



**Tuesday, August 18, 2020
5:00 PM**

**City Council
Tuesday Meeting Agenda**

**Jackie Dole Community Center
220 W. Front Street**

Call to Order

Call to Prayer and Pledge of Allegiance

Presentation Agenda

POLICY AGENDA

1. **2020-562** Ordinance for review on the petition filed by The City of Hattiesburg to amend the Land Development Code Section 7 Standards of Design and Section 13 Definitions. More specifically, for the purpose of amending language as it relates to the design standards for parking and driveways. The Planning Commission recommended to Approve on August 5, 2020.
2. **2020-561** Approve or Deny a petition filed by Karnella Myers, Representative and Mark Gibson, Owner, to request a Conditional Use as “Multi-Family Residential” in B-1 (Professional Business) District for a certain property located at 257 McLeod Street (Parcel 2-029J-10.137.00, PPIN 21836; Ward 4). The Planning Commission recommended to Approve on August 5, 2020 with conditions: A barrier should be installed along the creek and substantial fencing should be installed along the western and southern property boundaries.
3. **2020-563** Approve or Deny a petition filed by Stephens Daniel, Architect, and The Betty Green Chain Bank Property Trust, Bobby L. Chain, Jr., Successor Trustee, Owner, to request a variance from Section 6, Table 6.1 “Maximum Front Setback” for B-2, “10 feet”, and instead allow a setback of seventy-six (76) feet for a variance of sixty-six (66) feet along N 31st Avenue for a proposed building to be located at 3101 Hardy Street (Parcel 2-028K-07-052.00, PPIN 23016; 2-028K-07-053.00, PPIN 23015l; Ward 1). The Board of Adjustment recommended to Approve on August 5, 2020.
4. **2020-557** Adopt Resolutions adjudicating and directing the placement as an assessment for the cleanup costs and applicable penalties, not to exceed the values prescribed by State law, against the following properties.

5. **2020-573** Adopt the August 18, 2020 Amendments to the budget for the City of Hattiesburg for fiscal year ending September 30, 2020 and Adopt Resolution authorizing publication of amendments for funds in excess of 10% of the originally appropriated fund balance.
6. **2020-565** Adopt a Resolution approving the adoption and implementation of the Regional Hazard Mitigation Plan including the counties of Covington, Forrest, Jefferson Davis, Jones, Marion, Perry, and Wayne. Prepared for the MEMA District 8 Regional Hazard Mitigation Council (RHMC).
7. **2020-548** Adopt a Resolution declaring equipment surplus and authorize the disposal of said equipment and authorize removal of equipment from the City inventory of the Hattiesburg Police Department.
8. **2020-549** Adopt a Resolution declaring certain vehicles as surplus (per attached memo) and authorize sale of said vehicles and remove from the City's inventory of the Hattiesburg Police Department.
9. **2020-556** Adopt a Resolution authorizing Requisition No. 70 from the Project Fund Construction Account in connection with a certain loan agreement dated August 18, 2016, by and between the Mississippi Development Bank and the City of Hattiesburg.
10. **2020-554** Approve Letter Agreement with Neel-Schaffer, Inc. for Engineering Services related to the Lincoln Road and Mobile Street Paving Project and authorize the Mayor to execute in duplicate.
11. **2020-570** Approve Agreement with the Natural Resources Conservation Services for an Emergency Watershed Protection (EWP) Project at Campbell Loop #3, Oceola McCarty Park, McLeod @ Gordon Creek, Forrest to McCleod & Hi-Fi Crusin for a total cost of \$1,523,250.00 of which \$1,142,437.50 is Federally funded and \$380,812.50 is City funded and authorize the Mayor to execute any and all documents required for the project pre-application, application, and other required documents.
12. **2020-546** Approve Lighting Agreement with Mississippi Power Company for additional lighting on Graymont Avenue for a monthly increase of \$42.96 and authorize the Mayor to execute the same.
13. **2020-547** Approve Lighting Agreement with Mississippi Power Company for additional lighting on Butler Avenue for a monthly increase of \$35.06 and authorize the Mayor to execute the same.
14. **2020-591** Approve Agreement with Mississippi Power Company to use property located at Tatum Park in the event of emergency restoration efforts related to disaster recovery and authorize the Mayor to execute the same.
15. **2020-564** Approve Change Order No. 2 with Hanco Corporation for the Public Safety Complex and authorize the Mayor to execute in triplicate.

- 16. 2020-567** Approve Alcohol Grant Agreement with MS Department of Public Safety, Office of Highway Safety FY2021, in the amount of \$49,499.20 and authorize the Mayor to execute in duplicate.
- 17. 2020-588** Approve contract with Topp McWhorter Harvey PLLC to audit the financial statements of the City of Hattiesburg for the fiscal year ending September 30, 2020 and authorize the Council President to execute in duplicate.
- 18. 2020-593** Approve contract with the Hattiesburg Convention Commission for the management, operations and upkeep of the Hattiesburg Zoo, beginning October 1, 2020 and authorize the Mayor to execute the same.
- 19. - Deleted -**
- 20. 2020-568** Approve and authorize issuance of manual checks for CDBG Program Claims for 213 S 11th Avenue - C. White; 207 W 5th Street - S. Brister; 735 Longstreet Drive - B. Booth; 303 J.C. Killingsworth Drive - H. O'Neal.
- 21. 2020-552** Acknowledge receipt of grant offer from the Mississippi Transportation Commission for the Bobby L. Chain Municipal Airport Project No. 3-28-0031-027-2020 in the amount of \$216,750.00 and authorize the Mayor to execute Airport Federal Matching Grant Agreement in triplicate.
- 22. 2020-553** Authorize the Mayor to execute an Authority to cancel Resolution of Adjudication for property located at 202 N. 23rd Avenue; authorize recording of the same.
- 23. 2020-580** Authorize acquisition of a portion of a parcel of property identified as Forrest County Parcel No. 2-030M-11-278.00 (PPIN 022501) for the Hall Avenue Overpass Project: Acknowledge receipt of Appraisal Report; Determine the appraisal valuation of \$3,900.00 to be Just Compensation for the aforementioned portion of the parcel; Authorize Mayor to make a Fair Market Value Offer for the property of \$3,900.00; Authorize Mayor to execute any and all documents required to complete the transaction; Authorize issuance of a manual check in payment thereof upon closing of transaction.
- 24. 2020-581** Authorize acquisition of a portion of a parcel of property identified as Forrest County Parcel No. 2-030M-11-279.00 (PPIN 022502) for the Hall Avenue Overpass Project: Acknowledge receipt of Appraisal Report; Determine the appraisal valuation of \$7,925.00 to be Just Compensation for the aforementioned portion of the parcel; Authorize Mayor to make a Fair Market Value Offer for the property of \$7,925.00; Authorize Mayor to execute any and all documents required to complete the transaction; Authorize issuance of a manual check in payment thereof upon closing of transaction.
- 25. 2020-582** Authorize acquisition of a portion of a parcel of property identified as Forrest County Parcel No. 2-030M-11-247.00 (PPIN 022489) for the Hall Avenue Overpass Project: Acknowledge receipt of Appraisal Report; Determine the appraisal valuation of \$330.00 to be Just Compensation for the aforementioned portion of the parcel; Authorize Mayor to make a Fair Market Value Offer for the property of \$330.00; Authorize Mayor to execute

any and all documents required to complete the transaction; Authorize issuance of a manual check in payment thereof upon closing of transaction.

- 26. 2020-583** Authorize acquisition of a portion of a parcel of property identified as Forrest County Parcel No. 2-037D-14-105.00 (PPIN 022050) for the Hall Avenue Overpass Project: Acknowledge receipt of Appraisal Report; Determine the appraisal valuation of \$650.00 to be Just Compensation for the aforementioned portion of the parcel; Authorize Mayor to make a Fair Market Value Offer for the property of \$650.00; Authorize Mayor to execute any and all documents required to complete the transaction; Authorize issuance of a manual check in payment thereof upon closing of transaction.
- 27. 2020-584** Authorize acquisition of a portion of a parcel of property identified as Forrest County Parcel No. 2-037D-14-104.00 (PPIN 022033) for the Hall Avenue Overpass Project: Acknowledge receipt of Appraisal Report; Determine the appraisal valuation of \$825.00 to be Just Compensation for the aforementioned portion of the parcel; Authorize Mayor to make a Fair Market Value Offer for the property of \$825.00; Authorize Mayor to execute any and all documents required to complete the transaction; Authorize issuance of a manual check in payment thereof upon closing of transaction.
- 28. 2020-585** Authorize acquisition of a portion of a parcel of property identified as Forrest County Parcel No. 2-029P-10-302.00 (PPIN 019192) for the Hall Avenue Overpass Project: Acknowledge receipt of Appraisal Report; Determine the appraisal valuation of \$1,350.00 to be Just Compensation for the aforementioned portion of the parcel; Authorize Mayor to make a Fair Market Value Offer for the property of \$1,350.00; Authorize Mayor to execute any and all documents required to complete the transaction; Authorize issuance of a manual check in payment thereof upon closing of transaction.
- 29. 2020-586** Authorize acquisition of a portion of a parcel of property identified as Forrest County Parcel No. 2-030M-11-018.00 (PPIN 026749) for the Hall Avenue Overpass Project: Acknowledge receipt of Appraisal Report; Determine the appraisal valuation of \$3,300.00 to be Just Compensation for the aforementioned portion of the parcel; Authorize Mayor to make a Fair Market Value Offer for the property of \$3,300.00; Authorize Mayor to execute any and all documents required to complete the transaction; Authorize issuance of a manual check in payment thereof upon closing of transaction.
- 30. 2020-587** Authorize acquisition of a portion of a parcel of property identified as Forrest County Parcel No. 2-030M-11-023.00 (PPIN 021192) for the Hall Avenue Overpass Project: Acknowledge receipt of Appraisal Report; Determine the appraisal valuation of \$250.00 to be Just Compensation for the aforementioned portion of the parcel; Authorize Mayor to make a Fair Market Value Offer for the property of \$250.00; Authorize Mayor to execute any and all documents required to complete the transaction; Authorize issuance of a manual check in payment thereof upon closing of transaction.
- 31. 2020-590** Extend state of emergency for an additional 30 days resulting from the pandemic event (COVID-19) that occurred on or about March 13, 2020.

ROUTINE AGENDA

1. **2020-571** Set a public hearing on the proposed budget and proposed tax levies for fiscal year 2021 for 5:30 p.m. on Tuesday, September 8, 2020, at the Jackie Dole Sherrill Community Center; authorize advertisement of Notice of Public Hearing.
2. **2020-555** Acknowledge receipt of and approve the budget of the Hattiesburg Convention Commission for the fiscal year ending 2021 and amended budget for fiscal year ending 2020.
3. **2020-594** Acknowledge receipt of the FYE 2019 Annual Report of the Hattiesburg Convention Commission.
4. **2020-589** Acknowledge receipt of the Audited Financial Statements of the City of Hattiesburg Combined Water and Sewer System for the Fiscal year ending September 30, 2019, from Topp McWhorter Harvey PLLC.
5. **2020-558** Acknowledge Federal Transit Administration award amendment MS-2016-007-03, incorporating an additional \$10,022 in Section 5339 federal funds for bus shelters and bus stop access improvements.
6. **2020-566** Acknowledge receipt of a warranty deed from Forrest County for a parcel of land being part of the Northeast 1/4 of Section 15, and the Southeast 1/4 of Section 10 Township 4 North, Range 13 West, Forrest County, Mississippi, and further described in the attached deed, as required for the Hall Avenue Overpass Project.
7. **2020-572** Acknowledge receipt of corrected Certified Bid Tabulation from Neel-Schaffer, Inc. for the Hardy Street and Concart Street Drainage and Sidewalk Improvements project.
8. **2020-551** Authorize and approve publication setting a Public Comment Period for the City's 2019 Hazard Mitigation Grant Program application.
9. **2020-544** Approve the sale of grave spaces, per attached Memo's, Receipts, and Deeds.
10. **2020-569** Approve claims docket for the period ending August 14, 2020.

In Memoriam:

- **Mr. Norman Trowell**
- **Mr. Robert Lee Friend**
- **Mr. Melvin Buckley, Sr.**
- **Ms. Maggie Gilbert**

Meeting Adjourn



Memorandum

To: Mayor Toby Barker and Members of City Council

From: Ginger Lowrey, Planning Administrator

cc: Andrew Ellard, Director

Date: Tuesday, August 18, 2020

Re: Ordinance for review on the petition filed by The City of Hattiesburg to amend the Land Development Code Section 7 Standards of Design and Section 13 Definitions. More specifically, for the purpose of amending language as it relates to the design standards for parking and driveways. The Planning Commission recommended to Approve on August 5, 2020.
File Number: 2020-562
Minute Book #

Summary

Adopt an Ordinance amending the Land Development Code – Section 7, & 13

Recommendation Statement

Review and comment period of proposed Ordinance for three (3) weeks until September 8, 2020.

Please place this on the August 18, 2020 City Council meeting for consideration.



**Planning Commission
Case Fact Sheet**

Applicant: City of Hattiesburg

Request: To consider an application to amend the Land Development Code, Ord. No. 3209, to amend the Land Development Code Section 7 Standards of Design and Section 13 Definitions. More specifically, for the purpose of amending language as it relates to the design standards for parking and driveways.

Applicable Regulations: Section 7 Standards of Design and Section 13 Definitions

Letters or Concerns stated: The Planning Division Office has not received any letters or other written communications relative to this case as of July 20, 2020.

Additional Information: See attached memo outlining the proposed amendments. These amendments serve to clarify Code administration, update parking requirements, and add language regarding outdoor storage regulation.

Basis for Approval: Recommend **APPROVAL** or **DENIAL** of the request to amend the Land Development Code Section 7 Standards of Design and Section 13 Definitions.

The Planning Commission may approve, deny, and table at will. Minor, non-substantial changes may be made within a motion to the items presented in these amendments.



Department of Urban Development

Andrew Ellard, Director

601.545.4609 or aellard@hattiesburgms.com

MEMORANDUM

TO: To All It May Concern
FROM: Ginger M. Lowrey, AICP, Planning Division Manager
DATE: July 24, 2020
SUBJECT: Land Development Code amendment – Section 7 Standards of Design and related definitions – Parking, driveway, and storage codes.

Planning Commissioners and all others it may concern, the August 5, 2020 Planning Commission agenda includes a proposal for changes to Section 7 Standards of Design and related definitions. The intent of these amendments is to clarify Code administration, update parking requirements, and add language regarding outdoor storage regulation. Staff proposes to add legal options for new gravel facilities for driving and parking as well as further clarify when hard surfaces such as concrete and asphalt are required. The table below lists each proposed change.

	Code Section	Change proposed	Reasoning
1	7.12.8.3	Amend to read "Parking and Driveways shall be hard surface as approved by the Engineering Department. Additional parking may be paved with pervious pavers/pavement as approved by the Site and Design Review Committee."	Add "Driveways" to clarify administration of Code
2	7.12.8.3.i	Add: "Any parking or driveways on private property of a commercial use or multi-unit dwelling residential use that provides access to on-site parking or off-site parking shall be kept in a proper state of repair and maintained in a finished condition."	Add language regarding parking/driveway surface maintenance
3	7.12.8.3.ii	Add: "Dustless gravel maintained in finished condition and kept so as to be free of overgrowth may be allowed for	Add language to allow for gravel

		driveways by right in A-1 zones and as a Conditional Use in A-2 zones.”	driveways in Agricultural Zoning
4	7.12.8.3.iii	Add: “All approved gravel driveways shall have a hard surface apron that is a minimum of twenty (20) feet from the edge of pavement at the street or as required by the Engineering Department. The design of the apron shall prevent loose gravel from being deposited on the sidewalk and roadway.”	Add requirements for A zone permitted gravel driveways
5	7.12.10	Add new section: “Parking and Storage Areas in Non-Residential Zones.”	Add Section Title
6	7.12.10.1	Add: “Unless otherwise stated in Section 5, the following standards apply to all Business and Industrial Zones.”	Add language for standards
7	7.12.10.2	Add: “Outdoor storage of commercial equipment and materials and shall be kept at least 100 linear feet from any adjacent lot containing a legal, conforming residential use and shall be only located in a side or rear yard as an accessory to a principal use on the same lot or within 300 feet of the principal use.”	Align language regulating outdoor storage of commercial equipment with existing regulations Construction Office equipment regulations (LDC 5.4.16)
8	7.12.10.3	Add: “Outdoor storage shall be screened from major thoroughfares, local streets and adjacent properties in accordance with the screening requirements set forth in Section 7.9”	Align language regulating outdoor storage of commercial equipment with existing regulations Construction Office equipment regulations
9	7.12.10.4	Add: “A maximum outdoor equipment storage space of 50% of the side and rear lot area is allowed for business and industrial equipment and materials if outdoor storage is an accessory to another use on the same lot.”	Align language regulating outdoor storage of heavy equipment with existing regulations Construction Office equipment regulations
10	7.12.10.4.i	Add: “Unless otherwise permitted, commercial outdoor storage areas shall be hard surface only.”	Clarify administration of Code

11	7.12.10.4.ii	Add: "All outdoor storage associated with automotive and tow yard uses shall be hard surface, regardless of zone."	Clarify administration of Code
12	7.12.10.4.iii	Add: "Dustless gravel maintained so as to be free of overgrowth may be allowed for only non-public outdoor storage space of heavy equipment and non-hazardous materials by right in A-1, I zones and as a Conditional Use in A-2 and B-5 zones. Any approved gravel storage lot shall be subject to driveway requirements per 7.12.8.3.."	Clarify Code to allow for gravel storage lots in certain zones
13	7.12.10.5	Add: "Outdoor storage of materials shall not be piled or stacked over 20 feet in height above grade."	Align language regulating outdoor storage of commercial equipment with existing regulations Construction Office equipment regulations
14	13.2 Definitions – Hard Surface	Add: "Hard Surface -A surface paved with concrete or asphalt. May include approved pavers or pervious pavement. Does not include sand, gravel, or crushed aggregate."	New definition to clarify administration of Code
15	13.2 Definitions – All Weather Surface	Add: "All Weather Surface – See Definition for Hard Surface."	New definition to clarify administration of Code

Prepared by: City of Hattiesburg
City Clerk's Office
P.O. Box 1898
Hattiesburg, MS 39403-1898
(601)545-4550

Return to: City of Hattiesburg
City Clerk's Office
P.O. Box 1898
Hattiesburg, MS 39403
(601)545-4550

INDEXING INSTRUCTIONS:

**ORDINANCE NUMBER _____
OF THE
CITY OF HATTIESBURG, MISSISSIPPI**

**AN ORDINANCE AMENDING THE LAND DEVELOPMENT CODE,
ORDINANCE NUMBER 3209, AS AMENDED, SECTION 7 STANDARDS OF DESIGN AND 13
DEFINITIONS
FOR THE CITY OF HATTIESBURG, MISSISSIPPI.**

**BE IT ORDAINED BY THE MAYOR AND COUNCIL OF THE CITY OF
HATTIESBURG, MISSISSIPPI:**

SECTION 1. That the Land Development Code, Ordinance Number 3209, as amended, of the City of Hattiesburg, Mississippi, be further amended as follows:

That Section 7.12.8.3 be amended to read "Parking and Driveways shall be hard surface as approved by the Engineering Department. Additional parking may be paved with pervious pavers/pavement as approved by the Site and Design Review Committee."

That Section 7.12.8.3.i. be added to read: "Any parking or driveways on private property of a commercial use or multi-unit dwelling residential use that provides access to on-site parking or off-site parking shall be kept in a proper state of repair and maintained in a finished condition."

That Section 7.12.8.3.ii. be added to read: "Dustless gravel maintained in finished condition and kept so as to be free of overgrowth may be allowed for driveways by right in A-1 zones and as a Conditional Use in A-2 zones."

That Section 7.12.8.3.iii be added to read: "All approved gravel driveways shall have a hard surface apron that is a minimum of twenty (20) feet from the edge of pavement at the street or as required by the Engineering Department. The design of the apron shall prevent loose gravel from

being deposited on the sidewalk and roadway.”.

That Section 7.12.10. be amended to read: “Parking and Storage Areas in Non-Residential Zones.”.

That Section 7.12.10.1 be added to read: “Unless otherwise stated in Section 5, the following standards apply to all Business and Industrial Zones.”.

That Section 7.12.10.2. be added to read: “Outdoor storage of commercial equipment and materials and shall be kept at least 100 linear feet from any adjacent lot containing a legal, conforming residential use and shall be only located in a side or rear yard as an accessory to a principal use on the same lot or within 300 feet of the principal use.”.

That Section 7.12.10.3. be added to read: “Outdoor storage shall be screened from major thoroughfares, local streets and adjacent properties in accordance with the screening requirements set forth in Section 7.9.”.

That Section 7.12.10.4. be added to read: “A maximum outdoor equipment storage space of 50% of the side and rear lot area is allowed for business and industrial equipment and materials if outdoor storage is an accessory to another use on the same lot.”.

That Section 7.12.10.4.i be added to read: “Unless otherwise permitted, commercial outdoor storage areas shall be hard surface only.”.

That Section 7.12.10.4.ii be added to read: “All outdoor storage associated with automotive and tow yard uses shall be hard surface, regardless of zone.”.

That Section 7.12.10.4.iii be added to read: “Dustless gravel maintained so as to be free of overgrowth may be allowed for only non-public outdoor storage space of heavy equipment and non-hazardous materials by right in A-1, I zones and as a Conditional Use in A-2 and B-5 zones. Any approved gravel storage lot shall be subject to driveway requirements per 7.12.8.3.”.

That Section 10.8.2.5. be added to read: “Outdoor storage of materials shall not be piled or stacked over 20 feet in height above grade.”.

That Section 13.2 Definitions – “Hard Surface” be added to read “A surface paved with concrete or asphalt. May include approved pavers or pervious pavement. Does not include sand, gravel, or crushed aggregate.”.

That Section 13.2 Definitions – “All Weather Surface” be added to read “See Definition for Hard Surface”.

SECTION 2. Except as hereby expressly changed and amended, the aforesaid Land Development Code, Ordinance Number 3209, adopted February 21, 2017, as amended, of said City of Hattiesburg, Mississippi, shall be and remain in full force and form as adopted.

SECTION 3. That this Ordinance take effect and be in force thirty (30) days from and after passage as provided by law.

The foregoing Ordinance having been reduced to writing, the same was introduced by Councilmember _____, seconded by Councilmember _____, and was adopted by the following vote to-wit:

YEAS:

NAYS:

THE President thereby declared the motion carried and the foregoing Ordinance adopted and approved, this the _____ day of _____ A.D., 2020.

(S E A L)

ATTEST:

ADOPTED:

CLERK OF COUNCIL

PRESIDENT

THE above foregoing Ordinance having been submitted to and approved by the Mayor, this the _____ day of _____ A.D., 2020.

ATTEST:

APPROVED:

CITY CLERK

MAYOR

**MINUTES OF THE
REGULAR MEETING OF THE
HATTIESBURG PLANNING COMMISSION
August 5, 2020**

The Hattiesburg Planning Commission did meet in a regular session on August 5, 2020 at 1:00 p.m. at the Jackie Dole Community Center, 220 West Front Street, Hattiesburg, Mississippi. Mark Miller, Chair, presided over the meeting. Due to ongoing COVID-19 pandemic, CDC recommended social distancing guidelines were observed. Staff utilized GoToMeeting, an online meeting, desktop sharing, and telephone/video conferencing platform to allow Commissioners and petitioners to participate remotely. A quorum was indicated and the attendance was as follows:

Commissioners Present: Dick Conville (via GoToMeeting)
 Jeff Keyseear (via GoToMeeting)
 Elayne Lockett (in person)
 Mark Miller, Chair (via GoToMeeting)
 Rhoda A. Pickett (via GoToMeeting)
 Rebekah Ray (in person)
 Kenneth Waites (in person)

Commissioners Absent: Ricardo Bryant
 Charles Dawe
 Amy Hinton, Vice-Chair

Also Present: Ginger Maddox Lowrey, AICP, Planning Division Manager (in person)
 Andrew Ellard, Director Urban Development (via GoToMeeting)
 Caroline Miles, Planner (in person)
 Jim Gladden, Esq. (in person)
 Steve Mitchell, Building Official (in person)
 Nathan Satcher, Planning Office Manager (in person)

Chair Miller declared the meeting of the Hattiesburg Planning Commission open and in session at 1:00 PM.

AGENDA REVIEW

There came the matter of the August 2020 Agenda. A request was made by Chair Miller for a motion to approve the August 2020 Agenda. A motion was made to approve the August 2020 Agenda by Commissioner Ray and seconded by Commissioner Lockett.

Commissioners voting aye:

Dick Conville (via GoToMeeting)
Jeff Keysear (via GoToMeeting)
Elayne Lockett (in person)
Mark Miller, Chair (via GoToMeeting)
Rhoda A. Pickett (via GoToMeeting)
Rebekah Ray (in person)
Kenneth Waites (in person)

Commissioners voting nay:

None

MINUTES REVIEW

There came the matter of the July 1, 2020 minutes. Commissioner Ray requested a grammatical correction. A motion was made by Commissioner Conville to approve the July 1, 2020 minutes with a grammatical correction and seconded by Commissioner Ray.

Commissioners voting aye:

Dick Conville (via GoToMeeting)
Jeff Keysear (via GoToMeeting)
Elayne Lockett (in person)
Mark Miller, Chair (via GoToMeeting)
Rhoda A. Pickett (via GoToMeeting)
Rebekah Ray (in person)
Kenneth Waites (in person)

Commissioners voting nay:

None

REPORTS

BUILDING REPORT

Steve Mitchell, Building Official, provided the Building Permit Report. An electronic copy was emailed to the Planning Commission.

PLANNING REPORT

There came the matter of the Planning Report by Ginger Maddox Lowrey, AICP. Mrs. Lowrey introduced Nathan Satcher, the new Planning Division Office Manager. On July 21, 2020, City Council approved the rezone request, Conditional Use for a warehouse, and the alley closure for 119 Oak Street (HPC approval upheld). They also approved the rezone request and Conditional Use for a place of assembly at 103 Wisteria Drive (HPC approval upheld).

CHAIR'S REPORT

No report.

INTRODUCTIONS

Commissioners introduced themselves.

PUBLIC HEARING – PLANNING COMMISSION

There came the matter of Item A (Conditional Use), to consider a request that has been filed by Karnella Myers, Representative and Mark Gibson, Owner, as required in the Land Development Code, Ord. No. 3209, to request a Conditional Use as “Multi-Family Residential” in B-1 (Professional Business) District as defined by the LDC for a certain property located at 257 McLeod Street (Parcel 2-029J-10.137.00, PPIN 21836; Ward 4).

	<u>Name</u>	<u>Address</u>	<u>City/State</u>
<u>Presented by:</u>	Jeff Hall	PO Box 18307	Hattiesburg, MS
	Karnella Myers	PO Box 1	Picayune, MS
<u>Proponents:</u>	None		
<u>Opponents:</u>	None		
<u>Other:</u>	Chris West	104 McLeod St.	Hattiesburg, MS

Jeff Hall and Karnella Myers presented the request. Commissioner Pickett asked the representatives if there were any plans to add a barrier or protective railing along the creek bank. Ms. Myers stated that there would likely be some type of fencing put up along the creek. Commissioner Keysear asked what the plans were for solid waste management. Mr. Hall stated that his client, the owner of the property, would follow the City ordinances for the dumpsters/solid waste management on the property.

Chris West, who lives at a nearby property, asked if this would be Section 8 housing. He asked if federal state subsidies were provided for this housing. He also asked if background checks would be done on lessee and who would be managing the background screens. He stated the property abuts the school’s property and is also quite close to two Pre-K schools, making background screens important. Mr. West said he was not anti-low income housing, but he wanted to know what type of apartments these would be.

Mr. Hall rebutted by answering Mr. West’s questions. He stated that it was likely that the apartments do not even qualify for Section 8 status. Mr. Hall stated he was not aware of any federal/state housing grants so it was unlikely that this was something that would be pursued. However, if someone was eligible for some type of housing grant and wanted to apply, then they should apply. Mr. Hall also said that it is the owner’s policy to run background screens on his tenants prior to leasing, though the owner has ultimate discretion over leasing decisions.

Chair Miller declared the Public Hearing closed and the Business Meeting open to vote on the request (Item A). Commissioner Conville made a motion to approve the request with the conditions that a barrier be installed along the creek and substantial fencing be installed along the western and southern property boundaries. Commissioner Pickett seconded the motion. Mrs. Lowrey conducted a roll-call vote. Commissioners attending in person submitted physical voting sheets as well.

Commissioners voting aye: Dick Conville (via GoToMeeting)
 Jeff Keysear (via GoToMeeting)
 Elayne Lockett (in person)
 Mark Miller, Chair (via GoToMeeting)
 Rhoda A. Pickett (via GoToMeeting)
 Rebekah Ray (in person)
 Kenneth Waites (in person)

Commissioners voting nay: None

There came the matter of Item B (Text Amendment), to consider a request filed by The City of Hattiesburg, as required in the Land Development Code, Ord. No. 3209, to amend the Land Development Code Section 7 Standards of Design and Section 13 Definitions. More specifically, for the purpose of amending language as it relates to the design standards for parking and driveways.

	<u>Name</u>	<u>Address</u>	<u>City/State</u>
<u>Presented by:</u>	Staff		
<u>Proponents:</u>	None		
<u>Opponents:</u>	None		

Chair Miller declared the Public Hearing closed and the Business Meeting open to vote on the request (Item B). Commissioner Ray made a motion to recommend approval (Item B). Commissioner Lockett seconded the motion. Mrs. Lowrey conducted a roll-call vote. Commissioners attending in person submitted physical voting sheets as well.

Commissioners voting aye: Dick Conville (via GoToMeeting)
 Jeff Keysear (via GoToMeeting)
 Elayne Lockett (in person)
 Mark Miller, Chair (via GoToMeeting)
 Rhoda A. Pickett (via GoToMeeting)
 Rebekah Ray (in person)
 Kenneth Waites (in person)

Commissioners voting nay: None

BUSINESS MEETING

Having no further business, Commissioner Ray made a motion to adjourn the meeting. The motion was seconded by Commissioner Lockett. The meeting was adjourned at 2:20 PM.

Mark Miller, Chair

Ginger Maddox Lowrey, AICP, CFM, Planning Division Manager



Memorandum

To: Mayor Toby Barker and Members of City Council

From: Ginger Lowrey, Planning Administrator

cc: Andrew Ellard, Director

Date: Tuesday, August 18, 2020

Re: Approve or Deny a petition filed by Karnella Myers, Representative and Mark Gibson, Owner, to request a Conditional Use as “Multi-Family Residential” in B-1 (Professional Business) District for a certain property located at 257 McLeod Street (Parcel 2-029J-10.137.00, PPIN 21836; Ward 4). The Planning Commission recommended to Approve on August 5, 2020 with conditions: A barrier should be installed along the creek and substantial fencing should be installed along the western and southern property boundaries.
File Number: 2020-561
Minute Book #

Summary

257 McLeod Street – Conditional Use - Multi-Family Residential

Recommendation Statement

Approve or Deny a petition for a Conditional Use as “Multi-Family Residential” in B-1 (Professional Business) District for 257 McLeod Street with conditions.

Please place this on the August 18, 2020 City Council meeting for consideration.

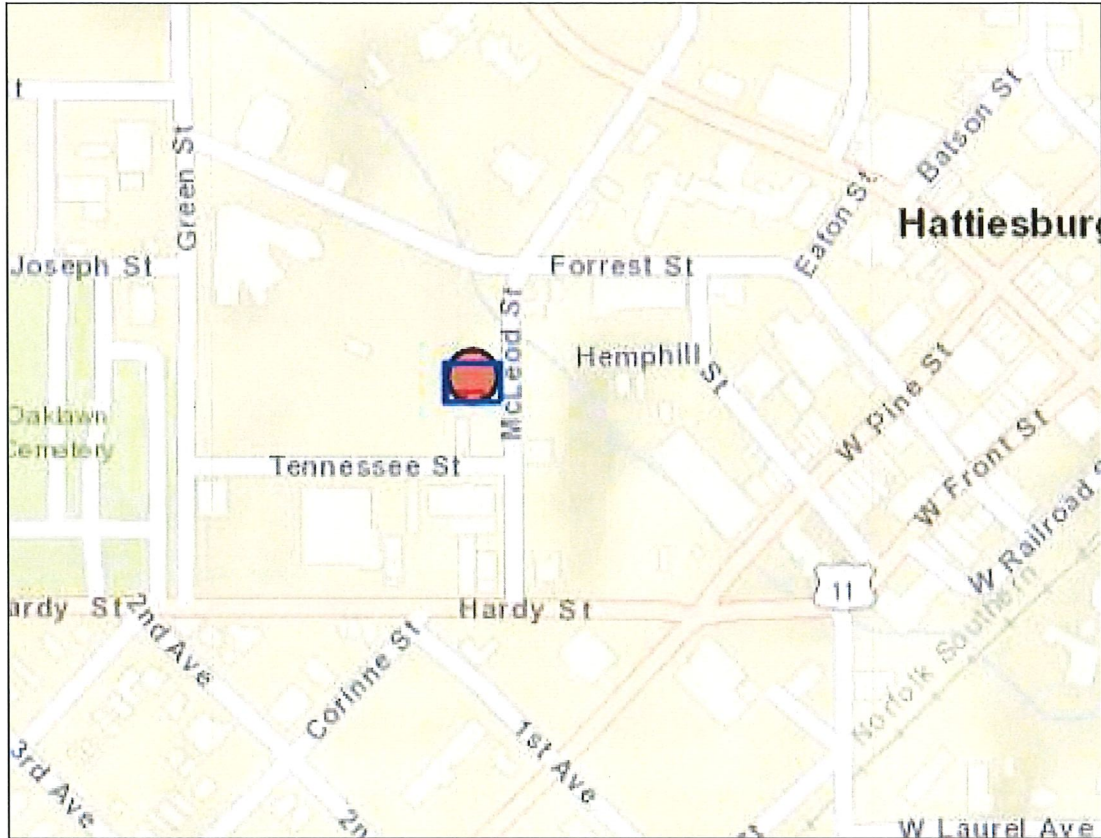
SUBJECT PARCEL: 257 McLeod Street

Karnella Myers, Representative and Mark Gibson, Owner

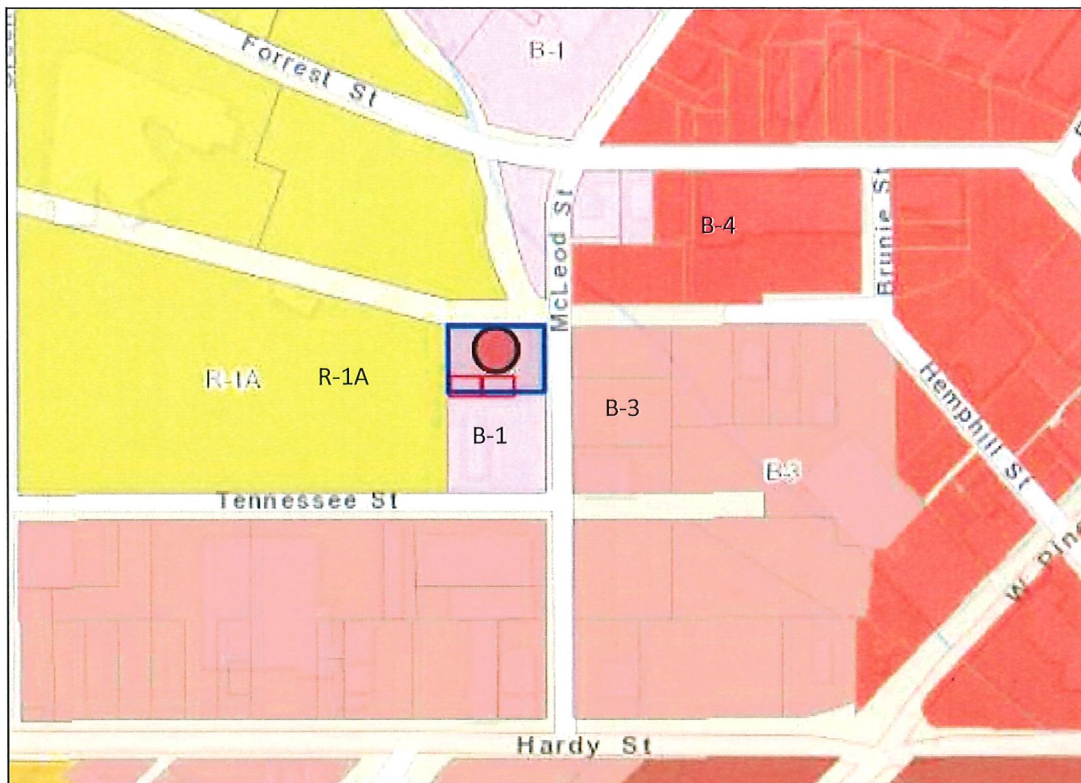
The petitioners request a Conditional Use as "Multi-Family Residential" in B-1 (Professional Business) District as defined by the LDC for a certain property located at 257 McLeod Street (Parcel 2-029J-10.137.00, PPIN 21836; Ward 4).



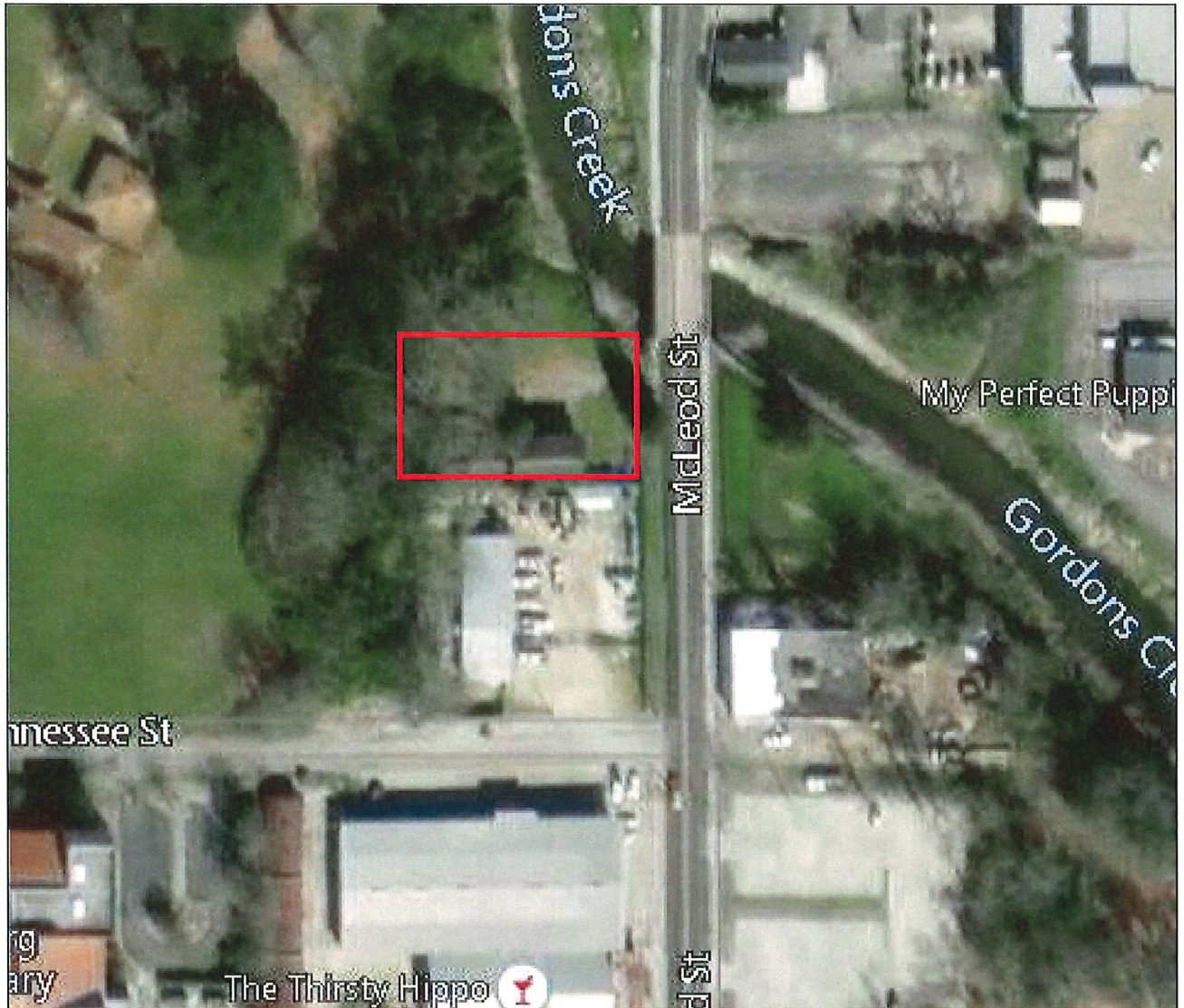
Vicinity Map—Ward 4



Zoning—B-1



Site Aerial



SURROUNDING AREA

Northern Direction: Right-of-Way/
Undeveloped ROW and Gordon
Creek

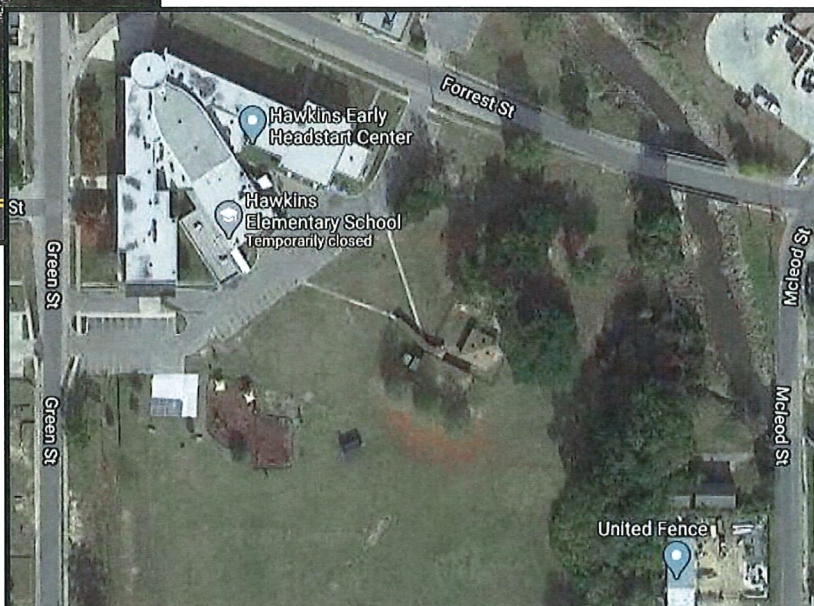


Southern Direction: B-1
(Professional Business) District/
Commercial



Eastern Direction: B-3 (Community
Business) District/ Greenspace,
Gordon Creek

Western Direction: R-1A (Single
Family Residential) District/ School





**Planning Commission
Case Fact Sheet**

Name of Petitioner: Karnella Myers, Representative, and Mark Gibson, Owner

Address of Property:	Tax Parcel	PPIN:	Ward:
257 McLeod Street	2-029J-10.137.00	21836	4

Request: **Conditional Use (Multi-Family Residential)**

Purpose of Request: To consider an application to request a Conditional Use as "Multi-Family Residential" in B-1 (Professional Business) District as defined by the LDC for a certain property located at 257 McLeod Street (Parcel 2-029J-10.137.00, PPIN 21836; Ward 4).

Applicant Summary: See Attached

Applicable Regulations:

SECTION 4

Zoning Districts Established

4.5.8 B-1 Professional Business District: The purpose of this business district is to provide areas for professional and business offices and related activities that require separate buildings and building groups surrounded by landscaped yards and open areas. The intent is to provide compact locations for business offices, medical and dental offices, as well as suburban locations near residential neighborhoods.

5.4.18 Additional Conditions for Use:

5.4.18 Dwelling, Two-Family and Multi-Family

5.4.18.1 On infill development sites in residential districts, multi-family buildings shall be designed to blend in with surrounding single-family residential buildings to the maximum extent practicable with regards to building design, setbacks, driveway and garage design and location, porches, and sidewalks.

5.4.18.2 Site designs shall create a sense of "neighborhood" and shall meet the following requirements:

i. Buildings shall be sited with front entrances and porches oriented toward streets, drives, and plazas, rather than clustered around parking lots.

ii. An internal vehicular circulation system for private streets, when included, shall be reflective of a single-family residential street system.

iii. Parking lots shall be located behind buildings, except where it is deemed appropriate to use a parking lot as a buffer from an arterial street, or where such parking area will directly abut a property line exterior to the development site when located in or adjacent to a residential district.

iv. Walkways shall connect all buildings with parking areas, play areas, clubhouses, and existing public sidewalks adjacent to the development site.

v. Plazas, clubhouses, pools, and recreational facilities shall be centrally located, when provided.

5.4.18.3 Building designs that create variety and do not look monotonous if replicated throughout the development shall be required. Such designs shall include the following:

i. Side and rear building elevations, garages, carports, and all accessory structures shall have the same level of design, aesthetic quality, and architectural detailing.

ii. Porches, varied rooflines, and varied façade depths shall be provided to create variety and individuality of each building.

iii. Windows and projecting wall surfaces shall be used to break up larger wall surfaces, establish visual interest and provide visibility of the street and other public spaces encouraging social interaction.

iv. Protective entry courts, common vestibules, covered breeze ways, or enclosed stair halls shall be used to reduce the number of visible doors, unless designed in a row house or townhouse manner oriented toward the street.

v. Garages shall be designed to be integrated with the building design or sited so as to avoid long monotonous rows of garage doors and building walls. Garages shall be oriented so that they do not visually dominate the building façade or the streetscape.

Present Zoning: This parcel is currently zoned B-1 (Professional Business) District

Present Use: Vacant

Future Land Use: Downtown District

Flood Zone: The existing structures are in the AE/100-year flood zone.

Surrounding Zoning and Land Use:
North: Right-of-Way/ Undeveloped ROW and Creek
South: B-1 (Professional Business) District/ Commercial
East: B-3 (Community Business) District/ Greenspace and Creek
West: R-1A (Single Family Residential) District/ School

Most Nearly

Bounded By (streets):

The parcel is most nearly bounded by McLeod Street to the east, Forrest Street to the north, Green Street to the west, and Tennessee Street to the south. The northern limit of the parcel abuts a platted, unimproved Right-of-Way. The parcel is accessible from McLeod Street.

Letters or

Concerns stated:

The Planning Division Office has not received any letters or other written communications relative to this case, as of July 21, 2020.

History / Background:

The petitioner met with the Planning Division regarding re-establishing the use of Multi-Family on the parcel. The use of Multi-Family Dwelling is a Conditional Use in B-1 zoning, and the previously established Multi-Family use on the site would have been considered legal nonconforming under the Land Development Code. However, the apartment buildings on the site have been vacant for many years. Legal nonconforming uses are not allowed to reestablish if they have not been used in a bona fide manner for a period of six (6) months. A Conditional Use is required for the Multi-Family use to re-establish on the property.

On February 19, 2019, the City Council adopted a resolution which determined the property was in such a state of uncleanness so as to be a menace to the health and safety of the community. The property cited for being in violation for the following from the International Property Maintenance Code: dangerous structure, exterior structure, unsafe structure, and vacant structure.

The current property owner acquired the property in January 2019 and has since made improvements on the property so as to avoid demolition of the structures by the City.

The structures on the site are in the AE/100-year flood zone. The site also contains regulated Floodway, but none of the buildings or existing parking areas are located within the Floodway.

The site is within the Hub City Downtown Historic District boundaries.

Per Forrest County Emergency Management, the official address for the site is 257 McLeod St. Some documents pertaining to the location list 205 McLeod St. as the address.

Option: **Basis for approval:**

Applicable conditions listed in 5.4.18 Dwelling, Two-Family and Multi-Family (5.4.18.1; 5.4.18.2; 5.4.18.3)

12.3.3.2 Additional Approval Criteria. In addition to the standards [5.4.18], the applicant for a request for the Planning Commission to approve a use shall be required to demonstrate that his/her proposal addresses the following additional requirements, except that the Planning Commission may waive any one or more criteria that it determines are not applicable based upon the expected impact of the proposal.

- i. Determination that adequate public facilities and services will be available concurrent with the impacts of the development as evidenced by letters of sufficiency from utilities and schools and a determination by the city engineer that the available capacity of existing streets can safely provide access to the site.
- ii. The proposed development will be compatible with surrounding uses and will protect adjacent properties through the following measures:
 - Protection of privacy. The proposed plan shall provide reasonable visual and auditory privacy for all dwelling units located within and adjacent to the site. Fences, walls, barriers and / or vegetation shall be arranged to protect and enhance the property and to enhance the privacy of on-site and neighboring occupants.
 - Protection of use and enjoyment. The proposed plan shall be designed and arranged to have minimal negative impact on the use and enjoyment of adjoining property.
 - Compatible design and integration. The use meets all design criteria required by this Code that apply and is designed to integrate well both on and off site.

**MINUTES OF THE
REGULAR MEETING OF THE
HATTIESBURG PLANNING COMMISSION
August 5, 2020**

The Hattiesburg Planning Commission did meet in a regular session on August 5, 2020 at 1:00 p.m. at the Jackie Dole Community Center, 220 West Front Street, Hattiesburg, Mississippi. Mark Miller, Chair, presided over the meeting. Due to ongoing COVID-19 pandemic, CDC recommended social distancing guidelines were observed. Staff utilized GoToMeeting, an online meeting, desktop sharing, and telephone/video conferencing platform to allow Commissioners and petitioners to participate remotely. A quorum was indicated and the attendance was as follows:

Commissioners Present: Dick Conville (via GoToMeeting)
 Jeff Keyseear (via GoToMeeting)
 Elayne Lockett (in person)
 Mark Miller, Chair (via GoToMeeting)
 Rhoda A. Pickett (via GoToMeeting)
 Rebekah Ray (in person)
 Kenneth Waites (in person)

Commissioners Absent: Ricardo Bryant
 Charles Dawe
 Amy Hinton, Vice-Chair

Also Present: Ginger Maddox Lowrey, AICP, Planning Division Manager (in person)
 Andrew Ellard, Director Urban Development (via GoToMeeting)
 Caroline Miles, Planner (in person)
 Jim Gladden, Esq. (in person)
 Steve Mitchell, Building Official (in person)
 Nathan Satcher, Planning Office Manager (in person)

Chair Miller declared the meeting of the Hattiesburg Planning Commission open and in session at 1:00 PM.

AGENDA REVIEW

There came the matter of the August 2020 Agenda. A request was made by Chair Miller for a motion to approve the August 2020 Agenda. A motion was made to approve the August 2020 Agenda by Commissioner Ray and seconded by Commissioner Lockett.

Commissioners voting aye:

Dick Conville (via GoToMeeting)
Jeff Keysear (via GoToMeeting)
Elayne Lockett (in person)
Mark Miller, Chair (via GoToMeeting)
Rhoda A. Pickett (via GoToMeeting)
Rebekah Ray (in person)
Kenneth Waites (in person)

Commissioners voting nay:

None

MINUTES REVIEW

There came the matter of the July 1, 2020 minutes. Commissioner Ray requested a grammatical correction. A motion was made by Commissioner Conville to approve the July 1, 2020 minutes with a grammatical correction and seconded by Commissioner Ray.

Commissioners voting aye:

Dick Conville (via GoToMeeting)
Jeff Keysear (via GoToMeeting)
Elayne Lockett (in person)
Mark Miller, Chair (via GoToMeeting)
Rhoda A. Pickett (via GoToMeeting)
Rebekah Ray (in person)
Kenneth Waites (in person)

Commissioners voting nay:

None

REPORTS

BUILDING REPORT

Steve Mitchell, Building Official, provided the Building Permit Report. An electronic copy was emailed to the Planning Commission.

PLANNING REPORT

There came the matter of the Planning Report by Ginger Maddox Lowrey, AICP. Mrs. Lowrey introduced Nathan Satcher, the new Planning Division Office Manager. On July 21, 2020, City Council approved the rezone request, Conditional Use for a warehouse, and the alley closure for 119 Oak Street (HPC approval upheld). They also approved the rezone request and Conditional Use for a place of assembly at 103 Wisteria Drive (HPC approval upheld).

CHAIR'S REPORT

No report.

INTRODUCTIONS

Commissioners introduced themselves.

PUBLIC HEARING – PLANNING COMMISSION

There came the matter of Item A (Conditional Use), to consider a request that has been filed by Karnella Myers, Representative and Mark Gibson, Owner, as required in the Land Development Code, Ord. No. 3209, to request a Conditional Use as “Multi-Family Residential” in B-1 (Professional Business) District as defined by the LDC for a certain property located at 257 McLeod Street (Parcel 2-029J-10.137.00, PPIN 21836; Ward 4).

	<u>Name</u>	<u>Address</u>	<u>City/State</u>
<u>Presented by:</u>	Jeff Hall	PO Box 18307	Hattiesburg, MS
	Karnella Myers	PO Box 1	Picayune, MS
<u>Proponents:</u>	None		
<u>Opponents:</u>	None		
<u>Other:</u>	Chris West	104 McLeod St.	Hattiesburg, MS

Jeff Hall and Karnella Myers presented the request. Commissioner Pickett asked the representatives if there were any plans to add a barrier or protective railing along the creek bank. Ms. Myers stated that there would likely be some type of fencing put up along the creek. Commissioner Keysear asked what the plans were for solid waste management. Mr. Hall stated that his client, the owner of the property, would follow the City ordinances for the dumpsters/solid waste management on the property.

Chris West, who lives at a nearby property, asked if this would be Section 8 housing. He asked if federal state subsidies were provided for this housing. He also asked if background checks would be done on lessee and who would be managing the background screens. He stated the property abuts the school’s property and is also quite close to two Pre-K schools, making background screens important. Mr. West said he was not anti-low income housing, but he wanted to know what type of apartments these would be.

Mr. Hall rebutted by answering Mr. West’s questions. He stated that it was likely that the apartments do not even qualify for Section 8 status. Mr. Hall stated he was not aware of any federal/state housing grants so it was unlikely that this was something that would be pursued. However, if someone was eligible for some type of housing grant and wanted to apply, then they should apply. Mr. Hall also said that it is the owner’s policy to run background screens on his tenants prior to leasing, though the owner has ultimate discretion over leasing decisions.

Chair Miller declared the Public Hearing closed and the Business Meeting open to vote on the request (Item A). Commissioner Conville made a motion to approve the request with the conditions that a barrier be installed along the creek and substantial fencing be installed along the western and southern property boundaries. Commissioner Pickett seconded the motion. Mrs. Lowrey conducted a roll-call vote. Commissioners attending in person submitted physical voting sheets as well.

Commissioners voting aye: Dick Conville (via GoToMeeting)
 Jeff Keysear (via GoToMeeting)
 Elayne Lockett (in person)
 Mark Miller, Chair (via GoToMeeting)
 Rhoda A. Pickett (via GoToMeeting)
 Rebekah Ray (in person)
 Kenneth Waites (in person)

Commissioners voting nay: None

There came the matter of Item B (Text Amendment), to consider a request filed by The City of Hattiesburg, as required in the Land Development Code, Ord. No. 3209, to amend the Land Development Code Section 7 Standards of Design and Section 13 Definitions. More specifically, for the purpose of amending language as it relates to the design standards for parking and driveways.

	<u>Name</u>	<u>Address</u>	<u>City/State</u>
<u>Presented by:</u>	Staff		
<u>Proponents:</u>	None		
<u>Opponents:</u>	None		

Chair Miller declared the Public Hearing closed and the Business Meeting open to vote on the request (Item B). Commissioner Ray made a motion to recommend approval (Item B). Commissioner Lockett seconded the motion. Mrs. Lowrey conducted a roll-call vote. Commissioners attending in person submitted physical voting sheets as well.

Commissioners voting aye: Dick Conville (via GoToMeeting)
 Jeff Keysear (via GoToMeeting)
 Elayne Lockett (in person)
 Mark Miller, Chair (via GoToMeeting)
 Rhoda A. Pickett (via GoToMeeting)
 Rebekah Ray (in person)
 Kenneth Waites (in person)

Commissioners voting nay: None

BUSINESS MEETING

Having no further business, Commissioner Ray made a motion to adjourn the meeting. The motion was seconded by Commissioner Lockett. The meeting was adjourned at 2:20 PM.

Mark Miller, Chair

Ginger Maddox Lowrey, AICP, CFM, Planning Division Manager



Memorandum

To: Mayor Toby Barker and Members of City Council

From: Ginger Lowrey, Planning Administrator

cc: Andrew Ellard, Director

Date: Tuesday, August 18, 2020

Re: Approve or Deny a petition filed by Stephens Daniel, Architect, and The Betty Green Chain Bank Property Trust, Bobby L. Chain, Jr., Successor Trustee, Owner, to request a variance from Section 6, Table 6.1 "Maximum Front Setback" for B-2, "10 feet", and instead allow a setback of seventy-six (76) feet for a variance of sixty-six (66) feet along N 31st Avenue for a proposed building to be located at 3101 Hardy Street (Parcel 2-028K-07-052.00, PPIN 23016; 2-028K-07-053.00, PPIN 23015I; Ward 1). The Board of Adjustment recommended to Approve on August 5, 2020.
File Number: 2020-563
Minute Book #

Summary

3101 Hardy Street - Variance – Front setback on corner

Recommendation Statement

Approve or Deny a petition to request a variance from Section 6, Table 6.1 "Maximum Front Setback" for B-2, for a variance of sixty-six (66) feet along N 31st Avenue at 3101 Hardy Street

Please place this on the August 18, 2020 City Council meeting for consideration.



June 23, 2020

To Whom It May Concern:

As a resident of Midtown Hattiesburg, a business owner in Midtown Hattiesburg, and a founder of the Midtown Merchants Association, I enthusiastically endorse BancorpSouth's plans for a redesigned branch bank on Hardy Street, next to the University of Southern Mississippi.

BancorpSouth has always been a strong supporter of Hattiesburg, and an enthusiastic proponent of the upgrades and changes we are putting into place in the Midtown area.

If you have any questions, please do not hesitate to call.

Warmly,


Robert St. John

3904 HARDY ST., HATTIESBURG, MS 39404 / PO BOX 17318, HATTIESBURG, MS 39404

T: 601.264.0672 C: 601.270.7129 F: 601.264.0681



E: robert@robertstjohn.com

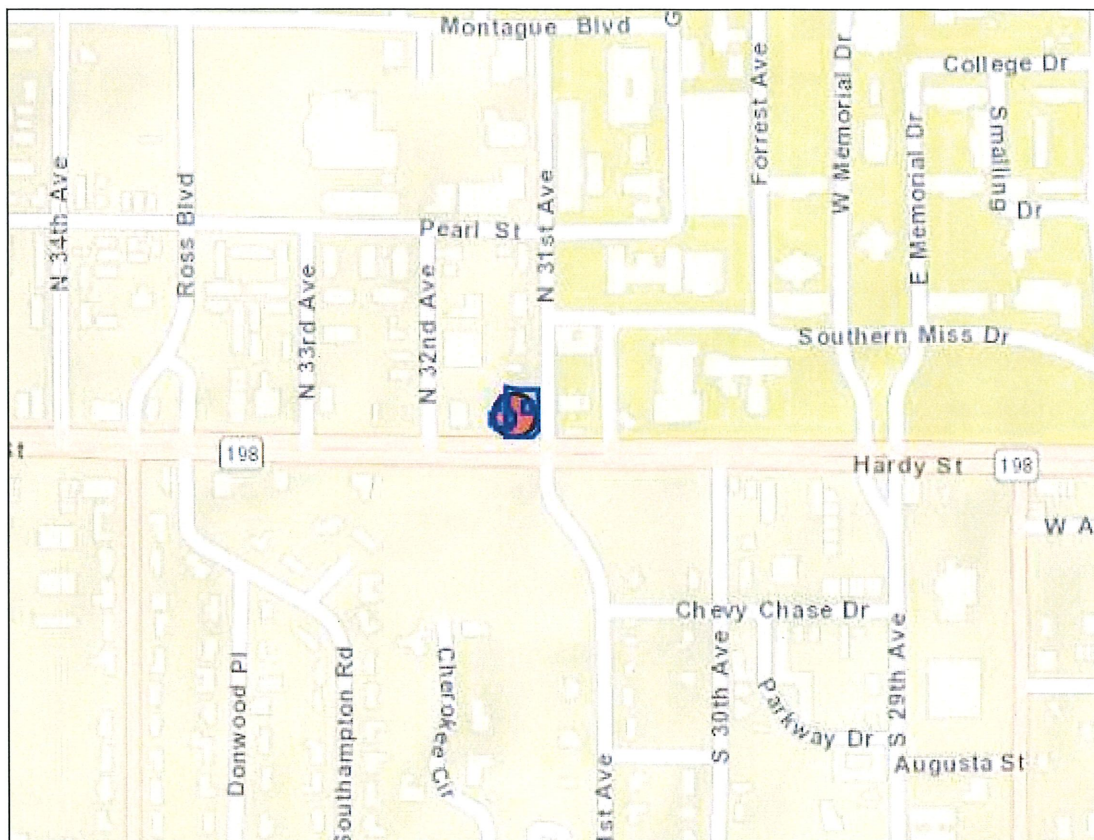


SUBJECT PARCEL: 3101 Hardy Street

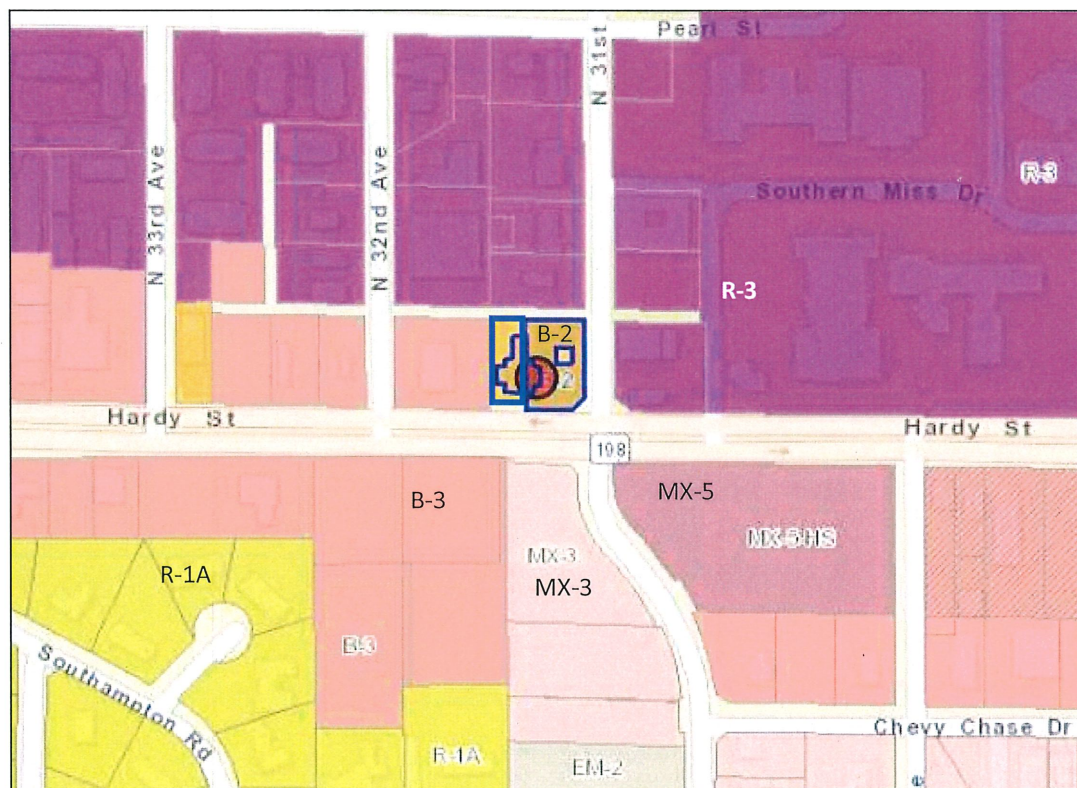
Stephens Daniel, Architect, and The Betty Green Chain Bank Property Trust, Owner
The petitioners to request a variance from Section 6, Table 6.1 "Maximum Front Setback"
for B-2, "10 feet", and instead allow a setback of seventy-six (76) feet for a variance of
sixty-six (66) feet along N 31st Avenue for a proposed building to be located at 3101
Hardy Street (Parcel 2-028K-07-052.00, PPIN 23016; 2-028K-07-053.00, PPIN 23015I;
Ward 1).



Vicinity Map—Ward 1



Zoning—B-2



Site Aerial



SURROUNDING AREA

Northern Direction: R-3 (Multi-Family) District/ University



Southern Direction: MX-3 (Mixed Use-Three Story) District/ Restaurants



Eastern Direction: R-3 (Multi-Family) District/ Gas Station

Western Direction: B-3 (Community Business) District/ Drive-Thru Restaurant



SITE PHOTOS

REAR OF SITE LOOKING SOUTH



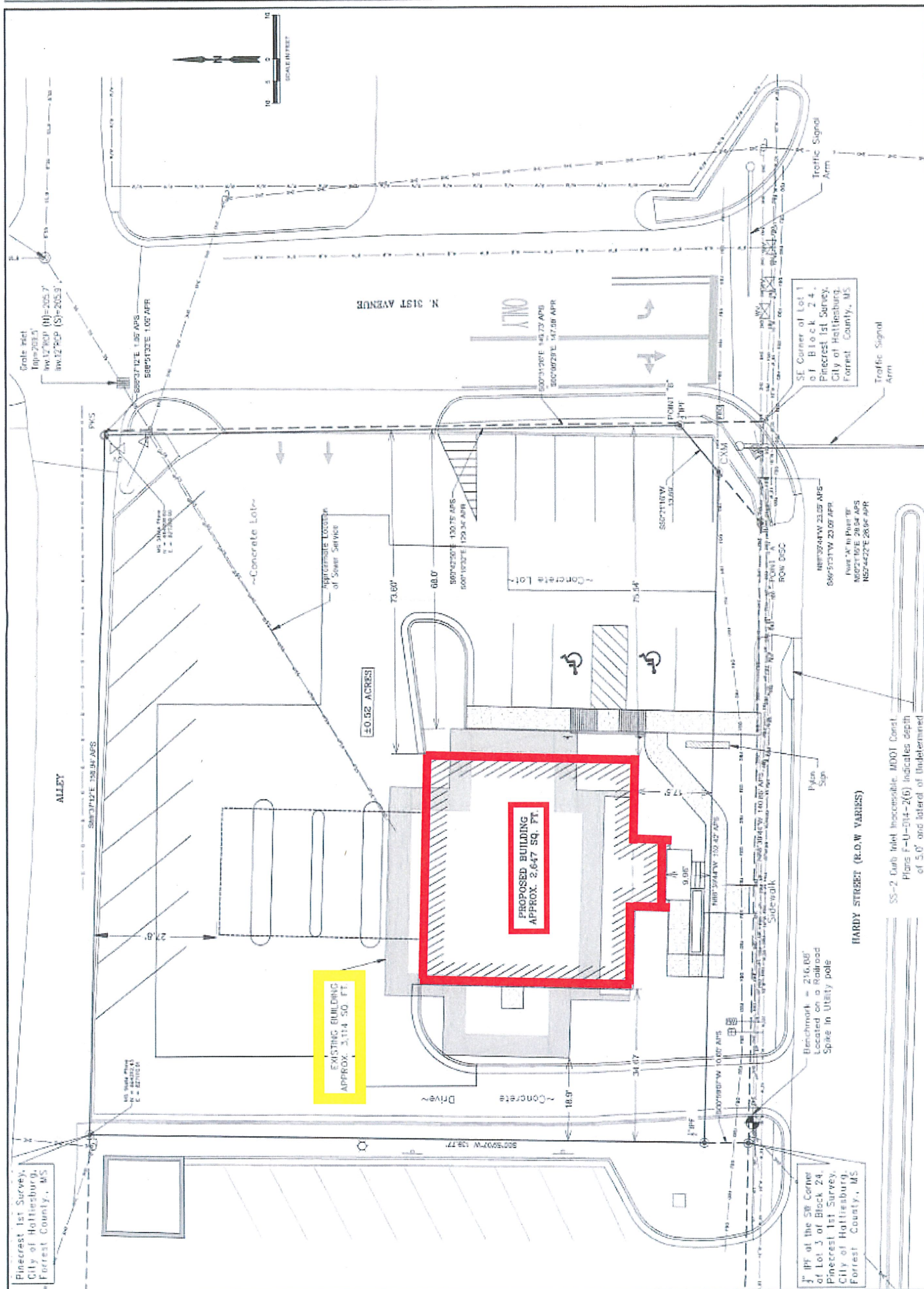
REAR OF SITE LOOKING
SOUTHWEST



HARDY STREET FRONTAGE
LOOKING NORTHEAST

N 31ST FRONTAGE LOOKING
SOUTHWEST







**Board of Adjustment
 Case Fact Sheet**

Petitioners: Stephens Daniel, Architect, and The Betty Green Chain Bank Property Trust, Bobby L. Chain, Jr., Successor Trustee, Owner

Address of Property:	Tax Parcel	PPIN:	Ward:
3101 Hardy Street	2-028K-07-052.00	23016	1
	2-028K-07-053.00	23015	

Request: Front Setback variance

Purpose of Request: To vary from Section 6, Table 6.1 "Maximum Front Setback" for B-2, "10 feet", and instead allow a setback of seventy-six (76) feet for a variance of sixty-six (66) feet along N 31st Avenue for a proposed building to be located at 3101 Hardy Street (Parcel 2-028K-07-052.00, PPIN 23016; 2-028K-07-053.00, PPIN 23015; Ward 1).

Applicant Summary: See Attached

Applicable Regulations:

SECTION 6 Dimensional Standards and Measurements

Table 6.1 Dimensional Standards										
District	Minimum Lot Size in SF/ Width at Setback	Max. Dwelling Units	Max. Floor Area Ratio	Setbacks in feet				Max. Height*	Max. Impervious Surface Lot Coverage	Buffer in Feet
				Min. Front	Max. Front	Min. Side	Min. Rear			
B-2	4,000/ 100	-	0.75	0	10	0 or 10	0	35 feet or 3 stories	80%	20

6.2.2 Corner lots shall have two front setbacks and two side setbacks The Planning Director may waive this requirement and determine the front yard to be on the street front that is in line with the prevailing pattern of front yards on the street in order to be consistent with the established pattern of the street.

Present Zoning: This parcel is currently zoned B-2 (Neighborhood Business) District.

Present Use: Bank

Future Land Use: Community Business

Surrounding Zoning and Land Use:
North: R-3 (Multi-Family) District/ University
South: MX-3 (Mixed Use–Three Story) District/ Restaurants
East: R-3 (Multi-Family) District/ Gas Station
West: B-3 (Community Business) District/ Drive-Thru Restaurant

Most Nearly Bounded By (streets): The parcel is bounded by Hardy Street to the south, Pearl Street to the north, N 31th Avenue to the east and N 32th Avenue to the west. It is accessible from Hardy Street, N 31st Ave, and an unnamed alley to the north of the property.

Letters or Concerns stated: The Planning Division Office has not received any letters relative to this case as of July 24, 2020.

History / Background: The petitioner met with Staff in Pre-Application to discuss a proposed demolition and rebuild of the Bancorp South building at 3101 Hardy Street. The design of the site will remain as currently designed. The site is a corner lot, fronting both Hardy Street and N. 31st Ave. The existing building is a legal nonconforming structure as it does not meet building setback requirements for B-2 zoning. The newly proposed building meets setback requirements along the Hardy Street frontage. However, the proposed building does not meet the required front setback along N. 31st Ave.

Any newly constructed building on the site will require conformance with the LDC setback standards. Per LDC Sec. 2.4.5.8, a nonconforming structure shall not be replaced with another nonconforming structure regardless of the degree of conformity. Building setback requirements in B-2 zoning are a minimum of 0' and a maximum of 10'.

A waiver for the corner lot front setback requirement as set forth in 6.2.2 was not issued due to the lack of a conformity with the prevailing patterns of front yards along 31st Ave. The shopfront and mixed-use buildings on across Hardy Street on S 31st Ave. require a 0' to 10' setback and were constructed under a different development code.

The petitioner proposes to keep the existing parking lot design, but

will adjust some of the more severe grades on the parking lot to allow for improved ADA access. The overall impervious area of the lot is decreasing, as the proposed building footprint is smaller than the existing footprint.

The provided site plan indicates the correct property lines. A discrepancy exists between the parcel lines of the provided site plan and the Forrest County tax maps, but Staff confirmed the accuracy of the applicant provided data.

Site and Design Review Committee review and approval of Site Plan is still required.

Basis for Approval (12.4.1.1):

I. Hardship.

- The hardship is unique to the property and is not or will not be caused by the actions or inactions of the applicant.
- There are exceptional conditions creating an undue hardship applicable only to the property involved or the intended use which do not apply generally to the other land areas or uses within the same zoning district.

II. Special Privilege. A variance shall not confer any special privilege that is denied to other lands or structures in the same zoning district.

III. Literal Interpretation. The literal interpretation of the provisions of the regulations would deprive the applicant of rights commonly enjoyed by other properties in the same zoning district and would cause unnecessary and undue hardship on the applicant.

IV. Reasonable Use. The applicant cannot make reasonable use of the property without the requested variance.

V. Minimum Required. The granting of a variance is the minimum variance that will make possible the reasonable use of the land or structure.

VI. Conformance with the Purposes of this Code. The granting of a variance will not conflict with the purposes and intent expressed or implied in the Land Development Code.

**R&BW, INC.
DBA
MCDONALD'S**

June 17, 2020

For Inclusion in Public Hearing Application

City of Hattiesburg
Department of Urban Development
200 Forrest Street
Hattiesburg, MS 39401

Re: BancorpSouth Bank's Public Hearing Application for Variance (the Application) for Property Located at 3101 Hardy Street, Hattiesburg, MS (the Property)

Ladies and Gentlemen:

R&BW Inc. dba McDonald's (R&BW) operates the McDonald's restaurant located at 3111 Hardy Street, Hattiesburg, MS, which borders the Property on the west. R & BW is aware of BancorpSouth Bank's Application for a variance from the front setback requirement applicable to North 31st Avenue and has no objection to the requests made therein.

If you have any questions about this letter, do not hesitate to contact me.

Sincerely,

R & BW, Inc. dba McDonald's

Ron H. Williams, Jr., President



Chad B. Williams, Vice President



11 Power Lane
Hattiesburg, Ms. 39402

PHONE 601-264-3107
FAX 601-264-2232
E-MAIL mcsaver@comcast.net

**MINUTES OF THE
REGULAR MEETING OF THE
HATTIESBURG BOARD OF ADJUSTMENT
August 5, 2020**

The Hattiesburg Board of Adjustment did meet in regular session on August 5, 2020 at 3:30 PM at the Jackie Dole Community Center, 220 West Front Street, Hattiesburg, Mississippi. Ginger Maddox Lowrey, AICP, Planning Division Manager and Shawn Harris, Chair, presided over the meeting. A quorum was indicated and the attendance was as follows:

Board Members Present: Bruce Betts, Vice-Chair (in person)
Dick Conville (via GoToMeeting)
Shawn Harris, Chair (in person)
Lucy Parkman (in person)
Rebekah Ray (in person)
James Trussell (in person)
Kenneth Waites (in person)

Board Members Absent: James Hughes

Also Present: Ginger Maddox Lowrey, AICP, Planning Division Manager
Caroline Miles, Planner
Jim Gladden, Esq.

Ginger Lowrey, AICP, Planning Division Manager, declared the meeting of the Hattiesburg Board of Adjustment open and in session at 3:30 PM.

AGENDA REVIEW

There came the matter of the August 2020 Agenda. Staff requested two corrections of clerical errors in Agenda Item A. A motion was made to approve the August 2020 Agenda with corrections by Shawn Harris and seconded by Rebekah Ray.

Board Members voting aye: Bruce Betts, Vice-Chair (in person)
Dick Conville (via GoToMeeting)
Shawn Harris, Chair (in person)
Lucy Parkman (in person)
Rebekah Ray (in person)
James Trussell (in person)
Kenneth Waites (in person)

Board Members voting nay: None

MINUTES REVIEW

There came the matter of the July 1, 2020 minutes. Kenneth Waites requested a spelling correction. A motion was made to approve the minutes by Shawn Harris and seconded by James Trussell.

Board Members voting aye: Bruce Betts, Vice-Chair (in person)
Dick Conville (via GoToMeeting)
Shawn Harris, Chair (in person)
Lucy Parkman (in person)
Rebekah Ray (in person)
James Trussell (in person)
Kenneth Waites (in person)

Board Members voting nay: None

REPORTS

PLANNING REPORT

Ginger Maddox Lowrey, AICP, Planning Division Manager, provided the Planning Report. Mrs. Lowrey reported that this was Rebekah Ray’s last meeting on the Board of Adjustment, as her term expires later in August. Mrs. Lowrey introduced Mr. Bernard Green, who called in on GoToMeeting, and who would be appointed in Ms. Ray’s place. Mrs. Lowrey also announced Nathan Satcher as the new Planning Division Office Manager. Additionally, on July 21, 2020, City Council approved a wall height variance at 3810 Hardy Street (BOA approval upheld).

CHAIR’S REPORT

Lucy Parkman, head of the Nominating Committee, announced the Committee’s choice for new Chair and Vice-Chair. They nominated Shawn Harris for Chair and Bruce Betts for Vice-Chair. Dick Conville made a motion to accept the Nominating Committee’s choices for Shawn Harris as Chair and Bruce Betts as Vice-Chair. Rebekah Ray seconded the motion.

Board Members voting aye: Bruce Betts, Vice-Chair (in person)
Dick Conville (via GoToMeeting)
Shawn Harris, Chair (in person)
Lucy Parkman (in person)
Rebekah Ray (in person)
James Trussell (in person)
Kenneth Waites (in person)

Board Members voting nay: None

INTRODUCTIONS

Board members introduced themselves.

PUBLIC HEARING – BOARD OF ADJUSTMENT

Shawn Harris, Chair, declared the Public Hearing for the Board of Adjustment open at 3:44 PM.

There came the matter of Item A (Front Setback Variance), Stephens Daniel, Architect, and The Betty Green Chain Bank Property Trust, Bobby L. Chain, Jr., Successor Trustee, Owner, as required in the Land Development Code, Ord. No. 3209, to request a variance from Section 6, Table 6.1 “Maximum Front Setback” for B-2, “10 feet”, and instead allow a setback of seventy-six (76) feet for a variance of sixty-six (66) feet along N 31st Avenue for a proposed building to be located at 3101 Hardy Street (Parcel 2-028K-07-052.00, PPIN 23016; 2-028K-07-053.00, PPIN 23015l; Ward 1).

	<u>Name</u>	<u>Address</u>	<u>City/State</u>
<u>Presented by:</u>	Stephens Daniel (via GoToMeeting)	398 E Main St. #209	Tupelo, MS
	Carol Drake (via GoToMeeting)	201 S Spring	Tupelo, MS
	Ted Webb (via GoToMeeting)	100 Hardy Street	Hattiesburg, MS
<u>Proponents:</u>	None		
<u>Opponents:</u>	None		

Stephens Daniel presented the application. Rebekah Ray asked the age of the building. Ted Webb stated he believed it was built in 1961. James Trussell asked if the current building had stacking issues with the drive-thru. Mr. Daniel and Mr. Webb stated that there were no current

stacking issues. Dick Conville asked the advantage of eliminating a unique, historic structure in Midtown rather than keeping it and retrofitting it, especially since there were issues on the site, such as stacking. He cited a case in Birmingham, AL, where the City allowed for the demoing of a historic building and the subsequent building of another structure in its place. The City was ultimately remorseful of its actions to demolish the older building. Carol Drake stated that the current bank building is, out-of-date, the interior does not meet the needs of the current bank functions, and there are maintenance issue for the bank; review of the renovation versus new building costs indicated similar costs to BancorpSouth.

Shawn Harris declared the Public Hearing closed and the Business Meeting open to vote on the request. Kenneth Waites made a motion to approve the front setback variance. The approval is based on the following criteria: Hardship, the hardship is unique to the property and is not or will not be caused by the action or inactions of the applicant and there are exceptional conditions creating an undue hardship applicable only to the property involved or intended use which do not generally to the other land areas or uses with in the same zoning district; Reasonable Use, the applicant cannot make reasonable use of the property without the requested variance; Minimum Required, the granting of a variance is the minimum variance that will make possible the reasonable use of the land or structure; Conformance with the Purposes of this Code, the granting of a variance will not conflict with the purposes and intent expressed or implied in the Land Development Code. Bruce Betts seconded the motion.

Board Members voting aye: Bruce Betts, Vice-Chair (in person)
Dick Conville (via GoToMeeting)
Shawn Harris, Chair (in person)
Lucy Parkman (in person)
Rebekah Ray (in person)
James Trussell (in person)
Kenneth Waites (in person)

Board Members voting nay: None

BUSINESS MEETING

There being no further business, Rebekah Ray made a motion to adjourn the meeting. The motion was seconded by James Trussell. The meeting was adjourned at 4:28 PM.

Shawn Harris, Chair

Ginger Maddox Lowrey, AICP, CFM, Planning Division Manager



Memorandum

To: Mayor Toby Barker and Members of City Council

From: Andrew Ellard, Director

cc: Wiley Quinn, Code Enforcement Division Manager

Date: Tuesday, August 18, 2020

Re: Adopt Resolutions adjudicating and directing the placement as an assessment for the cleanup costs and applicable penalties, not to exceed the values prescribed by State law, against the following properties.
File Number: 2020-557
Minute Book #

Summary

Adopt Resolutions of Adjudication 8 18 2020 for:

Case #1 212 Timothy Lane
Case #2 250 Dauphine Street

Recommendation Statement

I recommend the adoption of resolutions adjudicating property maintenance costs and penalties for the property on the attached list.

Please place this on the August 18, 2020 City Council meeting for consideration.



MAYOR
Toby Barker

COUNCIL - WARD ONE
Jeffrey George

COUNCIL - WARD TWO
Deborah Denard Delgado

COUNCIL - WARD THREE
Carter Carroll

COUNCIL - WARD FOUR
Mary Dryden

COUNCIL - WARD FIVE
Nicholas Brown

TO: Mayor and City Council

FR: Wiley Quinn, Code Enforcement Division Manager

DATE: August 18, 2020

RE: Adopt Resolution of Adjudication

I recommend adopting a Resolution adjudicating and directing the placement as an assessment the cleanup cost, and Title Opinion Cost not to exceed the values prescribed by State law, against the following property.

Case #	Owner	Address	PPIN	Clean Up Costs	Ward Number
1	Jimmy Brown 16 th Section Land Hattiesburg Public School District Lora Annette Hosey	212 Timothy Lane	21776	\$7420.44	4
2	William Lee Kerzee	250 Dauphine Street	20897	\$11,576.10	4

Prepared by:
City of Hattiesburg
Code Enforcement
P.O. Box 1898
Hattiesburg, MS 39403-1898
(601) 554-1027

Return to:
City of Hattiesburg
City Clerk’s Office
P.O. Box 1898
Hattiesburg, MS 39403-1898
(601) 545-4550

RESOLUTION

INDEXING INSTRUCTIONS: 2-038D-16-056; Begin 50 ft, NW corner of the S corner Lot 1, Block 93; NE 100ft, NW 75 ft, SW 100ft, SE 75 ft to POB

WHEREAS, Section 21-19-11 of the Mississippi Code of 1972, Annotated, authorizes the governing authorities of municipalities to adjudicate applicable penalties, plus the actual cost to the City of Hattiesburg for cleaning properties that have been determined to be in such a state of uncleanness as to be a menace to the public health and safety of the community, when the owner has failed, after appropriate notice, to clean said property; and

WHEREAS, the following property has been cleaned by MSP on behalf of the City.

NOW, THEREFORE, BE IT RESOLVED by the Mayor and Council of the City of Hattiesburg, Mississippi:

Section 1. That the City Council of the City of Hattiesburg does hereby adjudicate and direct the placement as an assessment the cleanup cost, plus applicable penalty against the following described property:

OWNER/LEGAL	ADDRESS	PARCEL NUMBER	CLEAN-UP COST
Jimmy Brown, Jr., 16th Section Lane, Hattiesburg Public School District, State of Mississippi, Lora Annette Hosey			
	<u>212 Timothy Lane</u>	<u>2-038D-16-056.00</u>	<u>\$7420.44</u>
			Total: \$7420.44

Begin 50 Feet Northwest of the South corner of Lot 1 of Block 93. Proceed Northeast 100 feet; then Northwest 75 feet; then Southwest 100 feet; then Southeast 75 to the point of beginning.

Section 2. That public interest and necessity requiring same, this resolution shall become Effective immediately from and after passage.

Section 3. A copy of this Resolution will be certified and recorded in the Chancery Clerk's Office of Forrest County, Mississippi.

The foregoing Resolution having been reduced to writing, the same was introduced by Council Person _____, seconded by Council Person _____ and was adopted by the

Following vote, to-wit:

YEAS:

NAYS:

The President thereby declared the motion carried and the Resolution adopted this the 18th day of August 2020.

(S E A L)

ATTEST:

ADOPTED:

CLERK OF COUNCIL

PRESIDENT

The above and foregoing Resolution, having been submitted to and approved by the Mayor, this the 18th day of August 2020.

ATTEST:

APPROVED:

CITY CLERK

MAYOR

Prepared by:
City of Hattiesburg
Code Enforcement
P.O. Box 1898
Hattiesburg, MS 39403-1898
(601) 554-1027

Return to:
City of Hattiesburg
City Clerk’s Office
P.O. Box 1898
Hattiesburg, MS 39403-1898
(601) 545-4550

RESOLUTION

INDEXING INSTRUCTIONS: Lots 18 and 19, Block 1, of Mosley and Dozier Subdivision, of Forrest County, Mississippi

WHEREAS, Section 21-19-11 of the Mississippi Code of 1972, Annotated, authorizes the governing authorities of municipalities to adjudicate applicable penalties, plus the actual cost to the City of Hattiesburg for cleaning properties that have been determined to be in such a state of uncleanness as to be a menace to the public health and safety of the community, when the owner has failed, after appropriate notice, to clean said property; and

WHEREAS, the following property has been cleaned by MSP on behalf of the City.

NOW, THEREFORE, BE IT RESOLVED by the Mayor and Council of the City of Hattiesburg, Mississippi:

Section 1. That the City Council of the City of Hattiesburg does hereby adjudicate and direct the placement as an assessment the cleanup cost, plus applicable penalty against the following described property:

OWNER/LEGAL	ADDRESS	PARCEL NUMBER	CLEAN-UP COST
William Lee Kerzee	250 Dauphine Street	2-029K-09-276.00	\$11,576.10
			Total: \$11,576.10

Lots 18 and 19, Block 1, of Mosley and Dozier Subdivision, of Forrest County, Mississippi, as per the map or plat thereof on file in the office of the Chancery Clerk of Forrest County, Mississippi; together with all improvements thereon and appurtenances thereunto belonging.

Section 2. That public interest and necessity requiring same, this resolution shall become Effective immediately from and after passage.

Section 3. A copy of this Resolution will be certified and recorded in the Chancery Clerk's Office of Forrest County, Mississippi.

The foregoing Resolution having been reduced to writing, the same was introduced by Council Person _____, seconded by Council Person _____ and was adopted by the
Following vote, to-wit:

YEAS:

NAYS:

The President thereby declared the motion carried and the Resolution adopted this the 18th day of August 2020.

(S E A L)

ATTEST:

ADOPTED:

CLERK OF COUNCIL

PRESIDENT

The above and foregoing Resolution, having been submitted to and approved by the Mayor, this the 18th day of August 2020.

ATTEST:

APPROVED:

CITY CLERK

MAYOR



Memorandum

To: Mayor Toby Barker and Members of City Council

From: Connie Everett, Interim CFO

cc:

Date: Tuesday, August 18, 2020

Re: Adopt the August 18, 2020 Amendments to the budget for the City of Hattiesburg for fiscal year ending September 30, 2020 and Adopt Resolution authorizing publication of amendments for funds in excess of 10% of the originally appropriated fund balance.
File Number: 2020-573
Minute Book #

Summary

Adopt August 18, 2020 budget amendments and authorize publication of Resolution for amendments in excess of 10% of originally appropriated fund balance.

Recommendation Statement

I recommend adoption of the proposed August 18, 2020 budget amendments and Resolution.

Please place this on the August 18, 2020 City Council meeting for consideration.

MEMORANDUM

TO : **Mayor Barker, Members of City Council**
FROM : **Connie Everett, Interim CFO**
DATE : **August 18, 2020**
SUBJECT : **Proposed Amendments, FY 2020**

Below is a list of the most significant proposed amendments to the FY 2020 General Fund budget:

- Correct error on Municipal Court grant amount
- Budget Police grant
- Reallocate fiscal year budget savings for additional paving projects

Attached is a more detailed list of proposed changes to the General Fund, detailing the impact to the Fund's budgeted ending cash. Descriptions are also included for proposed changes to the budgets of other funds.

If you have questions concerning the information presented, please give me a call.

RECAP OF PROPOSED AMENDMENTS**18-Aug-20****FY 2020****GENERAL FUND:**

Budgeted Ending Cash as amended 1,659,171

Amendments to Revenues:

Federal grant - adjust Mun. Court grant and Police
grant (214,521)

Total Amendments to Revenues (702,473)

Amendments to Expenditures:

Municipal Court - adjust grant award 301,290
Urban Dev - reallocate budget for paving 28,900
Info.Systems - budget for software costs (17,000)
Gen.Govt.Bldg - reallocate budget for paving 20,000
Police - adjust budget for grant & repair costs (69,819)
Streets - budget for addl. paving (283,350)
Drainage - reallocate budget for paving 184,500
Construction - adj. budget for benefits cost (3,600)
Health - adj. budget for benefits costs 3,600
Economic Dev. - reallocate budget for paving 50,000

Total Amendments to General Fund Expenditures (139,406)

Budgeted Ending Cash, as Amended 1,659,171

WATER & SEWER BOND & INTEREST FUND:

Adjust budget for interest cost 7,700

WATER & SEWER FUND:

Adjust budget for paying agent fee 5,000

CITY BOND & INTEREST FUND:

Transfer residual bond funds for issuance costs to construction fund 15,439

POLICE FORFEITURES FUND:

Budget court awarded fines for equipment purchases 50,060

WATER & SEWER CONSTRUCTION FUND:	
Budget for consent decree fines & penalties	165,600

PUBLIC SAFETY/RECREATION CONSTRUCTION FUND:	
Budget bond proceeds	17,795,590

INFRASTRUCTURE IMPR/INTERNET SALES TAX FUND:	
Budget additional sales tax revenue	52,738

CITY OF HATTIESBURG, MS. - GENERAL FUND
Analysis of Revenue and Expenditure Budgets
Fiscal Year Ending September 30, 2020

	Original FY 2020 Budgets	November Amend'ts	Amended Budgets	February Amend'ts	Amended Budgets	Proposed June Amend'ts	Proposed Amended Budgets	Proposed August Amend'ts	Proposed Amended Budgets
<u>Revenues & Beg. Cash Balance:</u>									
Taxes -Other	\$40,000		\$40,000		\$40,000		\$40,000		\$40,000
Licenses & Permits	4,397,600		4,397,600		\$4,397,600		\$4,397,600		\$4,397,600
Intergovernmental Revenues:							\$0		\$0
Federal	1,285,567	9,377	1,294,944	10,000	\$1,304,944	697,527	\$2,002,471	-214,521	\$1,787,950
State	202,595	-43,873	158,722	102,400	\$261,122		\$261,122		\$261,122
State-Shared	23,358,000		23,358,000		\$23,358,000	-1,400,000	\$21,958,000		\$21,958,000
County/City Shared	22,218	36,300	58,518	5,000	\$63,518		\$63,518		\$63,518
Charges for Services:					\$0		\$0		\$0
Public Safety	295,000		295,000	100,000	\$395,000		\$395,000		\$395,000
Streets	0		0		\$0		\$0		\$0
Sanitation	2,245,000		2,245,000		\$2,245,000		\$2,245,000		\$2,245,000
Misc.	0		0		\$0		\$0		\$0
Fines & Forf.	1,043,300		1,043,300		\$1,043,300		\$1,043,300		\$1,043,300
Misc. Revenues	302,400	121,000	423,400	4,750	\$428,150		\$428,150		\$428,150
Transfers-In	850,000		850,000		\$850,000		\$850,000		\$850,000
Non-Revenue Receipts	237,412		237,412	1,297,782	\$1,535,194		\$1,535,194		\$1,535,194
TOTAL REVENUES EXCLUSIVE OF PROPERTY TAXES	\$34,279,092	\$122,804	\$34,401,896	\$1,519,932	\$35,921,828	-\$702,473	\$35,219,355	-\$214,521	\$35,004,834
Beg. Fund Balance	8,400,000	994,348	9,394,348		\$9,394,348		9,394,348		\$9,394,348
Less Reserve for Court Technology	-900,000	-14,503	-914,503		-\$914,503		-914,503		-\$914,503
Less Reserve for Future Debt Service	-1,800,000	1,800,000	0		\$0		0		0
Property Tax Levy	18,400,000	335,000	18,735,000		\$18,735,000		18,735,000		\$18,735,000
TOTAL AVAIL. REVENUES	\$58,379,092	\$3,237,649	\$61,616,741	\$1,519,932	\$63,136,673	-\$702,473	\$62,434,200	-\$214,521	\$62,219,679

THE GENERAL FUND EXPENDITURE BUDGETS:

001003	City Council								
	Personnel	\$362,805		\$362,805		\$362,805	362,805		362,805
	Supplies & Expenses	3,400		3,400		\$3,400	3,400		3,400
	Other Services & Charges	251,500		251,500		\$251,500	3,500	255,000	255,000
	Capital Outlays	6,000		6,000		\$6,000	6,000		6,000
	Total - City Council	\$623,705	\$0	\$623,705	\$0	\$623,705	\$3,500	\$627,205	\$0
001015	City Court								
	Personnel	\$1,090,201		\$1,090,201		\$1,090,201	-\$25,260	1,064,941	1,064,941
	Supplies & Expenses	59,925	1,719	61,644	-28,761	\$32,883	3,121	36,004	35,183
	Other Services & Charges	529,694	80,000	609,694	26,110	\$635,804	713,398	1,349,202	1,048,733
	Capital Outlays	0		0		\$0		0	0
	Total - City Court	\$1,679,820	\$81,719	\$1,761,539	-\$2,651	\$1,758,888	\$691,259	\$2,450,147	-\$301,290
001020	Mayor/Admin.								
	Personnel	\$817,694		\$817,694		\$817,694	-\$94,934	722,760	722,760
	Supplies & Expenses	15,350		15,350		\$15,350		15,350	15,350
	Other Services & Charges	194,965		194,965	3,750	\$198,715		198,715	198,715
	Capital Outlays	5,000		5,000		\$5,000		5,000	5,000
	Total - Mayor/Admin.	\$1,033,009	\$0	\$1,033,009	\$3,750	\$1,036,759	-\$94,934	\$941,825	\$0
001030	Elections								
	Personnel	\$0		\$0		\$0		\$0	\$0
	Supplies & Expenses	1,400		1,400		\$1,400		1,400	1,400
	Other Services & Charges	45,550		45,550		\$45,550		45,550	45,550
	Capital Outlays	0		0		\$0		0	0
	Total - Elections	\$46,950	\$0	\$46,950	\$0	\$46,950	\$0	\$46,950	\$0
001040	Muni. Clerk								
	Personnel	\$323,178		\$323,178	-\$25,084	\$298,094	-\$15,933	\$282,161	\$282,161
	Supplies & Expenses	5,300		5,300		\$5,300		5,300	5,300
	Other Services & Charges	48,852	6,825	55,677		\$55,677		55,677	55,677
	Capital Outlays	0		0		\$0		0	0
	Total - Muni Clerk	\$377,330	\$6,825	\$384,155	-\$25,084	\$359,071	-\$15,933	\$343,138	\$0
001042	Accounting								
	Personnel	\$321,940		\$321,940	\$4,571	\$326,511	-\$7,827	\$318,684	\$318,684
	Supplies & Expenses	5,750		5,750		\$5,750		5,750	5,750
	Other Services & Charges	1,730		1,730		\$1,730		1,730	1,730
	Capital Outlays	0		0		\$0		0	0
	Total - Accounting	\$329,420	\$0	\$329,420	\$4,571	\$333,991	-\$7,827	\$326,164	\$0
001045	Purchasing								
	Personnel	\$126,415		\$126,415		\$126,415		\$126,415	\$126,415
	Supplies & Expenses	3,100		3,100		\$3,100		3,100	3,100
	Other Services & Charges	2,605	129	2,734		\$2,734		2,734	2,734
	Capital Outlays	0		0		\$0		0	0
	Total - Purchasing	\$132,120	\$129	\$132,249	\$0	\$132,249	\$0	\$132,249	\$0
001060	City Attorney								
	Personnel	\$95,655		\$95,655		\$95,655		\$95,655	\$95,655
	Supplies & Expenses	0		0		\$0		0	0
	Other Services & Charges	5,000		5,000		\$5,000		5,000	5,000
	Capital Outlays	0		0		\$0		0	0
	Total - City Attorney	\$100,655	\$0	\$100,655	\$0	\$100,655	\$0	\$100,655	\$0
001080	Human Resources								

CITY OF HATTIESBURG, MS. - GENERAL FUND
Analysis of Revenue and Expenditure Budgets
Fiscal Year Ending September 30, 2020

	Original FY 2020 Budgets	November Amend'ts	Amended Budgets	February Amend'ts	Amended Budgets	Proposed June Amend'ts	Proposed Amended Budgets	Proposed August Amend'ts	Proposed Amended Budgets
Personnel	\$188,812		\$188,812		\$188,812		\$188,812		\$188,812
Supplies & Expenses	9,600		9,600		9,600		9,600		9,600
Other Services & Charges	6,100		6,100		\$6,100		6,100		6,100
Capital Outlays	0		0		\$0		0		0
Total - Human Resources	\$204,512	\$0	\$204,512	\$0	\$204,512	\$0	\$204,512	\$0	\$204,512
001081 Loss Control									
Personnel	\$70,065		\$70,065		\$70,065		\$70,065		\$70,065
Supplies & Expenses	6,900		6,900		\$6,900		6,900		6,900
Other Services & Charges	4,000		4,000		\$4,000		4,000		4,000
Capital Outlays	0		0		\$0		0		0
Total - Loss Control	\$80,965	\$0	\$80,965	\$0	\$80,965	\$0	\$80,965	\$0	\$80,965
001090 Urban Development									
Personnel	\$724,472		\$724,472		\$724,472	-\$55,260	\$669,212		\$669,212
Supplies & Expenses	29,150		29,150	1,000	\$30,150		30,150		30,150
Other Services & Charges	86,850	51,925	138,775		\$138,775		138,775	-28,900	109,875
Capital Outlays	0		0		\$0		0		0
Total - Urban Dev.	\$840,472	\$51,925	\$892,397	\$1,000	\$893,397	-\$55,260	\$838,137	-\$28,900	\$809,237
001091 Information Systems									
Personnel	\$300,520	\$3,755	\$304,275		\$304,275		\$304,275		\$304,275
Supplies & Expenses	54,125		54,125		\$54,125		54,125		54,125
Other Services & Charges	589,945		589,945		\$589,945		589,945	17,000	606,945
Capital Outlays	243,703		243,703	12,651	\$256,354		256,354		256,354
Total - Inf. Systems	\$1,188,293	\$3,755	\$1,192,048	\$12,651	\$1,204,699	\$0	\$1,204,699	\$17,000	\$1,221,699
001092 Gen. Gov't Building									
Personnel			\$0		\$0		\$0		\$0
Supplies & Expenses	21,600		21,600		\$21,600		21,600		21,600
Other Services & Charges	172,100		172,100		\$172,100		172,100	-20,000	152,100
Capital Outlays	0	1,899	1,899		\$1,899		1,899		1,899
Total - Gen. Gov't Building	\$193,700	\$1,899	\$195,599	\$0	\$195,599	\$0	\$195,599	-\$20,000	\$175,599
001093 Intermodal Facility (Depot) O & M:									
Personnel	\$0		\$0		\$0		\$0		\$0
Supplies & Expenses	14,700		14,700		\$14,700		14,700		14,700
Other Services & Charges	81,100	36,338	117,438		\$117,438		117,438		117,438
Capital Outlays	0		0		\$0		0		0
Total - Depot O & M	\$95,800	\$36,338	\$132,138	\$0	\$132,138	\$0	\$132,138	\$0	\$132,138
001094 Metro Planning									
Personnel	\$235,281		\$235,281		\$235,281	-\$19,100	\$216,181		\$216,181
Supplies & Expenses	19,000		19,000		\$19,000		19,000		19,000
Other Services & Charges	149,200	165,340	314,540		\$314,540		314,540		314,540
Capital Outlays	0		0		\$0		0		0
Total - Metro Planning	\$403,481	\$165,340	\$568,821	\$0	\$568,821	-\$19,100	\$549,721	\$0	\$549,721
001095 Gen. Gov't Insurance/Other serv.									
Personnel	\$0		\$0		\$0		\$0		\$0
Supplies & Expenses	1,000		1,000		\$1,000		1,000		1,000
Other Services & Charges	2,349,400		2,349,400		\$2,349,400		2,349,400		2,349,400
Capital Outlays	0		0		\$0		0		0
Total - Gen. Gov't Insur/other Serv.	\$2,350,400	\$0	\$2,350,400	\$0	\$2,350,400	\$0	\$2,350,400	\$0	\$2,350,400
001096 Federal Programs Administration									
Personnel	\$0		0		\$0		0		0
Supplies	0		0		\$0		0		0
Other Services & Charges	0		0		\$0		0		0
Capital Outlay	0		0		\$0		0		0
Total - Federal Programs Admin.	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Recap - General Government Cost Centers									
Personnel	\$4,657,038	\$3,755	\$4,660,793	-\$20,513	\$4,640,280	-\$218,314	\$4,421,966	\$0	\$4,421,966
Supplies & Expenses	\$250,300	\$1,719	\$252,019	-\$27,761	\$224,258	\$3,121	\$227,379	-\$821	\$226,558
Other Services & Charges	\$4,518,591	\$340,557	\$4,859,148	\$29,860	\$4,889,008	\$716,898	\$5,605,906	-\$332,369	\$5,273,537
Capital Outlays	\$254,703	\$1,899	\$256,602	\$12,651	\$269,253	\$0	\$269,253	\$0	\$269,253
Total - Gen. Government	\$9,680,632	\$347,930	\$10,028,562	-\$5,763	\$10,022,799	\$501,705	\$10,524,504	-\$333,190	\$10,191,314
001100 Police									
Personnel	\$11,350,274	\$7,810	\$11,358,084		\$11,358,084	-\$82,729	\$11,275,355	\$3,840	\$11,279,195
Supplies & Expenses	729,324	38,000	767,324		\$767,324	-5,000	762,324	65,979	828,303
Other Services & Charges	644,796	9,043	653,839		\$653,839	5,000	658,839		658,839
Capital Outlays	0	117,353	117,353		\$117,353		117,353		117,353
Total - Police	\$12,724,394	\$172,206	\$12,896,600	\$0	\$12,896,600	-\$82,729	\$12,813,871	\$69,819	\$12,883,690
001131 Police & Fire Training									
Personnel	\$41,107		\$41,107		\$41,107	\$600	\$41,707	\$800	\$42,507
Supplies & Expenses	108,175		108,175	10,000	\$118,175		118,175	-800	117,375
Other Services & Charges	71,356	-311	71,045		\$71,045		71,045		71,045
Capital Outlays	2,002	4,213	6,215		\$6,215		6,215		6,215
Total - Police & Fire Training	\$222,640	\$3,902	\$226,542	\$10,000	\$236,542	\$600	\$237,142	\$0	\$237,142
001160 Fire									

CITY OF HATTIESBURG, MS. - GENERAL FUND
Analysis of Revenue and Expenditure Budgets
Fiscal Year Ending September 30, 2020

	Original FY 2020 Budgets	November Amend'ts	Amended Budgets	February Amend'ts	Amended Budgets	Proposed June Amend'ts	Proposed Amended Budgets	Proposed August Amend'ts	Proposed Amended Budgets
Personnel	\$8,727,232		\$8,727,232		\$8,727,232		\$8,727,232		\$8,727,232
Supplies & Expenses	323,068	34,300	357,368	5,000	362,368		362,368		362,368
Other Services & Charges	313,109		313,109		313,109		313,109		313,109
Capital Outlays	0		0		0		0		0
Total - Fire Dept.	\$9,363,409	\$34,300	\$9,397,709	\$5,000	\$9,402,709	\$0	\$9,402,709	\$0	\$9,402,709
001180 Code Enforcement									
Personnel	\$652,212		\$652,212		\$652,212	-\$32,482	\$619,730		\$619,730
Supplies & Expenses	26,450		26,450		\$26,450		26,450		26,450
Other Services & Charges	261,700		261,700		\$261,700		261,700		261,700
Capital Outlays	0		0		0		0		0
Total - Code Enforcement	\$940,362	\$0	\$940,362	\$0	\$940,362	-\$32,482	\$907,880	\$0	\$907,880
001190 Contractual Services - Public Safety									
Personnel	\$281,300		\$281,300	\$100,000	\$381,300		\$381,300		\$381,300
Supplies & Expenses	0		0		0		0		0
Other Services & Charges	918,000		918,000		\$918,000	300,000	1,218,000		1,218,000
Capital Outlays	0		0		0		0		0
Total - Cont. Serv. - Public Safety	\$1,199,300	\$0	\$1,199,300	\$100,000	\$1,299,300	\$300,000	\$1,599,300	\$0	\$1,599,300
Public Services Cost Centers:									
001191 Traffic Maint.									
Personnel	\$367,751		\$367,751		\$367,751	-\$33,665	\$334,086		\$334,086
Supplies & Expenses	221,872		221,872		\$221,872		221,872		221,872
Other Services & Charges	46,447		46,447		\$46,447		46,447		46,447
Capital Outlays	0		0		0		0		0
Total - Traffic Maint.	\$636,070	\$0	\$636,070	\$0	\$636,070	-\$33,665	\$602,405	\$0	\$602,405
001201 Streets									
Personnel	\$1,092,124		\$1,092,124	\$1,636	\$1,093,760	-\$68,114	\$1,025,646		\$1,025,646
Supplies & Expenses	450,986	20,490	471,476		\$471,476		471,476		471,476
Other Services & Charges	1,666,300	454,410	2,120,710		\$2,120,710		2,120,710	318,900	2,439,610
Capital Outlays	300,000		300,000		\$300,000		300,000	-35,550	264,450
Total - Streets	\$3,509,410	\$474,900	\$3,984,310	\$1,636	\$3,985,946	-\$68,114	\$3,917,832	\$283,350	\$4,201,182
001202 Street Lights									
Personnel			\$0		\$0		\$0		\$0
Supplies & Expenses			0		0		0		0
Other Services & Charges	1,310,000	10,000	1,320,000		\$1,320,000		1,320,000		1,320,000
Capital Outlays	0		0		0		0		0
Total - Street Lights	\$1,310,000	\$10,000	\$1,320,000	\$0	\$1,320,000	\$0	\$1,320,000	\$0	\$1,320,000
001203 Engineering									
Personnel	\$443,598		\$443,598		\$443,598		\$443,598		\$443,598
Supplies & Expenses	11,075		11,075		\$11,075		11,075		11,075
Other Services & Charges	308,487	60,000	368,487		\$368,487		368,487		368,487
Capital Outlays	0		0		0		0		0
Total - Engineering	\$763,160	\$60,000	\$823,160	\$0	\$823,160	\$0	\$823,160	\$0	\$823,160
001204 Shop									
Personnel	\$535,610		\$535,610	\$2,454	\$538,064	-\$41,104	\$496,960		\$496,960
Supplies & Expenses	48,386		48,386		\$48,386	-2,000	46,386		46,386
Other Services & Charges	39,484	2,000	41,484		\$41,484	4,000	45,484		45,484
Capital Outlays	0		0		0		0		0
Total - Shop	\$623,480	\$2,000	\$625,480	\$2,454	\$627,934	-\$39,104	\$588,830	\$0	\$588,830
001205 GOFs									
Personnel	\$0		\$0		\$0		\$0		\$0
Supplies & Expenses	6,620		6,620		\$6,620	-1,400	5,220		5,220
Other Services & Charges	18,150		18,150		\$18,150	1,400	19,550		19,550
Capital Outlays	0	10,750	10,750		\$10,750		10,750		10,750
Total - GOFs	\$24,770	\$10,750	\$35,520	\$0	\$35,520	\$0	\$35,520	\$0	\$35,520
001206 Drainage									
Personnel	\$0		\$0		\$0		\$0		\$0
Supplies & Expenses	51,800		51,800		\$51,800	-2,000	49,800		49,800
Other Services & Charges	63,800	54,300	118,100		\$118,100	2,000	120,100	-184,500	-64,400
Capital Outlays	712,310		712,310		\$712,310		712,310		712,310
Total - Drainage	\$827,910	\$54,300	\$882,210	\$0	\$882,210	\$0	\$882,210	-\$184,500	\$697,710
001207 Construction									
Personnel	\$824,826		\$824,826		\$824,826	-\$83,596	\$741,230	\$3,600	\$744,830
Supplies & Expenses	137,900		137,900		\$137,900		137,900		137,900
Other Services & Charges	108,132		108,132		\$108,132		108,132		108,132
Capital Outlays	0		0		0		0		0
Total - Construction	\$1,070,858	\$0	\$1,070,858	\$0	\$1,070,858	-\$83,596	\$987,262	\$3,600	\$990,862
001220 Sanitation									
Personnel	\$1,586,432		1,586,432	-\$4,772	\$1,581,660	-\$24,110	\$1,557,550		\$1,557,550
Supplies & Expenses	371,770	3,000	374,770		\$374,770		374,770		374,770
Other Services & Charges	1,425,295		1,425,295		\$1,425,295	40,000	1,465,295		1,465,295
Capital Outlays	287,000	-36,750	250,250		\$250,250	-40,000	210,250		210,250
Total - Sanitation	\$3,670,497	-\$33,750	\$3,636,747	-\$4,772	\$3,631,975	-\$24,110	\$3,607,865	\$0	\$3,607,865

CITY OF HATTIESBURG, MS. - GENERAL FUND
Analysis of Revenue and Expenditure Budgets
Fiscal Year Ending September 30, 2020

	Original FY 2020 Budgets	November Amend'ts	Amended Budgets	February Amend'ts	Amended Budgets	Proposed June Amend'ts	Proposed Amended Budgets	Proposed August Amend'ts	Proposed Amended Budgets
001221 Street Cleaning									
Personnel	\$0		\$0		\$0		\$0		\$0
Supplies & Expenses	0		0		\$0	705	705		705
Other Services & Charges	0		0		\$0		0		0
Capital Outlays	0		0		\$0		0		0
Total - Street Cleaning	\$0	\$0	\$0	\$0	\$0	\$705	\$705	\$0	\$705
001250 Health									
Personnel	\$1,611,425		\$1,611,425	-\$70,807	\$1,540,618	-\$155,783	\$1,384,835	-\$3,600	\$1,381,235
Supplies & Expenses	178,685	-3,585	175,100		\$175,100		175,100		175,100
Other Services & Charges	7,100		7,100		\$7,100		7,100		7,100
Capital Outlays	0		0		\$0		0		0
Total - Health	\$1,797,210	-\$3,585	\$1,793,625	-\$70,807	\$1,722,818	-\$155,783	\$1,567,035	-\$3,600	\$1,563,435
Recap - Public Services:									
Personnel	\$6,461,766	\$0	\$6,461,766	-\$71,489	\$6,390,277	-\$406,372	\$5,983,905	\$0	\$5,983,905
Supplies & Expenses	\$1,479,094	19,905	1,498,999	0	\$1,498,999	-4,695	1,494,304	0	1,494,304
Other Services & Charges	\$4,993,195	580,710	5,573,905	0	\$5,573,905	47,400	5,621,305	134,400	5,755,705
Capital Outlays	\$1,299,310	-26,000	1,273,310	0	\$1,273,310	-40,000	1,233,310	-35,550	1,197,760
Total - Public Services	\$14,233,365	\$574,615	\$14,807,980	-\$71,489	\$14,736,491	-\$403,667	\$14,332,824	\$98,850	\$14,431,674
001260 Animal Control									
Personnel	\$167,939		\$167,939		\$167,939	-\$9,552	\$158,387		\$158,387
Supplies & Expenses	15,400		15,400		\$15,400		15,400		15,400
Other Services & Charges	182,125		182,125		\$182,125		182,125		182,125
Capital Outlays	0		0		\$0		0		0
Total - Animal Control	\$365,464	\$0	\$365,464	\$0	\$365,464	-\$9,552	\$355,912	\$0	\$355,912
001280 Human/Social Assist.									
Personnel			\$0		\$0		\$0		\$0
Supplies & Expenses			0		\$0		0		0
Other Services & Charges	288,500		288,500	92,400	\$380,900		380,900		380,900
Capital Outlays			0		\$0		0		0
Total - Human/Social Assist.	\$288,500	\$0	\$288,500	\$92,400	\$380,900	\$0	\$380,900	\$0	\$380,900
001402 Economic Dev.									
Personnel			\$0		\$0		\$0		\$0
Supplies & Expenses			0		\$0		0		0
Other Services & Charges	360,810		360,810	92,002	\$452,812		452,812	-50,000	402,812
Capital Outlays		1,800,000	1,800,000		\$1,800,000		1,800,000		1,800,000
Total - Economic Dev.	\$360,810	\$1,800,000	\$2,160,810	\$92,002	\$2,252,812		\$2,252,812	-\$50,000	\$2,202,812
001460 Debt Service									
Principal	\$702,600	\$93,871	\$796,471	\$1,318,301	\$2,114,772		\$2,114,772		\$2,114,772
Interest	412,310	\$27,541	\$439,851	-\$20,519	\$419,332		\$419,332		\$419,332
Paying Agent Fee	3,000		\$3,000		\$3,000		\$3,000		\$3,000
Total Debt Service	\$1,117,910	\$121,412	\$1,239,322	\$1,297,782	\$2,537,104	\$0	\$2,537,104	\$0	\$2,537,104
001551 Airport									
Personnel	\$0		\$0		\$0		\$0		\$0
Supplies & Expenses	32,000		32,000		\$32,000		32,000		32,000
Other Services & Charges	47,550		47,550		\$47,550		47,550		47,550
Capital Outlays	0		0		\$0		0		0
Total - Airport	\$79,550	\$0	\$79,550	\$0	\$79,550	\$0	\$79,550	\$0	\$79,550
001553 Cemetery									
Personnel	\$821,001		\$821,001		\$821,001	-\$21,175	\$799,826		\$799,826
Supplies & Expenses	79,650	3,000	82,650		\$82,650		82,650		82,650
Other Services & Charges	60,801	26,000	86,801		\$86,801		86,801		86,801
Capital Outlays	65,200		65,200		\$65,200		65,200		65,200
Total - Cemetery	\$1,026,652	\$29,000	\$1,055,652	\$0	\$1,055,652	-\$21,175	\$1,034,477	\$0	\$1,034,477
001560 Parking Garages									
Personnel	\$124,288		\$124,288		\$124,288	-\$13,294	\$110,994		\$110,994
Supplies & Expenses	6,950		6,950		\$6,950		6,950		6,950
Other Services & Charges	54,950		54,950		\$54,950		54,950		54,950
Capital Outlays	0		0		\$0		0		0
Total - Parking Garages	\$186,188	\$0	\$186,188	\$0	\$186,188	-\$13,294	\$172,894	\$0	\$172,894
Transfers to Other Funds	\$3,850,150	393,000	\$4,243,150		\$4,243,150	-100,000	\$4,143,150		\$4,143,150
EXPENDITURES & TRANSFERS	\$55,639,326	\$3,476,365	\$59,115,691	\$1,519,932	\$60,635,623	\$139,406	\$60,775,029	-\$214,521	\$60,560,508
Recap - General Fund									
Personnel	\$33,284,157	\$11,565	\$33,295,722	\$7,998	\$33,303,720	-\$783,318	\$32,520,402	\$4,640	\$32,525,042
Supplies & Expenses	3,050,411	96,924	3,147,335	-12,761	3,134,574	-6,574	3,128,000	64,358	3,192,358
Other Services & Charges	12,718,483	955,999	13,674,482	214,262	13,888,744	1,069,298	14,958,042	-247,969	14,710,073
Capital Outlays	1,621,215	1,897,465	3,518,680	12,651	3,531,331	-40,000	3,491,331	-35,550	3,455,781
Principal Payments	702,600	93,871	796,471	1,318,301	2,114,772	0	2,114,772	0	2,114,772
Interest Payments	412,310	27,541	439,851	-20,519	419,332	0	419,332	0	419,332
Total - Gen. Fund Cost Centers	\$51,789,176	\$3,083,365	\$54,872,541	\$1,519,932	\$56,392,473	\$239,406	\$56,631,879	-\$214,521	\$56,417,358
Transfers to Other Funds	3,850,150	393,000	4,243,150	0	4,243,150	-100,000	4,143,150	0	4,143,150
Total - Expenditures & Transfers	\$55,639,326	\$3,476,365	\$59,115,691	\$1,519,932	\$60,635,623	\$139,406	\$60,775,029	-\$214,521	\$60,560,508
Ending Cash Budget	\$2,739,766	-\$238,716	\$2,501,050	\$0	\$2,501,050	-\$841,879	\$1,659,171	\$0	\$1,659,171

CITY OF HATTIESBURG, MS
Analysis of Expenditure Budgets - Funds Other Than General
Fiscal Year Ending September 30, 2020

	Original FY 2020 Budgets	November Amend'ts	Amended Budgets	Feb/March Amend'ts	Amended Budgets	Proposed June Amend'ts	Proposed Amended Budgets	Proposed August Amend'ts	Proposed Amended Budgets
Parks & Recreation (Fund #2):									
002300 Recreation Maint. Cost Center									
Personnel	\$1,530,340		\$1,530,340		\$1,530,340	-\$64,407	\$1,465,933		\$1,465,933
Supplies & Expenses	387,000		387,000		\$387,000		387,000		387,000
Other Services & Charges	498,702		498,702		\$498,702		498,702		498,702
Capital Outlays	149,000	42,654	191,654	20,000	\$211,654		211,654		211,654
Total - Recreation Maint.	\$2,565,042	\$42,654	\$2,607,696	\$20,000	\$2,627,696	-\$64,407	\$2,563,289	\$0	\$2,563,289
002315 Recreation Admin.									
Personnel	\$626,870		\$626,870		\$626,870	-\$61,610	\$565,260		\$565,260
Supplies & Expenses	86,800		86,800		\$86,800		86,800		86,800
Other Services & Charges	466,492		466,492		\$466,492		466,492		466,492
Capital Outlays	0		0		\$0		0		0
Total - Recreation Admin.	\$1,180,162	\$0	\$1,180,162	\$0	\$1,180,162	-\$61,610	\$1,118,552	\$0	\$1,118,552
Kamper Park Zoo									
Personnel	\$0		\$0		\$0		\$0		\$0
Supplies & Expenses	0		0		\$0		0		0
Other Services & Charges	0		0		\$0		0		0
Capital Outlays	0		0		\$0		0		0
Total - Kamper Park	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Recap - Parks & Recreation Fund:									
Personnel	\$2,157,210	\$0	\$2,157,210	\$0	\$2,157,210	-\$126,017	\$2,031,193	\$0	\$2,031,193
Supplies & Expenses	473,800	0	473,800	0	\$473,800	0	\$473,800	0	473,800
Other Services & Charges	965,194	0	965,194	0	\$965,194	0	\$965,194	0	965,194
Capital Outlays	149,000	42,654	191,654	20,000	\$211,654	0	\$211,654	0	211,654
Total - Recreation Maint.	\$3,745,204	\$42,654	\$3,787,858	\$20,000	\$3,807,858	-\$126,017	\$3,681,841	\$0	\$3,681,841
Municipal Fire Protection (Fund #5):									
Personnel	\$0		\$0		\$0		\$0		\$0
Supplies & Expenses	68,500		68,500		\$68,500		68,500		68,500
Other Services & Charges	60,200		60,200		\$60,200		60,200		60,200
Capital Outlays	262,100		262,100		\$262,100		262,100		262,100
Principal Payments	239,500		239,500		\$239,500		239,500		239,500
Interest Payments	10,700		10,700		\$10,700		10,700		10,700
Total - Municipal Fire Prot. Fund	\$641,000	\$0	\$641,000	\$0	\$641,000	\$0	\$641,000	\$0	\$641,000
Special Streets (Fund #8):									
Personnel	\$0		\$0		\$0		\$0		\$0
Supplies & Expenses	0		0		\$0		\$0		0
Other Services & Charges	100,000		100,000		\$100,000		100,000		100,000
Capital Outlays	0		0		\$0		0		0
Total - Special Streets	\$100,000	\$0	\$100,000	\$0	\$100,000	\$0	\$100,000	\$0	\$100,000
Water & Sewer Operation & Maint. (Fund #9):									
009660 Customer Accounts Cost Center									
Personnel	\$690,940		\$690,940		\$690,940	\$705	\$691,645		\$691,645
Supplies & Expenses	52,000		52,000		\$52,000		52,000		52,000
Other Services & Charges	266,200		266,200		\$266,200		266,200		266,200
Capital Outlays	20,000		20,000		\$20,000		20,000		20,000
Total - Customer Accounts	\$1,029,140	\$0	\$1,029,140	\$0	\$1,029,140	\$705	\$1,029,845	\$0	\$1,029,845
009672 Water Transmission Cost Center									
Personnel	\$856,320		\$856,320		\$856,320	\$10,141	\$866,461	\$43,400	\$909,861
Supplies & Expenses	279,753		279,753		\$279,753		279,753	-16,934	262,819
Other Services & Charges	1,057,000		1,057,000		\$1,057,000	307,000	1,364,000	281,588	1,645,588
Capital Outlays	270,500		270,500		\$270,500		270,500	-43,342	227,158
Total - Water Trans.	\$2,463,573	\$0	\$2,463,573	\$0	\$2,463,573	\$317,141	\$2,780,714	\$264,712	\$3,045,426
009673 Plant Cost Center									
Personnel	\$626,370		\$626,370		\$626,370	\$1,401	\$627,771	-\$35,000	\$592,771
Supplies & Expenses	137,000		137,000		\$137,000	-9,000	128,000	-4,111	123,889
Other Services & Charges	1,236,098	4,000	1,240,098		\$1,240,098	-146,000	1,094,098	-1,500	1,092,598
Capital Outlays	138,000		138,000		\$138,000		138,000		138,000
Total - Plant	\$2,137,468	\$4,000	\$2,141,468	\$0	\$2,141,468	-\$153,599	\$1,987,869	-\$40,611	\$1,947,258
009676 Sewer Cost Center									
Personnel	\$595,834		\$595,834		\$595,834	-\$16,452	\$579,382	-\$8,400	\$570,982
Supplies & Expenses	330,100		330,100		\$330,100	-100,000	230,100	-10,577	219,523
Other Services & Charges	2,234,500		2,234,500		\$2,234,500	228,000	2,462,500	144,537	2,607,037
Capital Outlays	458,000		458,000		\$458,000	-228,000	230,000	-21,460	208,540
Total - Sewer	\$3,618,434	\$0	\$3,618,434	\$0	\$3,618,434	-\$116,452	\$3,501,982	\$104,100	\$3,606,082
009677 Lagoon Cost Center									
Personnel	\$278,829		\$278,829		\$278,829	\$4,205	\$283,034		\$283,034
Supplies & Expenses	373,500	3,720	377,220		\$377,220	-40,000	337,220	-49,536	287,684
Other Services & Charges	2,269,400		2,269,400		\$2,269,400	-12,000	2,257,400	-278,665	1,978,735
Capital Outlays	0		0		\$0		0		0
Principal Payments	0		0		\$0		0		0
Interest Payments	0		0		\$0		0		0
Total - Lagoon Cost Center	\$2,921,729	\$3,720	\$2,925,449	\$0	\$2,925,449	-\$47,795	\$2,877,654	-\$328,201	\$2,549,453
Recap: Water & Sewer O & M Fund:									
Personnel	\$3,048,293	\$0	\$3,048,293	\$0	\$3,048,293	\$0	\$3,048,293	\$0	\$3,048,293

CITY OF HATTIESBURG, MS
Analysis of Expenditure Budgets - Funds Other Than General
Fiscal Year Ending September 30, 2020

	Original FY 2020 Budgets	November Amend'ts	Amended Budgets	Feb/March Amend'ts	Amended Budgets	Proposed June Amend'ts	Proposed Amended Budgets	Proposed August Amend'ts	Proposed Amended Budgets
Supplies & Expenses	1,172,353	3,720	1,176,073	0	1,176,073	-149,000	1,027,073	-81,158	\$945,915
Other Services & Charges	7,063,198	4,000	7,067,198	0	7,067,198	377,000	\$7,444,198	145,960	\$7,590,158
Capital Outlays	886,500	0	886,500	0	886,500	-228,000	\$658,500	-64,802	\$593,698
Principal Payments	0	0	0	0	0	0	0	0	\$0
Interest Payments	0	0	0	0	0	0	0	0	\$0
Total - Water & Sewer O & M Fund	\$12,170,344	\$7,720	\$12,178,064	\$0	\$12,178,064	\$0	\$12,178,064	\$0	\$12,178,064
Water & Sewer Bond & Int. (Fund #10):									
Principal Payments	\$5,361,000		\$5,361,000		\$5,361,000		\$5,361,000		\$5,361,000
Interest Payments	\$2,217,215		\$2,217,215		\$2,217,215		\$2,217,215	\$7,700	\$2,224,915
Paying Agent Fees	\$15,000		\$15,000		\$15,000		\$15,000		\$15,000
Total - W & S Bond & Int. Fund	\$7,593,215	\$0	\$7,593,215	\$0	\$7,593,215	\$0	\$7,593,215	\$7,700	\$7,600,915
Water & Sewer Revenue (Fund #11):									
Principal Payments	\$0		\$0		\$0		\$0		\$0
Interest Payments	0		0		0		0		0
Other services & charges	76,700		76,700		76,700		76,700	5,000	81,700
Transfers to other funds	22,840,600		22,840,600		22,840,600		22,840,600		22,840,600
Total - W & S Revenue Fund	\$22,917,300	\$0	\$22,917,300	\$0	\$22,917,300	\$0	\$22,917,300	\$5,000	\$22,922,300
2020 Tax Increment (Planet Fitness) Bond & Int (Fund #12):									
Principal Payments	\$0		\$0		\$0	\$9,282	\$9,282		\$9,282
Interest Payments	0		0		0	3,840	\$3,840		3,840
Other Services & Charges				55,000	\$55,000	-5,110	\$49,890		49,890
Transfers	0		0		0		0		0
Paying Agent Fees	0		0		0		0		0
Total - 1999 TIF Bond & Int Fund	\$0	\$0	\$0	\$55,000	\$55,000	\$8,012	\$63,012	\$0	\$63,012
City Bond & Interest (Fund #13):									
Principal Payments	\$935,000		\$935,000		\$935,000		\$935,000		\$935,000
Interest Payments	1,457,982	75,000	1,532,982		\$1,532,982		\$1,532,982		1,532,982
Other Services & Charges	32,000		32,000		\$32,000		\$32,000		32,000
Transfers			0		\$0		\$0	15,439	15,439
Paying Agent Fees	10,000		10,000		\$10,000		\$10,000		10,000
Total - 1999 TIF Bond & Int Fund	\$2,434,982	\$75,000	\$2,509,982	\$0	\$2,509,982	\$0	\$2,509,982	\$15,439	\$2,525,421
USA Yeast Bond & Interest (Fund #15):									
Principal Payments	\$0		\$0		\$0		\$0		\$0
Interest Payments	0		0		0		0		0
Transfers Out	0		0		0		0		0
other services & charges	0		0		0		0		0
Total - 1999 TIF Bond & Int Fund	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Police Fines & Forfeitures (Fund #19):									
Personnel	\$0		\$0		\$0		0		\$0
Supplies & Expenses	135,399	-59,551	75,848		\$75,848		75,848	5,493	81,341
Other Services & Charges	48,000		48,000		\$48,000	-9,411	38,589		38,589
Capital Outlays	16,601	78,652	95,253		\$95,253	9,411	104,664	44,567	149,231
Transfers	0		0		0		0		0
Total - Fines & Forf. Fund	\$200,000	\$19,101	\$219,101	\$0	\$219,101	\$0	\$219,101	\$50,060	\$269,161
Series 2002 TIF Bond & Int (Southern Pointe, Fund #20):									
Principal Payments	\$155,000		\$155,000		\$155,000		155,000		\$155,000
Interest Payments	89,605		89,605		\$89,605		89,605		89,605
other services & charges	2,000		2,000		\$2,000		2,000		2,000
Total - 1999 TIF Bond & Int Fund	\$246,605	\$0	\$246,605	\$0	\$246,605	\$0	\$246,605	\$0	\$246,605
Series 2004 TIF Bond & Int (Home Depot, Fund #21):									
Principal Payments	\$0		\$0		\$0		\$0		\$0
Interest Payments	0		0		0		0		0
Transfers	0		0		0		0		0
other services & charges	0		0		0		0		0
Total - 2004 TIF Bond & Int Fund	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Series 2003 TIF Bond & Int (Chauvet Sq., Fund #22):									
Principal Payments	\$135,000		\$135,000		\$135,000		135,000		\$135,000
Interest Payments	59,610		59,610		\$59,610		59,610		59,610
other services & charges	2,500		2,500		\$2,500		2,500		2,500
Transfers to other Funds	0		0		0		0		0
Total - 2003 TIF Bond & Int Fund	\$197,110	\$0	\$197,110	\$0	\$197,110	\$0	\$197,110	\$0	\$197,110
Series 2007 TIFBond & Int (Turtle Creek Fund 23):									
Principal Payments	475,000		475,000		\$475,000		475,000		475,000
Interest Payments	83,620		83,620		\$83,620		83,620		83,620
Other Services & Charges	5,000		5,000		\$5,000		5,000		5,000
Total - 2007 TIF Bond & Int Fund	\$563,620	\$0	\$563,620	\$0	\$563,620	\$0	\$563,620	\$0	\$563,620
Series 2008 TIF Bond & Int (Lincoln Center Fund 24):									
Principal Payments	\$50,000		50,000		\$50,000		50,000		50,000
Interest Payments	\$8,000		8,000		\$8,000		8,000		8,000
Other Services & Charges	\$1,000		1,000		\$1,000		1,000		1,000
Total - 2008 TIF Bond & Int Fund	\$59,000	\$0	\$59,000	\$0	\$59,000	\$0	\$59,000	\$0	\$59,000
Series 2011 TIF Bond & Int (Turtle Creek Commons/Kohl's Fund 25):									
Principal Payments	\$80,000		80,000		\$80,000		80,000		80,000

CITY OF HATTIESBURG, MS
Analysis of Expenditure Budgets - Funds Other Than General
Fiscal Year Ending September 30, 2020

	Original FY 2020 Budgets	November Amend'ts	Amended Budgets	Feb/March Amend'ts	Amended Budgets	Proposed June Amend'ts	Proposed Amended Budgets	Proposed August Amend'ts	Proposed Amended Budgets
Interest Payments	\$8,250		8,250		8,250		8,250		8,250
Other Services & Charges	\$2,000		2,000		2,000		2,000		2,000
Total - 2008 TIF Bond & Int Fund	\$90,250	\$0	\$90,250	\$0	\$90,250	\$0	\$90,250	\$0	\$90,250
Series 22016 TIF Bond & Int (Whispering Pines Fund 26):									
Principal Payments	\$169,000		169,000		169,000		169,000		169,000
Interest Payments	\$111,143		111,143		111,143		111,143		111,143
Other Services & Charges	\$2,000		2,000		2,000		2,000		2,000
Total - 2008 TIF Bond & Int Fund	\$282,143	\$0	\$282,143	\$0	\$282,143	\$0	\$282,143	\$0	\$282,143
Series 2016 TIF Bond & Int (Hburg Clinic Midtown Fund 28):									
Principal Payments	\$47,000		47,000		47,000		47,000		47,000
Interest Payments	\$28,485		28,485		28,485		28,485		28,485
Other Services & Charges			0		\$0		0		0
Total - 2008 TIF Bond & Int Fund	\$75,485	\$0	\$75,485	\$0	\$75,485	\$0	\$75,485	\$0	\$75,485
Airport Imp. (Fund #39):									
Personnel	\$0		\$0		\$0		\$0		\$0
Supplies & Expenses	0		0		\$0		0		0
Other Services & Charges	0		0	363,443	\$363,443		363,443		363,443
Capital Outlays	870,000		870,000	1,804,057	\$2,674,057		2,674,057		2,674,057
Total - Airport Imp. Fund	\$870,000	\$0	\$870,000	\$2,167,500	\$3,037,500	\$0	\$3,037,500	\$0	\$3,037,500
Series 2015A TIF Bond & Int (The Ridge at Turtle Creek) (Fund #50)									
Principal Payments	64000		64,000		64,000		64,000		64,000
Interest Payments	55825		55,825		55,825		55,825		55,825
Paying Agent Fees	2000		2,000		2,000		2,000		2,000
Other Services & Charges	0		0		0		0		0
Total - Series 2015A TIF Bond & Int	\$ 121,825	\$ -	\$ 121,825	\$ -	\$ 121,825	\$ -	\$ 121,825	\$ -	\$ 121,825
Series 2015B TIF Bond & Int (Midtown Market) (Fund #51)									
Principal Payments	11000		11,000		11,000		11,000		11,000
Interest Payments	9598		9,598		9,598		9,598		9,598
Paying Agent Fees	2000		2,000		2,000	-11	1,989		1,989
Other Services & Charges			0		0	11	11		11
Total - Series 2015B TIF Bond & Int	\$ 22,598	\$ -	\$ 22,598	\$ -	\$ 22,598	\$ -	\$ 22,598	\$ -	\$ 22,598
Series 2019 TIF Bond & Int (Elam Arms) (Fund #52)									
Principal Payments									
Interest Payments									
Paying Agent Fees									
Other Services & Charges									
Total - Series 2019 TIF Bond & Int	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Municipal Road & Bridge (Fund #72):									
Personnel	\$0		\$0		\$0		\$0		\$0
Supplies & Expenses	0		0		\$0		\$0		0
Other Services & Charges	2,030,000	185,000	2,215,000		\$2,215,000		\$2,215,000		2,215,000
Capital Outlays	3,921,000	235,110	4,156,110		\$4,156,110	170,000	\$4,326,110		4,326,110
Principal	0		0		\$0		\$0		0
Interest	0		0		\$0		\$0		0
Total - Municipal Road & Bridge	\$5,951,000	\$420,110	\$6,371,110	\$0	\$6,371,110	\$170,000	\$6,541,110	\$0	\$6,541,110
Mass Transit (Fund #73):									
Personnel	\$1,191,876		\$1,191,876		\$1,191,876		\$1,191,876		\$1,191,876
Supplies & Expenses	229,600		229,600		\$229,600		\$229,600		229,600
Other Services & Charges	380,146	-28,908	351,238		\$351,238		\$351,238		351,238
Capital Outlays	1,130,924	-34,480	1,096,444		\$1,096,444		\$1,096,444		1,096,444
Total - Mass Transit Fund	\$2,932,546	-\$63,388	\$2,869,158	\$0	\$2,869,158	\$0	\$2,869,158	\$0	\$2,869,158
Water & Sewer Construction (Fund #75):									
Personnel	\$0		\$0		\$0		\$0		\$0
Supplies & Expenses	0		0		\$0		0		0
Other Services & Charges	917,097		917,097		\$917,097		917,097	165,600	1,082,697
Transfers							0		0
Capital Outlays	4,754,003		4,754,003		\$4,754,003		4,754,003		4,754,003
Total - W & S Construction Fund	\$5,671,100	\$0	\$5,671,100	\$0	\$5,671,100	\$0	\$5,671,100	\$165,600	\$5,836,700
Community Centers (Fund #77):									
Personnel	\$663,837		\$663,837		\$663,837	-\$33,180	630,657		\$630,657
Supplies & Expenses	50,750		50,750		\$50,750		50,750		50,750
Other Services & Charges	170,877		170,877		\$170,877		170,877		170,877
Capital Outlays	70,700	28,046	98,746		\$98,746		98,746		98,746
Total - Community Centers Fund	\$956,164	\$28,046	\$984,210	\$0	\$984,210	-\$33,180	\$951,030	\$0	\$951,030
Community Dev. Block Grant (Fund #82):									
Personnel	\$225,020	\$1,820	\$226,840		\$226,840		226,840		\$226,840
Supplies & Expenses	8,200		8,200		\$8,200		8,200		8,200
Other Services & Charges	223,602		223,602		\$223,602	221,280	444,882		444,882
Capital Outlays	1,901,377	-181,744	1,719,633		\$1,719,633	100,000	1,819,633		1,819,633
Transfers	0		0		\$0		0		0
Total - CDBG Fund	\$2,358,199	-\$179,924	\$2,178,275	\$0	\$2,178,275	\$321,280	\$2,499,555	\$0	\$2,499,555

CITY OF HATTIESBURG, MS
Analysis of Expenditure Budgets - Funds Other Than General
Fiscal Year Ending September 30, 2020

	Original FY 2020 Budgets	November Amend'ts	Amended Budgets	Feb/March Amend'ts	Amended Budgets	Proposed June Amend'ts	Proposed Amended Budgets	Proposed August Amend'ts	Proposed Amended Budgets
Series 2009 G.O. Bonds - AMR Project (Fund #78)									
Supplies	\$0		0		\$0		0		0
Other Services & Charges	\$0		0		\$0		0		0
Transfers Out	\$0		0		\$0		0		0
Capital Outlay	0		0		\$0		0		0
Total - Series 2009 G.O. Bonds	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

Special Sales Tax-Parks/Rec/USM Improvements (Fund #6):

Personal Services						\$12,457	12,457		12,457
Supplies	\$0		0		\$0		0		0
Other Services & Charges	\$1,499,000		1,499,000		\$1,499,000		1,499,000		1,499,000
Transfers Out	0		0		\$0		0		0
Capital Outlay	1,619,000	\$219,194	1,838,194		\$1,838,194		1,838,194		1,838,194
Total - Parks/Rec/USM Impr.	\$3,118,000	\$219,194	\$3,337,194	\$0	\$3,337,194	\$12,457	\$3,349,651	\$0	\$3,349,651

Public Safety/Recreation Construction (Fund #88):

Personnel	\$0		\$0		\$0		\$0		\$0
Supplies & Expenses	0		0		\$0		0		0
Other Services & Charges	0		0		\$0		0	622,825	622,825
Capital Outlays	28,140,000	-1,097,678	27,042,322		\$27,042,322		27,042,322	16,625,785	43,668,107
Transfers to other Funds	0		0		\$0		0	546,980	546,980
Total - Series 2002 Const. Fund	\$28,140,000	-\$1,097,678	\$27,042,322	\$0	\$27,042,322	\$0	\$27,042,322	\$17,795,590	\$44,837,912

MDA Energy Efficiency Capital Projects (Fund #89):

Personnel	\$0		\$0		\$0		0		\$0
Supplies & Expenses	0		0		\$0		0		0
Other Services & Charges	0		0		\$0		0		0
Capital Outlays	0		0		\$0		0		0
Transfers	0		0		\$0		0		0
Total - Series 2004 Const. Fund	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

Series 2008 G.O. Note (Downtown Lighting)(Fund # 90):

Personnel	\$0		\$0		\$0		\$0		\$0
Supplies & Expenses	0		0		\$0		0		0
Other Services & Charges	0		0		\$0		0		0
Capital Outlays	0		0		\$0		0		0
Transfers	0		0		\$0		0		0
Total - Series 2004 Const. Fund	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

TIF Construction (Fund # 91):

Personnel	\$0		\$0		\$0		\$0		\$0
Supplies & Expenses	0		0		\$0		0		0
Other Services & Charges	0	248,075	248,075		\$248,075		248,075		248,075
Capital Outlays	0	2,820,492	2,820,492	768,000	\$3,588,492		3,588,492		3,588,492
Transfers	0	146,433	146,433		\$146,433		146,433		146,433
Total - Series 2004 Const. Fund	\$0	\$3,215,000	\$3,215,000	\$768,000	\$3,983,000	\$0	\$3,983,000	\$0	\$3,983,000

2019 Fire Station Construction Fund (Fund #95):

Personnel	\$0		\$0		\$0		\$0		\$0
Supplies & Expenses	0		0		\$0		0		0
Other Services & Charges	0		0		\$0		0		0
Capital Outlays	0	4,100,000	4,100,000		\$4,100,000		4,100,000		4,100,000
Transfers	0		0		\$0		0		0
Total - Series 2001 Const. Fund	\$0	\$4,100,000	\$4,100,000	\$0	\$4,100,000	\$0	\$4,100,000	\$0	\$4,100,000

Infrastructure Impr-Internet Sales Tax (Fund #97):

Personnel	\$0		\$0		\$0		\$0		\$0
Supplies & Expenses	0		0		\$0		0		0
Other Services & Charges	0		0		\$0		0		0
Transfers	0		0		\$0		0		0
Capital Outlays	0		0	485,060	\$485,060		485,060	52,738	537,798
Total - MDB Fund	\$0	\$0	\$0	\$485,060	\$485,060	\$0	\$485,060	\$52,738	\$537,798

Kamper Park Imp. (Fund #98):

Personnel	\$0		\$0		\$0		\$0		\$0
Supplies & Expenses	0		0		\$0		0		0
Other Services & Charges	0		0		\$0		0		0
Capital Outlays	2,255	5	2,260		\$2,260		2,260		2,260
Total - Kamper Park Imp. Fund	\$2,255	\$5	\$2,260	\$0	\$2,260	\$0	\$2,260	\$0	\$2,260

Series 2010 Water & Sewer G.O. Constr. (Fund #99):

Personnel					\$0				0
Supplies & Expenses					\$0				0
Other Services & Charges			0		\$0		0		0
Capital Outlay	\$0		0		\$0		0		0
Transfers out	\$0		0		\$0		\$0		\$0
Total - Series 2010 Constr.	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

Series 2013 Water & Sewer Revenue Constr. (Fund #105):

Personnel			0		\$0		0		0
Supplies & Expenses			0		\$0		0		0
Other Services & Charges	\$0		0		\$0		0		0
Capital Outlay	\$0		0		\$0		0		0
Transfers		\$565	565		\$565		565		565

CITY OF HATTIESBURG, MS
Analysis of Expenditure Budgets - Funds Other Than General
Fiscal Year Ending September 30, 2020

	Original FY 2020 Budgets	November Amend'ts	Amended Budgets	Feb/March Amend'ts	Amended Budgets	Proposed June Amend'ts	Proposed Amended Budgets	Proposed August Amend'ts	Proposed Amended Budgets
Total - Series 2013 Constr.	\$0	\$565	\$565	\$0	\$565	\$0	\$565	\$0	\$565
Series 2016 Water & Sewer Taxable Bonds Constr. (Fund #93):									
Personnel			0		\$0		0		0
Supplies & Expenses			0		\$0		0		0
Other Services & Charges	\$300,000		300,000		\$300,000		300,000		300,000
Capital Outlay	\$12,484,530	-\$1,033,457	11,451,073		\$11,451,073		11,451,073		11,451,073
Transfers			0		\$0		0		0
Total - Series 2016 Constr.	\$12,784,530	-\$1,033,457	\$11,751,073	\$0	\$11,751,073	\$0	\$11,751,073	\$0	\$11,751,073
Series 2012 Water & Sewer Const. (Fund #94):									
Personnel	\$0		\$0		\$0		\$0		\$0
Supplies & Expenses	0		0		\$0		0		0
Other Services & Charges	0		0		\$0		0		0
Capital Outlays	0		0		\$0		0		0
Transfers Out	0	73	73		\$73		73	2	75
Total - Series 2012 Const.	\$0	\$73	\$73	\$0	\$73	\$0	\$73	\$2	\$75
GRAND TOTAL - FUNDS OTHER THAN THE GENERAL FUND									
	\$114,244,476	\$5,753,021	\$119,997,496	\$3,495,560	\$123,493,056	\$352,552	\$123,845,608	\$18,092,129	\$141,937,737
General Fund	\$65,639,326	\$3,476,365	\$69,115,691	\$1,519,932	\$60,635,623	\$139,406	\$60,775,029	-\$214,521	\$60,560,508
TOTAL EXPENDITURES & TRANSFERS	\$169,883,801	\$9,229,386	\$179,113,187	\$5,015,492	\$184,128,679	\$491,958	\$184,620,637	\$17,877,608	\$202,498,245
Less: Interfund Transfers	-26,690,750	-540,071	-27,230,821	0	-27,230,821	100,000	-27,130,821	-562,421	-27,693,242
TOTAL EXPENDITURES	\$143,193,051	\$8,689,315	\$151,882,366	\$5,015,492	\$156,897,858	\$591,958	\$157,489,816	\$17,315,187	\$174,805,003
Recap of City-Wide Expenditure Budgets:									
Personnel	\$40,570,393	\$13,385	\$40,583,778	\$7,998	\$40,591,776	-\$930,058	\$39,661,718	\$4,640	\$39,666,358
Supplies & Expenses	\$5,189,013	\$41,093	\$5,230,106	-\$12,761	\$5,217,345	-\$155,574	\$5,061,771	-\$11,307	\$5,050,464
Other Services & Charges	\$26,627,997	\$1,364,166	\$27,992,163	\$632,705	\$28,624,868	\$1,653,057	\$30,277,925	\$691,416	\$30,969,341
Capital Outlays	\$57,829,205	\$7,074,259	\$64,903,464	\$3,089,768	\$67,993,232	\$11,411	\$68,004,643	\$16,622,738	\$84,627,381
Principal Payments	8,424,100	93,871	8,517,971	1,318,301	9,836,272	9,282	9,845,554	0	9,845,554
Interest Payments	4,552,343	102,541	4,654,884	-20,519	4,634,365	3,840	4,638,205	7,700	4,645,905
Total Expenditure Budgets	\$143,193,051	\$8,689,315	\$151,882,366	\$5,015,492	\$156,897,858	\$591,958	\$157,489,816	\$17,315,187	\$174,805,003

RESOLUTION

WHEREAS, the Mayor and City Council of the City of Hattiesburg, Mississippi, have determined that expenditures within the City will exceed the original budget appropriation; and

WHEREAS, the additional appropriation needed is in excess of ten percent (10%) of the original appropriation, and in accordance with Section 21-35-25 of the Mississippi Code of 1972, as amended, shall be published;

NOW, THEREFORE, BE IT RESOLVED BY THE COUNCIL OF THE CITY OF HATTIESBURG:

Section 1. That the following budget amendments are hereby authorized to be made in the City's General Fund Public Services Other Services & Charges Unappropriated Fund Balance:

ORIGINAL BALANCE	CUMULATIVE AMENDMENTS	AMENDED BUDGET	DESCRIPTION OF ITEMS NOT PREVIOUSLY LISTED
\$4,993,195	\$762,510	\$5,755,705	Adjust budget for paving projects

Section 2. That the following budget amendments are hereby authorized to be made in the City's Bond & Interest Fund Transfers Other Services & Charges

Unappropriated Fund Balance:

ORIGINAL BALANCE	CUMULATIVE AMENDMENTS	AMENDED BUDGET	DESCRIPTION OF ITEMS NOT PREVIOUSLY LISTED
\$ -0-	\$15,439	\$15,439	Transfer residual funds set aside for bond issuance costs to construction fund

Section 3. That the following budget amendments are hereby authorized to be made in the City's Police Forfeitures Fund Capital Outlay Unappropriated Fund Balance:

ORIGINAL BALANCE	CUMULATIVE AMENDMENTS	AMENDED BUDGET	DESCRIPTION OF ITEMS NOT PREVIOUSLY LISTED
\$ 16,601	\$132,630	\$149,231	Budget court awarded fines for equipment purchases

Section 4. That the following budget amendments are hereby authorized to be made in the City's Water & Sewer Construction Fund Other Services & Charges Unappropriated

Fund Balance:

ORIGINAL BALANCE	CUMULATIVE AMENDMENTS	AMENDED BUDGET	DESCRIPTION OF ITEMS NOT PREVIOUSLY LISTED
\$ 917,097	\$165,600	\$1,082,697	Budget for consent decree fines & penalties

Section 5. That the following budget amendments are hereby authorized to be made in the City's Public Safety/Recreation Construction Fund Other Services & Charges

Unappropriated Fund Balance:

ORIGINAL BALANCE	CUMULATIVE AMENDMENTS	AMENDED BUDGET	DESCRIPTION OF ITEMS NOT PREVIOUSLY LISTED
\$ -0-	\$622,825	\$622,825	Budget for bond issuance costs

Section 6. That the following budget amendments are hereby authorized to be made in the City's Public Safety/Recreation Construction Fund Capital Outlay Unappropriated

Fund Balance:

ORIGINAL BALANCE	CUMULATIVE AMENDMENTS	AMENDED BUDGET	DESCRIPTION OF ITEMS NOT PREVIOUSLY LISTED
\$ 28,140,000	\$ 15,512,668	\$43,652,668	Budget bond proceeds for construction projects

Section 7. That the following budget amendments are hereby authorized to be made in the City's Public Safety/Recreation Fund Transfers Unappropriated Fund Balance:

ORIGINAL BALANCE	CUMULATIVE AMENDMENTS	AMENDED BUDGET	DESCRIPTION OF ITEMS NOT PREVIOUSLY LISTED
\$ -0-	\$546,980	\$546,980	Budget transfer of capitalized interest to debt service fund

Section 8. That the following budget amendments are hereby authorized to be made in the City's Infrastructure Improvements-Internet Sales Tax Fund Capital Outlay

Unappropriated Fund Balance:

ORIGINAL BALANCE	CUMULATIVE AMENDMENTS	AMENDED BUDGET	DESCRIPTION OF ITEMS NOT PREVIOUSLY LISTED
\$485,060	\$52,738	\$537,798	Budget additional sales tax revenue received for capital projects

Section 9. That public interest and necessity requiring same, this resolution shall become effective immediately from and after passage, but nevertheless to be published according to law.

The above and foregoing Resolution, after having been first reduced to writing, was

introduced by Councilperson _____, seconded by Councilperson

_____, and was adopted by the following, to wit;

YEAS:

NAYS:

The President thereby declared the motion carried and the Resolution adopted, this the 18th day of August, 2020.

(S E A L)

ATTEST:

ADOPTED:

CLERK OF COUNCIL

PRESIDENT

The above and foregoing Resolution having been submitted to and approved by the Mayor, this the 18th day of August, 2020.

ATTEST:

APPROVED:

CITY CLERK

MAYOR

CITY OF HATTIESBURG, MISSISSIPPI
A MUNICIPALITY
BUDGET OF ESTIMATED REVENUES AND EXPENDITURES
For the Fiscal Year Ending September 30, 2020

GENERAL FUND:

REVENUES & BEG. CASH:

Taxes - Other	\$40,000
Licenses & Permits	4,397,600
Inter-governmental Revenues:	
Federal Grants	1,787,950
State Grants	261,122
State-Shared Revenues	21,958,000
County Shared Revenues	63,518
Charges for Services:	
Public safety	395,000
Streets	0
Sanitation	2,245,000
Misc.	0
Fines & Forfeits	1,043,300
Miscellaneous	428,150
Transfers-In	850,000
Non-Revenue Receipts	1,535,194
Total From All Sources	
Other Than taxation	35,004,834
Beginning Cash and	
Investment Balance	9,394,348
Reserve for Future Debt Service	(914,503)
Amount to be Raised by Tax Levy	18,735,000
TOTAL FROM ALL SOURCES	\$62,219,679

EXPENDITURES & ENDING CASH:

General Government:	
Personnel	4,421,966
Supplies & Expenses	226,558
Other services & Charges	5,273,537
Capital Outlays	269,253
Total - General Government	10,191,314
Police Dept.:	
Personnel	11,279,195
Supplies & Expenses	828,303
Other services & Charges	658,839
Capital Outlays	117,353
Total - Police Dept.	12,883,690
Police & Fire Training:	
Personnel	42,507
Supplies & Expenses	117,375
Other services & Charges	71,045
Capital Outlays	6,215
Total - Police & Fire Training	237,142
Fire Dept.:	
Personnel	8,727,232
Supplies & Expenses	362,368
Other services & Charges	313,109
Capital Outlays	0
Total - Fire Dept.	9,402,709
Land Development Administration:	
Personnel	619,730
Supplies & Expenses	26,450
Other services & Charges	261,700
Capital Outlays	0
Total - Land Dev. Admin.	907,880

Public Safety Contractual Services:	
Personnel	381,300
Other services & Charges	<u>1,218,000</u>
Total - Pub. Safety Cont. Serv.	<u>1,599,300</u>
Public Services:	
Personnel	5,983,905
Supplies & Expenses	1,494,304
Other services & Charges	5,755,705
Capital Outlays	<u>1,197,760</u>
Total - Public Services	<u>14,431,674</u>
Animal Control	
Personnel	158,387
Supplies & Expenses	15,400
Other services & Charges	182,125
Capital Outlays	<u>0</u>
Total - Animal Control	<u>355,912</u>
Human/Social	
Other services & Charges	<u>380,900</u>
Total - Human/Social	<u>380,900</u>
Economic Development	
Personnel	
Supplies & Expenses	
Other services & Charges	402,812
Capital Outlays	<u>1,800,000</u>
Total - Eco. Dev.	<u>2,202,812</u>
Debt Service:	
Principal Payments	2,114,772
Interest Payments	419,332
Paying Agent Fee	<u>3,000</u>
Total - Debt service	<u>2,537,104</u>
Airport	
Personnel	0
Supplies & Expenses	32,000
Other services & Charges	47,550
Capital Outlays	<u>0</u>
Total - Airport	<u>79,550</u>
Cemetery	
Personnel	799,826
Supplies & Expenses	82,650
Other services & Charges	86,801
Capital Outlays	<u>65,200</u>
Total - Cemetery	<u>1,034,477</u>
Parking Garages	
Personnel	110,994
Supplies & Expenses	6,950
Other services & Charges	54,950
Capital Outlays	<u>0</u>
Total - Parking Garages	<u>172,894</u>
Operating Transfers Out	<u>4,143,150</u>
Total Expenditures & Transfers	<u>60,560,508</u>
Ending Cash Balance	<u>\$1,659,171</u>
TOTAL EXPENDITURES AND ENDING CASH BALANCE	<u><u>\$62,219,679</u></u>

CITY OF HATTIESBURG, MISSISSIPPI
A MUNICIPALITY
BUDGET OF ESTIMATED REVENUES AND EXPENDITURES
For the Fiscal Year Ending September 30, 2020

PARKS & RECREATION FUND:

REVENUES & BEG. CASH:

Inter-governmental Revenues:

Federal Grants	\$0
State Grants	0
County Shared Revenues	0
Misc. grants	0

Charges for Services:

Culture & Recreation	39,800
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Miscellaneous	1,000
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Transfers-In	2,117,000
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Non-Revenue Receipts	0
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Total From All Sources

Other Than taxation	2,157,800
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Beginning Cash and

Investment Balance	1,077,950
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Amount to be Raised by Tax Levy	930,000
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TOTAL FROM ALL SOURCES	<u><u>\$4,165,750</u></u>
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EXPENDITURES & ENDING CASH:

Culture & Recreation:

Personnel	2,031,193
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Supplies & Expenses	473,800
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Other services & Charges	965,194
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Capital Outlays	211,654
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Total Expenditures	<u>\$3,681,841</u>
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Cash balance at End of Year	<u>483,909</u>
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TOTAL EXPENDITURES AND

ENDING CASH BALANCE	<u><u>\$4,165,750</u></u>
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CITY OF HATTIESBURG, MISSISSIPPI
A MUNICIPALITY
BUDGET OF ESTIMATED REVENUES AND EXPENDITURES
For the Fiscal Year Ending September 30, 2020

MUNICIPAL FIRE PROTECTION FUND:

REVENUES & BEG. CASH:

Inter-governmental Revenues:

State-Shared Revenues	\$257,000
Charges for Services	95,652
Fines & Forfeits	0
Miscellaneous	3,000
Transfers In	0
Non-Revenue Receipts	0
Total From All Sources	
Other Than taxation	<u>355,652</u>
Beginning Cash and	
Investment Balance	<u>346,557</u>
TOTAL FROM ALL SOURCES	<u><u>\$702,209</u></u>

EXPENDITURES & ENDING CASH:

Public Safety:

Personnel	\$0
Supplies & Expenses	68,500
Other services & Charges	60,200
Capital Outlays	262,100
Lease Debt Service - Principal	239,500
Lease Debt Service - Interest	10,700
Total Expenditures	<u>\$641,000</u>
Cash balance at End of Year	<u>61,209</u>
TOTAL EXPENDITURES AND	
ENDING CASH BALANCE	<u><u>\$702,209</u></u>

CITY OF HATTIESBURG, MISSISSIPPI
A MUNICIPALITY
BUDGET OF ESTIMATED REVENUES AND EXPENDITURES
For the Fiscal Year Ending September 30, 2020

SPECIAL STREET
SPECIAL REVENUE FUND:

REVENUES & BEG. CASH:

Inter-governmental Revenues:

Federal Grants	\$0
State Shared Revenues	45,000
Misc. grants	0
Miscellaneous	0
Non-Revenue Receipts	<u>0</u>
Total From All Sources	
Other Than taxation	<u>45,000</u>
Beginning Cash and	
Investment Balance	<u>62,500</u>
TOTAL FROM ALL SOURCES	<u><u>\$107,500</u></u>

EXPENDITURES & ENDING CASH:

Public Services:

Supplies & Expenses	0
Other services & Charges	100,000
Capital Outlays	<u>0</u>
Total Expenditures	<u>\$100,000</u>
Cash balance at End of Year	<u>7,500</u>
TOTAL EXPENDITURES AND	
ENDING CASH BALANCE	<u><u>\$107,500</u></u>

CITY OF HATTIESBURG, MISSISSIPPI
A MUNICIPALITY
BUDGET OF ESTIMATED REVENUES AND EXPENDITURES
For the Fiscal Year Ending September 30, 2020

**WATER & SEWER OPERATION
AND MAINTENANCE FUND:**

REVENUES & BEG. CASH:

Charges for Services	\$25,000
Transfers-In	12,200,000
Miscellaneous	4,200
Non-Revenue Receipts	5,000
Total From All Sources	
Other Than taxation	12,234,200
Beginning Cash and	
Investment Balance	865,572
TOTAL FROM ALL SOURCES	\$13,099,772

EXPENDITURES & ENDING CASH:

Personnel	3,048,293
Supplies & Expenses	945,915
Other services & Charges	7,590,158
Capital Outlays	583,698
Lease Debt Service - Principal	0
Lease Debt Service - Interest	0
Total Expenditures	\$12,168,064
Cash balance at End of Year	931,708
TOTAL EXPENDITURES AND ENDING CASH BALANCE	\$13,099,772

CITY OF HATTIESBURG, MISSISSIPPI
A MUNICIPALITY
BUDGET OF ESTIMATED REVENUES AND EXPENDITURES
For the Fiscal Year Ending September 30, 2020

***WATER & SEWER BOND
AND INTEREST FUND:***

REVENUES & BEG. CASH:

Transfers-In	\$6,516,000
Miscellaneous	58,000
Non-Revenue Receipts	
Total Revenues	<u>6,574,000</u>
Beginning Cash Balance	<u>10,287,322</u>
TOTAL FROM ALL SOURCES	<u><u>\$16,861,322</u></u>

EXPENDITURES & ENDING CASH:

Bonds Redeemed	5,361,000
Interest on Bonds	2,224,915
Paying Agent Fees	15,000
Total Expenditures	<u>7,600,915</u>
Cash balance at End of Year	<u>9,260,407</u>
TOTAL EXPENDITURES AND ENDING CASH BALANCE	<u><u>\$16,861,322</u></u>

CITY OF HATTIESBURG, MISSISSIPPI
A MUNICIPALITY
BUDGET OF ESTIMATED REVENUES AND EXPENDITURES
For the Fiscal Year Ending September 30, 2020

WATER & SEWER ENTERPRISE FUND:

REVENUES & BEG. CASH:

Charges for Services:	
Licenses, Permits & Fees	\$4,000
Miscellaneous	8,500
Metered Water Sales	11,505,000
Taps	150,000
Water Turn-On Fees	60,000
Sewer Connections	80,000
Sewer Charges	11,114,800
Total Revenues	<u>22,922,300</u>
Beginning Fund Balance	<u>0</u>
TOTAL FROM ALL SOURCES	<u>\$22,922,300</u>

EXPENDITURES & ENDING CASH:

Other Services & Charges	81,700
Principal Redeemed - Notes	0
Interest on Notes	0
Operating Transfers Out	22,840,600
Total Expenditures	<u>\$22,922,300</u>
Cash balance at End of Year	<u>\$0</u>
TOTAL EXPENDITURES AND	
ENDING CASH BALANCE	<u>\$22,922,300</u>

CITY OF HATTIESBURG, MISSISSIPPI
A MUNICIPALITY
BUDGET OF ESTIMATED REVENUES AND EXPENDITURES
For the Fiscal Year Ending September 30, 2020

***2020 TAX INCREMENT FINANCING (PLANET FITNESS) BOND & INT
FUND (DEBT SERVICE FUND):***

REVENUES & BEG. CASH:

Interest	\$0
County-Shared Revenues	34,387
Total From All Sources	34,387
Other Than taxation	34,387
Beginning Cash and Investment Balance	0
Amount to be Raised by Tax Levy	28,625
TOTAL FROM ALL SOURCES	\$63,012

EXPENDITURES & ENDING CASH:

General Issues:	
Bonds Redeemed	9,282
Interest on Bonds	3,840
Paying Agent Fees	0
Transfers Out	0
Other Services & Charges	49,890
Total Expenditures	\$63,012
Cash balance at End of Year	0
TOTAL EXPENDITURES AND ENDING CASH BALANCE	\$63,012

CITY OF HATTIESBURG, MISSISSIPPI
A MUNICIPALITY
BUDGET OF ESTIMATED REVENUES AND EXPENDITURES
For the Fiscal Year Ending September 30, 2020

CITY BOND & INTEREST
FUND (DEBT SERVICE FUND):

REVENUES & BEG. CASH:

County-Shared Revenues	\$0
Interest	30,000
Non-Revenue receipts	0
Transfers-In	0
Total From All Sources	
Other Than taxation	30,000
Beginning Cash and	
Investment Balance	7,552,651
Amount to be Raised by Tax Levy	1,912,500
TOTAL FROM ALL SOURCES	\$9,495,151

EXPENDITURES & ENDING CASH:

General Issues:	
Bonds Redeemed	935,000
Interest on Bonds	1,532,982
Other Services & Charges	32,000
Transfers	15,439
Paying Agent Fees	10,000
Total Expenditures	\$2,525,421
Cash balance at End of Year	6,969,730
TOTAL EXPENDITURES AND	
ENDING CASH BALANCE	\$9,495,151

CITY OF HATTIESBURG, MISSISSIPPI
A MUNICIPALITY
BUDGET OF ESTIMATED REVENUES AND EXPENDITURES
For the Fiscal Year Ending September 30, 2020

FINES & FORFEITURES FUND:

REVENUES & BEG. CASH:

State grants	
Charges for Services	2,471
Fines & Forfeits	34,018
Miscellaneous	110
Non-Revenue Receipts	0
Total From All Sources	
Other Than taxation	36,599
Beginning Cash and	
Investment Balance	232,562
TOTAL FROM ALL SOURCES	\$269,161

EXPENDITURES & ENDING CASH:

Public Safety:	
Personnel	0
Supplies & Expenses	81,341
Other services & Charges	38,589
Capital Outlays	149,231
Transfers Out	0
Total Expenditures	\$269,161
Cash balance at End of Year	0
TOTAL EXPENDITURES AND	
ENDING CASH BALANCE	\$269,161

CITY OF HATTIESBURG, MISSISSIPPI
A MUNICIPALITY
BUDGET OF ESTIMATED REVENUES AND EXPENDITURES
For the Fiscal Year Ending September 30, 2020

SERIES 2002 TIF BOND & INTEREST
FUND (Southern Pointe Project):

REVENUES & BEG. CASH:

Interest	\$0
Transfers In	\$0
County-Shared Revenues	125,000
Total From All Sources	
Other Than taxation	125,000
Beginning Cash and	
Investment Balance	283,615
Amount to be Raised by Tax Levy	125,000
TOTAL FROM ALL SOURCES	\$533,615

EXPENDITURES & ENDING CASH:

General Issues:	
Bonds Redeemed	155,000
Interest on Bonds	89,605
Other Services & Charges	2,000
Total Expenditures	\$246,605
Cash balance at End of Year	287,010
TOTAL EXPENDITURES AND	
ENDING CASH BALANCE	\$533,615

CITY OF HATTIESBURG, MISSISSIPPI
A MUNICIPALITY
BUDGET OF ESTIMATED REVENUES AND EXPENDITURES
For the Fiscal Year Ending September 30, 2019

SERIES 2004 TIF BOND & INTEREST
FUND (Home Depot Project):

REVENUES & BEG. CASH:

Interest	\$40
County-Shared Revenues	0
Transfer From Other Funds	0
Total From All Sources	
Other Than taxation	40
Beginning Cash and	
Investment Balance	44
Amount to be Raised by Tax Levy	0
TOTAL FROM ALL SOURCES	\$84

EXPENDITURES & ENDING CASH:

General Issues:	
Bonds Redeemed	0
Interest on Bonds	0
Transfers Out	84
Other Services & Charges	0
Total Expenditures	\$84
Cash balance at End of Year	0
TOTAL EXPENDITURES AND	
ENDING CASH BALANCE	\$84

CITY OF HATTIESBURG, MISSISSIPPI
A MUNICIPALITY
BUDGET OF ESTIMATED REVENUES AND EXPENDITURES
For the Fiscal Year Ending September 30, 2020

SERIES 2003 TIF BOND & INTEREST
FUND (Chauvet Square Project):

REVENUES & BEG. CASH:

Interest	\$0
Transfer From Other Funds	0
Total From All Sources	
Other Than taxation	0
Beginning Cash and	
Investment Balance	194,297
Amount to be Raised by Tax Levy	200,000
TOTAL FROM ALL SOURCES	\$394,297

EXPENDITURES & ENDING CASH:

General Issues:	
Bonds Redeemed	135,000
Interest on Bonds	59,610
Other Services & Charges	2,500
Transfers to Other Funds	0
Total Expenditures	\$197,110
Cash balance at End of Year	197,187
TOTAL EXPENDITURES AND	
ENDING CASH BALANCE	\$394,297

CITY OF HATTIESBURG, MISSISSIPPI
A MUNICIPALITY
BUDGET OF ESTIMATED REVENUES AND EXPENDITURES
For the Fiscal Year Ending September 30, 2020

SERIES 2007 TIF BOND & INTEREST
FUND (Turtle Creek):

REVENUES & BEG. CASH:

Interest	\$1,000
County Shared Revenue	\$168,058
Transfer From Other Funds	
Total From All Sources	
Other Than taxation	169,058
Beginning Cash and	
Investment Balance	136,137
Amount to be Raised by Tax Levy	450,000
TOTAL FROM ALL SOURCES	\$755,195

EXPENDITURES & ENDING CASH:

General Issues:	
Bonds Redeemed	475,000
Interest on Bonds	83,620
Other Services & Charges	5,000
Total Expenditures	\$563,620
Cash balance at End of Year	191,575
TOTAL EXPENDITURES AND	
ENDING CASH BALANCE	\$755,195

CITY OF HATTIESBURG, MISSISSIPPI
A MUNICIPALITY
BUDGET OF ESTIMATED REVENUES AND EXPENDITURES
For the Fiscal Year Ending September 30, 2020

2008 TIF BOND AND INTEREST FUND
FUND (Lincoln Center):

REVENUES & BEG. CASH:

Interest	\$600
County Shared Revenue	\$0
Transfer From Other Funds	0
Total From All Sources	
Other Than taxation	600
Beginning Cash and	
Investment Balance	70,815
Amount to be Raised by Tax Levy	60,000
TOTAL FROM ALL SOURCES	\$131,415

EXPENDITURES & ENDING CASH:

General Issues:	
Bonds Redeemed	50,000
Interest on Bonds	8,000
Other Services & Charges	1,000
Total Expenditures	\$59,000
Cash balance at End of Year	72,415
TOTAL EXPENDITURES AND	
ENDING CASH BALANCE	\$131,415

CITY OF HATTIESBURG, MISSISSIPPI
A MUNICIPALITY
BUDGET OF ESTIMATED REVENUES AND EXPENDITURES
For the Fiscal Year Ending September 30, 2020

2011 TIF BOND AND INTEREST FUND
FUND (Turtle Creek Crossing/Kohl's):

REVENUES & BEG. CASH:

Interest	\$200
County Shared Revenue	\$30,887
Transfer From Other Funds	
Total From All Sources	
Other Than taxation	31,087
Beginning Cash and	
Investment Balance	26,487
Amount to be Raised by Tax Levy	65,000
TOTAL FROM ALL SOURCES	\$122,574

EXPENDITURES & ENDING CASH:

General Issues:	
Bonds Redeemed	80,000
Interest on Bonds	8,250
Other Services & Charges	2,000
Total Expenditures	\$90,250
Cash balance at End of Year	32,324
TOTAL EXPENDITURES AND	
ENDING CASH BALANCE	\$122,574

CITY OF HATTIESBURG, MISSISSIPPI
A MUNICIPALITY
BUDGET OF ESTIMATED REVENUES AND EXPENDITURES
For the Fiscal Year Ending September 30, 2020

2016 TIF BOND AND INTEREST
FUND (Whispering Pines):

REVENUES & BEG. CASH:

Interest	\$1,400
County Shared Revenue	\$185,880
Transfer From Other Funds	0
Total From All Sources	
Other Than taxation	187,280
Beginning Cash and	
Investment Balance	308,716
Amount to be Raised by Tax Levy	150,291
TOTAL FROM ALL SOURCES	\$646,287

EXPENDITURES & ENDING CASH:

General Issues:	
Bonds Redeemed	169,000
Interest on Bonds	111,143
Other Services & Charges	2,000
Total Expenditures	\$282,143
Cash balance at End of Year	364,144
TOTAL EXPENDITURES AND	
ENDING CASH BALANCE	\$646,287

CITY OF HATTIESBURG, MISSISSIPPI
A MUNICIPALITY
BUDGET OF ESTIMATED REVENUES AND EXPENDITURES
For the Fiscal Year Ending September 30, 2020

2016 TIF BOND AND INTEREST FUND
FUND (Hattiesburg Clinic Midtown):

REVENUES & BEG. CASH:

Interest	\$350
County Shared Revenue	\$37,643
Transfer From Other Funds	0
Total From All Sources	
Other Than taxation	37,993
Beginning Cash and	
Investment Balance	53,068
Amount to be Raised by Tax Levy	37,643
TOTAL FROM ALL SOURCES	\$128,704

EXPENDITURES & ENDING CASH:

General Issues:	
Bonds Redeemed	47,000
Interest on Bonds	28,485
Other Services & Charges	0
Total Expenditures	\$75,485
Cash balance at End of Year	53,219
TOTAL EXPENDITURES AND	
ENDING CASH BALANCE	\$128,704

CITY OF HATTIESBURG, MISSISSIPPI
A MUNICIPALITY
BUDGET OF ESTIMATED REVENUES AND EXPENDITURES
For the Fiscal Year Ending September 30, 2020

AIRPORT IMPROVEMENT
SPECIAL REVENUE FUND:

REVENUES & BEG. CASH:

Federal Grants	\$2,765,066
State Shared Revenues	237,728
Miscellaneous	31,950
Transfers In	250,000
Non-Revenue Receipts	0
Total From All Sources	
Other Than taxation	3,284,744
Beginning Cash and	
Investment Balance	(37,422)
TOTAL FROM ALL SOURCES	\$3,247,322

EXPENDITURES & ENDING CASH:

Public Services:	
Other services & Charges	363,443
Capital Outlays	2,674,057
Total Expenditures	\$3,037,500
Cash balance at End of Year	209,822
TOTAL EXPENDITURES AND	
ENDING CASH BALANCE	\$3,247,322

CITY OF HATTIESBURG, MISSISSIPPI
A MUNICIPALITY
BUDGET OF ESTIMATED REVENUES AND EXPENDITURES
For the Fiscal Year Ending September 30, 2020

2015A TIF BOND AND INTEREST FUND
FUND (The Ridge at Turtle Creek):

REVENUES & BEG. CASH:

Interest	\$500
County Shared Revenue	\$29,956
Transfer From Other Funds	<u>0</u>
Total From All Sources	
Other Than taxation	<u>30,456</u>
Beginning Cash and	
Investment Balance	98,769
Amount to be Raised by Tax Levy	<u>116,500</u>
TOTAL FROM ALL SOURCES	<u><u>\$245,725</u></u>

EXPENDITURES & ENDING CASH:

General Issues:	
Bonds Redeemed	64,000
Interest on Bonds	55,825
Other Services & Charges	<u>2,000</u>
Total Expenditures	<u>\$121,825</u>
Cash balance at End of Year	<u>123,900</u>
TOTAL EXPENDITURES AND	
ENDING CASH BALANCE	<u><u>\$245,725</u></u>

CITY OF HATTIESBURG, MISSISSIPPI
A MUNICIPALITY
BUDGET OF ESTIMATED REVENUES AND EXPENDITURES
For the Fiscal Year Ending September 30, 2020

2015B TIF BOND AND INTEREST FUND
FUND (Midtown Market):

REVENUES & BEG. CASH:

Interest	\$100
County Shared Revenue	\$11,450
Transfer From Other Funds	0
Total From All Sources	
Other Than taxation	11,550
Beginning Cash and	
Investment Balance	10,482
Amount to be Raised by Tax Levy	11,450
TOTAL FROM ALL SOURCES	\$33,482

EXPENDITURES & ENDING CASH:

General Issues:	
Bonds Redeemed	11,000
Interest on Bonds	9,598
Other Services & Charges	2,000
Total Expenditures	\$22,598
Cash balance at End of Year	10,884
TOTAL EXPENDITURES AND	
ENDING CASH BALANCE	\$33,482

CITY OF HATTIESBURG, MISSISSIPPI
A MUNICIPALITY
BUDGET OF ESTIMATED REVENUES AND EXPENDITURES
For the Fiscal Year Ending September 30, 2020

SERIES 2019 TIF BOND & INT
FUND (ELAM ARMS):

REVENUES & BEG. CASH:

Interest	\$0
County Shared Revenue	\$166,026
Transfer From Other Funds	227,692
Total From All Sources	
Other Than taxation	393,718
Beginning Cash and	
Investment Balance	62,168
Amount to be Raised by Tax Levy	136,001
TOTAL FROM ALL SOURCES	\$591,887

EXPENDITURES & ENDING CASH:

General Issues:	
Bonds Redeemed	0
Interest on Bonds	0
Other Services & Charges	0
Total Expenditures	\$0
Cash balance at End of Year	591,887
TOTAL EXPENDITURES AND	
ENDING CASH BALANCE	\$591,887

CITY OF HATTIESBURG, MISSISSIPPI
A MUNICIPALITY
BUDGET OF ESTIMATED REVENUES AND EXPENDITURES
For the Fiscal Year Ending September 30, 2020

MUNICIPAL ROAD & BRIDGE
SPECIAL REVENUE FUND:

REVENUES & BEG. CASH:

Inter-governmental Revenues:

State Grants	\$1,556,250
Federal Grants	71,250
County Shared Revenues	1,600,000
Miscellaneous	421,500
Transfers In	493,000

Non-Revenue Receipts	0
----------------------	---

Total From All Sources	
Other Than taxation	4,142,000

Beginning Cash and	
Investment Balance	2,399,133

TOTAL FROM ALL SOURCES	\$6,541,133
-------------------------------	--------------------

EXPENDITURES & ENDING CASH:

Public Services:

Supplies & Expenses	0
Other services & Charges	2,215,000
Capital Outlays	4,326,110
Principal Payments	0
Interest Payments	0

Total Expenditures	\$6,541,110
--------------------	-------------

Cash balance at End of Year	23
-----------------------------	----

TOTAL EXPENDITURES AND	
ENDING CASH BALANCE	\$6,541,133

CITY OF HATTIESBURG, MISSISSIPPI
A MUNICIPALITY
BUDGET OF ESTIMATED REVENUES AND EXPENDITURES
For the Fiscal year Ending September 30, 2020

**MASS TRANSIT OPERATING
SPECIAL REVENUE FUND:**

REVENUES & BEG. CASH:

Inter-governmental Revenues:

Federal Grants	\$2,144,496
State Grants	\$0
Miscellaneous	279,500
Transfers-In	691,096
Non-Revenue Receipts	0
Total From All Sources	
Other Than taxation	3,115,092
Beginning Cash and	
Investment Balance	(470,934)
Amount to be Raised by Tax Levy	225,000
TOTAL FROM ALL SOURCES	\$2,869,158

EXPENDITURES & ENDING CASH:

Personnel	1,191,876
Supplies & Expenses	229,600
Other services & Charges	351,238
Capital Outlays	1,096,444
Total Expenditures	\$2,869,158
Cash balance at End of Year	0
TOTAL EXPENDITURES AND	
ENDING CASH BALANCE	\$2,869,158

CITY OF HATTIESBURG, MISSISSIPPI
A MUNICIPALITY
BUDGET OF ESTIMATED REVENUES AND EXPENDITURES
For the Fiscal year Ending September 30, 2020

WATER & SEWER CONSTRUCTION FUND:

REVENUES & BEG. CASH:

Inter-governmental Revenues:

Federal Grants	\$356,025
Miscellaneous	46,500
Transfers-In	3,624,600
Non-Revenue Receipts	<u>0</u>
Total From All Sources	
Other Than taxation	<u>4,027,125</u>
Beginning Cash and	
Investment Balance	<u>2,614,750</u>
TOTAL FROM ALL SOURCES	<u><u>\$6,641,875</u></u>

EXPENDITURES & ENDING CASH:

Other services & Charges	\$1,082,697
Capital Outlays	4,754,003
Transfers	<u>0</u>
Total Expenditures	<u>5,836,700</u>
Cash balance at End of Year	<u>805,175</u>
TOTAL EXPENDITURES AND	
ENDING CASH BALANCE	<u><u>\$6,641,875</u></u>

CITY OF HATTIESBURG, MISSISSIPPI
A MUNICIPALITY
BUDGET OF ESTIMATED REVENUES AND EXPENDITURES
For the Fiscal Year Ending September 30, 2020

COMMUNITY CENTERS
SPECIAL REVENUE FUND:

REVENUES & BEG. CASH:

Charges for services:	
Culture & Recreation	\$31,000
Miscellaneous	600
Transfers-In	575,000
Non-Revenue Receipts	0
Total From All Sources	
Other Than taxation	606,600
Beginning Cash and	
Investment Balance	419,864
TOTAL FROM ALL SOURCES	\$1,026,464

EXPENDITURES & ENDING CASH:

Personnel	630,657
Supplies & Expenses	50,750
Other services & Charges	170,877
Capital Outlays	98,746
Total Expenditures	\$951,030
Cash balance at End of Year	75,434
TOTAL EXPENDITURES AND	
ENDING CASH BALANCE	\$1,026,464

CITY OF HATTIESBURG, MISSISSIPPI
A MUNICIPALITY
BUDGET OF ESTIMATED REVENUES AND EXPENDITURES
For the Fiscal Year Ending September 30, 2020

COMMUNITY DEVELOPMENT BLOCK GRANT
SPECIAL REVENUE FUND:

REVENUES & BEG. CASH:

Federal Grants	\$2,639,932
Miscellaneous	\$300
Transfers In	<u>35,795</u>
Total From All Sources	
Other Than taxation	<u>2,676,027</u>
Beginning Cash and	
Investment Balance	<u>(176,472)</u>
TOTAL FROM ALL SOURCES	<u><u>\$2,499,555</u></u>

EXPENDITURES & ENDING CASH:

Personnel	226,840
Supplies & Expenses	8,200
Other services & Charges	444,882
Capital Outlays	1,819,633
Transfers	<u>0</u>
Total Expenditures	<u>\$2,499,555</u>
Cash balance at End of Year	<u>0</u>
TOTAL EXPENDITURES AND	
ENDING CASH BALANCE	<u><u>\$2,499,555</u></u>

CITY OF HATTIESBURG, MISSISSIPPI
A MUNICIPALITY
BUDGET OF ESTIMATED REVENUES AND EXPENDITURES
For the Fiscal Year Ending September 30, 2020

**SPECIAL SALES TAX-PARKS/RECREATION/USM IMPROVEMENTS
FUND**

REVENUES & BEG. CASH:

Intergovernmental Revenues:

Federal Grants 120,000

State Grants

State Shared Revenues 2,998,000

Interest Earnings

Total Revenues 3,118,000

Beginning Cash and

Investment Balance 267,512

TOTAL FROM ALL SOURCES \$3,385,512

EXPENDITURES & ENDING CASH:

Personal Services 12,457

Other services & Charges 1,499,000

Capital Outlays 1,838,194

Transfers to Other Funds 0

Total Expenditures \$3,349,651

Cash balance at End of Year 35,861

**TOTAL EXPENDITURES AND
ENDING CASH BALANCE \$3,385,512**

CITY OF HATTIESBURG, MISSISSIPPI
A MUNICIPALITY
BUDGET OF ESTIMATED REVENUES AND EXPENDITURES
For the Fiscal Year Ending September 30, 2020

***Public Safety Complex/Recreation
Construction Fund:***

REVENUES & BEG. CASH:

Proceeds from Bond Issue	15,150,000
Bond Premium	2,630,151
Transfers	15,439
Interest Earnings	
Total Revenues	<u>17,795,590</u>
Beginning Cash and Investment Balance	<u>27,042,322</u>
TOTAL FROM ALL SOURCES	<u><u>\$44,837,912</u></u>

EXPENDITURES & ENDING CASH:

Other services & Charges	622,825
Capital Outlays	43,668,107
Transfers to Other Funds	546,980
Total Expenditures	<u>\$44,837,912</u>
Cash balance at End of Year	<u>0</u>
TOTAL EXPENDITURES AND ENDING CASH BALANCE	<u><u>\$44,837,912</u></u>

CITY OF HATTIESBURG, MISSISSIPPI
A MUNICIPALITY
BUDGET OF ESTIMATED REVENUES AND EXPENDITURES
For the Fiscal Year Ending September 30, 2020

TIF Construction Fund:

REVENUES & BEG. CASH:

Proceeds from Bond Issue	\$3,983,000
Interest Earnings	0
Total Revenues	<u>3,983,000</u>
Beginning Cash and	
Investment Balance	306
TOTAL FROM ALL SOURCES	<u><u>\$3,983,306</u></u>

EXPENDITURES & ENDING CASH:

Other services & Charges	248,075
Capital Outlays	3,588,492
Transfers to Other Funds	146,433
Total Expenditures	<u>\$3,983,000</u>
Cash Balance at End of Year	<u>306</u>
TOTAL EXPENDITURES AND	
ENDING CASH BALANCE	<u><u>\$3,983,306</u></u>

CITY OF HATTIESBURG, MISSISSIPPI
A MUNICIPALITY
BUDGET OF ESTIMATED REVENUES AND EXPENDITURES
For the Fiscal Year Ending September 30, 2020

2019 FIRE STATION
CONSTRUCTION FUND:

REVENUES & BEG. CASH:

Interest Earnings	\$0
Grant Revenues - State of MS	0
Transfers In	0
Note Proceeds	4,100,000
Proceeds from General Obligation Bond Issue	0
Total Revenues	<u>4,100,000</u>
Beginning Cash and	
Investment Balance	<u>0</u>
TOTAL FROM ALL SOURCES	<u>\$4,100,000</u>

EXPENDITURES & ENDING CASH:

Other services & Charges	0
Capital Outlays	4,100,000
Transfers Out	0
Total Expenditures	<u>\$4,100,000</u>
Cash balance at End of Year	<u>0</u>
TOTAL EXPENDITURES AND	
ENDING CASH BALANCE	<u>\$4,100,000</u>

CITY OF HATTIESBURG, MISSISSIPPI
A MUNICIPALITY
BUDGET OF ESTIMATED REVENUES AND EXPENDITURES
For the Fiscal Year Ending September 30, 2020

INFRASTRUCTURE IMPROVEMENTS - INTERNET SALES TAX FUND:

REVENUES & BEG. CASH:

Intergovernmental Revenue	\$537,798
Transfers In	0
Miscellaneous	0
Non-Revenue Receipts	
Total Revenues	<u>537,798</u>
Beginning Cash and	
Investment Balance	<u>0</u>
TOTAL FROM ALL SOURCES	<u>\$537,798</u>

EXPENDITURES & ENDING CASH:

Other services & Charges	0
Transfers Out	0
Capital Outlays	<u>537,798</u>
Total Expenditures	<u>\$537,798</u>
Cash Balance at End of Year	<u>0</u>
TOTAL EXPENDITURES AND	
ENDING CASH BALANCE	<u>\$537,798</u>

CITY OF HATTIESBURG, MISSISSIPPI
A MUNICIPALITY
BUDGET OF ESTIMATED REVENUES AND EXPENDITURES
For the Fiscal Year Ending September 30, 2020

KAMPER PARK ZOO CAPITAL
IMPROVEMENTS FUND:

REVENUES & BEG. CASH:

State Grants	\$0
Miscellaneous	0
Charges for Services	0
Transfers-In from Other Funds	0
Non-Revenue Receipts	0
Total Revenues	<u>0</u>
Beginning Cash and	
Investment Balance	<u>2,260</u>
TOTAL FROM ALL SOURCES	<u><u>\$2,260</u></u>

EXPENDITURES & ENDING CASH:

Supplies	0
Other services & Charges	0
Capital Outlays	<u>2,260</u>
Total Expenditures	<u>\$2,260</u>
Cash balance at End of Year	<u>0</u>
TOTAL EXPENDITURES AND	
ENDING CASH BALANCE	<u><u>\$2,260</u></u>

CITY OF HATTIESBURG, MISSISSIPPI
A MUNICIPALITY
BUDGET OF ESTIMATED REVENUES AND EXPENDITURES
For the Fiscal Year Ending September 30, 2020

SERIES 2013 WATER & SEWER REVENUE BOND
CONSTRUCTION FUND:

REVENUES & BEG. CASH:

Interest Earnings	0
Proceeds from Revenue Bond Issue	\$0
Total Revenues	<u>0</u>
Beginning Cash and	
Investment Balance	<u>565</u>
TOTAL FROM ALL SOURCES	<u>\$565</u>

EXPENDITURES & ENDING CASH:

Other services & Charges	0
Capital Outlays	0
Transfers Out	<u>565</u>
Total Expenditures	<u>\$565</u>
Cash balance at End of Year	<u>0</u>
TOTAL EXPENDITURES AND	
ENDING CASH BALANCE	<u>\$565</u>



Memorandum

To: Mayor Toby Barker and Members of City Council

From: Ginger Lowrey, Planning Administrator

cc: Andrew Ellard, Director

Date: Tuesday, August 18, 2020

Re: Adopt a Resolution approving the adoption and implementation of the Regional Hazard Mitigation Plan including the counties of Covington, Forrest, Jefferson Davis, Jones, Marion, Perry, and Wayne. Prepared for the MEMA District 8 Regional Hazard Mitigation Council (RHMC).
File Number: 2020-565
Minute Book #

Summary

Adopt a Resolution approving the Regional Hazard Mitigation Plan. Prepared for the MEMA District 8 Regional Hazard Mitigation Council (RHMC).

Recommendation Statement

Adopt a Resolution approving the Regional Hazard Mitigation Plan. Prepared for the MEMA District 8 Regional Hazard Mitigation Council (RHMC).

Please place this on the August 18, 2020 City Council meeting for consideration.

**A RESOLUTION OF THE CITY OF HATTIESBURG
FOR ADOPTING THE DISTRICT 8 REGIONAL HAZARD
MITIGATION PLAN.**

WHEREAS, various natural hazards have the potential for causing devastating harm and loss of life and property to the citizens of the City of Hattiesburg and will continue to do so; and

WHEREAS, the implementation of hazard mitigation policies and strategies can protect the citizens, and significantly reduce the loss of life and property from natural hazards; and

WHEREAS, a concerted effort should be made to address hazard mitigation in our respective policies and programs; and

WHEREAS, hazard mitigation goals and objectives can be effectively developed through participation in the development of a regional mitigation plan,

WHEREAS, a public comment period from December 5th to December 19th 2019, was authorized by the City of Hattiesburg City Council,

NOW THEREFORE, We, the Mayor, Board of Alderman of the City of Hattiesburg do hereby resolve to adopt the District 8 Regional Hazard Mitigation Plan.

The foregoing resolution having been reduced to writing was introduced by Council member _____, seconded by Council member _____ and was adopted by the following vote, to wit:

YEAS:

NAYS:

ABSENT:

THE President thereby declared the motion carried and the foregoing Resolution adopted
and approved, this the day of A.D., 2020.

(S E A L)

ATTEST:

ADOPTED:

CLERK OF COUNCIL

PRESIDENT

THE above and foregoing Resolution having been submitted to and approved by the Mayor, this the _____ day of _____ A.D., 2020.

ATTEST:

APPROVED:

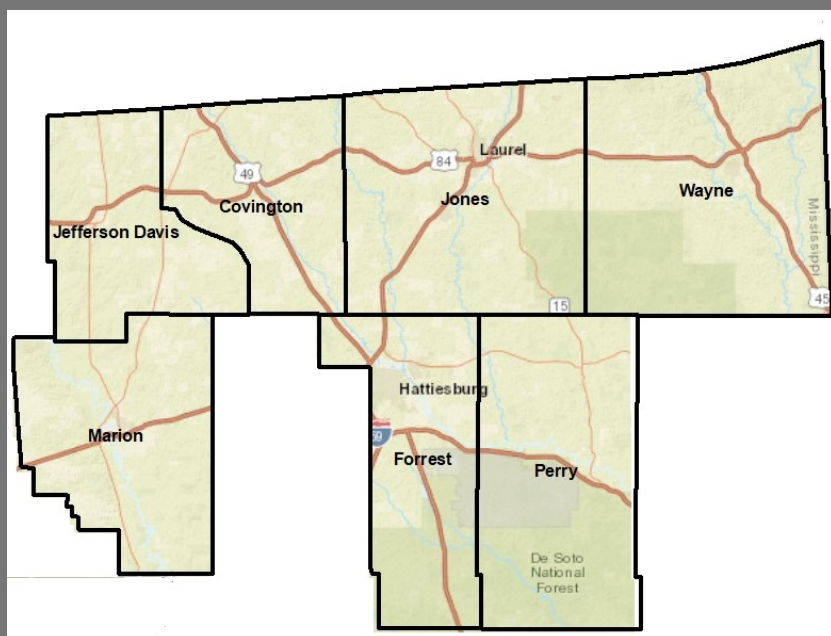
CITY CLERK

MAYOR



Mississippi Emergency Management Agency

District 8



All-Hazards Mitigation Plan

2020

MEMA District 8
Hazard Mitigation Plan 2020
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Hazard Mitigation Plan 2020
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SECTION 1

INTRODUCTION

This section provides a general introduction to the MEMA District 8 Regional Hazard Mitigation Plan. It consists of the following five subsections:

- ❖ 1.1 Background
- ❖ 1.2 Purpose
- ❖ 1.3 Scope
- ❖ 1.4 Authority
- ❖ 1.5 Summary of Plan Contents

1.1 BACKGROUND

Natural hazards, such as hurricanes, floods, and tornadoes, are a part of the world around us. Their occurrence is natural and inevitable, and there is little we can do to control their force and intensity. We must consider these hazards to be legitimate and significant threats to human life, safety, and property.

The MEMA District 8 Region is located in the southeastern part of Mississippi and includes the counties of Covington, Forrest, Jefferson Davis, Jones, Marion, Perry, and Wayne. This area is vulnerable to a wide range of natural hazards such as floods, drought, hurricanes, severe thunderstorms, and wildfires. It is also vulnerable to human-caused hazards, such as hazardous material incidents. These hazards threaten the life and safety of residents in the MEMA District 8 Region and have the potential to damage or destroy both public and private property, disrupt the local economy, and impact the overall quality of life of individuals who live, work, and vacation in the MEMA District 8 Region.

While the threat from hazardous events may never be fully eliminated, there is much we can do to lessen their potential impact upon our community and our citizens. By minimizing the impact of hazards upon our built environment, we can prevent such events from resulting in disasters. The concept and practice of reducing risks to people and property from known hazards is generally referred to as *hazard mitigation*.



FEMA Definition of Hazard Mitigation:

"Any sustained action taken to reduce or eliminate the long-term risk to human life and property from hazards."

Hazard mitigation techniques include both structural measures (such as strengthening or protecting buildings and infrastructure from the destructive forces of potential hazards) and non-structural measures (such as the adoption of sound land use policies and the creation of public awareness programs). It is widely accepted that the most effective mitigation measures are implemented at the local government level, where decisions on the regulation and control of development are ultimately

made. A comprehensive mitigation approach addresses hazard vulnerabilities that exist today and in the foreseeable future. Therefore, it is essential that projected patterns of future development are evaluated and considered in terms of how that growth will increase or decrease a community's overall hazard vulnerability.

A key component in the formulation of a comprehensive approach to hazard mitigation is to develop, adopt, and update a local hazard mitigation plan as needed. A hazard mitigation plan establishes the broad community vision and guiding principles for reducing hazard risk, and further proposes specific mitigation actions to eliminate or reduce identified vulnerabilities.

Each of the six counties participating in the development of the MEMA District 8 Hazard Mitigation Plan has an existing hazard mitigation plan that has evolved over the years, as described in Section 2: Planning Process. This regional plan draws from each of the county plans and documents the region's sustained efforts to incorporate hazard mitigation principles and practices into routine government activities and functions. At its core, the Plan recommends specific actions to minimize hazard vulnerability and protect residents from losses to those hazards that pose the greatest risk. These mitigation actions go beyond simply recommending structural solutions to reduce existing vulnerability, such as elevation, retrofitting, and acquisition projects. Local policies on community growth and development, incentives for natural resource protection, and public awareness and outreach activities are examples of other actions considered to reduce the MEMA District 8 Region's vulnerability to identified hazards. The Plan remains a living document, with implementation and evaluation procedures established to help achieve meaningful objectives and successful outcomes over time.

1.1.1 The Disaster Mitigation Act and the Flood Insurance Reform Act

In an effort to reduce the Nation's mounting natural disaster losses, the U.S. Congress passed the Disaster Mitigation Act of 2000 (DMA 2000) in order to amend the Robert T. Stafford Disaster Relief and Emergency Assistance Act. Section 322 of DMA 2000 emphasizes the need for state and local government entities to closely coordinate on mitigation planning activities and makes the development of a hazard mitigation plan a specific eligibility requirement for any local government applying for federal mitigation grant funds. These funds include the Hazard Mitigation Grant Program (HMGP) and the Pre-Disaster Mitigation (PDM) program, both of which are administered by the Federal Emergency Management Agency (FEMA) under the Department of Homeland Security. Communities with an adopted and federally-approved hazard mitigation plan thereby become pre-positioned and more apt to receive available mitigation funds before and after the next disaster strikes.

The Flood Insurance Reform Act of 2004 (P.L. 108-264) created two new grant programs, Severe Repetitive Loss (SRL) and Repetitive Flood Claim (RFC), and modified the existing Flood Mitigation Assistance (FMA) program. One of the requirements of this Act is that a FEMA-approved Hazard Mitigation Plan is now required if communities wish to be eligible for these FEMA mitigation programs. However, as of mid-2013, guidance has not been released for the RFC and SRL programs and it is likely that these programs will be folded into a single, unified FMA program.

In addition, major federal flood insurance legislation was passed in 2012 under the Biggert-Waters Flood Insurance Reform Act (P.L. 112-141). This act made several changes to the way the National Flood Insurance Program is to be run, including raises in rates to reflect true flood risk and changes in how Flood Insurance Rate Map (FIRM) updates impact policyholders.

The MEMA District 8 Regional Hazard Mitigation Plan has been prepared in coordination with FEMA Region IV and the Mississippi Emergency Management Agency (MEMA) to ensure that the Plan meets all applicable FEMA and state requirements for hazard mitigation plans. A *Local Mitigation Plan Review Tool*, found in Appendix C, provides a summary of federal and state minimum standards and notes the location where each requirement is met within the Plan.

1.2 PURPOSE

The purpose of the MEMA District 8 Regional Hazard Mitigation Plan is to:

- ❖ Update the existing Covington, Jefferson Davis, Jones, Marion, Perry, and Wayne County hazard mitigation plans into one regional plan;
- ❖ Merge the Forrest County Hazard Mitigation Plan;
- ❖ Complete update of existing plans to demonstrate progress and reflect current conditions;
- ❖ Increase public awareness and education;
- ❖ Maintain grant eligibility for participating jurisdictions; and
- ❖ Maintain compliance with state and federal legislative requirements for local hazard mitigation plans.

1.3 SCOPE

The focus of the MEMA District 8 Regional Hazard Mitigation Plan is on those hazards determined to be “high” or “moderate” risks to the MEMA District 8 Region, as determined through a detailed hazard risk assessment. Other hazards that pose a “low” or “negligible” risk will continue to be evaluated during future updates to the Plan, but they may not be fully addressed until they are determined to be of high or moderate risk. This enables the participating counties to prioritize mitigation actions based on those hazards which are understood to present the greatest risk to lives and property.

The geographic scope (i.e., the planning area) for the Plan includes the counties of Covington, Forrest, Jefferson Davis, Jones, Marion, Perry, and Wayne, as well as their incorporated jurisdictions. **Table 1.1** identifies the participating areas.

**TABLE 1.1: PARTICIPATING JURISDICTIONS IN THE MEMA DISTRICT 8
REGIONAL HAZARD MITIGATION PLAN**

Covington County	
Collins	Mount Olive
Seminary	
Forrest County	
Hattiesburg	Petal
Jefferson Davis County	
Bassfield	Prentiss
Jones County	
Ellisville	Laurel
Sandersville	Soso
Marion County	
Columbia	
Perry County	
Beaumont	New Augusta
Richton	
Wayne County	
State Line	Waynesboro

1.4 AUTHORITY

The MEMA District 8 Regional Hazard Mitigation Plan has been developed in accordance with current state and federal rules and regulations governing local hazard mitigation plans and has been adopted by each participating county and local jurisdiction in accordance with standard local procedures. Copies of the adoption resolutions for each participating jurisdiction are provided in Appendix A. The Plan shall be routinely monitored and revised to maintain compliance with the following provisions, rules, and legislation:

- ❖ Section 322, Mitigation Planning, of the Robert T. Stafford Disaster Relief and Emergency Assistance Act, as enacted by Section 104 of the Disaster Mitigation Act of 2000 (P.L. 106-390);
- ❖ FEMA's Mitigation Planning Final Rule published in the Federal Register on September 16, 2009, at 44 CFR Part 201; and
- ❖ Flood Insurance Reform Act of 2004 (P.L. 108-264) and the Biggert-Waters Flood Insurance Reform Act of 2012 (P.L. 112-141)

1.5 SUMMARY OF PLAN CONTENTS

The contents of this Plan are designed and organized to be as reader-friendly and functional as possible. While significant background information is included on the processes used and studies completed (i.e., risk assessment, capability assessment), this information is separated from the more meaningful planning outcomes or actions (i.e., mitigation strategy, mitigation action plan).

Section 2, ***Planning Process***, provides a complete narrative description of the process used to prepare the Plan. This includes the identification of participants on the planning team and describes how the public and other stakeholders were involved. It also includes a detailed summary for each of the key meetings held, along with any associated outcomes.

The ***Community Profile***, located in Section 3, provides a general overview of the MEMA District 8 Region, including prevalent geographic, demographic, and economic characteristics. In addition, building characteristics and land use patterns are discussed. This baseline information provides a snapshot of the planning area and helps local officials recognize those social, environmental, and economic factors that ultimately play a role in determining the region's vulnerability to hazards.

The Risk Assessment is presented in three sections: Section 4, ***Hazard Identification***; Section 5, ***Hazard Profiles***; and Section 6, ***Vulnerability Assessment***. Together, these sections serve to identify, analyze, and assess hazards that pose a threat to the MEMA District 8 Region. The risk assessment also attempts to define any hazard risks that may uniquely or exclusively affect specific areas of the MEMA District 8 Region.

The Risk Assessment begins by identifying hazards that threaten the MEMA District 8 Region. Next, detailed profiles are established for each hazard, building on available historical data from past hazard occurrences, spatial extent, and probability of future occurrence. This section culminates in a hazard risk ranking based on conclusions regarding the frequency of occurrence, spatial extent, and potential impact highlighted in each of the hazard profiles. In the vulnerability assessment, FEMA's HAZUS^{®MH} loss estimation methodology is used to evaluate known hazard risks by their relative long-term cost in expected damages. In essence, the information generated through the risk assessment serves a critical function as the MEMA District 8 Region seeks to determine the most appropriate mitigation actions to pursue and implement—enabling it to prioritize and focus its efforts on those hazards of greatest concern and those structures or planning areas facing the greatest risk(s).

The ***Capability Assessment***, found in Section 7, provides a comprehensive examination of the MEMA District 8 Region's capacity to implement meaningful mitigation strategies and identifies opportunities to increase and enhance that capacity. Specific capabilities addressed in this section include planning and regulatory capability, staff and organizational (administrative) capability, technical capability, fiscal capability, and political capability. Information was obtained through the use of a detailed survey questionnaire and an inventory and analysis of existing plans, ordinances, and relevant documents. The purpose of this assessment is to identify any existing gaps, weaknesses, or conflicts in programs or activities that may hinder mitigation efforts and to identify those activities that should be built upon in establishing a successful and sustainable local hazard mitigation program.

The *Community Profile*, *Risk Assessment*, and *Capability Assessment* collectively serve as a basis for determining the goals for the MEMA District 8 Regional Hazard Mitigation Plan, each contributing to the development, adoption, and implementation of a meaningful and manageable *Mitigation Strategy* that is based on accurate background information.

The ***Mitigation Strategy***, found in Section 8, consists of broad goal statements as well as an analysis of hazard mitigation techniques for the MEMA District 8 Region to consider in reducing hazard vulnerabilities. The strategy provides the foundation for a detailed ***Mitigation Action Plan***, found in Section 9, which links specific mitigation actions for each county department or agency to locally-assigned implementation mechanisms and target completion dates. Together, these sections are

designed to make the Plan both strategic, through the identification of long-term goals, and functional, through the identification of immediate and short-term actions that will guide day-to-day decision-making and project implementation.

In addition to the identification and prioritization of possible mitigation projects, emphasis is placed on the use of program and policy alternatives to help make the MEMA District 8 Region less vulnerable to the damaging forces of hazards while improving the economic, social, and environmental health of the community. The concept of multi-objective planning was emphasized throughout the planning process, particularly in identifying ways to link, where possible, hazard mitigation policies and programs with complimentary community goals related to disaster recovery, housing, economic development, recreational opportunities, transportation improvements, environmental quality, land development, and public health and safety.

Plan Maintenance, found in Section 10, includes the measures that the MEMA District 8 Region will take to ensure the Plan's continuous long-term implementation. The procedures also include the manner in which the Plan will be regularly evaluated and updated to remain a current and meaningful planning document.

County-specific Annexes have been created for each of the Counties participating in this plan. Each Annex contains information relevant to the County and the participating municipal jurisdictions in the County. Information included in each County-level Annex includes Community Profile, Risk Assessment and Capability Assessment information. The Mitigation Actions identified for that County and its municipal jurisdictions are also included in the County's Annex. This allows each County and jurisdiction to quickly locate the information contained in the plan that is most relevant for them.

SECTION 2

PLANNING PROCESS

This section describes the planning process undertaken by the Mississippi Emergency Management Agency (MEMA) District 8 counties and jurisdictions in the development of its 2020 Regional Hazard Mitigation Plan. It consists of the following seven subsections:

- ❖ 2.1 Overview of Hazard Mitigation Planning
- ❖ 2.2 History of Hazard Mitigation Planning in the MEMA District 8 Region
- ❖ 2.3 The MEMA District 8 Regional Hazard Mitigation Council
- ❖ 2.4 Community Meetings and Workshops
- ❖ 2.5 Involving the Public
- ❖ 2.6 Involving the Stakeholders
- ❖ 2.7 Documentation of Plan Progress

44 CFR Requirement

44 CFR Part 201.6(c)(1): The plan shall include documentation of the planning process used to develop the plan, including how it was prepared, who was involved in the process and how the public was involved.

2.1 OVERVIEW OF HAZARD MITIGATION PLANNING

Local hazard mitigation planning is the process of organizing community resources, identifying and assessing hazard risks, and determining how to best minimize or manage those risks. This process culminates in a hazard mitigation plan that identifies specific mitigation actions, each designed to achieve both short-term planning objectives and a long-term community vision.

To ensure the functionality of a hazard mitigation plan, responsibility is assigned for each proposed mitigation action to a specific individual, department, or agency along with a schedule or target completion date for its implementation (see Section 10: *Plan Maintenance*). Plan maintenance procedures are established for the routine monitoring of implementation progress, as well as the evaluation and enhancement of the mitigation plan itself. These plan maintenance procedures ensure that the Plan remains a current, dynamic, and effective planning document over time that becomes integrated into the routine local decision-making process.

Communities that participate in hazard mitigation planning have the potential to accomplish many benefits, including:

- ❖ saving lives and property,
- ❖ saving money,
- ❖ speeding up recovery following disasters,

- ❖ reducing future vulnerability through wise development and post-disaster recovery and reconstruction,
- ❖ expediting the receipt of pre-disaster and post-disaster grant funding, and
- ❖ demonstrating a firm commitment to improving community health and safety.

Typically, mitigation planning is described as having the potential to produce long-term and recurring benefits by breaking the repetitive cycle of disaster loss. A core assumption of hazard mitigation is that the investments made before a hazard event will significantly reduce the demand for post-disaster assistance by lessening the need for emergency response, repair, recovery, and reconstruction. Furthermore, mitigation practices will enable local residents, businesses, and industries to re-establish themselves in the wake of a disaster, getting the community economy back on track sooner and with less interruption.

The benefits of mitigation planning go beyond solely reducing hazard vulnerability. Measures such as the acquisition or regulation of land in known hazard areas can help achieve multiple community goals, such as preserving open space, maintaining environmental health, and enhancing recreational opportunities. Thus, it is vitally important that any local mitigation planning process be integrated with other concurrent local planning efforts, and any proposed mitigation strategies must take into account other existing community goals or initiatives that will help complement or hinder their future implementation.

2.2 HISTORY OF HAZARD MITIGATION PLANNING IN MEMA DISTRICT 8 REGION

One of the Counties in MEMA District 8 (Lamar) chose not to participate in the development of this plan. The county had recently completed updates to their existing plans and wanted to maximize the approval time they had already received for their plan. They will join the regional plan at some point in the future.

Forrest County joined the MEMA District 8 hazard mitigation planning process, and all of the jurisdictions that participated in previous planning efforts have participated in the development of this regional plan.

2.3 THE MEMA DISTRICT 8 REGIONAL HAZARD MITIGATION COUNCIL

In order to guide the development of this Plan, the counties in MEMA District 8 (Covington, Forrest, Jefferson Davis, Jones, Marion, Perry, and Wayne) and representatives from their participating municipal jurisdictions created the MEMA District 8 Regional Hazard Mitigation Council (RHMC). The RHMC represents a community-based planning team made up of representatives from various county departments and municipalities and other key stakeholders identified to serve as critical partners in the planning process.

Beginning in April 2019, the RHMC members engaged in regular discussions as well as local planning workshops to discuss and complete tasks associated with preparing the Plan. This working group coordinated on all aspects of plan preparation and provided valuable input to the process.

Specifically, the tasks assigned to the RHMC members included:

- ❖ participate in RHMC meetings and workshops
- ❖ provide best available data as required for the risk assessment portion of the Plan
- ❖ help review the local Capability Assessment information and provide copies of any mitigation or hazard-related documents for review and incorporation into the Plan
- ❖ support the development of the Mitigation Strategy, including the design and adoption of regional goal statements
- ❖ help design and propose appropriate mitigation actions for their department/agency for incorporation into the Mitigation Action Plan
- ❖ review and provide timely comments on all study findings and draft plan deliverables
- ❖ support the adoption of the *2020 MEMA District 8 Hazard Mitigation Plan*

Table 2.1 lists the members of the RHMC who were responsible for participating in the development of the Plan. Council members are listed in alphabetical order by last name.

**TABLE 2.1: MEMBERS OF THE MEMA DISTRICT 8
REGIONAL HAZARD MITIGATION COUNCIL**

NAME/TITLE	DEPARTMENT / AGENCY
Atchison, Angela / EMA Director	Wayne County
Breland, Tammy	Town of Beaumont
Brown, Chip / Communications	Forrest County EMA
Burns, Sherry	City of New Augusta
Chambliss, Jamie	Town of Beaumont
Courtney, Patricia	Bassfield
Dumas, Charley / Mayor	Prentiss
Ellard, Andrew	City of Hattiesburg
Gallaspy, Joe	City of New Augusta
Greer, Aaron / CD Director	Marion County / Columbia
Hall, S.	City of Hattiesburg
Knight, Shane / Assistant Director	City of Collins
Marx, Hal	City of Petal
Moore, Glen	Forrest County EMA
Osgood, Jennifer	City of Hattiesburg
Pitts, James	Town of Richton
Prine, Colby / Director	Perry County EMA
Ragsdale, Jocelyn / EMA Director	Jefferson Davis County
Roberts, Billy	City of Mt. Olive
Sanford, Greg / EMA Director	Covington County / Seminary
Sheffield, Paul / Director	Jones County / Soso / Sandersville / Ellisville / Laurel
Shoemake, Bob	City of Collins
Shows, Jennifer	City of Hattiesburg

NAME/TITLE	DEPARTMENT / AGENCY
Stevens, Kevin	Wayne County EMA
Proctor, Corey /EMA Director	Forrest County / City of Petal
Burns, Gerry	Forrest County
Williams, Nicolas	City of Hattiesburg
Zaydel, Joseph	City of Waynesboro
Billy Patrick / Staff Officer	MEMA

Some of the Regional Hazard Mitigation Council Members listed above were designated to represent more than one jurisdiction.

2.3.1 Multi-Jurisdictional Participation

The MEMA District 8 Hazard Mitigation Plan includes seven counties and seventeen incorporated municipalities. To satisfy multi-jurisdictional participation requirements, each county and its participating jurisdictions were required to perform the following tasks:

- ❖ Participate in mitigation planning workshops;
- ❖ Identify completed/new mitigation projects, if applicable; and
- ❖ Develop and adopt (or update) their local Mitigation Action Plan.

Each jurisdiction participated in the planning process and has developed a local Mitigation Action Plan unique to their jurisdiction. Each jurisdiction will adopt their Mitigation Action Plan separately. This provides the means for jurisdictions to monitor and update their Plan on a regular basis.

2.4 COMMUNITY MEETINGS AND WORKSHOPS

The preparation of this Plan required a series of meetings and workshops for facilitating discussion, gaining consensus and initiating data collection efforts with local government staff, community officials, and other identified stakeholders. More importantly, the meetings and workshops prompted continuous input and feedback from relevant participants throughout the drafting stages of the Plan. The following is a summary of the key meetings and community workshops held during the development of the plan update.¹ In many cases, routine discussions and additional meetings were held by local staff to accomplish planning tasks specific to their department or agency, such as the approval of specific mitigation actions for their department or agency to undertake and include in the Mitigation Action Plan.

TABLE 2.2: Hazard Mitigation Planning Meetings

Meeting Date	Meeting Notes
April 10, 2019	MEMA Region 8 HMP Kickoff Meeting- Discussed project background and purpose, overview of the project, completed a hazard identification exercise, and discussed next steps.
October 15, 2019	MEMA Region 8 HMP Mitigation Strategy Meeting- (Forrest County) discussed plan goals and potential updates to those goals. Also, discussed mitigation actions within the region.
October 16, 2019	Individual County/municipality workshops to discuss status updates to existing mitigation actions as well as new mitigation actions
October 16, 2019	MEMA Region 8 HMP Mitigation Strategy Meeting- discussed plan goals and potential updates to those goals. Also, discussed mitigation actions within the region.

2.5 INVOLVING THE PUBLIC

44 CFR Requirement

44 CFR Part 201.6(b)(1): The planning process shall include an opportunity for the public to comment on the plan during the drafting stage and prior to plan approval.

An important component of the mitigation planning process involves public participation. Individual citizen and community-based input provides the entire planning team with a greater understanding of local concerns and increases the likelihood of successfully implementing mitigation actions by developing community “buy-in” from those directly affected by the decisions of public officials. As citizens become more involved in decisions that affect their safety, they are more likely to gain a greater appreciation of the hazards present in their community and take the steps necessary to reduce their impact. Public awareness is a key component of any community’s overall mitigation strategy aimed at making a home, neighborhood, school, business or entire city safer from the potential effects of hazards.

The Public was provided two opportunities to be involved in the actual plan development at two distinct periods during the planning process: (1) during the drafting stage of the Plan; and (2) upon completion of a final draft Plan, but prior to official plan approval and adoption.

Each of the participating jurisdictions will hold public meetings before the final plan is officially adopted by the local governing bodies. These meetings will occur at different times once FEMA has granted conditional approval of the Plan. Adoption resolutions will be included in Appendix A.

2.6 INVOLVING THE STAKEHOLDERS

44 CFR Requirement

44 CFR Part 201.6(b)(2): The planning process shall include an opportunity for neighboring communities, local and regional agencies involved in hazard mitigation activities, and agencies that have the authority to regulate development, as well as businesses, academia and other non-profit interests to be involved in the planning process.

At the beginning of the planning process for the development of this plan, the project consultant worked with MEMA mitigation staff, the MEMA District 8 Area Coordinator, and each of the seven County Emergency Management leads to initiate outreach to stakeholders to be involved in the planning process. Stakeholders were involved in the planning process by providing requested data needed to update the plan. The project consultant and the County EM leads contacted Mississippi Automated Resources Information System (MARIS), Mississippi Forestry Commission, Mississippi Department of Environmental Quality, TriState Consulting Services, Golden Triangle Planning and Development District, and the Three Rivers Planning and Development District to ask them to participate in the planning process and provide data that was used in the development of this plan.

2.7 DOCUMENTATION OF PLAN PROGRESS

Progress in hazard mitigation planning for the participating jurisdictions in the MEMA District 8 Region is documented in this plan update. Since hazard mitigation planning efforts officially began in the participating counties with the development of the initial Hazard Mitigation Plans in the late 1990's/early 2000s, many mitigation actions have been completed and implemented in the participating jurisdictions. These actions will help reduce the overall risk to natural hazards for the people and property in the Region. The actions that have been completed are documented in the Mitigation Action Plan found in Section 9.

In addition, community capability continues to improve with the implementation of new plans, policies and programs that help to promote hazard mitigation at the local level. The current state of local capabilities for the participating jurisdictions is captured in Section 7: Capability Assessment. The participating jurisdictions continue to demonstrate their commitment to hazard mitigation and hazard mitigation planning and have proven this by reconvening the Hazard Mitigation Planning Team to update the Plan and by continuing to involve the public in the hazard mitigation planning process.

SECTION 3

COMMUNITY PROFILE

This section of the Plan provides a general overview of the MEMA District 8 Region. It consists of the following four subsections:

- ❖ 3.1 Geography and the Environment
- ❖ 3.2 Population and Demographics
- ❖ 3.3 Housing, Infrastructure, and Land Use
- ❖ 3.4 Employment and Industry

The County-specific annexes provide more detailed community profile information about each County.

3.1 GEOGRAPHY AND THE ENVIRONMENT

The MEMA District 8 Region was named based on the Mississippi Emergency Management Agency districts lines and is one of nine MEMA regions throughout the state. The Region is located in the southeastern portion of the state. It is bounded by the Mississippi/Alabama State Line to the east. The MEMA District 8 Region includes the counties of Covington, Forrest, Jefferson Davis, Jones, Marion, Perry, and Wayne. Lamar and Greene Counties are also in MEMA District 8 but are not participants in the development of this plan. An orientation map is provided as **Figure 3.1**.

The region surrounds the metropolitan area of Hattiesburg which is home to The University of Southern Mississippi and has traditionally been a major hub of transportation intersections (rail and road). The MEMA District 8 Region is often associated with the Civil Rights movement of the 1960s, and there are many important historic sites throughout the region. During the Civil War, Jones County was known as a haven of anti-secessionism and came to be known as “The Free State of Jones.” The region is also home to a number of naturally protected areas that attract tourists to the area, such as the De Soto National Forest in Wayne County.

The total area of each of the participating counties is presented in **Table 3.1**.

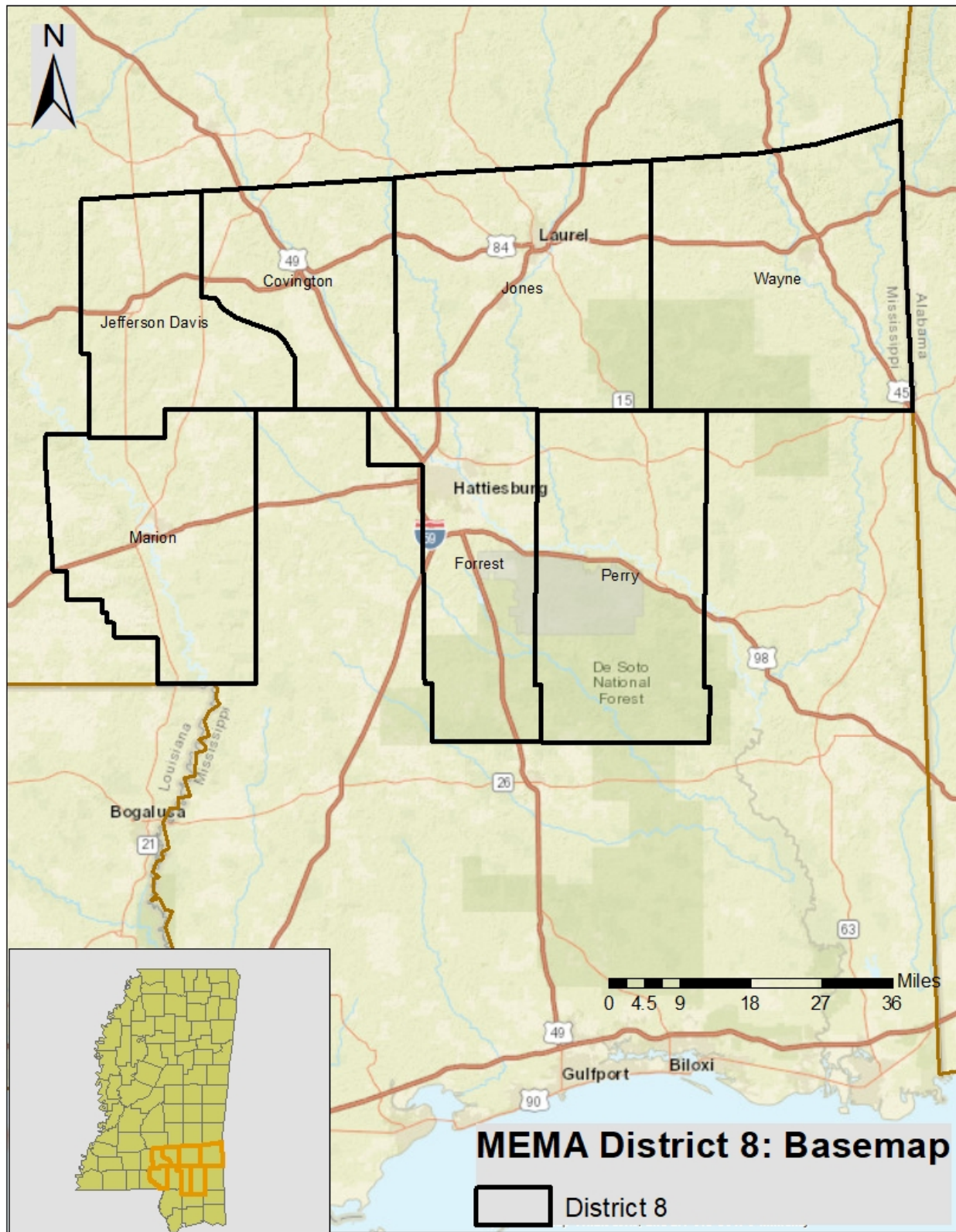
TABLE 3.1: TOTAL AREAS OF PARTICIPATING COUNTIES

County	Total Area
Covington County	415 square miles
Forrest County	470 square miles
Jefferson Davis County	409 square miles
Jones County	700 square miles
Marion County	549 square miles
Perry County	650 square miles
Wayne County	814 square miles

Source: US Census Bureau

The MEMA District 8 Region enjoys four distinct seasons but the climate in the region is generally hot and humid compared to much of the rest of the United States given its latitude and relative proximity to the Gulf Coast. The region generally receives steady precipitation throughout the year, averaging between 4 and 5 inches per month. The hottest months of the year tend to be July and August when average high temperatures reach the low to mid 90s and the coldest month is typically January with average low temperatures dropping to the mid thirties. The region is also often susceptible to turbulent weather when warm, wet air from the Gulf of Mexico is pushed up into the region and mixes with cooler air coming down from across the continent resulting in severe weather conditions. This is particularly true in the spring and fall when seasons are changing and diverse weather patterns interact.

FIGURE 3.1: MEMA DISTRICT 8 REGION ORIENTATION MAP



3.2 POPULATION AND DEMOGRAPHICS

Although Wayne County is the largest participating county by area, Forrest County has the largest population. Between 2000 and 2010, the majority of participating jurisdictions experienced little to no growth, however Jefferson Davis County experienced a notable decline in population. The Town of Ellisville had the highest rate of growth at 28.4 percent. Population counts from the US Census Bureau for 1990, 2000, and 2010 for each of the participating counties and jurisdictions are presented in **Table 3.2**.

TABLE 3.2: POPULATION COUNTS FOR PARTICIPATING COUNTIES

Jurisdiction	1990 Census Population	2000 Census Population	2010 Census Population	% Change 2000-2010
Covington County	16,527	19,407	19,568	0.8%
Forrest County	68,325	72,156	75,007	3.8%
Jefferson Davis County	14,051	13,962	12,487	-10.6%
Jones County	62,031	64,958	67,761	4.3%
Marion County	25,544	25,595	27,088	5.8%
Perry County	10,865	12,138	12,250	0.9%
Wayne County	19,517	21,216	20,747	-2.2%

Source: US Census Bureau

Based on the 2010 Census, the median age for residents of the participating counties ranges from 37 to 43 years. The racial characteristics of the participating counties are presented in **Table 3.3**. Generally, whites make up the majority of the population in the region, however, blacks make up a significant population throughout the region as well and in some cases represent the majority.

TABLE 3.3: DEMOGRAPHICS OF PARTICIPATING COUNTIES

Jurisdiction	White Persons, Percent (2010)	Black Persons, Percent (2010)	American Indian or Alaska Native, Percent (2010)	Other Race, Percent (2010)	Persons of Hispanic Origin, Percent (2010)*
Covington County	63.0%	34.9%	0.1%	1.0%	1.9%
Forrest County	57.0%	37.8%	0.4%	1.5%	2.9%
Jefferson Davis County	38.7%	59.9%	0.3%	0.3%	0.8%
Jones County	67.2%	28.3%	0.5%	3.1%	4.7%
Marion County	65.8%	32.3%	0.2%	1.7%	1.2%
Perry County	78.2%	20.0%	0.3%	1.5%	1.0%
Wayne County	59.3%	38.9%	0.2%	1.5%	1.2%

*Hispanics may be of any race, so also are included in applicable race categories

Source: US Census Bureau

3.3 HOUSING, INFRASTRUCTURE, AND LAND USE

3.3.1 Housing

According to the 2010 US Census, there are 85,791 housing units in the MEMA District 8 Region, most of which are single family homes. Housing information for the seven participating counties is presented in **Table 3.4**. As shown in the table, all counties have a very low percentage of seasonal housing units compared.

TABLE 3.4: HOUSING CHARACTERISTICS OF PARTICIPATING COUNTIES

Jurisdiction	Housing Units (2000)	Housing Units (2010)	Seasonal Units, Percent (2010)	Median Home Value (2006-2010)
Covington County	8,083	8,501	2.2%	\$78,900
Forrest County	16,420	29,913	33,282	\$114,000
Jefferson Davis County	5,891	5,876	3.6%	\$69,500
Jones County	26,921	28,424	1.1%	\$85,000
Marion County	10,395	11,838	3.8%	\$82,800
Perry County	5,107	5,519	5.0%	\$82,200
Wayne County	9,049	9,213	2.2%	\$64,400

Source: US Census Bureau

3.3.2 Infrastructure

TRANSPORTATION

There are several major thoroughfares that traverse the MEMA District 8 Region. US Interstate 59 runs roughly northeast to southwest through Jones County, connecting with US Interstate 10 to the south and running into New Orleans. It is intersected by US Highway 84 which traverses across Wayne, Jones, Covington, and Jefferson Davis Counties from east to west, connecting Waynesboro, Laurel, and Collins. US Highway 98 runs through Perry and Marion Counties from east to west and connects both of these counties with Hattiesburg.

There are several small general aviation airports within the MEMA District 8 Region, including the Columbia-Marion County Airport in Columbia and the Richton-Perry County Airport in Richton. The major airport nearest to the region is the Hattiesburg-Laurel Regional Airport in Hattiesburg which offers non-stop commercial flights to destinations across the eastern US and Midwest and is generally less than 50 miles from anywhere in the region. Another major nearby airport that is often used by residents in the region is the Jackson-Medgar Wiley Evers International Airport, located in Jackson, Mississippi, which is used for longer flights into and out of the region.

UTILITIES

Electric power in the MEMA District 8 Region is provided by several electricity cooperatives, many of which are provided with power by Mississippi Power Company. Dixie Electric Power Association (EPA) serves Jones, Wayne, and Perry Counties. Meanwhile, Southern Pine EPA serves much of Covington and Jefferson Davis Counties and Pearl River Valley EPA is the primary provider to Marion County.

Water and sewer service is generally provided by all of the participating towns, but unincorporated areas rely on septic systems and wells in the MEMA District 8 Region.

COMMUNITY FACILITIES

There are a number of public buildings and community facilities located throughout the MEMA District 8 Region. According to the data collected for the vulnerability assessment (Section 6.4.1), there are 11 fire stations, 14 police stations, 7 medical care facilities, 4 EOCs, and 68 schools located within the study area.

Seven hospitals are located in the MEMA District 8 Region. The largest is Forrest General Hospital is a 545 inpatient bed facility with a 400-bed medical-surgical hospital located in the City of Hattiesburg. The second largest is the South Central Regional Medical Center, a 285-bed, not-for-profit hospital located in Laurel. Wayne General Hospital follows with 85 beds and Perry County General Hospital has 60 beds.

The MEMA District 8 Region contains numerous local, state, and national parks and recreation areas, the largest of which is the De Soto National Forest in Wayne and Perry Counties. These facilities offer recreational opportunities to area residents and hundreds of thousands of visitors each year.

3.3.3 Land Use

Many areas of the MEMA District 8 Region are undeveloped or sparsely developed due to the region's location just off the Gulf Coast and the conservation of land in state and national parks. As shown in **Figure 3.1** above, there are a few incorporated municipalities located throughout the study area, and these areas are where the region's population is generally concentrated. The incorporated areas are also where many of the businesses, commercial uses, and institutional uses are located. Land uses in the balance of the study area generally consist of rural residential development, agricultural uses, and recreational areas.

3.4 EMPLOYMENT AND INDUSTRY

Like many other parts of Mississippi, the MEMA District 8 Region's economy has traditionally been heavily reliant on the manufacturing industries. However, the region has suffered from numerous plant closings during the 1990s and 2000s. As a result, many of the communities are now working to develop place-based economies that will rely on the MEMA District 8 Region's cultural traditions and natural resources. Agriculture also continues to play a major role in the local economy and there are cattle, poultry, and other operations located throughout the region. As the construction sector continues to recover, this area of employment is also expected to pick back up.

According to the Mississippi Employment Security Commission (MESC), in 2018, Covington County had an average annual employment of 5,350 workers and an average unemployment rate of 8.2 percent (compared to 6.0 percent for the state). In 2018, the Manufacturing industry employed 26.2 percent of the County's workforce followed by Retail Trade (11.2%), and Transportation and Warehousing (8.0%). The average annual wage in 2018 for Covington County was \$35,880 compared to \$41,236 for the State of Mississippi.

In 2018, Forrest County had an average annual employment of 32,270 workers and an average unemployment rate of 4.4% percent. According to the MESC, in 2018, the Government Agencies

employed 26.8% percent of the workforce followed by Educational Services (13.3%) and Manufacturing (9.7%). The average annual wage in Forrest County was \$ 42,389.

In 2019, Jefferson Davis County had an average annual employment of 1,630 workers and an average unemployment rate of 6.8 percent. According to the MESC, in 2018, the Construction industry employed 16 percent of the workforce followed by Retail Trade (14.1 %) and Health Care and Social Assistance (8.6%). The average annual wage in Jefferson Davis County was \$26,736

In 2019, Jones County had an average annual employment of 27,860 workers in 2018 and an average unemployment rate of 4.8 percent. According to the MESC, in 2018, the Government Agencies employed the most people, with 25.1 percent of the workforce, followed by Manufacturing (23.7%) and Retail Trade (10.4%). The average annual wage in Jones County was \$ 39,310.

In 2018, Marion County had an average annual employment of 8,220 workers and an average unemployment rate of 5.1 percent. In 2018, according to the MESC, Government Agencies employed 15.7 percent of the workforce. Retail Trade was the second largest industry, employing (14%) of workers, and Health Care and Social Assistance followed closely behind (13.4%). The average annual wage in Marion County was \$30,998.

In 2018, Perry County had an average annual employment of 2,220 workers and an average unemployment rate of 6.0 percent. According to the MESC, in 2018, Government Agencies employed 26.6 percent of the workforce followed by Manufacturing (25.7 %) and Health Care and Social Assistance (14.9%). The average annual wage in Perry County was \$35,374.

In 2019, Wayne County had an average annual employment of 4,937 workers and an average unemployment rate of 6.6 percent (compared to 6.0 percent for the state). In 2019, the Retail Trade industry continues to lead by employing the most people, with 16.1 percent of the workforce, followed by Manufacturing (12.6%) and Transportation and Warehousing (5.8%). The average annual wage in 2019for Wayne County was \$36,816 compared to \$41,236 for the State of Mississippi.

SECTION 4

HAZARD IDENTIFICATION

This section describes how the planning team identified the hazard to be included this plan. It consists of the following five subsections:

- ❖ 4.1 Overview
- ❖ 4.2 Description of Full Range of Hazards
- ❖ 4.3 Disaster Declarations
- ❖ 4.4 Hazard Evaluation
- ❖ 4.5 Hazard Identification Results

44 CFR Requirement

44 CFR Part 201.6(c)(2)(i): The risk assessment shall include a description of the type, location and extent of all natural hazards that can affect the jurisdiction. The plan shall include information on previous occurrences of hazard events and on the probability of future hazard events.

4.1 OVERVIEW

The MEMA District 8 Region is vulnerable to a wide range of natural and human-caused hazards that threaten life and property. Current FEMA regulations and guidance under the Disaster Mitigation Act of 2000 (DMA 2000) require, at a minimum, an evaluation of a full range of natural hazards. An evaluation of human-caused (i.e., terrorism) and technological hazards (i.e., hazardous materials incident) is encouraged, though not required, for plan approval. The MEMA District 8 Region has included a comprehensive assessment of all hazards. It should be noted however, that this list may not be all-inclusive and will be revisited with each plan update.

Upon a review of the full range of natural hazards suggested under FEMA planning guidance, the participating jurisdictions in the MEMA District 8 Regional Hazard Mitigation Plan have identified a number of hazards that are to be addressed in this plan including natural, technological, and human-caused disasters. These hazards were identified through an extensive process that utilized input from the MEMA District 8 Hazard Mitigation Council (MEMA District 8 HMC) members, research of past disaster declarations in the participating counties¹, and review of the State of Mississippi Hazard Mitigation Plan (2019). Readily available information from reputable sources (such as federal and state agencies) was also evaluated to supplement information from these key sources.

Table 4.1 lists the full range of hazards initially identified for inclusion in the Plan and provides a brief description for each. This table includes 27 individual hazards. Some of these hazards are considered to be interrelated or cascading (one hazard event may cause another, i.e. – hurricanes cause flooding), but for preliminary hazard identification purposes these individual hazards are broken out separately.

¹ A complete list of disaster declarations for the MEMA District 8 Region can be found below in Section 4.3.

Table 4.2 lists the disaster declarations in the MEMA District 8 Region.

Table 4.3 documents the evaluation process used for determining which of the initially identified hazards are considered significant enough to warrant further evaluation in the risk assessment. For each hazard considered, the table indicates whether or not the hazard was identified as a significant hazard to be further assessed, how this determination was made, and why this determination was made. The table works to summarize not only those hazards that *were* identified (and why) but also those that *were not* identified (and why not). Hazard events not identified for inclusion at this time may be addressed during future evaluations and updates of the risk assessment if deemed necessary by the MEMA District 8 RHMC during the plan update process.

Lastly, **Table 4.4** provides a summary of the hazard identification and evaluation process noting that 15 of the 27 initially identified hazards are considered significant enough for further evaluation in this Plan's risk assessment (marked with a "☑")

4.2 DESCRIPTION OF FULL RANGE OF HAZARDS

In this section, hazards are classified into groups including atmospheric hazards, hydrological hazards, geologic hazards, and other hazards (a catch-category of hazards all that typically includes human-caused and technological hazards). As noted above, several sources were consulted to determine a list of hazard to be considered by MEMA District 8. These include the MEMA District 8 HMC members, research of past disaster declarations in the participating counties², and review of the State of Mississippi Hazard Mitigation Plan (2019). Readily available information from reputable sources (such as federal and state agencies) was also evaluated to supplement information from these key sources.

TABLE 4.1: DESCRIPTIONS OF THE FULL RANGE OF INITIALLY IDENTIFIED HAZARDS

Hazard Description	
ATMOSPHERIC HAZARDS	
Avalanche	A rapid fall or slide of a large mass of snow down a mountainside.
Drought	A prolonged period of less than normal precipitation such that the lack of water causes a serious hydrologic imbalance. Common effects of drought include crop failure, water supply shortages, and fish and wildlife mortality. High temperatures, high winds, and low humidity can worsen drought conditions and also make areas more susceptible to wildfire. Human demands and actions have the ability to hasten or mitigate drought-related impacts on local communities.
Hailstorm	Any storm that produces hailstones that fall to the ground; usually used when the amount or size of the hail is considered significant. Hail is formed when updrafts in thunderstorms carry raindrops into parts of the atmosphere where the temperatures are below freezing.

² A complete list of disaster declarations for the MEMA District 8 Region can be found below in Section 4.3.

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Heat Wave	A heat wave may occur when temperatures hover 10 degrees or more above the average high temperature for the region and last for several weeks. Humid or muggy conditions, which add to the discomfort of high temperatures, occur when a “dome” of high atmospheric pressure traps hazy, damp air near the ground. Excessively dry and hot conditions can provoke dust storms and low visibility. A heat wave combined with a drought can be very dangerous and have severe economic consequences on a community.
Hurricane and Tropical Storm	Hurricanes and tropical storms are classified as cyclones and defined as any closed circulation developing around a low-pressure center in which the winds rotate counter-clockwise in the Northern Hemisphere (or clockwise in the Southern Hemisphere) and with a diameter averaging 10 to 30 miles across. When maximum sustained winds reach or exceed 39 miles per hour, the system is designated a tropical storm, given a name, and is closely monitored by the National Hurricane Center. When sustained winds reach or exceed 74 miles per hour the storm is deemed a hurricane. The primary damaging forces associated with these storms are high-level sustained winds, heavy precipitation and tornadoes. Coastal areas are also vulnerable to the additional forces of storm surge, wind-driven waves and tidal flooding which can be more destructive than cyclone wind. The majority of hurricanes and tropical storms form in the Atlantic Ocean, Caribbean Sea and Gulf of Mexico during the official Atlantic hurricane season, which extends from June through November.
Lightning	Lightning is a discharge of electrical energy resulting from the buildup of positive and negative charges within a thunderstorm, creating a “bolt” when the buildup of charges becomes strong enough. This flash of light usually occurs within the clouds or between the clouds and the ground. A bolt of lightning can reach temperatures approaching 50,000 degrees Fahrenheit. Lightning rapidly heats the sky as it flashes, but the surrounding air cools following the bolt. This rapid heating and cooling of the surrounding air causes thunder. On average, 73 people are killed each year by lightning strikes in the United States.
Nor’easter	Similar to hurricanes, nor’easters are ocean storms capable of causing substantial damage to coastal areas in the Eastern United States due to their associated strong winds and heavy surf. Nor’easters are named for the winds that blow in from the northeast and drive the storm up the East Coast along the Gulf Stream, a band of warm water that lies off the Atlantic coast. They are caused by the interaction of the jet stream with horizontal temperature gradients and generally occur during the fall and winter months when moisture and cold air are plentiful. Nor’easters are known for dumping heavy amounts of rain and snow, producing hurricane-force winds, and creating high surf that causes severe beach erosion and coastal flooding.
Tornado	A tornado is a violently rotating column of air that has contact with the ground and is often visible as a funnel cloud. Its vortex rotates cyclonically with wind speeds ranging from as low as 40 mph to as high as 300 mph. Tornadoes are most often generated by thunderstorm activity when cool, dry air intersects and overrides a layer of warm, moist air forcing the warm air to rise rapidly. The destruction caused by tornadoes ranges from light to catastrophic depending on the intensity, size and duration of the storm.
Severe Thunderstorm	Thunderstorms are caused by air masses of varying temperatures meeting in the atmosphere. Rapidly rising warm moist air fuels the formation of thunderstorms. Thunderstorms may occur singularly, in lines, or in clusters. They can move through an area very quickly or linger for several hours. Thunderstorms may result in hail, tornadoes, or straight-line winds. Windstorms pose a threat to lives, property, and vital utilities primarily due to the effects of flying debris and can down trees and power lines.

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Winter Storm and Freeze	Winter storms may include snow, sleet, freezing rain, or a mix of these wintry forms of precipitation. Blizzards, the most dangerous of all winter storms, combine low temperatures, heavy snowfall, and winds of at least 35 miles per hour, reducing visibility to only a few yards. Ice storms occur when moisture falls and freezes immediately upon impact on trees, power lines, communication towers, structures, roads and other hard surfaces. Winter storms and ice storms can down trees, cause widespread power outages, damage property, and cause fatalities and injuries to human life.
GEOLOGIC HAZARDS	
Earthquake	A sudden, rapid shaking of the Earth caused by the breaking and shifting of rock beneath the surface. This movement forces the gradual building and accumulation of energy. Eventually, strain becomes so great that the energy is abruptly released, causing the shaking at the earth's surface which we know as an earthquake. Roughly 90 percent of all earthquakes occur at the boundaries where plates meet, although it is possible for earthquakes to occur entirely within plates. Earthquakes can affect hundreds of thousands of square miles; cause damage to property measured in the tens of billions of dollars; result in loss of life and injury to hundreds of thousands of persons; and disrupt the social and economic functioning of the affected area.
Expansive Soils	Soils that will exhibit some degree of volume change with variations in moisture conditions. The most important properties affecting degree of volume change in a soil are clay mineralogy and the aqueous environment. Expansive soils will exhibit expansion caused by the intake of water and, conversely, will exhibit contraction when moisture is removed by drying. Generally speaking, they often appear sticky when wet, and are characterized by surface cracks when dry. Expansive soils become a problem when structures are built upon them without taking proper design precautions into account with regard to soil type. Cracking in walls and floors can be minor, or can be severe enough for the home to be structurally unsafe.
Landslide	The movements of a mass of rock, debris, or earth down a slope when the force of gravity pulling down the slope exceeds the strength of the earth materials that comprise to hold it in place. Slopes greater than 10 degrees are more likely to slide, as are slopes where the height from the top of the slope to its toe is greater than 40 feet. Slopes are also more likely to fail if vegetative cover is low and/or soil water content is high.
Land Subsidence	The gradual settling or sudden sinking of the Earth's surface due to the subsurface movement of earth materials. Causes of land subsidence include groundwater pumpage, aquifer system compaction, drainage of organic soils, underground mining, hydrocompaction, natural compaction, sinkholes, and thawing permafrost.
Sinkhole	Sinkholes are a natural and common geologic feature in areas with underlying limestone and other rock types that are soluble in natural water. Most limestone is porous, allowing the acidic water of rain to percolate through their strata, dissolving some limestone and carrying it away in solution. Over time, this persistent erosional process can create extensive underground voids and drainage systems in much of the carbonate rocks. Collapse of overlying sediments into the underground cavities produces sinkholes.

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Tsunami	A series of waves generated by an undersea disturbance such as an earthquake. The speed of a tsunami traveling away from its source can range from up to 500 miles per hour in deep water to approximately 20 to 30 miles per hour in shallower areas near coastlines. Tsunamis differ from regular ocean waves in that their currents travel from the water surface all the way down to the sea floor. Wave amplitudes in deep water are typically less than one meter; they are often barely detectable to the human eye. However, as they approach shore, they slow in shallower water, basically causing the waves from behind to effectively “pile up”, and wave heights to increase dramatically. As opposed to typical waves which crash at the shoreline, tsunamis bring with them a continuously flowing ‘wall of water’ with the potential to cause devastating damage in coastal areas located immediately along the shore.
Volcano	A mountain that opens downward to a reservoir of molten rock below the surface of the earth. While most mountains are created by forces pushing up the earth from below, volcanoes are different in that they are built up over time by an accumulation of their own eruptive products: lava, ash flows, and airborne ash and dust. Volcanoes erupt when pressure from gases and the molten rock beneath becomes strong enough to cause an explosion.
HYDROLOGIC HAZARDS	
Dam and Levee Failure	Dam failure is the collapse, breach, or other failure of a dam structure resulting in downstream flooding. In the event of a dam failure, the energy of the water stored behind even a small dam is capable of causing loss of life and severe property damage if development exists downstream of the dam. Dam failure can result from natural events, human-induced events, or a combination of the two. The most common cause of dam failure is prolonged rainfall that produces flooding. Failures due to other natural events such as hurricanes, earthquakes or landslides are significant because there is generally little or no advance warning.
Erosion	Erosion is the gradual breakdown and movement of land due to both physical and chemical processes of water, wind, and general meteorological conditions. Natural, or geologic, erosion has occurred since the Earth’s formation and continues at a very slow and uniform rate each year.
Flood	The accumulation of water within a water body which results in the overflow of excess water onto adjacent lands, usually floodplains. The floodplain is the land adjoining the channel of a river, stream ocean, lake or other watercourse or water body that is susceptible to flooding. Most floods fall into the following three categories: riverine flooding, coastal flooding, or shallow flooding (where shallow flooding refers to sheet flow, ponding and urban drainage).
Storm Surge	A storm surge is a large dome of water often 50 to 100 miles wide and rising anywhere from four to five feet in a Category 1 hurricane up to more than 30 feet in a Category 5 storm. Storm surge heights and associated waves are also dependent upon the shape of the offshore continental shelf (narrow or wide) and the depth of the ocean bottom (bathymetry). A narrow shelf, or one that drops steeply from the shoreline and subsequently produces deep water close to the shoreline, tends to produce a lower surge but higher and more powerful storm waves. Storm surge arrives ahead of a storm’s actual landfall and the more intense the hurricane is, the sooner the surge arrives. Storm surge can be devastating to coastal regions, causing severe beach erosion and property damage along the immediate coast. Further, water rise caused by storm surge can be very rapid, posing a serious threat to those who have not yet evacuated flood-prone areas.

OTHER HAZARDS	
Hazardous Materials Incident	Hazardous material (HAZMAT) incidents can apply to fixed facilities as well as mobile, transportation-related accidents in the air, by rail, on the nation's highways and on the water. HAZMAT incidents consist of solid, liquid and/or gaseous contaminants that are released from fixed or mobile containers, whether by accident or by design as with an intentional terrorist attack. A HAZMAT incident can last hours to days, while some chemicals can be corrosive or otherwise damaging over longer periods of time. In addition to the primary release, explosions and/or fires can result from a release, and contaminants can be extended beyond the initial area by persons, vehicles, water, wind and possibly wildlife as well.
Pipeline Incident	In the case of this plan, a pipeline incident generally refers to a spill, explosion, or fire caused in the transport of flammable liquid or gas being carried by fixed pipes across the United States. These pipes often carry petroleum-based products that are dangerous to health and safety of people as well as the environment if exposed in large quantities.
Meth Lab Incident	A meth lab incident most often occurs as an explosion or fire that results from an unwanted chemical reaction that occurs during the production of the illegal drug, methamphetamine. Unlike a typical structural fire, the chemicals involved in meth production can create explosions and the release of toxic chemical gases which present additional risk of harm to anyone in the vicinity. Exposure to these chemicals can cause anything from eye/skin irritation to long term respiratory diseases and death.
Pandemic	Pandemics are infectious and contagious outbreaks typically caused by a virus that originated in animals and spreads to humans. Common sources are swine and avian. There are several definitions of pandemic depending on the severity of the outbreak. It can be defined generally as an epidemic occurring over a large geographic area. Pandemic viruses reproduce and mutate rapidly. Unlike seasonal influenza, humans have no immunity to the mutated strains, making it especially deadly in populations.
Terror Threat	Terrorism is defined by FEMA as, "the use of force or violence against persons or property in violation of the criminal laws of the United States for purposes of intimidation, coercion, or ransom." Terrorist acts may include assassinations, kidnappings, hijackings, bomb scares and bombings, cyber attacks (computer-based), and the use of chemical, biological, nuclear and radiological weapons.
Wildfire	An uncontrolled fire burning in an area of vegetative fuels such as grasslands, brush, or woodlands. Heavier fuels with high continuity, steep slopes, high temperatures, low humidity, low rainfall, and high winds all work to increase risk for people and property located within wildfire hazard areas or along the urban/wildland interface. Wildfires are part of the natural management of forest ecosystems, but most are caused by human factors. Over 80 percent of forest fires are started by negligent human behavior such as smoking in wooded areas or improperly extinguishing campfires. The second most common cause for wildfire is lightning.
Cyber Attack	A cyber-attack is a malicious, intentional attempt to breach the information technology (IT) infrastructure of an individual or organization. The State of Mississippi defines a cyberterrorism incident as any adverse premeditated, politically, financially or maliciously motivated attack against informational systems.

4.3 DISASTER DECLARATIONS

Disaster declarations provide initial insight into the hazards that may impact the MEMA District 8 Regional planning area. Since 1973, 27 presidential disaster declarations have occurred in the region. This includes 14 events related to flooding, 15 events related to tornadoes, and 8 events related to hurricane and tropical storms.

TABLE 4.2: MEMA DISTRICT 8 REGION DISASTER DECLARATIONS BY COUNTY

Disaster Number	Year	Description	Covington	Jefferson Davis	Jones	Marion	Perry	Wayne	Forrest
271	1969	HURRICANE CAMILLE	X	X	X	X	X	X	X
302	1971	STORMS & TORNADOES			X		X		
318	1972	HEAVY RAINS & FLOODING				X			
368	1973	HEAVY RAINS, TORNADOES & FLOODING			X	X		X	
430	1974	HEAVY RAINS & FLOODING	X	X	X	X	X	X	X
577	1979	STORMS, TORNADOES, FLOODS				X			
599	1979	HURRICANE FREDERIC	X		X		X	X	X
618	1980	STORMS, FLOOD, MUDSLIDES & TORNADOES				X			X
678	1983	SEVERE STORMS, FLOODING & TORNADOES	X			X	X		X
787	1987	SEVERE STORMS, TORNADOES & FLOODING			X				
859	1990	SEVERE STORMS, TORNADOES & FLOODING	X		X	X	X		X
968	1992	SEVERE STORMS, HIGH WINDS & TORNADOES	X	X					
1251	1998	HURRICANE GEORGES	X	X	X	X	X	X	X
1360	2001	SEVERE STORMS AND TORNADOES			X	X	X		X
1459	2003	SEVERE STORMS, TORNADOES, FLOODS				X		X	
1550	2004	HURRICANE IVAN	X	X	X	X	X	X	X
1594	2005	HURRICANE DENNIS	X	X	X		X	X	X
1604	2005	MS HURRICANE KATRINA	X	X	X	X	X	X	X
1837	2009	MS SEVERE STORMS, FLOODING, AND TORNADOES		X				X	
1974	2008	MS HURRICANE GUSTAV		X		X			
4081	2012	MS HURRICANE ISAAC	X	X	X	X	X	X	X
4101	2013	MS SEVERE STORMS, TORNADOES, AND FLOODING				X		X	X
4175	2014	Mississippi Severe Storms, Tornadoes, and Flooding			X			X	
4205	2015	Mississippi Severe Storms and Tornadoes				X			

Disaster Number	Year	Description	Covington	Jefferson Davis	Jones	Marion	Perry	Wayne	Forrest
4268	2016	Mississippi Severe Storms and Flooding	X	X	X	X	X	X	X
4295	2017	Mississippi Severe Storms, Tornadoes, Straight-line Winds, and Flooding					X		X
4415	2018	Mississippi Severe Storms, Flooding, And Tornado	X		X	X	X	X	X
TOTAL NUMBER OF DISASTERS:			13	11	16	19	15	15	16

4.4 HAZARD EVALUATION

TABLE 4.3: DOCUMENTATION OF THE HAZARD EVALUATION PROCESS

Hazards Considered	Was this hazard identified as a significant hazard to be addressed in the plan at this time? (Yes or No)	How was this determination made?	Why was this determination made?
ATMOSPHERIC HAZARDS			
Avalanche	NO	- Review of US Forest Service National Avalanche Center website - Review of FEMA's Multi-Hazard Identification and Risk Assessment - Review of State of MS Hazard Mitigation Plan - Review of Previous Region 8 Hazard Mitigation Plan and Forrest County Hazard Mitigation Plan	There is no risk or history of avalanche events in Mississippi. The United States avalanche hazard is limited to mountainous western states including Alaska, as well as some areas of low risk in New England.

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Hazards Considered	Was this hazard identified as a significant hazard to be addressed in the plan at this time? (Yes or No)	How was this determination made?	Why was this determination made?
Drought	YES	- Review of State of MS Hazard Mitigation Plan - Review of U.S. Drought Monitor website - Review of Previous Region 8 Hazard Mitigation Plan and Forrest County Hazard Mitigation Plan	- Droughts are identified in the State of MS Hazard Mitigation Plan as a limited hazard. - There are reports of the most extreme (exceptional) drought in each of the counties according to the NC Drought Monitor.
Hailstorm	YES	- Review of State of MS Hazard Mitigation Plan - Review of Previous Region 8 Hazard Mitigation Plan and Forrest County Hazard Mitigation Plan - Review of FEMA's Multi-Hazard Identification and Risk Assessment - Review of NOAA NCEI Storm Events Database	- Hailstorm events are excluded from the state plan, but the plan notes that they should be addressed in local plans. - Hail is addressed under the thunderstorm in the previous MEMA District 8 Hazard Mitigation Plan. - NCEI reports over 509 hailstorm events (0.5-inch size hail to 4.5 inches) for the MEMA District 8 Region since 1962. For these events, there was over \$6.3 million in property damages reported.
Heat Wave	YES	- Review of State of MS Hazard Mitigation Plan - Review of Previous Region 8 Hazard Mitigation Plan and Forrest County Hazard Mitigation Plan - Review of NOAA NCDC Storm Events Database	- The State of MS Hazard Mitigation Plan excludes extreme heat, but it also indicates that extreme heat can create emergencies in Mississippi. - Heat wave/extreme heat was included in the previous MEMA District 8 Hazard Mitigation Plan. - NCEI reports 5 extreme heat events for the MEMA District 8 counties since 2000. These events resulted in 1 recorded death.

Hazards Considered	Was this hazard identified as a significant hazard to be addressed in the plan at this time? (Yes or No)	How was this determination made?	Why was this determination made?
Hurricane and Tropical Storm	YES	• Review of State of MS Hazard Mitigation Plan • Review of Previous Region 8 Hazard Mitigation Plan and Forrest County Hazard Mitigation Plan • Historical tropical cyclone tracks and National Hurricane Center Website • Review of NOAA NCEI Storm Events Database • Review of historical presidential disaster declarations	• The State Hazard Mitigation Plan profiles the hurricane hazard and identifies it as a significant hazard, noting its devastating impacts on the state. • The hurricane and tropical storm hazard was addressed in the previous MEMA District 8 Hazard Mitigation Plan. • NOAA historical records indicate 71 hurricane or tropical storms have come within 75 miles of the MEMA District 8 Region since 1850. Of these storms, 33 passed directly through the region. • NCEI reports 12 hurricane and tropical storm events in the MEMA District 8 Region since 1995. These events were responsible for an estimated \$759.076 million (2019 dollars) in property damages as well as 25 deaths and 243 injuries (some of which may have occurred outside of the region). • 8 out of 22 disaster declarations in the MEMA District 8 are directly related to hurricane and tropical storm events.

Hazards Considered	Was this hazard identified as a significant hazard to be addressed in the plan at this time? (Yes or No)	How was this determination made?	Why was this determination made?
Lightning	YES	• Review of State of MS Hazard Mitigation Plan • Review of Previous Region 8 Hazard Mitigation Plan and Forrest County Hazard Mitigation Plan • Review of FEMA's Multi-Hazard Identification and Risk Assessment • Review of NOAA NCDC Storm Events Database, NOAA lightning statistics	• Lightning events are not profiled in the MS State Hazard Mitigation Plan because they do not generally impact the entire state. It is recommended that these hazards be profiled locally. • Lightning was previously included under thunderstorms in the MEMA District 8 Hazard Mitigation Plan. • NCEI reports 33 lightning events for the MEMA District 8 Region since 1995. These events have resulted in no recorded deaths, 6 injuries, and over \$1,899,000 (2019 dollars) in property damages. • According to Vaisala's U.S. National Lightning Detection Network, the MEMA District 8 Region is located in an area that experienced an average of 12 to 20 lightning flashes per square kilometer per year between 2008 and 2017. • Given the damage and reported death and injuries, individual analysis is warranted.
Nor'easter	NO	• Review of State of MS Hazard Mitigation Plan • Review of Previous Region 8 Hazard Mitigation Plan and Forrest County Hazard Mitigation Plan • Review of NOAA NCEI Storm Events Database	• Nor'easters are not profiled or discussed in the state plan. • Nor'easters were not identified in the previous hazard mitigation plan for the MEMA District 8. • NCEI does not report any nor'easter activity for the MEMA District 8 Region.

Hazards Considered	Was this hazard identified as a significant hazard to be addressed in the plan at this time? (Yes or No)	How was this determination made?	Why was this determination made?
Tornado	YES	• Review of State of MS Hazard Mitigation Plan • Review of Previous Region 8 Hazard Mitigation Plan and Forrest County Hazard Mitigation Plan • Review of FEMA's Multi-Hazard Identification and Risk Assessment • Review of NOAA NCEI Storm Events Database • Review of historical presidential disaster declarations	• Tornado events are listed in the State of MS Hazard Mitigation Plan as a significant hazard and are referenced as a common disaster. • Tornado events were included in the previous MEMA District 8 Hazard Mitigation Plan. • NCEI reports 206 tornado events in MEMA District 8 Region counties since 1950. These events have resulted in 22 recorded deaths, 764 injuries, and almost \$377.277 million (2019 dollars) in property damage. • 16 out of 27 disaster declarations in the MEMA District 8 Region are directly related to tornado events.
Severe Thunderstorm	YES	• Review of State of MS Hazard Mitigation Plan • Review of previous Review of Previous Region 8 Hazard Mitigation Plan and Forrest County Hazard Mitigation Plan • Review of FEMA's Multi-Hazard Identification and Risk Assessment • Review of NOAA NCEI Storm Events Database	• Severe thunderstorm events were not profiled in the State Hazard Mitigation Plan because they do not typically impact the entire state, invoking a state response. However, severe thunderstorms were identified as a significant concern at the local level. • Severe thunderstorm events were addressed the previous plans. • NCEI reports 1,230 thunderstorm events in the MEMA 8 Region counties since 1957. These events have resulted in 5 deaths, 16 injuries, and almost \$19.659 million (2019 dollars) in property damage.

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Hazards Considered	Was this hazard identified as a significant hazard to be addressed in the plan at this time? (Yes or No)	How was this determination made?	Why was this determination made?
Winter Storm and Freeze	YES	• Review of State of MS Hazard Mitigation Plan • Review of Previous Region 8 Hazard Mitigation Plan and Forrest County Hazard Mitigation Plan • Review of FEMA's Multi-Hazard Identification and Risk Assessment • Review of NOAA NCEI Storm Events Database • Review of historical presidential disaster declarations	• Extreme winter weather is identified in the state plan as a limited hazard. • Winter storm events included in the previous MEMA District 8 Hazard Mitigation Plan. • NCEI reports that the MEMA District 8 counties have been affected by 44 winter weather events since 1993. These events resulted in no recorded deaths or injuries and nearly \$1,385,000 in property damages. • None of the region's disaster declarations were directly related to winter storm events.

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Hazards Considered	Was this hazard identified as a significant hazard to be addressed in the plan at this time? (Yes or No)	How was this determination made?	Why was this determination made?
GEOLOGIC HAZARDS			
Earthquake	YES	• Review of State of MS Hazard Mitigation Plan • Review of Previous Region 8 Hazard Mitigation Plan and Forrest County Hazard Mitigation Plan • Review of National Geophysical Data Center • USGS Earthquake Hazards Program website • Review of FEMA's Multi-Hazard Identification and Risk Assessment	• Earthquake events are identified as a limited hazard in the State of MS Hazard Mitigation Plan, and all counties in MS are considered to be susceptible to the effects of earthquakes. • Earthquakes have occurred in and around the State of Mississippi in the past. The state is affected by the New Madrid (near Missouri) and White River Fault lines which have generated a magnitude 8.0 earthquake in the last 200 years. • The previous MEMA District 8 Region hazard mitigation plan does not address earthquake. • No events are known to have occurred in the region according to the National Geophysical Data Center. • According to USGS seismic hazard maps, the peak ground acceleration (PGA) with a 10% probability of exceedance in 50 years for the MEMA District 8 Region is approximately 2-3%. FEMA recommends that earthquakes be further evaluated for mitigation purposes in areas with a PGA of 3%g or more.

Hazards Considered	Was this hazard identified as a significant hazard to be addressed in the plan at this time? (Yes or No)	How was this determination made?	Why was this determination made?
Expansive Soils	YES	- Review of State of MS Hazard Mitigation Plan - Review of Previous Region 8 Hazard Mitigation Plan and Forrest County Hazard Mitigation Plan - Review of FEMA's Multi-Hazard Identification and Risk Assessment - Review of USGS Swelling Clays Map	- Expansive soils are not identified in the state plan and have not historically been a problem for most areas in Mississippi. - Expansive soils are not addressed in the previous MEMA District 8 hazard mitigation plan. - According to USGS, the MEMA District 8 Region is located in an area that is underlain with "generally less than 50%" clay having high swelling potential.
Landslide	YES	- Review of State of MS Hazard Mitigation Plan - Review of Previous Region 8 Hazard Mitigation Plan and Forrest County Hazard Mitigation Plan - Review of USGS Landslide Incidence and Susceptibility Hazard Map	- The State of MS Hazard Mitigation Plan excludes the landslide hazard because there is no extensive history of landslides in Mississippi. - The previous MEMA District 8 hazard mitigation plan does not identify landslides as a potential hazard. - USGS landslide hazard maps indicate "low incidence" (less than 1.5% of the area is involved in landsliding) for nearly the entire region. A small area in Wayne County has "moderate incidence" (1.5-15% of the area is involved in landsliding). - Local conditions may become more favorable for landslides due to heavy rain, for example.
Land Subsidence	NO	- Review of State of MS Hazard Mitigation Plan - Review of Previous Region 8 Hazard Mitigation Plan and Forrest County Hazard Mitigation Plan	- The state plan does not identify land subsidence as a hazard because there is no significant historical record of the hazard in the region. - The previous MEMA District 8 hazard mitigation plan does not identify land subsidence as a potential hazard.

Hazards Considered	Was this hazard identified as a significant hazard to be addressed in the plan at this time? (Yes or No)	How was this determination made?	Why was this determination made?
Sinkhole	NO	• Review of State of MS Hazard Mitigation Plan • Review of Previous Region 8 Hazard Mitigation Plan and Forrest County Hazard Mitigation Plan	• The state plan does not identify sinkholes as a hazard because there is no significant historical record of the hazard in the region. • The previous MEMA District 8 Hazard Mitigation Plan does not identify sinkholes as a potential hazard.
Tsunami	NO	• Review of State of MS Hazard Mitigation Plan • Review of Previous Region 8 Hazard Mitigation Plan and Forrest County Hazard Mitigation Plan • Review of USGS Regional Assessment of Tsunami potential in the Gulf of Mexico • Review of FEMA’s Multi-Hazard Identification and Risk Assessment • Review of FEMA “How-to” mitigation planning guidance (Publication 386-2, “Understanding Your Risks – Identifying Hazards and Estimating Losses)	• The tsunami hazard is excluded from the state plan. There is no historical record of tsunamis in the Gulf of Mexico. • Tsunami inundation zone maps are not available for communities located along the U.S. Gulf Coast. • FEMA mitigation planning guidance suggests that locations along the U.S. Gulf Coast have a relatively low tsunami risk and need not conduct a tsunami risk assessment at this time.
Volcano	NO	• Review of State of MS Hazard Mitigation Plan • Review of USGS Volcano Hazards Program website	• The volcano hazard is excluded from the state plan. There is no historical record of this hazard in the region. • There are no active volcanoes in Mississippi.

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Hazards Considered	Was this hazard identified as a significant hazard to be addressed in the plan at this time? (Yes or No)	How was this determination made?	Why was this determination made?
HYDROLOGIC HAZARDS			
Dam and Levee Failure	YES	• Review of State of MS Hazard Mitigation Plan • Review of Previous Region 8 Hazard Mitigation Plan and Forrest County Hazard Mitigation Plan • Review of MS Division of Environmental Quality dam inventory	• Dam/levee failure is identified in the state plan as a limited hazard. • The previous MEMA District 8 Hazard Mitigation Plan address dam failure • 7 dams in the region are classified as high-hazard (high hazard is defined where dam failure may cause loss of life or serious damage).
Erosion	YES	• Review of State of MS Hazard Mitigation Plan • Review of Previous Region 8 Hazard Mitigation Plan and Forrest County Hazard Mitigation Plan	• Coastal erosion was excluded from the State of MS Hazard Mitigation Plan as a hazard, however, it is addressed under the hurricane hazard. Riverine erosion is not addressed in the plan. • Erosion is identified as a hazard in the previous MEMA District 8 Hazard Mitigation Plan. • Erosion is a natural process and continuous process that impacts the region.

Hazards Considered	Was this hazard identified as a significant hazard to be addressed in the plan at this time? (Yes or No)	How was this determination made?	Why was this determination made?
Flood	YES	• Review of State of MS Hazard Mitigation Plan • Review of Previous Region 8 Hazard Mitigation Plan and Forrest County Hazard Mitigation Plan • Review of historical disaster declarations • Review of NOAA NCEI Storm Events Database • Review of FEMA DFIRM flood data for the MEMA District 8 Region counties • Review of FEMA's NFIP Community Status Book and Community Rating System (CRS)	• The flood hazard is thoroughly discussed in the state plan. Much of the state is located in the 100-year floodplain. Further, flash floods are a common occurrence during rain storms. • The previous MEMA District 8 Hazard Mitigation Plan includes the flood hazard. • 15 out of 27 disaster declarations were flood-related and an additional 8 were hurricane or tropical storm-related which caused flooding issues. • NCEI reports that MEMA District 8 Region counties have been affected by 344 flood events since 1993. In total, these events caused no recorded deaths or injuries but caused an estimated \$53.66 million in property damages.
Storm Surge	NO	• Review of State of MS Hazard Mitigation Plan • Review of Previous Region 8 Hazard Mitigation Plan and Forrest County Hazard Mitigation Plan • Review of NOAA NCEI Storm Events Database	• Storm surge is discussed in the state plan under the hurricane hazard and indicates that only the coastal shoreline counties are subject to storm surge. • The previous MEMA District 8 Hazard Mitigation Plan does not include storm surge as a potential hazard. • No historical events were reported by NCEI. • Given the inland location of the MEMA District 8 Region, storm surge would not affect the area.

SECTION 4: HAZARD IDENTIFICATION

Hazards Considered	Was this hazard identified as a significant hazard to be addressed in the plan at this time? (Yes or No)	How was this determination made?	Why was this determination made?
OTHER HAZARDS			
Hazardous Materials Incident	YES	- Review of State of MS Hazard Mitigation Plan - Review of Previous Region 8 Hazard Mitigation Plan and Forrest County Hazard Mitigation Plan - Review of EPA TRI sites inventory - Review of PHMSA HAZMAT Incident Statistics database	- The previous MEMA District 8 Hazard Mitigation Plan include hazardous materials incident as a hazard. - There are 60 TRI sites located in the MEMA District 8 Region. - Previously included as part of the Hazardous Materials Incident in the MEMA District 8 Hazard Mitigation Plan
Pipeline Incident	YES	- Review of PHMSA HAZMAT Incident Statistics database - Discussion with Regional Hazard Mitigation Plan Committee - Review of Previous Region 8 Hazard Mitigation Plan and Forrest County Hazard Mitigation Plan	- The MEMA District 8 Region contains 1,248 miles of gas lines and 822 miles of hazardous liquid lines - Previously included as part of the Hazardous Materials Incident in the MEMA District 8 Hazard Mitigation Plan
Meth Lab Incident	YES	- Review of incident history based on local knowledge of past events and the potential for future events - Review of Previous Region 8 Hazard Mitigation Plan and Forrest County Hazard Mitigation Plan	- Although there has not been an abundance of major meth lab incidents in the region, the potential for an incident exists and responders should be aware and prepared. - Previously included as part of the Hazardous Materials Incident in the MEMA District 8 Hazard Mitigation Plan

SECTION 4: HAZARD IDENTIFICATION

Hazards Considered	Was this hazard identified as a significant hazard to be addressed in the plan at this time? (Yes or No)	How was this determination made?	Why was this determination made?
Pandemic	NO	- Review of State of MS Hazard Mitigation Plan - Review of Previous Region 8 Hazard Mitigation Plan and Forrest County Hazard Mitigation Plan	- Pandemic is not discussed in the state plan. - Pandemic is not included in the previous MEMA District 8 Hazard Mitigation Plan
Terror Threat	NO	- Review of State of MS Hazard Mitigation Plan - Review of Previous Region 8 Hazard Mitigation Plan and Forrest County Hazard Mitigation Plan	- Terrorism is excluded from the state plan. - Terrorism was considered but not included in the previous MEMA District 8 Hazard Mitigation Plan
Wildfire	YES	- Review of State of MS Hazard Mitigation Plan - Review of Previous Region 8 Hazard Mitigation Plan and Forrest County Hazard Mitigation Plan - Review of Southern Wildfire Risk Assessment (SWRA) Data - Review of Mississippi Forestry Commission website	- The State of MS Hazard Mitigation Plan identifies wildfire as a significant hazard and regular occurrence. - The previous MEMA District 8 Hazard Mitigation Plan addresses wildfire. - A review of Wildfire Hazard Potential (US Forrest Service) data indicates that there are areas of concern in the MEMA District 8 Region. Wildfire hazard risks will increase as low-density development along the urban/wildland interface increases.
Cyber-Attack	YES	Review of State of MS Hazard Mitigation Plan	- Cyber Attack is included from the state plan - Cyber Attack was discussed and the planning committee determined to include the threat in this plan update.

4.5 HAZARD IDENTIFICATION RESULTS

TABLE 4.4: SUMMARY RESULTS OF THE HAZARD IDENTIFICATION AND EVALUATION PROCESS

ATMOSPHERIC HAZARDS	GEOLOGIC HAZARDS
☐ Avalanche	☒ Earthquake
☒ Drought	☒ Expansive Soils
☒ Hailstorm	☒ Landslide
☒ Heat Wave	☐ Land Subsidence
☒ Hurricane and Tropical Storm	☐ Sinkhole
☒ Lightning	☐ Tsunami
☐ Nor'easter	☐ Volcano
☒ Tornado	OTHER HAZARDS
☒ Severe Thunderstorm	☒ Hazardous Materials Incident
☒ Winter Storm and Freeze	☒ Pipeline Incident
HYDROLOGIC HAZARDS	☒ Meth Lab Incident
☒ Dam and Levee Failure	☐ Pandemic
☒ Erosion	☐ Terror Threat
☒ Flood	☒ Wildfire
☐ Storm Surge	☒ Cyber Terrorism

From this point in the plan onward, the hazards will be organized per the MEMA District 8 classification groups of: Flood Hazards (Flood, Erosion, Dam Failure, Winter Storm); Fire-related hazards (Drought/Heat Wave, Wildfire); Geologic hazards (Earthquake, Landslide, Expansive Soils); Wind Hazards (Hurricane and Tropical Storm; Thunderstorm, including Wind, Hail, and Lighting; Tornado); and Other Hazards (HAZMAT, Pipeline Incident, Meth Lab Incident, Wildfire, and Cyber Terrorism).

SECTION 5

HAZARD PROFILES

This section includes detailed hazard profiles for each of the hazards identified in the previous section (*Hazard Identification*) as significant enough for further evaluation in the MEMA District 8 Regional Hazard Mitigation Plan. It contains the following subsections:

- ❖ 5.1 Overview
- ❖ 5.2 Study Area
- Flood-Related Hazards
 - ❖ 5.3 Flooding
 - ❖ 5.4 Erosion
 - ❖ 5.5 Dam Failure
 - ❖ 5.6 Winter Storm / Freeze
- Fire-Related Hazards
 - ❖ 5.7 Drought / Heat Wave
 - ❖ 5.8 Wildfire
- Geologic Hazards
 - ❖ 5.9 Earthquake
 - ❖ 5.10 Landslide
 - ❖ 5.11 Expansive Soils
- Wind-Related Hazards
 - ❖ 5.12 Hurricane and Tropical Storm
 - ❖ 5.13 Thunderstorm (wind, hail, lightning)
 - ❖ 5.14 Tornado
- Other Hazards
 - ❖ 5.14 Hazardous Materials Incidents
 - ❖ 5.15 Cyber Terrorism
 - ❖ 5.16 Conclusions on Hazard Risk
 - ❖ 5.17 Final Determinations

44 CFR Requirement

44 CFR Part 201.6(c)(2)(i): The risk assessment shall include a description of the type, location and extent of all natural hazards that can affect the jurisdiction. The plan shall include information on previous occurrences of hazard events and on the probability of future hazard events

5.1 OVERVIEW

This section includes detailed hazard profiles for each of the hazards identified in the previous section (*Hazard Identification*) as significant enough for further evaluation in the MEMA District 8 hazard risk assessment by creating a hazard profile. Each hazard profile includes a general description of the hazard, its location and extent, notable historical occurrences and the probability of future occurrences. Each profile also includes specific items noted by members of the MEMA District 8 Regional Hazard Mitigation Council (MEMA District 8 RHMC) as it relates to unique historical or anecdotal hazard information for the counties in the Region or a participating municipality within it.

The following hazards were identified:

- ❖ **Flood-related Hazards**
 - ❖ Flooding
 - ❖ Erosion
 - ❖ Dam Failure

- ❖ Winter Storm and Freeze
- ❖ **Fire-related Hazards**
 - ❖ Drought / Heat Wave
 - ❖ Wildfire
- ❖ **Geologic Hazards**
 - ❖ Earthquake
 - ❖ Landslide
 - ❖ Expansive Soils
- ❖ **Wind-related Hazards**
 - ❖ Hurricane and Tropical Storm
 - ❖ Thunderstorm (including wind, hail, and lightning)
 - ❖ Tornado
- ❖ **Other Hazards**
 - ❖ Hazardous Materials Incident
 - ❖ Cyber Terrorism

5.2 STUDY AREA

The MEMA District 8 Region includes six counties and fifteen incorporated jurisdictions. **Table 5.1** provides a summary table of the participating jurisdictions within each county. In addition, **Figure 5.1** provides a base map, for reference, of the MEMA District 8 Region.

**TABLE 5.1: PARTICIPATING JURISDICTIONS IN THE MEMA DISTRICT 8
REGIONAL HAZARD MITIGATION PLAN**

Covington County	
Collins	Mount Olive
Seminary	
Jefferson Davis County	
Bassfield	Prentiss
Jones County	
Ellisville	Laurel
Sandersville	Soso
Marion County	
Columbia	
Perry County	
Beaumont	New Augusta
Richton	
Wayne County	
State Line	Waynesboro
Forrest County	

Hattiesburg	Petal
-------------	-------

FIGURE 5.1: MEMA DISTRICT 8 BASE MAP

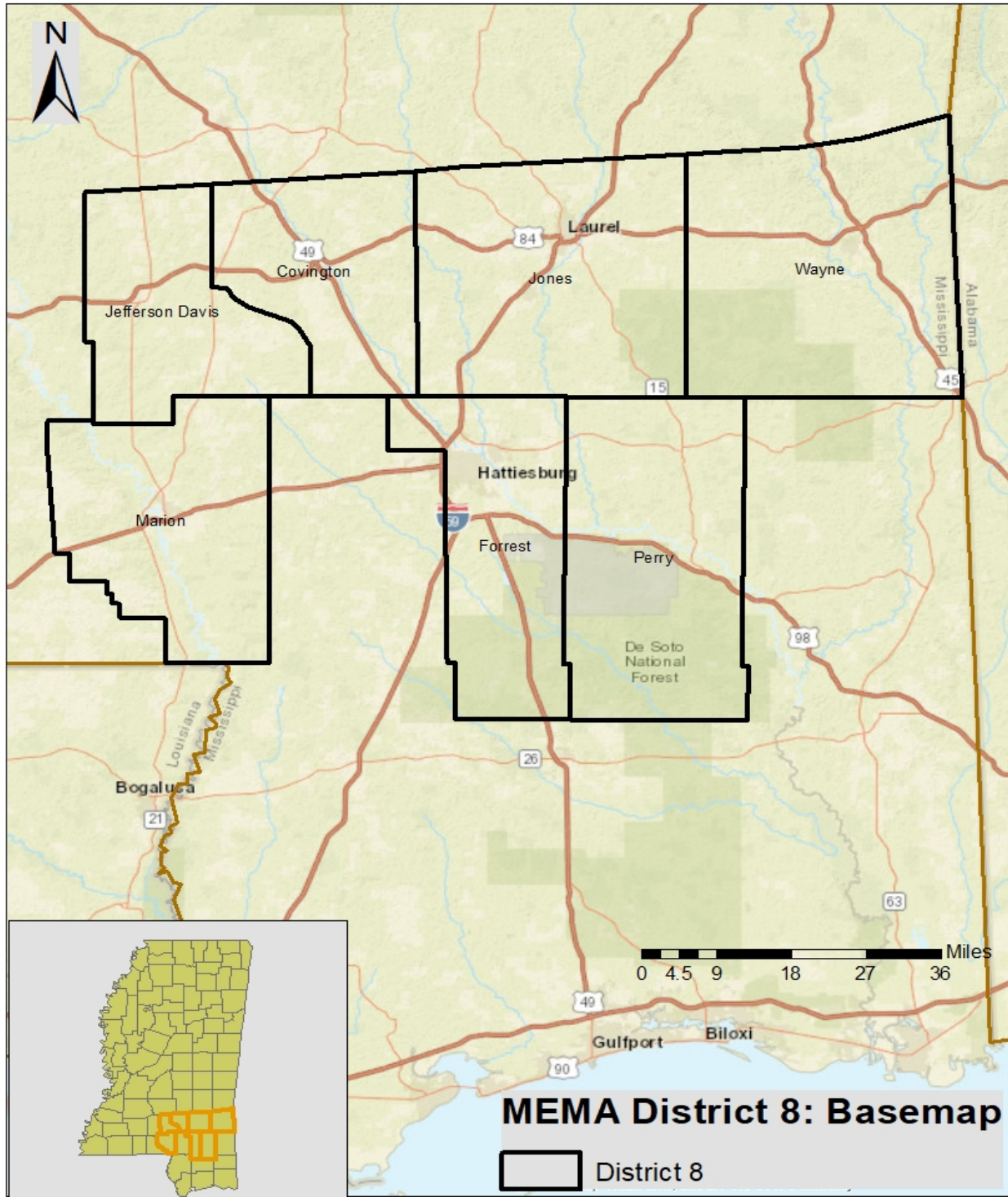


Table 5.2 lists each significant hazard for the MEMA District 8 Region and identifies whether or not it has been determined to be a specific hazard of concern for the municipal jurisdictions and the

unincorporated areas of the counties. This is based on the best available data and information from the MEMA District 8 Regional Hazard Mitigation Council. (● = hazard of concern)

TABLE 5.2 SUMMARY OF IDENTIFIED HAZARD EVENTS IN THE MEMA DISTRICT 8 REGION

Jurisdiction	Flood-related				Fire-related		Geological			Wind-related			Other	
	Flood	Erosion	Dam Failure	Winter Storm	Drought / Heat Wave	Wildfire	Earthquake	Landslide	Expansive Soils	Hurricane	Thunderstorm	Tornado	HAZMAT	Cyber Terrorism
Covington County														
Collins	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Mount Olive	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Seminary	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Unincorporated Area	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Jefferson Davis County														
Bassfield	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Prentiss	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Unincorporated Area	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Jones County														
Ellisville	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Laurel	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Sandersville	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Soso	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Unincorporated Area	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Marion County														
Columbia	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Unincorporated Area	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Perry County														
Beaumont	●	●	●	●	●	●	●	●	●	●	●	●	●	●
New Augusta	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Richton	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Unincorporated Area	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Wayne County														
State Line	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Waynesboro	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Unincorporated Area	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Forrest County														
Hattiesburg	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Petal	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Unincorporated Area	●	●	●	●	●	●	●	●	●	●	●	●	●	●

FLOOD-RELATED HAZARDS

FLOOD

5.3.1 Background

Flooding is the most frequent and costly natural hazard in the United States and is a hazard that has caused more than 10,000 deaths since 1900. Nearly 90 percent of presidential disaster declarations result from natural events where flooding was a major component.

Floods generally result from excessive precipitation and can be classified under two categories: general floods, precipitation over a given river basin for a long period of time along with storm-induced wave action, and flash floods, the product of heavy localized precipitation in a short time period over a given location. The severity of a flooding event is typically determined by a combination of several major factors, including stream and river basin topography and physiography, precipitation and weather patterns, recent soil moisture conditions, and the degree of vegetative clearing and impervious surface.

General floods are usually long-term events that may last for several days. The primary types of general flooding include riverine, coastal, and urban flooding. Riverine flooding is a function of excessive precipitation levels and water runoff volumes within the watershed of a stream or river. Coastal flooding is typically a result of storm surge, wind-driven waves, and heavy rainfall produced by hurricanes, tropical storms, and other large coastal storms. Urban flooding occurs where manmade development has obstructed the natural flow of water and decreased the ability of natural groundcover to absorb and retain surface water runoff.

Flash flooding is another type of flooding that can be associated with urban flooding. It is common in urbanized areas where much of the ground is covered by impervious surfaces. Most flash flooding occurs along mountain streams and is caused by slow-moving thunderstorms in a local area or by heavy rains associated with hurricanes and tropical storms. However, flash-flooding events may also occur from a dam or levee failure within minutes or hours of heavy amounts of rainfall, or from a sudden release of water held by retention basin or other stormwater control facility.

The periodic flooding of lands adjacent to rivers, streams and shorelines (land known as floodplain) is a natural and inevitable occurrence that can be expected to take place based upon established recurrence intervals. Floodplains are designated by the frequency of the flood that is large enough to cover them. For example, the 10-year floodplain will be covered by the 100-year flood and the 100-year floodplain by the 1,000-year flood. Flood frequencies such as the 100-year flood are determined by plotting a graph of the size of all known floods for an area and determining how often floods of a particular size occur. Another way of expressing the flood frequency is the chance of occurrence in a given year, which is the percentage of the probability of flooding each year. For example, the 100-year flood has a 1-percent annual chance of occurring in any given year, and the 500-year flood has a 0.2-percent annual chance of occurring in any given year.

5.3.2 Location and Spatial Extent

There are areas in the MEMA District 8 Region that are susceptible to flood events. Special flood hazard areas in the MEMA District 8 Region were mapped using Geographic Information System (GIS) and FEMA

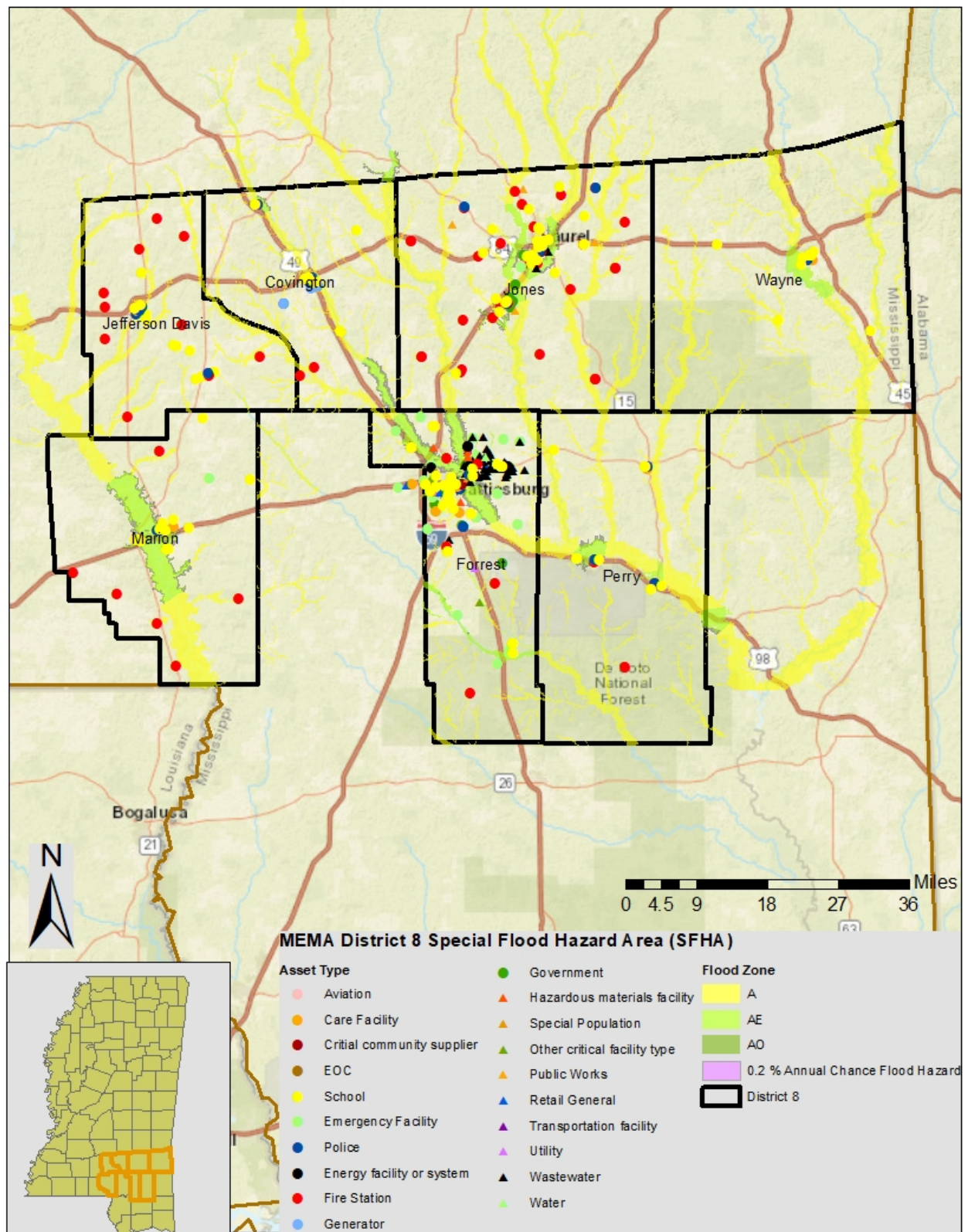
Digital Flood Insurance Rate Maps (DFIRM). This includes Zone A (1-percent annual chance floodplain), Zone AE (1-percent annual chance floodplain with elevations), and the 0.2-percent annual chance floodplain. According to GIS analysis, of the 4,003 square miles that make up the MEMA District 8 Region, there are approximately 629 square miles of land in zones A and AE (1-percent annual chance floodplain/100-year floodplain) and 5 square miles of land in the 0.2-percent annual chance floodplain (500-year floodplain). The county totals are presented below in **Table 5.3**.

TABLE 5.3: SUMMARY OF FLOODPLAIN AREAS IN THE MEMA DISTRICT 8 REGION

Location	100-year area (square miles)	500-year area (square miles)
Covington County (2010)	80	1
Jefferson Davis County (2010)	46	0
Jones County (2010)	137	1
Marion County (2011)	83	2
Perry County (2011)	115	1
Wayne County (2011)	122	0
Forrest County (2016)	46	0
MEMA DISTRICT 8 REGION TOTAL	629	5

These flood zone values account for 16.6 percent of the total land area in the MEMA District 8 Region. It is important to note that while FEMA digital flood data is recognized as best available data for planning purposes, it does not always reflect the most accurate and up-to-date flood risk. Flooding and flood-related losses often do occur outside of delineated special flood hazard areas. **Figure 5.2** illustrates the location and extent of currently mapped special flood hazard areas for the MEMA District 8 Region based on best available FEMA Digital Flood Insurance Rate Map (DFIRM) data.

FIGURE 5.2: SPECIAL FLOOD HAZARD AREAS IN THE MEMA DISTRICT 8 REGION



Source: Federal Emergency Management Agency

5.3.3 Historical Occurrences

Floods resulted in 12 disaster declarations in the MEMA District 8 Region between 1972 and 2019.¹ Information from the National Centers for Environmental Information was used to ascertain historical flood events. The National Centers for Environmental Information reported a total of 411 events throughout the MEMA District 8 Region since 1993.² A summary of these events is presented in **Table 5.4**. These events accounted for \$94M in property damage throughout the region. Specific information on flood events for each county, including date, type of flooding, and deaths and injuries, can be found in the jurisdiction-specific annexes.

TABLE 5.4: SUMMARY OF FLOOD OCCURRENCES IN THE MEMA DISTRICT 8 REGION

Location	Number of Occurrences	Deaths / Injuries	Property Damage
Covington County	36	0/0	\$3,377,816
Collins	6	0/0	\$258,689
Mount Olive	4	0/0	\$311,460
Seminary	4	0/0	\$45,130
Unincorporated Area	22	0/0	\$2,762,537
Jefferson Davis County	29	0/0	\$1,324,227
Bassfield	8	0/0	\$96,512
Prentiss	7	0/0	\$528,156
Unincorporated Area	14	0/0	\$699,559
Jones County	106	0/0	\$6,079,482
Ellisville	9	0/0	\$62,387
Laurel	35	0/0	\$1,265,051
Sandersville	4	0/0	\$35,855
Soso	2	0/0	\$8,000
Unincorporated Area	56	0/0	\$4,708,189
Marion County	68	0/0	\$36,668,695
Columbia	23	0/0	\$24,924,081
Unincorporated Area	45	0/0	\$11,744,614
Perry County	29	0/0	\$2,017,797
Beaumont	1	0/0	\$0
New Augusta	2	0/0	\$50,000
Richton	5	0/0	\$16,883
Unincorporated Area	21	0/0	\$1,850,000
Wayne County	26	0/0	\$1,351,395
State Line	3	0/0	\$5,465
Waynesboro	10	0/0	\$74,280
Unincorporated Area	13	0/0	\$1,271,650
Forrest County	117	4/0	\$43,193,000
Hattiesburg	46	3/0	\$38,681,000

¹Not all of the participating counties were declared disaster areas for these storms. A complete listing of historical disaster declarations, including the affected counties, can be found in Section 4: Hazard Identification.

² These events are only inclusive of those reported by NCEI. It is likely that additional occurrences have occurred and have gone unreported.

Location	Number of Occurrences	Deaths / Injuries	Property Damage
Petal	11	0/0	\$313,000
Unincorporated Area	60	1/0	\$4,199,000
MEMA DISTRICT 8 REGION TOTAL	411	0/0	\$94,012,412

Source: National Centers for Environmental Information

5.3.4 Historical Summary of Insured Flood Losses

Recently, FEMA issued a directive that prevents states or local governments from sharing NFIP information such as rep loss or severe rep loss data with third parties. Third parties are considered as consultants, contractors, etc. As a result, for continuity of information so that the reader will have an idea of the historical occurrences along with the corresponding damage amounts, the decision was made to leave the existing information in the plan.

According to FEMA flood insurance policy records as of March 2013, there have been 800 flood losses reported in the MEMA District 8 Region through the National Flood Insurance Program (NFIP) since 1978, totaling nearly \$7.7 million in claims payments. A summary of these figures for each MEMA District 8 county is provided in **Table 5.5**. It should be emphasized that these numbers include only those losses to structures that were insured through the NFIP policies, and for losses in which claims were sought and received. It is likely that many additional instances of flood loss in the MEMA District 8 Region were either uninsured, denied claims payment, or not reported.

TABLE 5.5: SUMMARY OF INSURED FLOOD LOSSES IN THE MEMA DISTRICT 8 REGION

Location	Flood Losses	Claims Payments
Covington County	48	\$528,810
Collins	18	\$124,503
Mount Olive	3	\$46,982
Seminary	0	\$0
Unincorporated Area	27	\$357,325
Jefferson Davis County	2	\$4,613
Bassfield*	--	--
Prentiss	2	\$4,613
Unincorporated Area	0	\$0
Jones County	108	\$681,965
Ellisville	5	\$46,027
Laurel	75	\$398,815
Sandersville*	--	--
Soso*	--	--
Unincorporated Area	28	\$237,123
Marion County	551	\$5,950,261
Columbia	303	\$3,612,752
Unincorporated Area	248	\$2,337,509
Perry County	67	\$258,797
Beaumont	16	\$32,703
New Augusta	12	\$51,683
Richton	1	\$42,415

Location	Flood Losses	Claims Payments
Unincorporated Area	38	\$131,996
Wayne County	24	\$258,596
State Line	1	\$6,924
Waynesboro	17	\$134,036
Unincorporated Area	6	\$117,636
Forrest County	23	\$243,475
Hattiesburg	23	\$243,475
Petal	-	-
Unincorporated Area	-	-
MEMA DISTRICT 8 REGION TOTAL	823	\$7,926,517

* These communities do not participate in the National Flood Insurance Program. Therefore, no values are reported.

Source: FEMA, NFIP, Planning Committee (Note: Forrest County data reported is as of March 2016)

5.3.5 Repetitive Loss Properties

No updates to this section can be provided at this time. Information normally used to update this section is not currently accessible. As a result, this information will remain the same for historical purposes.

FEMA defines a repetitive loss property as any insurable building for which two or more claims of more than \$1,000 were paid by the NFIP within any rolling 10-year period, since 1978. A repetitive loss property may or may not be currently insured by the NFIP. Currently there are over 140,000 repetitive loss properties nationwide.

Currently (as of May 2013), there are 125 non-mitigated repetitive loss properties located in the MEMA District 8 Region, which accounted for 371 losses and more than \$4.3 million in claims payments under the NFIP. The average claim amount for these properties is \$11,657. Of the 125 properties, 88 are single family, 7 are assumed condominiums, 1 is other residential, and 29 are non-residential. Without mitigation, these properties will likely continue to experience flood losses. **Table 5.6** presents a summary of these figures for the MEMA District 8 Region. Detailed information on repetitive loss properties and NFIP claims and policies can be found in the jurisdiction-specific annexes. Currently, this remains the best available data. No NFIP Claims data was provided in the existing Forrest County HMP and no additional data was accessible at the time of the District Plan Update.

TABLE 5.6: SUMMARY OF REPETITIVE LOSS PROPERTIES IN THE MEMA DISTRICT 8 REGION

Location	Number of Properties	Number of Losses	Total Payments
Covington County	8	18	\$291,033
Collins	0	0	\$0
Mount Olive	0	0	\$0
Seminary	0	0	\$0
Unincorporated Area	8	18	\$291,033
Jefferson Davis County	0	0	\$0
Bassfield*	--	--	--
Prentiss	0	0	\$0
Unincorporated Area	0	0	\$0

Location	Number of Properties	Number of Losses	Total Payments
Jones County	12	34	\$235,086
Ellisville	1	2	\$17,996
Laurel	9	25	\$186,536
Sandersville	--	--	--
Soso*	--	--	--
Unincorporated Area	2	7	\$30,554
Marion County	91	282	\$3,563,949
Columbia	47	139	\$2,027,858
Unincorporated Area	44	143	\$1,536,092
Perry County	11	26	\$116,001
Beaumont	2	4	\$10,688
New Augusta	3	6	\$33,259
Richton	0	0	\$0
Unincorporated Area	6	16	\$72,053
Wayne County	3	11	\$118,827
State Line	0	0	\$0
Waynesboro	3	11	\$118,828
Unincorporated Area	0	0	\$0
Forrest County	22	74	\$1,379,010
Hattiesburg	22	74	\$1,379,010
Petal	-	-	-
Unincorporated Area	-	-	-
MEMA DISTRICT 8 REGION TOTAL	125	371	\$5,703,907

* These communities do not participate in the National Flood Insurance Program. Therefore, no values are reported.

Source: FEMA, NFIP, Planning Committee. Other locations where no data was available is due to new data restrictions associated with RL/SRL data at the time of the plan update.

5.3.6 Probability of Future Occurrences

Due to the unpredictable nature of this hazard, flood events will remain a threat in the MEMA District 8 Region, and the probability of future occurrences will remain likely (between 10 and 100 percent annual probability). The participating jurisdictions and unincorporated areas have risk to flooding, though not all areas will experience flood. The probability of future flood events based on magnitude and according to best available data is illustrated in the figures above, which indicates those areas susceptible to the 1-percent annual chance flood (100-year floodplain) and the 0.2-percent annual chance flood (500-year floodplain).

It can be inferred from the floodplain location maps, previous occurrences, and repetitive loss properties that risk varies throughout the region. For example, the eastern half of the region has more floodplain and thus a higher risk of flood than the western half of the region. Flood is not the greatest hazard of concern but will continue to occur and cause damage. Therefore, mitigation actions may be warranted, particularly for repetitive loss properties.

5.4 EROSION

5.4.1 Background

Erosion is the gradual breakdown and movement of land due to both physical and chemical processes of water, wind, and general meteorological conditions. Natural, or geologic, erosion has occurred since the Earth's formation and continues at a very slow and uniform rate each year.

There are two types of soil erosion: wind erosion and water erosion. Wind erosion can cause significant soil loss. Winds blowing across sparsely vegetated or disturbed land can pick up soil particles and carry them through the air, thus displacing them. Water erosion, the hazard of topic here, can occur over land or in streams and channels. Water erosion that takes place over land may result from raindrops, shallow sheets of water flowing off the land, or shallow surface flow, which becomes concentrated in low spots. Stream channel erosion may occur as the volume and velocity of water flow increases enough to cause movement of the streambed and bank soils. Major storms, such as hurricanes in coastal areas, may cause significant erosion by combining high winds with heavy surf and storm surge to significantly impact the shoreline.

An area's potential for erosion is determined by four factors: soil characteristics, vegetative cover, topography, climate, or rainfall, and topography. Soils composed of a large percentage of silt and fine sand are most susceptible to erosion. As the clay and organic content of these soils increases, the potential for erosion decreases. Well-drained and well-graded gravels and gravel-sand mixtures are the least likely to erode. Coarse gravel soils are highly permeable and have a good capacity for absorption, which can prevent or delay the amount of surface runoff. Vegetative cover can be very helpful in controlling erosion by shielding the soil surface from falling rain, absorbing water from the soil, and slowing the velocity of runoff. Runoff is also affected by the topography of the area including size, shape, and slope. The greater the slope length and gradient, the more potential an area has for erosion. Climate can affect the amount of runoff, especially the frequency, intensity, and duration of rainfall and storms. When rainstorms are frequent, intense, or of long duration, erosion risks are high. Seasonal changes in temperature and rainfall amounts define the period of highest erosion risk of the year.

During the past 20 years, the importance of erosion control has gained the increased attention of the public. Implementation of erosion control measures consistent with sound agricultural and construction operations is needed to minimize the adverse effects associated with harmful chemicals run-off due to wind or water events. The increase in government regulatory programs and public concern has resulted in a wide range of erosion control products, techniques, and analytical methodologies in the United States. The preferred method of erosion control in recent years has been the restoration of vegetation.

5.4.2 Location and Spatial Extent

Erosion in the MEMA District 8 Region is typically caused by flash flooding events. Unlike coastal areas, areas of concern for erosion in the MEMA District 8 Region are primarily rivers and streams. Generally, vegetation helps to prevent erosion in the area, and it is not an extreme threat to any of the participating counties and jurisdictions. No areas of concern were reported by the planning committee.

5.4.3 Historical Occurrences

Several sources were vetted to identify areas of erosion in the MEMA District 8 Region. This includes searching local newspapers, interviewing local officials, and reviewing previous hazard mitigation plans. No historical erosion occurrences were found in these sources.

Covington County, Jefferson Davis County, and Marion County have flood damage prevention ordinances that include measures to limit erosion. Such actions will continue to be implemented as necessary throughout the region.

5.4.4 Probability of Future Occurrences

Erosion remains a natural, dynamic, and continuous process for the MEMA District 8 Region, and it will continue to occur. The annual probability level assigned for erosion is possible (between 1 and 10 percent annually). However, given the lack of historical events, location, and threat to life or property, no further analysis will be done in Section 6: *Vulnerability Assessment*.

5.5 DAM AND LEVEE FAILURE

5.5.1 Background

Worldwide interest in dam and levee safety has risen significantly in recent years. Aging infrastructure, new hydrologic information, and population growth in floodplain areas downstream from dams and near levees have resulted in an increased emphasis on safety, operation, and maintenance.

There are approximately 80,000 dams in the United States today, the majority of which are privately owned. Other owners include state and local authorities, public utilities, and federal agencies. The benefits of dams are numerous: they provide water for drinking, navigation, and agricultural irrigation. Dams also provide hydroelectric power, create lakes for fishing and recreation, and save lives by preventing or reducing floods.

Though dams have many benefits, they also can pose a risk to communities if not designed, operated, and maintained properly. In the event of a dam failure, the energy of the water stored behind even a small dam is capable of causing loss of life and great property damage if development exists downstream. If a levee breaks, scores of properties may become submerged in floodwaters and residents may become trapped by rapidly rising water. The failure of dams and levees has the potential to place large numbers of people and great amounts of property in harm's way.

5.5.2 Location and Spatial Extent

The Mississippi Division of Environmental Quality provides information on dams including a hazard potential classification. There are three hazard classifications—high, significant, and low—that correspond to qualitative descriptions. **Table 5.7** explains these classifications.

TABLE 5.7: MISSISSIPPI DAM HAZARD CLASSIFICATIONS

Hazard Classification	Description
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SECTION 5: HAZARD PROFILES

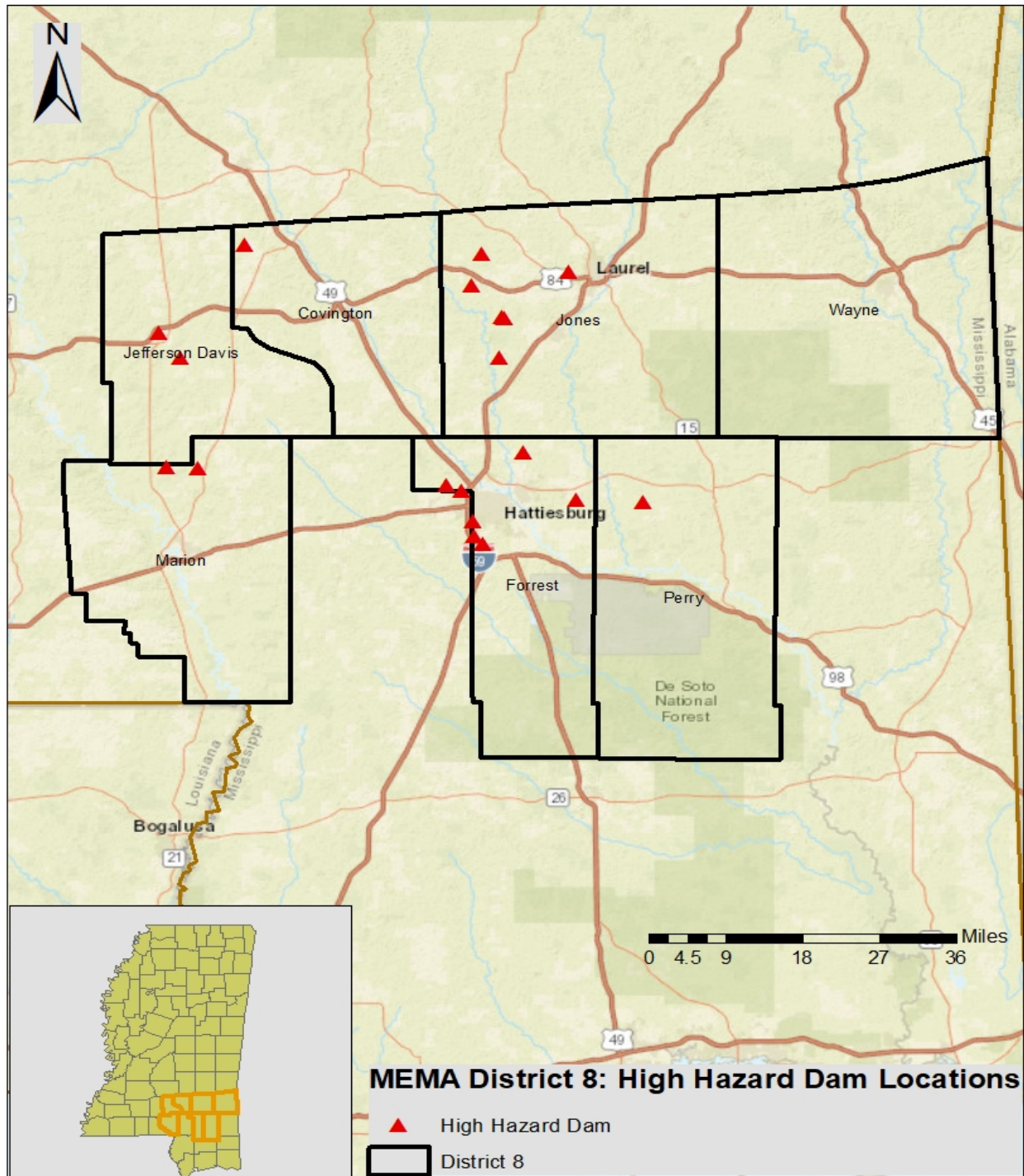
Low	Dam failure may cause damage to farm buildings (excluding residences), agricultural land, or county or minor roads.
Significant	Dam failure may cause significant damage to main roads, minor railroads, or cause interruption of use or service of relatively important public utilities.
High	Dam failure may cause loss of life, serious damage to homes, industrial or commercial buildings, important public utilities, main highways or railroads. Dams constructed in existing or proposed residential, commercial or industrial areas will be classified as high hazard dams, unless the applicant presents clear and convincing evidence to the contrary.

Source: Mississippi Division of Environmental Quality

According to the Mississippi Division of Environmental Quality, there are nineteen high hazard dams in the MEMA District 8 Region.³ **Figure 5.3** shows the location of each of these high hazard dams and **Table 5.8** lists them by name. According to a consensus of local government officials and the Hazard Mitigation Council, a majority of these dams would not pose a major threat in a breach or failure occurrence.

³ The list of high hazard dams obtained from the Mississippi Division of Environmental Quality was reviewed and amended by local officials to the best of their knowledge.

FIGURE 5.3: MEMA DISTRICT 8 REGION HIGH HAZARD DAM LOCATIONS



Source: Mississippi Division of Environmental Quality

TABLE 5.8: MEMA DISTRICT 8 REGION HIGH HAZARD DAMS

Dam Name	Hazard Potential
Covington County	
DRY CREEK WATERSHED STRUCTURE 3 DAM	High

Jefferson Davis County	
LAKE JEFFERSON DAVIS DAM	High
WHITE SAND - GREENS CREEK STR 11E DAM	High
Jones County	
BIG CREEK WATERSHED STRUCTURE 9 DAM	High
BIG CREEK WATER PARK DAM	High
ROBERTS LAKE DAM	High
LAKE HATTEN DAM	High
LAKE IVELL DAM	High
FLOWERS LAKE DAM	High
Marion County	
HOLIDAY CREEK WS STR 4 DAM	High
HOLIDAY CREEK WS STR 3 DAM	High
Perry County	
SPORTSMAN LAKE DAM	High
Wayne County	
None	N/A
Forrest County	
LYNN CARLAGE LAKE DAM	High
COUNTRY CLUB LAKE	High
LAKE SEHOY (USM CAMPUS LAKE) DAM	High
LAKE B DAM	High
FORTIETH PLACE DAM	High
PLEASANT RIDGE ESTATES DAM	High
LAKELAND DRIVE LAKE DAM	High

Source: Mississippi Division of Environmental Quality

5.5.3 Historical Occurrences

A total of two dams have been breached in the MEMA District 8 Region. Two dam breaches occurred in Jones County in 1993 (Indian Springs Lake) and 2010 (Lake Getaway). There are no reports of death or injury and damage caused was minimal. However, a third breach occurred in 2004 (Big Bay Dam) in Lamar County that resulted in damages in Marion County, including destruction of 1 mobile home; major damage to 14 homes, 2 mobile homes, Pine Burr Church, and Pine Burr Volunteer Fire Department; and minor damage to 10 homes, 3 mobile homes, and Hub Chapel Church.

5.5.4 Probability of Future Occurrence

Given the current dam inventory and historic data, a dam breach is unlikely (less than 1 percent annual probability) in the future. However, as has been demonstrated in the past, regular monitoring is necessary to prevent these events. No further analysis will be completed in Section 6: *Vulnerability Assessment* as more sophisticated dam breach plans (typically completed by the U.S. Army Corp of Engineers) have been completed for dams of concern in the region.

5.6 WINTER STORM AND FREEZE

5.6.1 Background

A winter storm can range from a moderate snow over a period of a few hours to blizzard conditions with blinding wind-driven snow that lasts for several days. Events may include snow, sleet, freezing rain, or a mix of these wintry forms of precipitation. Some winter storms might be large enough to affect several states, while others might affect only localized areas. Occasionally, heavy snow might also cause significant property damages, such as roof collapses on older buildings.

All winter storm events have the potential to present dangerous conditions to the affected area. Larger snowfalls pose a greater risk, reducing visibility due to blowing snow and making driving conditions treacherous. A heavy snow event is defined by the National Weather Service as an accumulation of 4 or more inches in 12 hours or less. A blizzard is the most severe form of winter storm. It combines low temperatures, heavy snow, and winds of 35 miles per hour or more, which reduces visibility to a quarter mile or less for at least 3 hours. Winter storms are often accompanied by sleet, freezing rain, or an ice storm. Such freeze events are particularly hazardous as they create treacherous surfaces.

Ice storms are defined as storms with significant amounts of freezing rain and are a result of cold air damming (CAD). CAD is a shallow, surface-based layer of relatively cold, stably-stratified air entrenched against the eastern slopes of the Appalachian Mountains. With warmer air above, falling precipitation in the form of snow melts, then becomes either super-cooled (liquid below the melting point of water) or re-freezes. In the former case, super-cooled droplets can freeze on impact (freezing rain), while in the latter case, the re-frozen water particles are ice pellets (or sleet). Sleet is defined as partially frozen raindrops or refrozen snowflakes that form into small ice pellets before reaching the ground. They typically bounce when they hit the ground and do not stick to the surface. However, it does accumulate like snow, posing similar problems and has the potential to accumulate into a layer of ice on surfaces. Freezing rain, conversely, usually sticks to the ground, creating a sheet of ice on the roadways and other surfaces. All of the winter storm elements – snow, low temperatures, sleet, ice, etcetera – have the potential to cause significant hazard to a community. Even small accumulations can down power lines and trees limbs and create hazardous driving conditions. Furthermore, communication and power may be disrupted for days.

5.6.2 Location and Spatial Extent

Nearly the entire continental United States is susceptible to winter storm and freeze events. Some ice and winter storms may be large enough to affect several states, while others might affect limited, localized areas. The degree of exposure typically depends on the normal expected severity of local winter weather. The MEMA District 8 Region is not typically affected by major severe winter weather conditions and seldom receives extremely devastating winter weather, even during the winter months. Given the atmospheric nature of the hazard the entire region has uniform exposure to a winter storm.

5.6.3 Historical Occurrences

According to the National Centers for Environmental Information, there have been a total of 51 recorded winter storm events in the MEMA District 8 Region since 1993 (**Table 5.9**).⁴ These events resulted in nearly \$2M in damages. Detailed information on the recorded winter storm events can be found in the jurisdiction-specific annexes.

TABLE 5.9: SUMMARY OF WINTER STORM EVENTS IN THE MEMA DISTRICT 8 REGION

Location	Number of Occurrences	Deaths / Injuries	Property Damage
Covington County	6	0/0	\$349,819
Jefferson Davis County	6	0/0	\$123,695
Jones County	6	0/0	\$226,921
Marion County	6	0/0	\$674,558
Perry County	7	0/0	\$0
Wayne County	11	0/0	\$10,000
Forrest County	9	0/0	\$605,000
MEMA DISTRICT 8 REGION TOTAL	51	0/0	\$1,989,993

Source: National Centers for Environmental Information

There have been several severe winter weather events in the MEMA District 8 Region. The text below describes two of the major events and associated impacts on the region. Similar impacts can be expected with severe winter weather.

January 2002 Winter Storm

A winter storm produced heavy snow across portions of southeast Mississippi. The heaviest snow recorded during the storm was four to four- and one-half inches. Icy bridges made traveling across the region very treacherous. As a result, several accidents occurred with two fatalities in Jones County.

January 2008 Winter Storm

This storm produced heavy snow across the region, with an average of three to four inches of snow. Some heavier amounts, between four to five inches, also fell in isolated areas. At the height of the snow, temperatures fell to near freezing, and accumulations occurred on roadways resulting in a number of traffic accidents. Additionally, some power outages occurred in the heaviest snow band due to the weight of wet snow on limbs and lines. The heaviest snow fell in the areas around Covington, Jefferson Davis, and Jones Counties.

Winter storms throughout the region have several negative externalities including hypothermia, cost of snow and debris cleanup, business and government service interruption, traffic accidents, and power outages. Furthermore, citizens may resort to using inappropriate heating devices that could to fire or an accumulation of toxic fumes.

January 2018 Winter Storm

⁴ These ice and winter storm events are only inclusive of those reported by the National Centers for Environmental Information (NCEI). It is likely that additional winter storm conditions have affected the MEMA District 8 Region.

A winter weather event occurred across the area beginning on January 16th and on into January 17th across the Gulf Coast. This event came with measurable snow with low temperatures in the 20's. The winter accumulation resulted in very hazardous traveling conditions particularly over bridges and overpasses. Several roads were closed throughout the area. The National Weather Service indicated the area received two to three inches of snow.

5.6.4 Probability of Future Occurrences

Winter storm events will continue to occur in the MEMA District 8 Region. Based on historical information, the annual probability is possible (between 1 and 10 percent).

FIRE-RELATED HAZARDS

5.7 DROUGHT

5.7.1 Background

DROUGHT

Drought is a normal part of virtually all climatic regions, including areas with high and low average rainfall. Drought is the consequence of a natural reduction in the amount of precipitation expected over an extended period of time, usually a season or more in length. High temperatures, high winds, and low humidity can exacerbate drought conditions. In addition, human actions and demands for water resources can hasten drought-related impacts. Droughts may also lead to more severe wildfires.

Droughts are typically classified into one of four types: 1) meteorological, 2) hydrologic, 3) agricultural, or 4) socioeconomic. **Table 5.10** presents definitions for these types of drought.

TABLE 5.10 DROUGHT CLASSIFICATION DEFINITIONS

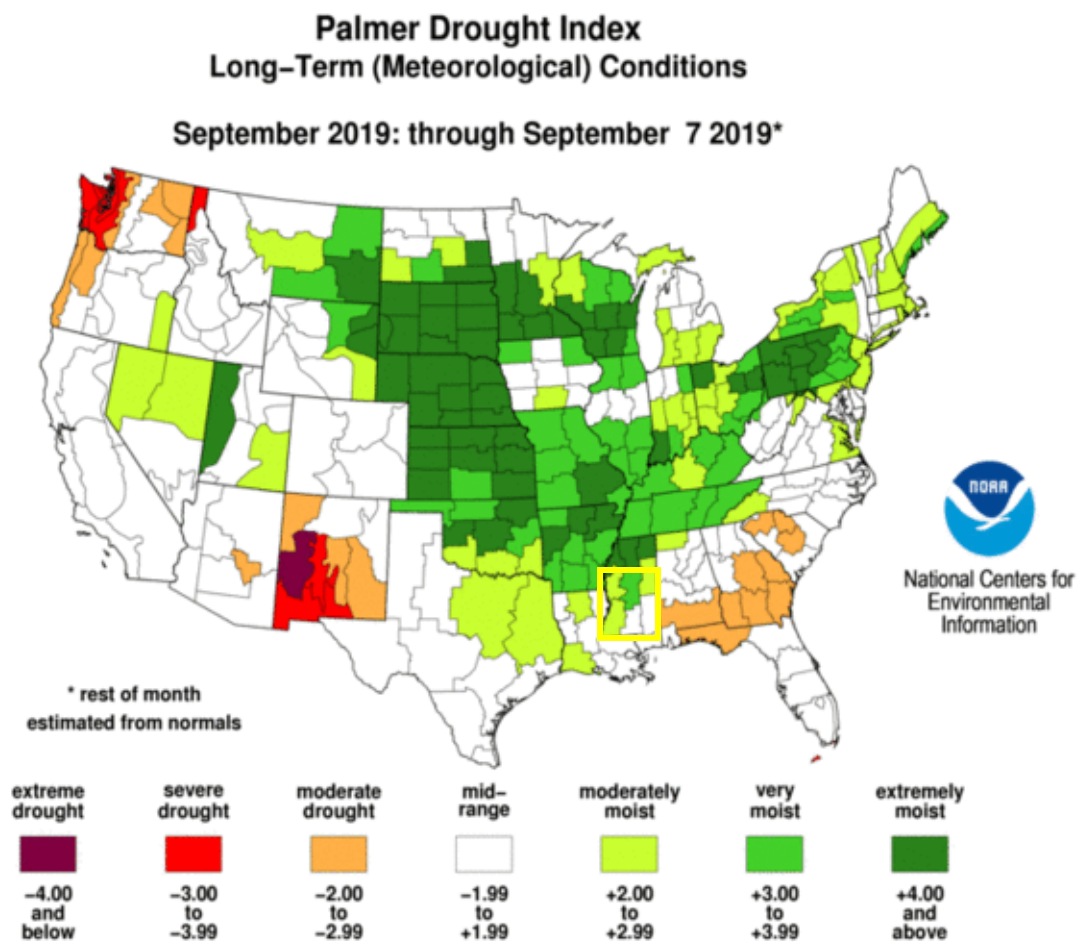
Meteorological Drought	The degree of dryness or departure of actual precipitation from an expected average or normal amount based on monthly, seasonal, or annual time scales.
Hydrologic Drought	The effects of precipitation shortfalls on stream flows and reservoir, lake, and groundwater levels.
Agricultural Drought	Soil moisture deficiencies relative to water demands of plant life, usually crops.
Socioeconomic Drought	The effect of demands for water exceeding the supply as a result of a weather-related supply shortfall.

Source: Multi-Hazard Identification and Risk Assessment: A Cornerstone of the National Mitigation Strategy, FEMA

Droughts are slow-onset hazards, but, over time, can have very damaging affects to crops, municipal water supplies, recreational uses, and wildlife. If drought conditions extend over a number of years, the direct and indirect economic impact can be significant.

The Palmer Drought Severity Index (PDSI) is based on observed drought conditions and range from -0.5 (incipient dry spell) to -4.0 (extreme drought). Evident in **Figure 5.4**, the Palmer Drought Severity Index Summary Map for the United States, drought affects most areas of the United States, but is less severe in the Eastern and Southeastern United States.

FIGURE 5.4: PALMER DROUGHT SEVERITY INDEX SUMMARY MAP FOR THE UNITED STATES



Source: National Drought Mitigation Center

The U.S. Drought Monitor also records information on historical drought occurrence. The U.S. Drought Monitor categorizes drought on a D0-D4 scale as **Table 5.11** presents definitions for these classifications.

TABLE 5.11 U.S. DROUGHT MONITOR

D0	Abnormally Dry	Going into drought: short-term dryness slowing planting, growth of crops or pastures. Coming out of drought: some lingering water deficits; pastures or crops not fully recovered
D1	Moderate Drought	Some damage to crops, pastures; streams, reservoirs, or wells low, some water shortages developing or imminent; voluntary water-use restrictions requested
D2	Severe Drought	Crop or pasture losses likely; water shortages common; water restrictions imposed
D3	Extreme Drought	Major crop/pasture losses; widespread water shortages or restrictions
D4	Exceptional Drought	Exceptional and widespread crop/pasture losses; shortages of water in reservoirs, streams, and wells creating water emergencies

Source U.S. Drought Monitor, <http://droughtmonitor.unl.edu/classify.htm>

HEAT WAVE

Extreme heat is defined as temperatures that hover 10 degrees or more above the average high temperature for the region and that last for an extended period of time. A heat wave may occur when temperatures hover 10 degrees or more above the average high temperature for the region and last for a prolonged number of days or several weeks. Humid conditions may also add to the discomfort of high temperatures.

While extreme heat does not typically affect buildings, the impact to the population can have grave effects. Health risks from extreme heat include heat cramps, heat fainting, heat exhaustion and heat stroke. According to the National Weather Service (which compiles data from the National Centers for Environmental Information), heat is the leading weather-related killer in the United States. During the ten-year period between 2000 and 2009 heat events killed 162 people - more people than lightning, tornado, flood, cold, winter storm, wind and hurricane hazards. However, most deaths are attributed to prolonged heat waves in large cities that rarely experience hot weather. The elderly and the ill are most at-risk, along with those who exercise outdoors in hot, humid weather.

The National Weather Service devised the Heat Index as a mechanism to better inform the public of heat dangers. The Heat Index Chart, shown in **Figure 5.5**, uses air temperature and humidity to determine the heat index or apparent temperature. **Table 5.12** shows the dangers associated with different heat index temperatures. Some populations, such as the elderly and young, are more susceptible to heat danger than other segments of the population.

FIGURE 5.5: HEAT INDEX CHART

		Relative Humidity (in percent)																				
		0	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95	100
Air Temp (in F)	140	125																				
	135	120	128																			
	130	117	122	131																		
	125	111	116	123	131	141																
	120	107	111	116	123	130	139	148														
	115	103	107	111	115	120	127	135	143	151												
	110	99	102	105	108	112	117	123	130	137	143	150										
	105	95	97	100	102	105	109	113	118	123	129	135	142	149								
	100	91	93	95	97	99	101	104	107	110	115	120	126	132	138	144						
	95	87	88	90	91	93	94	96	98	101	104	107	110	114	119	124	130	136				
	90	83	84	85	86	87	88	90	91	93	95	96	98	100	102	106	109	113	117	122		
	85	78	79	80	81	82	83	84	85	86	87	88	89	90	91	93	95	97	99	102	105	108
80	73	74	75	76	77	77	78	79	79	80	81	81	82	83	85	86	86	87	88	89	91	
75	69	69	70	71	72	72	73	73	74	74	75	75	76	76	77	77	78	78	79	79	80	
70	64	64	65	65	66	66	67	67	68	68	69	69	70	70	70	70	71	71	71	71	72	

Source: NOAA

TABLE 5.12: HEAT DISORDERS ASSOCIATED WITH HEAT INDEX TEMPERATURE

Heat Index Temperature (Fahrenheit)	Description of Risks
80° - 90°	Fatigue possible with prolonged exposure and/or physical activity
90° - 105°	Sunstroke, heat cramps, and heat exhaustion possible with prolonged exposure and/or physical activity
105° - 130°	Sunstroke, heat cramps, and heat exhaustion likely, and heatstroke possible with prolonged exposure and/or physical activity
130° or higher	Heatstroke or sunstroke is highly likely with continued exposure

Source: National Weather Service, NOAA

5.7.2 Location and Spatial Extent

Drought and heat waves typically cover a large area and cannot be confined to any geographic or political boundaries. Furthermore, it is assumed that the MEMA District 8 Region would be uniformly exposed to drought, making the spatial extent potentially widespread. It is also notable that drought conditions typically do not cause significant damage to the built environment but may exacerbate wildfire conditions.

5.7.3 Historical Occurrences

DROUGHT

Data from the U.S. Drought Monitor and National Centers for Environmental Information (NCEI) were used to ascertain historical drought events in the MEMA District 8 Region. The U.S. Drought Monitor reports data at the county level on a weekly basis throughout the county. It classifies drought conditions on a scale of D0 to D4, as described in **Table 5.11** above.

According to the U.S. Drought Monitor, all of the counties in the MEMA District 8 Region had drought levels (including abnormally dry) in all of the last thirteen years (2000-2018) (**Table 5.13**). The most severe drought classification reported for each year, according to U.S. Drought Monitor classifications, is listed in the jurisdiction-specific annexes. It should be noted that the U.S. Drought Monitor also estimates what percentage of the county is in each classification of drought severity. For example, the most severe classification reported may be exceptional, but a majority of the county may actually be in a less severe condition.

TABLE 5.13: SUMMARY OF DROUGHT OCCURRENCES IN THE MEMA DISTRICT 8 REGION

Abnormally Dry Moderate Drought Severe Drought Extreme Drought Exceptional Drought



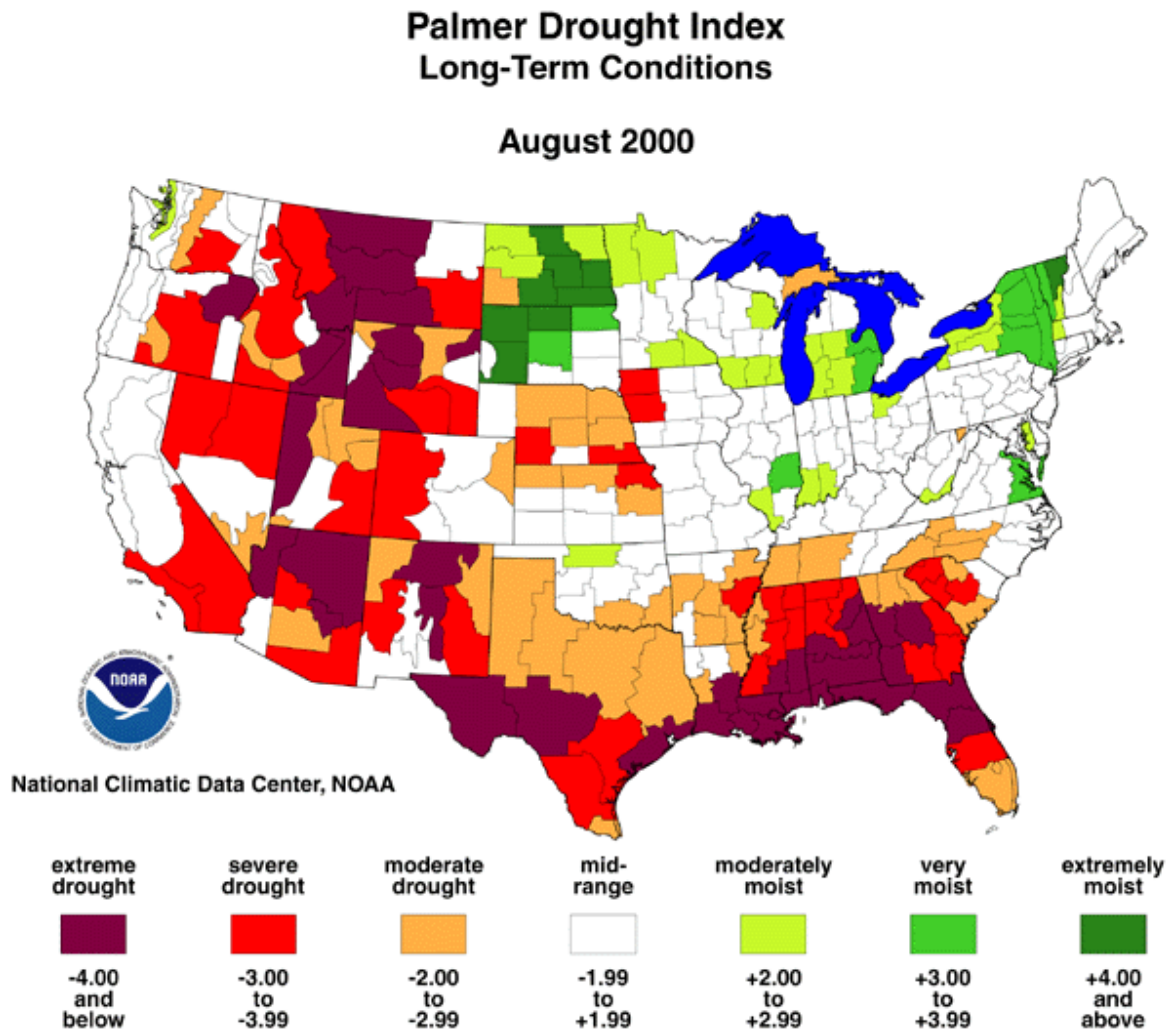
Location	Number Years with Drought Occurrences	Number of years with Exceptional Drought Occurrences
Covington County	20	1
Jefferson Davis County	20	1
Jones County	20	1
Marion County	20	2
Perry County	20	2
Wayne County	20	1
Forrest County	20	1

Source: U.S. Drought Monitor

Some additional anecdotal information was provided from the National Centers for Environmental Information on droughts in the MEMA District 8 Region.

Summer 2000 Drought – As shown in the **Figure 5.6** below, drought conditions were pronounced throughout much of the south and western areas of the nation.

Figure 5.6: Palmer Drought Index for August 2000



June through October 2006 – Widespread drought conditions were reported as at least Extreme (D3) throughout most of the area.

June/July 2007 – Lingering drought conditions peaked in June causing severe agricultural losses. By July, rainfall helped relieve conditions. However, yields were expected to be much lower than usual.

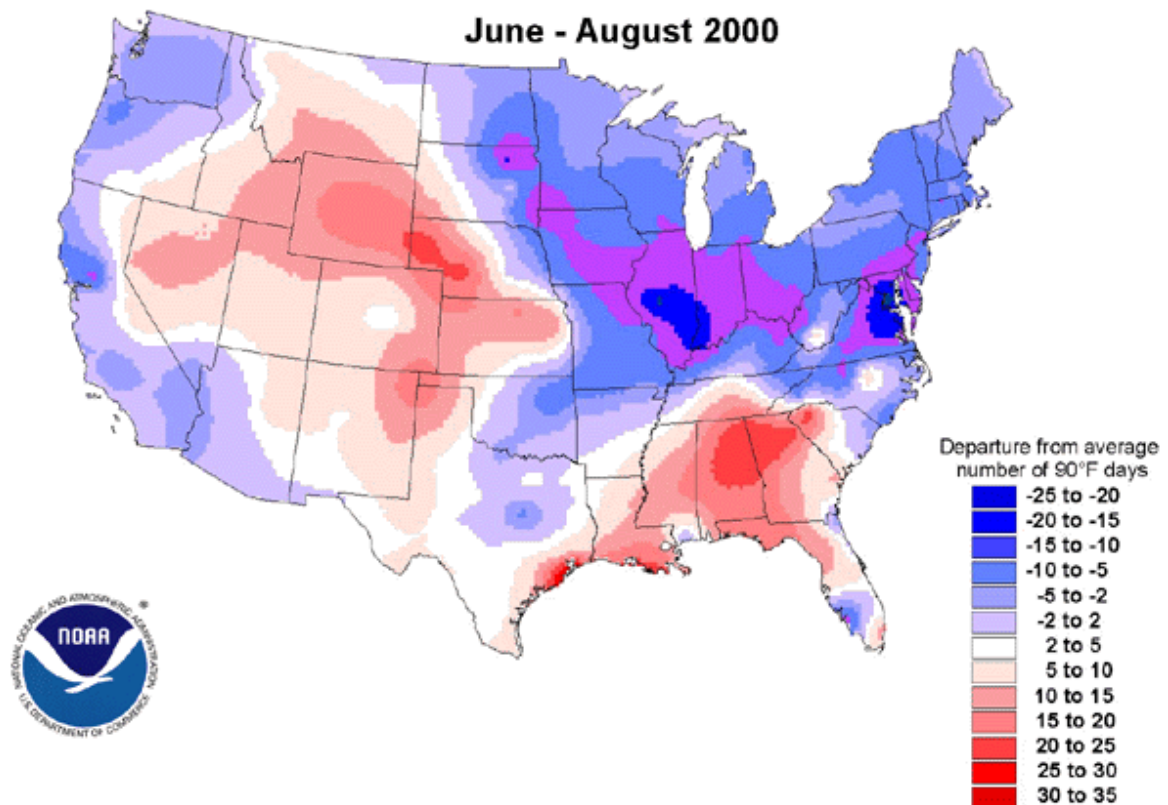
HEAT WAVE

The National Centers for Environmental Information was used to determine historical heat wave occurrences in the region.

Summer of 2000 – Hot temperatures persisted from July to September across the South and Plains. Known as the Summer of 2000 Heat Wave, high temperatures commonly peaked over 100 degrees. As shown in **Figure 5.7** below, there were several days over 90 degree than the typical average. This was the fourth warmest July-August on record. In Beaumont, the temperature was 100 degrees or higher eleven days during the month with the hottest being 105 degrees. In Richton the temperature was 100 degrees or higher three days during the month with the hottest being 102 degrees. In Waynesboro the temperature was 100 degrees or higher four days during the month with the hottest being 103 degrees.

FIGURE 5.7: DEPARTURE FROM AVERAGE NUMBER OF 90 DEGREE DAYS

**Departure from 1961-90 average number of days
with maximum temperature greater than or equal to 90°F**



Source: National Centers for Environmental Information

July 2005 – A five-day heat wave covered the area. Temperatures were consistently above 95 degrees. One heat-stress fatality was reported in Covington County. The agricultural industry was hit particularly hard in the cattle and catfish sectors. Water supply issues were encountered by cities and a burn ban was implemented due to the high fire risk.

August 2005 – A heat wave covering the south began in mid-August and lasted about 10 days. High temperatures were consistently over 95 degrees and surpassed 100 degrees on some days. It was the first time since August 2000 that 100-degree temperatures reached the area.

July 2006 – A short heat wave impacted most of the area temperatures in the 90s to around 100 for five straight days.

August 2007 – A heat wave gripped most of the area with the warmest temperatures since 2000. It lasted from August 5th to the 16th.

5.7.4 Probability of Future Occurrences

DROUGHT

According to the Palmer Drought Severity Index (**Figure 5.2**), MEMA District 8 has a relatively low risk for drought hazard (5 to 9.99%). However, local areas may experience much more severe and/or frequent drought events than what is represented on the Palmer Drought Severity Index map.

Based on historical occurrence information, it is assumed that all of the MEMA District 8 Region has a probability level of highly likely (100 percent annual probability) for future drought events. However, the extent (or magnitude) of drought and the amount of geographic area covered by drought, varies with each year. Historic information indicates that there is a much lower probability for extreme, long-lasting drought conditions.

HEAT WAVE

Based on historical occurrence information, it is assumed that all of the MEMA District 8 Region has a probability level of highly likely (100 percent annual probability) for future heat wave events.

5.8 WILDFIRE

5.8.1 Background

A wildfire is any outdoor fire (i.e. grassland, forest, brush land) that is not under control, supervised, or prescribed.⁵ Wildfires are part of the natural management of forest ecosystems, but may also be caused by human factors.

⁵ Prescription burning, or “controlled burn,” undertaken by land management agencies is the process of igniting fires under selected conditions, in accordance with strict parameters.

Nationally, over 80 percent of forest fires are started by negligent human behavior such as smoking in wooded areas or improperly extinguishing campfires. The second most common cause for wildfire is lightning. In Mississippi, a majority of fires are caused by debris burning.

There are three classes of wildland fires: surface fire, ground fire, and crown fire. A surface fire is the most common of these three classes and burns along the floor of a forest, moving slowly and killing or damaging trees. A ground fire (muck fire) is usually started by lightning or human carelessness and burns on or below the forest floor. Crown fires spread rapidly by wind and move quickly by jumping along the tops of trees. Wildfires are usually signaled by dense smoke that fills the area for miles around.

Wildfire probability depends on local weather conditions, outdoor activities such as camping, debris burning, and construction, and the degree of public cooperation with fire prevention measures. Drought conditions and other natural hazards (such as tornadoes, hurricanes, etc.) increase the probability of wildfires by producing fuel in both urban and rural settings.

Many individual homes and cabins, subdivisions, resorts, recreational areas, organizational camps, businesses, and industries are located within high wildfire hazard areas. Furthermore, the increasing demand for outdoor recreation places more people in wildlands during holidays, weekends, and vacation periods. Unfortunately, wildland residents and visitors are rarely educated or prepared for wildfire events that can sweep through the brush and timber and destroy property within minutes.

Wildfires can result in severe economic losses as well. Businesses that depend on timber, such as paper mills and lumber companies, experience losses that are often passed along to consumers through higher prices and sometimes jobs are lost. The high cost of responding to and recovering from wildfires can deplete state resources and increase insurance rates. The economic impact of wildfires can also be felt in the tourism industry if roads and tourist attractions are closed due to health and safety concerns.

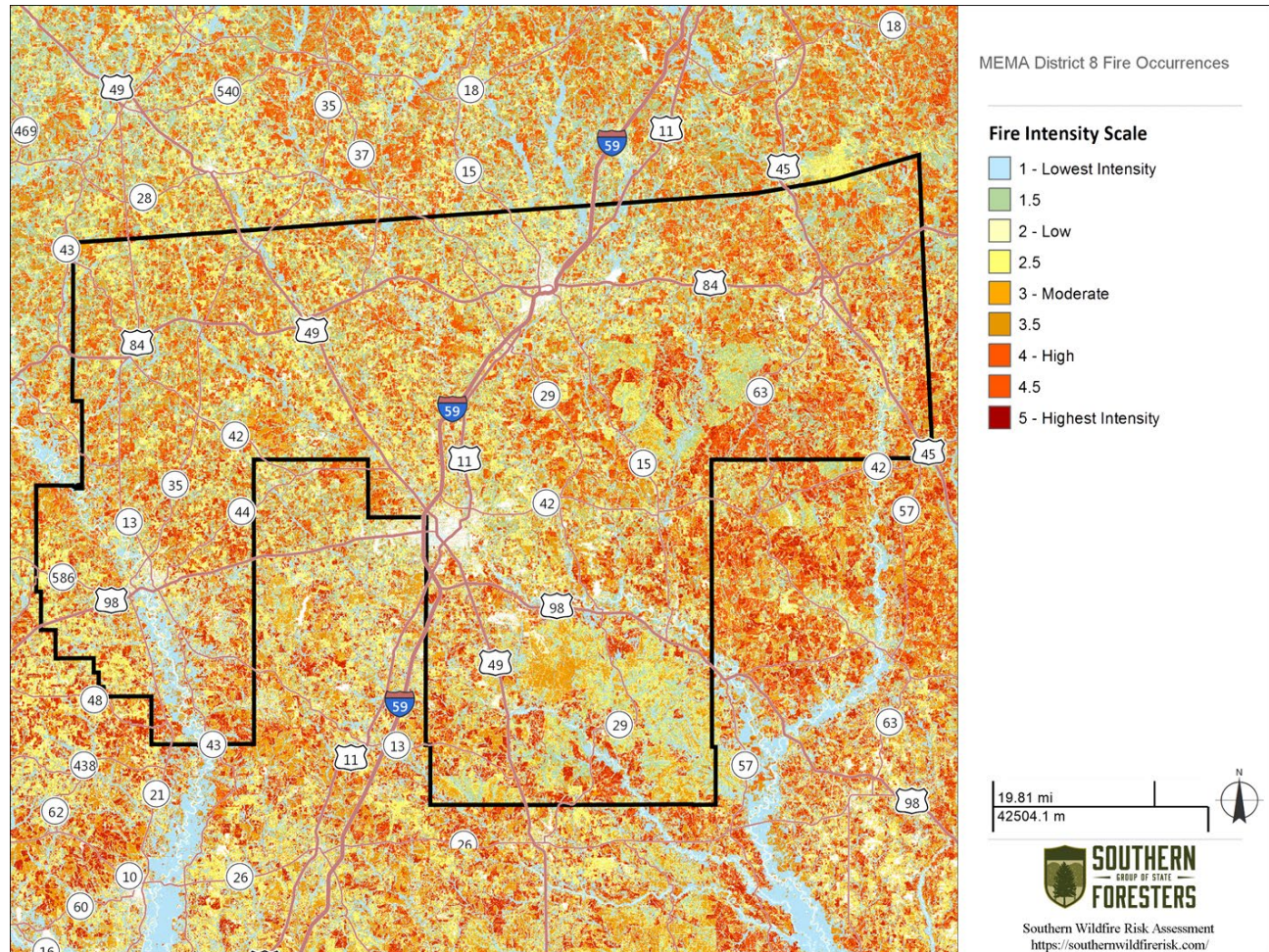
State and local governments can impose fire safety regulations on home sites and developments to help curb wildfire. Land treatment measures such as fire access roads, water storage, helipads, safety zones, buffers, firebreaks, fuel breaks, and fuel management can be designed as part of an overall fire defense system to aid in fire control. Fuel management, prescribed burning, and cooperative land management planning can also be encouraged to reduce fire hazards.

5.8.2 Location and Spatial Extent

The entire region is at risk to a wildfire occurrence. However, several factors such as drought conditions or high levels of fuel on the forest floor, may make a wildfire more likely. Furthermore, areas in the urban-wildland interface are particularly susceptible to fire hazard as populations abut formerly undeveloped areas. The Fire Occurrence Areas in the figure below give an indication of historic location.

5.8.3 Historical Occurrences

Figure 5.8 shows the Fire Occurrence Areas (FOA) in the MEMA District 8 Region based on data from the Southern Wildfire Risk Assessment. This data is based on historical fire ignitions and is reported as the number of fires that occur per 1,000 acres each year.

FIGURE 5.8: HISTORIC WILDFIRE EVENTS IN THE MEMA DISTRICT 8 REGION

Source: Southern Wildfire Risk Assessment

Based on data from the Mississippi Forestry Commission from 2008 to 2018, the MEMA District 8 Region experienced an average of 43 wildfires annually which burned a combined 406 acres, on average. **Table 5.14** provides a summary table for wildfire occurrences in the MEMA District 8 Region. The number of reported wildfire occurrences in the participating counties between the years 2008 and 2018 is listed in the jurisdiction-specific annexes.

TABLE 5.14: SUMMARY TABLE OF ANNUAL WILDFIRE OCCURRENCES (2008-2018)*

	Covington County	Jefferson Davis County	Jones County	Marion County	Perry County	Wayne County	Forrest County
Average Number of Fires per year	26.9	65	51.4	53.4	25.4	32.8	47.8
Average Number of Acres Burned per year	212	559	390.2	507.7	348.7	317.8	510.6
Average Number of Acres Burned	7.9	8.8	13.2	9.5	13.7	9.7	8.8

per fire

*These values reflect averages over a 10-year period. No data available for 2009

Source: Mississippi Forestry Commission

5.8.4 Probability of Future Occurrences

Wildfire events will be an ongoing occurrence in the MEMA District 8 Region. The likelihood of wildfires increases during drought cycles and abnormally dry conditions. Fires are likely to stay small in size but could increase due to local climate and ground conditions. Dry, windy conditions with an accumulation of forest floor fuel (potentially due to ice storms or lack of fire) could create conditions for a large fire that spreads quickly. It should also be noted that some areas do vary somewhat in risk. For example, highly developed areas are less susceptible unless they are located near the urban-wildland boundary. The risk will also vary due to assets. Areas in the urban-wildland interface will have much more property at risk, resulting in increased vulnerability and need to mitigate compared to rural, mainly forested areas. In this case, the participating jurisdictions appear to have a similar risk to the surrounding areas. The probability assigned to the MEMA District 8 Region for future wildfire events is likely (a 10 and 100 percent annual probability).

GEOLOGIC HAZARDS

5.9 EARTHQUAKE

5.9.1 Background

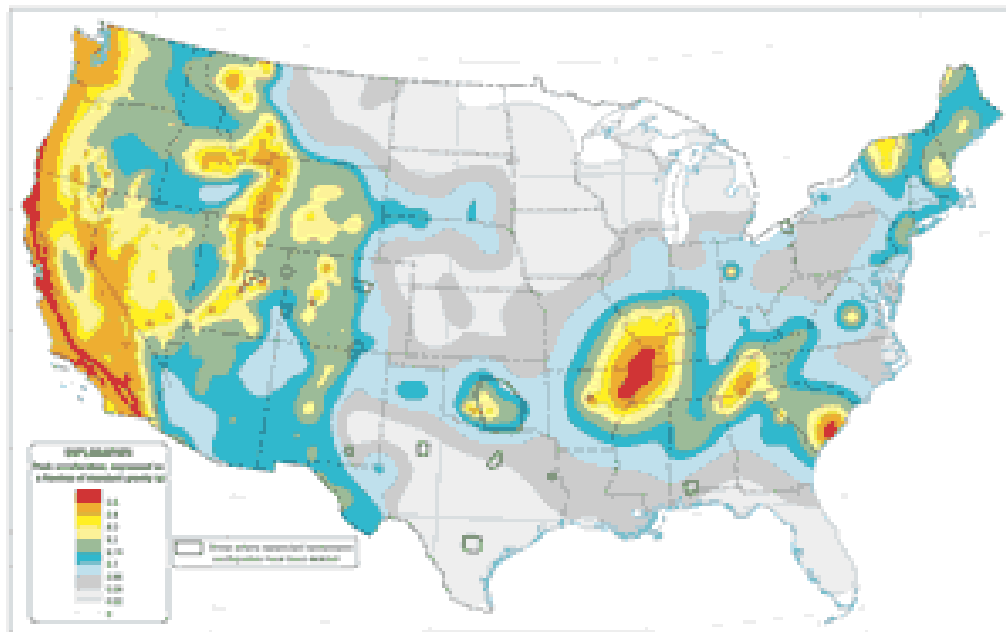
An earthquake is movement or trembling of the ground produced by sudden displacement of rock in the Earth's crust. Earthquakes result from crustal strain, volcanism, landslides, or the collapse of caverns. Earthquakes can affect hundreds of thousands of square miles, cause damage to property measured in the tens of billions of dollars, result in loss of life and injury to hundreds of thousands of persons, and disrupt the social and economic functioning of the affected area.

Most property damage and earthquake-related deaths are caused by the failure and collapse of structures due to ground shaking. The level of damage depends upon the amplitude and duration of the shaking, which are directly related to the earthquake size, distance from the fault, site, and regional geology. Other damaging earthquake effects include landslides, the down-slope movement of soil and rock (mountain regions and along hillsides), and liquefaction, in which ground soil loses the ability to resist shear and flows much like quick sand. In the case of liquefaction, anything relying on the substrata for support can shift, tilt, rupture, or collapse.

Most earthquakes are caused by the release of stresses accumulated as a result of the rupture of rocks along opposing fault planes in the Earth's outer crust. These fault planes are typically found along borders of the Earth's 10 tectonic plates. The areas of greatest tectonic instability occur at the perimeters of the slowly moving plates, as these locations are subjected to the greatest strains from plates traveling in opposite directions and at different speeds. Deformation along plate boundaries causes strain in the rock and the consequent buildup of stored energy. When the built-up stress exceeds the rocks' strength a rupture occurs. The rock on both sides of the fracture is snapped, releasing the stored energy and producing seismic waves, generating an earthquake.

The greatest earthquake threat in the United States is along tectonic plate boundaries and seismic fault lines located in the central and western states; however, the Eastern United State does face moderate risk to less frequent, less intense earthquake events. **Figure 5.9** shows relative seismic risk for the United States.

FIGURE 5.10: UNITED STATES EARTHQUAKE HAZARD MAP



Source: United States Geological Survey

Earthquakes are measured in terms of their magnitude and intensity. Magnitude is measured using the Richter Scale, an open-ended logarithmic scale that describes the energy release of an earthquake through a measure of shock wave amplitude (**Table 5.15**). Each unit increase in magnitude on the Richter Scale corresponds to a 10-fold increase in wave amplitude, or a 32-fold increase in energy. Intensity is most commonly measured using the Modified Mercalli Intensity (MMI) Scale based on direct and indirect measurements of seismic effects. The scale levels are typically described using roman numerals, ranging from “I” corresponding to imperceptible (instrumental) events to “XII” for catastrophic (total destruction). A detailed description of the Modified Mercalli Intensity Scale of earthquake intensity and its correspondence to the Richter Scale is given in **Table 5.16**.

TABLE 5.15: RICHTER SCALE

RICHTER MAGNITUDES	EARTHQUAKE EFFECTS
< 3.5	Generally not felt, but recorded.
3.5 - 5.4	Often felt, but rarely causes damage.
5.4 - 6.0	At most slight damage to well-designed buildings. Can cause major damage to poorly constructed buildings over small regions.
6.1 - 6.9	Can be destructive in areas up to about 100 kilometers across where people live.
7.0 - 7.9	Major earthquake. Can cause serious damage over larger areas.
8 or >	Great earthquake. Can cause serious damage in areas several hundred kilometers across.

Source: Federal Emergency Management Agency

TABLE 5.16: MODIFIED MERCALLI INTENSITY SCALE FOR EARTHQUAKES

SCALE	INTENSITY	DESCRIPTION OF EFFECTS	CORRESPONDING RICHTER SCALE MAGNITUDE
I	INSTRUMENTAL	Detected only on seismographs.	
II	FEEBLE	Some people feel it.	< 4.2
III	SLIGHT	Felt by people resting; like a truck rumbling by.	
IV	MODERATE	Felt by people walking.	
V	SLIGHTLY STRONG	Sleepers awake; church bells ring.	< 4.8
VI	STRONG	Trees sway; suspended objects swing, objects fall off shelves.	< 5.4
VII	VERY STRONG	Mild alarm; walls crack; plaster falls.	< 6.1
VIII	DESTRUCTIVE	Moving cars uncontrollable; masonry fractures, poorly constructed buildings damaged.	
IX	RUINOUS	Some houses collapse; ground cracks; pipes break open.	< 6.9
X	DISASTROUS	Ground cracks profusely; many buildings destroyed; liquefaction and landslides widespread.	< 7.3
XI	VERY DISASTROUS	Most buildings and bridges collapse; roads, railways, pipes and cables destroyed; general triggering of other hazards.	< 8.1
XII	CATASTROPHIC	Total destruction; trees fall; ground rises and falls in waves.	> 8.1

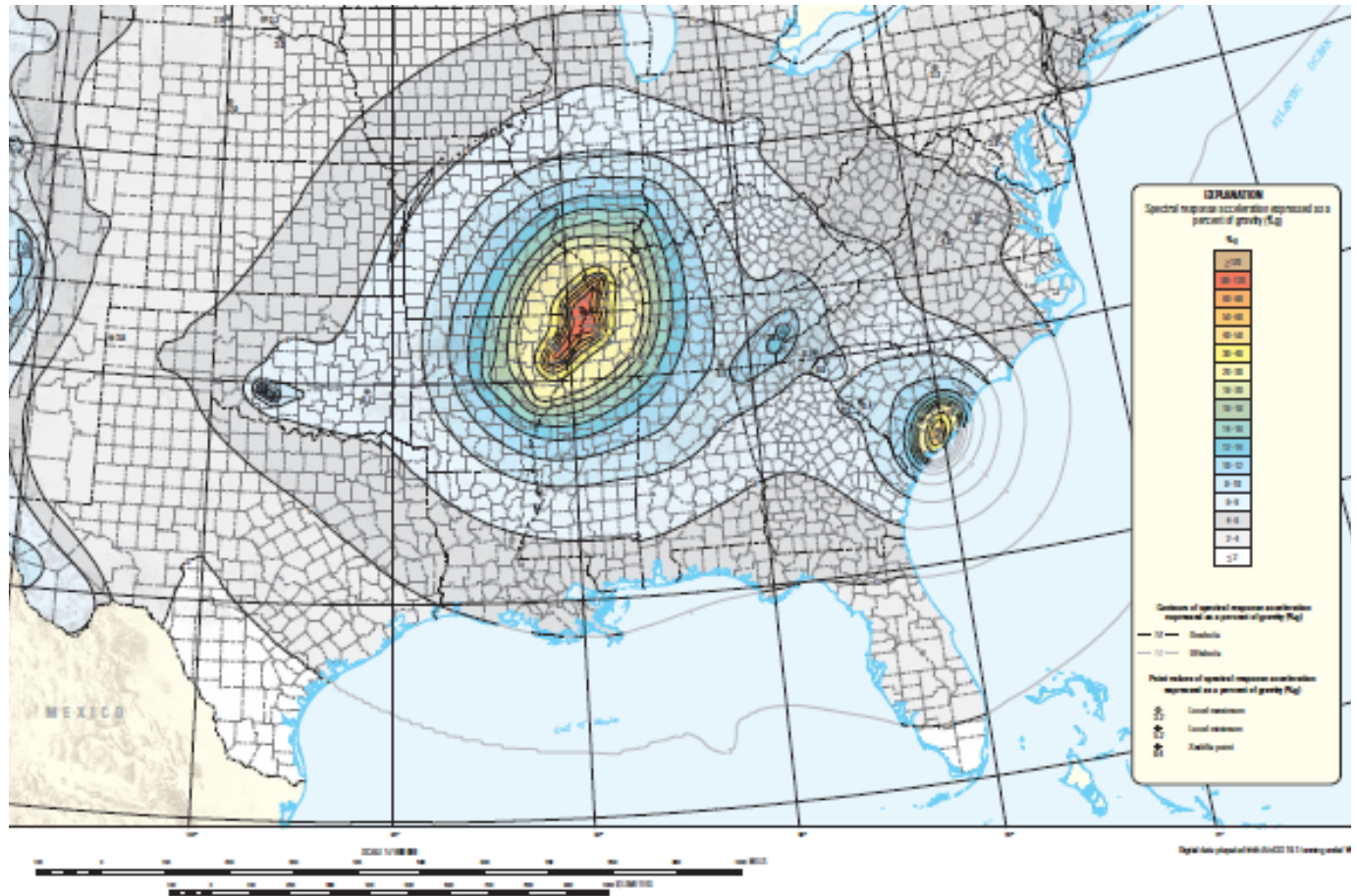
Source: Federal Emergency Management Agency

5.9.2 Location and Spatial Extent

Figure 5.10 shows the intensity level associated with the MEMA District 8 Region, based on the national USGS map of peak acceleration with 10 percent probability of exceedance in 50 years. It is the probability that ground motion will reach a certain level during an earthquake. The data show peak horizontal ground acceleration (the fastest measured change in speed, for a particle at ground level that is moving horizontally due to an earthquake) with a 10 percent probability of exceedance in 50 years.

The map was compiled by the U.S. Geological Survey (USGS) Geologic Hazards Team, which conducts global investigations of earthquake, geomagnetic, and landslide hazards. According to this map, all of the MEMA District 8 Region lies within an approximate zone of level “2” to “3” ground acceleration. This indicates that the region as a whole exists within an area of moderate seismic risk.

FIGURE 5.11: PEAK ACCELERATION WITH 10 PERCENT PROBABILITY OF EXCEEDANCE IN 50 YEARS



Source: USGS, 2017

5.9.3 Historical Occurrences

No earthquakes are known to have affected the MEMA District 8 Region since 1638. The strongest of these measured a VI on the Modified Mercalli Intensity (MMI) scale. **Table 5.17** provides a summary of earthquake events reported by the National Geophysical Data Center between 1638 and 1985.⁶ There are no updates since the last plan.

⁶ Due to reporting mechanisms, not all earthquakes events were recorded during this time.

TABLE 5.17: SUMMARY OF SEISMIC ACTIVITY IN THE MEMA DISTRICT 8 REGION

Location	Number of Occurrences	Greatest MMI Reported	Richter Scale Equivalent
Covington County	0	--	--
Collins	0	--	--
Mount Olive	0	--	--
Seminary	0	--	--
Unincorporated Area	0	--	--
Jefferson Davis County	0	--	--
Bassfield	0	--	--
Prentiss	0	--	--
Unincorporated Area	0	--	--
Jones County	0	--	--
Ellisville	0	--	--
Laurel	0	--	--
Sandersville	0	--	--
Soso	0	--	--
Unincorporated Area	0	--	--
Marion County	0	--	--
Columbia	0	--	--
Unincorporated Area	0	--	--
Perry County	0	--	--
Beaumont	0	--	--
New Augusta	0	--	--
Richton	0	--	--
Unincorporated Area	0	--	--
Wayne County	0	--	--
State Line	0	--	--
Waynesboro	0	--	--
Unincorporated Area	0	--	--
Forrest County	0	--	--
Hattiesburg	0	--	--
Petal	0	--	--
Unincorporated Area	0	--	--
MEMA DISTRICT 8 REGION TOTAL	0	--	--

Source: National Geophysical Data Center

In addition to those earthquakes specifically affecting the MEMA District 8 Region, a list of earthquakes that have affected Mississippi is presented below in **Table 5.18**.

TABLE 5.18: EARTHQUAKES WHICH HAVE AFFECTED MISSISSIPPI

Date	Origin	Richter Scale (Magnitude)	MMI (Intensity)	MMI in Mississippi	MEMA District 8 Counties Affected
1811-1812	New Madrid Seismic Zone	7.8-8.1	XI	Not available	Affected counties as far as the Gulf Coast

3/29/1972	New Madrid Seismic Zone	Not available	IV	I, II, III, IV	--
4/29/2003	8 miles ENE of Ft. Payne, AL	4.6	V	I, II, III, IV	--
11/7/2004	25 miles SW of Tuscaloosa, AL	4.0	V	I, II, III, IV	--
2/10/2005	22 miles WSW of Blytheville, AR	4.1	V	I, II, III	Jones
5/1/2005	15 miles WSW of Blytheville, AR	4.1	IV	I, II, III	--
6/2/2005	10 miles NNW of Dyersburg, TN	4.0	III	I	--
9/10/2006	253 miles SSW of Apalachicola, FL	6.0	VI	I, II, III, IV	Covington, Jones, Marion

Source: State of Mississippi Standard Mitigation Plan

5.9.4 Probability of Future Occurrences

The probability of significant, damaging earthquake events affecting the MEMA District 8 Region is unlikely. However, it is possible that future earthquakes resulting in light to moderate perceived shaking and damages ranging from none to very light will affect the region. The annual probability level for the region is estimated to be less than 1 percent (unlikely).

5.10 LANDSLIDE

5.10.1 Background

A landslide is the downward and outward movement of slope-forming soil, rock, and vegetation, which is driven by gravity. Landslides may be triggered by both natural and human-caused changes in the environment, including heavy rain, rapid snow melt, steepening of slopes due to construction or erosion, earthquakes, volcanic eruptions, and changes in groundwater levels.

There are several types of landslides: rock falls, rock topple, slides, and flows. Rock falls are rapid movements of bedrock, which result in bouncing or rolling. A topple is a section or block of rock that rotates or tilts before falling to the slope below. Slides are movements of soil or rock along a distinct surface of rupture, which separates the slide material from the more stable underlying material. Mudflows, sometimes referred to as mudslides, mudflows, lahars or debris avalanches, are fast-moving rivers of rock, earth, and other debris saturated with water. They develop when water rapidly accumulates in the ground, such as heavy rainfall or rapid snowmelt, changing the soil into a flowing river of mud or "slurry." Slurry can flow rapidly down slopes or through channels and can strike with little or no warning at avalanche speeds. Slurry can travel several miles from its source, growing in size as it picks up trees, cars, and other materials along the way. As the flows reach flatter ground, the mudflow spreads over a broad area where it can accumulate in thick deposits.

Landslides are typically associated with periods of heavy rainfall or rapid snow melt and tend to worsen the effects of flooding that often accompanies these events. In areas burned by forest and brush fires, a lower threshold of precipitation may initiate landslides. Some landslides move slowly and cause damage gradually, whereas others move so rapidly that they can destroy property and take lives suddenly and unexpectedly.

Among the most destructive types of debris flows are those that accompany volcanic eruptions. A spectacular example in the United States was a massive debris flow resulting from the 1980 eruptions of Mount St. Helens, Washington. Areas near the bases of many volcanoes in the Cascade Mountain Range

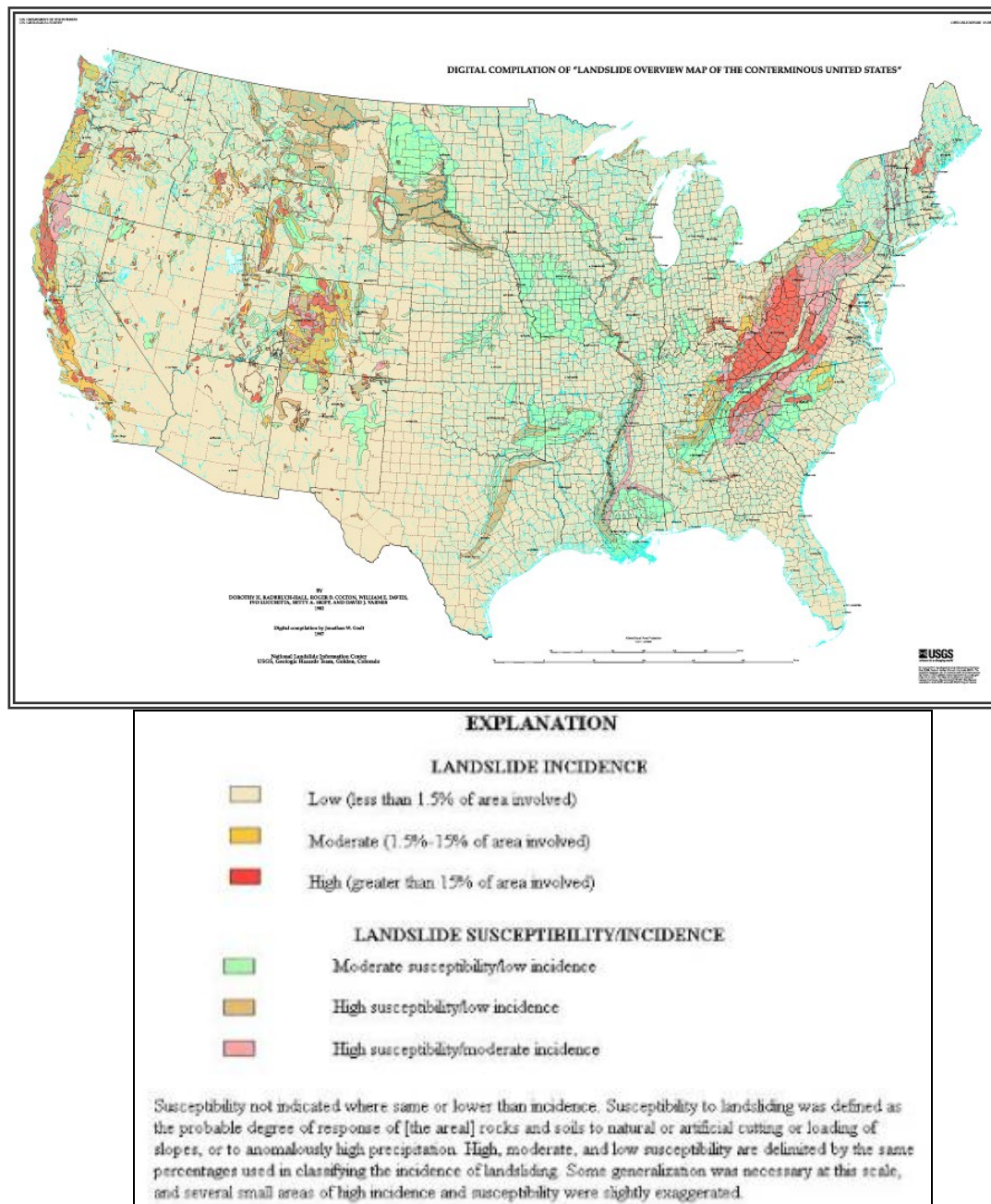
of California, Oregon, and Washington are at risk from the same types of flows during future volcanic eruptions.

Areas that are generally prone to landslide hazards include previous landslide areas, the bases of steep slopes, the bases of drainage channels, and developed hillsides where leach-field septic systems are used. Areas that are typically considered safe from landslides include areas that have not moved in the past, relatively flat-lying areas away from sudden changes in slope, and areas at the top or along ridges set back from the tops of slopes.

According to the United States Geological Survey, each year landslides cause \$5.1 billion (2009 dollars) in damage and between 25 and 50 deaths in the United States.⁷ **Figure 5.11** delineates areas where large numbers of landslides have occurred and areas that are susceptible to landsliding in the conterminous United States.⁸

⁷ United States Geological Survey (USGS). United States Department of the Interior. "Landslide Hazards – A National Threat." 2005.

⁸ This map layer is provided in the U.S. Geological Survey Professional Paper 1183, Landslide Overview Map of the Conterminous United States, available online at: http://landslides.usgs.gov/html_files/landslides/nationalmap/national.html.

FIGURE 5.12: LANDSLIDE OVERVIEW MAP OF THE CONTERMINOUS UNITED STATES

Source: USGS

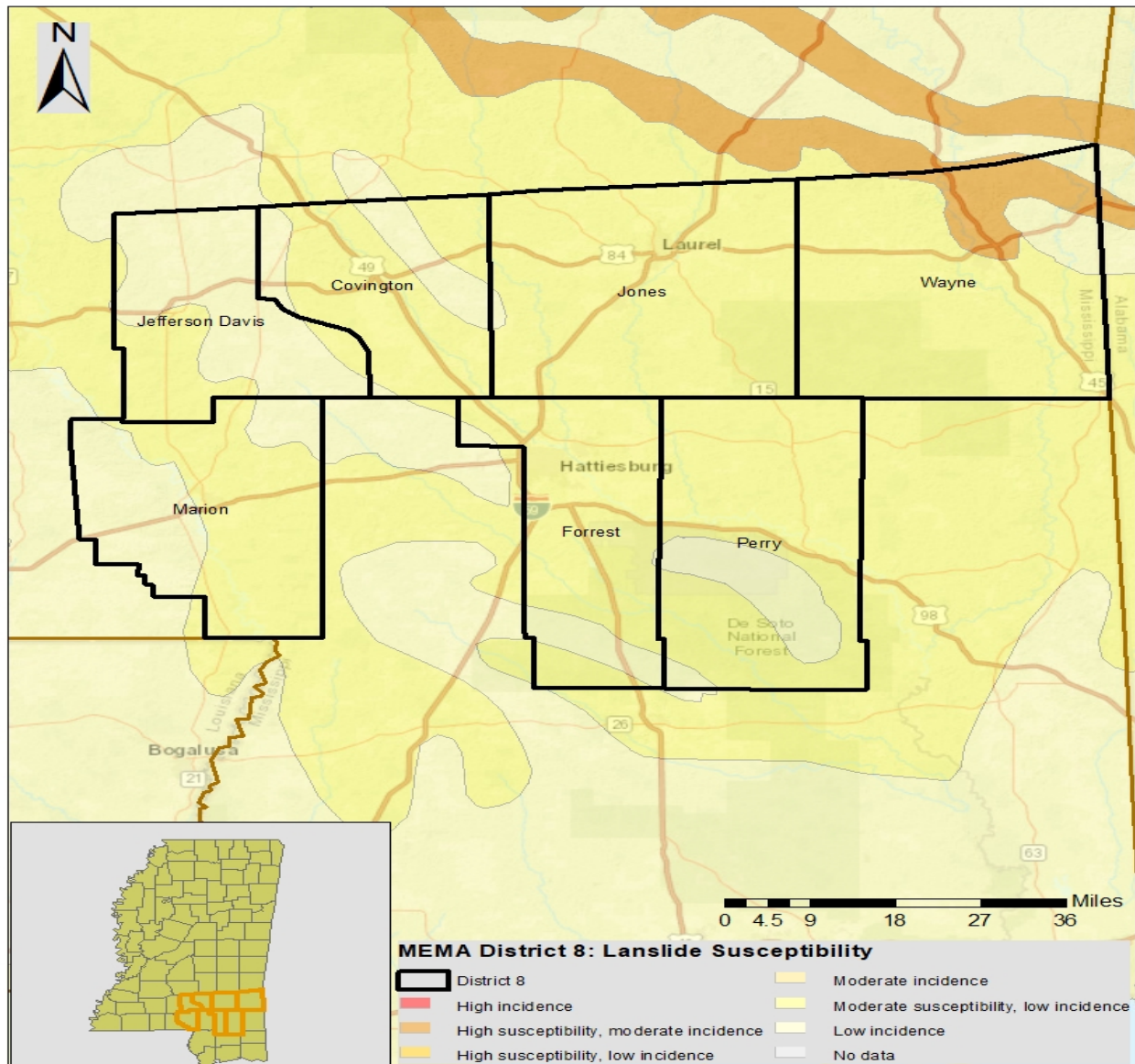
5.10.2 Location and Spatial Extent

Landslides occur along steep slopes when the pull of gravity can no longer be resisted (often due to heavy rain). Human development can also exacerbate risk by building on previously undevelopable steep slopes. Landslides are possible throughout the MEMA District 8 Region.

According to **Figure 5.12** below, nearly the entire region falls under a low incidence area (yellow and light purple). This indicates that less than 1.5 percent of the area is involved in landsliding. The areas in

yellow are defined as low incidence and low susceptibility. The areas in light purple, however, indicate that a moderate susceptibility to landsliding activity is present. In addition, there is a small area of land in Wayne County (depicted in orange) reported as high susceptibility and moderate incidence. This area is the area at greatest risk to landsliding according to the United States Geological Survey data.

FIGURE 5.13: LANDSLIDE SUSCEPTIBILITY MAP OF THE MEMA DISTRICT 8 REGION



Source: USGS

5.10.3 Historical Occurrences

There is no extensive history of landslides in the MEMA District 8 Region. Landslide events typically occur in isolated areas.

5.10.4 Probability of Future Occurrences

Based on historical information and the USGS susceptibility index, the probability of future landslide events is unlikely (less than 1 percent probability). The USGS data indicates that the nearly all areas in the MEMA District 8 Region have a low landslide incidence rate. However, some areas are reported as having moderate or high susceptibility to landsliding activity. Local conditions may become more favorable for landslides due to heavy rain, for example. This would increase the likelihood of occurrence. It should also be noted that some areas in the MEMA District 8 Region have greater risk than others given factors such as steepness on slope and modification of slopes.

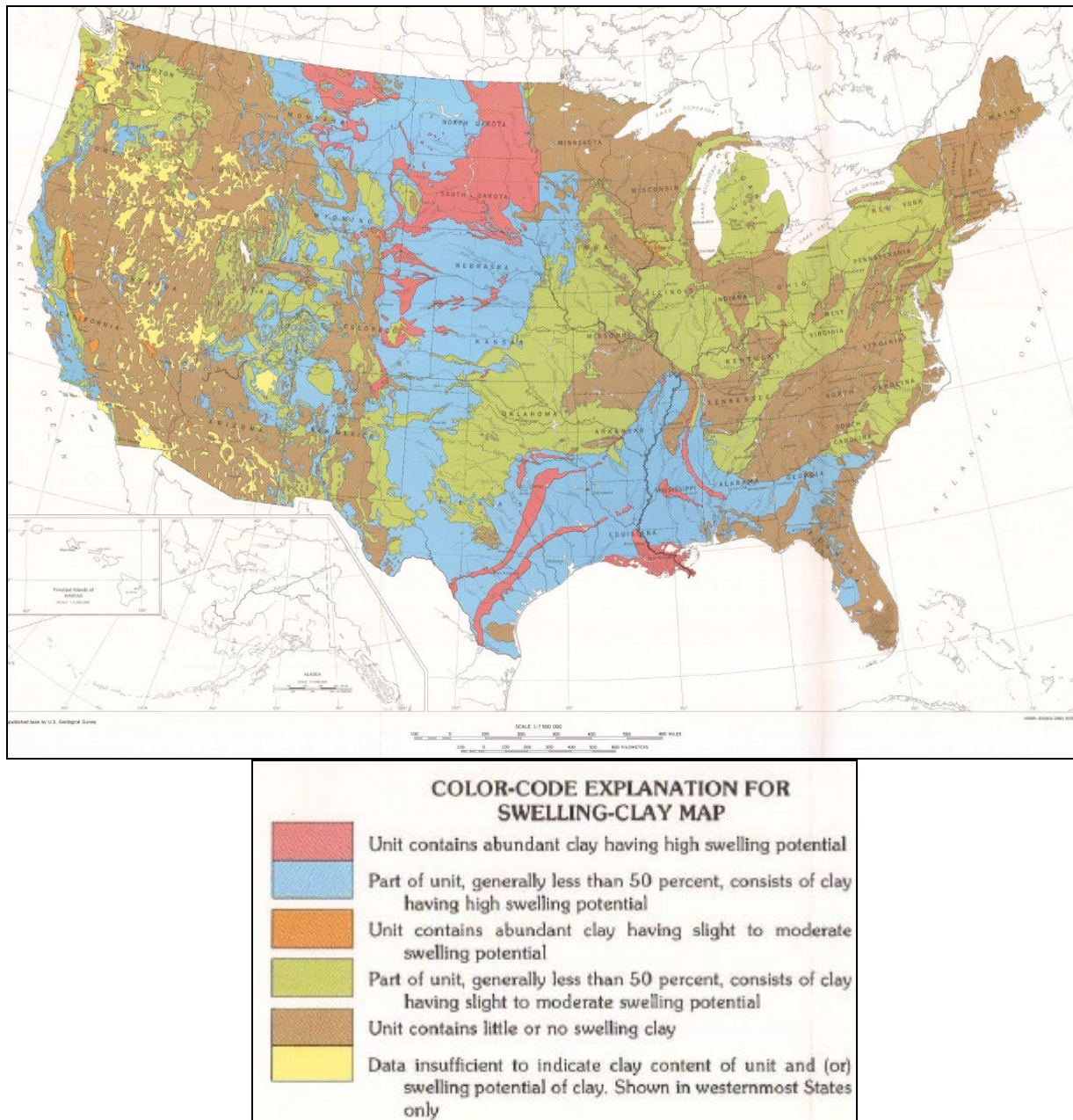
5.11 EXPANSIVE SOILS

5.11.1 Background

Expansive soils, also called shrink-swell soils, are soils that will exhibit some degree of volume change with variations in moisture conditions. Depending upon the supply of moisture in the ground, expansive soils will experience changes in volume of up to thirty percent or more. The most important properties affecting degree of volume change in a soil are clay mineralogy and the aqueous environment. Generally speaking, expansive soils often appear sticky when wet and are characterized by surface cracks when dry.

The effects of expansive soils are typically experienced in regions of moderate to high precipitation, where periods of drought are followed by periods of rainfall. Expansive soils become a problem when structures are built upon them without taking proper design precautions into account with regard to soil type. Cracking in walls and floors can be minor, or can be severe enough for the home to be structurally unsafe. Expansive soils are known to cause adverse effects on structures and infrastructure throughout the United States. **Figure 5.14** delineates areas underlain by soils with swelling potential in the conterminous United States.⁹

⁹ This map layer is provided in the U.S. Geological Survey Investigation Series Map 1940, Swelling Clays Map of the Conterminous United States, available online at: http://ngmdb.usgs.gov/Prodesc/proddesc_10014.htm.

FIGURE 5.14: SWELLING CLAYS MAP OF THE CONTERMINOUS UNITED STATES

Source: USGS

5.11.3 Location and Spatial Extent

Due to the amount of clay minerals present in the MEMA District 8 Region, expansive soils present a threat to the region. Areas underlain by soils with swelling potential are shown in **Figure 5.13**. The areas in blue are underlain with generally less than 50 percent clay having high swelling potential and the areas in brown contain little or no swelling clays.

FIGURE 5.15: SWELLING CLAYS IN MISSISSIPPI

Source: USGS

5.11.3 Historical Occurrences

There is no historical record of significant expansive soil events in the MEMA District 8 Region. However, expansive soils can cause considerable damage to structural foundations in the region, although they do not pose a significant threat to human life.

5.11.4 Probability of Future Occurrences

Based on historical information, the probability of future expansive soil events is possible (between 1 and 100 percent annually).

WIND-RELATED HAZARDS

5.12 HURRICANE AND TROPICAL STORM

5.12.1 Background

Hurricanes and tropical storms are classified as cyclones and defined as any closed circulation developing around a low-pressure center in which the winds rotate counter-clockwise in the Northern Hemisphere (or clockwise in the Southern Hemisphere) and whose diameter averages 10 to 30 miles across. A tropical cyclone refers to any such circulation that develops over tropical waters. Tropical cyclones act as a “safety-valve,” limiting the continued build-up of heat and energy in tropical regions by maintaining the atmospheric heat and moisture balance between the tropics and the pole-ward latitudes. The primary damaging forces associated with these storms are high-level sustained winds, heavy precipitation, and tornadoes.

The key energy source for a tropical cyclone is the release of latent heat from the condensation of warm water. Their formation requires a low-pressure disturbance, warm sea surface temperature, rotational force from the spinning of the earth, and the absence of wind shear in the lowest 50,000 feet of the atmosphere. The majority of hurricanes and tropical storms form in the Atlantic Ocean, Caribbean Sea, and Gulf of Mexico during the official Atlantic hurricane season, which encompasses the months of June through November. The peak of the Atlantic hurricane season is in early to mid-September and the average number of storms that reach hurricane intensity per year in the Atlantic basin is about six.

As an incipient hurricane develops, barometric pressure (measured in millibars or inches) at its center falls and winds increase. If the atmospheric and oceanic conditions are favorable, it can intensify into a tropical depression. When maximum sustained winds reach or exceed 39 miles per hour, the system is designated a tropical storm, given a name, and is closely monitored by the National Hurricane Center in Miami, Florida. When sustained winds reach or exceed 74 miles per hour the storm is deemed a hurricane. Hurricane intensity is further classified by the Saffir-Simpson Scale (**Table 5.19**), which rates hurricane intensity on a scale of 1 to 5, with 5 being the most intense.

TABLE 5.19: SAFFIR-SIMPSON SCALE

Category	Maximum Sustained Wind Speed (MPH)
1	74–95
2	96–110
3	111–129
4	130–156
5	157 +

Source: National Hurricane Center

The Saffir-Simpson Scale categorizes hurricane intensity linearly based upon maximum sustained winds, barometric pressure and storm surge potential, which are combined to estimate potential damage. Categories 3, 4, and 5 are classified as “major” hurricanes and, while hurricanes within this range comprise only 20 percent of total tropical cyclone landfalls, they account for over 70 percent of the damage in the United States. **Table 5.20** describes the damage that could be expected for each category

of hurricane. Damage during hurricanes may also result from spawned tornadoes, storm surge, and inland flooding associated with heavy rainfall that usually accompanies these storms.

TABLE 5.20: HURRICANE DAMAGE CLASSIFICATIONS

Storm Category	Damage Level	Description of Damages	Photo Example
1	MINIMAL	No real damage to building structures. Damage primarily to unanchored mobile homes, shrubbery, and trees. Also, some coastal flooding and minor pier damage.	
2	MODERATE	Some roofing material, door, and window damage. Considerable damage to vegetation, mobile homes, etc. Flooding damages piers and small craft in unprotected moorings may break their moorings.	
3	EXTENSIVE	Some structural damage to small residences and utility buildings, with a minor amount of curtainwall failures. Mobile homes are destroyed. Flooding near the coast destroys smaller structures, with larger structures damaged by floating debris. Terrain may be flooded well inland.	
4	EXTREME	More extensive curtainwall failures with some complete roof structure failure on small residences. Major erosion of beach areas. Terrain may be flooded well inland.	
5	CATASTROPHIC	Complete roof failure on many residences and industrial buildings. Some complete building failures with small utility buildings blown over or away. Flooding causes major damage to lower floors of all structures near the shoreline. Massive evacuation of residential areas may be required.	

Source: National Hurricane Center; Federal Emergency Management Agency

5.12.2 Location and Spatial Extent

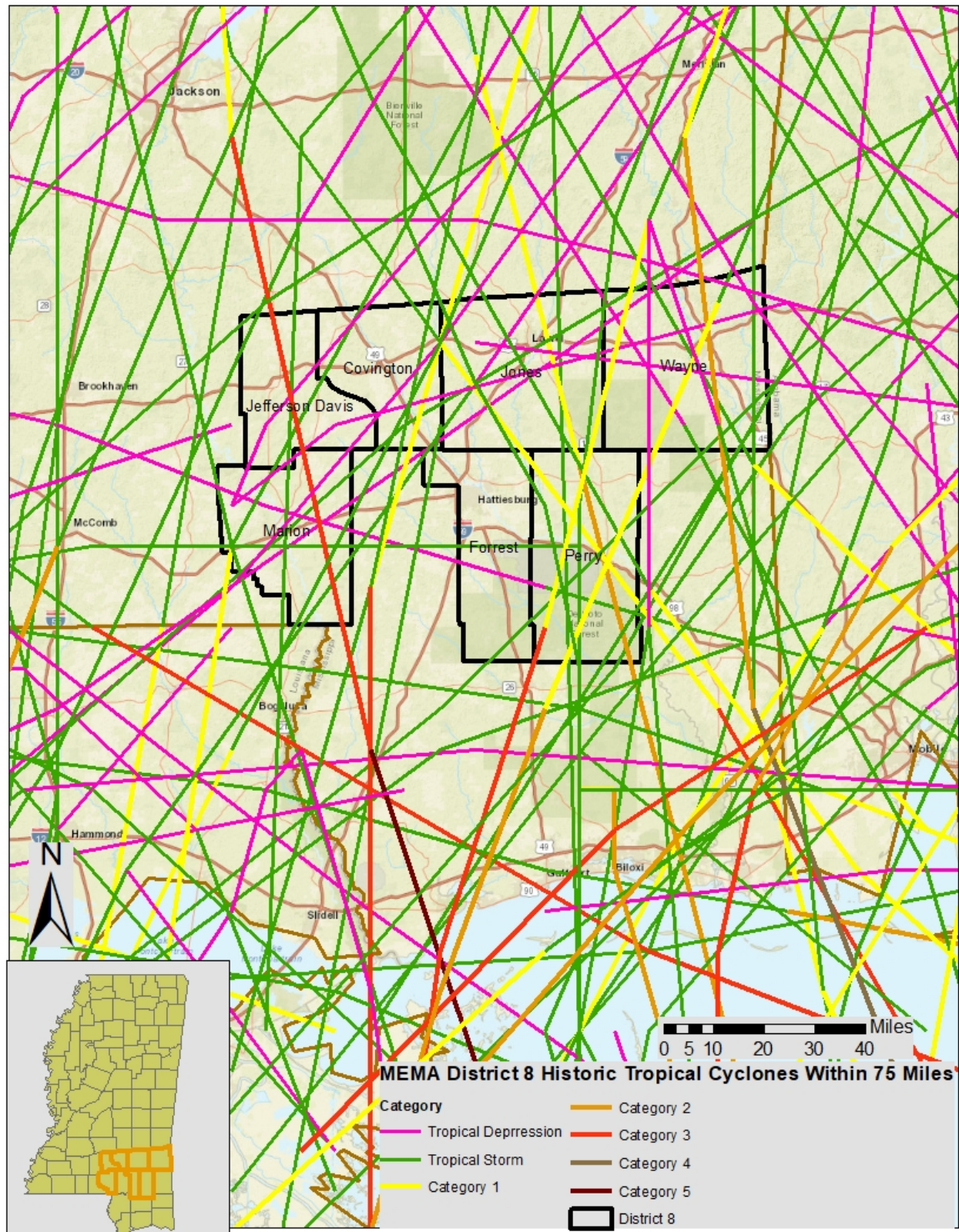
Hurricanes and tropical storms threaten the entire Atlantic and Gulf seaboard of the United States. While coastal areas are most directly exposed to the brunt of landfalling storms, their impact is often felt hundreds of miles inland and major hurricanes (category 3 or higher) may impact the region. All areas in the MEMA District 8 Region are equally susceptible to hurricane and tropical storms.

5.12.3 Historical Occurrences

According to the National Hurricane Center's historical storm track records, approximately 69 hurricane or tropical storm tracks have passed within 75 miles of the MEMA District 8 Region since 1851 as shown in **Figure 5.14**.¹⁰ Thirty-one of these tracks passed directly through the region. Notable storms include Hurricane Camille (1969), Hurricane Frederic (1979), and Hurricane Katrina (2005).

¹⁰ These storm track statistics do not include extra-tropical storms or tropical depressions. Though these related hazard events are less severe in intensity, they may cause significant local impact in terms of rainfall and high winds.

FIGURE 5.16: HISTORICAL HURRICANE STORM TRACKS WITHIN 75 MILES OF THE MEMA DISTRICT 8 REGION



Source: National Oceanic and Atmospheric Administration, National Hurricane Center

Federal records indicate that disaster declarations were made in 1969 (Hurricane Camille), 1979 (Hurricane Frederic), 1998 (Hurricane Georges), 2004 (Hurricane Ivan), 2005 (Hurricane Dennis), 2005 (Hurricane Katrina), 2008 (Hurricane Gustav), and 2012 (Hurricane Isaac).¹¹ Hurricane and tropical storm events can cause substantial damage in the area due to high winds and flooding.

Flooding and high winds from hurricanes and tropical storms can cause damage throughout the region. Many anecdotes are available from NCEI for the major storms that have impacted the area as found below:

Hurricane Erin – August 20, 1995

Hurricane Erin moved out of Washington County, Alabama into Greene and Wayne Counties in Mississippi. The storm moved generally along Highway 45 passing just south of Waynesboro. Trees and power lines were blown down across Northern Greene, Northern Perry and most of Wayne Counties as Erin moved northwest. Some homes were damaged along Highway 45 and in the cities of Buckatunna and Waynesboro. Most of the damage was from trees falling on homes or shingles being blown from roofs. Wind speeds of 50 to 60 mph were estimated in Waynesboro. Preliminary damage estimates in these three counties was around \$100 thousand.

Hurricane Georges – September 25, 1998

Hurricane Georges, a strong Category 2 hurricane moved slowly northwest across the Gulf of Mexico toward southeast Louisiana and coastal Mississippi on the September 25 and September 26. As the hurricane approached the mouth of the Mississippi River on September 27, it slowly turned toward the north making landfall along the Mississippi Coast just to the east of Biloxi, MS on September 28. Hurricane Georges resulted in damage from heavy rains and persistent winds. Trees and power lines were blown down. Cotton, soybean, and pecan crops were almost totally destroyed.

Tropical Storm Isidore – September 26, 2002

Tropical Storm Isidore moved onshore along the Louisiana coast early in the morning of September 26. The weakening storm then moved northeast across eastern Mississippi during the day. The heavy rainfall associated with the storm resulted in significant river and flash flooding across much of Mississippi. Twenty-four-hour rainfall totals between 5 and 10 inches were common over much of Mississippi, especially in the southern part of the state, where twenty-four hour amounts exceeded 9 inches near Hattiesburg. Gradient wind gusts between 35 and 45 miles per hour combined with the saturated ground to lead to numerous downed trees and powerlines over the state. Most of the damage was seen along and east of the Natchez Trace, near the path of the storm's diffuse center. One indirect fatality was reported just east of the Kalem community in Scott County. Here, a falling tree struck a truck driven by a 31-year-old male. Damage from Isidore was an estimated \$500,000.

Hurricane Lili – October 3, 2002

Hurricane Lili brought thunderstorm bands, strong winds, and associated tornadoes that created damage across central Mississippi. Most of the damage was caused by downed trees. The highest actual wind gust was measured at 56 miles per hour. Ground over most of the area was saturated from the combined rainfall of Lili and Isidore (which affected the same areas a week earlier), and this allowed

¹¹ Not all of the participating counties were declared disaster areas for these storms. A complete listing of historical disaster declarations, including the affected counties, can be found in Section 4: Hazard Identification.

tropical storm force winds to easily push down trees area-wide. Rainfall amounts were over 3 inches in the most persistent rainbands. Estimated damage across central Mississippi from Lili was \$500,000.

Tropical Storm Bill – June 30, 2003

Tropical Storm Bill tracked along Interstate 59. Heavy rainfall caused flash flooding. Forty-eight-hour rainfall totals ranged between 3-7 inches, mainly across SE Mississippi. Gradient wind gusts between 30 and 40 mph combined with saturated soils downed numerous trees very close to center's track. Damage from Bill was an estimated \$100,000.

Hurricane Ivan – September 16, 2004

Thousands of trees were blown down across Eastern Mississippi during the event as well as hundreds of power lines. The strong wind itself did not cause much structural damage, however the fallen trees did. These downed trees accounted for several hundred homes, mobile homes and businesses to be damaged or destroyed. Most locations across Eastern Mississippi reported sustained winds between 30 and 40 mph with Tropical Storm force gusts between 48 and 54 mph. The strongest reported winds occurred in Newton, Lauderdale and Oktibbeha Counties.

Overall, rainfall totals were held in check as Ivan steadily moved north. The heaviest rains were confined to far Eastern Mississippi where 3 to 4 inches fell over a 15-hour period. Due to the duration of the rain no flooding was reported. Across Eastern Mississippi, Hurricane Ivan was responsible for one fatality. This fatality occurred in Brooksville (Noxubee County) when a tree fell on a man. Damage from Ivan was estimated at \$200 million.

Hurricane Dennis – July 10, 2005

Hurricane Dennis made landfall during the afternoon of July 10th near Navarre Beach Florida as a category 3 Hurricane. The storm moved north-northwest across Southwest Alabama and then into East-Central Mississippi and finally across Northeast Mississippi during the overnight hours. Wind gusts over tropical storm force were common across areas east of a line from Starkville to Newton to Hattiesburg. These winds caused several hundred trees to uproot or snap and took down numerous power lines. Additionally, a total of 21 homes or businesses sustained minor to major damage from fallen trees or gusty winds.

Heavy rainfall was not a major issue as Dennis steadily moved across the region. Rainfall totals between 2 and 5 inches fell across Eastern Mississippi over a 12 hour period. One indirect fatality occurred in Jasper County from an automobile accident due to wet roads.

Hurricane Katrina – August 25, 2005

Hurricane Katrina will likely go down as the worst and costliest natural disaster in United States history. The amount of destruction, the cost of damaged property/agriculture and the large loss of life across the affected region has been overwhelming. Catastrophic damage was widespread across a large portion of the Gulf Coast region. The devastation was not only confined to the coastal region, widespread and significant damage occurred well inland up to the Hattiesburg area and northward past Interstate 20.

Devastation from Hurricane Katrina was widespread across the region. Hurricane force winds were common across the area. The region received sustained winds of 60-80 mph with gusts ranging from 80-120 mph. There was widespread damage to trees and power lines. Wind damage to structures was also widespread, with roofs blown off or partially peeled. Hundreds of signs were shredded or blown down. Businesses sustained structural damage. Power outages lasted from a few days to as long as four

weeks. Agriculture and timber industries were severely impacted. Row crops, including cotton, rice, corn, and soybeans, took a hard hit. Other impacted industries were the catfish industry, dairy and cattle industry, and nursery businesses.

Hurricane Rita – September 5, 2005

Hurricane Rita brought heavy rainfall, tropical storm force winds, and tornados to the region. Rainfall amounts ranged from 4-7 inches, which resulted in flooding. Winds between 25-35 mph, with gusts up to 40-50 mph, downed trees and power lines.

Hurricane Gustav – September 1, 2008

As hurricane Gustav moved south of the area, tropical depression conditions spread into southeast Mississippi. The winds increased during the early morning of September 1 and ended during the early afternoon as Gustav moved farther away. No damage was reported from the winds. Several mesonet sites had sustained winds of 20-30 mph with higher gusts. Rainfall estimates across the area were 3-5 inches which resulted in some minor street flooding. Parts of southeast Mississippi were put under a tropical storm wind warning in the early morning hours of August 31 and the warning continued in effect until the late evening of September 1.

Hurricane Gordon (Tropical Depression) – September 9, 2018

As Tropical Storm Gordon moved further inland, it was downgraded to a tropical depression. Gusty winds still occurred as the center moved through central Mississippi. A few trees were blown down across portions of Covington County.

5.12.4 Probability of Future Occurrences

Based on historical evidence, the probability level of future occurrence is likely (annual probability between 10 and 100 percent). Given the regional nature of the hazard, all areas in the region are equally exposed to this hazard. However, when the region is impacted, the damage could be catastrophic, threatening lives and property throughout the planning area.

5.13 THUNDERSTORM (WIND, HAIL, LIGHTNING)

5.13.1 Background

THUNDERSTORM / HIGH WIND

Thunderstorms can produce a variety of accompanying hazards including wind (discussed here), hail, and lightning. Although thunderstorms generally affect a small area, they are very dangerous may cause substantial property damage.

Three conditions need to occur for a thunderstorm to form. First, it needs moisture to form clouds and rain. Second, it needs unstable air, such as warm air that can rise rapidly (this often referred to as the “engine” of the storm). Third, thunderstorms need lift, which comes in the form of cold or warm fronts, sea breezes, mountains, or the sun’s heat. When these conditions occur simultaneously, air masses of varying temperatures meet, and a thunderstorm is formed. These storm events can occur singularly, in lines, or in clusters. Furthermore, they can move through an area very quickly or linger for several hours.

According to the National Weather Service, more than 100,000 thunderstorms occur each year, though only about 10 percent of these storms are classified as “severe.” A severe thunderstorm occurs when the storm produces at least one of these three elements: 1) hail of three-quarters of an inch, 2) a tornado, or 3) winds of at least 58 miles per hour.

Downbursts are also possible with thunderstorm events. Such events are an excessive burst of wind in excess of 125 miles per hour. They are often confused with tornadoes. Downbursts are caused by down drafts from the base of a convective thunderstorm cloud. It occurs when rain-cooled air within the cloud becomes heavier than its surroundings. Thus, air rushes towards the ground in a destructive yet isolated manner. There are two types of downbursts. Downbursts less than 2.5 miles wide, duration less than 5 minutes, and winds up to 168 miles per hour are called “microbursts.” Larger events greater than 2.5 miles at the surface and longer than 5 minutes with winds up to 130 miles per hour are referred to as “macrobursts.”

HAILSTORM

Hailstorms are a potentially damaging outgrowth of severe thunderstorms (thunderstorms are discussed separately in Section 5.8). Early in the developmental stages of a hailstorm, ice crystals form within a low-pressure front due to the rapid rising of warm air into the upper atmosphere and the subsequent cooling of the air mass. Frozen droplets gradually accumulate on the ice crystals until they develop to a sufficient weight and fall as precipitation. Hail typically takes the form of spheres or irregularly-shaped masses greater than 0.75 inches in diameter. The size of hailstones is a direct function of the size and severity of the storm. High velocity updraft winds are required to keep hail in suspension in thunderclouds. The strength of the updraft is a function of the intensity of heating at the Earth’s surface. Higher temperature gradients relative to elevation above the surface result in increased suspension time and hailstone size. **Table 5.21** shows the TORRO Hailstorm Intensity Scale which is a way of measuring hail severity.

TABLE 5.21: TORRO HAILSTORM INTENSITY SCALE

	Intensity Category	Typical Hail Diameter (mm)*	Probable Kinetic Energy, J-m²	mm to inch conversion (inches)	Typical Damage Impacts
H0	Hard Hail	5	0-20	0 - 0.2	No damage
H1	Potentially Damaging	5-15	>20	0.2 - 0.6	Slight general damage to plants, crops
H2	Significant	10-20	>100	0.4 - 0.8	Significant damage to fruit, crops, vegetation
H3	Severe	20-30	>300	0.8 - 1.2	Severe damage to fruit and crops, damage to glass and plastic structures, paint and wood scored
H4	Severe	25-40	>500	1.0 - 1.6	Widespread glass damage, vehicle bodywork damage
H5	Destructive	30-50	>800	1.2 - 2.0	Wholesale destruction of glass, damage to tiled roofs, significant risk of injuries
H6	Destructive	40-60		1.6 - 2.4	Bodywork of grounded aircraft dented,

	Intensity Category	Typical Hail Diameter (mm)*	Probable Kinetic Energy, J-m ²	mm to inch conversion (inches)	Typical Damage Impacts
					brick walls pitted
H7	Destructive	50-75		2.0 - 3.0	Severe roof damage, risk of serious injuries
H8	Destructive	60-90		1.6 - 3.5	(Severest recorded in the British Isles) Severe damage to aircraft bodywork
H9	Super Hailstorms	75-100		3.0 - 3.9	Extensive structural damage. Risk of severe or even fatal injuries to persons caught in the open
H10	Super Hailstorms	>100			Extensive structural damage. Risk of severe or even fatal injuries to persons caught in the open

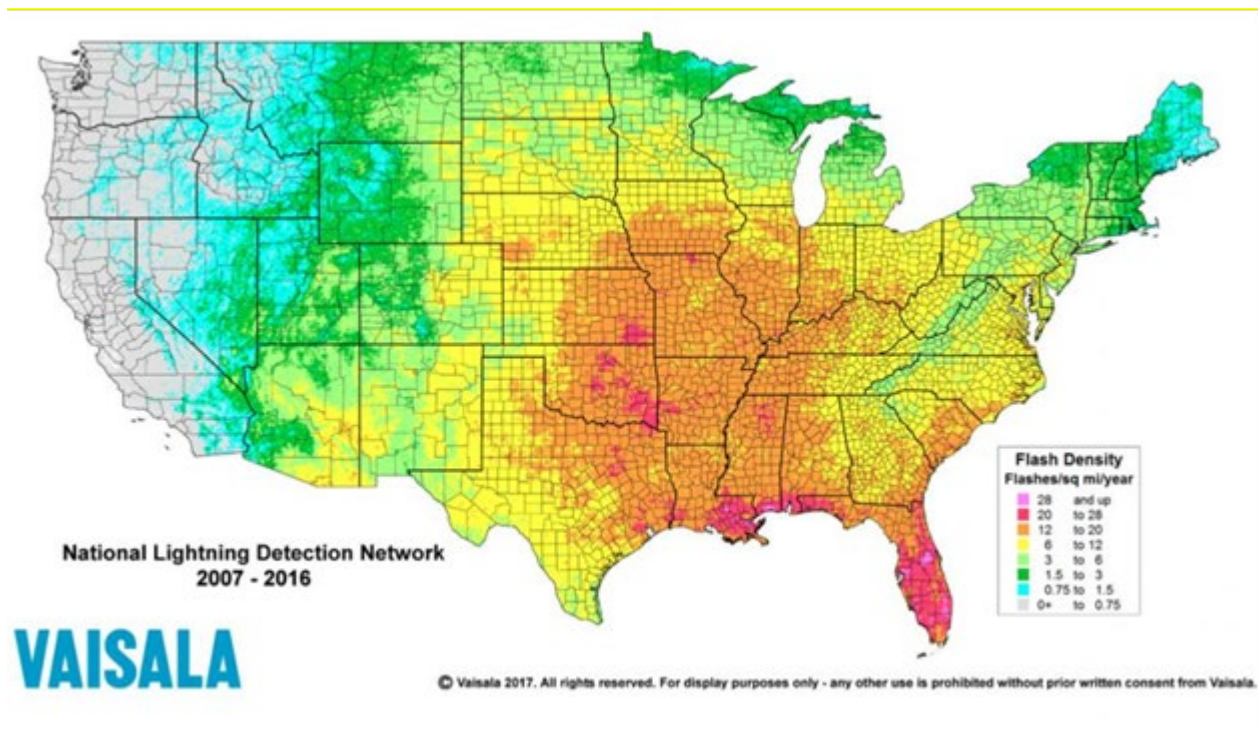
Source: <http://www.torro.org.uk/site/hscale.php>

LIGHTNING

Lightning is a discharge of electrical energy resulting from the buildup of positive and negative charges within a thunderstorm, creating a “bolt” when the buildup of charges becomes strong enough. This flash of light usually occurs within the clouds or between the clouds and the ground. A bolt of lightning can reach temperatures approaching 50,000 degrees Fahrenheit. Lightning rapidly heats the sky as it flashes but the surrounding air cools following the bolt. This rapid heating and cooling of the surrounding air causes the thunder which often accompanies lightning strikes. While most often affiliated with severe thunderstorms, lightning may also strike outside of heavy rain and might occur as far as 10 miles away from any rainfall.

Lightning strikes occur in very small, localized areas. For example, they may strike a building, electrical transformer, or even a person. According to FEMA, lightning injures an average of 300 people and kills 80 people each year in the United States. Direct lightning strikes also have the ability to cause significant damage to buildings, critical facilities, and infrastructure largely by igniting a fire. Lightning is also responsible for igniting wildfires that can result in widespread damages to property.

Figure 5.17 shows the Vaisala’s U.S. National Lightning Detection Network which indicates the average flash density per foot per square kilometer per year.

FIGURE 5.17: LIGHTNING FLASH DENSITY IN THE UNITED STATES

Source: Vaisala U.S. National Lightning Detection Network

5.13.2 Location and Spatial Extent

THUNDERSTORM / HIGH WIND

A thunderstorm event is an atmospheric hazard, and thus has no geographic boundaries. It is typically a widespread event that can occur in all regions of the United States. However, thunderstorms are most common in the central and southern states because atmospheric conditions in those regions are favorable for generating these powerful storms. It is assumed that the MEMA District 8 Region has uniform exposure to an event and the spatial extent of an impact could be large.

HAILSTORM

Hailstorms frequently accompany thunderstorms, so their locations and spatial extents typically coincide. It is assumed that the MEMA District 8 Region is uniformly exposed to severe thunderstorms; therefore, all areas of the region are equally exposed to hail which may be produced by such storms.

LIGHTNING

Lightning occurs randomly, therefore it is impossible to predict where and with what frequency it will strike. It is assumed that all of the MEMA District 8 Region is uniformly exposed to lightning.

5.13.3 Historical Occurrences

THUNDERSTORM / HIGH WIND

Severe storms resulted in 11 disaster declarations in the MEMA District 8 Region between 1971 and 2019.¹² According to National Centers for Environmental Information, there have been 1,360 reported thunderstorm and high wind events since 1957 in the MEMA District 8 Region.¹³ These events caused over \$425M in damages. There were also reports of four fatalities and nine injuries. **Table 5.22** summarizes this information. Detailed thunderstorm and high wind event reports including date, magnitude, and associated damages for each event are presented in the jurisdiction-specific annexes.

TABLE 5.22: SUMMARY OF THUNDERSTORM / HIGH WIND OCCURRENCES IN THE MEMA DISTRICT 8 REGION

Location	Number of Occurrences	Deaths / Injuries	Property Damage (2013)
Covington County	191	0/0	\$3,199,067
Collins	50	0/0	\$1,017,872
Mount Olive	20	0/0	\$442,317
Seminary	19	0/0	\$213,420
Unincorporated Area	102	0/0	\$1,029,141
Jefferson Davis County	170	0/0	\$2,205,513
Bassfield	29	0/0	\$309,589
Prentiss	52	0/0	\$583,390
Unincorporated Area	89	0/0	\$1,312,534
Jones County	397	4/3	\$7,554,192
Ellisville	31	0/0	\$756,008
Laurel	79	2/1	\$2,054,391
Sandersville	26	0/0	\$1,332,184
Soso	16	0/0	\$148,985
Unincorporated Area	245	2/1	\$3,252,624
Marion County	176	0/1	\$3,005,059
Columbia	68	0/0	\$1,360,465
Unincorporated Area	108	0/1	\$1,677,594
Perry County	87	0/0	\$2,125,045
Beaumont	10	0/0	\$69,388
New Augusta	18	0/0	\$197,899
Richton	18	0/0	\$203,767
Unincorporated Area	41	0/0	\$1,653,991
Wayne County	97	0/7	\$752,732
State Line	7	0/0	\$67,209
Waynesboro	24	0/0	\$216,918
Unincorporated Area	66	0/7	\$321,605

¹²Not all of the participating counties were declared disaster areas for these storms. A complete listing of historical disaster declarations, including the affected counties, can be found in Section 4: Hazard Identification.

¹³ These thunderstorm events are only inclusive of those reported by the National Centers for Environmental Information (NCEI). It is likely that additional thunderstorm events have occurred in the MEMA District 8 Region. As additional local data becomes available, this hazard profile will be amended.

Location	Number of Occurrences	Deaths / Injuries	Property Damage (2013)
Forrest County	476	5/48	\$11,192,700
Hattiesburg	163	3/46	\$7,567,500
Petal	54	1/0	\$803,500
Unincorporated Area	259	1/2	\$2,821,700
MEMA DISTRICT 8 REGION TOTAL	1,360	9/57	\$425,773,491

Source: National Centers for Environmental Information

HAILSTORM

According to the National Centers for Environmental Information, 675 recorded hailstorm events have affected the MEMA District 8 Region since 1962.¹⁴ **Table 5.23** is a summary of the hail events in the MEMA District 8 Region. Detailed information about each event that occurred in the region is provided in the jurisdiction-specific annexes. In all, hail occurrences resulted in over \$12.3M in property damages, the majority of which were reported in Jones and Marion County. Hail ranged in diameter from 0.5 inches to 4.5 inches. It should be noted that hail is notorious for causing substantial damage to cars, roofs, and other areas of the built environment that may not be reported to the National Centers for Environmental Information. Furthermore, high losses in Jones and Marion County indicate that neighboring counties may also be subject to additional, unreported losses. Therefore, it is likely that damages are greater than the reported value. Additionally, a single storm event may have affected multiple counties.

TABLE 5.23: SUMMARY OF HAIL OCCURRENCES IN THE MEMA DISTRICT 8 REGION

Location	Number of Occurrences	Deaths / Injuries	Property Damage (2013)
Covington County	61	0/0	\$438,622
Collins	10	0/0	\$42,397
Mount Olive	12	0/0	\$40,118
Seminary	12	0/0	\$283,360
Unincorporated Area	27	0/0	\$72,747
Jefferson Davis County	78	0/0	\$604,108
Bassfield	21	0/0	\$90,140
Prentiss	17	0/0	\$145,178
Unincorporated Area	40	0/0	\$368,790
Jones County	188	0/0	\$1,154,554
Ellisville	16	0/0	\$20,855
Laurel	48	0/0	\$47,409
Sandersville	11	0/0	\$1,537
Soso	8	0/0	\$1,051,231
Unincorporated Area	105	0/0	\$33,522

¹⁴ These hail events are only inclusive of those reported by the National Centers for Environmental Information (NCEI). It is likely that additional hail events have affected the MEMA District 8 Region. As additional local data becomes available, this hazard profile will be amended.

Location	Number of Occurrences	Deaths / Injuries	Property Damage (2013)
Marion County	124	0/0	\$1,467,543
Columbia	39	0/0	\$506,316
Unincorporated Area	85	0/0	\$961,227
Perry County	41	0/0	\$24,356
Beaumont	7	0/0	\$3,800
New Augusta	6	0/0	\$15,489
Richton	11	0/0	\$5,067
Unincorporated Area	17	0/0	\$0
Wayne County	55	0/0	\$16,573
State Line	2	0/0	\$0
Waynesboro	11	0/0	\$1,180
Unincorporated Area	42	0/0	\$15,393
Forrest County	166	0/0	\$5,985,000
Hattiesburg	60	0/0	\$5,031,000
Petal	21	0/0	\$26,000
Unincorporated Area	85	0/0	\$928,000
MEMA DISTRICT 8 REGION TOTAL	675	0/0	\$12,330,212

Source: National Centers for Environmental Information

LIGHTNING

According to the National Centers for Environmental Information, there have been a total of 37 recorded lightning events in the MEMA District 8 Region since 1995.¹⁵ These events resulted in over \$1.8M in damages, as listed in summary **Table 5.24**. Furthermore, lightning has caused three injuries in the MEMA District 8 Region. Detailed information on historical lightning events can be found in the jurisdiction-specific annexes.

TABLE 5.24: SUMMARY OF LIGHTNING OCCURRENCES IN THE MEMA DISTRICT 8 REGION

Location	Number of Occurrences	Deaths / Injuries	Property Damage (2013)
Covington County	3	0/0	\$40,000
Collins	0	0/0	\$0
Mount Olive	0	0/0	\$0
Seminary	1	0/0	\$15,000
Unincorporated Area	2	0/0	\$25,000
Jefferson Davis County	5	0/0	\$431,396
Bassfield	1	0/0	\$380,031
Prentiss	2	0/0	\$16,365
Unincorporated Area	2	0/0	\$35,000
Jones County	15	0/2	\$651,993
Ellisville	1	0/0	\$25,750

¹⁵ These lightning events are only inclusive of those reported by the National Centers for Environmental Information (NCEI). It is likely that additional lightning events have occurred in the MEMA District 8 Region. As additional local data becomes available, this hazard profile will be amended.

Location	Number of Occurrences	Deaths / Injuries	Property Damage (2013)
Laurel	4	0/0	\$117,850
Sandersville	0	0/0	\$0
Soso	0	0/0	\$0
Unincorporated Area	10	0/2	\$508,393
Marion County	1	0/0	\$200,000
Columbia	1	0/0	\$200,000
Unincorporated Area	0	0/0	\$0
Perry County	1	0/0	\$60,000
Beaumont	0	0/0	\$0
New Augusta	0	0/0	\$0
Richton	1	0/0	\$60,000
Unincorporated Area	0	0/0	\$0
Wayne County	5	0/2	\$135,618
State Line	0	0/0	\$0
Waynesboro	5	0/2	\$135,618
Unincorporated Area	0	0/0	\$0
Forrest County	22	2/1	\$1,165,000
Hattiesburg	6	1/0	\$252,000
Petal	7	1/0	\$415,000
Unincorporated Area	9	0/1	\$498,000
MEMA DISTRICT 8 REGION TOTAL	37	4/4	\$1,884,007

Source: National Centers for Environmental Information

5.13.4 Probability of Future Occurrences

THUNDERSTORM / HIGH WIND

Given the high number of previous events, it is certain that thunderstorm events, including straight-line wind events, will occur in the future. This results in a probability level of highly likely (100 percent annual probability) for the entire planning area.

HAILSTORM

Based on historical occurrence information, it is assumed that the probability of future hail occurrences is likely (10 – 100 percent annual probability). Since hail is an atmospheric hazard, it is assumed that the entire MEMA District 8 Region has equal exposure to this hazard. It can be expected that future hail events will continue to cause minor damage to property and vehicles throughout the region.

LIGHTNING

Although there was not a high number of historical lightning events reported throughout the MEMA District 8 Region via NCEI data, it is a regular occurrence accompanied by thunderstorms. In fact, lightning events will assuredly happen on an annual basis, though all events will not cause damage. According to Vaisala's U.S. National Lightning Detection Network (NLDN®), the MEMA District 8 Region is located in an area of the country that experienced an average of 6 to 8 lightning flashes per square

kilometer per year between 1997 and 2010. Therefore, the probability of future events is highly likely (100 percent annual probability). It can be expected that future lightning events will continue to threaten life and cause minor property damages throughout the region.

5.14 TORNADO

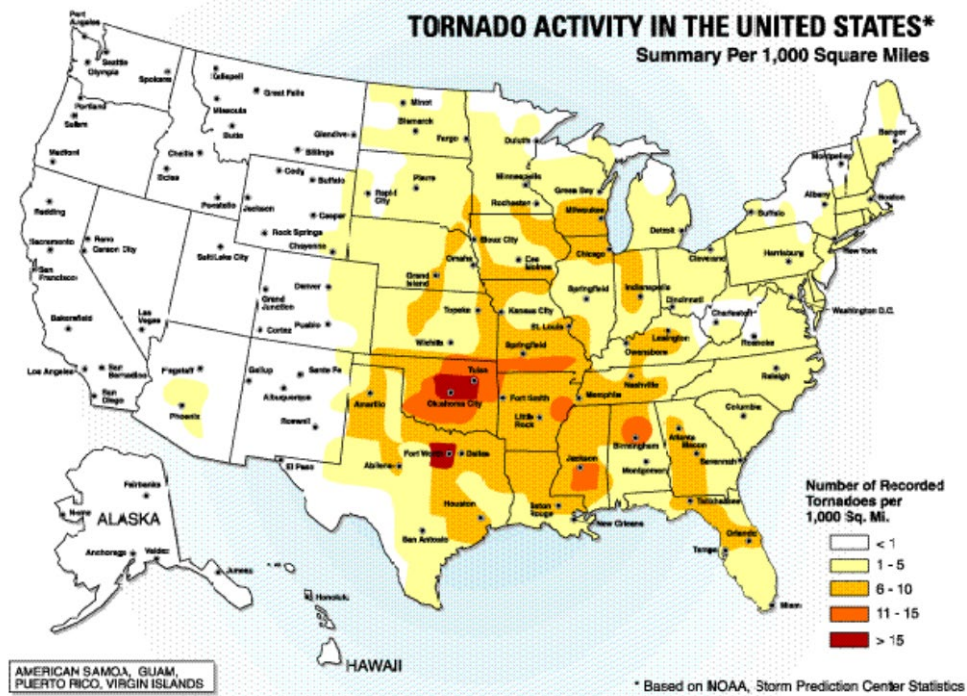
5.14.1 Background

A tornado is a violent windstorm characterized by a twisting, funnel-shaped cloud extending to the ground. Tornadoes are most often generated by thunderstorm activity (but sometimes result from hurricanes and other tropical storms) when cool, dry air intersects and overrides a layer of warm, moist air forcing the warm air to rise rapidly. The damage caused by a tornado is a result of the high wind velocity and wind-blown debris, also accompanied by lightning or large hail. According to the National Weather Service, tornado wind speeds normally range from 40 miles per hour to more than 300 miles per hour. The most violent tornadoes have rotating winds of 250 miles per hour or more and are capable of causing extreme destruction and turning normally harmless objects into deadly missiles.

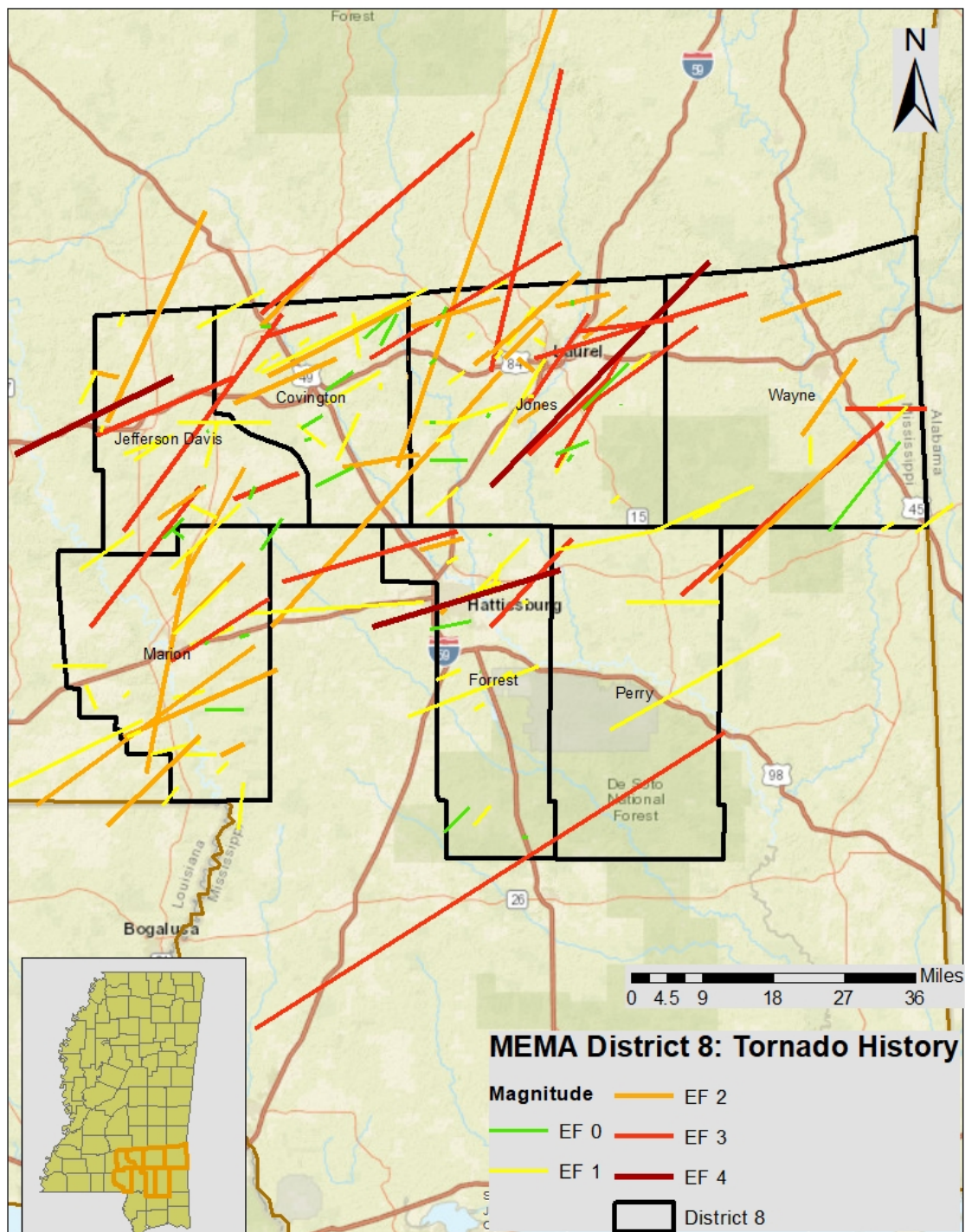
Each year, an average of over 1,253 tornadoes is reported nationwide¹⁶ According to the NOAA Storm Prediction Center (SPC), the highest concentration of tornadoes in the United States has been in Oklahoma, Texas, Kansas, and Florida respectively. Although the Great Plains region of the Central United States does favor the development of the largest and most dangerous tornadoes (earning the designation of “tornado alley”), Florida experiences the greatest number of tornadoes per square mile of all U.S. states (SPC, 2002). **Figure 5.15** shows tornado activity in the United States based on the number of recorded tornadoes per 1,000 square miles.

¹⁶ NOAA, 2019.

FIGURE 5.18: TORNADO ACTIVITY IN THE UNITED STATES



Source: Federal Emergency Management Agency

FIGURE 5.19: TORNADO HISTORY MEMA DISTRICT 8 REGION

Source: NOAA

Tornadoes are more likely to occur during the months of March through May and are most likely to form in the late afternoon and early evening. Most tornadoes are a few dozen yards wide and touch down briefly, but even small short-lived tornadoes can inflict tremendous damage. Highly destructive tornadoes may carve out a path over a mile wide and several miles long.

The destruction caused by tornadoes ranges from light to inconceivable depending on the intensity, size, and duration of the storm. Typically, tornadoes cause the greatest damage to structures of light construction, including residential dwellings (particularly mobile homes). Tornadic magnitude is reported according to the Fujita and Enhanced Fujita Scales. Tornado magnitudes prior to 2005 were determined using the traditional version of the Fujita Scale (**Table 5.25**). Tornado magnitudes that were determined in 2005 and later were determined using the Enhanced Fujita Scale (**Table 5.26**).

TABLE 5.25: THE FUJITA SCALE (EFFECTIVE PRIOR TO 2005)

F-SCALE NUMBER	INTENSITY	WIND SPEED	TYPE OF DAMAGE DONE
F0	GALE TORNADO	40–72 MPH	Some damage to chimneys; breaks branches off trees; pushes over shallow-rooted trees; damages to sign boards.
F1	MODERATE TORNADO	73–112 MPH	The lower limit is the beginning of hurricane wind speed; peels surface off roofs; mobile homes pushed off foundations or overturned; moving autos pushed off the roads; attached garages may be destroyed.
F2	SIGNIFICANT TORNADO	113–157 MPH	Considerable damage. Roofs torn off frame houses; mobile homes demolished; boxcars pushed over; large trees snapped or uprooted; light object missiles generated.
F3	SEVERE TORNADO	158–206 MPH	Roof and some walls torn off well-constructed houses; trains overturned; most trees in forest uprooted.
F4	DEVASTATING TORNADO	207–260 MPH	Well-constructed houses leveled; structures with weak foundations blown off some distance; cars thrown and large missiles generated.
F5	INCREDIBLE TORNADO	261–318 MPH	Strong frame houses lifted off foundations and carried considerable distances to disintegrate; automobile sized missiles fly through the air in excess of 100 meters; trees debarked; steel re-enforced concrete structures badly damaged.
F6	INCONCEIVABLE TORNADO	319–379 MPH	These winds are very unlikely. The small area of damage they might produce would probably not be recognizable along with the mess produced by F4 and F5 wind that would surround the F6 winds. Missiles, such as cars and refrigerators would do serious secondary damage that could not be directly identified as F6 damage. If this level is ever achieved, evidence for it might only be found in some manner of ground swirl pattern, for it may never be identifiable through engineering studies.

Source: National Weather Service

TABLE 5.26 THE ENHANCED FUJITA SCALE (EFFECTIVE 2005 AND LATER)

EF-SCALE NUMBER	INTENSITY PHRASE	3 SECOND GUST (MPH)	TYPE OF DAMAGE DONE
EF0	GALE	65–85	Some damage to chimneys; breaks branches off trees; pushes over shallow-rooted trees; damages to sign boards.
EF1	MODERATE	86–110	The lower limit is the beginning of hurricane wind speed; peels surface off roofs; mobile homes pushed off foundations or overturned; moving autos pushed off the roads; attached garages may be destroyed.
EF2	SIGNIFICANT	111–135	Considerable damage. Roofs torn off frame houses; mobile homes demolished; boxcars pushed over; large trees snapped or uprooted; light object missiles generated.
EF3	SEVERE	136–165	Roof and some walls torn off well-constructed houses; trains overturned; most trees in forest uprooted.
EF4	DEVASTATING	166–200	Well-constructed houses leveled; structures with weak foundations blown off some distance; cars thrown and large missiles generated.
EF5	INCREDIBLE	Over 200	Strong frame houses lifted off foundations and carried considerable distances to disintegrate; automobile sized missiles fly through the air in excess of 100 meters; trees debarked; steel re-enforced concrete structures badly damaged.

Source: National Weather Service

5.14.2 Location and Spatial Extent

Tornadoes occur throughout the state of Mississippi, and thus the MEMA District 8 Region. Tornadoes typically impact a relatively small area, but damage may be extensive. Event locations are completely random, and it is not possible to predict specific areas that are more susceptible to tornado strikes over time. Therefore, it is assumed that the MEMA District 8 Region is uniformly exposed to this hazard.

5.14.3 Historical Occurrences

Tornadoes resulted in 14 disaster declarations in the MEMA District 8 Region between 1973 and 2019.¹⁷ According to the National Centers for Environmental Information, there have been a total of 243 recorded tornado events in the MEMA District 8 Region since 1950 (**Table 5.27**), resulting in almost \$211M in property damages.¹⁸ In addition, 18 fatalities and 788 injuries were reported. The magnitude of these tornadoes ranges from F0 to F4 in intensity, although an F5 event is possible. Detailed information on historical tornado events can be found in the jurisdiction-specific annexes.

¹⁷Not all of the participating counties were declared disaster areas for these storms. A complete listing of historical disaster declarations, including the affected counties, can be found in Section 4: Hazard Identification.

¹⁸ These tornado events are only inclusive of those reported by the National Centers for Environmental Information (NCEI). It is likely that additional tornadoes have occurred in the MEMA District 8 Region. As additional local data becomes available, this hazard profile will be amended.

TABLE 5.27: SUMMARY OF TORNADO OCCURRENCES IN THE MEMA DISTRICT 8 REGION

Location	Number of Occurrences	Deaths / Injuries	Property Damage
Covington County	46	0/123	\$58,710,702
Collins	7	0/0	\$2,227,644
Mount Olive	5	0/0	\$208,984
Seminary	2	0/0	\$102,688
Unincorporated Area	32	0/132	\$56,171,386
Jefferson Davis County	27	0/11	\$9,340,538
Bassfield	6	0/0	\$987,816
Prentiss	2	0/0	\$39,144
Unincorporated Area	19	0/11	\$8,313,578
Jones County	62	11/478	\$194,246,349
Ellisville	5	0/0	\$56,868
Laurel	5	0/0	\$12,745,780
Sandersville	0	0/0	\$0
Soso	2	0/0	\$212,541
Unincorporated Area	52	11/478	\$181,231,160
Marion County	35	3/63	\$34,664,606
Columbia	9	3/50	\$26,179,455
Unincorporated Area	26	0/13	\$8,485,151
Perry County	17	2/24	\$4,492,368
Beaumont	1	0/0	\$11,074
New Augusta	2	0/0	\$80,456
Richton	0	0/0	\$0
Unincorporated Area	14	2/24	\$4,400,838
Wayne County	22	2/0	\$61,670,052
State Line	4	0/0	\$117,133
Waynesboro	2	0/0	\$31,720
Unincorporated Area	16	2/0	\$61,521,199
Forrest County	34	0/79	\$35,459,000
Hattiesburg	7	0/68	\$31,152,000
Petal	1	0/0	\$200,000
Unincorporated Area	26	0/11	\$4,107,000
MEMA DISTRICT 8 REGION TOTAL	243	18/778	\$398,583,615

Source: National Centers for Environmental Information

There have been several significant tornado events in the MEMA District 8 Region. The text below describes one of the major events and associated impacts on the region.

Jones County — On February 28, 1987, a 1.25 mile-wide F4 tornado in Glade (unincorporated Jones County) was recorded as the second widest tornado on record in Mississippi. This tornado resulted in 6 deaths, 250 injuries, and \$55,563,194 in damages.

Marion County- On December 23, 2014, a tornado first touched down just east of Pearl River just south of Columbia. It quickly became strong and moved northeast impacting the southeast side of Columbia. The tornado remained on the ground through Marion County before lifting as it approached the Lamar County line. Numerous business, homes, mobile homes, a Nation Guard building, and power poles / lines were heavily damaged or destroyed. There were three deaths as a direct result of the tornado.

Forrest County- On January 21, 2017, an early morning event impacted areas south of I-20 in Mississippi. Most notably, an EF-3 tornado tracked through Lamar and Forrest counties, killing four people in Hattiesburg and injuring over 50 others. In addition, damaging winds, large hail, and flash flooding occurred in other areas across south Mississippi. The evening event impacted a larger portion of the ArkLaMiss, and brought wind damage as well as large hail and a strong tornado.

5.14.4 Probability of Future Occurrences

According to historical information, tornado events pose a significant threat to the MEMA District 8 Region. The probability of future tornado occurrences affecting MEMA District 8 Region is likely (10 – 100 percent annual probability).

OTHER HAZARDS

5.15 HAZARDOUS MATERIALS INCIDENTS

5.15.1 Background

HAZARDOUS MATERIALS

Hazardous materials can be found in many forms and quantities that can potentially cause death; serious injury; long-lasting health effects; and damage to buildings, homes, and other property in varying degrees. Such materials are routinely used and stored in many homes and businesses and are also shipped daily on the nation's highways, railroads, waterways, and pipelines. This subsection on the hazardous material hazard is intended to provide a general overview of the hazard, and the threshold for identifying fixed and mobile sources of hazardous materials is limited to general information on rail, highway, and fixed HAZMAT sites under the Toxic Release Inventory determined to be of greatest significance as appropriate for the purposes of this plan.

Hazardous material (HAZMAT) incidents can apply to fixed facilities as well as mobile, transportation-related accidents in the air, by rail, on the nation's highways, and on the water. Approximately 6,774 HAZMAT events occur each year, 5,517 of which are highway incidents, 991 are railroad incidents, and 266 are due to other causes.¹⁹ In essence, HAZMAT incidents consist of solid, liquid, and/or gaseous contaminants that are released from fixed or mobile containers, whether by accident or by design as with an intentional terrorist attack. A HAZMAT incident can last hours to days, while some chemicals can be corrosive or otherwise damaging over longer periods of time. In addition to the primary release, explosions and/or fires can result from a release, and contaminants can be extended beyond the initial area by persons, vehicles, water, wind, and possibly wildlife as well.

¹⁹ FEMA, 1997.

Hazardous material incidents can include the spilling, leaking, pumping, pouring, emitting, emptying, discharging, injecting, escaping, leaching, dumping, or disposing into the environment of a hazardous material, but exclude: (1) any release which results in exposure to poisons solely within the workplace with respect to claims which such persons may assert against the employer of such persons; (2) emissions from the engine exhaust of a motor vehicle, rolling stock, aircraft, vessel or pipeline pumping station engine; (3) release of source, byproduct, or special nuclear material from a nuclear incident; and (4) the normal application of fertilizer.

PIPELINES

Pipelines in the United States are used to transport and distribute a number of products from their extraction point to sites where those materials are utilized throughout the country. Pipelines are most commonly used to transport energy sources such as natural gas and petroleum products but are also often used in the transportation of other hazardous liquids. Transportation of these products via pipeline is abundant in the United States due to the cost-effectiveness of the process which allows quick movement with relatively minimal cost.

Generally, pipelines are safe and effective, transporting materials where they are needed without incident. However, many pipelines in the United States were installed over 60 years ago and were made with materials such as cast and wrought iron or bare steel which degrade over time. This presents a definitive danger to people and property as a leak or spill of hazardous products from a degraded pipeline could prove disastrous, causing costly damage to property and injury or death.

As a result, there has been a recent movement to replace many of these older pipelines with newer materials such as plastics that can reduce the risk of a pipeline failure and a hazard incident. In 2011, the Pipeline Safety, Regulatory Certainty, and Job Creation Act was passed and called for the US Department of Transportation to conduct a state by state survey of pipelines and accelerate repairs of aging infrastructure.

In Mississippi, the regulatory authority for pipelines is shared by the US Office of Pipeline Safety (OPS) and the Mississippi Public Service Commission (MPSC). In 2011, the MPSC corrected 273 natural gas pipeline violations and found no hazardous liquid violations.²⁰

METH LABS

Methamphetamine, or meth, is a highly addictive drug that is affecting a rapidly growing sector of the US population. Many sources identify meth as the fastest growing drug epidemic in the country and it is dangerous not only to those who use it, but to a large number of people who are impacted incidentally by the production process.

In terms of Emergency Management, one of the primary dangers of meth labs is that the process of producing meth is a chemical one that requires super heating products that can cause explosions if not monitored and maintained properly. This is especially concerning since, as the National Institute on Drug Abuse reports, the relative simplicity of the process results in the product being manufactured by people

²⁰ Mississippi Enforcement Program, 2011
(http://primis.phmsa.dot.gov/comm/reports/stenforce/StateEnfDet_state_MS.html?nocache=6913&nocache=1411)

who are non-skilled in chemistry or advanced science, increasing the chances of production errors and explosive fires.

One of the most dangerous aspects of methamphetamine production is that, because the product is illegal, most production operations are clandestine and are purposefully difficult for authorities to identify. This presents a challenge because unlike other hazardous materials, there is no way to regulate or track meth lab location or size. Often, a meth lab is not identified until an incident has already taken place, causing an increased danger to responders and citizens alike.

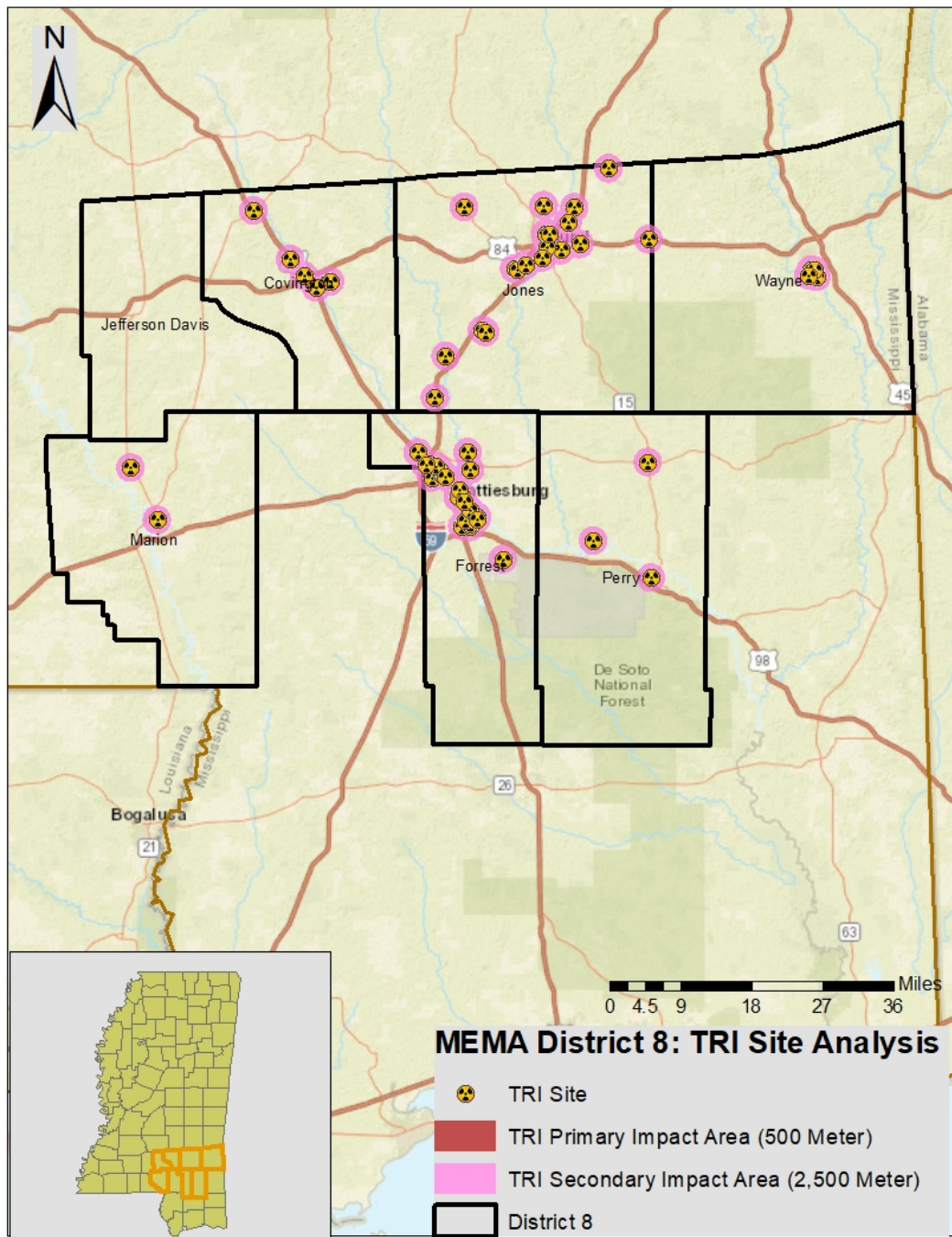
Furthermore, an increased danger results from the fact that, unlike a typical structural fire, the chemicals involved in meth production can create explosions and the release of toxic chemical gases which present additional risk of harm to anyone in the vicinity. Exposure to these chemicals can cause anything from eye/skin irritation to long term respiratory diseases.

Recently there has been an increased emphasis on training first responders to recognize the signs of meth labs and act accordingly. However, the potential consequences of a meth lab incident combined with the challenge of identifying these sites presents a real risk to communities and is a hazard that local emergency managers should recognize.

5.15.2 Location and Spatial Extent

HAZARDOUS MATERIALS

As a result of the 1986 Emergency Planning and Community Right to Know Act (EPCRA), the Environmental Protection Agency provides public information on hazardous materials. One facet of this program is to collect information from industrial facilities on the releases and transfers of certain toxic agents. This information is then reported in the Toxic Release Inventory (TRI). TRI sites indicate where such activity is occurring. The MEMA District 8 Region has numerous TRI sites. These sites are shown in **Figure 5.16**.

FIGURE 5.20: TOXIC RELEASE INVENTORY (TRI) SITES IN THE MEMA DISTRICT 8 REGION

Source: EPA

In addition to “fixed” hazardous materials locations, hazardous materials may also impact the region via roadways and rail. Many roads in the region are narrow, making hazardous material transport in the area especially treacherous. All roads that permit hazardous material transport are considered potentially at risk to an incident.

PIPELINES

Pipelines exist throughout the state of Mississippi and throughout the MEMA District 8 Region. Across the state, there are over 3,400 miles of hazardous liquid line, 10,600 miles of gas transmission lines, and 15,700 miles of gas distribution lines. In the MEMA District 8 Region, there are 1,248 miles of gas lines and 822 miles of hazardous liquid lines. For more specific description of the location of pipelines in the MEMA District 8 region, please see the maps located in the respective county annexes of this plan.

METH LABS

As mentioned above, one of the greatest concerns about meth labs is that they are clandestine in nature. Additionally, once a meth lab has been identified, police authorities generally attempt to eliminate the site as quickly as possible. Therefore, it is nearly impossible to identify specific locations for meth labs and instead, the entire planning area is considered to be at risk to this hazard.

5.15.3 Historical Occurrences

HAZARDOUS MATERIALS

The U.S. Department of Transportation Pipeline and Hazardous Materials Safety Administration (PHMSA) lists historical occurrences throughout the nation. A “serious incident” is a hazardous materials incident that involves:

- ❖ a fatality or major injury caused by the release of a hazardous material,
- ❖ the evacuation of 25 or more persons as a result of release of a hazardous material or exposure to fire,
- ❖ a release or exposure to fire which results in the closure of a major transportation artery,
- ❖ the alteration of an aircraft flight plan or operation,
- ❖ the release of radioactive materials from Type B packaging,
- ❖ the release of over 11.9 galls or 88.2 pounds of a severe marine pollutant, or
- ❖ the release of a bulk quantity (over 199 gallons or 882 pounds) of a hazardous material.

However, prior to 2002, a hazardous material “serious incident” was defined as follows:

- ❖ a fatality or major injury due to a hazardous material,
- ❖ closure of a major transportation artery or facility or evacuation of six or more person due to the presence of hazardous material, or
- ❖ a vehicle accident or derailment resulting in the release of a hazardous material.

Table 5.28 summarizes the HAZAMAT incidents reported in the MEMA District 8 Region. Detailed information on these events is presented in the jurisdiction-specific annexes.

TABLE 5.28: SUMMARY OF HAZMAT INCIDENTS IN THE MEMA DISTRICT 8 REGION

Location	Number of Occurrences	Deaths / Injuries	Property Damage
Covington County	24	1/0	\$19,750
Collins	21	1/0	\$9,650
Mount Olive	3	0/0	\$10,100
Seminary	0	0/0	\$0
Unincorporated Area	0	0/0	\$0
Jefferson Davis County	1	0/0	\$55,300
Bassfield	0	0/0	\$0
Prentiss	1	0/0	\$55,300
Unincorporated Area	0	0/0	\$0
Jones County	54	1/0	\$102,315
Ellisville	2	0/0	\$0
Laurel	37	0/0	\$96,021
Sandersville	4	0/0	\$400
Soso	0	0/0	\$0
Unincorporated Area	11	1/0	\$5,915
Marion County	5	0/1	\$317,999
Columbia	4	0/0	\$340
Unincorporated Area	1	0/1	\$317,659
Perry County	7	0/0	\$0
Beaumont	0	0/0	\$0
New Augusta	5	0/0	\$0
Richton	2	0/0	\$0
Unincorporated Area	0	0/0	\$0
Wayne County	6	0/1	\$4,450
State Line	0	0/0	\$0
Waynesboro	5	0/1	\$400
Unincorporated Area	1	0/0	\$4,050
Forrest County	0	0/0	\$0
Hattiesburg	0	0/0	\$0
Petal	0	0/0	\$0
Unincorporated Area	0	0/0	\$0
MEMA DISTRICT 8 REGION TOTAL	97	2/2	\$499,814

Source: USDOT PHMSA

PIPELINES

Between 2002 and 2019, there have been four pipeline incidents in the MEMA District 8 Region. These incidents are listed in **Table 5.29** below.

TABLE 5.29: SUMMARY OF HAZMAT INCIDENTS IN THE MEMA DISTRICT 8 REGION

Location	Date	Operator	Deaths / Injuries	Property Damage
Columbia	8/4/2004	Gulf South Pipeline Company	0/0	\$106,991
Collins	4/11/2009	Transmontaigne Operating Company	0/0	\$85,904

Location	Date	Operator	Deaths / Injuries	Property Damage
Columbia	9/10/2009	Gulf South Pipeline Company	0/0	\$103,511
Petal	4/22/2003	N/A	0/0	\$55,300
MEMA DISTRICT 8 REGION TOTAL			0/0	\$351,706

Source: USDOT PHMSA

METH LABS

Meth lab incidents have occurred at various times throughout the MEMA District 8 Region. Although there is not an extensive documented record of these events, they have occurred in the past and are generally confined to single sites, often in residential areas.

5.15.4 Probability of Future Occurrence

HAZARDOUS MATERIALS

Given the location of twenty-two toxic release inventory sites in the MEMA District 8 Region and several serious roadway incidents, it is possible that a hazardous material incident may occur in the region, though it is unlikely (less than one percent annual probability). County and town officials are mindful of this possibility and take precautions to prevent such an event from occurring. Furthermore, there are detailed plans in place to respond to an occurrence.

PIPELINES

Since there have been three major pipeline incidents and there are over 2,000 miles of gas and hazardous liquid lines in the region, it is anticipated that there will be future pipeline incidents in the MEMA District 8 Region. However, because the chances of an incident are small relative to the spatial extent of pipelines, the probability is considered to be possible.

METH LABS

Meth lab incidents will likely continue to occur throughout the MEMA District 8 Region. Although it is difficult to predict where exactly these incidents would occur, the probability that they will be possible.

5.16 CYBER TERRORISM

A cyber-attack is a malicious, intentional attempt to breach the information technology (IT) infrastructure of an individual or organization. The State of Mississippi defines a cyberterrorism incident as any adverse premeditated, politically, financially or maliciously motivated attack against informational systems. A cyberterrorism event can impact one or more of the State and its counties', corresponding departments' and divisions' information assets by the following ways, which includes, but are not limited to, the following:

- Unauthorized use
- Denial of Service

- Malicious code
- Network system failures
- Application system failures
- Unauthorized disclosure or loss of information
- Information security breach
- Structured Query Language (SQL) Injection

Incidents can be the result of any of the following:

- Intentional and unintentional acts
- Actions of employees
- Actions of vendors or constituents
- Actions of third parties
- External or internal acts
- Credit card fraud
- Potential policy violations
- Natural disasters and power failures
- Acts related to violence, warfare or terrorism
- Serious wrongdoing

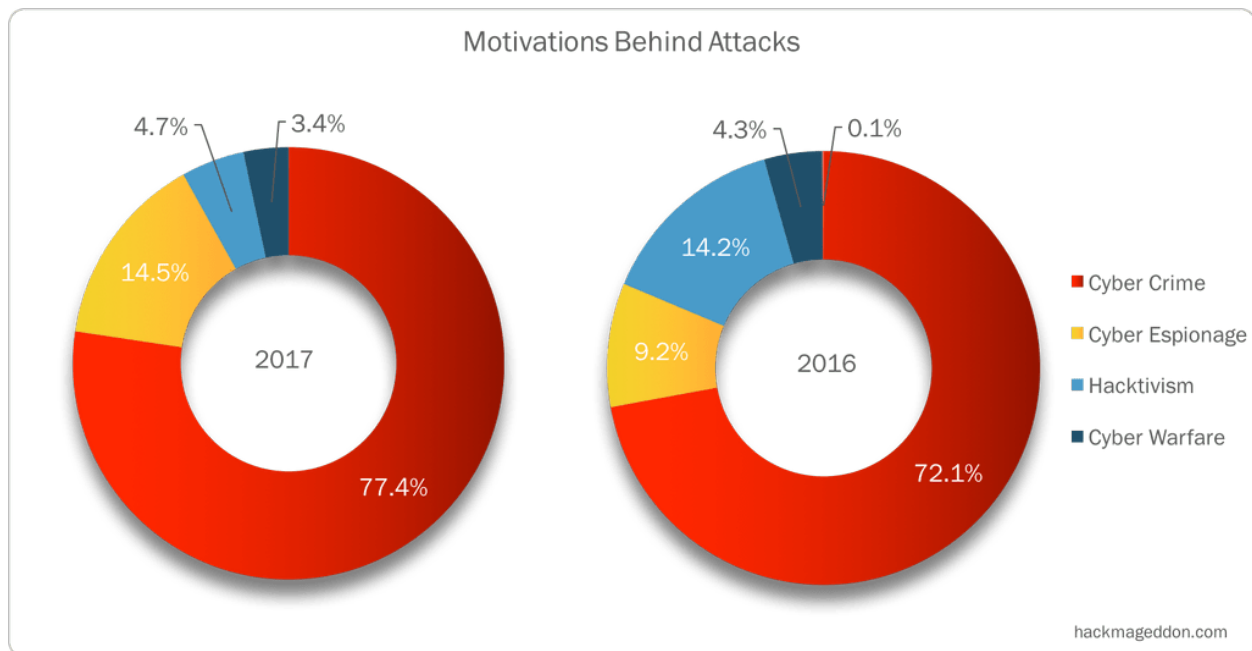
The motives behind cyberterrorism attacks can vary. However, according to Hackmageddon, a comprehensive website that catalogs cyber-attacks through timelines and statistics, the top four motives in 2017 are listed in the table below.

TABLE 5.30: TOP 4 MOTIVES FOR CYBERTERRORISM

Motives	Definitions
Cyber Crime	Crime that involves or carried out by a computer and a network. The computer may have been used in the commission of a crime, or it may be the target.
Cyber Espionage	The act or practice of obtaining secrets and information without the permission and knowledge of the holder of the information from individuals, competitors, rivals, groups, governments and enemies for personal, economic, political or military advantage using methods on the Internet, networks or individual computers through the use of proxy servers, cracking techniques and malicious software including Trojan horses and spyware.
Hactivism	Refers to the use of computers and any other IT system and network to debate and sustain a political issue, promote free speech, and support human rights. Hactivism is mainly interpreted by society as the transposition of the protest and the civil disobedience into cyberspace.
Cyber Warfare	Actions by a nation-state to penetrate another nation's computers or networks for the purposes of causing damage or disruption.

The figure below, Figure 3.21 describes the differences between 2016 and 2017. According to research, Cyber Crime confirmed its crown from 2016 into 2017 with a similar percentage 77.4% versus 72.1% in 2016. Hactivism events fell down to 4.3% in 2017, from 14.2% in 2016. Cyber Espionage had an opposite trend, soaring to 14.5% from 4.3%. Cyber Warfare reported a slight decrease to 3.4% in 2017 from 4.3% in 2016.

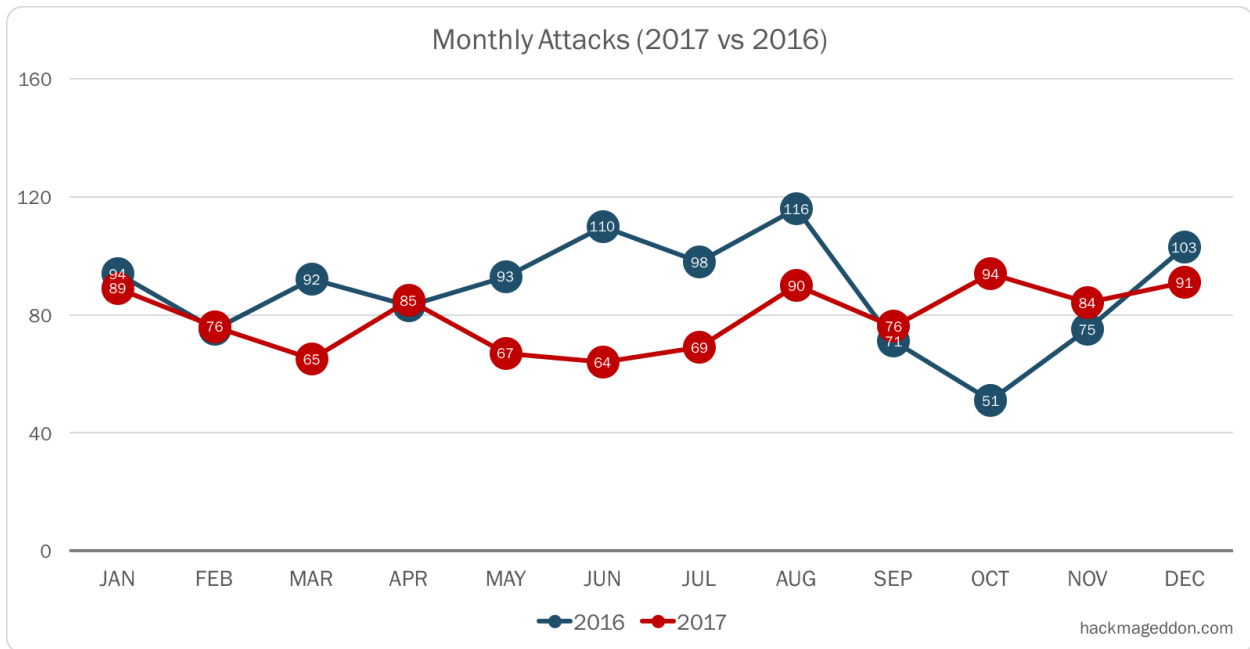
FIGURE 3.21: TOP 4 MOTIVES FOR CYBERTERRORISM



According to Hackmageddon, in comparison to 1,061 events collected in 2016, 950 events were collected in 2017, which is approximately a 10% decrease. Despite a minor number of events being recorded, 2017 was characterized by large scale attacks like WannaCry. WannaCry is a ransomware cryptoworm, which targeted computers running the Microsoft Windows operating system by encrypting data and demanding ransom payments in the Bitcoin cryptocurrency. It is considered a network worm because it also includes a "transport" mechanism to automatically spread itself. The ransomware encrypting files required victims to pay anywhere from \$300 - \$600 to recover their documents. This attack affected over 200,000 victims and over 300,000 computers were infected.

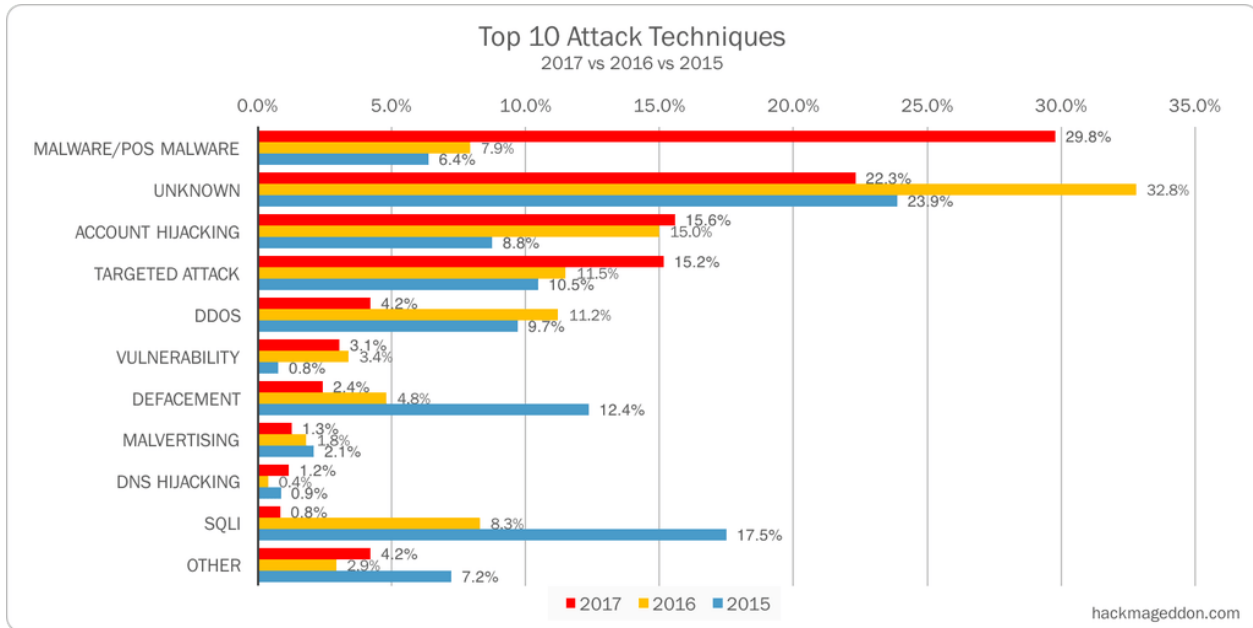
The **Monthly Attacks** chart shows that the level of activity has been generally lower in 2017 in comparison with 2017, with the exception of October.

FIGURE 3-22: MONTHLY ATTACKS



The type of cyberterrorism attacks varies. Hackmageddon recognizes at least 10 different kinds. As the figure below demonstrates, 2017 has been the year of Malware. Account hijackings were essentially in line with the findings of 2016 where typically vulnerabilities were exploited. Targeted attacks rose to 15.2% and Hacktivism fell continuously. The potential reason for this may be the increasing emergence of cyber- attacks through ransomware, which implements Distributed Denial of Service (DDOS) and Structured Query Language injection (SQLi). A DDOS attack is an attempt to make a machine or network resource unavailable to its intended users, such as to temporarily or indefinitely interrupt or suspend services of a host connected to the Internet. SQLi is a common attack vector that uses malicious SQL code for backend database manipulation to access information that was not intended to be displayed. This information may include any number of items, including sensitive company data, user lists or private customer details.

FIGURE 3-23: TOP 10 ATTACK TECHNIQUES



Source: *Hackmageddon.com*

5.16.2 Location and Spatial Extent

The cyberterrorism hazard is not geography-based. Attacks can originate from any computer to affect any other computer in the world. If a system is connected to the Internet or operating on a wireless frequency, it is susceptible to exploitation. Targets of cyberterrorism can be individual computers, networks, organizations, business sectors, or governments. Financial institutions and retailers are often targeted to extract personal and financial data that can be used to steal money from individuals and banks.

When a cyber security incident occurs, the State of Mississippi uses the following factors to evaluate its severity:

- Nature of the attack
- Criticality of systems that are (or could be) made unavailable
- Value of the information compromised (if any)
- Number of people, agencies, or functions impacted
- Business considerations
- Public relations
- Effects on the State's entire IT enterprise

Cyberterrorism may range from the infection of a single machine by a common computer virus to a large-scale, organized incident that cripples an organization or infrastructure.

5.16.3 Historical Occurrences

Even there have been no disruption of services within State government, Mississippi is no stranger to similar types of cyberterrorism attacks. In 2017, a Lebanese national executed a distributed denial of

service (DDOS) attack on a Ridgeland business. The hacker utilized a computer in Lebanon to extort payments from the Ridgeland business while conducting computer attacks to interfere with its computer business and operations. This type of act is considered a denial-of-service attack, where an attacker attempts to prevent legitimate users from accessing information or services, preventing one from accessing email, websites, online accounts (banking, etc.), or other services that rely on the affected computer.

Even as this plan is being updated, the City of Atlanta has been held hostage by a ransomware attack for 6-days and counting. So far, the hackers are asking \$51,000 in Bitcoin to unlock the city's systems. Luckily, emergency services such as 911 calls and control of wastewater treatment have been exempt from the attack.

To date, most experts believe this one of the most sustained, coordinated and consequential cyberterrorism attacks ever mounted against a major American city. The assault on Atlanta, the core of a metropolitan area of about 6 million people, represented a serious escalation from other recent cyberattacks on American cities, like the one last year in Dallas where hackers gained the ability to set off tornado sirens in the middle of the night.

Actions are taken by the Department of Information Technology Services to mitigate security risks presented by, for example, blocking IP address ranges, identifying vulnerable servers, performing scans as necessary, opening Help Desk tickets to scan/check machines, etc. Losses can include loss of productivity, financial theft, and the exposure of secure information. To date, no specific losses from cyberterrorism that have affected the State are available.

5.16.4 Probability of Future Occurrences

As is the case for any large governmental organization, the State of Mississippi will continue to be impacted and compelled to respond to cyberterrorisms in the future. The nature of these attacks is projected to evolve in sophistication over time. The State has taken a proactive position in its cyber security efforts and is expected to remain vigilant in its efforts to prevent attacks from occurring and/or disrupting business operations. The reality remains that many computers and networks in organizations of all sizes and industries around the United States will continue to suffer intrusion attempts on a daily basis from viruses and malware that are passed through web sites and emails.

5.17 CONCLUSIONS ON HAZARD RISK

The hazard profiles presented in this section were developed using best available data and result in what may be considered principally a qualitative assessment as recommended by FEMA in its "How-to" guidance document titled *Understanding Your Risks: Identifying Hazards and Estimating Losses* (FEMA Publication 386-2). It relies heavily on historical and anecdotal data, stakeholder input, and professional and experienced judgment regarding observed and/or anticipated hazard impacts. It also carefully considers the findings in other relevant plans, studies, and technical reports.

5.17.1 Hazard Extent

Table 5.31 describes the extent of each natural hazard identified for the MEMA District 8 Region. The extent of a hazard is defined as its severity or magnitude, as it relates to the planning area.

TABLE 5.31: EXTENT OF MEMA DISTRICT 8 REGION HAZARDS

Flood-related Hazards				
Flood	Flood extent can be measured by the amount of land and property in the floodplain as well as flood height and velocity.			
	Flood depth and velocity are recorded via United States Geological Survey stream gages throughout the region. While a gage does not exist for each participating jurisdiction, there is one at or near many areas. The greatest peak discharge recorded for the region was in Columbia in Marion County in 1874. Water reached a discharge of 165,000 cubic feet per second and the stream gage height was recorded at 31.00 feet. Additional peak discharge readings and gage heights are in the table below.			
	Jurisdiction	Date	Peak Discharge (cfs)	Gage Height (ft)
	Covington County			
	Leaf River near Collins	April 1856	56,000	33.00
	Okatoma Cr Trib at Mount Olive	4/13/1974	318	6.21
	Seminary	--	--	--
	Jefferson Davis County			
	Bassfield	--	--	--
	Goines Draw near Prentiss	4/12/1974	610	9.10
	Jones County			
	Ellisville	--	--	--
	Tallahala Creek at Laurel	12/9/1919	38,300	26.00
	Sandersville	--	--	--
	Soso	--	--	--
	Marion County			
	Pearl River near Columbia	1874	165,000	31.00
	Perry County			
	Leaf River at Beaumont	1900	150,000	34.00
	Leaf River near New Augusta	1900	120,000	36.00
	Thompson Creek at Richton	3/3/2001	10,900	16.63
	Wayne County			
	State Line	--	--	--
	Chickasawhay River near Waynesboro	April 1900	73,000	50.30
	Forrest County			
	Hattiesburg	--	--	--
	Petal	1974	610	9.10
Erosion	The extent of erosion can be defined by the measurable rate of erosion that			

	occurs. There are no erosion rate records located in the MEMA District 8 Region.
Dam Failure	Dam Failure extent is defined using the Mississippi Division of Environmental Quality criteria. Nineteen dams are classified as high-hazard in the region.
Winter Storm and Freeze	The extent of winter storms can be measured by the amount of snowfall received (in inches). Official long-term snow records are not kept for any areas in the MEMA District 8 Region. However, the greatest snowfall reported in Jackson (northwest of the region) was 11.7 inches in 1904 and in Meridian (north of the region) was 14.0 inches in 1963.
Fire-related Hazards	
Drought / Heat Wave	Drought extent is defined by the U.S. Drought Monitor Classifications which include Abnormally Dry, Moderate Drought, Severe Drought, Extreme Drought, and Exceptional Drought. According to the U.S. Drought Monitor Classifications, the most severe drought condition is Exceptional. All of the participating counties have received this ranking at least once over the eighteen-year reporting period. The extent of extreme heat can be measured by the record high temperature recorded. Official long-term temperature records are not kept for any areas in the MEMA District 8 Region. However, the highest recorded temperature in Hattiesburg (located between Marion and Perry Counties) was 106°F in 1989.
Wildfire	Wildfire data was provided by the Mississippi Forestry Commission and is reported annually by county from 2008-2018. The greatest number of fires to occur and number of acres burned occurred in Marion County. Analyzing the data by county indicates the following wildfire hazard extent for each county. Covington County The average number of fires per year was 26.9. The average number of acres burned per year was 212. The average number of acres burned was 7.9. Jefferson Davis County The average number of fires per year was 65. The average number of acres burned per year was 559. The average number of acres burned was 8.8. Jones County The average number of fires per year was 51.4. The average number of acres burned per year was 390.2. The average number of acres burned was 13.2. Marion County The average number of fires per year was 53.4. The average number of acres burned per year was 507.7. The average number of acres burned was 9.5. Perry County The average number of fires per year was 25.4. The average number of acres burned per year was 348.7. The average number of acres burned was 13.7. Wayne County The average number of fires per year was 32.8. The average number of acres burned per year was 317.8. The average number of acres burned was 9.7. Forrest County

	The average number of fires per year was 47.8. The average number of acres burned per year was 510.6. The average number of acres burned was 8.8.
Geologic Hazards	
Earthquake	Earthquake extent can be measured by the Richter Scale (Table 5.15) and the Modified Mercalli Intensity (MMI) scale (Table 5.16) and the distance of the epicenter from the MEMA District 8 Region. According to data provided by the National Geophysical Data Center, no recorded earthquakes have been located in the region. However, the greatest MMI to impact the region was reported in Covington, Jones, and Marion County with a MMI of IV (moderate) with a correlating Richter Scale measurement of less than 4.8. Additionally, USGS data shows the MEMA District 8 Region lies within an approximate zone of level “2” to “3” ground acceleration. This indicates that the region exists within an area of moderate seismic risk.
Landslide	As noted above in the landslide profile, there is no extensive history of landslides in the MEMA District 8 Region and landslide events typically occur in isolated areas. This provides a challenge when trying to determine an accurate extent for the landslide hazard. However, when using USGS landslide susceptibility index, extent can be measured with incidence, which is between low and moderate in the MEMA District 8 Region. There is also susceptibility throughout the region.
Expansive Soils	As noted above in the expansive soils profile, there is no historical record of significant expansive soil events in the MEMA District 8 Region. Again, this provides a challenge when trying to determine an accurate extent for the expansive soils hazard. However, when using USGS data on soils with clay swelling potential, extent can be measured with swelling potential, which is high in less than 50 percent of the soils in the MEMA District 8 Region.
Wind-related Hazards	
Hurricane and Tropical Storm	Hurricane extent is defined by the Saffir-Simpson Scale which classifies hurricanes into Category 1 through Category 5 (Table 5.19). The greatest classification of hurricane to traverse directly through the MEMA District 8 Region was Hurricane Camille, which was a Category 3 hurricane when it passed through the region. One additional Category 3 hurricane has also passed through the region (an unnamed hurricane in 1855).
Thunderstorm / Hail / Lightning	Thunderstorm extent is defined by the number of thunder events and wind speeds reported. According to a 63-year history from the National Centers for Environmental Information, the strongest recorded wind event in the MEMA District 8 Region was reported on June 5, 1998 at 80 knots (approximately 92 mph). It should be noted that future events may exceed these historical occurrences. Hail extent can be defined by the size of the hail stone. The largest hail stone reported in the MEMA District 8 Region was 4.0 inches (last reported on April 7, 2003 in). It should be noted that future events may exceed this. According to the Vaisala’s flash density map (Figure 5.16), the MEMA District 8 Region is located in an area that experiences 6 to 8 lightning flashes per square kilometer per year. It should be noted that future lightning occurrences may exceed these figures.
Tornado	Tornado hazard extent is measured by tornado occurrences in the US provided by FEMA (Figure 5.17) as well as the Fujita/Enhanced Fujita Scale (Tables 5.25 and

	5.26). The greatest magnitude reported in the MEMA District 8 Region was an F4 (last reported on February 28, 1987).
Other Hazards	
Hazardous Materials Incident	According to USDOT PHMSA, the largest hazardous materials incident reported in the region is 7,980 LGA released on the highway in Collins (Covington County). It should be noted that larger events are possible.
	A pipeline incident could have a potentially large impact in terms of extent. Based on recent history, the largest spill in the last 10 years in Mississippi caused over 10,000 barrels of hazardous liquid to be spilled.
	Because of the generally small-scale nature of most meth labs, the extent of a fire or explosion that was caused by a meth lab incident would likely not be larger than a few acres.
Cyber Terrorism	

5.17.2 Priority Risk Index

In order to draw some meaningful planning conclusions on hazard risk for the MEMA District 8 Region, the results of the hazard profiling process were used to generate countywide hazard classifications according to a “Priority Risk Index” (PRI). The purpose of the PRI is to categorize and prioritize all potential hazards for the MEMA District 8 Region as high, moderate, or low risk. Combined with the asset inventory and quantitative vulnerability assessment provided in the next section, the summary hazard classifications generated through the use of the PRI allows for the prioritization of those high hazard risks for mitigation planning purposes, and more specifically, the identification of hazard mitigation opportunities for the MEMA District 8 Region to consider as part of their proposed mitigation strategy.

The prioritization and categorization of identified hazards for the MEMA District 8 Region is based principally on the PRI, a tool used to measure the degree of risk for identified hazards in a particular planning area. The PRI is used to assist the MEMA District 8 Regional Hazard Mitigation Council (RHMC) in gaining consensus on the determination of those hazards that pose the most significant threat to the MEMA District 8 counties based on a variety of factors. The PRI is not scientifically based, but is rather meant to be utilized as an objective planning tool for classifying and prioritizing hazard risks in the MEMA District 8 Region based on standardized criteria.

The application of the PRI results in numerical values that allow identified hazards to be ranked against one another (the higher the PRI value, the greater the hazard risk). PRI values are obtained by assigning varying degrees of risk to five categories for each hazard (probability, impact, spatial extent, warning time, and duration). Each degree of risk has been assigned a value (1 to 4) and an agreed upon weighting factor²¹, as summarized in **Table 5.30**. To calculate the PRI value for a given hazard, the assigned risk value for each category is multiplied by the weighting factor. The sum of all five categories equals the final PRI value, as demonstrated in the example equation below:

²¹ The HMC, based upon any unique concerns or factors for the planning area, may adjust the PRI weighting scheme during future plan updates.

$$\text{PRI VALUE} = [(\text{PROBABILITY} \times .30) + (\text{IMPACT} \times .30) + (\text{SPATIAL EXTENT} \times .20) + (\text{WARNING TIME} \times .10) + (\text{DURATION} \times .10)]$$

According to the weighting scheme and point system applied, the highest possible value for any hazard is 4.0. When the scheme is applied for the MEMA District 8 Region, the highest PRI value is 3.2 (hurricane and tropical storm). Prior to being finalized, PRI values for each identified hazard were reviewed and accepted by the members of the RHMC.

TABLE 5.32: PRIORITY RISK INDEX FOR THE MEMA DISTRICT 8 REGION

PRI Category	Degree of Risk			Assigned Weighting Factor
	Level	Criteria	Index Value	
Probability	Unlikely	Less than 1% annual probability	1	30%
	Possible	Between 1 and 10% annual probability	2	
	Likely	Between 10 and 100% annual probability	3	
	Highly Likely	100% annual probability	4	
Impact	Minor	Very few injuries, if any. Only minor property damage and minimal disruption on quality of life. Temporary shutdown of critical facilities.	1	30%
	Limited	Minor injuries only. More than 10% of property in affected area damaged or destroyed. Complete shutdown of critical facilities for more than one day.	2	
	Critical	Multiple deaths/injuries possible. More than 25% of property in affected area damaged or destroyed. Complete shutdown of critical facilities for more than one week.	3	
	Catastrophic	High number of deaths/injuries possible. More than 50% of property in affected area damaged or destroyed. Complete shutdown of critical facilities for 30 days or more.	4	
Spatial Extent	Negligible	Less than 1% of area affected	1	20%
	Small	Between 1 and 10% of area affected	2	
	Moderate	Between 10 and 50% of area affected	3	
	Large	Between 50 and 100% of area affected	4	
Warning Time	More than 24 hours	Self explanatory	1	10%
	12 to 24 hours	Self explanatory	2	
	6 to 12 hours	Self explanatory	3	
	Less than 6 hours	Self explanatory	4	
Duration	Less than 6 hours	Self explanatory	1	10%
	Less than 24 hours	Self explanatory	2	
	Less than one week	Self explanatory	3	
	More than one week	Self explanatory	4	

5.17.3 Priority Risk Index Results

Table 5.33 summarizes the degree of risk assigned to each category for all initially identified hazards based on the application of the PRI. Assigned risk levels were based on the detailed hazard profiles developed for this section, as well as input from the RHMC. The results were then used in calculating PRI values and making final determinations for the risk assessment.

TABLE 5.33: SUMMARY OF PRI RESULTS FOR THE MEMA DISTRICT 8 REGION

Hazard	Category/Degree of Risk					
	Probability	Impact	Spatial Extent	Warning Time	Duration	PRI Score
Flood-related Hazards						
Flood	Likely	Limited	Small	6 to 12 hours	Less than 24 hours	2.4
Erosion	Possible	Minor	Small	More than 24 hours	More than 1 week	1.8
Dam Failure	Unlikely	Critical	Moderate	More than 24 hours	Less than 6 hours	2.0
Winter Storm and Freeze	Possible	Limited	Large	More than 24 hours	Less than 24 hours	2.3
Fire-related Hazards						
Drought / Heat Wave	Highly Likely	Minor	Large	More than 24 hours	More than 1 week	2.8
Wildfire	Likely	Minor	Small	Less than 6 hours	Less than 1 week	2.1
Geologic Hazards						
Earthquake	Unlikely	Minor	Moderate	Less than 6 hours	Less than 6 hours	1.7
Landslide	Unlikely	Minor	Small	Less than 6 hours	Less than 6 hours	1.5
Expansive Soils	Possible	Minor	Small	Less than 6 hours	Less than 6 hours	1.8
Wind-related Hazards						
Hurricane and Tropical Storm	Likely	Catastrophic	Large	More than 24 hours	Less than 24 hours	3.2
Thunderstorm Wind / High Wind	Highly Likely	Limited	Moderate	Less than 6 hours	Less than 6 hours	2.9
Hailstorm	Likely	Minor	Small	Less than 6 hours	Less than 6 hours	2.1
Lighting	Highly Likely	Limited	Negligible	Less than 6 hours	Less than 6 hours	2.5
Tornado	Likely	Critical	Small	Less than 6 hours	Less than 6 hours	2.7
Other Hazards						
Hazardous Materials Incident	Unlikely	Limited	Small	Less than 6 hours	Less than 24 hours	1.9
Pipeline Incident	Possible	Limited	Small	Less than 6 hours	Less than 24 hours	2.2
Meth Lab Incident	Possible	Minor	Small	Less than 6 hours	Less than 6 hours	1.8
Cyber Terrorism	Unlikely	Limited	Small	Less than 6 hours	Less than 24 hours	1.9

5.17 FINAL DETERMINATIONS

The conclusions drawn from the hazard profiling process for the MEMA District 8 Region, including the PRI results and input from the RHMC, resulted in the classification of risk for each identified hazard according to three categories: High Risk, Moderate Risk, and Low Risk (**Table 5.31**). For purposes of

these classifications, risk is expressed in relative terms according to the estimated impact that a hazard will have on human life and property throughout all of the MEMA District 8 Region. A more quantitative analysis to estimate potential dollar losses for each hazard has been performed separately and is described in Section 6: *Vulnerability Assessment*. It should be noted that although some hazards are classified below as posing low risk, their occurrence of varying or unprecedented magnitudes is still possible in some cases and their assigned classification will continue to be evaluated during future plan updates.

TABLE 5.30: CONCLUSIONS ON HAZARD RISK FOR THE MEMA DISTRICT 8 REGION

HIGH RISK	Hurricane and Tropical Storm Thunderstorm Wind / High Wind Tornado Flood
MODERATE RISK	Drought / Heat Wave Dam Failure Lightning Hailstorm Pipeline Incident Hazardous Material Incident Wildfire
LOW RISK	Winter Storm and Freeze Expansive Soils Erosion Earthquake Landslide Hazardous Material Incident Wildfire Meth Lab Incident Cyber Terrorism

SECTION 6

VULNERABILITY ASSESSMENT

This section identifies and quantifies the vulnerability of the MEMA District 8 Region to the significant hazards identified in the previous sections (*Hazard Identification and Profiles*). It consists of the following subsections:

- ❖ 6.1 Overview
- ❖ 6.2 Methodology
- ❖ 6.3 Explanation of Data Sources
- ❖ 6.4 Asset Inventory
- ❖ 6.5 Vulnerability Assessment Results
- ❖ 6.6 Conclusions on Hazard Vulnerability

44 CFR Requirement

44 CFR Part 201.6(c)(2)(ii): The risk assessment shall include a description of the jurisdiction's vulnerability to the hazards described in paragraph (c)(2)(i) of this section. The description shall include an overall summary of each hazard and its impact on the community. The plan should describe vulnerability in terms of: (A) The types and numbers of existing and future buildings, infrastructure, and critical facilities located in the identified hazard areas; (B) An estimate of the potential losses to vulnerable structures identified in paragraph (c)(2)(ii)(A) of this section and a description of the methodology used to prepare the estimate; (C) Providing a general description of land uses and development trends within the community so that mitigation options can be considered in future land use decisions.

6.1 OVERVIEW

This section builds upon the information provided in Section 4: *Hazard Identification and Section 5: Hazard Profiles* by identifying and characterizing an inventory of assets in the MEMA District 8 Region. In addition, the potential impact and expected amount of damages caused to these assets by each identified hazard event is assessed. The primary objective of the vulnerability assessment is to quantify exposure and the potential loss estimates for each hazard. In doing so, the MEMA District 8 counties and their participating jurisdictions may better understand their unique risks to identified hazards and be better prepared to evaluate and prioritize specific hazard mitigation actions.

This section begins with an explanation of the methodology applied to complete the vulnerability assessment, followed by a summary description of the asset inventory as compiled for the MEMA District 8 Region. The remainder of this section focuses on the results of the assessment conducted.

6.2 METHODOLOGY

This vulnerability assessment was conducted using three distinct methodologies: (1) A stochastic risk assessment; (2) a geographic information system (GIS)-based analysis; and (3) a risk modeling software

analysis. Each approach provides estimates for the potential impact of hazards by using a common, systematic framework for evaluation, including historical occurrence information provided in the *Hazard Identification and Analysis* sections. A brief description of the three different approaches is provided on the following pages.

6.2.1 Stochastic Risk Assessment

The stochastic risk assessment methodology was applied to analyze hazards of concern that were outside the scope of hazard risk models and the GIS-based risk assessment. This includes hazards that do not have geographically-definable boundaries and are therefore excluded from spatial analysis through GIS. A stochastic risk methodology was used for the following hazards:

- ❖ Dam Failure
- ❖ Drought
- ❖ Erosion
- ❖ Hailstorm
- ❖ Landslide
- ❖ Lightning
- ❖ Thunderstorm Wind
- ❖ Tornado
- ❖ Winter Storm and Freeze

Many of the hazards listed above are considered atmospheric and have the potential to affect all buildings and all populations. For many of these hazards listed above, no additional analysis was performed. When possible, annualized loss estimates were determined using the best available data on historical losses from sources including NOAA’s National Centers for Environmental Information records, MEMA District 8 Region county hazard mitigation plans, and local knowledge. Annualized loss is the estimated long-term weighted average value of losses to property in any single year in a specified geographic area (i.e., municipal jurisdiction or county). Annualized loss estimates were generated by totaling the amount of property damage over the period of time for which records were available and calculating the average annual loss. Given the standard weighting analysis, losses can be readily compared across hazards providing an objective approach for evaluating mitigation alternatives.

For the dam failure¹, drought, erosion, and landslide hazards, no data with historical property damages was available. Therefore, annualized potential losses for these hazards are presumed to be negligible. Drought, hailstorm, lightning, thunderstorm wind, tornado, and winter storm and freeze have the potential to impact the entire MEMA District 8 region. The results for these hazards are found at the end of this section in **Table 6.12**.

¹ As noted in Section 5: *Hazard Profiles*, Dam failure could be catastrophic to areas in the inundation area. Due to a lack of a data, no additional analysis was performed. Further, local MEMA District 8 officials indicate that separate dam failure plans have been completed for their counties to identify risk and response measures. There was no local knowledge of critical facilities being at risk to dam failure. As additional data becomes available, more in-depth analysis will be conducted.

6.2.2 GIS-Based Analysis

Other hazards have specified geographic boundaries that permit additional using Geographic Information Systems (GIS). These hazards include:

- ❖ Hazardous Material Incident
- ❖ Wildfire

The objective of the GIS-based analysis was to determine the estimated vulnerability of critical facilities and populations for the identified hazards in the MEMA District 8 Region using best available geospatial data. Digital data was collected from local, regional, state, and national sources for hazards and buildings. This included local records for critical facilities and infrastructure when available. ESRI® ArcGIS™ 10.5 was used to assess hazard vulnerability utilizing digital hazard data, as well as local building data. Using these data layers, hazard vulnerability can be quantified by estimating the assessed building value for parcels and/or buildings determined to be located in identified hazard areas. To estimate vulnerable populations in hazard areas, digital Census 2010 data by census tract was obtained. This was intersected with hazard areas to determine exposed population counts. Unfortunately, due to the large scale of census tracts, the results are limited, but will be revised with population by census block when available. The results of the analysis provided an estimate of the number of people and critical facilities, as well as the replacement value of buildings, determined to be potentially at risk to those hazards with delineable geographic hazard boundaries.

6.2.3 Risk Modeling Software Analysis

A risk modeling software was used for the following hazards:

- ❖ Earthquake
- ❖ Flood
- ❖ Hurricane and Tropical Storm

There are several models that exist to model hazards. HAZUS-MH 4.2 was used in this vulnerability assessment to address the aforementioned hazards.

HAZUS-MH

HAZUS-MH (“HAZUS”) is a standardized loss estimation software program developed by FEMA. It is built upon an integrated GIS platform to conduct analysis at a regional level (i.e., not on a structure-by-structure basis). The HAZUS risk assessment methodology is parametric, in that distinct hazard and inventory parameters (e.g., wind speed and building types) can be modeled using the software to determine the impact (i.e., damages and losses) on the built environment.

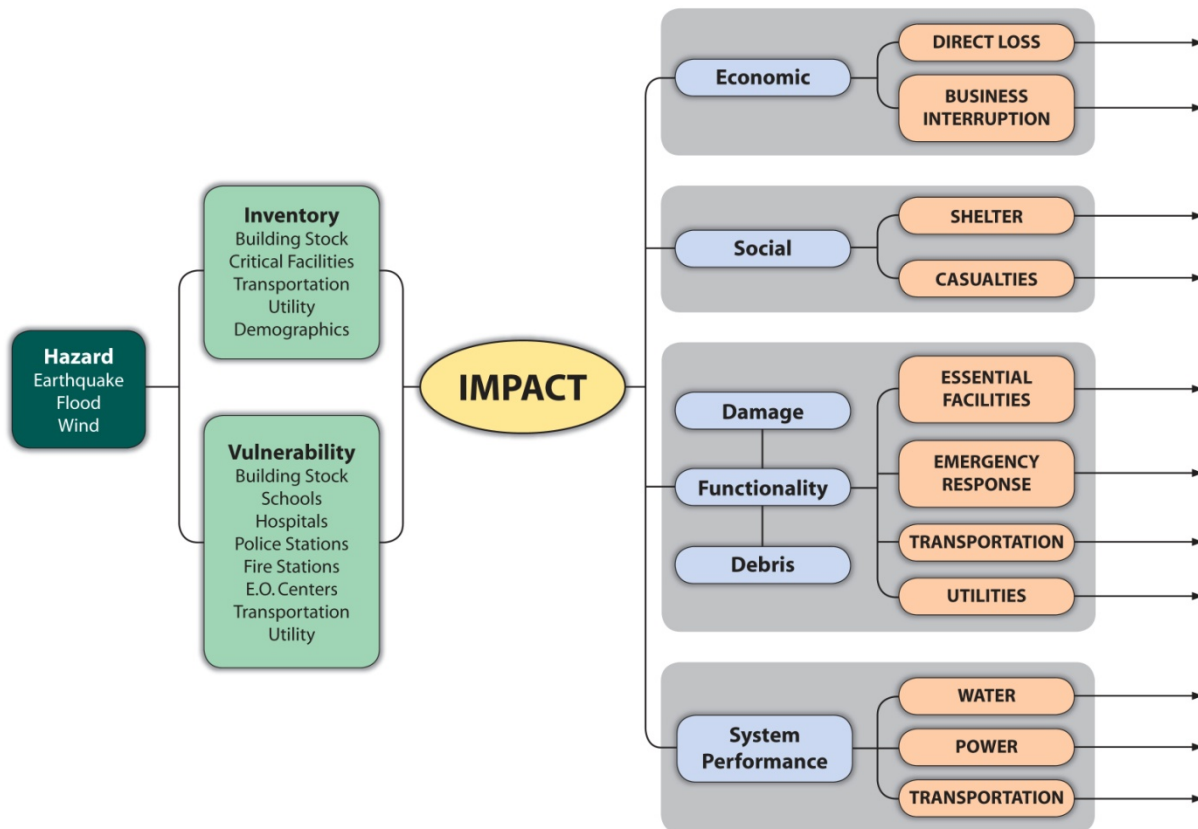


The MEMA District 8 Regional Risk Assessment utilized HAZUS-MH to produce hazard damage loss estimations for hazards for the planning area. At the time

this analysis was completed, HAZUS-MH 4.2 was used to estimate potential damages from hurricane winds, flooding and earthquake hazards using HAZUS-MH methodology. Although the program can also model losses for flood and storm surge, it was not used in this Risk Assessment.

Figure 6.1 illustrates the conceptual model of the HAZUS-MH methodology.

FIGURE 6.1: CONCEPTUAL MODEL OF HAZUS-MH METHODOLOGY



HAZUS-MH is capable of providing a variety of loss estimation results. Some additional results based on location-specific scenarios may also be presented to provide a complete picture of hazard vulnerability.

Loss estimates provided in this vulnerability assessment are based on best available data and methodologies. The results are an approximation of risk. These estimates should be used to understand relative risk from hazards and potential losses. Uncertainties are inherent in any loss estimation methodology, arising in part from incomplete scientific knowledge concerning natural hazards and their effects on the built environment. Uncertainties also result from approximations and simplifications that are necessary for a comprehensive analysis (e.g., incomplete inventories, non-specific locations, demographics, or economic parameters).

All conclusions are presented in “Conclusions on Hazard Vulnerability” at the end of this section.

6.3 EXPLANATION OF DATA SOURCES

FLOOD

HAZUS-MH 4.2 was used to assess flood vulnerability for the Region. The scenario chosen was a probabilistic 100-year event and reports expected building damages, debris generation, shelter requirements, and economic losses.

WILDFIRE

The data used to determine vulnerability to wildfire in the MEMA District 8 Region is based on GIS data called the Wildfire Hazard Potential (WHP 2014). It was provided for use in this plan by the Mississippi Forestry Commission.

EARTHQUAKE

HAZUS-MH 4.2 (as described above) was used to assess earthquake vulnerability. Default HAZUS-MH methodologies were used to determine the probability of damage for a 100-year frequency event and reports expected building damages, debris generation, shelter requirements, and economic losses.

LANDSLIDE

As a result of the low susceptibility and low incidence of landslide for counties in the MEMA District 8 Region, a GIS-based vulnerability analysis was not carried out for this plan. USGS Landslide Susceptibility Index data was evaluated along with historic occurrences to determine landslide vulnerability and vulnerability was determined to be consistently low throughout the region.

HURRICANE AND TROPICAL STORM WIND

HAZUS-MH 4.2 (as described above) was used to assess wind vulnerability. For the hurricane wind analysis, a probabilistic scenario was created to estimate damage in the MEMA District 8 Region. Default HAZUS wind speed data, damage functions, and methodology were used in to determine the probability of damage for 100-year frequency events (also known as a return period) in the scenario.

HAZARDOUS MATERIALS INCIDENT

For the fixed hazardous materials incident analysis, Toxic Release Inventory (TRI) data was used. The Toxics Release Inventory is a publicly available database from the federal Environmental Protection Agency (EPA) that contains information on toxic chemical releases and other waste management activities reported annually by certain covered industry groups as well as federal facilities. This inventory was established under the Emergency Planning and Community Right-to-Know Act of 1986 (EPCRA) and expanded by the Pollution Prevention Act of 1990. Each year, facilities that meet certain activity thresholds must report their releases and other waste management activities for listed toxic chemicals to EPA and to their state or tribal entity. A facility must report if it meets the following three criteria:

- ❖ The facility falls within one of the following industrial categories: manufacturing; metal mining; coal mining; electric generating facilities that combust coal and/or oil; chemical wholesale

distributors; petroleum terminals and bulk storage facilities; RCRA Subtitle C treatment, storage, and disposal (TSD) facilities; and solvent recovery services;

- ❖ Has 10 or more full-time employee equivalents; and
- ❖ Manufactures or processes more than 25,000 pounds or otherwise uses more than 10,000 pounds of any listed chemical during the calendar year. Persistent, bioaccumulative, and toxic (PBT) chemicals are subject to different thresholds of 10 pounds, 100 pounds, or 0.1 grams depending on the chemical.

For the mobile hazardous materials incident analysis, transportation data including major highways and railroads were obtained from the Mississippi Department of Environmental Quality. This data is ArcGIS compatible, lending itself to buffer analysis to determine risk.

6.4 ASSET INVENTORY

An inventory of geo-referenced assets within the MEMA District 8 counties and jurisdictions was compiled in order to identify and characterize those properties potentially at risk to the identified hazards². By understanding the type and number of assets that exist and where they are located in relation to known hazard areas, the relative risk and vulnerability for such assets can be assessed. Under this assessment, two categories of physical assets were created and then further assessed through GIS analysis. Additionally, social assets are addressed to determine population at risk to the identified hazards.

6.4.1 Physical and Improved Assets

The two categories of physical assets consist of:

1. Improved Property Includes all improved properties in the MEMA District 8 Region according to HAZUS-MH 4.2. HAZUS-MH 4.2 building count data was utilized to determine the number of buildings that were present in the planning area. This data is presented to show potential vulnerability; however, this data was not analyzed to show impacts from hazards.

HAZUS inventory data provides an estimate of the number of buildings in the study region. The economic exposure is also presented to be referenced with any HAZUS-related results.

2. Critical Facilities: Critical facilities vary by jurisdiction. For this Vulnerability Assessment, facilities were used from HAZUS-MH which includes fire stations, police station, medical care facilities, schools, and emergency operation centers. When provided, local data was used to supplement the HAZUS data. It should be noted that this listing is not all-inclusive for assets located in the region, but it is anticipated that it will be expanded during future plan updates as more geo-referenced data becomes available for use in GIS analysis.

The following tables provide a detailed listing of the geo-referenced assets that have been identified for inclusion in the vulnerability assessment for the MEMA District 8 Region.

² While potentially not all-inclusive for MEMA District 8, “georeferenced” assets include those assets for which specific location data is readily available for connecting the asset to a specific geographic location for purposes of GIS analysis.

Table 6.1 lists the number of parcels and the total assessed value of improvements for participating areas of the MEMA District 8 Region (study area of vulnerability assessment).³ HAZUS-MH 4.2 was utilized to determine the number of parcels, total improved assets and building counts to complete the analysis.

TABLE 6.1: IMPROVED PROPERTY IN THE MEMA DISTRICT 8 REGION

Location	Number of Parcels	Total Assessed Value of Improvements
Covington County	8,877	\$1,613,517,000
Forrest County	28,780	\$7,621,195,000
Jefferson Davis County	5,782	\$852,147,000
Jones County	29,059	\$5,912,251,000
Marion County	12,536	\$2,186,833,000
Perry County	5,608	\$874,179,000
Wayne County	9,627	\$,1501,381,000
MEMA DISTRICT 8 REGION TOTAL	100,269	\$19,060,122,000

*Improvement values for these communities were obtained from HAZUS -MH.

Table 6.2 lists the fire stations, police stations, emergency operations centers (EOCs), medical care facilities, and schools located in the MEMA District 8 Region according to HAZUS-MH Version 2.1 with some modifications. In addition, **Figure 6.2** shows the locations of essential facilities in the MEMA District 8 Region. **Table 6.12**, near the end of this section, shows a complete list of the critical facilities by name, as well as the hazards that affect each facility. As noted previously, this list is not all-inclusive and only includes information provided by the counties.

TABLE 6.2: CRITICAL FACILITY INVENTORY IN THE MEMA DISTRICT 8 REGION

Location	Fire Stations	Police Stations	Medical Care Facilities	EOC	Schools
Covington County	2	3	1	0	10
Collins	1	2	1	0	5
Mount Olive	1	1	0	0	1
Seminary	0	0	0	0	4
Unincorporated Area	0	0	0	0	0
Jefferson Davis County	2	1	1	1	8
Bassfield	1	0	0	0	3
Prentiss	1	1	1	1	4
Unincorporated Area	0	0	0	0	1
Jones County	2	3	1	1	22
Ellisville	0	0	0	0	3
Laurel	1	2	1	1	18
Sandersville	0	1	0	0	0
Soso	1	0	0	0	0
Unincorporated Area	0	0	0	0	1

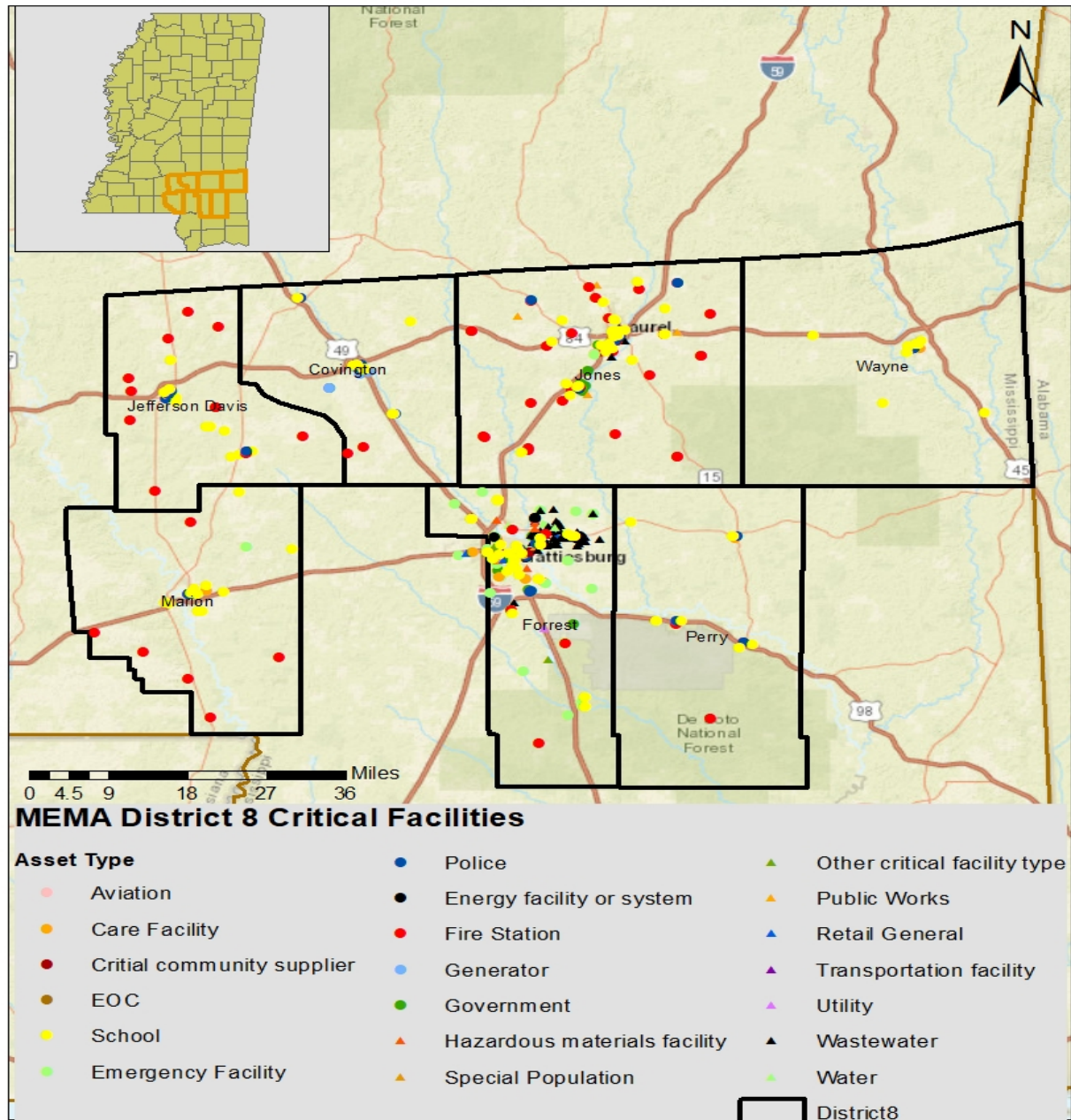
³ Total assessed values for improvements is based on HAZUS data.

SECTION 6: VULNERABILITY ASSESSMENT

Location	Fire Stations	Police Stations	Medical Care Facilities	EOC	Schools
Marion County	3	2	1	1	11
Columbia	2	2	1	1	8
Unincorporated Area	1	0	0	0	3
Perry County	1	2	1	0	6
Beaumont	1	0	0	0	1
New Augusta	0	1	0	0	2
Richton	0	1	1	0	2
Unincorporated Area	0	0	0	0	1
Wayne County	2	2	1	1	9
State Line	0	0	0	0	0
Waynesboro	2	2	1	1	8
Unincorporated Area	0	0	0	0	1
Forrest County	25	3	2	1	26
Hattiesburg	8	1	2	1	14
Petal	3	1	0	0	5
Unincorporated Area	14	1	0	0	7
MEMA DISTRICT 8 REGION TOTAL	37	16	8	5	92

Source: HAZUS-MH and Planning Committee

FIGURE 6.2: CRITICAL FACILITY LOCATIONS IN THE MEMA DISTRICT 8 REGION



Source: HAZUS-MH and local jurisdictions

6.4.2 Social Vulnerability

In addition to identifying those assets potentially at risk to identified hazards, it is important to identify and assess those particular segments of the resident population in the MEMA District 8 Region that are potentially at risk to these hazards.

Table 6.3 lists the population by jurisdiction according to U.S. Census 2010. The total population in the MEMA District 8 Region according to Census data was 234,907 persons. Additional population estimates are presented in Section 3: *Community Profile*.

TABLE 6.3: TOTAL POPULATION IN THE MEMA DISTRICT 8 REGION

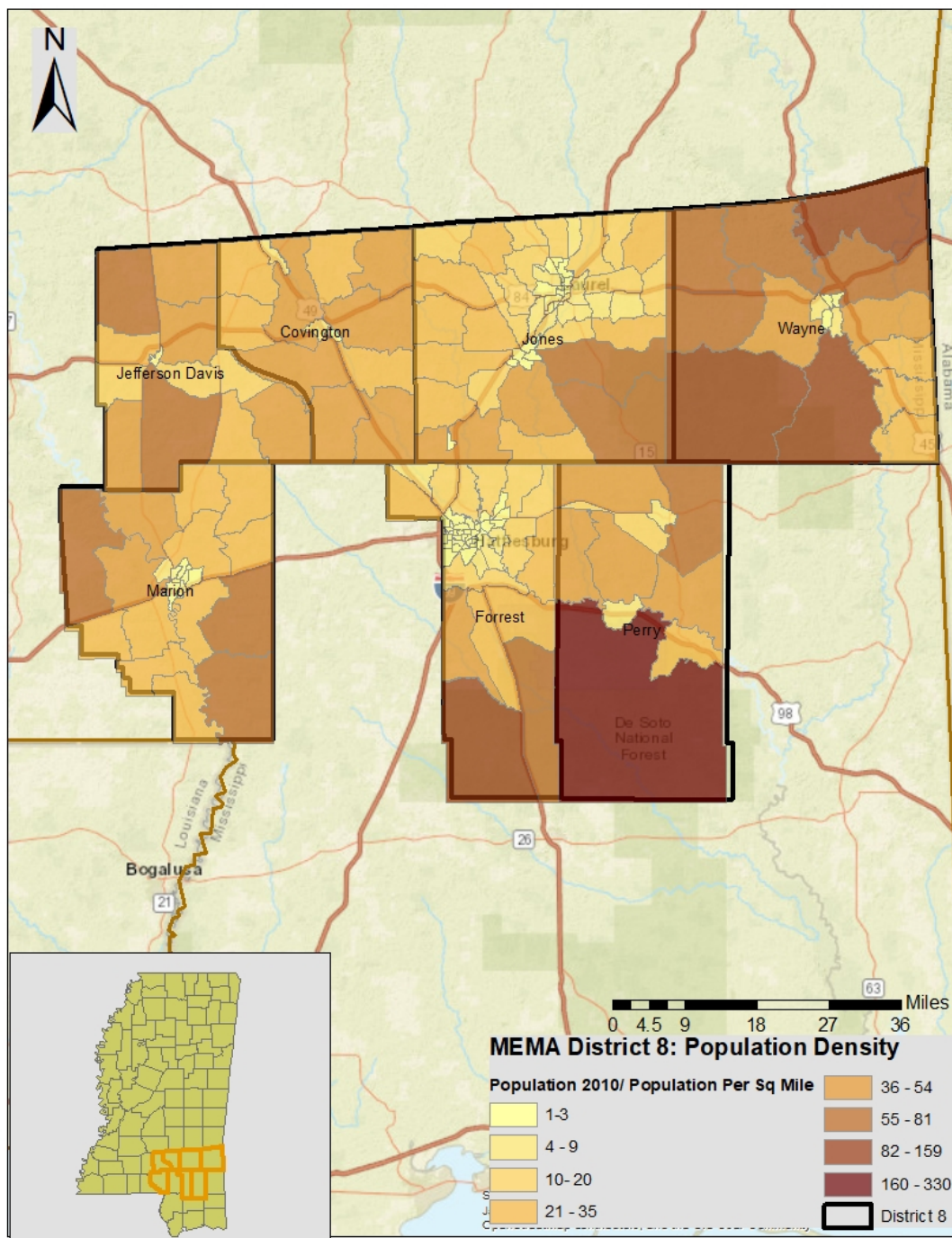
Location	Total 2010 Population	2017 Population Estimates
Covington County	19,568	19,079
Jefferson Davis County	12,487	11,314
Jones County	67,761	67,930
Marion County	27,088	25,069
Perry County	12,249	12,032
Wayne County	20,747	20,446
Forrest County	75,007	75,471
MEMA DISTRICT 8 REGION TOTAL	234,907	231,341

Source: U.S. Census 2010

In addition, **Figure 6.3** illustrates the population density per square mile by census tract as it was reported by the U.S. Census Bureau in 2010.⁴ As can be seen in the figure the population is spread out, with concentrations in Laurel, Columbia, and Waynesboro.

⁴ Population by census block was not available at the time this plan was completed.

FIGURE 6.3: POPULATION DENSITY IN THE MEMA DISTRICT 8 REGION



Source: U.S. Census Bureau, 2010

6.5 VULNERABILITY ASSESSMENT RESULTS

As noted earlier, only hazards with a specific geographic boundary, available modeling tool, or sufficient historical data allow for further analysis. Those results are presented here. All other hazards are assumed to impact the entire planning region (drought, hailstorm, lightning, thunderstorm wind, tornado, and winter storm and freeze) or, due to lack of data, analysis would not lead to credible results (dam and levee failure, erosion, expansive soils, and landslide). The total region exposure, and thus risk, was presented in **Table 6.1**.

The hazards to be further analyzed in this subsection include: flood, wildfire, earthquake, hurricane and tropical storm winds, and hazardous materials incident.

6.5.1 Flood

Historical evidence indicates that the MEMA District 8 Region is susceptible to flood events. A total of 178 flood events have been reported by the National Centers for Environmental Information resulting in \$41.3 million dollars in damages.

As the HAZUS-MH model suggests below, and historical occurrences confirm, any flood activity in the area is likely to inflict damage to the planning area. HAZUS-MH 4.2 estimates a total of 100,269 buildings in the region, which have an aggregate replacement value of \$20,560,000,000. Approximately 92% of the buildings in the area are associated with residential housing. While this number is not an exact representation of assessed tax value, it is helpful in assessing the results of the HAZUS-MH scenario.

For the flood hazard vulnerability assessment, a probabilistic scenario, 100-year event, was created to estimate damages to the planning area. HAZUS-MH estimates that approximately 450 buildings would be at least moderately damaged. This is approximately 53% of the buildings in the scenario. There is an estimated number of 96 buildings that would be damaged beyond repair. The table below shows the damage categories by general occupancy.

TABLE 6.4 EXPECTED DAMAGE CATEGORIES BY GENERAL OCCUPANCY

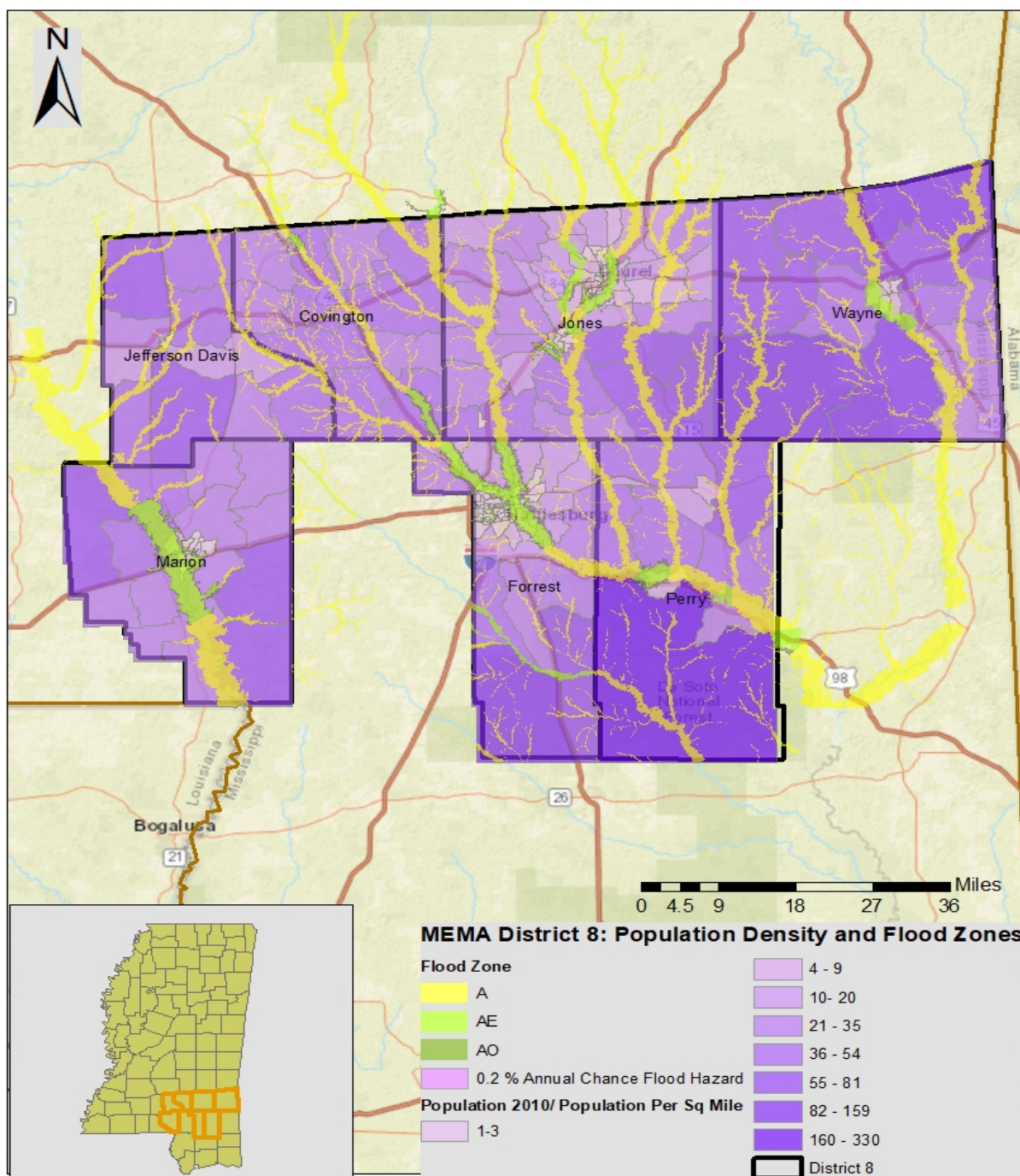
HAZUS-MH 4.2 Flood Model: Expected Building Damage by Occupancy						
	1-10	11-20	21-30	31-40	41-50	>50
	Count	Count	Count	Count	Count	Count
Agriculture	0	0	0	0	0	0
Commercial	0	4	0	0	0	1
Education	1	0	0	0	0	0
Government	0	0	0	0	0	0
Industrial	0	0	0	0	0	0
Religion	0	1	0	0	0	0
Residential	60	158	77	68	50	95
Total	61	163	77	68	50	96

ECONOMIC IMPACT

HAZUS-MH estimates the total economic loss for the district would be \$674.05 million dollars, which represents 19.32% of the total replacement value of the scenario buildings.

SOCIAL VULNERABILITY

Figure 6.4 is presented to gain a better understanding of at-risk population by evaluating census tract level population data against mapped floodplains. There are areas of concern in several of the municipal population centers in this region including Columbia, Waynesboro, Laurel, Ellsville, New Augusta, and Collins. Indeed, nearly every incorporated municipality is potentially at risk of being impacted by flooding in some areas of its jurisdiction. Therefore, further investigation in these areas may be warranted.

FIGURE 6.4 : POPULATION DENSITY NEAR FLOODPLAINS

Source: FEMA DFIRM, U.S. Census 2010

In the HAZUS scenario, the model estimates 2,324 households would be displaced due to the flood. Displacement includes households evacuated from within or very near to the inundated area. Of these, 182 people would seek temporary shelter in public shelters.

CRITICAL FACILITIES

The critical facility analysis revealed that there are fifty-four critical facilities located in floodplain. (Please note, as previously noted, this analysis does not consider building elevation, which may negate risk.) Facilities include five fire stations, seven police stations, thirteen schools, fourteen wastewater facilities and two EOCs. A list of specific critical facilities and their associated risk can be found in **Table 6.12** at the end of this section.

TABLE 6.5 FLOOD SCENARIO ESSENTIAL FACILITY EXPECTED DAMAGES

HAZUS-MH 4.2 Flood Model: Expected Damage to Essential Facilities

Classification	Total	# Facilities		
		At Least <u>Moderate</u> Damage > 50%	At Least Substantial Damage > 50%	Loss of Use > 50% on day 1
Emergency Operation Centers	3	0	0	0
Fire Stations	33	2	0	2
Hospitals	6	0	0	0
Police Stations	26	1	0	1
Schools	99	6	0	6

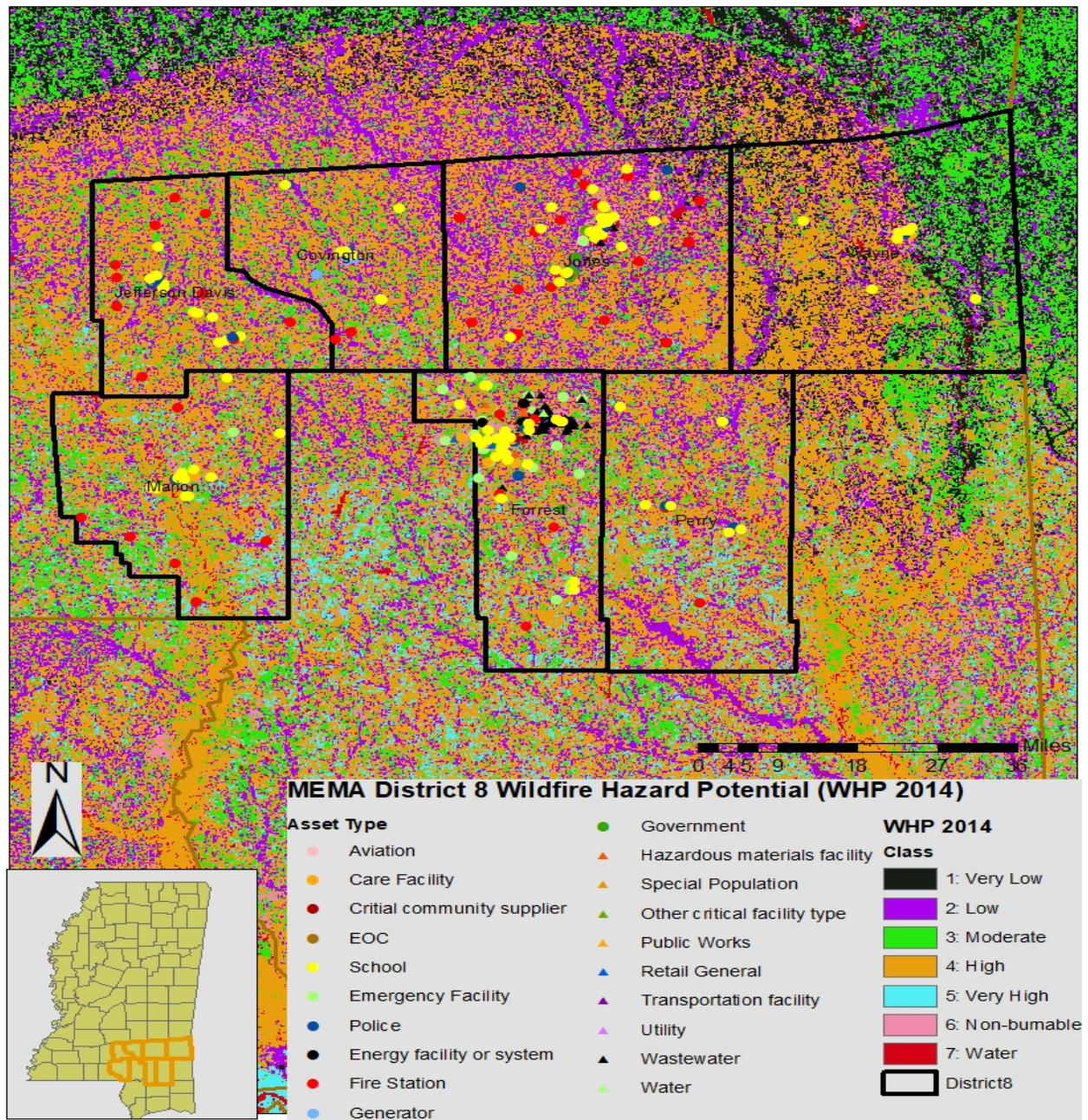
In conclusion, a flood has the potential to impact many existing and future buildings, facilities, and populations in the MEMA District 8 Region, though some areas are at a higher risk than others. All types of structures in a floodplain are at-risk, though elevated structures will have a reduced risk. Such site-specific vulnerability determinations are outside the scope of this assessment but will be considered during future plan updates. Furthermore, areas subject to repetitive flooding should be analyzed for potential mitigation actions.

6.5.2 Wildfire

Although historical evidence indicates that the MEMA District 8 Region is susceptible to wildfire events, there are few reports of damage.

To estimate exposure to wildfire, the wildfire hazard potential (WHP 2014) data provided via the US Forest Service was utilized. A GIS analysis was performed with the WHP dataset and identified critical facilities throughout MEMA District 8. The resulting analysis identified the hazard area each facility fell within to show the level of vulnerability for the identified facilities.

Figure 6.5 shows the wildfire hazard potential for MEMA District 8. According to the data, a majority of the region falls within the very low to moderate classification.

FIGURE 6.5: WILDFIRE RISK AREAS IN THE MEMA DISTRICT 8 REGION

Source: Wildfire Hazard Potential (US Forest Service 2014)

SOCIAL VULNERABILITY

Given some level of susceptibility across the entire MEMA District 8 Region, it is assumed that the total population is at risk to the wildfire hazard. Determining the exact number of people in certain wildfire zones is difficult with existing data and could be misleading.

CRITICAL FACILITIES

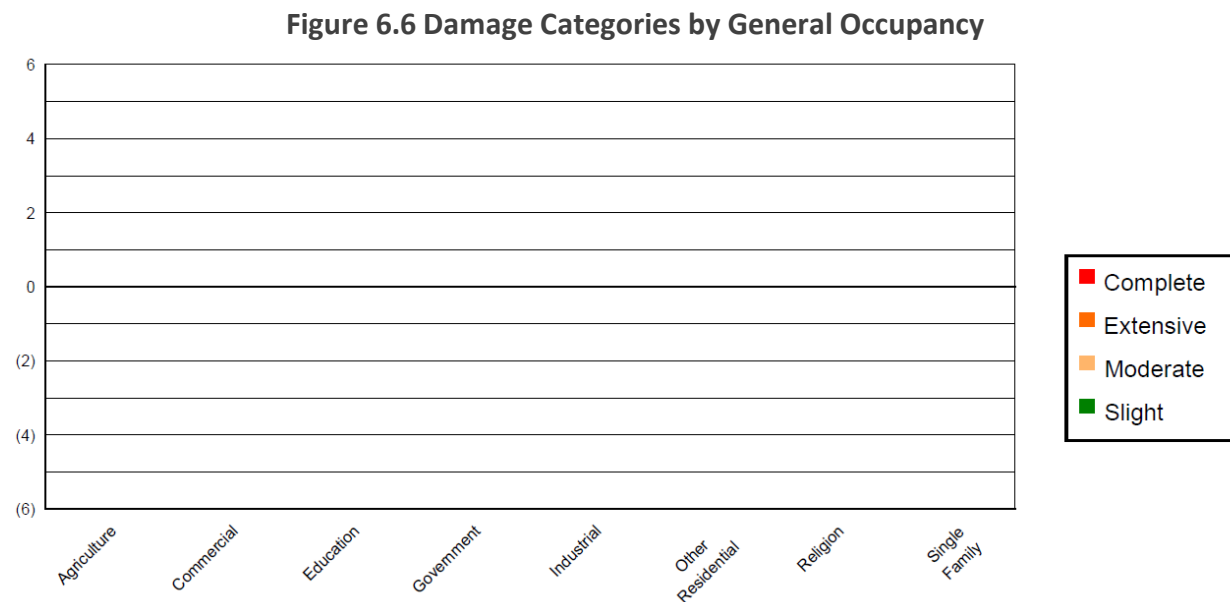
The critical facility analysis revealed that there are 4 critical facilities located in the wildfire hazard potential area (very high), 97 critical facilities located in the (High) and 52 critical facilities in the (moderate) . A list of specific critical facilities and their associated risk can be found in Table 6.12 at the end of this section.

In conclusion, a wildfire event has the potential to impact many existing and future buildings, critical facilities, and populations in the MEMA District 8 Region.

6.5.3 Earthquake

As the HAZUS-MH model suggests below, and historical occurrences confirm, any earthquake activity in the area is likely to inflict minor damage to the planning area. HAZUS-MH 4.2 estimates a total of 100,269 buildings in the region, which have an aggregate replacement value of \$20,560,000,000. Approximately 92% of the buildings in the area are associated with residential housing. While this number is not an exact representation of assessed tax value, it is helpful in assessing the results of the HAZUS-MH scenario.

For the earthquake hazard vulnerability assessment, an arbitrary scenario was created to estimate damages to the planning area. HAZUS-MH estimates that approximately 0 buildings would be at least moderately damaged. The figure shows the damage categories by general occupancy.



As the figure shows, no damages were identified by building occupancy type. Figure 6.6 provides the details of these findings by occupancy type and Figure 6.6 provides the details by building type.

Table 6.6 shows the expected building damages by occupancy

	None		Slight		Moderate		Extensive		Complete	
	Count	(%)	Count	(%)	Count	(%)	Count	(%)	Count	(%)
Agriculture	367.00	0.37	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Commercial	5560.00	5.55	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Education	201.00	0.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Government	205.00	0.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Industrial	1339.00	1.34	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Other Residential	22433.00	22.37	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Religion	796.00	0.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Single Family	69368.00	69.18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	100,269		0		0		0		0	

Table 6.6 Earthquake Scenario Expected Building Damages by Building Type

	None		Slight		Moderate		Extensive		Complete	
	Count	(%)	Count	(%)	Count	(%)	Count	(%)	Count	(%)
Wood	69337.64	69.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Steel	2559.46	2.55	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Concrete	658.38	0.66	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Precast	664.25	0.66	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
RM	252.87	0.25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
URM	7296.40	7.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MH	19500.00	19.45	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	100,269		0		0		0		0	

*Note:

RM Reinforced Masonry
 URM Unreinforced Masonry
 MH Manufactured Housing

Transportation and Utility Damage

HAZUS-MH estimated damages to highways, railways, light rail, bus facilities, ferry facilities, port facilities, and airports. Of these, no damages were expected.

Figure 6.7 Earthquake Scenario- Expected Damages to Transportation System

System	Component	Number of Locations				
		Locations/ Segments	With at Least Mod. Damage	With Complete Damage	With Functionality > 50 %	
Highway	Segments	300	0	0	300	300
	Bridges	1,164	0	0	1,164	1,164
	Tunnels	0	0	0	0	0
Railways	Segments	174	0	0	174	174
	Bridges	8	0	0	8	8
	Tunnels	0	0	0	0	0
	Facilities	2	0	0	2	2
Light Rail	Segments	0	0	0	0	0
	Bridges	0	0	0	0	0
	Tunnels	0	0	0	0	0
	Facilities	0	0	0	0	0
Bus	Facilities	1	0	0	1	1
Ferry	Facilities	0	0	0	0	0
Port	Facilities	0	0	0	0	0
Airport	Facilities	5	0	0	5	5
	Runways	6	0	0	6	6

HAZUS-MH estimated damages to utility system facilities, pipelines, potable water, and electric power systems. Relatively minor utility system facility damages were estimated; no system was estimated to be damaged.

Figure 6.8 Earthquake Scenario- Expected Damages to Utility System

System	# of Locations				
	Total #	With at Least Moderate Damage	With Complete Damage	with Functionality > 50 %	
Potable Water	2	0	0	2	2
Waste Water	24	0	0	24	24
Natural Gas	11	0	0	11	11
Oil Systems	0	0	0	0	0
Electrical Power	2	0	0	2	2
Communication	26	0	0	26	26

Figure 6.9 Earthquake Scenario- Expected Damages to Utility System

System	Total Pipelines Length (miles)	Number of Leaks	Number of Breaks
Potable Water	13,467	4	1
Waste Water	8,080	2	0
Natural Gas	5,387	1	0
Oil	0	0	0

Debris Generation

As part of the model, HAZUS-MH estimated the amount of debris that would be generated by the event. The types of debris considered were brick/wood and reinforced concrete/steel. HAZUS-MH estimated that a total of 0 tons of debris would be generated by the event.

Economic Loss

HAZUS-MH estimated economic losses for the scenario event. All told, HAZUS-MH estimated losses at \$30K, including buildings and lifelines. 100 percent of the losses were related to transportation and utility lifelines. The figure below provides additional details of these estimated losses.

Figure 6.9 Earthquake Scenario Economic Loss Estimates

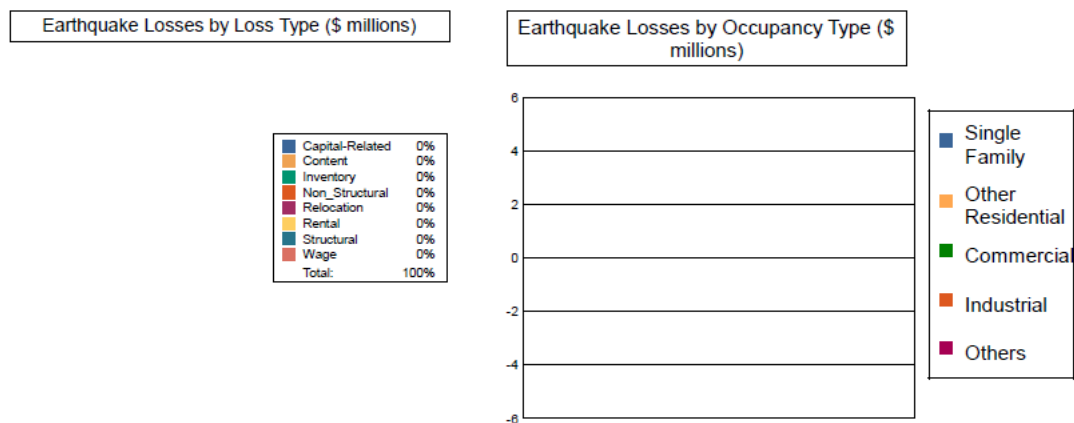


Table 11: Building-Related Economic Loss Estimates
(Millions of dollars)

Category	Area	Single Family	Other Residential	Commercial	Industrial	Others	Total
Income Losses							
	Wage	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
	Capital-Related	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
	Rental	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
	Relocation	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
	Subtotal	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Capital Stock Losses							
	Structural	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
	Non_Structural	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
	Content	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
	Inventory	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
	Subtotal	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
	Total	0.00	0.00	0.00	0.00	0.00	0.00

SOCIAL VULNERABILITY

It can be assumed that all existing future populations are at risk to the earthquake hazard. No fatalities or injuries were reported in the above HAZUS-MH arbitrary scenario.

CRITICAL FACILITIES

The HAZUS-MH probabilistic analysis indicated that no critical facilities would sustain measurable damage in an earthquake event. However, all critical facilities should be considered at-risk to minor damage, should an event occur. Specific vulnerabilities for these assets will be greatly dependent on their individual design and the mitigation measures in place, where appropriate. Such site-specific vulnerability determinations are outside the scope of this assessment but will be considered during future plan updates.

Table 6.7 Earthquake Scenario Essential Facility Expected Damages

Classification	Total	# Facilities		
		At Least Moderate Damage > 50%	Complete Damage > 50%	With Functionality > 50% on day 1
Hospitals	6	0	0	6
Schools	99	0	0	99
EOCs	3	0	0	3
PoliceStations	26	0	0	26
FireStations	33	0	0	33

In conclusion, an earthquake has the potential to impact all existing and future buildings, facilities, and populations in the MEMA District 8 Region. The HAZUS-MH scenario indicates that minimal damage is expected from an earthquake occurrence. While the MEMA District 8 Region may not experience a large earthquake (there are none on record), localized damage is possible with an occurrence.

6.5.4 Hurricane and Tropical Storm

Historical evidence indicates that the MEMA District 8 has an elevated risk to the hurricane and tropical storm hazard. There have been eight disaster declarations due to hurricanes (Hurricane Camille, Hurricane Frederic, Hurricane Georges, Hurricane Ivan, Hurricane Dennis, Hurricane Gustav, Hurricane Katrina, and Hurricane Isaac) in the region. Several tracks have come near or traversed through the MEMA District 8 Region, as shown and discussed in Section 5: *Hazard Profiles- Hurricane Section*.

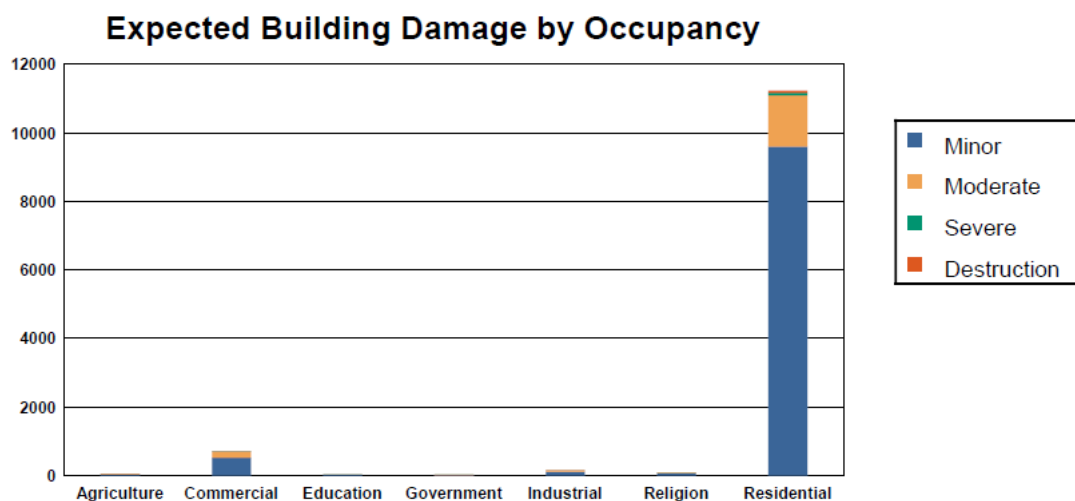
Hurricanes and tropical storms can cause damage through numerous additional hazards such as flooding, erosion, tornadoes, and high winds, thus it is difficult to estimate total potential losses from these cumulative effects. The current HAZUS-MH hurricane model only analyzes hurricane winds and is not capable of modeling and estimating cumulative losses from all hazards associated with hurricanes; therefore, only hurricane winds are analyzed in this section. It can be assumed that all existing and future buildings and populations are at risk to the hurricane and tropical storm hazard. HAZUS-MH 4.2

was used to determine vulnerability to the hazard for a 100-Year event. There are an estimated 100,269 buildings in the region with a total building replacement value of \$20,562,000,000.

For this plan update, the risk assessment for Hurricane and Tropical Storm winds was developed using HAZUS-MH v.4.2. A 100-year probabilistic scenario was created and modeled. The results are presented in the following pages.

HAZUS-MH estimated that at least 1,892 buildings would be at least moderately damaged by the event; this is over two percent of the buildings in the Region. 69 buildings would be completely destroyed. The figure below shows the distribution of damage by type of occupancy.

Figure 6.10 HAZUS-MH Hurricane Scenario Expected Damage by Occupancy Type (100-Year Probabilistic Event)



As the figure shows, most building damage is expected to be in residential structures. Table 6.7 provides the details of these findings by occupancy type; Figure 6.6 provides the details by building type

Table 6.7 Hurricane and Tropical Storm 100-Year Event Scenario Expected Building Damages by Building Type

Occupancy	None		Minor		Moderate		Severe		Destruction	
	Count	(%)	Count	(%)	Count	(%)	Count	(%)	Count	(%)
Agriculture	318.32	86.74	29.26	7.97	12.46	3.40	6.28	1.71	0.68	0.18
Commercial	4,857.45	87.36	520.18	9.36	167.23	3.01	14.93	0.27	0.21	0.00
Education	177.72	88.42	18.13	9.02	4.73	2.36	0.43	0.21	0.00	0.00
Government	184.69	90.09	16.03	7.82	3.92	1.91	0.36	0.18	0.00	0.00
Industrial	1,197.09	89.40	110.80	8.27	27.48	2.05	3.49	0.26	0.15	0.01
Religion	709.84	89.18	70.44	8.85	14.56	1.83	1.16	0.15	0.00	0.00
Residential	80,567.71	87.76	9,599.19	10.46	1,497.84	1.63	68.38	0.07	67.88	0.07
Total	88,012.82		10,364.01		1,728.22		95.02		68.92	

Table 6.8 Hurricane and Tropical Storm 100-Year Event Scenario Expected Building Damages by Building Type

Building Type	None		Minor		Moderate		Severe		Destruction	
	Count	(%)	Count	(%)	Count	(%)	Count	(%)	Count	(%)
Concrete	1,143	87.07	125	9.54	42	3.21	2	0.18	0	0.00
Masonry	6,507	86.34	746	9.90	265	3.52	17	0.22	1	0.02
MH	18,930	97.10	347	1.78	158	0.81	5	0.03	54	0.28
Steel	2,245	87.66	210	8.21	95	3.69	11	0.43	0	0.01
Wood	59,775	86.21	8,475	12.22	1,006	1.45	59	0.08	23	0.03

Economic Losses

HAZUS-MH estimated economic losses for the scenario event. The total economic loss estimated for the hurricane is 349.5 million dollars, which represents 1.70 % of the total replacement value of the region's buildings. The building related losses are broken into two categories: direct property damage losses and business interruption losses. The direct property damage losses are the estimated costs to repair or replace the damage caused to the building and its contents. The business interruption losses are the losses associated with inability to operate a business because of the damage sustained during the hurricane. Business interruption losses also include the temporary living expenses for those people displaced from their homes because of the hurricane. The total property damage losses were 350 million dollars. 9% of the estimated losses were related to the business interruption of the region. By far, the largest loss was sustained by the residential occupancies which made up over 88% of the total loss. Table 5 below provides a summary of the losses associated with the building damage.

Table 6.9 Hurricane Building Related Economic Losses from 100-Year Event

(Thousands of dollars)

Category	Area	Residential	Commercial	Industrial	Others	Total
<u>Property Damage</u>						
	Building	214,500.60	16,229.37	2,300.49	3,736.01	236,766.46
	Content	72,063.76	5,023.75	1,018.72	1,153.29	79,259.52
	Inventory	0.00	113.31	180.80	35.44	329.55
	Subtotal	286,564.35	21,366.43	3,500.01	4,924.73	316,355.53
<u>Business Interruption Loss</u>						
	Income	35.68	2,516.08	33.76	508.01	3,093.53
	Relocation	12,522.06	3,275.14	216.19	844.90	16,858.30
	Rental	6,839.21	1,556.71	28.29	63.66	8,487.88
	Wage	83.56	2,497.93	56.28	2,110.18	4,747.95
	Subtotal	19,480.52	9,845.85	334.52	3,526.76	33,187.65

Debris Generation

As part of the scenario, HAZUS-MH estimated the amount of debris that would be generated by the event. The types of debris considered were brick/wood, reinforced concrete/steel, eligible tree debris, and other tree debris. The model estimates that a total of 2,165,680 tons of debris will be generated. Of

the total amount, 2,024,447 tons (93%) is Other Tree Debris. Of the remaining 141,233 tons, Brick/Wood comprises 21% of the total, Reinforced Concrete/Steel comprises 0% of the total, with the remainder being Eligible Tree Debris. If the building debris tonnage is converted to an estimated number of truckloads, it will require 1190 truckloads (@25 tons/truck) to remove the building debris generated by the hurricane. The number of Eligible Tree Debris truckloads will depend on how the 111,483 tons of Eligible Tree Debris are collected and processed. The volume of tree debris generally ranges from about 4 cubic yards per ton for chipped or compacted tree debris to about 10 cubic yards per ton for bulkier, uncompacted debris.

SOCIAL VULNERABILITY

HAZUS estimates the number of households that are expected to be displaced from their homes due to the hurricane and the number of displaced persons that will require accommodations. The model estimates 276 households to be displaced due to the hurricane. Of these, 85 people (out of a total population of 234,835) will seek temporary shelter in public shelters.

CRITICAL FACILITIES

Before the hurricane, the region had 1,154 hospital beds available for use. On the day of the hurricane, the model estimates that 1154 hospital beds (only 100.00%) are available for use by patients already in the hospital and those injured by the hurricane. After one week, 100.00% of the beds will be in service. By 30 days, 100.00% will be operational.

The HAZUS-MH probabilistic analysis indicated that several essential facilities would be impacted. Table 6.10 shows the types of facilities as well as expected function after an event.

Table 6.10 Hurricane / Tropical Storm Scenario Essential Facility Expected Damages

Classification	Total	# Facilities		
		Probability of at Least Moderate Damage > 50%	Probability of Complete Damage > 50%	Expected Loss of Use < 1 day
EOCs	3	0	0	3
Fire Stations	33	0	0	33
Hospitals	6	0	0	6
Police Stations	26	0	0	26
Schools	99	0	0	73

In conclusion, a hurricane event has the potential to impact many existing and future buildings, critical facilities, and populations in the MEMA District 8 Region.

6.5.5 Hazardous Materials Incident

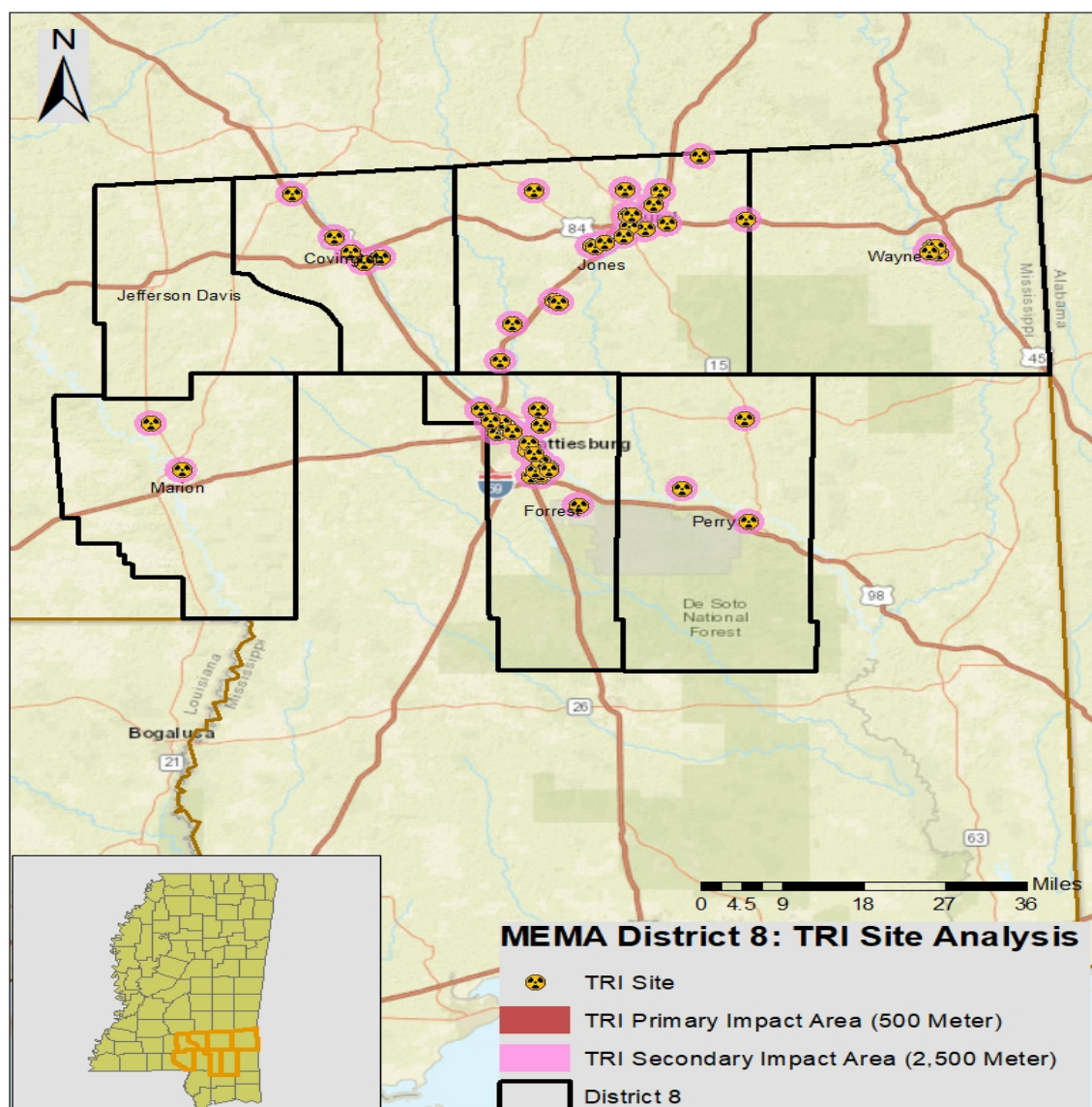
Although historical evidence and existing Toxic Release Inventory sites indicate that the MEMA District 8 Region is susceptible to hazardous materials events, there are few reports of damage.

Most hazardous materials incidents that occur are contained and suppressed before destroying any property or threatening lives. However, they can have a significant negative impact. Such events can

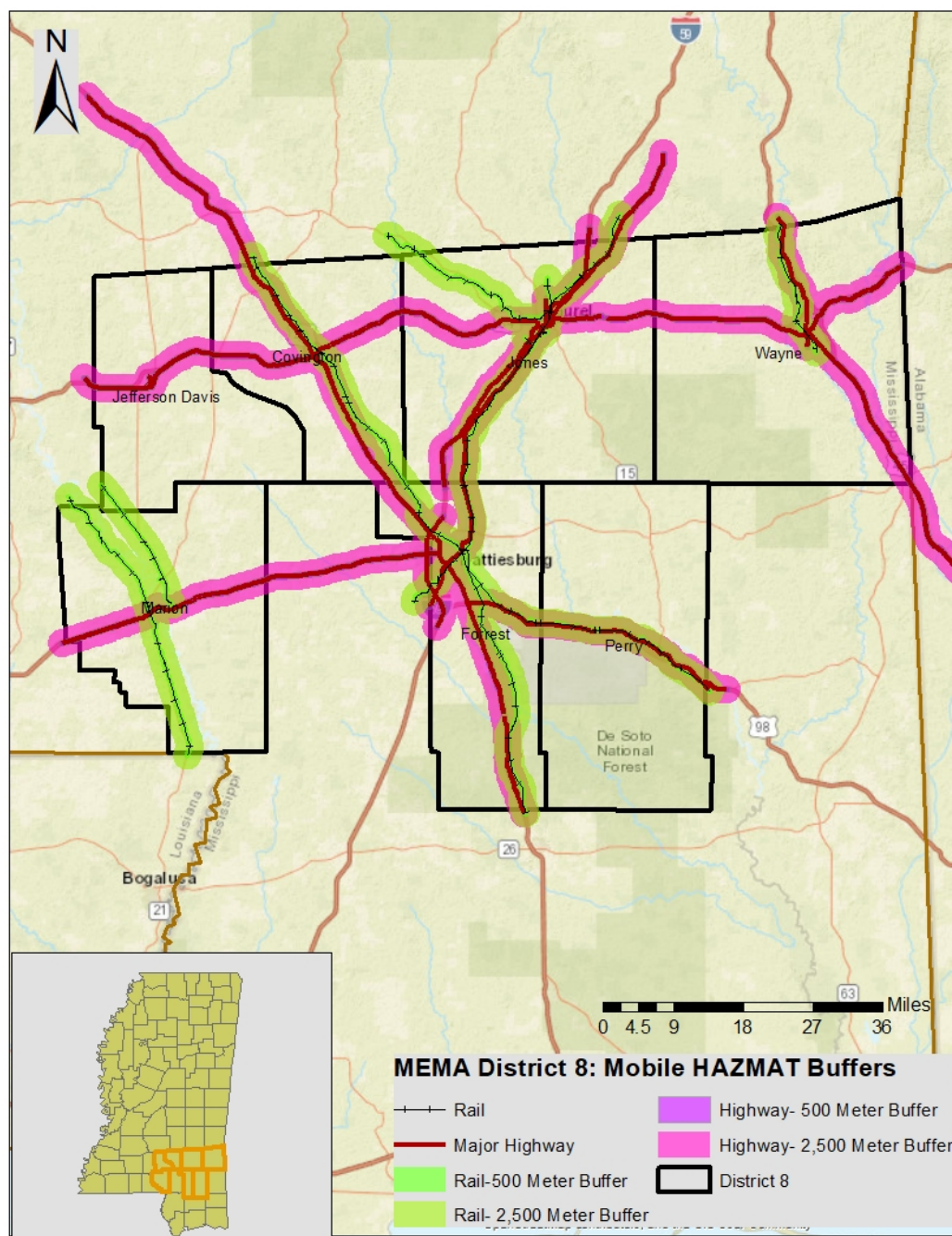
cause multiple deaths, completely shut down facilities for 30 days or more, and cause more than 50 percent of affected properties to be destroyed or suffer major damage. In a hazardous materials incident, solid, liquid, and/or gaseous contaminants may be released from fixed or mobile containers. Weather conditions will directly affect how the hazard develops. Certain chemicals may travel through the air or water, affecting a much larger area than the point of the incidence itself. Non-compliance with fire and building codes, as well as failure to maintain existing fire and containment features, can substantially increase the damage from a hazardous materials release. The duration of a hazardous materials incident can range from hours to days. Warning time is minimal to none.

In order to conduct the vulnerability assessment for this hazard, GIS analysis was used for fixed and mobile areas. In both scenarios, two sizes of buffers—500 and 2,500 meters—were used. These areas are assumed to respect the different levels of effect: immediate (primary) and secondary. Primary and secondary impact sites were selected based on guidance from FEMA 426, Reference Manual to Mitigate Potential Terrorist Attacks Against Buildings and engineering judgment. For the fixed site analysis, geo-referenced TRI listed toxic sites in the MEMA District 8 Region, along with buffers, were used for analysis as shown in **Figure 6.11**. For the mobile analysis, the major roads (Interstate highway, U.S. highway, and State highway) and railroads, where hazardous materials are primarily transported that could adversely impact people and buildings, were used for the GIS buffer analysis. **Figure 6.12** shows the areas used for mobile toxic release buffer analysis.

FIGURE 6.11: TRI SITES WITH BUFFERS IN THE MEMA DISTRICT 8 REGION



Source: EPA

FIGURE 6.12: MOBILE HAZMAT BUFFERS IN THE MEMA DISTRICT 8 REGION

SOCIAL VULNERABILITY

Given high susceptibility across the entire MEMA District 8 Region, it is assumed that the total population is at risk. It should be noted that areas of population concentration (near Laurel and Waynesboro, for example) may be at an elevated risk due to a greater burden to evacuate population quickly.

CRITICAL FACILITIES

Fixed Site Analysis:

The critical facility analysis for fixed TRI sites revealed that there are 198 facilities located in a hazmat risk zone. This includes 61 schools, 20 police stations, 18 fire stations, 13 medical care facilities, and 2 EOCs. A list of specific critical facilities and their associated risk can be found in **Table 6.12** at the end of this section.

Mobile Analysis:

The critical facility analysis for transportation corridors in MEMA District 8 revealed that there are 105 critical facilities located in the 500M Highway mobile HAZMAT buffer areas valued at over \$366M, and there are 103 critical facilities located in the 500M Railway mobile HAZMAT buffer areas valued at approximately \$103M.

Expanding to a 2500M HAZMAT risk zone reveals that there are 179 critical facilities located in the highway mobile HAZMAT buffer areas valued at over \$538M. There are 182 critical facilities located in the railway mobile HAZMAT buffer area valued at nearly \$508M. A list of specific critical facilities and their associated risk can be found in **Table A.32** at the end of this section.

In conclusion, a hazardous material incident has the potential to impact many existing and future buildings, critical facilities, and populations in the MEMA District 8 Region. Those areas in a primary buffer area at the highest risk, though all areas carry some vulnerability due to variations in condition that could alter the impact area (i.e., direction and speed of wind, volume of release, etc). Further, incidents from neighboring counties could also impact the county and participating jurisdictions.

6.6 CONCLUSIONS ON HAZARD VULNERABILITY

The results of this vulnerability assessment are useful in at least three ways:

- ❖ Improving our understanding of the risk associated with the natural hazards in the MEMA District 8 Region through better understanding of the complexities and dynamics of risk, how levels of risk can be measured and compared, and the myriad of factors that influence risk. An understanding of these relationships is critical in making balanced and informed decisions on managing the risk.
- ❖ Providing a baseline for policy development and comparison of mitigation alternatives. The data used for this analysis presents a current picture of risk in the MEMA District 8 Region. Updating this risk “snapshot” with future data will enable comparison of the changes in risk with time. Baselines of this type can support the objective analysis of policy and program options for risk reduction in the region.
- ❖ Comparing the risk among the natural hazards addressed. The ability to quantify the risk to all these hazards relative to one another helps in a balanced, multi-hazard approach to risk management at each level of governing authority. This ranking provides a systematic framework to compare and prioritize the very disparate natural hazards that are present in the MEMA District 8 Region. This final step in the risk assessment provides the necessary information for local officials to craft a mitigation strategy to focus resources on only those hazards that pose the most threat to the MEMA District 8 Region counties.

Exposure to hazards can be an indicator of vulnerability. Economic exposure can be identified through locally assessed values for improvements (buildings), and social exposure can be identified by estimating the population exposed to each hazard. This information is especially important for decision-makers to use in planning for evacuation or other public safety related needs.

The types of assets included in these analyses include all building types in the participating jurisdictions. Specific information about the types of assets that are vulnerable to the identified hazards is included in each hazard subsection (for example all building types are considered at risk to the winter storm hazard and commercial, residential, and government owned facilities are at risk to repetitive flooding, etc).

As noted previously, all existing and future buildings and populations (including critical facilities) are vulnerable to atmospheric hazards including drought, hailstorm, hurricane and tropical storm, lightning, thunderstorm wind, tornado, and winter storm and freeze. Some buildings may be more vulnerable to these hazards based on locations, construction, and building type. **Table 6.4** shows the critical facilities vulnerable to additional hazards analyzed in this section. The table lists those assets that are determined to be exposed to each of the identified hazards (marked with an “X”).

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TABLE 6.4: AT-RISK CRITICAL FACILITIES

		ATMOSPHERIC							GEOLOGIC			HYDROLOGIC			OTHER						
FACILITY NAME	FACILITY TYPE	Drought	Hailstorm	Hurricane and Tropical Storm	Lightning	Thunderstorm	Tornado	Winter Storm and Freeze	Earthquake	Landslide – Mod	Landslide- High	Dam and Levee Failure ⁵	Flood – 100 yr	Flood – 500 yr	Fixed HAZMAT 500m	Fixed HAZMAT 2,500 meter	Mobile HZMT Roads 500 METER	Mobile HZMT Roads 2,500 meter	Mobile HZMT Rails 500 METER	Mobile HZMT Rails 2,500 meter	Wildfire
COVINGTON COUNTY																					
City of Collins Fire Department	Fire Department	X	X	X	X	X	X	X	X							X	X	X		X	Non-burnable
Collins City Police Dept	Police Station	X	X	X	X	X		X	X				X			X	X	X	X	X	Non-burnable
COLLINS ELEMENTARY	School	X	X	X	X	X		X	X				X			X	X	X	X	X	Non-burnable
COLLINS FIRE STATION	Fire Station	X	X	X	X	X		X	X							X	X	X	X	X	Non-burnable
COLLINS HIGH SCHOOL	School	X	X	X	X	X		X	X							X		X	X	X	Non-burnable
COLLINS MAINTENANCE BUILDING	Government	X	X	X	X	X		X	X				X			X	X	X	X	X	Non-burnable
COLLINS MIDDLE SCHOOL	School	X	X	X	X	X		X	X						X	X	X	X		X	Non-burnable
COLLINS POLICE STATION	Police Station	X	X	X	X	X		X	X									X			Moderate
COLLINS POLICE STATION	Generator	X	X	X	X	X		X	X									X			Moderate
COVINGTON CO VOCATIONAL TECHNICAL	School	X	X	X	X	X		X	X							X		X	X	X	Non-burnable
COVINGTON COUNTY ALTERNATIVE SCHOOL	School	X	X	X	X	X		X	X							X		X	X	X	Non-burnable
Covington County Sheriff	Police Station	X	X	X	X	X	X	X	X							X	X	X		X	Non-burnable

⁵ As noted previously, these facilities could be at risk to dam failure if located in an inundation area. Data was not available to conduct such an analysis. There was no local knowledge of these facilities being at risk to dam failure. As additional data becomes available, more in-depth analysis will be conducted.

SECTION 6: VULNERABILITY ASSESSMENT

FACILITY NAME	FACILITY TYPE	ATMOSPHERIC							GEOLOGIC			HYDROLOGIC			OTHER						
		Drought	Hailstorm	Hurricane and Tropical Storm	Lightning	Thunderstorm	Tornado	Winter Storm and Freeze	Earthquake	Landslide – Mod	Landslide- High	Dam and Levee Failure ^s	Flood – 100 yr	Flood – 500 yr	Fixed HAZMAT 500m	Fixed HAZMAT 2,500 meter	Mobile HZMT Roads 500 METER	Mobile HZMT Roads 2,500 meter	Mobile HZMT Rails 500 METER	Mobile HZMT Rails 2,500 meter	Wildfire
EOC	Generator	X	X	X	X	X	X	X	X				X			X		X	X	X	High
HOPEWELL ELEMENTARY SCHOOL	School	X	X	X	X	X		X	X												Non-burnable
LAGOON	Generator	X	X	X	X	X		X	X						X	X		X	X	X	Moderate
WATER WELL 1	Generator	X	X	X	X	X		X	X				X			X	X	X		X	Moderate
WATER WELL 4	Generator	X	X	X	X	X		X	X							X	X	X		X	Non-burnable
MOUNT OLIVE ATTENDANCE CENTER	School	X	X	X	X	X		X	X							X		X	X	X	Non-burnable
CLEM VOLUNTEER FIRE DEPT	Fire Station	X	X	X	X	X		X	X												High
Hot Coffee Volunteer Fire Department	Fire Department	X	X	X	X	X		X	X							X		X	X	X	Non-burnable
Mt Olive City Police Dept	Police Station	X	X	X	X	X		X	X							X		X	X	X	Non-burnable
East Covington Volunteer Fire Department	Fire Department	X	X	X	X	X		X	X												Moderate
SEMINARY ATTENDANCE CENTER	School	X	X	X	X	X		X	X									X	X	X	Non-burnable
SEMINARY BAPTIST KINDERGARTEN	School	X	X	X	X	X		X	X									X	X	X	Non-burnable
Seminary Town Police Dept	Police Station	X	X	X	X	X		X	X									X	X	X	Non-burnable
Southwest Covington Volunteer Fire Department	Fire Department	X	X	X	X	X		X	X							X	X	X		X	Very High
Jefferson Davis County																					
BASSFIELD HIGH SCHOOL	School	X	X	X	X	X		X	X												Moderate

SECTION 6: VULNERABILITY ASSESSMENT

		ATMOSPHERIC							GEOLOGIC			HYDROLOGIC			OTHER							
FACILITY NAME	FACILITY TYPE	Drought	Hailstorm	Hurricane and Tropical Storm	Lightning	Thunderstorm	Tornado	Winter Storm and Freeze	Earthquake	Landslide – Mod	Landslide- High	Dam and Levee Failure ⁵	Flood – 100 yr	Flood – 500 yr	Fixed HAZMAT 500m	Fixed HAZMAT 2,500 meter	Mobile HZMT Roads 500 METER	Mobile HZMT Roads 2,500 meter	Mobile HZMT Rails 500 METER	Mobile HZMT Rails 2,500 meter	Wildfire	
Bassfield Police Dept	Police Station	X	X	X	X	X		X	X												Non- burnable	
Bassfield Volunteer Fire Department	Fire Department	X	X	X	X	X		X	X												Low	
CARVER ELEMENTARY SCHOOL	School	X	X	X	X	X		X	X												High	
G W CARVER ELEMENTARY SCHOOL	School Safe Room	X	X	X	X	X		X	X												Moderate	
GOOD HOPE FIRE DEPT	Fire Station	X	X	X	X	X	X	X	X												High	
JEFFERSON DAVIS HIGH SCHOOL	School Safe Room	X	X	X	X	X		X	X												High	
TOWN OF BASSFIELD FIRE DEPT	Fire Station	X	X	X	X	X		X	X												Non- burnable	
JDCS LEARNING CENTER/ACADEMIC SUCCESS/ALTERNATIVE	School Safe Room	X	X	X	X	X		X	X												High	
JEFF DAVIS CO VOC TECH CENTER	School	X	X	X	X	X		X	X												High	
JEFFERSON DAVIS CO VO TECH	School Safe Room	X	X	X	X	X		X	X												High	
RED HOUSE FIRE DEPT	Fire Station	X	X	X	X	X		X	X												High	
OAKVALE VOLUNTEER FIRE DEPT/SOCIETY HILL STATION	Fire Station	X	X	X	X	X		X	X												Non- burnable	
CLEM VOLUNTEER FIRE DEPT/WILLIAMSON MILL STATION	Fire Station	X	X	X	X	X		X	X												High	
GRANBY FIRE DEPT	Fire Station	X	X	X	X	X		X	X												Moderate	
GRANBY FIRE DEPT	Fire Station	X	X	X	X	X		X	X												Moderate	

SECTION 6: VULNERABILITY ASSESSMENT

		ATMOSPHERIC							GEOLOGIC			HYDROLOGIC			OTHER						
FACILITY NAME	FACILITY TYPE	Drought	Hailstorm	Hurricane and Tropical Storm	Lightning	Thunderstorm	Tornado	Winter Storm and Freeze	Earthquake	Landslide – Mod	Landslide- High	Dam and Levee Failure ⁵	Flood – 100 yr	Flood – 500 yr	Fixed HAZMAT 500m	Fixed HAZMAT 2,500 meter	Mobile HZMT Roads 500 METER	Mobile HZMT Roads 2,500 meter	Mobile HZMT Rails 500 METER	Mobile HZMT Rails 2,500 meter	Wildfire
Highway 84 West Fire Station Inc.	Fire Department	X	X	X	X	X		X	X									X			High
HWY 84 WEST FIRE STATION	Fire Station	X	X	X	X	X		X	X												Low
HWY 84 WEST FIRE STATION	Fire Station	X	X	X	X	X		X	X												Low
J E JOHNSON ELEMENTARY	School	X	X	X	X	X		X	X												High
J E JOHNSON ELEMENTARY SCHOOL	School Safe Room	X	X	X	X	X	X	X	X								X	X			Non-burnable
J E JOHNSON HEAD START/FIVE COUNTY	School Safe Room	X	X	X	X	X		X	X									X			High
JEFFERSON DAVIS COUNTY ADMINISTRATION BUILDING	Government	X	X	X	X	X	X	X	X								X	X			Non-burnable
JEFFERSON DAVIS COUNTY COURTHOUSE	Government	X	X	X	X	X		X	X								X	X			Non-burnable
JEFFERSON DAVIS COUNTY EMA/EOC	EOC	X	X	X	X	X	X	X	X								X	X			Non-burnable
JEFFERSON DAVIS COUNTY SHERIFF'S OFFICE	Police/Govern ment Offices	X	X	X	X	X		X	X								X	X			Non-burnable
Jefferson Davis Sheriff	Police Station	X	X	X	X	X		X	X								X	X			Non-burnable
Mississippi Dept Corrections	Police Station	X	X	X	X	X		X	X								X	X			Non-burnable
PRENTISS CHRISTIAN SCHOOL	School Safe Room	X	X	X	X	X		X	X									X			Moderate
PRENTISS CHRISTIAN SCHOOL	School	X	X	X	X	X	X	X	X									X			Moderate
PRENTISS CITY HALL	Government	X	X	X	X	X	X	X	X								X	X			Non-burnable

SECTION 6: VULNERABILITY ASSESSMENT

FACILITY NAME	FACILITY TYPE	ATMOSPHERIC							GEOLOGIC			HYDROLOGIC			OTHER						
		Drought	Hailstorm	Hurricane and Tropical Storm	Lightning	Thunderstorm	Tornado	Winter Storm and Freeze	Earthquake	Landslide – Mod	Landslide- High	Dam and Levee Failure ^s	Flood – 100 yr	Flood – 500 yr	Fixed HAZMAT 500m	Fixed HAZMAT 2,500 meter	Mobile HZMT Roads 500 METER	Mobile HZMT Roads 2,500 meter	Mobile HZMT Rails 500 METER	Mobile HZMT Rails 2,500 meter	Wildfire
Prentiss Fire Department	Fire Department	X	X	X	X	X	X	X	X								X	X			Non-burnable
PRENTISS INSTITUTE (MAIN BLDG)(ROSENWALD BLDG)	School Safe Room	X	X	X	X	X		X	X									X			Non-burnable
PRENTISS REG HOSP & CARE FACIL	Care Facility	X	X	X	X	X	X	X	X								X	X			Non-burnable
PRENTISS REGIONAL EXTENDED CARE FACILITY	Care Facility	X	X	X	X	X	X	X	X								X	X			High
PRENTISS REGIONAL HOSPITAL	Care Facility	X	X	X	X	X	X	X	X								X	X			Non-burnable
PRENTISS SENIOR HIGH SCHOOL	School	X	X	X	X	X	X	X	X								X	X			Non-burnable
TOWN OF PRENTISS FIRE DEPT/POLICE DEPT	Police/Government Offices	X	X	X	X	X		X	X								X	X			High
NEW MEDINAH ISLAMIC SCHOOL SYS	School	X	X	X	X	X		X	X												Moderate
Jones County																					
Adult Detention Facility	Special Population	X	X	X	X	X	X	X	X								X	X		X	Non-burnable
Beat 4 Barn	Public Works	X	X	X	X	X		X	X									X		X	Low
City Hall	Government offices	X	X	X	X	X		X	X								X	X	X	X	Non-burnable
Court House District 1	Government offices	X	X	X	X	X		X	X								X	X	X	X	Non-burnable
Ellisville Fire Department	Fire Department	X	X	X	X	X		X	X								X	X	X	X	Non-burnable

SECTION 6: VULNERABILITY ASSESSMENT

		ATMOSPHERIC							GEOLOGIC			HYDROLOGIC			OTHER							
FACILITY NAME	FACILITY TYPE	Drought	Hailstorm	Hurricane and Tropical Storm	Lightning	Thunderstorm	Tornado	Winter Storm and Freeze	Earthquake	Landslide – Mod	Landslide- High	Dam and Levee Failure ⁵	Flood – 100 yr	Flood – 500 yr	Fixed HAZMAT 500m	Fixed HAZMAT 2,500 meter	Mobile HZMT Roads 500 METER	Mobile HZMT Roads 2,500 meter	Mobile HZMT Rails 500 METER	Mobile HZMT Rails 2,500 meter	Wildfire	
ELLISVILLE LOWER ELEMENTARY SCHOOL	School	X	X	X	X	X	X	X	X								X	X	X	X	Non-burnable	
Ellisville Police Dept	Police Station	X	X	X	X	X		X	X								X	X	X	X	Non-burnable	
ELLISVILLE STATE SCHOOL	School	X	X	X	X	X	X	X	X				X				X	X	X	X	Non-burnable	
Fire Station #1	Fire Station	X	X	X	X	X		X	X								X	X	X	X	Non-burnable	
Fire Station #2	Fire Station	X	X	X	X	X	X	X	X				X				X	X		X	Non-burnable	
Fire Station #3	Fire Station	X	X	X	X	X	X	X	X								X	X	X	X	High	
Johnson VFD	Fire Station	X	X	X	X	X		X	X												Low	
Juvenile Detention Facility	Special Population	X	X	X	X	X	X	X	X								X	X		X	Non-burnable	
Maintenance Building (county wide)	Government offices	X	X	X	X	X	X	X	X								X	X		X	Non-burnable	
Police Department	Police/Government Offices	X	X	X	X	X		X	X								X	X	X	X	Non-burnable	
Public Works	Government offices	X	X	X	X	X		X	X				X				X	X	X	X	High	
Public Works	Government offices	X	X	X	X	X	X	X	X								X	X	X	X	Low	
Public Works	Government offices	X	X	X	X	X	X	X	X								X	X	X	X	Moderate	
Public Works	Government offices	X	X	X	X	X		X	X									X		X	Non-burnable	

SECTION 6: VULNERABILITY ASSESSMENT

FACILITY NAME	FACILITY TYPE	ATMOSPHERIC							GEOLOGIC			HYDROLOGIC			OTHER						
		Drought	Hailstorm	Hurricane and Tropical Storm	Lightning	Thunderstorm	Tornado	Winter Storm and Freeze	Earthquake	Landslide – Mod	Landslide- High	Dam and Levee Failure ^s	Flood – 100 yr	Flood – 500 yr	Fixed HAZMAT 500m	Fixed HAZMAT 2,500 meter	Mobile HZMT Roads 500 METER	Mobile HZMT Roads 2,500 meter	Mobile HZMT Rails 500 METER	Mobile HZMT Rails 2,500 meter	Wildfire
Public Works	Government offices	X	X	X	X	X		X	X									X		X	Very Low
SOUTH JONES ELEMENTARY SCHOOL	School	X	X	X	X	X		X	X				X				X	X		X	Low
SOUTH JONES HIGH SCHOOL	School	X	X	X	X	X	X	X	X								X	X	X	X	Non-burnable
South Jones VFD	Fire Station	X	X	X	X	X		X	X												Low
Southwest Jones VFD	Fire Station	X	X	X	X	X		X	X												Low
A P FATHEREE VOC TECH SCHOOL	School	X	X	X	X	X		X	X							X	X	X		X	Moderate
Beat 1 Barn	Public Works	X	X	X	X	X		X	X												High
Beat 3 Barn	Public Works	X	X	X	X	X		X	X								X	X			Non-burnable
Beat 5 Barn	Public Works	X	X	X	X	X	X	X	X							X	X	X	X	X	Non-burnable
Calhoun VFD	Fire Station	X	X	X	X	X		X	X								X	X		X	Non-burnable
Court House District 2	Government offices	X	X	X	X	X	X	X	X							X	X	X	X	X	Non-burnable
EAST JONES ELEMENTARY SCHOOL	School	X	X	X	X	X		X	X							X	X	X			High
Emergency Operations Center	EOC	X	X	X	X	X	X	X	X					X		X	X	X	X	X	Non-burnable
Fire Dept Central Station #1	Fire Station	X	X	X	X	X	X	X	X					X		X	X	X	X	X	Non-burnable
Fire Dept Station #2	Fire Station	X	X	X	X	X		X	X							X	X	X	X	X	High
Fire Dept Station #4	Fire Station	X	X	X	X	X		X	X				X			X		X	X	X	Non-burnable

SECTION 6: VULNERABILITY ASSESSMENT

FACILITY NAME	FACILITY TYPE	ATMOSPHERIC							GEOLOGIC			HYDROLOGIC			OTHER						
		Drought	Hailstorm	Hurricane and Tropical Storm	Lightning	Thunderstorm	Tornado	Winter Storm and Freeze	Earthquake	Landslide – Mod	Landslide- High	Dam and Levee Failure ^s	Flood – 100 yr	Flood – 500 yr	Fixed HAZMAT 500m	Fixed HAZMAT 2,500 meter	Mobile HZMT Roads 500 METER	Mobile HZMT Roads 2,500 meter	Mobile HZMT Rails 500 METER	Mobile HZMT Rails 2,500 meter	Wildfire
Fire Dept Station #5	Fire Station	X	X	X	X	X		X	X							X		X		X	Non- burnable
Fire Dept Station #6	Fire Station	X	X	X	X	X		X	X						X	X		X	X	X	Low
General Aviation (Hesler-Noble Field)	Aviation	X	X	X	X	X		X	X						X	X		X	X	X	Low
GLADE ELEMENTARY SCHOOL	School	X	X	X	X	X		X	X												Low
Glade VFD	Fire Station	X	X	X	X	X		X	X												Moderate
IMMACULATE CONCEPTION SCHOOL	School	X	X	X	X	X		X	X							X	X	X		X	Non- burnable
Jones Cnty Sheriff-Processing	Police Station	X	X	X	X	X	X	X	X							X	X	X	X	X	Non- burnable
Jones County Civil Defense	Emergency Facility	X	X	X	X	X		X	X						X	X		X	X	X	Non- burnable
Jones County Sheriff-Records	Police Station	X	X	X	X	X	X	X	X							X	X	X	X	X	Non- burnable
LAUREL CHRISTIAN SCHOOL	School	X	X	X	X	X		X	X							X	X	X		X	High
Laurel City Hall	Government offices	X	X	X	X	X	X	X	X							X	X	X	X	X	Non- burnable
Laurel City Police Dept	Police Station	X	X	X	X	X	X	X	X					X		X	X	X	X	X	Non- burnable
LAUREL EDUCATION CENTER	School	X	X	X	X	X		X	X							X	X	X		X	Low
Laurel Fire Department	Fire Department	X	X	X	X	X	X	X	X					X		X	X	X	X	X	Non- burnable
LAUREL HIGH SCHOOL	School	X	X	X	X	X		X	X							X		X	X	X	Non- burnable
LAUREL HIGH SCHOOL VOC	School	X	X	X	X	X		X	X							X		X	X	X	Non-

SECTION 6: VULNERABILITY ASSESSMENT

FACILITY NAME	FACILITY TYPE	ATMOSPHERIC							GEOLOGIC			HYDROLOGIC			OTHER						
		Drought	Hailstorm	Hurricane and Tropical Storm	Lightning	Thunderstorm	Tornado	Winter Storm and Freeze	Earthquake	Landslide – Mod	Landslide- High	Dam and Levee Failure ⁵	Flood – 100 yr	Flood – 500 yr	Fixed HAZMAT 500m	Fixed HAZMAT 2,500 meter	Mobile HZMT Roads 500 METER	Mobile HZMT Roads 2,500 meter	Mobile HZMT Rails 500 METER	Mobile HZMT Rails 2,500 meter	Wildfire
COMPLEX																					burnable
M & M Volunteer Fire Department	Fire Department	X	X	X	X	X		X	X												Non-burnable
MASON ELEMENTARY SCHOOL	School	X	X	X	X	X		X	X							X		X		X	Low
NORA DAVIS MAGNET SCHOOL	School	X	X	X	X	X	X	X	X							X	X	X	X	X	Non-burnable
NORTHEAST JONES HIGH SCHOOL	School	X	X	X	X	X		X	X							X	X	X			High
OAK PARK ELEMENTARY SCHOOL	School	X	X	X	X	X	X	X	X							X	X	X	X	X	Non-burnable
PINE BELT EDUCATIONAL CENTER	School	X	X	X	X	X		X	X							X	X	X		X	Non-burnable
Pleasant Ridge VFD	Fire Station	X	X	X	X	X		X	X								X	X			High
Police Dept	Police/Government Offices	X	X	X	X	X	X	X	X					X		X	X	X	X	X	Non-burnable
Powers Volunteer Fire Department	Fire Department	X	X	X	X	X		X	X							X	X	X			Non-burnable
Public Works Facility	Government offices	X	X	X	X	X		X	X							X		X		X	Low
R H Watkins High School	School Safe Room	X	X	X	X	X		X	X							X		X	X	X	Non-burnable
Rushton VFD	Fire Station	X	X	X	X	X		X	X												High
Safe Room / Shelter	School Safe Room	X	X	X	X	X	X	X	X							X	X	X	X	X	Moderate
Sewer Department	Wastewater	X	X	X	X	X		X	X				X			X	X	X		X	Moderate
Sewer Department	Wastewater	X	X	X	X	X		X	X				X			X		X		X	Moderate

SECTION 6: VULNERABILITY ASSESSMENT

FACILITY NAME	FACILITY TYPE	ATMOSPHERIC							GEOLOGIC			HYDROLOGIC			OTHER						
		Drought	Hailstorm	Hurricane and Tropical Storm	Lightning	Thunderstorm	Tornado	Winter Storm and Freeze	Earthquake	Landslide – Mod	Landslide- High	Dam and Levee Failure ^s	Flood – 100 yr	Flood – 500 yr	Fixed HAZMAT 500m	Fixed HAZMAT 2,500 meter	Mobile HZMT Roads 500 METER	Mobile HZMT Roads 2,500 meter	Mobile HZMT Rails 500 METER	Mobile HZMT Rails 2,500 meter	Wildfire
SHADY GROVE ELEMENTARY SCHOOL	School	X	X	X	X	X		X	X											X	High
Shady Grove VFD	Fire Station	X	X	X	X	X		X	X												High
Shady Grove VFD	Fire Department	X	X	X	X	X		X	X												High
SHARON ELEMENTARY SCHOOL	School	X	X	X	X	X		X	X												Non-burnable
Sharon VFD	Fire Station	X	X	X	X	X		X	X												High
Sheriff's Department	Police/Government Offices	X	X	X	X	X	X	X	X							X	X	X	X	X	Non-burnable
SOUTH CENTRAL REGIONAL MED CTR	Care Facility	X	X	X	X	X		X	X							X	X	X		X	Non-burnable
ST JOHNS DAY SCHOOL	School	X	X	X	X	X		X	X							X	X	X	X	X	Non-burnable
STANTON ELEMENTARY SCHOOL	School	X	X	X	X	X		X	X							X		X		X	Non-burnable
Stewart Jones Middle School	School Safe Room	X	X	X	X	X		X	X				X			X	X	X	X	X	Non-burnable
THE STAR REACH CENTER	School	X	X	X	X	X		X	X							X		X			Low
Water Department	Wastewater	X	X	X	X	X	X	X	X					X		X	X	X	X	X	Non-burnable
Water Department	Wastewater	X	X	X	X	X	X	X	X					X		X	X	X	X	X	Non-burnable
Water Department	Wastewater	X	X	X	X	X	X	X	X					X		X	X	X	X	X	Non-burnable
WEST JONES ELEMENTARY SCHOOL	School	X	X	X	X	X		X	X								X	X			Low

SECTION 6: VULNERABILITY ASSESSMENT

FACILITY NAME	FACILITY TYPE	ATMOSPHERIC							GEOLOGIC			HYDROLOGIC			OTHER						
		Drought	Hailstorm	Hurricane and Tropical Storm	Lightning	Thunderstorm	Tornado	Winter Storm and Freeze	Earthquake	Landslide – Mod	Landslide- High	Dam and Levee Failure ^s	Flood – 100 yr	Flood – 500 yr	Fixed HAZMAT 500m	Fixed HAZMAT 2,500 meter	Mobile HZMT Roads 500 METER	Mobile HZMT Roads 2,500 meter	Mobile HZMT Rails 500 METER	Mobile HZMT Rails 2,500 meter	Wildfire
WEST JONES HIGH SCHOOL	School	X	X	X	X	X		X	X											X	Moderate
MOSELLE ELEMENTARY SCHOOL	School	X	X	X	X	X		X	X									X		X	High
Moselle VFD	Fire Station	X	X	X	X	X		X	X								X	X	X	X	High
Southwest Jones Volunteer Fire Departmen	Fire Department	X	X	X	X	X		X	X												High
Union VFD	Fire Station	X	X	X	X	X		X	X								X	X	X	X	High
Ovett Volunteer Fire Department	Fire Department	X	X	X	X	X		X	X												Moderate
Police Dept	Police Station	X	X	X	X	X		X	X								X	X	X	X	Non-burnable
Sandersville VFD	Fire Station	X	X	X	X	X		X	X								X	X	X	X	Non-burnable
Beat 2 Barn	Public Works	X	X	X	X	X		X	X												High
Hebron Volunteer Fire Department	Fire Department	X	X	X	X	X		X	X								X	X			Low
Soso Police Dept	Police Station	X	X	X	X	X		X	X						X	X			X	X	Non-burnable
Soso VFD	Fire Station	X	X	X	X	X	X	X	X						X	X			X	X	Non-burnable
Marion County																					
COLUMBIA ACADEMY	School	X	X	X	X	X		X	X								X	X			Non-burnable
COLUMBIA ELEMENTARY SCHOOL	School	X	X	X	X	X	X	X	X							X		X	X	X	Non-burnable
Columbia Fire Department	Fire Department	X	X	X	X	X		X	X				X			X		X	X	X	Moderate

SECTION 6: VULNERABILITY ASSESSMENT

FACILITY NAME	FACILITY TYPE	ATMOSPHERIC							GEOLOGIC			HYDROLOGIC			OTHER						
		Drought	Hailstorm	Hurricane and Tropical Storm	Lightning	Thunderstorm	Tornado	Winter Storm and Freeze	Earthquake	Landslide – Mod	Landslide- High	Dam and Levee Failure ^s	Flood – 100 yr	Flood – 500 yr	Fixed HAZMAT 500m	Fixed HAZMAT 2,500 meter	Mobile HZMT Roads 500 METER	Mobile HZMT Roads 2,500 meter	Mobile HZMT Rails 500 METER	Mobile HZMT Rails 2,500 meter	Wildfire
COLUMBIA HIGH SCHOOL	School	X	X	X	X	X		X	X					X		X		X		X	Non-burnable
Columbia Police Dept	Police Station	X	X	X	X	X		X	X				X			X		X	X	X	Non-burnable
Columbia Police Investigator	Police Station	X	X	X	X	X		X	X				X			X		X	X	X	Moderate
COLUMBIA PRIMARY SCHOOL	School	X	X	X	X	X	X	X	X							X		X		X	Non-burnable
EAST COLUMBIA HIGH SCHOOL	School	X	X	X	X	X		X	X									X			Non-burnable
EAST MARION ELEMENTARY SCHOOL	School	X	X	X	X	X		X	X									X			Moderate
EAST MARION HIGH SCHOOL	School	X	X	X	X	X		X	X									X			Moderate
EAST MARION PRIMARY SCHOOL	School	X	X	X	X	X		X	X									X			Moderate
JEFFERSON MIDDLE SCHOOL	School	X	X	X	X	X	X	X	X							X				X	Non-burnable
MARION CO VOC COMPLEX	School	X	X	X	X	X		X	X									X			Non-burnable
Marion County Civil Defense	Emergency Facility	X	X	X	X	X		X	X												High
Marion County Sheriff Dept	Police Station	X	X	X	X	X	X	X	X							X		X	X	X	Non-burnable
MARION GENERAL HOSPITAL	Care Facility	X	X	X	X	X		X	X									X		X	Non-burnable
Pine Burr Volunteer Fire Department	Fire Department	X	X	X	X	X		X	X												Very High
Tri-Community Volunteer Fire Department	Fire Department	X	X	X	X	X		X	X												High

SECTION 6: VULNERABILITY ASSESSMENT

		ATMOSPHERIC							GEOLOGIC			HYDROLOGIC			OTHER							
FACILITY NAME	FACILITY TYPE	Drought	Hailstorm	Hurricane and Tropical Storm	Lightning	Thunderstorm	Tornado	Winter Storm and Freeze	Earthquake	Landslide – Mod	Landslide- High	Dam and Levee Failure ⁵	Flood – 100 yr	Flood – 500 yr	Fixed HAZMAT 500m	Fixed HAZMAT 2,500 meter	Mobile HZMT Roads 500 METER	Mobile HZMT Roads 2,500 meter	Mobile HZMT Rails 500 METER	Mobile HZMT Rails 2,500 meter	Wildfire	
Southwest Marion Volunteer Fire Departme	Fire Department	X	X	X	X	X		X	X												Low	
Southwest Marion Volunteer Fire Departme	Fire Department	X	X	X	X	X		X	X									X			Non-burnable	
WEST MARION ELEMENTARY	School	X	X	X	X	X		X	X									X	X	X	Non-burnable	
WEST MARION HIGH SCHOOL	School	X	X	X	X	X		X	X									X	X	X	Non-burnable	
WEST MARION JUNIOR HIGH SCHOOL	School	X	X	X	X	X		X	X									X	X	X	Non-burnable	
WEST MARION PRIMARY SCHOOL	School	X	X	X	X	X		X	X				X				X	X	X	X	Non-burnable	
Southwest Marion Volunteer Fire Departme	Fire Department	X	X	X	X	X		X	X										X	X	Non-burnable	
Southwest Marion Volunteer Fire Departme	Fire Department	X	X	X	X	X		X	X												Very High	
Perry County																						
BEAUMONT ELEMENTARY SCHOOL	School	X	X	X	X	X	X	X	X							X		X		X	High	
Beaumont Police Dept	Police Station	X	X	X	X	X	X	X	X							X	X	X	X	X	Low	
Beaumont Volunteer Fire Company	Fire Department	X	X	X	X	X	X	X	X							X	X	X		X	Non-burnable	
PERRY COUNTY ALTERNATIVE CENTER	School	X	X	X	X	X		X	X							X	X	X	X	X	High	
NEW AUGUSTA ELEMENTARY SCHOOL	School	X	X	X	X	X		X	X					X			X	X	X	X	Low	

SECTION 6: VULNERABILITY ASSESSMENT

FACILITY NAME	FACILITY TYPE	ATMOSPHERIC							GEOLOGIC			HYDROLOGIC			OTHER						
		Drought	Hailstorm	Hurricane and Tropical Storm	Lightning	Thunderstorm	Tornado	Winter Storm and Freeze	Earthquake	Landslide – Mod	Landslide- High	Dam and Levee Failure ^s	Flood – 100 yr	Flood – 500 yr	Fixed HAZMAT 500m	Fixed HAZMAT 2,500 meter	Mobile HZMT Roads 500 METER	Mobile HZMT Roads 2,500 meter	Mobile HZMT Rails 500 METER	Mobile HZMT Rails 2,500 meter	Wildfire
PERRY CENTRAL HIGH SCHOOL	School	X	X	X	X	X		X	X								X	X	X	X	High
PERRY CO VOC COMPLEX	School	X	X	X	X	X		X	X								X	X	X	X	High
Perry County Sheriff's Dept	Police Station	X	X	X	X	X		X	X					X			X	X	X	X	Non-burnable
Town of New Augusta Volunteer Fire Depar	Fire Department	X	X	X	X	X		X	X								X	X	X	X	High
PERRY COUNTY GENERAL HOSPITAL	Care Facility	X	X	X	X	X		X	X							X					Non-burnable
RICHTON ELEMENTARY SCHOOL	School	X	X	X	X	X		X	X							X					Non-burnable
RICHTON HIGH SCHOOL	School	X	X	X	X	X		X	X							X					Non-burnable
Richton Police Dept	Police Station	X	X	X	X	X	X	X	X							X					Non-burnable
Wayne County																					
BUCKATUNNA ELEMENTARY SCHOOL	School	X	X	X	X	X		X	X									X			High
BEAT FOUR ELEMENTARY SCHOOL	School	X	X	X	X	X		X	X								X	X			High
CLARA ELEMENTARY SCHOOL	School	X	X	X	X	X		X	X												Very Low
WAYNE ACADEMY	School	X	X	X	X	X		X	X									X	X	X	Low
WAYNE CO VOCATIONAL COMPLEX	School	X	X	X	X	X	X	X	X							X	X	X		X	Non-burnable
WAYNE COUNTY ALTERNATIVE SCHOOL	School	X	X	X	X	X	X	X	X							X	X	X		X	Non-burnable
Wayne County Civil Defense	Emergency Facility	X	X	X	X	X	X	X	X							X	X	X	X	X	Non-burnable

SECTION 6: VULNERABILITY ASSESSMENT

FACILITY NAME	FACILITY TYPE	ATMOSPHERIC							GEOLOGIC			HYDROLOGIC			OTHER						
		Drought	Hailstorm	Hurricane and Tropical Storm	Lightning	Thunderstorm	Tornado	Winter Storm and Freeze	Earthquake	Landslide – Mod	Landslide- High	Dam and Levee Failure ⁵	Flood – 100 yr	Flood – 500 yr	Fixed HAZMAT 500m	Fixed HAZMAT 2,500 meter	Mobile HZMT Roads 500 METER	Mobile HZMT Roads 2,500 meter	Mobile HZMT Rails 500 METER	Mobile HZMT Rails 2,500 meter	Wildfire
WAYNE COUNTY HIGH SCHOOL	School	X	X	X	X	X	X	X	X								X	X		X	Low
Wayne County Sheriff	Police Station	X	X	X	X	X	X	X	X							X	X	X	X	X	Non-burnable
Wayne County VFD	Fire Department	X	X	X	X	X	X	X	X							X	X	X	X	X	Non-burnable
WAYNE GENERAL HOSPITAL	Care Facility	X	X	X	X	X		X	X							X	X	X		X	Non-burnable
WAYNESBORO ELEMENTARY SCH	School	X	X	X	X	X	X	X	X								X	X		X	Non-burnable
Waynesboro Fire Department	Fire Department	X	X	X	X	X	X	X	X							X	X	X	X	X	Non-burnable
WAYNESBORO MIDDLE SCHOOL	School	X	X	X	X	X		X	X							X	X	X		X	Low
Waynesboro Police Clerk	Police Station	X	X	X	X	X	X	X	X							X	X	X	X	X	Non-burnable
Waynesboro Police Dept	Police Station	X	X	X	X	X	X	X	X							X	X	X	X	X	Non-burnable
Forrest County																					
Brooklyn Utility Association	Water system facility	X	X	X	X	X		X	X									X		X	Very High
Brooklyn VFD	Emergency services center	X	X	X	X	X		X	X									X	X	X	Non-burnable
FORREST COUNTY AGRICULTURAL HI SCH	School	X	X	X	X	X		X	X									X	X	X	Non-burnable
Forrest County Agricultural High School Safe Room	School Safe Room	X	X	X	X	X		X	X									X	X	X	Non-burnable
Forrest County AHS	School/Lbrary	X	X	X	X	X		X	X									X	X	X	Non-burnable

SECTION 6: VULNERABILITY ASSESSMENT

		ATMOSPHERIC							GEOLOGIC			HYDROLOGIC			OTHER							
FACILITY NAME	FACILITY TYPE	Drought	Hailstorm	Hurricane and Tropical Storm	Lightning	Thunderstorm	Tornado	Winter Storm and Freeze	Earthquake	Landslide – Mod	Landslide- High	Dam and Levee Failure ⁵	Flood – 100 yr	Flood – 500 yr	Fixed HAZMAT 500m	Fixed HAZMAT 2,500 meter	Mobile HZMT Roads 500 METER	Mobile HZMT Roads 2,500 meter	Mobile HZMT Rails 500 METER	Mobile HZMT Rails 2,500 meter	Wildfire	
Forrest County District 5 Barn	Emergency Service/Repair	X	X	X	X	X		X	X									X		X	Non- burnable	
Janice VFD	Fire Department	X	X	X	X	X		X	X												High	
SOUTH FORREST ATTENDANCE CENTER	School	X	X	X	X	X		X	X									X	X	X	Non- burnable	
South Forrest Attendance Center Safe Room	School Safe Room	X	X	X	X	X		X	X									X	X	X	Non- burnable	
9TH GRADE ACADEMY - HHS	School	X	X	X	X	X		X	X							X		X		X	Non- burnable	
AAA Ambulance Service	Medical/healt h care offices	X	X	X	X	X		X	X							X	X	X		X	Non- burnable	
ALPHA CHRISTIAN SCHOOL	School	X	X	X	X	X		X	X							X		X	X	X	Non- burnable	
Bedford Care Center of Hattiesburg	Health Care/Nursing Home	X	X	X	X	X		X	X							X	X	X		X	Non- burnable	
BLAIR CENTER HATTIESBURG HIGH	School	X	X	X	X	X		X	X							X		X		X	Non- burnable	
Bobby L. Chain Airport	Medical/healt h care offices	X	X	X	X	X		X	X						X	X			X	X	Non- burnable	
BURNEY ELEMENTARY SCHOOL	School	X	X	X	X	X		X	X							X		X		X	Non- burnable	
Camp Shelby	Government offices	X	X	X	X	X		X	X							X					Non- burnable	
CENTRAL BAPTIST SCHOOL	School	X	X	X	X	X		X	X							X	X	X		X	Non- burnable	

SECTION 6: VULNERABILITY ASSESSMENT

FACILITY NAME	FACILITY TYPE	ATMOSPHERIC							GEOLOGIC			HYDROLOGIC			OTHER						
		Drought	Hailstorm	Hurricane and Tropical Storm	Lightning	Thunderstorm	Tornado	Winter Storm and Freeze	Earthquake	Landslide – Mod	Landslide- High	Dam and Levee Failure ⁵	Flood – 100 yr	Flood – 500 yr	Fixed HAZMAT 500m	Fixed HAZMAT 2,500 meter	Mobile HZMT Roads 500 METER	Mobile HZMT Roads 2,500 meter	Mobile HZMT Rails 500 METER	Mobile HZMT Rails 2,500 meter	Wildfire
City of Hattiesburg	Water system facility	X	X	X	X	X		X	X					X	X	X	X	X	X	X	Non-burnable
City of Hattiesburg	Government offices	X	X	X	X	X		X	X							X		X	X	X	Non-burnable
City of Hattiesburg- Utility	Energy facility or system	X	X	X	X	X		X	X					X	X	X		X	X	X	Non-burnable
Clean Earth	Hazardous materials facility	X	X	X	X	X		X	X								X	X		X	High
Department of Human Services	Government office/economic assistance	X	X	X	X	X		X	X							X	X	X	X	X	Non-burnable
DIXIE ATTENDANCE CENTER	School	X	X	X	X	X		X	X									X			High
Dixie Attendance Center Safe Room	School Safe Room	X	X	X	X	X		X	X									X			High
Dixie Community Utility Association	Utility/Water system facility	X	X	X	X	X		X	X									X			Non-burnable
Dixie Volunteer Fire Department	Fire Department	X	X	X	X	X		X	X									X			Non-burnable
EARL TRAVILLION ATTENDANCE CENTER	School	X	X	X	X	X		X	X							X			X	X	High
Earl Travillion Elementary	School/Library	X	X	X	X	X		X	X							X			X	X	High
Entex Gas Pipeline Station	Energy facility or system	X	X	X	X	X		X	X							X	X	X	X	X	Non-burnable
FEMA Community Shelter	Education	X	X	X	X	X		X	X						X	X	X	X		X	Non-burnable

SECTION 6: VULNERABILITY ASSESSMENT

FACILITY NAME	FACILITY TYPE	ATMOSPHERIC							GEOLOGIC			HYDROLOGIC			OTHER						
		Drought	Hailstorm	Hurricane and Tropical Storm	Lightning	Thunderstorm	Tornado	Winter Storm and Freeze	Earthquake	Landslide – Mod	Landslide- High	Dam and Levee Failure ^s	Flood – 100 yr	Flood – 500 yr	Fixed HAZMAT 500m	Fixed HAZMAT 2,500 meter	Mobile HZMT Roads 500 METER	Mobile HZMT Roads 2,500 meter	Mobile HZMT Rails 500 METER	Mobile HZMT Rails 2,500 meter	Wildfire
Forrest County Circuit Court	Government	X	X	X	X	X		X	X							X	X	X	X	X	Non-burnable
Forrest County Circuit Courthouse	Government offices	X	X	X	X	X		X	X							X	X	X	X	X	Non-burnable
Forrest County Coroner's Office	Government Office/Emergency Service	X	X	X	X	X		X	X							X	X	X	X	X	Non-burnable
Forrest County District 1 Barn	Emergency Service/Repair	X	X	X	X	X		X	X									X			High
Forrest County District 2 Barn	Emergency Service/Repair	X	X	X	X	X		X	X							X	X	X	X	X	Non-burnable
Forrest County District 2 Central Shop	Emergency Service/Repair	X	X	X	X	X		X	X							X	X	X	X	X	Non-burnable
Forrest County Evaluation Center	Government/Emergency Service	X	X	X	X	X		X	X								X	X	X	X	Low
Forrest County Health Department	Medical/health care offices	X	X	X	X	X		X	X							X	X	X		X	Non-burnable
Forrest County Juvenile Detention Center	Police/Government Offices	X	X	X	X	X		X	X				X		X	X		X	X	X	Non-burnable
Forrest County Justice Court	Government office/legal	X	X	X	X	X		X	X							X	X	X	X	X	Non-burnable
Forrest County MultiPurpose Center	Government office/other facility	X	X	X	X	X		X	X						X	X	X	X		X	Non-burnable
Forrest County Schools-Administrative Offices	Other critical facility	X	X	X	X	X		X	X							X	X	X	X	X	Non-burnable

SECTION 6: VULNERABILITY ASSESSMENT

FACILITY NAME	FACILITY TYPE	ATMOSPHERIC							GEOLOGIC			HYDROLOGIC			OTHER						
		Drought	Hailstorm	Hurricane and Tropical Storm	Lightning	Thunderstorm	Tornado	Winter Storm and Freeze	Earthquake	Landslide – Mod	Landslide- High	Dam and Levee Failure ^s	Flood – 100 yr	Flood – 500 yr	Fixed HAZMAT 500m	Fixed HAZMAT 2,500 meter	Mobile HZMT Roads 500 METER	Mobile HZMT Roads 2,500 meter	Mobile HZMT Rails 500 METER	Mobile HZMT Rails 2,500 meter	Wildfire
	type/Education																				
Forrest County Sheriff	Police Station	X	X	X	X	X		X	X							X	X	X	X	X	Non-burnable
Forrest County Sheriff's Department	Emergency/Police	X	X	X	X	X		X	X						X	X	X	X		X	Non-burnable
Forrest County Sheriff's Service Center	Emergency/Police	X	X	X	X	X		X	X						X	X	X	X		X	Non-burnable
FORREST GENERAL HOSPITAL	Care Facility	X	X	X	X	X		X	X							X	X	X		X	High
Forrest County District 4 Barn	Emergency Service/Repair	X	X	X	X	X		X	X									X	X	X	Non-burnable
Glendale Utility District	Water system facility	X	X	X	X	X		X	X							X		X		X	Non-burnable
GRACE CHRISTIAN ELEMENTARY SCHOOL	School	X	X	X	X	X		X	X							X	X	X		X	Non-burnable
Hattiesburg Clinic	Medical/health care offices	X	X	X	X	X		X	X							X	X	X		X	Non-burnable
Hattiesburg Convalescent Center	Medical/health care offices	X	X	X	X	X	X	X	X							X		X	X	X	Non-burnable
Hattiesburg Fire Department	Fire Department	X	X	X	X	X		X	X							X	X	X	X	X	Moderate
Hattiesburg Fire Department #1	Emergency services center	X	X	X	X	X		X	X							X	X	X	X	X	Moderate
Hattiesburg Fire Department #3	Emergency services center	X	X	X	X	X		X	X						X	X			X	X	Non-burnable
Hattiesburg Fire Department #4	Emergency	X	X	X	X	X		X	X				X			X	X	X		X	Non-burnable

SECTION 6: VULNERABILITY ASSESSMENT

FACILITY NAME	FACILITY TYPE	ATMOSPHERIC							GEOLOGIC			HYDROLOGIC			OTHER						
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	services center																				
Hattiesburg Fire Department #5	Emergency services center	X	X	X	X	X	X	X	X							X		X	X	X	Moderate
Hattiesburg Fire Department #6	Emergency services center	X	X	X	X	X		X	X							X	X	X			Non-burnable
Hattiesburg Fire Department #7	Emergency services center	X	X	X	X	X		X	X								X	X		X	Low
Hattiesburg Fire Department #8	Emergency sevices center	X	X	X	X	X		X	X								X	X			Non-burnable
Hattiesburg High School	Education	X	X	X	X	X		X	X							X		X		X	Non-burnable
Hattiesburg Medical Supply	Emergency services center	X	X	X	X	X		X	X									X		X	Non-burnable
Hattiesburg Police Chief	Police Station	X	X	X	X	X		X	X												Non-burnable
Hattiesburg Police Department	Critical community supplier	X	X	X	X	X	X	X	X				X			X		X	X	X	Non-burnable
HAWKINS ELEMENTARY SCHOOL	School	X	X	X	X	X		X	X				X			X	X	X		X	Moderate
Jessie L. Brown Tax Services Building	Emergency services center	X	X	X	X	X		X	X							X	X	X	X	X	Non-burnable
Lillie Burney Elementary	Education	X	X	X	X	X		X	X							X		X		X	Non-burnable
Loyalton of Hattiesburg	Hospital/Nursing Home	X	X	X	X	X		X	X									X		X	Non-burnable
MARY BETHUNE ALTERNATIVE	School	X	X	X	X	X		X	X							X		X	X	X	Non-burnable

SECTION 6: VULNERABILITY ASSESSMENT

FACILITY NAME	FACILITY TYPE	ATMOSPHERIC							GEOLOGIC			HYDROLOGIC			OTHER						
		Drought	Hailstorm	Hurricane and Tropical Storm	Lightning	Thunderstorm	Tornado	Winter Storm and Freeze	Earthquake	Landslide – Mod	Landslide- High	Dam and Levee Failure ^s	Flood – 100 yr	Flood – 500 yr	Fixed HAZMAT 500m	Fixed HAZMAT 2,500 meter	Mobile HZMT Roads 500 METER	Mobile HZMT Roads 2,500 meter	Mobile HZMT Rails 500 METER	Mobile HZMT Rails 2,500 meter	Wildfire
McLaurin VFD	Emergency services center	X	X	X	X	X		X	X									X	X	X	Non-burnable
McLaurin/Dantzler VFD Station #2	Emergency services center	X	X	X	X	X		X	X												High
Merit Health Medical Group	Medical/health care offices	X	X	X	X	X		X	X								X	X			Non-burnable
Mississippi Power	Energy facility or system	X	X	X	X	X		X	X							X	X	X	X	X	Non-burnable
Mississippi Power Company	Energy facility or system	X	X	X	X	X		X	X							X	X	X		X	Non-burnable
Monroe Hall, LLC- Bedford Care Center	Hospital/Nursing Home	X	X	X	X	X		X	X							X	X	X		X	Non-burnable
MONTESSORI CHILDRENS HOUSE	School	X	X	X	X	X		X	X							X	X	X		X	Non-burnable
N R BURGER MIDDLE SCHOOL	School	X	X	X	X	X		X	X							X		X		X	High
NORTH FORREST ATTENDANCE CENTER	School	X	X	X	X	X		X	X									X			Moderate
North Forrest Elementary	School/Library	X	X	X	X	X		X	X									X			Moderate
North Forrest Elementary Safe Room	School Safe Room	X	X	X	X	X		X	X									X			Moderate
NORTH FORREST HIGH SCHOOL	School	X	X	X	X	X		X	X									X			Moderate
North Forrest High School Safe Room	School Safe Room	X	X	X	X	X		X	X									X			Moderate
North Forrest VFD	Fire Department	X	X	X	X	X		X	X							X				X	High
North Forrest VFD Station #1	Emergency	X	X	X	X	X		X	X							X				X	High

SECTION 6: VULNERABILITY ASSESSMENT

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	services center																				
North Forrest VFD Station #2	Emergency services center	X	X	X	X	X		X	X											X	High
Old Federal Building	Government offices /City Court	X	X	X	X	X		X	X							X	X	X	X	X	Non-burnable
Paul B. Johnson State Park	Other critical facility type	X	X	X	X	X		X	X									X			Water
PRESBYTERIAN CHRISTIAN SCHOOL	School	X	X	X	X	X	X	X	X									X		X	Low
RAWLS SPRINGS ATTENDANCE CENTER	School	X	X	X	X	X		X	X					X		X	X	X	X	X	High
Rawls Springs Utility District	Waste water control facility	X	X	X	X	X		X	X				X			X	X	X	X	X	Low
Rawls Springs VFD	Emergency services center	X	X	X	X	X		X	X								X	X		X	Moderate
Resinall Mississippi, Inc.	Hazardous materials facility	X	X	X	X	X		X	X						X	X		X	X	X	Moderate
ROWAN ELEMENTARY SCHOOL	School	X	X	X	X	X		X	X							X		X		X	Non-burnable
Sacred Heart School	School/Lbrary	X	X	X	X	X		X	X							X		X	X	X	Non-burnable
SACRED HEART SCHOOL	School	X	X	X	X	X		X	X							X	X	X	X	X	Non-burnable
Sam's Club #6503	Retail General	X	X	X	X	X		X	X								X	X			Non-burnable

SECTION 6: VULNERABILITY ASSESSMENT

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		Drought	Hailstorm	Hurricane and Tropical Storm	Lightning	Thunderstorm	Tornado	Winter Storm and Freeze	Earthquake	Landslide – Mod	Landslide- High	Dam and Levee Failure ^s	Flood – 100 yr	Flood – 500 yr	Fixed HAZMAT 500m	Fixed HAZMAT 2,500 meter	Mobile HZMT Roads 500 METER	Mobile HZMT Roads 2,500 meter	Mobile HZMT Rails 500 METER	Mobile HZMT Rails 2,500 meter	Wildfire
South MS Chapter of the American Red Cross	Transportation facility/ Emergency services center	X	X	X	X	X		X	X							X		X		X	Non-burnable
South MS Electric Power Association	Utility	X	X	X	X	X		X	X								X	X		X	Non-burnable
Southeast MS Rural Health Initiative, Inc.	Medical/health care offices	X	X	X	X	X		X	X							X		X		X	Non-burnable
Southern Bone and Joint Specialists	Medical/health care offices	X	X	X	X	X		X	X								X	X		X	High
Spire Energy	Utility	X	X	X	X	X		X	X							X	X	X	X	X	Non-burnable
THAMES ELEMENTARY SCHOOL	School	X	X	X	X	X		X	X							X		X		X	High
The Emergency Management District	Emergency services center	X	X	X	X	X	X	X	X								X	X		X	Moderate
U.S. Postal Service	Other critical facility type	X	X	X	X	X		X	X							X	X	X			High
U.S. Postal Service	Other critical facility type	X	X	X	X	X		X	X							X	X	X	X	X	Non-burnable
University of Southern Mississippi	School/Library	X	X	X	X	X		X	X							X		X	X	X	Non-burnable
University of Southern Mississippi Public Safety	Other critical facility type	X	X	X	X	X		X	X						X	X	X	X		X	Non-burnable
USM Physical Plant	Other critical facility type	X	X	X	X	X		X	X						X	X		X		X	Non-burnable
Walmart Supercenter #2717	Retail General	X	X	X	X	X		X	X								X	X		X	Non-burnable

SECTION 6: VULNERABILITY ASSESSMENT

		ATMOSPHERIC							GEOLOGIC			HYDROLOGIC			OTHER							
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Walmart Supercenter #916	Retail General	X	X	X	X	X		X	X								X	X			Non- burnable	
WOODLEY ELEMENTARY SCHOOL	School	X	X	X	X	X		X	X							X	X	X			Non- burnable	
Carnes VFD	Emergency services center	X	X	X	X	X		X	X												Low	
Carnes Volunteer Fire & Rescue Departmen	Fire Department	X	X	X	X	X		X	X												Low	
Barrontown Utility District	Water system facility	X	X	X	X	X		X	X												Low	
Bedford Care Center of Petal	Hospital/ Nursing Home	X	X	X	X	X		X	X					X		X		X		X	High	
Diversified CPC	Energy facility or system	X	X	X	X	X		X	X							X	X	X	X	X	Non- burnable	
Dixie Electric Power Association	Energy facility or system	X	X	X	X	X		X	X												Moderate	
Dixie Pipeline Company	Transportation facility	X	X	X	X	X		X	X					X	X	X	X	X	X	X	Non- burnable	
Eastabuchie Utility Association	Water system facility	X	X	X	X	X		X	X									X		X	Non- burnable	
Enterprise Products Operating LP	Hazardous materials facility	X	X	X	X	X		X	X				X			X	X	X	X	X	Non- burnable	
Forrest County District 3 Barn	Emergency Service/Repair	X	X	X	X	X		X	X												Low	
Lone Star NGL	Hazardous materials	X	X	X	X	X		X	X				X		X	X	X	X	X	X	Non- burnable	

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	facility																				
Macedonia VFD	Emergency services center	X	X	X	X	X		X	X												Low
Macedonia VFD Station #2	Emergency services center	X	X	X	X	X		X	X												High
Macedonia VFD Station #3	Emergency services center	X	X	X	X	X		X	X									X		X	Non-burnable
MidCoast Energy (Enbridge Petroleum)	Energy facility or system	X	X	X	X	X		X	X							X	X	X	X	X	Non-burnable
Petal City Hall	Government offices	X	X	X	X	X		X	X							X		X		X	Non-burnable
Petal City Police Dept	Police Station	X	X	X	X	X	X	X	X							X		X		X	Non-burnable
Petal City Public Works Dept.	Government offices	X	X	X	X	X		X	X				X			X	X	X	X	X	Moderate
Petal Civic Center	Emergency Shelter	X	X	X	X	X		X	X							X		X		X	Non-burnable
PETAL ELEMENTARY	School	X	X	X	X	X		X	X												Non-burnable
Petal Elementary School	Education	X	X	X	X	X		X	X												Non-burnable
Petal Fire Department	Fire Department	X	X	X	X	X	X	X	X							X		X		X	Moderate
Petal Fire Station #1	Emergency services center	X	X	X	X	X	X	X	X							X		X		X	Moderate
Petal Fire Station #2	Emergency services center	X	X	X	X	X		X	X							X		X		X	Non-burnable

SECTION 6: VULNERABILITY ASSESSMENT

		ATMOSPHERIC							GEOLOGIC			HYDROLOGIC			OTHER							
FACILITY NAME	FACILITY TYPE	Drought	Hailstorm	Hurricane and Tropical Storm	Lightning	Thunderstorm	Tornado	Winter Storm and Freeze	Earthquake	Landslide – Mod	Landslide- High	Dam and Levee Failure ⁵	Flood – 100 yr	Flood – 500 yr	Fixed HAZMAT 500m	Fixed HAZMAT 2,500 meter	Mobile HZMT Roads 500 METER	Mobile HZMT Roads 2,500 meter	Mobile HZMT Rails 500 METER	Mobile HZMT Rails 2,500 meter	Wildfire	
Petal Fire Station #3	Emergency services center	X	X	X	X	X		X	X												Non-burnable	
Petal Gas Storage	Energy facility or system	X	X	X	X	X		X	X							X	X	X	X	X	Non-burnable	
PETAL HIGH	School	X	X	X	X	X		X	X												Non-burnable	
Petal High School	Education	X	X	X	X	X		X	X												Non-burnable	
Petal High School Safe Room	School Safe Room	X	X	X	X	X		X	X												Non-burnable	
Petal Lift Station	Water system facility	X	X	X	X	X		X	X				X			X		X		X	High	
Petal Lift Station	Wastewater	X	X	X	X	X		X	X				X			X	X	X	X	X	High	
Petal Lift Station	Wastewater	X	X	X	X	X		X	X							X		X		X	High	
Petal Lift Station	Wastewater	X	X	X	X	X		X	X							X					High	
Petal Lift Station	Wastewater	X	X	X	X	X	X	X	X					X			X	X	X	X	High	
Petal Lift Station	Wastewater	X	X	X	X	X		X	X							X		X		X	High	
Petal Lift Station	Wastewater	X	X	X	X	X		X	X							X					High	
Petal Lift Station	Water system facility	X	X	X	X	X		X	X							X		X		X	Low	
Petal Lift Station	Wastewater	X	X	X	X	X		X	X							X					Low	
Petal Lift Station	Wastewater	X	X	X	X	X		X	X							X				X	Moderate	
Petal Lift Station	Wastewater	X	X	X	X	X		X	X				X			X		X		X	Moderate	
Petal Lift Station	Wastewater	X	X	X	X	X		X	X							X					Non-burnable	

SECTION 6: VULNERABILITY ASSESSMENT

FACILITY NAME	FACILITY TYPE	ATMOSPHERIC							GEOLOGIC			HYDROLOGIC			OTHER						
		Drought	Hailstorm	Hurricane and Tropical Storm	Lightning	Thunderstorm	Tornado	Winter Storm and Freeze	Earthquake	Landslide – Mod	Landslide- High	Dam and Levee Failure ⁵	Flood – 100 yr	Flood – 500 yr	Fixed HAZMAT 500m	Fixed HAZMAT 2,500 meter	Mobile HZMT Roads 500 METER	Mobile HZMT Roads 2,500 meter	Mobile HZMT Rails 500 METER	Mobile HZMT Rails 2,500 meter	Wildfire
Petal Lift Station	Wastewater	X	X	X	X	X		X	X					X		X	X	X	X	X	Non-burnable
Petal Lift Station	Wastewater	X	X	X	X	X		X	X				X			X	X	X	X	X	Non-burnable
Petal Lift Station	Wastewater	X	X	X	X	X		X	X				X			X	X	X	X	X	Non-burnable
Petal Lift Station	Wastewater	X	X	X	X	X		X	X												High
Petal Lift Station	Wastewater	X	X	X	X	X		X	X												High
Petal Lift Station	Wastewater	X	X	X	X	X		X	X												High
Petal Lift Station	Wastewater	X	X	X	X	X		X	X												High
Petal Lift Station	Wastewater	X	X	X	X	X		X	X												High
Petal Lift Station	Wastewater	X	X	X	X	X		X	X												High
Petal Lift Station	Wastewater	X	X	X	X	X		X	X												High
Petal Lift Station	Wastewater	X	X	X	X	X		X	X												High
Petal Lift Station	Wastewater	X	X	X	X	X		X	X												High
Petal Lift Station	Wastewater	X	X	X	X	X		X	X												High
Petal Lift Station	Wastewater	X	X	X	X	X		X	X												High
Petal Lift Station	Wastewater	X	X	X	X	X		X	X												High
Petal Lift Station	Wastewater	X	X	X	X	X		X	X												High
Petal Lift Station	Wastewater	X	X	X	X	X		X	X												High
Petal Lift Station	Wastewater	X	X	X	X	X		X	X												High
Petal Lift Station	Wastewater	X	X	X	X	X		X	X												High

SECTION 6: VULNERABILITY ASSESSMENT

		ATMOSPHERIC							GEOLOGIC			HYDROLOGIC			OTHER							
FACILITY NAME	FACILITY TYPE	Drought	Hailstorm	Hurricane and Tropical Storm	Lightning	Thunderstorm	Tornado	Winter Storm and Freeze	Earthquake	Landslide – Mod	Landslide- High	Dam and Levee Failure ⁵	Flood – 100 yr	Flood – 500 yr	Fixed HAZMAT 500m	Fixed HAZMAT 2,500 meter	Mobile HZMT Roads 500 METER	Mobile HZMT Roads 2,500 meter	Mobile HZMT Rails 500 METER	Mobile HZMT Rails 2,500 meter	Wildfire	
Petal Lift Station	Wastewater	X	X	X	X	X		X	X												High	
Petal Lift Station	Wastewater	X	X	X	X	X		X	X												High	
Petal Lift Station	Wastewater	X	X	X	X	X		X	X												High	
Petal Lift Station	Wastewater	X	X	X	X	X		X	X												High	
Petal Lift Station	Wastewater	X	X	X	X	X		X	X												High	
Petal Lift Station	Wastewater	X	X	X	X	X		X	X												High	
Petal Lift Station	Wastewater	X	X	X	X	X		X	X												High	
Petal Lift Station	Water system facility	X	X	X	X	X		X	X												Low	
Petal Lift Station	Wastewater	X	X	X	X	X		X	X												Low	
Petal Lift Station	Wastewater	X	X	X	X	X		X	X												Low	
Petal Lift Station	Wastewater	X	X	X	X	X		X	X												Low	
Petal Lift Station	Wastewater	X	X	X	X	X		X	X												Low	
Petal Lift Station	Wastewater	X	X	X	X	X		X	X												Low	
Petal Lift Station	Wastewater	X	X	X	X	X		X	X												Moderate	
Petal Lift Station	Wastewater	X	X	X	X	X		X	X												Moderate	
Petal Lift Station	Wastewater	X	X	X	X	X		X	X												Moderate	
Petal Lift Station	Wastewater	X	X	X	X	X		X	X												Moderate	
Petal Lift Station	Wastewater	X	X	X	X	X		X	X												Non- burnable	

SECTION 6: VULNERABILITY ASSESSMENT

		ATMOSPHERIC							GEOLOGIC			HYDROLOGIC			OTHER							
FACILITY NAME	FACILITY TYPE	Drought	Hailstorm	Hurricane and Tropical Storm	Lightning	Thunderstorm	Tornado	Winter Storm and Freeze	Earthquake	Landslide – Mod	Landslide- High	Dam and Levee Failure ⁵	Flood – 100 yr	Flood – 500 yr	Fixed HAZMAT 500m	Fixed HAZMAT 2,500 meter	Mobile HZMT Roads 500 METER	Mobile HZMT Roads 2,500 meter	Mobile HZMT Rails 500 METER	Mobile HZMT Rails 2,500 meter	Wildfire	
Petal Lift Station	Wastewater	X	X	X	X	X	X	X	X												Non- burnable	
Petal Lift Station	Wastewater	X	X	X	X	X		X	X									X		X	Non- burnable	
Petal Lift Station	Wastewater	X	X	X	X	X		X	X												Non- burnable	
Petal Lift Station	Wastewater	X	X	X	X	X		X	X												Water	
Petal Lift Station	Wastewater	X	X	X	X	X		X	X												Water	
Petal Lift Station	Wastewater	X	X	X	X	X		X	X												Water	
Petal Lower Elementary Safe Room	School Safe Room	X	X	X	X	X		X	X												Non- burnable	
PETAL MIDDLE SCHOOL	School	X	X	X	X	X	X	X	X						X	X		X		X	Non- burnable	
Petal Middle School Safe Room	School Safe Room	X	X	X	X	X	X	X	X						X	X		X		X	Non- burnable	
Petal Plant A- Water Well	Water system facility	X	X	X	X	X		X	X							X		X		X	High	
Petal Plant B- Water Well	Water	X	X	X	X	X	X	X	X						X	X		X		X	Non- burnable	
Petal Plant C- Water Well and Tank	Water	X	X	X	X	X		X	X												Moderate	
Petal Police Department	Emergency services center	X	X	X	X	X	X	X	X							X		X		X	Non- burnable	
Petal Post Office	Government offices	X	X	X	X	X	X	X	X						X	X		X		X	Non- burnable	
Petal Primary School	School Safe Room	X	X	X	X	X		X	X												Low	

SECTION 6: VULNERABILITY ASSESSMENT

FACILITY NAME	FACILITY TYPE	ATMOSPHERIC							GEOLOGIC			HYDROLOGIC			OTHER						
		Drought	Hailstorm	Hurricane and Tropical Storm	Lightning	Thunderstorm	Tornado	Winter Storm and Freeze	Earthquake	Landslide – Mod	Landslide- High	Dam and Levee Failure ^s	Flood – 100 yr	Flood – 500 yr	Fixed HAZMAT 500m	Fixed HAZMAT 2,500 meter	Mobile HZMT Roads 500 METER	Mobile HZMT Roads 2,500 meter	Mobile HZMT Rails 500 METER	Mobile HZMT Rails 2,500 meter	Wildfire
Petal Primary School Safe Room	School Safe Room	X	X	X	X	X		X	X												Low
Petal Stand Pipe (for Plants A & B)	Wastewater	X	X	X	X	X		X	X							X		X		X	High
Petal Upper Elementary School Safe Room	School Safe Room	X	X	X	X	X		X	X							X		X		X	Moderate
RUNNELSTOWN ELEMENTARY SCHOOL	School	X	X	X	X	X		X	X									X			High
Sunrise Utilitiy	Emergency services center	X	X	X	X	X		X	X												Non-burnable
Sunrise VFD	Emergency services center	X	X	X	X	X		X	X												Non-burnable
Sunrise VFD Station #2	Emergency services center	X	X	X	X	X		X	X												High
Targa	Hazardous materials facility	X	X	X	X	X		X	X				X			X	X	X	X	X	Non-burnable
W L SMITH	School	X	X	X	X	X		X	X							X		X		X	Moderate
Walmart Supercenter #887	Retail General	X	X	X	X	X		X	X				X								Non-burnable

SECTION 7

CAPABILITY ASSESSMENT

This section of the Plan discusses the capability of the MEMA District 8 Region to implement hazard mitigation activities. It consists of the following four subsections:

- ❖ 7.1 What is a Capability Assessment?
- ❖ 7.2 Conducting the Capability Assessment
- ❖ 7.3 Capability Assessment Findings
- ❖ 7.4 Linking the Capability Assessment

7.1 WHAT IS A CAPABILITY ASSESSMENT

The purpose of conducting a capability assessment is to determine the ability of a local jurisdiction to implement a comprehensive mitigation strategy and to identify potential opportunities for establishing or enhancing specific mitigation policies, programs, or projects¹. As in any planning process, it is important to try to establish which goals, objectives, and/or actions are feasible based on an understanding of the organizational capacity of those agencies or departments tasked with their implementation. A capability assessment helps to determine which mitigation actions are practical, and likely to be implemented over time, given a local government's planning and regulatory framework, level of administrative and technical support, amount of fiscal resources, and current political climate.

A capability assessment has two primary components: 1) an inventory of a local jurisdiction's relevant plans, ordinances, or programs already in place and 2) an analysis of its capacity to carry them out. Careful examination of local capabilities will detect any existing gaps, shortfalls, or weaknesses with ongoing government activities that could hinder proposed mitigation activities and possibly exacerbate community hazard vulnerability. A capability assessment also highlights the positive mitigation measures already in place or being implemented at the local government level, which should continue to be supported and enhanced through future mitigation efforts.

The capability assessment completed for the MEMA District 8 Region serves as a critical planning step and an integral part of the foundation for designing an effective hazard mitigation strategy. Coupled with the Risk Assessment, the Capability Assessment helps identify and target meaningful mitigation actions for incorporation in the Mitigation Strategy portion of the Hazard Mitigation Plan. It not only helps establish the goals and objectives for the region to pursue under this Plan, but it also ensures that those goals and objectives are realistically achievable under given local conditions.

¹ While the Final Rule for implementing the Disaster Mitigation Act of 2000 does not require a local capability assessment to be completed for local hazard mitigation plans, it is a critical step in developing a mitigation strategy that meets the needs of the region while taking into account their own unique abilities. The Rule does state that a community's mitigation strategy should be "based on existing authorities, policies, programs and resources, and its ability to expand on and improve these existing tools" (44 CFR, Part 201.6(c)(3)).

7.2 CONDUCTING THE CAPABILITY ASSESSMENT

In order to facilitate the inventory and analysis of local government capabilities within the MEMA District 8 counties, each participating jurisdiction took part in a mini workshop to go over any updates or changes from the previous capability assessment. Discussions in the mini workshop focused on a variety of capability indicators, such as existing local plans, policies, programs, or ordinances that contribute to and/or hinder the region's ability to implement hazard mitigation actions. Other indicators included information related to the region's fiscal, administrative, and technical capabilities, such as access to local budgetary and personnel resources for mitigation purposes. The current political climate, an important consideration for any local planning or decision-making process, was also evaluated with respect to hazard mitigation.

At a minimum, discussion results provide an extensive inventory of existing local plans, ordinances, programs, and resources that are in place or under development in addition to their overall effect on hazard loss reduction. However, results can also serve to identify gaps, weaknesses, or conflicts that counties and local jurisdictions can recast as opportunities for specific actions to be proposed as part of the hazard mitigation strategy.

7.3 CAPABILITY ASSESSMENT FINDINGS

The findings of the capability assessment are summarized in this Plan to provide insight into the relevant capacity of the MEMA District 8 Region to implement hazard mitigation activities.

7.3.1 Planning and Regulatory Capability

Planning and regulatory capability is based on the implementation of plans, ordinances, and programs that demonstrate a local jurisdiction's commitment to guiding and managing growth, development, and redevelopment in a responsible manner while maintaining the general welfare of the community. It includes emergency response and mitigation planning, comprehensive land use planning, and transportation planning; the enforcement of zoning or subdivision ordinances and building codes that regulate how land is developed and structures are built; as well as protecting environmental, historic, and cultural resources in the community. Although some conflicts can arise, these planning initiatives generally present significant opportunities to integrate hazard mitigation principles and practices into the local decision-making process.

This assessment is designed to provide a general overview of the key planning and regulatory tools and programs that are in place or under development for the MEMA District 8 Region along with their potential effect on loss reduction. This information will help identify opportunities to address existing gaps, weaknesses, or conflicts with other initiatives in addition to integrating the implementation of this Plan with existing planning mechanisms where appropriate.

Table 7.1 provides a summary of the relevant local plans, ordinances, and programs already in place or under development for the MEMA District 8 Region. A checkmark (✓) indicates that the given item is currently in place and being implemented. An asterisk (*) indicates that the given item is currently being developed for future implementation. Each of these local plans, ordinances, and programs should be considered available mechanisms for incorporating the requirements of the MEMA District 8 Regional Hazard Mitigation Plan.

TABLE 7.1: RELEVANT PLANS, ORDINANCES, AND PROGRAMS

Planning / Regulatory Tool	COVINGTON COUNTY	Collins	Mount Olive	Seminary	FORREST COUNTY	Hattiesburg	Petal	JEFFERSON DAVIS COUNTY	Bassfield	Prentiss	JONES COUNTY	Ellisville	Laurel	Sandersville	Soso	MARION COUNTY	Columbia	PERRY COUNTY	Beaumont	New Augusta	Richton	WAYNE COUNTY	State Line	Waynesboro
Hazard Mitigation Plan	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Comprehensive Land Use Plan			✓			✓	✓		✓	✓		✓	✓				✓			✓	✓			✓
Floodplain Management Plan						✓																		
Open Space Management Plan (or Parks & Rec/Greenway Plan)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Stormwater Management Plan/Ordinance					✓	✓	✓						✓											✓
Natural Resource Protection Plan																								
Flood Response Plan																								
Emergency Operations Plan	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Continuity of Operations Plan	✓							✓			✓	✓	✓	✓	✓	✓		✓				✓	✓	✓
Evacuation Plan																						✓	✓	✓
Disaster Recovery Plan																								
Capital Improvements Plan													✓											✓
Economic Development Plan	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Historic Preservation Plan																								
Flood Damage Prevention Ordinance	✓	✓	✓	✓	✓	✓	✓	✓		✓	✓	✓	✓			✓	✓	✓	✓	✓	✓	✓	✓	✓
Zoning Ordinance		✓	✓	✓		✓	✓		✓	✓		✓	✓				✓			✓	✓			✓
Subdivision Ordinance		✓	✓		✓	✓	✓		✓	✓	✓	✓	✓			✓	✓			✓	✓			✓
Unified Development Ordinance						✓																		

Planning / Regulatory Tool	COVINGTON COUNTY	Collins	Mount Olive	Seminary	FORREST COUNTY	Hattiesburg	Petal	JEFFERSON DAVIS COUNTY	Bassfield	Prentiss	JONES COUNTY	Ellisville	Laurel	Sandersville	Soso	MARION COUNTY	Columbia	PERRY COUNTY	Beaumont	New Augusta	Righton	WAYNE COUNTY	State Line	Waynesboro
Post-Disaster Redevelopment Ordinance																								✓
Building Code		✓		✓		✓	✓		✓	✓		✓	✓				✓	✓	✓	✓	✓			✓
Fire Code						✓	✓		✓	✓			✓											✓
National Flood Insurance Program (NFIP)	✓	✓	✓	✓	✓	✓	✓	✓		✓	✓	✓	✓			✓	✓	✓	✓	✓	✓	✓	✓	✓
NFIP Community Rating System						✓		✓		✓														

A more detailed discussion on the region's planning and regulatory capability follows.

7.3.2 Emergency Management

Hazard mitigation is widely recognized as one of the four primary phases of emergency management. The three other phases include preparedness, response, and recovery. In reality, each phase is interconnected with hazard mitigation, as **Figure 7.1** suggests. Opportunities to reduce potential losses through mitigation practices are most often implemented before disaster strikes, such as the elevation of flood prone structures or the continuous enforcement of policies that prevent and regulate development that is vulnerable to hazards due to its location, design, or other characteristics. Mitigation opportunities will also be presented during immediate preparedness or response activities, such as installing storm shutters in advance of a hurricane, and certainly during the long-term recovery and redevelopment process following a hazard event.

FIGURE 7.1: THE FOUR PHASES OF EMERGENCY MANAGEMENT



Planning for each phase is a critical part of a comprehensive emergency management program and a key to the successful implementation of hazard mitigation actions. As a result, the Capability Assessment Survey asked several questions across a range of emergency management plans in order to assess the MEMA District 8 Region's willingness to plan and their level of technical planning proficiency.

Hazard Mitigation Plan: A hazard mitigation plan represents a community's blueprint for how it intends to reduce the impact of natural and human-caused hazards on people and the built environment. The essential elements of a hazard mitigation plan include a risk assessment, capability assessment, and mitigation strategy.

- ❖ Each of the seven counties participating in this multi-jurisdictional plan has previously adopted a hazard mitigation plan. Each participating municipality was included in its respective county's plan.

Disaster Recovery Plan: A disaster recovery plan serves to guide the physical, social, environmental, and economic recovery and reconstruction process following a disaster. In many instances, hazard mitigation principles and practices are incorporated into local disaster recovery plans with the intent of capitalizing on opportunities to break the cycle of repetitive disaster losses. Disaster recovery plans can also lead to the preparation of disaster redevelopment policies and ordinances to be enacted following a hazard event.

- ❖ None of the counties or municipalities participating in this multi-jurisdictional plan has adopted a disaster recovery plan. The jurisdictions should consider developing a plan to guide the recovery and reconstruction process following a disaster.

Emergency Operations Plan: An emergency operations plan outlines responsibilities and the means by which resources are deployed during and following an emergency or disaster.

- ❖ Each of the seven counties participating in this multi-jurisdictional plan maintains a comprehensive emergency management plan through its respective County Emergency Management Agency. Each participating municipality is covered by its respective county's plan.

Continuity of Operations Plan: A continuity of operations plan establishes a chain of command, line of succession, and plans for backup or alternate emergency facilities in case of an extreme emergency or disaster event.

- ❖ Covington, Jefferson Davis, Jones, Marion Perry and Wayne Counties have adopted Continuity of Operations plans since that last mitigation plan update.

7.3.3 General Planning

The implementation of hazard mitigation activities often involves agencies and individuals beyond the emergency management profession. Stakeholders may include local planners, public works officials, economic development specialists, and others. In many instances, concurrent local planning efforts will help to achieve or complement hazard mitigation goals, even though they are not designed as such. Therefore, the Capability Assessment Survey also asked questions regarding general planning capabilities and the degree to which hazard mitigation is integrated into other on-going planning efforts in the MEMA District 8 Region.

Comprehensive Land Use Plan: A comprehensive land use plan establishes the overall vision for what a community wants to be and serves as a guide for future governmental decision making. Typically a comprehensive plan contains sections on demographic conditions, land use, transportation elements, and community facilities. Given the broad nature of the plan and its regulatory standing in many communities, the integration of hazard mitigation measures into the comprehensive plan can enhance the likelihood of achieving risk reduction goals, objectives, and actions.

- ❖ None of the counties participating in this multi-jurisdictional plan has adopted comprehensive land use plans.
- ❖ Several of the participating municipalities adopted community development and comprehensive plans in the 1970s, including Mount Olive, Bassfield, Prentiss, Ellisville, Laurel, Columbia, New Augusta, Hattiesburg, Petal and Richton.
- ❖ The City of Waynesboro adopted a city comprehensive plan in 1998. The Board of Alderman discussed updating or developing a new comprehensive plan in 2010.

Capital Improvements Plan: A capital improvements plan guides the scheduling of spending on public improvements. A capital improvements plan can serve as an important mechanism for guiding future development away from identified hazard areas. Limiting public spending in hazardous areas is one of the most effective long-term mitigation actions available to local governments.

- ❖ None of the counties participating in this multi-jurisdictional plan have adopted a capital improvements plan.
- ❖ The Cities of Laurel and Waynesboro are the only participating municipalities with a capital improvement plan in place.

Historic Preservation Plan: A historic preservation plan is intended to preserve historic structures or districts within a community. An often overlooked aspect of the historic preservation plan is the assessment of buildings and sites located in areas subject to natural hazards and the identification of ways to reduce future damages. This may involve retrofitting or relocation techniques that account for the need to protect buildings that do not meet current building standards or are within a historic district that cannot easily be relocated out of harm's way.

- ❖ None of the counties or municipalities participating in this multi-jurisdictional plan has a historic preservation plan.

Zoning Ordinance: Zoning represents the primary means by which land use is controlled by local governments. As part of a community's police power, zoning is used to protect the public health, safety, and welfare of those in a given jurisdiction that maintains zoning authority. A zoning ordinance is the mechanism through which zoning is typically implemented. Since zoning regulations enable municipal governments to limit the type and density of development, a zoning ordinance can serve as a powerful tool when applied in identified hazard areas.

- ❖ None of the counties participating in this multi-jurisdictional plan has adopted zoning ordinances.
- ❖ Several of the participating municipalities adopted zoning ordinances in the 1970s and 1980s, including Collins, Mount Olive, Bassfield, Prentiss, Ellisville, Laurel, Columbia, New Augusta, Seminary, Hattiesburg, Petal and Richton. Waynesboro also adopted a zoning ordinance more recently in 1998.

Subdivision Ordinance: A subdivision ordinance is intended to regulate the development of residential, commercial, industrial, or other uses, including associated public infrastructure, as land is subdivided into buildable lots for sale or future development. Subdivision design that accounts for natural hazards can dramatically reduce the exposure of future development.

- ❖ Jones County and the Cities of Ellisville and Laurel have each adopted subdivision regulations.
- ❖ Forrest County and the Cities of Hattiesburg and Petal have each adopted subdivision regulations.
- ❖ Marion County adopted rather extensive subdivision regulations in 2005. The City of Columbia also has subdivision regulations that were adopted in 1969 and amended in 1980.
- ❖ Several additional participating municipalities adopted subdivision ordinances in the 1960s and 1970s, including Collins, Mount Olive, Bassfield, Prentiss, New Augusta, and Richton. Waynesboro also adopted subdivision regulations concurrently with its zoning ordinance more recently in 1998.

Building Codes, Permitting, and Inspections: Building codes regulate construction standards. In many communities, permits, and inspections are required for new construction. Decisions regarding the adoption of building codes (that account for hazard risk), the type of permitting process required both before and after a disaster, and the enforcement of inspection protocols all affect the level of hazard risk faced by a community.

- ❖ Mississippi adopted the 2006 complete family of International Codes (I-Codes) as the minimum codes for its statewide building code in 2011. This means that if a jurisdiction chooses to adopt a code or update their current codes they must be at a minimum one or more of the 2006 family of I-Codes. Additionally, all state buildings, leased or owned, must meet the requirements set forth in the 1997 Standard Building Code.
- ❖ Jones County, Perry County, and Wayne County have adopted building codes.
- ❖ The following participating municipalities have also adopted building codes: Collins, Seminary, Bassfield, Prentiss, Ellisville, Laurel, Columbia, Beaumont, New Augusta, Richton, Hattiesburg, Petal and Waynesboro.

The adoption and enforcement of building codes by local jurisdictions is routinely assessed through the Building Code Effectiveness Grading Schedule (BCEGS) program developed by the Insurance Services Office, Inc. (ISO).² In Mississippi, the Mississippi State Rating Bureau assesses the building codes in effect in a particular community and how the community enforces its building codes *with special emphasis on mitigation of losses from natural hazards*. The results of BCEGS assessments are routinely provided to ISO's member private insurance companies, which in turn may offer ratings credits for new buildings constructed in communities with strong BCEGS classifications. The concept is that communities with well-enforced, up-to-date codes should experience fewer disaster-related losses and, as a result, should have lower insurance rates.

In conducting the assessment, ISO collects information related to personnel qualification and continuing education as well as the number of inspections performed per day. This type of information combined with local building codes is used to determine a grade for that jurisdiction. The grades range from 1 to 10 with a BCEGS grade of 1 representing exemplary commitment to building code enforcement and a grade of 10 indicating less than minimum recognized protection.

² Participation in BCEGS is voluntary and may be declined by local governments if they do not wish to have their local building codes evaluated.

7.3.4 Floodplain Management

Flooding represents the greatest natural hazard facing the nation. At the same time, the tools available to reduce the impacts associated with flooding are among the most developed when compared to other hazard-specific mitigation techniques. In addition to approaches that cut across hazards such as education, outreach, and the training of local officials, the *National Flood Insurance Program* (NFIP) contains specific regulatory measures that enable government officials to determine where and how growth occurs relative to flood hazards. Participation in the NFIP is voluntary for local governments; however, program participation is strongly encouraged by FEMA as a first step for implementing and sustaining an effective hazard mitigation program. It is therefore used as part of this assessment as a key indicator for measuring local capability.

In order for a county or municipality to participate in the NFIP, they must adopt a local flood damage prevention ordinance that requires jurisdictions to follow established minimum building standards in the floodplain. These standards require that all new buildings and substantial improvements to existing buildings will be protected from damage by a 100-year flood event and that new development in the floodplain will not exacerbate existing flood problems or increase damage to other properties.

A key service provided by the NFIP is the mapping of identified flood hazard areas. Once completed, the Flood Insurance Rate Maps (FIRMs) are used to assess flood hazard risk, regulate construction practices, and set flood insurance rates. FIRMs are an important source of information to educate residents, government officials, and the private sector about the likelihood of flooding in their community.

Table 7.2 provides NFIP policy and claim information for each participating jurisdiction in the MEMA District 8 Region. Each of the jurisdictions that are participating in the development of this plan that also participate in the NFIP are committed to maintaining and enforcing their floodplain management ordinances and regulating new development in floodplains.

TABLE 7.2: NFIP POLICY AND CLAIM INFORMATION

Jurisdiction	Date Joined NFIP	Current Effective Map Date	NFIP Policies in Force	Insurance in Force	Closed Claims	Total Payments to Date
COVINGTON COUNTY†	12/15/90	4/5/10	63	\$7,483,100	27	\$357,325
Collins	8/5/85	4/5/10(M)	16	\$3,121,600	18	\$124,503
Mount Olive	9/15/89	4/5/10	1	\$54,200	3	\$46,982
Seminary	4/5/10	4/5/10(M)	0	\$0	0	\$0
FORREST COUNTY	12/17/10	12/17/10(M)	7	\$762,600	0	\$0
Hattiesburg	--	--	--	--	--	--
Petal	12/17/10	12/17/10(M)	0	\$0	2	\$4,613
JEFFERSON DAVIS COUNTY†	12/17/10	12/17/10(M)	7	\$762,600	0	\$0

SECTION 7: CAPABILITY ASSESSMENT

Jurisdiction	Date Joined NFIP	Current Effective Map Date	NFIP Policies in Force	Insurance in Force	Closed Claims	Total Payments to Date
Bassfield*	--	--	--	--	--	--
Prentiss	1/1/86	12/17/10(M)	0	\$0	2	\$4,613
JONES COUNTY	2/16/90	9/29/10	133	\$17,174,300	28	\$237,123
Ellisville	9/30/77	9/29/10	24	\$2,281,200	5	\$46,027
Laurel	9/15/77	9/29/10	254	\$30,415,800	75	\$398,815
Sandersville*	--	--	--	--	--	--
Soso*	--	--	--	--	--	--
MARION COUNTY†	9/28/79	7/18/11	189	\$29,435,100	248	\$2,337,509
Columbia	9/28/79	7/18/11	197	\$27,315,800	303	\$3,612,752
PERRY COUNTY†	9/1/87	12/16/11	86	\$10,072,300	38	\$131,996
Beaumont	8/16/88	12/16/11	11	\$3,209,400	16	\$32,703
New Augusta	4/2/86	12/16/11	10	\$804,800	12	\$51,683
Richton	4/15/86	12/16/11(M)	4	\$553,000	1	\$42,415
WAYNE COUNTY†	8/16/88	7/18/11	44	\$6,960,900	6	\$117,636
State Line	8/19/85	7/18/11(M)	1	\$22,900	1	\$6,924
Waynesboro	8/16/88	7/18/11	32	\$3,136,500	17	\$134,036

†Includes unincorporated areas of county only

*Community does not participate in the NFIP

(M) – No Elevation Determined, All Zone A, C and X

Source: NFIP Community Status information as of 3/31/13; NFIP claims and policy information as of 5/15/13

Community Rating System: An additional indicator of floodplain management capability is the active participation of local jurisdictions in the Community Rating System (CRS). The CRS is an incentive-based program that encourages counties and municipalities to undertake defined flood mitigation activities that go beyond the minimum requirements of the NFIP by adding extra local measures to provide protection from flooding. All of the 18 creditable CRS mitigation activities are assigned a range of point values. As points are accumulated and reach identified thresholds, communities can apply for an improved CRS class rating. Class ratings, which range from 10 to 1, are tied to flood insurance premium reductions as shown in **Table 7.3**. As class rating improves (the lower the number the better), the percent reduction in flood insurance premiums for NFIP policyholders in that community increases.

TABLE 7.3: CRS PREMIUM DISCOUNTS, BY CLASS

CRS Class	Premium Reduction
1	45%
2	40%
3	35%
4	30%
5	25%
6	20%
7	15%
8	10%
9	5%
10	0

Source: FEMA

Community participation in the CRS is voluntary. Any community that is in full compliance with the rules and regulations of the NFIP may apply to FEMA for a CRS classification better than class 10. The CRS application process has been greatly simplified over the past several years based on community comments. Changes were made with the intent to make the CRS more user-friendly and make extensive technical assistance available for communities who request it.

- ❖ Jefferson Davis County and the City of Prentise participate in the CRS as well as the City of Hattiesburg. Participation in the CRS program should be considered as a mitigation action by the jurisdictions currently participating in the NFIP. The program would be most beneficial to Jones County, the City of Laurel, Marion County, and the City of Columbia, which each have over 100 NFIP policies in force.

Flood Damage Prevention Ordinance: A flood damage prevention ordinance establishes minimum building standards in the floodplain with the intent to minimize public and private losses due to flood conditions.

- ❖ All communities participating in the NFIP are required to adopt a local flood damage prevention ordinance. All counties and municipalities participating in this hazard mitigation plan, with the exception of Bassfield, Sandersville, and Soso, also participate in the NFIP and they all have adopted flood damage prevention ordinances.

Floodplain Management Plan: A floodplain management plan (or a flood mitigation plan) provides a framework for action regarding corrective and preventative measures to reduce flood-related impacts.

- ❖ The City of Hattiesburg is the only participating municipality that has adopted a floodplain management plan to help prevent damages associated with flooding and flood loss.

Open Space Management Plan: An open space management plan is designed to preserve, protect, and restore largely undeveloped lands in their natural state and to expand or connect areas in the public domain such as parks, greenways, and other outdoor recreation areas. In many instances, open space management practices are consistent with the goals of reducing hazard losses, such as the preservation of wetlands or other flood-prone areas in their natural state in perpetuity.

- ❖ All of the participating counties or municipalities are included in the Southern Mississippi Planning and Development District (SMPDD) Regional Open Space Plan that was written in 1973.

Stormwater Management Plan: A stormwater management plan is designed to address flooding associated with stormwater runoff. The stormwater management plan is typically focused on design and construction measures that are intended to reduce the impact of more frequently occurring minor urban flooding.

- ❖ Forrest County, Cities of Hattiesburg, Petal and Waynesboro have adopted a stormwater management plan or ordinance.
- ❖ The City of Laurel adopted a stormwater detention requirements ordinance in 2000.

7.3.6 Administrative and Technical Capability

The ability of a local government to develop and implement mitigation projects, policies, and programs is directly tied to its ability to direct staff time and resources for that purpose. Administrative capability can be evaluated by determining how mitigation-related activities are assigned to local departments and if there are adequate personnel resources to complete these activities. The degree of intergovernmental coordination among departments will also affect administrative capability for the implementation and success of proposed mitigation activities.

Technical capability can generally be evaluated by assessing the level of knowledge and technical expertise of local government employees, such as personnel skilled in using Geographic Information Systems (GIS) to analyze and assess community hazard vulnerability. The Capability Assessment Survey was used to capture information on administrative and technical capability through the identification of available staff and personnel resources.

Table 7.4 provides a summary of the Capability Assessment Survey results for the MEMA District 8 Region with regard to relevant staff and personnel resources. A checkmark (✓) indicates the presence of a staff member(s) in that jurisdiction with the specified knowledge or skill.

TABLE 7.4: RELEVANT STAFF / PERSONNEL RESOURCES

Staff / Personnel Resource	COVINGTON COUNTY	Collins	Mount Olive	Seminary	FORREST COUNTY	Hattiesburg	Petal	JEFFERSON DAVIS COUNTY	Bassfield	Prentiss	JONES COUNTY	Ellisville	Laurel	Sandersville	Soso	MARION COUNTY	Columbia	PERRY COUNTY	Beaumont	New Augusta	Richton	WAYNE COUNTY	State Line	Waynesboro
Planners with knowledge of land development / land management practices					✓	✓	✓				✓		✓					✓						

SECTION 7: CAPABILITY ASSESSMENT

Staff / Personnel Resource	COVINGTON COUNTY	Collins	Mount Olive	Seminary	FORREST COUNTY	Hattiesburg	Petal	JEFFERSON DAVIS COUNTY	Bassfield	Prentiss	JONES COUNTY	Ellisville	Laurel	Sandersville	Soso	MARION COUNTY	Columbia	PERRY COUNTY	Beaumont	New Augusta	Richton	WAYNE COUNTY	State Line	Waynesboro
Engineers or professionals trained in construction practices related to buildings and/or infrastructure	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Planners or engineers with an understanding of natural and/or human-caused hazards	✓				✓	✓	✓				✓	✓	✓	✓	✓			✓	✓			✓	✓	✓
Emergency Manager	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Floodplain Manager	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓			✓	✓	✓	✓	✓	✓	✓		✓
Land Surveyors					✓	✓	✓											✓				✓	✓	✓
Scientists familiar with the hazards of the community	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Staff with education or expertise to assess the community's vulnerability to hazards	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Personnel skilled in GIS and/or HAZUS					✓	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Resource development staff or grant writers	✓	✓	✓	✓				✓	✓	✓	✓							✓						

Credit for having a floodplain manager was given to those jurisdictions that have a flood damage prevention ordinance, and therefore an appointed floodplain administrator, regardless of whether the appointee was dedicated solely to floodplain management. Credit was given for having a scientist familiar with the hazards of the community if a jurisdiction has a Cooperative Extension Service or Soil and Water Conservation Department. Credit was also given for having staff with education or expertise to assess the community's vulnerability to hazards if a staff member from the jurisdiction was a participant on the existing hazard mitigation plan's planning committee.

7.3.7 Fiscal Capability

The ability of a local government to take action is often closely associated with the amount of money available to implement policies and projects. This may take the form of outside grant funding awards or locally-based revenue and financing. The costs associated with mitigation policy and project implementation vary widely. In some cases, policies are tied primarily to staff time or administrative costs associated with the creation and monitoring of a given program. In other cases, direct expenses are linked to an actual project, such as the acquisition of flood-prone homes, which can require a substantial commitment from local, state, and federal funding sources.

The Capability Assessment Survey was used to capture information on the region's fiscal capability through the identification of locally available financial resources.

Table 7.5 provides a summary of the results for the MEMA District 8 Region with regard to relevant fiscal resources. A checkmark (✓) indicates that the given fiscal resource is locally available for hazard mitigation purposes (including match funds for state and federal mitigation grant funds) according to the previous county hazard mitigation plans.

TABLE 7.5: RELEVANT FISCAL RESOURCES

Fiscal Tool / Resource	COVINGTON COUNTY	Collins	Mount Olive	Seminary	FORREST COUNTY	Hattiesburg	Petal	JEFFERSON DAVIS COUNTY	Bassfield	Prentiss	JONES COUNTY	Ellisville	Laurel	Sandersville	Soso	MARION COUNTY	Columbia	PERRY COUNTY	Beaumont	New Augusta	Richton	WAYNE COUNTY	State Line	Waynesboro
Capital Improvement Programming		✓	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓			✓	✓	✓	✓	✓	✓	✓	✓	✓
Community Development Block Grants	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓
Special Purpose Taxes (or taxing districts)						✓																✓	✓	✓
Gas / Electric Utility Fees																						✓	✓	✓
Water / Sewer Fees																						✓	✓	✓
Stormwater Utility Fees						✓																		
Development Impact Fees																								
General Obligation, Revenue, and/or Special Tax Bonds					✓	✓	✓															✓	✓	✓

Fiscal Tool / Resource	COVINGTON COUNTY	Collins	Mount Olive	Seminary	FORREST COUNTY	Hattiesburg	Petal	JEFFERSON DAVIS COUNTY	Bassfield	Prentiss	JONES COUNTY	Ellisville	Laurel	Sandersville	Soso	MARION COUNTY	Columbia	PERRY COUNTY	Beaumont	New Augusta	Richton	WAYNE COUNTY	State Line	Waynesboro
Partnering Arrangements or Intergovernmental Agreements	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

7.3.8 Political Capability

One of the most difficult capabilities to evaluate involves the political will of a jurisdiction to enact meaningful policies and projects designed to reduce the impact of future hazard events. Hazard mitigation may not be a local priority or may conflict with or be seen as an impediment to other goals of the community, such as growth and economic development. Therefore, the local political climate must be considered in designing mitigation strategies as it could be the most difficult hurdle to overcome in accomplishing their adoption and implementation.

The Capability Assessment Workshop was used to capture information on political capability of the MEMA District 8 Region. Previous county-level hazard mitigation plans were reviewed for general examples of local political capability, such as guiding development away from identified hazard areas, restricting public investments or capital improvements within hazard areas, or enforcing local development standards that go beyond minimum state or federal requirements (i.e., building codes, floodplain management, etc.).

- ❖ The previous county hazard mitigation plans identified existing ordinances that address natural hazards or are related to hazard mitigation, such as emergency management, comprehensive zoning, subdivision regulations, comprehensive land use plans, and flood zone ordinances.
- ❖ During the months immediately following a disaster, local public opinion in the region is more likely to shift in support of hazard mitigation efforts.

7.4 Linking the Capability Assessment with the Risk Assessment and the Mitigation Strategy

The conclusions of the Risk Assessment and Capability Assessment serve as the foundation for the development of a meaningful hazard mitigation strategy. During the process of identifying specific mitigation actions to pursue, the HMC considered not only each jurisdiction's level of hazard risk, but also their existing capability to minimize or eliminate that risk.

SECTION 8

MITIGATION STRATEGY

This section of the Plan provides the blueprint for the participating jurisdictions in the MEMA District 8 Region to follow in order to become less vulnerable to its identified hazards. It is based on general consensus of the Regional Hazard Mitigation Council (RHMC) and the findings and conclusions of the *Capability Assessment* and *Risk Assessment*. It consists of the following five subsections:

- ❖ 8.1 Introduction
 - ❖ 8.2 Mitigation Goals
 - ❖ 8.3 Identification and Analysis of Mitigation Techniques
 - ❖ 8.4 Selection of Mitigation Techniques for the MEMA District 8 Region
 - ❖ 8.5 Plan Update Requirement
-

8.1 INTRODUCTION

The intent of the Mitigation Strategy is to provide the communities in the MEMA District 8 Region with the goals that will serve as guiding principles for future mitigation policy and project administration, along with an analysis of mitigation techniques deemed available to meet those goals and reduce the impact of identified hazards. It is designed to be comprehensive, strategic, and functional in nature:

- ❖ In being *comprehensive*, the development of the strategy includes a thorough review of all hazards and identifies extensive mitigation measures intended to not only reduce the future impacts of high risk hazards, but also to help the region achieve compatible economic, environmental, and social goals.
- ❖ In being *strategic*, the development of the strategy ensures that all policies and projects proposed for implementation are consistent with pre-identified, long-term planning goals.
- ❖ In being *functional*, each proposed mitigation action is linked to established priorities and assigned to specific departments or individuals responsible for their implementation with target completion deadlines. When necessary, funding sources are identified that can be used to assist in project implementation.

The first step in designing the Mitigation Strategy includes the identification of mitigation goals. Mitigation goals represent broad statements that are achieved through the implementation of more specific mitigation actions. These actions include both hazard mitigation policies (such as the regulation of land in known hazard areas through a local ordinance) and hazard mitigation projects that seek to address specifically targeted hazard risks (such as the acquisition and relocation of a repetitive loss structure).

The second step involves the identification, consideration, and analysis of available mitigation measures to help achieve the identified mitigation goals. This is a long-term, continuous process sustained through the development and maintenance of this Plan. Alternative mitigation measures will continue

to be considered as future mitigation opportunities are identified, as data and technology improve, as mitigation funding becomes available, and as this Plan is maintained over time.

The third and last step in designing the Mitigation Strategy is the selection and prioritization of specific mitigation actions for the communities in the MEMA District 8 Region (provided separately in Section 9: *Mitigation Action Plan*). Each county and participating jurisdiction has its own Mitigation Action Plan (MAP) that reflects the needs and concerns of that jurisdiction. The MAP represents an unambiguous and functional plan for action and is considered to be the most essential outcome of the mitigation planning process.

The MAP includes a prioritized listing of proposed hazard mitigation actions (policies and projects) for the MEMA District 8 counties and jurisdictions to complete. Each action has accompanying information, such as those departments or individuals assigned responsibility for implementation, potential funding sources, and an estimated target date for completion. The MAP provides those departments or individuals responsible for implementing mitigation actions with a clear roadmap that also serves as an important tool for monitoring success or progress over time. The cohesive collection of actions listed in the MAP can also serve as an easily understood menu of mitigation policies and projects for those local decision makers who want to quickly review the recommendations and proposed actions of the Regional Hazard Mitigation Plan.

In preparing each Mitigation Action Plan for the MEMA District 8 Region, officials considered the overall hazard risk and capability to mitigate the effects of hazards as recorded through the risk and capability assessment process, in addition to meeting the adopted mitigation goals and unique needs of the community.

8.1.1 Mitigation Action Prioritization

In the previous versions of MEMA District 8 county plans, not all actions were prioritized. In addition, there needed to be consistency among the counties and jurisdiction regarding how they prioritized their actions. Therefore, for the 2013 MEMA District 8 Regional plan, the RHMC members were tasked with establishing a priority for each action. Prioritization of the proposed mitigation actions was based on the following six factors:

- ❖ Effect on overall risk to life and property
- ❖ Ease of implementation
- ❖ Political and community support
- ❖ A general economic cost/benefit review¹
- ❖ Funding availability
- ❖ Continued compliance with the NFIP

¹ Only a general economic cost/benefit review was considered by the RHMC through the process of selecting and prioritizing mitigation actions. Mitigation actions with “high” priority were determined to be the most cost effective and most compatible with the participating jurisdictions’ unique needs. A more detailed cost/benefit analysis will be applied to particular projects prior to the application for or obligation of funding, as appropriate.

The point of contact for each county helped coordinate the prioritization process by reviewing each action and working with the lead agency/department responsible to determine a priority for each action using the six factors listed above.

Using these criteria, actions were classified as high, moderate, or low priority by the participating jurisdiction officials.

High Priority- mitigation actions determined to be the most cost effective and most compatible with the participating jurisdictions’ unique needs.

Moderate Priority- mitigation actions determined to be feasible and compatible with the participating jurisdictions’ unique needs; however, there may be challenges or difficulty that are expected to arise.

Low Priority- mitigation actions determined to be the least compatible with the participating jurisdictions’ unique needs.

During the 2019 planning process, action prioritization was validated and updated as necessary.

8.2 MITIGATION GOALS

44 CFR Requirement
44 CFR Part 201.6(c)(3)(i): The mitigation strategy shall include a description of mitigation goals to reduce or avoid long-term vulnerabilities to the identified hazards.

The primary goal of all local governments is to promote the public health, safety, and welfare of its citizens. In keeping with this standard, the MEMA District 8 counties and the participating municipalities have developed five goal statements for local hazard mitigation planning in the region. In developing these goals, the previous six county hazard mitigation plans were reviewed to determine areas of consistency. The project consultant reviewed the goals from each of the six existing plans that were combined to form this regional plan. Many of the goals were similar and, therefore, regional goals were formulated based on commonalities found between the goals in each plan. **Table 8.1** provides a listing of all of the existing mitigation goals from the ten plans that are being combined. During Planning Committee Workshop it was determined to merge the goals from Forrest County into the existing MEMA District 8 Hazard Mitigation Plan goals. Table 8.1 shows the merge.

As a result of reviewing the existing goals, five proposed regional goals were presented to the Hazard Mitigation for their consideration. The proposed goals were reviewed, voted on, and accepted by the HMC at their second meeting. This process of combining goals from the previous plans served to highlight the planning process that had occurred in each county prior to joining this regional planning effort. Each goal, purposefully broad in nature, serves to establish parameters that were used in developing more mitigation actions. The MEMA District 8 Regional Mitigation Goals are presented in **Table 8.2**. Consistent implementation of actions over time will ensure that community goals are achieved.

TABLE 8.1: EXISTING MITIGATION GOALS

Proposed Goal	Forrest County
Provide education about potential hazards and risks and expand awareness of protective measures that can be taken to minimize the potential loss of life and damage to property.	Goal 1
Invest in community facilities and infrastructure to ensure the safety of individuals, reduce damage to public buildings, and ensure continuity of emergency services.	Goal 2
Enhance preparedness and effective response to technological or transportation hazards.	Goal 3
Enhance and improve the ability to mitigate potential loss of revenue from civil hazards .	Goal 4
Maintain unique quality of life and environmental attributes that protect the community from hazards.	Goal 5

TABLE 8.2: MEMA DISTRICT 8 REGIONAL MITIGATION GOALS

	Goal
Goal #1	Develop a sustainable, comprehensive mitigation program to ensure safer communities.
Goal #2	Reduce or avoid loss of life, injury, and damage to property, the economy, and the environment.
Goal #3	Enhance preparedness and effective response to hazards.
Goal #4	Strengthen and improve local mitigation capabilities.
Goal #5	Increase public awareness of hazard mitigation, hazard risk, and protective measures that can be taken to minimize potential loss and damage.

8.3 IDENTIFICATION AND ANALYSIS OF MITIGATION TECHNIQUES

44 CFR Requirement

44 CFR Part 201.6(c)(3)(ii): The mitigation strategy shall include a section that identifies and analyzes a comprehensive range of specific mitigation actions and projects being considered to reduce the effect of each hazard, with particular emphasis on new and existing buildings and infrastructure.

In formulating the Mitigation Strategy for the MEMA District 8 Region, a wide range of activities were considered in order to help achieve the established mitigation goals, in addition to addressing any specific hazard concerns. These activities were discussed during the MEMA District 8 Regional Hazard Mitigation Planning meetings. In general, all activities considered by the RHMC can be classified under one of the following six (6) broad categories of mitigation techniques: Prevention, Property Protection, Natural Resource Protection, Structural Projects, Emergency Services, and Public Awareness and Education. These are discussed in detail below.

8.3.1 Prevention

Preventative activities are intended to keep hazard problems from getting worse, and are typically administered through government programs or regulatory actions that influence the way land is developed and buildings are built. They are particularly effective in reducing a community's future vulnerability, especially in areas where development has not occurred or capital improvements have not been substantial. Examples of preventative activities include:

- ❖ Planning and zoning
- ❖ Building codes
- ❖ Open space preservation
- ❖ Floodplain regulations
- ❖ Stormwater management regulations
- ❖ Drainage system maintenance
- ❖ Capital improvements programming
- ❖ Riverine / fault zone setbacks

8.3.2 Property Protection

Property protection measures involve the modification of existing buildings and structures to help them better withstand the forces of a hazard, or removal of the structures from hazardous locations. Examples include:

- ❖ Acquisition
- ❖ Relocation
- ❖ Building elevation
- ❖ Critical facilities protection
- ❖ Retrofitting (e.g., windproofing, floodproofing, seismic design techniques, etc.)
- ❖ Safe rooms, shutters, shatter-resistant glass
- ❖ Insurance

8.3.3 Natural Resource Protection

Natural resource protection activities reduce the impact of natural hazards by preserving or restoring natural areas and their protective functions. Such areas include floodplains, wetlands, steep slopes, and

sand dunes. Parks, recreation, or conservation agencies and organizations often implement these protective measures. Examples include:

- ❖ Floodplain protection
- ❖ Watershed management
- ❖ Riparian buffers
- ❖ Forest and vegetation management (e.g., fire resistant landscaping, fuel breaks, etc.)
- ❖ Erosion and sediment control
- ❖ Wetland preservation and restoration
- ❖ Habitat preservation
- ❖ Slope stabilization

8.3.4 Structural Projects

Structural mitigation projects are intended to lessen the impact of a hazard by modifying the environmental natural progression of the hazard event through construction. They are usually designed by engineers and managed or maintained by public works staff. Examples include:

- ❖ Reservoirs
- ❖ Dams / levees / dikes / floodwalls
- ❖ Diversions / detention / retention
- ❖ Channel modification
- ❖ Storm sewers

8.3.5 Emergency Services

Although not typically considered a “mitigation” technique, emergency service measures do minimize the impact of a hazard event on people and property. These commonly are actions taken immediately prior to, during, or in response to a hazard event. Examples include:

- ❖ Warning systems
- ❖ Evacuation planning and management
- ❖ Emergency response training and exercises
- ❖ Sandbagging for flood protection
- ❖ Installing temporary shutters for wind protection

8.3.6 Public Education and Awareness

Public education and awareness activities are used to advise residents, elected officials, business owners, potential property buyers, and visitors about hazards, hazardous areas, and mitigation techniques they can use to protect themselves and their property. Examples of measures to educate and inform the public include:

- ❖ Outreach projects
- ❖ Speaker series / demonstration events
- ❖ Hazard map information
- ❖ Real estate disclosure
- ❖ Library materials
- ❖ School children educational programs
- ❖ Hazard expositions

8.4 SELECTION OF MITIGATION TECHNIQUES FOR THE MEMA DISTRICT 8 REGION

In order to determine the most appropriate mitigation techniques for the communities in the MEMA District 8 Region, the RHMC members thoroughly reviewed and considered the findings of the *Capability Assessment* and *Risk Assessment* to determine the best activities for their respective communities. Other considerations included the effect of each mitigation action on overall risk to life and property, its ease of implementation, its degree of political and community support, its general cost-effectiveness, and funding availability (if necessary).

8.5 PLAN UPDATE REQUIREMENT

In keeping with FEMA requirements for plan updates, the Mitigation Actions identified in the previous MEMA District 8 county plans were evaluated to determine their 2020 implementation status. Updates on the implementation status of each action are provided. The mitigation actions provided in Section 9: *Mitigation Action Plan* include the mitigation actions from the previous plans as well as any new mitigation actions proposed through the 2020 planning process.

SECTION 9

MITIGATION ACTION PLAN

This section includes the listing of the mitigation actions proposed by the participating jurisdictions in MEMA District 8. It consists of the following two subsections:

- ❖ 9.1 Overview
- ❖ 9.2 Mitigation Action Plans

44 CFR Requirement

44 CFR Part 201.6(c)(3)(iii): The mitigation strategy shall include an action plan describing how the actions identified in paragraph (c)(2)(ii) of this section will be prioritized, implemented, and administered by the local jurisdiction.

9.1 OVERVIEW

As described in the previous section, the Mitigation Action Plan, or MAP, provides a functional plan of action for each jurisdiction. It is designed to achieve the mitigation goals established in Section 8: *Mitigation Strategy* and will be maintained on a regular basis according to the plan maintenance procedures established in Section 10: *Plan Maintenance*.

Each proposed mitigation action has been identified as an effective measure (policy or project) to reduce hazard risk for the MEMA District 8 Region. Each action is listed in the MAP in conjunction with background information such as hazard(s) addressed, relative priority, and estimated cost. Other information provided in the MAP includes potential funding sources to implement the action should funding be required (not all proposed actions are contingent upon funding). Most importantly, implementation mechanisms are provided for each action, including the designation of a lead agency or department responsible for carrying the action out as well as a timeframe for its completion. These implementation mechanisms ensure that the MEMA District 8 Regional Hazard Mitigation Plan remains a functional document that can be monitored for progress over time. The proposed actions are not listed in priority order, though each has been assigned a priority level of “high,” “moderate,” or “low” as described below and in Section 8 (page 8.2).

The Mitigation Action Plan is organized by mitigation strategy category (Prevention, Property Protection, Natural Resource Protection, Structural Projects, Emergency Services, or Public Education and Awareness). The following are the key elements described in the Mitigation Action Plan:

- ❖ Hazard(s) Addressed—Hazard which the action addresses.
- ❖ Relative Priority—High, moderate, or low priority as assigned by the jurisdiction.
- ❖ Funding Sources—Local, State, or Federal sources of funds are noted here, where applicable.
- ❖ Estimated Cost—Anticipated cost of the action.
- ❖ Responsible Party—Department responsible for undertaking the action.

- ❖ Target Completion Date—Date by which the action the action should be completed. More information is provided when possible.
- ❖ 2013 Action Implementation Status—Indication of completion, progress, deferment, or no change since the previous plan. If the action is new, that will be noted here.

9.2 MITIGATION ACTION PLANS

Covington County Mitigation Action Plan

Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2019 Action Implementation Status
Prevention								
P-1	Identify high risk areas where hazards are most likely to occur.	All	High	N/A	No additional cost	County	Annual plan review	Completed but ongoing
P-2	Site-locate vulnerable population on a County-wide map.	Multiple	High	Area Agency on Aging, USDA Rural Dev., COPS, FIRE	Unknown	County EMA, County BOS	Ongoing	Completed but ongoing
P-3	Consider adoption of flood damage prevention ordinance in Covington County.	FL	High	Self-funded	No cost	County, County Floodplain Administrator	Ongoing	Implemented April 2008 ongoing implementation
P-4	Consider adoption of subdivision regulations.	TH, FL, HU, TS	Medium	Self-funded	No cost	County	Ongoing	Ongoing
P-5	Continue to maintain and upgrade the County's drainage facilities.	HU, TS, FL, BH	High	Self-funded	Unknown	County BOS, County Road Crews	Annual review	Ongoing

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2019 Action Implementation Status
P-6	Consider adoption of a comprehensive drainage plan.	FL, TS, HU	Medium	CDBG, Small Muni. Grant, MSDA, USDA Rural Dev.	Unknown	County	Within 5 years	Deferred until funding can be allocated
P-7	Map the easements and rights-of-way of roadways and drainage ways.	All	Low to Medium	CDBG, Small Muni. Grant, MSDA, USDA Rural Dev.	Unknown	County	Within 5 years	Deferred until funding can be allocated
P-8	Support the development of a shared geographic data system for land use and site planning.	All	Medium to High	Self-funded	No additional cost	County	Within 2 years	Deferred until funding can be allocated
P-9	Develop a comprehensive development plan.	All	High	CDBG, MSDA	Unknown	County	Within 2 years	Deferred until funding can be allocated
P-10	Incorporate the hazard mitigation plan into the comprehensive emergency management plan.	All	Medium	N/A	No additional cost	County	Ongoing	Implemented and ongoing

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2019 Action Implementation Status
Property Protection								
PP-1	Promote alternative construction techniques such as the building of “safe rooms” in new construction and when remodeling existing structures.	HU, TS, TO, TH	Medium	Self-funded	No additional cost	County	Ongoing	Implemented and ongoing
PP-2	Ensure that structures in floodplain areas are elevated.	FL	High	Self-funded	No additional cost	County	Ongoing	Implemented and ongoing
PP-3	Ensure that new public buildings are designed and built to hurricane resistant building codes.	HU, TS, TO, HW	High	Self-funded	No additional cost	County	Within 2 years	Deferred until funding can be allocated
PP-4	Continue to retrofit public buildings and other critical facilities to withstand natural hazards.	All	High	HMGP	Unknown	County	Within 2 years; Next round of HMGP funding	Deferred
PP-5	Ensure secure operation of water wells, water tanks and wastewater treatment facilities.	All	High	HMGP, USDA Rural Dev., CDBG, Small Muni. Grant	Unknown	County	Ongoing	Implemented and ongoing

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2019 Action Implementation Status
Natural Resource Protection								
NRP-1	Preserve natural wetlands and riparian areas through acquisition of conservation easements.	HU, TS, FL	Low to Medium	Donation	Low or no cost	MS Land Trust, Land Trust for MS Coastal Plain, County	Within 5 years	Deferred until funding can be allocated
Emergency Services								
ES-1	Encourage participation by staff and elected officials in voluntary or extracurricular activities related to emergency management, disaster preparedness, civil defense, or other hazard mitigation activities.	All	Medium	Self-funded, MEMA	Low or no cost	County EMA	Ongoing	Implemented and ongoing
ES-2	Establish a notification procedure for populations in high risk areas.	All	Medium	Self-funded	No additional cost	County EMA, County BOS	Ongoing	Implemented and ongoing
ES-3	Survey the existing emergency shelters and study the feasibility of expanding the capacity of shelters.	All	High	HMGP	Unknown	County EMA, County	Within 2 years	Deferred until funding can be allocated
ES-4	Explore potential sites for a new shelter and/or special needs shelter.	TO, HU, TS, FL	High	HMGP	Unknown	County, EMA, County	Within 2 years	Deferred until funding can be allocated

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2019 Action Implementation Status
ES-5	Improve disaster communication systems within the County.	All	High	Unknown	Unknown	County EMA	Contingent on funding	Ongoing task
ES-6	Consider generators for local radio station service areas and /or other critical facilities	TO, HU, TS	High	HMGP	Unknown	County EMA	Contingent upon funding	Contingent on funding
ES-7	Install warning sirens in the County.	TO, HU	High	HMGP	Unknown	County EMA	Contingent upon funding	Added two sirens FY '13 and added eight sirens in 2016. Action is ongoing.
ES-8	Enhance or upgrade emergency response communications or Central Dispatch and other communications equipment.	All	High	Unknown	Unknown	County EMA	Contingent on funding	Planning upgrade 11 of 17. Action is ongoing.
ES-9	Explore upgrade/enhancement of 911 system in Covington County.	All	Medium	HMGP	Unknown	County EMA, County	Within 2 years; Contingent upon funding	Planning upgrade in 8 years
ES-10	Explore potential to install Reverse 911 system.	All	Low to Medium	HMGP	Unknown	County EMA, County	Within 5 years; Contingent upon funding	Deferred until funding becomes available

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2019 Action Implementation Status
ES-11	Coordinate with neighboring jurisdictions to ensure consistency of evacuation plans.	FL, HU, TS, Others	Medium	Self-funded	No additional cost	County BOS, County EMA	Ongoing	Implemented, Evacuation plans/maps available upon request
ES-12	Enhance identification of evacuation routes through the distribution of MDOT maps.	FL, HU, TS, Others	High	Self-funded	No additional cost	County EMA	Ongoing	Implemented, Evacuation plans/maps available upon request
ES-13	Ensure continuity of utility services for public buildings and other critical facilities.	All	High	HGMP	Unknown	County	Ongoing	Implemented, Update critical facilities list on an annual basis
ES-14	Develop a government services continuity plan.	All	Medium	USDA Rural Dev., CDBG, Small Muni. Grant	Unknown	County	Within 5 years; Annual review	Implemented, FY'13 develop COOP/COG Plan. Revisions made in 2019. Maintained and ongoing action
ES-15	Host a meeting to review Covington County Comprehensive Emergency Management Plan.	TT	Medium	Self-funded	No additional cost	County	Ongoing	Updated CEMP 2013. Newly adopted in 2019

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2019 Action Implementation Status
ES-16	Actively search for and identify funding sources for the enhancement of emergency response abilities of Fire and Sheriff's Departments.	TT	Medium to High	DHS, SFER, COPS, FIRE	Unknown	County	Ongoing	Implemented, as grants/funds become available
ES-17	Explore continuing education programs/opportunities for first responders, especially in hazardous materials training.	Range	Medium	Self-funded, MEMA	Low cost	County	Within 2 years	Implemented, as grants/funds become available
Structural Projects								
SP-1	Address cross-jurisdictional issues related to response, recovery and mitigation on key projects with overlapping boundaries.	HU, TS, FL, RH	Low to Medium	Self-funded	No additional cost	County		Delete
SP-2	Acquisition / Demolition / Relocation or Elevation, Reconstruction of flood prone structures	FL	Medium	FEMA, MEMA,	TBD	County EMA	2024	New
SP-2	Individual Saferooms	TS, T	Medium	FEMA, MEMA	TBD	County EMA	2024	New

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2019 Action Implementation Status
Public Education and Awareness								
PEA-1	Explore continuing education programs/ opportunities for staff and elected officials.	Range	Medium	Self-funded, MEMA	Low cost	County	Ongoing	Implemented, Started FY'09. Ongoing action
PEA-2	Provide education and outreach materials to citizens and visitors.	All	High	Self-funded	No cost	County EMA	Ongoing	Implemented and ongoing
PEA-3	Encourage development of Family Disaster Plans.	All	High	Self-funded, COPS FIRE	Low or no cost	County EMA	Ongoing	Implemented through annual presentations/ Workshops. Ongoing action
PEA-4	Expand outreach information to property owners regarding retrofitting and flood-proofing techniques through community workshops, brochures, and newspaper articles.	FL, Multiple	High	Self-funded	No additional cost	County EMA, County	Ongoing	Implemented through annual presentations/ Workshops. Ongoing action
PEA-5	Provide education/outreach to communities to encourage participation in the National Flood Insurance Program.	FL	High	N/A	No additional cost	County/Towns/City	Ongoing	Implemented, County/Towns/City has adopted NFIP

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2019 Action Implementation Status
PEA-6	Encourage participation in the Community Rating System of the NFIP.	FL, HU, TS, TH, HW	Medium	USDA Rural Dev., CDBG, Small Muni. Grant, FEMA, Others	Unknown	County	Within 3 years	Deferred
PEA-7	Encourage businesses to develop business continuity or contingency operating plans.	CH	High	Self-funded, Chamber of Comm., SCORE	Low or no cost	County	Ongoing	Implemented,, Education at EMA annual workshop. Ongoing action
FL = Flood HU = Hurricane TS = Tropical Storm TO = Tornado TH = Thunderstorm BH = Biological Hazards HW = High Winds TT = Transportation and Technological Hazards RH = Roadway Hazards CH = Civil Hazards County EMA = Covington County Emergency Management Agency County BOS = Covington County Board of Supervisors								

City of Collins Mitigation Action Plan

Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2019 Action Implementation Status
Prevention								
P-1	Identify high risk areas where hazards are most likely to occur.	All	High	N/A	No additional cost	County	Annual plan review	Completed but ongoing
P-2	Site-locate vulnerable population on a County-wide map.	Multiple	High	Area Agency on Aging, USDA Rural Dev., COPS, FIRE	Unknown	County EMA, County BOS	Ongoing	Completed but ongoing
P-3	Strictly enforce the flood damage prevention ordinance.	FL	High	Self-funded	No cost	County, County Floodplain Administrator	Ongoing	Implemented April 2008 ongoing implementation
P-4	Consider adoption of subdivision regulations.	TH, FL, HU, TS	Medium	Self-funded	No cost	County	Ongoing	Ongoing
P-5	Continue to maintain and upgrade the County's drainage facilities.	HU, TS, FL, BH	High	Self-funded	Unknown	County BOS, County Road Crews	Annual review	Ongoing

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2019 Action Implementation Status
P-6	Consider adoption of a comprehensive drainage plan.	FL, TS, HU	Medium	CDBG, Small Muni. Grant, MSDA, USDA Rural Dev.	Unknown	County	Within 5 years	Deferred until funding can be allocated
P-7	Map the easements and rights-of-way of roadways and drainage ways.	All	Low to Medium	CDBG, Small Muni. Grant, MSDA, USDA Rural Dev.	Unknown	County	Within 5 years	Deferred until funding can be allocated
P-8	Support the development of a shared geographic data system for land use and site planning.	All	Medium to High	Self-funded	No additional cost	County, City	Within 2 years	Deferred until funding can be allocated
P-9	Develop a comprehensive development plan.	All	High	CDBG, MSDA	Unknown	County, City	Within 2 years	Deferred until funding can be allocated
P-10	Incorporate the hazard mitigation plan into the comprehensive plan.	All	Medium	N/A	No additional cost	County, City	Ongoing	Implemented and ongoing

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2019 Action Implementation Status
Property Protection								
PP-1	Promote alternative construction techniques such as the building of “safe rooms” in new construction and when remodeling existing structures.	HU, TS, TO, TH	Medium	Self-funded	No additional cost	County, City	Ongoing	Implemented and ongoing
PP-2	Ensure that structures in floodplain areas are elevated.	FL	High	Self-funded	No additional cost	County, City	Ongoing	Implemented and ongoing
PP-3	Ensure that new public buildings are designed and built to hurricane resistant building codes.	HU, TS, TO, HW	High	Self-funded	No additional cost	County, City	Within 2 years	Deferred until funding can be allocated
PP-4	Continue to retrofit public buildings and other critical facilities to withstand natural hazards.	All	High	HMGP	Unknown	County, City	Within 2 years; Next round of HMGP funding	Deferred
PP-5	Ensure secure operation of water wells, water tanks and wastewater treatment facilities.	All	High	HMGP, USDA Rural Dev., CDBG, Small Muni. Grant	Unknown	County, City	Ongoing	Implemented and ongoing

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2019 Action Implementation Status
Natural Resource Protection								
NRP-1	Preserve natural wetlands and riparian areas through acquisition of conservation easements.	HU, TS, FL	Low to Medium	Donation	Low or no cost	MS Land Trust, Land Trust for MS Coastal Plain, County, City	Within 5 years	Deferred until funding can be allocated
Emergency Services								
ES-1	Encourage participation by staff and elected officials in voluntary or extracurricular activities related to emergency management, disaster preparedness, civil defense, or other hazard mitigation activities.	All	Medium	Self-funded, MEMA	Low or no cost	County EMA	Ongoing	Implemented and ongoing
ES-2	Establish a notification procedure for populations in high risk areas.	All	Medium	Self-funded	No additional cost	County EMA, County BOS, City	Ongoing	Implemented and ongoing
ES-3	Survey the existing emergency shelters and study the feasibility of expanding the capacity of shelters.	All	High	HMGP	Unknown	County EMA, City	Within 2 years	Deferred until funding can be allocated
ES-4	Explore potential sites for a new special needs shelter.	TO, HU, TS, FL	High	HMGP	Unknown	County, EMA, City	Within 2 years	Deferred until funding can be allocated

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2019 Action Implementation Status
ES-5	Improve disaster communication systems within the County.	All	High	Unknown	Unknown	County EMA	Contingent on funding	Ongoing task
ES-6	Consider generators for local radio station service areas.	TO, HU, TS	High	HMGP	Unknown	County EMA	Contingent upon funding	Contingent on funding
ES-7	Install warning sirens in the County.	TO, HU	High	HMGP	Unknown	County EMA	Contingent upon funding	Added two sirens FY '13 and added eight sirens in 2016. Action is ongoing.
ES-8	Enhance Central Dispatch and other communications equipment.	All	High	Unknown	Unknown	County EMA	Contingent on funding	Planning upgrade 11 of 17. Action is ongoing.
ES-9	Explore upgrade/enhancement of 911 system in Covington County.	All	Medium	HMGP	Unknown	County EMA, City	Within 2 years; Contingent upon funding	Planning upgrade in 8 years
ES-10	Explore potential to install Reverse 911 system.	All	Low to Medium	HMGP	Unknown	County EMA, City	Within 5 years; Contingent upon funding	Deferred until funding becomes available
ES-11	Coordinate with neighboring jurisdictions to ensure consistency of evacuation plans.	FL, HU, TS, Others	Medium	Self-funded	No additional cost	County BOS, County EMA, City	Ongoing	Implemented, Evacuation plans/maps available upon request

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2019 Action Implementation Status
ES-12	Enhance identification of evacuation routes through the distribution of MDOT maps.	FL, HU, TS, Others	High	Self-funded	No additional cost	County EMA	Ongoing	Implemented, Evacuation plans/maps available upon request
ES-13	Ensure continuity of utility services for public buildings and other critical facilities.	All	High	HGMP	Unknown	County, City	Ongoing	Implemented, Update critical facilities list on an annual basis
ES-14	Develop a government services continuity plan.	All	Medium	USDA Rural Dev., CDBG, Small Muni. Grant	Unknown	County, City	Within 5 years; Annual review	Implemented, FY'13 develop COOP/COG Plan. Revisions made in 2019. Maintained and ongoing action
ES-15	Host a meeting to review Covington County Comprehensive Emergency Management Plan.	TT	Medium	Self-funded	No additional cost	City	Ongoing	Updated CEMP 2013. Newly adopted in 2019
ES-16	Actively search for and identify funding sources for the enhancement of emergency response abilities of Fire and Sheriff's Departments.	TT	Medium to High	DHS, SFER, COPS, FIRE	Unknown	County, City	Ongoing	Implemented, as grants/funds become available

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2019 Action Implementation Status
ES-17	Explore continuing education programs/opportunities for first responders, especially in hazardous materials training.	Range	Medium	Self-funded, MEMA	Low cost	City	Within 2 years	Implemented, as grants/funds become available
Structural Projects								
SP-1	Address cross-jurisdictional issues related to response, recovery and mitigation on key projects with overlapping boundaries.	HU, TS, FL, RH	Low to Medium	Self-funded	No additional cost	County, City		Delete
SP-2	Acquisition / Demolition / Relocation or Elevation, Reconstruction of flood prone structures	FL	Medium	FEMA, MEMA,	TBD	County EMA	2024	New
SP-2	Individual Saferooms	TS, T	Medium	FEMA, MEMA	TBD	County EMA	2024	New
Public Education and Awareness								
PEA-1	Explore continuing education programs/opportunities for staff and elected officials.	Range	Medium	Self-funded, MEMA	Low cost	City	Ongoing	Implemented, Started FY'09. Ongoing action
PEA-2	Provide education and outreach materials to citizens and visitors.	All	High	Self-funded	No cost	County EMA	Ongoing	Implemented and ongoing

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2019 Action Implementation Status
PEA-3	Encourage development of Family Disaster Plans.	All	High	Self-funded, COPS FIRE	Low or no cost	County EMA	Ongoing	Implemented through annual presentations/ Workshops. Ongoing action
PEA-4	Expand outreach information to property owners regarding retrofitting and flood-proofing techniques through community workshops, brochures, and newspaper articles.	FL, Multiple	High	Self-funded	No additional cost	County EMA, City	Ongoing	Implemented through annual presentations/ Workshops. Ongoing action
PEA-5	Provide education/outreach to communities to encourage participation in the National Flood Insurance Program.	FL	High	N/A	No additional cost	County/Towns/City	Ongoing	Implemented, County/Towns/City has adopted NFIP
PEA-6	Encourage participation in the Community Rating System of the NFIP.	FL, HU, TS, TH, HW	Medium	USDA Rural Dev., CDBG, Small Muni. Grant, FEMA, Others	Unknown	County, City	Within 3 years	Deferred

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2019 Action Implementation Status
PEA-7	Encourage businesses to develop business continuity or contingency operating plans.	CH	High	Self-funded, Chamber of Comm., SCORE	Low or no cost	County, City	Ongoing	Implemented,, Education at EMA annual workshop. Ongoing action
FL = Flood HU = Hurricane TS = Tropical Storm TO = Tornado TH = Thunderstorm BH = Biological Hazards HW = High Winds TT = Transportation and Technological Hazards RH = Roadway Hazards CH = Civil Hazards County EMA = Covington County Emergency Management Agency County BOS = Covington County Board of Supervisors								

Town of Mount Olive Mitigation Action Plan

Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2019 Action Implementation Status
Prevention								
P-1	Identify high risk areas where hazards are most likely to occur.	Low to Medium	N/A	No additional costs	County, Town	Within 5 years	Annual plan review	Completed but ongoing
P-2	Site-locate vulnerable population on a County-wide map.	Medium to High	Self-funded	No additional cost	County, Town	Within 2 years	Ongoing	Completed but ongoing
P-3	Strictly enforce the flood damage prevention ordinances.	High	Self-funded	No cost	County, Town	Within 2 years	Ongoing	Implemented April 2008 ongoing implementation
P-4	Consider adoption of subdivision regulations.	Medium	Self-funded	No additional cost	County, Town	Concurrent with prep. of Comp Plan	Ongoing	Ongoing
P-5	Continue to maintain and upgrade the County's drainage facilities.	Low to Medium	Self-funded	No cost	County, Town	Within 5 years	Annual review	Ongoing
P-6	Consider adoption of a comprehensive drainage plan.	Medium to High	Self-funded	No additional cost	County, Town	Within 2 years	Within 5 years	Deferred until funding can be allocated
P-7	Map the easements and rights-of-way of roadways and drainage ways.	High	CDBG, MSDA	Unknown	County, Town	Within 2 years	Within 5 years	Deferred until funding can be allocated

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2019 Action Implementation Status
P-8	Support the development of a shared geographic data system for land use and site planning.	Medium	Self-funded	No additional cost	County, Town	Concurrent with prep. of Comp Plan	Within 2 years	Deferred until funding can be allocated
P-9	Develop a comprehensive development plan.	All	Low to Medium	CDBG, Small Muni. Grant, MSDA, USDA Rural Dev.	Unknown	County, Town	Within 2 years	Deferred until funding can be allocated
P-10	Incorporate the hazard mitigation plan into the comprehensive plan.	All	Medium to High	Self-funded	No additional cost	County, Town	Ongoing	Implemented and ongoing
Property Protection								
PP-1	Promote alternative construction techniques such as the building of “safe rooms” in new construction and when remodeling existing structures.	HU, TS, TO, TH	Medium	Self-funded	No additional cost	County, Town	Ongoing	Implemented and ongoing
PP-2	Ensure that structures in floodplain areas are elevated.	FL	High	Self-funded	No additional cost	County, Town	Ongoing	Implemented and ongoing
PP-3	Ensure that new public buildings are designed and built to hurricane resistant building codes.	HU, TS, TO, HW	High	Self-funded	No additional cost	County, Town	Within 2 years	Deferred until funding can be allocated

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2019 Action Implementation Status
PP-4	Continue to retrofit public buildings and other critical facilities to withstand natural hazards.	All	High	HMGP	Unknown	County, Town	Within 2 years; Next round of HMGP funding	Deferred
PP-5	Ensure secure operation of water wells, water tanks and wastewater treatment facilities.	All	High	HMGP, USDA Rural Dev., CDBG, Small Muni. Grant	Unknown	County, Town	Ongoing	Implemented and ongoing
Natural Resource Protection								
NRP-1	Preserve natural wetlands and riparian areas through acquisition of conservation easements.	HU, TS, FL	Low to Medium	Donation	Low or no cost	MS Land Trust, Land Trust for MS Coastal Plain, County, Town	Within 5 years	Deferred until funding can be allocated
Emergency Services								
ES-1	Encourage participation by staff and elected officials in voluntary or extracurricular activities related to emergency management, disaster preparedness, civil defense, or other hazard mitigation activities.	All	Medium	Self-funded, MEMA	Low or no cost	County EMA	Ongoing	Implemented and ongoing

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2019 Action Implementation Status
ES-2	Establish a notification procedure for populations in high risk areas.	All	Medium	Self-funded	No additional cost	County EMA, County BOS, Town	Ongoing	Implemented and ongoing
ES-3	Survey the existing emergency shelters and study the feasibility of expanding the capacity of shelters.	All	High	HMGP	Unknown	County EMA, Town	Within 2 years	Deferred until funding can be allocated
ES-4	Explore potential sites for a new special needs shelter.	TO, HU, TS, FL	High	HMGP	Unknown	County, EMA, Town	Within 2 years	Deferred until funding can be allocated
ES-5	Improve disaster communication systems within the County.	All	High	Unknown	Unknown	County EMA	Contingent on funding	Ongoing task
ES-6	Consider generators for local radio station service areas.	TO, HU, TS	High	HMGP	Unknown	County EMA	Contingent upon funding	Contingent on funding
ES-7	Install warning sirens in the County.	TO, HU	High	HMGP	Unknown	County EMA	Contingent upon funding	Added two sirens FY '13 and added eight sirens in 2016. Action is ongoing.
ES-8	Enhance Central Dispatch and other communications equipment.	All	High	Unknown	Unknown	County EMA	Contingent on funding	Planning upgrade 11 of 17. Action is ongoing.

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2019 Action Implementation Status
ES-9	Explore upgrade/enhancement of 911 system in Covington County.	All	Medium	HMGP	Unknown	County EMA, Town	Within 2 years; Contingent upon funding	Planning upgrade in 8 years
ES-10	Explore potential to install Reverse 911 system.	All	Low to Medium	HMGP	Unknown	County EMA, Town	Within 5 years; Contingent upon funding	Deferred until funding becomes available
ES-11	Coordinate with neighboring jurisdictions to ensure consistency of evacuation plans.	FL, HU, TS, Others	Medium	Self-funded	No additional cost	County BOS, County EMA, Town	Ongoing	Implemented, Evacuation plans/maps available upon request
ES-12	Enhance identification of evacuation routes through the distribution of MDOT maps.	FL, HU, TS, Others	High	Self-funded	No additional cost	County EMA	Ongoing	Implemented, Evacuation plans/maps available upon request
ES-13	Ensure continuity of utility services for public buildings and other critical facilities.	All	High	HGMP	Unknown	County, Town	Ongoing	Implemented, Update critical facilities list on an annual basis
ES-14	Develop a government services continuity plan.	All	Medium	USDA Rural Dev., CDBG, Small Muni. Grant	Unknown	County, Town	Within 5 years; Annual review	Implemented, FY'13 develop COOP/COG Plan. Revisions made in 2019. Maintained and ongoing action

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2019 Action Implementation Status
ES-15	Host a meeting to review Covington County Comprehensive Emergency Management Plan.	TT	Medium	Self-funded	No additional cost	Town	Ongoing	Updated CEMP 2013. Newly adopted in 2019
ES-16	Actively search for and identify funding sources for the enhancement of emergency response abilities of Fire and Sheriff's Departments.	TT	Medium to High	DHS, SFER, COPS, FIRE	Unknown	County, Town	Ongoing	Implemented, as grants/funds become available
ES-17	Explore continuing education programs/opportunities for first responders, especially in hazardous materials training.	Range	Medium	Self-funded, MEMA	Low cost	Town	Within 2 years	Implemented, as grants/funds become available
Structural Projects								
SP-1	Address cross-jurisdictional issues related to response, recovery and mitigation on key projects with overlapping boundaries.	HU, TS, FL, RH	Low to Medium	Self-funded	No additional cost	County, Town		Delete
SP-2	Acquisition / Demolition / Relocation or Elevation, Reconstruction of flood prone structures	FL	Medium	FEMA, MEMA,	TBD	County EMA	2024	New
SP-2	Individual Saferooms	TS, T	Medium	FEMA, MEMA	TBD	County EMA	2024	New

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2019 Action Implementation Status
Public Education and Awareness								
PEA-1	Explore continuing education programs/ opportunities for staff and elected officials.	Range	Medium	Self-funded, MEMA	Low cost	Town	Ongoing	Implemented, Started FY'09. Ongoing action
PEA-2	Provide education and outreach materials to citizens and visitors.	All	High	Self-funded	No cost	County EMA	Ongoing	Implemented and ongoing
PEA-3	Encourage development of Family Disaster Plans.	All	High	Self-funded, COPS FIRE	Low or no cost	County EMA	Ongoing	Implemented through annual presentations/ Workshops. Ongoing action
PEA-4	Expand outreach information to property owners regarding retrofitting and flood-proofing techniques through community workshops, brochures, and newspaper articles.	FL, Multiple	High	Self-funded	No additional cost	County EMA, Town	Ongoing	Implemented through annual presentations/ Workshops. Ongoing action
PEA-5	Provide education/outreach to communities to encourage participation in the National Flood Insurance Program.	FL	High	N/A	No additional cost	County/Towns/City	Ongoing	Implemented, County/Towns/City has adopted NFIP

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2019 Action Implementation Status
PEA-6	Encourage participation in the Community Rating System of the NFIP.	FL, HU, TS, TH, HW	Medium	USDA Rural Dev., CDBG, Small Muni. Grant, FEMA, Others	Unknown	County, Town	Within 3 years	Deferred
PEA-7	Encourage businesses to develop business continuity or contingency operating plans.	CH	High	Self-funded, Chamber of Comm., SCORE	Low or no cost	County, Town	Ongoing	Implemented,, Education at EMA annual workshop. Ongoing action
FL = Flood HU = Hurricane TS = Tropical Storm TO = Tornado TH = Thunderstorm BH = Biological Hazards HW = High Winds TT = Transportation and Technological Hazards RH = Roadway Hazards CH = Civil Hazards County EMA = Covington County Emergency Management Agency County BOS = Covington County Board of Supervisors								

Town of Seminary Mitigation Action Plan

Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2019 Action Implementation Status
Prevention								
P-1	Identify high risk areas where hazards are most likely to occur.	All	High	N/A	No additional cost	County, Town	Annual plan review	Completed but ongoing
P-2	Site-locate vulnerable population on a County-wide map.	Multiple	High	Area Agency on Aging, USDA Rural Dev., COPS, FIRE	Unknown	County EMA, County BOS, Town	Ongoing	Completed but ongoing
P-3	Strictly enforce the flood damage prevention ordinances.	FL	High	Self-funded	No cost	Town Floodplain Administrator	Ongoing	Implemented April 2008 ongoing implementation
P-4	Consider adoption of subdivision regulations.	TH, FL, HU, TS	Medium	Self-funded	No cost	County, Town	Ongoing	Ongoing
P-5	Continue to maintain and upgrade the County's drainage facilities.	HU, TS, FL, BH	High	Self-funded	Unknown	County BOS, County Road Crews, Town	Annual review	Ongoing

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2019 Action Implementation Status
P-6	Consider adoption of a comprehensive drainage plan.	FL, TS, HU	Medium	CDBG, Small Muni. Grant, MSDA, USDA Rural Dev.	Unknown	County, Town	Within 5 years	Deferred until funding can be allocated
P-7	Map the easements and rights-of-way of roadways and drainage ways.	All	Low to Medium	CDBG, Small Muni. Grant, MSDA, USDA Rural Dev.	Unknown	County, Town	Within 5 years	Deferred until funding can be allocated
P-8	Support the development of a shared geographic data system for land use and site planning.	All	Medium to High	Self-funded	No additional cost	County, Town	Within 2 years	Deferred until funding can be allocated
P-9	Develop a comprehensive development plan.	All	High	CDBG, MSDA		County, Town	Within 2 years	Deferred until funding can be allocated
P-10	Incorporate the hazard mitigation plan into the comprehensive plan.	All	Medium	N/A	No additional cost	County, Town	Ongoing	Implemented and ongoing

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2019 Action Implementation Status
Property Protection								
PP-1	Promote alternative construction techniques such as the building of “safe rooms” in new construction and when remodeling existing structures.	HU, TS, TO, TH	Medium	Self-funded	No additional cost	County, Town	Ongoing	Implemented and ongoing
PP-2	Ensure that structures in floodplain areas are elevated.	FL	High	Self-funded	No additional cost	County, Town	Ongoing	Implemented and ongoing
PP-3	Ensure that new public buildings are designed and built to hurricane resistant building codes.	HU, TS, TO, HW	High	Self-funded	No additional cost	County, Town	Within 2 years	Deferred until funding can be allocated
PP-4	Continue to retrofit public buildings and other critical facilities to withstand natural hazards.	All	High	HMGP	Unknown	County, Town	Within 2 years; Next round of HMGP funding	Deferred
PP-5	Ensure secure operation of water wells, water tanks and wastewater treatment facilities.	All	High	HMGP, USDA Rural Dev., CDBG, Small Muni. Grant	Unknown	County, Town	Ongoing	Implemented and ongoing

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2019 Action Implementation Status
Natural Resource Protection								
NRP-1	Preserve natural wetlands and riparian areas through acquisition of conservation easements.	HU, TS, FL	Low to Medium	Donation	Low or no cost	MS Land Trust, Land Trust for MS Coastal Plain, County, Town	Within 5 years	Deferred until funding can be allocated
Emergency Services								
ES-1	Encourage participation by staff and elected officials in voluntary or extracurricular activities related to emergency management, disaster preparedness, civil defense, or other hazard mitigation activities.	All	Medium	Self-funded, MEMA	Low or no cost	County EMA	Ongoing	Implemented and ongoing
ES-2	Establish a notification procedure for populations in high risk areas.	All	Medium	Self-funded	No additional cost	County EMA, County BOS, Town	Ongoing	Implemented and ongoing
ES-3	Survey the existing emergency shelters and study the feasibility of expanding the capacity of shelters.	All	High	HMGP	Unknown	County EMA, Town	Within 2 years	Deferred until funding can be allocated
ES-4	Explore potential sites for a new special needs shelter.	TO, HU, TS, FL	High	HMGP	Unknown	County, EMA, Town	Within 2 years	Deferred until funding can be allocated

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2019 Action Implementation Status
ES-5	Improve disaster communication systems within the County.	All	High	Unknown	Unknown	County EMA	Contingent on funding	Ongoing task
ES-6	Consider generators for local radio station service areas.	TO, HU, TS	High	HMGP	Unknown	County EMA	Contingent upon funding	Contingent on funding
ES-7	Install warning sirens in the County.	TO, HU	High	HMGP	Unknown	County EMA	Contingent upon funding	Added two sirens FY '13 and added eight sirens in 2016. Action is ongoing.
ES-8	Enhance Central Dispatch and other communications equipment.	All	High	Unknown	Unknown	County EMA	Contingent on funding	Planning upgrade 11 of 17. Action is ongoing.
ES-9	Explore upgrade/enhancement of 911 system in Covington County.	All	Medium	HMGP	Unknown	County EMA, Town	Within 2 years; Contingent upon funding	Planning upgrade in 8 years
ES-10	Explore potential to install Reverse 911 system.	All	Low to Medium	HMGP	Unknown	County EMA, Town	Within 5 years; Contingent upon funding	Deferred until funding becomes available
ES-11	Coordinate with neighboring jurisdictions to ensure consistency of evacuation plans.	FL, HU, TS, Others	Medium	Self-funded	No additional cost	County BOS, County EMA, Town	Ongoing	Implemented, Evacuation plans/maps available upon request

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2019 Action Implementation Status
ES-12	Enhance identification of evacuation routes through the distribution of MDOT maps.	FL, HU, TS, Others	High	Self-funded	No additional cost	County EMA	Ongoing	Implemented, Evacuation plans/maps available upon request
ES-13	Ensure continuity of utility services for public buildings and other critical facilities.	All	High	HGMP	Unknown	County, Town	Ongoing	Implemented, Update critical facilities list on an annual basis
ES-14	Develop a government services continuity plan.	All	Medium	USDA Rural Dev., CDBG, Small Muni. Grant	Unknown	County, Town	Within 5 years; Annual review	Implemented, FY'13 develop COOP/COG Plan. Revisions made in 2019. Maintained and ongoing action
ES-15	Host a meeting to review Covington County Comprehensive Emergency Management Plan.	TT	Medium	Self-funded	No additional cost	Town	Ongoing	Updated CEMP 2013. Newly adopted in 2019
ES-16	Actively search for and identify funding sources for the enhancement of emergency response abilities of Fire and Sheriff's Departments.	TT	Medium to High	DHS, SFER, COPS, FIRE	Unknown	County, Town	Ongoing	Implemented, as grants/funds become available

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2019 Action Implementation Status
ES-17	Explore continuing education programs/ opportunities for first responders, especially in hazardous materials training.	Range	Medium	Self-funded, MEMA	Low cost	Town	Within 2 years	Implemented, as grants/funds become available
Structural Projects								
SP-1	Address cross-jurisdictional issues related to response, recovery and mitigation on key projects with overlapping boundaries.	HU, TS, FL, RH	Low to Medium	Self-funded	No additional cost	County, Town		Delete
SP-2	Acquisition / Demolition / Relocation or Elevation, Reconstruction of flood prone structures	FL	Medium	FEMA, MEMA,	TBD	County EMA	2024	New
SP-2	Individual Saferooms	TS, T	Medium	FEMA, MEMA	TBD	County EMA	2024	New
Public Education and Awareness								
PEA-1	Explore continuing education programs/ opportunities for staff and elected officials.	Range	Medium	Self-funded, MEMA	Low cost	Town	Ongoing	Implemented, Started FY'09. Ongoing action
PEA-2	Provide education and outreach materials to citizens and visitors.	All	High	Self-funded	No cost	County EMA	Ongoing	Implemented and ongoing

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2019 Action Implementation Status
PEA-3	Encourage development of Family Disaster Plans.	All	High	Self-funded, COPS FIRE	Low or no cost	County EMA	Ongoing	Implemented through annual presentations/ Workshops. Ongoing action
PEA-4	Expand outreach information to property owners regarding retrofitting and flood-proofing techniques through community workshops, brochures, and newspaper articles.	FL, Multiple	High	Self-funded	No additional cost	County EMA, Town	Ongoing	Implemented through annual presentations/ Workshops. Ongoing action
PEA-5	Provide education/outreach to communities to encourage participation in the National Flood Insurance Program.	FL	High	N/A	No additional cost	County/Towns/City	Ongoing	Implemented, County/Towns/City has adopted NFIP
PEA-6	Encourage participation in the Community Rating System of the NFIP.	FL, HU, TS, TH, HW	Medium	USDA Rural Dev., CDBG, Small Muni. Grant, FEMA, Others	Unknown	County, Town	Within 3 years	Deferred

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2019 Action Implementation Status
PEA-7	Encourage businesses to develop business continuity or contingency operating plans.	CH	High	Self-funded, Chamber of Comm., SCORE	Low or no cost	County, Town	Ongoing	Implemented,, Education at EMA annual workshop. Ongoing action
FL = Flood HU = Hurricane TS = Tropical Storm TO = Tornado TH = Thunderstorm BH = Biological Hazards HW = High Winds TT = Transportation and Technological Hazards RH = Roadway Hazards CH = Civil Hazards County EMA = Covington County Emergency Management Agency County BOS = Covington County Board of Supervisors								

Forrest County Mitigation Action Plan

Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2019 Action Implementation Status
Prevention								
P-1	Identify high risk areas where hazards are most likely to occur.	All	High	None needed	No additional cost	County	Annual review	Ongoing
P-2	Site-locate vulnerable population on a County-wide map.	Multiple	High	Area Agency on Aging, USDA Rural Dev., COPS, FIRE	Unknown	Emergency Management District, County	Within 1 year; Upon request	Ongoing
P-3	Strictly enforce the flood damage prevention ordinance.	FL	High	Self-funded	No additional cost	County Floodplain Administrator	Ongoing	Ongoing
P-4	Consider adoption of subdivision regulations in Forrest County.	TH, FL, HU, TS	High	Self-funded	No cost	County	Ongoing	Completed and Ongoing as Needed
P-5	Continue to maintain and upgrade drainage facilities.	HU, TS, FL, BH	High	Self-funded	Part of annual County budget	County BOS, County Road Crews	Annual review	Ongoing as Funding Is Available

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2019 Action Implementation Status
P-6	Consider adoption of a comprehensive drainage plan.	FL, TS, HU	Medium	CDBG, Small Muni. Grant, MSDA, USDA Rural Dev.	No additional cost	County	Within 5 years	The County is still considering this action/Ongoing
P-7	Map the easements and rights-of-way of roadways and drainage ways. <i>*Goal 4 Action #2</i>	All	Low to Medium	CDBG, Small Muni. Grant, MSDA, USDA Rural Dev.	Unknown	County	Within 5 years	The County is still considering this action/Ongoing
P-8	Support the development of a shared geographic data system for land use and site planning. <i>*Goal 4 Action #1</i>	All	High	Self-funded	No additional cost	County	Ongoing	Ongoing
P-9	Develop a comprehensive development plan. <i>*Goal 1 Action #3</i>	All	Low	CDBG, MSDA	Unknown	County	Within 5 years	The County is still considering this action
P-10	Incorporate the hazard mitigation plan into the comprehensive plan.	All	Medium	CDBG, MSDA	No additional cost	County	Concurrent with prep. of Comp Plan	The County is still considering this action/Ongoing

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2019 Action Implementation Status
P-11	Address the threat of unhealthy trees that are near critical facilities. <i>*Goal 1 Action #7</i>	High Winds, Winter Storms and Hail	Medium	Local funds and Grant Sources	TBD	City Urban Forestry, Forrest County Road Department, Forrest County Planning Department and Emergency Management	Ongoing	Ongoing
P-12	Address the local need of debris removal and related items after a storm . <i>*Goal 3 Action #1</i>	High Winds, Flooding, Landslides, Winter Storms, and Hail	High	HMGP and other grant sources	\$500,000	Forrest County Road Department, Forrest County Planning Department and Emergency Management	Ongoing	Ongoing
P-13	Preserve classified, confidential and/or important governmental documents. <i>*Goal 4 Action #3</i>	All Hazards	High	Local and Grant Sources	TBD	County	Ongoing	Ongoing

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2019 Action Implementation Status
Property Protection								
PP-1	Promote alternative construction techniques such as the building of “safe rooms” in new construction and when remodeling existing structures.	HU, TS, TO, TH	High	Self-funded	No additional cost \$10,000,000-\$15,000,000	County	Within 5 years	Two Completed and Ten Underway. Action is Ongoing
PP-2	Ensure that structures in floodplain areas are elevated. <i>*Goal 1 Action #1</i>	FL	High	Self-funded	No additional cost	County	2024	New construction is regulated by the flood damage prevention ordinance. Existing structures in the flood zone that need to be elevated will be evaluated on a case by case basis pending funding and desire to be elevated. /Ongoing
PP-3	Ensure that new public buildings are designed and built to hurricane resistant building codes.	HU, TS, TO, HW	High	Self-funded	No additional cost	County	2024	Ongoing

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2019 Action Implementation Status
PP-4	Continue to retrofit public buildings and other critical facilities to withstand natural hazards.	All	High	HMGP	Unknown	County	2024	Ongoing as funding becomes available
PP-5	Ensure secure operation of water wells and wastewater treatment facilities.	All	High	HMGP, USDA Rural Dev., CDBG, Small Muni. Grant	Unknown	County	2024	Ongoing pending funding availability
PP-6	Actively pursue and buy those properties that are considered repetitive loss properties. <i>*Goal 1 Action #4</i>	FL	High	HMGP, PDM, FMA Self-funded	TBD	County	2024	Ongoing
Natural Resource Protection								
NRP-1	Preserve natural wetlands and riparian areas through acquisition of conservation easements.	HU, TS, FL	Low to Medium	Donation	Low or no cost	MS Land Trust, Land Trust of MS Coastal Plain; County	2024	Ongoing pending funding availability

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2019 Action Implementation Status
Emergency Services								
ES-1	Encourage participation by staff and elected officials in voluntary or extracurricular activities related to emergency management, disaster preparedness, civil defense, or other hazard mitigation activities.	All	Medium	Self-funded, MEMA	Low or no cost	Emergency Management District	2024	Ongoing
ES-2	Establish a notification procedure for populations in high risk areas.	All	Medium	Self-funded	No additional cost	Emergency Management District, County	Within 2 years	Ongoing
ES-3	Survey the existing emergency shelters and study the feasibility of expanding the capacity of shelters. <i>*Goal 1 Action #8</i>	All	High	HMGP	Unknown	Emergency Management District, County	Within 2 years	Ongoing
ES-4	Explore potential sites for a new special needs shelter.	TO, HU, TS, FL	High	HMGP	Unknown	Emergency Management District, County	Within 2 years	Ongoing
ES-5	Improve disaster communication systems within the County.	All	High	State, Federal, Local funds	Unknown	Emergency Management District, County	2024	Ongoing

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2019 Action Implementation Status
ES-6	Consider generators for local radio station service areas.	All	High	State, Federal funds	Unknown	Emergency Management District, County	Contingent upon funding	Ongoing
ES-7	Install warning sirens in each jurisdiction. <i>*Goal 2 Action #3</i>	All	High	State, Federal, Local funds	Unknown	Emergency Management District, County	Contingent upon funding	Ongoing pending funding availability 5 Installed and Ongoing
ES-8	Explore upgrade/enhancement of 911 system in Forrest County.	All	Medium	HMGP	Unknown	Emergency Management District, County	Within 2 years; Contingent upon funding	Ongoing – contingent on funding Some Portions complete
ES-9	Explore potential to install Reverse 911 system.	All	Low to Medium	HMGP	Unknown	Emergency Management District, County	Ongoing	Completed pending upgrades
ES-10	Coordinate with neighboring jurisdictions to ensure consistency of evacuation plans.	FL, HU, TS, Others	Medium	Self-funded	No additional cost	County BOS, Emergency Management District	Within 2 years	Ongoing
ES-11	Enhance identification of evacuation routes through distribution of MDOT maps.	FL, HU, TS, Others	High	Self-funded	No additional cost	Emergency Management District	Ongoing	Ongoing

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2019 Action Implementation Status
ES-12	Ensure continuity of utility services for public buildings and other critical facilities. <i>*Goal 1 Action #2</i>	All	High	HMGP	Unknown	County	Within 2 years; Next round of HMGP funding	Ongoing – contingent on funding
ES-13	Develop a government services continuity plan.	All	Medium	USDA Rural Dev., CDBG, Small Muni. Grant	Unknown	County	Within 5 years; Annual review	Ongoing – contingent on funding
ES-14	Host a meeting to review Forrest County Comprehensive Emergency Management Plan.	TT	Medium	Self-funded	No additional cost	Emergency Management District, County	Ongoing	Completed
ES-15	Actively search for and identify funding sources for the enhancement of emergency response abilities of Fire and Sheriff's Departments.	TT	Medium to High	DHS, SAFER, COPS, FIRE, Others	Unknown	County	Ongoing	Ongoing – contingent on funding. Added paid firemen and approximately five fire trucks for Districts 2, 3, and 5.
ES-16	Adoption of building codes in Forrest County. <i>*Goal 1 Action #5</i>	All Hazards	Medium	Local	TBD	County	2025	Deferred

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2019 Action Implementation Status
Structural Projects								
SP-1	Address cross-jurisdictional issues related to response, recovery and mitigation on key projects with overlapping boundaries.	HU, TS, FL, RH	Low to Medium	Self-funded	No additional cost	County	Within 2 years	Ongoing as needed
Public Education and Awareness								
PEA-1	Explore continuing education programs/opportunities for staff and elected officials.	FL, TH, HU, TS	Medium	Self-funded, MEMA	Low cost	County	Within 2 years	Ongoing – contingent on funding
PEA-2	Provide education and outreach materials to citizens and visitors. <i>*Goal 2 Action #2</i>	All	High	Self-funded	No cost	Emergency Management District	Within 1 year	Ongoing – contingent on funding
PEA-3	Encourage the development of Family Disaster Plans.	All	High	Self-funded, COPS, FIRE	Low or no cost	Emergency Management District	Annual presentations	Ongoing – contingent on funding
PEA-4	Expand outreach information to property owners regarding retrofitting and flood-proofing techniques through community workshops, brochures, and newspaper articles.	FL, Multiple	High	Self-funded	No additional cost	Emergency Management District, County	Upon request	Ongoing – contingent on funding

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2019 Action Implementation Status
PEA-5	Provide education/outreach to communities to encourage participation in the National Flood Insurance Program. <i>*Goal 2 Action #1</i>	FL	High	Self-funded	N/A	Emergency Management District, County	Ongoing	The County continues to participate in the NFIP and encourages the jurisdictions within the County to also join.
PEA-6	Encourage participation in the Community Rating System of the NFIP.	FL, HU, TS, TH, HW	Medium	USDA Rural Dev., CDBG, Small Muni. Grant, FEMA, Others	Unknown	County	Within 3 years	The County is still considering joining the CRS.
PEA-7	Encourage businesses to develop business continuity or contingency operating plans.	CH	Medium	DHS, SAFER, COPS, FIRE, Others	TBD	County	Within 2 years	Ongoing – contingent on funding
PEA-8	Discourage development within the Special Flood Hazard Area and in the floodway. <i>*Goal 1 Action #6</i>	Flood	Medium	HMGP	TBD	County	Ongoing	Ongoing

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2019 Action Implementation Status
FL = Flood TH = Thunderstorm HU = Hurricane TS = Tropical Storm TO = Tornado BH = Biological Hazards HW = High Winds TT = Transportation and Technological Hazards RH = Roadway Hazards CH = Civil Hazards								
JDCEMA = Forrest County Emergency Management Agency County BOS = Forrest County Board of Supervisors <i>*Denotes Action item from 2013 Forrest County HMP, no numbering methodology was utilized in the 2013 planning process, numbers were assigned based on Goal and associated action item on pages 5-2 and 5-3.</i>								

Town of Hattiesburg Mitigation Action Plan

Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2019 Action Implementation Status
Prevention								
P-1	Identify high risk areas where hazards are most likely to occur.	All	High	Self-funded	No additional cost	County, Town Emergency Management District	Annual review	Ongoing
P-2	Site-locate vulnerable population on a County-wide map.	Multiple	High	Area Agency on Aging, USDA Rural Dev., COPS, FIRE	No additional cost	Emergency Management District, County, Town	Within 1 year; Upon request	Ongoing
P-3	Strictly enforce the flood damage prevention ordinance.	FL	High	Self-funded	No additional cost	Town Floodplain Administrator	Ongoing	Ongoing
P-4	Strictly enforce subdivision regulations concerning developments in flood hazard areas.	FL	High	Self-funded	No additional cost	Town	Ongoing	Completed and Ongoing as Needed
P-5	Continue to maintain and upgrade drainage facilities.	HU, TS, FL, BH	High	Self-funded	Budget restraints	County BOS, County Road Crews, Town	Annual review	Ongoing as Funding Is Available

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2019 Action Implementation Status
P-6	Consider adoption of a comprehensive drainage plan.	FL, TS, HU	Medium	CDBG, Small Muni. Grant, MSDA, USDA Rural Dev.	Unknown	County, Town	Within 5 years	The Town is still considering this action/Ongoing
P-7	Map the easements and rights-of-way of roadways and drainage ways. <i>*Goal 4 Action #2</i>	All	Low to Medium	CDBG, Small Muni. Grant, MSDA, USDA Rural Dev.	Unknown	County, Town	Within 5 years	The Town is still considering this action/Ongoing
P-8	Support the development of a shared geographic data system for land use and site planning. <i>*Goal 4 Action #1</i>	All	Medium to High	Self-funded	No additional cost	County, Town	Ongoing	Ongoing
P-9	Develop a comprehensive development plan. <i>*Goal 1 Action #3</i>	All	High	CDBG, MSDA	Unknown	County, Town, Emergency Management District	Within 5 years	The Town is still considering this action

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2019 Action Implementation Status
P-10	Incorporate the hazard mitigation plan into the comprehensive plan.	All	Medium	Self-funded	No additional cost	County, Town, Emergency Management District	Concurrent with prep. of Comp Plan	Complete and Ongoing
P-11	Address the threat of unhealthy trees that are near critical facilities. <i>*Goal 1 Action #7</i>	High Winds, Winter Storms and Hail	Medium	Local funds and Grant Sources	TBD	City Urban Forestry, Forrest County Road Department, Forrest County Planning Department and Emergency Management	Ongoing	Ongoing
P-12	Address the local need of debris removal and related items after a storm . <i>*Goal 3 Action #1</i>	High Winds, Flooding, Landslides, Winter Storms, and Hail	High	HMGP and other grant sources	\$500,000	Forrest County Road Department, Forrest County Planning Department and Emergency Management	Ongoing	Ongoing

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2019 Action Implementation Status
P-13	Preserve classified, confidential and/or important governmental documents. <i>*Goal 4 Action #3</i>	All Hazards	High	Local and Grant Sources	TBD	County and City	Ongoing	Ongoing
Property Protection								
PP-1	Promote alternative construction techniques such as the building of “safe rooms” in new construction and when remodeling existing structures.	HU, TS, TO, TH	Medium	Self-funded	No additional cost	County, Town	Within 5 years	Two Completed and Ten Underway. Action is Ongoing
PP-2	Ensure that structures in floodplain areas are elevated. <i>*Goal 1 Action #1</i>	FL	High	Self-funded	No additional cost	County, Town	2024	New construction is regulated by the flood damage prevention ordinance. Existing structures in the flood zone that need to be elevated will be evaluated on a case by case basis pending funding and desire to be elevated. /Ongoing

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2019 Action Implementation Status
PP-3	Ensure that new public buildings are designed and built to hurricane resistant building codes.	HU, TS, TO, HW	High	Self-funded	No additional cost	County, Town	2024	Ongoing
PP-4	Continue to retrofit public buildings and other critical facilities to withstand natural hazards.	All	High	HMGP	Budget restraints	County, Town	2024	Ongoing as funding becomes available
PP-5	Ensure secure operation of water wells and wastewater treatment facilities.	All	High	HMGP, USDA Rural Dev., CDBG, Small Muni. Grant	Unknown	County, Town	2024	Ongoing pending funding availability
PP-6	Actively pursue and buy those properties that are considered repetitive loss properties. <i>*Goal 1 Action #4</i>	FL	High	HMGP, PDM, FMA Self-funded	TBD	County	2024	Ongoing

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2019 Action Implementation Status
Natural Resource Protection								
NRP-1	Preserve natural wetlands and riparian areas through acquisition of conservation easements.	HU, TS, FL	Low to Medium	Donation	Low or no cost	MS Land Trust, Land Trust of MS Coastal Plain; County, Town	2024	Ongoing pending funding availability
Emergency Services								
ES-1	Encourage participation by staff and elected officials in voluntary or extracurricular activities related to emergency management, disaster preparedness, civil defense, or other hazard mitigation activities.	All	Medium	Self-funded, MEMA	Low or no cost	Emergency Management District	2024	Ongoing
ES-2	Establish a notification procedure for populations in high risk areas.	All	Medium	Self-funded	No additional cost	Emergency Management District, Town	Within 2 years	Ongoing
ES-3	Survey the existing emergency shelters and study the feasibility of expanding the capacity of shelters. <i>*Goal 1 Action #8</i>	All	High	HMGP	Unknown	Emergency Management District, County, Town	Within 2 years	Ongoing

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2019 Action Implementation Status
ES-4	Explore potential sites for a new special needs shelter.	TO, HU, TS, FL	High	HMGP	Unknown	Emergency Management District, County, Town	Within 2 years	Ongoing
ES-5	Improve disaster communication systems within the County.	All	High	State, Federal, Local funds	Unknown	Emergency Management District, County	2024	Ongoing
ES-6	Consider generators for local radio station service areas.	TO, HU, TS	High	State, Federal funds	Unknown	Emergency Management District, County	Contingent upon funding	Ongoing
ES-7	Install warning sirens in each jurisdiction. <i>*Goal 2 Action #3</i>	TO, HU, TS	High	State, Federal, Local funds	Unknown	Emergency Management District, County	Contingent upon funding	Ongoing pending funding availability 5 Installed and Ongoing
ES-8	Explore upgrade/enhancement of 911 system in Forrest County.	All	Medium	HMGP	Unknown	Emergency Management District, County, Town	Within 2 years; Contingent upon funding	Ongoing – contingent on funding Some Portions complete
ES-9	Explore potential to install Reverse 911 system.	All	Low to Medium	HMGP	Unknown	Emergency Management District, County, Town	Ongoing	Completed pending upgrades

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2019 Action Implementation Status
ES-10	Coordinate with neighboring jurisdictions to ensure consistency of evacuation plans.	FL, HU, TS, Others	Medium	Self-funded	No additional cost	County BOS, Emergency Management District, Town	Within 2 years	Ongoing
ES-11	Enhance identification of evacuation routes through distribution of MDOT maps.	FL, HU, TS, Others	High	Self-funded	No additional cost	Emergency Management District	Ongoing	Ongoing
ES-12	Ensure continuity of utility services for public buildings and other critical facilities. <i>*Goal 1 Action #2</i>	All	High	HMGP	No additional costs	County, Town	Within 2 years; Next round of HMGP funding	Ongoing – contingent on funding
ES-13	Develop a government services continuity plan.	All	Medium	USDA Rural Dev., CDBG, Small Muni. Grant	Unknown	County, Town, Emergency Management District	Within 5 years; Annual review	Ongoing – contingent on funding
ES-14	Host a meeting to review Forrest County Comprehensive Emergency Management Plan.	TT	Medium	Self-funded	No additional cost	County, Town, Emergency Management District	Ongoing	Completed

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2019 Action Implementation Status
ES-15	Actively search for and identify funding sources for the enhancement of emergency response abilities of Fire and Sheriff's Departments.	TT	Medium to High	DHS, SAFER, COPS, FIRE, Others	Unknown	County, Town	Ongoing	Ongoing – contingent on funding. Added paid firemen and approximately five fire trucks for Districts 2, 3, and 5.
ES-16	Adoption of building codes in Forrest County. <i>*Goal 1 Action #5</i>	All Hazards	Medium	Local	TBD	County and City	2025	Deferred
Structural Projects								
SP-1	Address cross-jurisdictional issues related to response, recovery and mitigation on key projects with overlapping boundaries.	HU, TS, FL, RH	Low to Medium	Self-funded	No additional cost	County, Town	Within 2 years	Ongoing as needed
Public Education and Awareness								
PEA-1	Explore continuing education programs/ opportunities for staff and elected officials.	FL, TH, HU, TS	Medium	Self-funded, MEMA	Low cost	County, Town	Within 2 years	Ongoing – contingent on funding
PEA-2	Provide education and outreach materials to citizens and visitors. <i>*Goal 2 Action #2</i>	All	High	Self-funded	No cost	Emergency Management District	Within 1 year	Ongoing – contingent on funding

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2019 Action Implementation Status
PEA-3	Encourage the development of Family Disaster Plans.	All	High	Self-funded, COPS, FIRE	Low or no cost	Emergency Management District	Annual presentations	Ongoing – contingent on funding
PEA-4	Expand outreach information to property owners regarding retrofitting and flood-proofing techniques through community workshops, brochures, and newspaper articles.	FL, Multiple	High	Self-funded	No additional cost	County, Town	Upon request	Ongoing – contingent on funding
PEA-5	Provide education/outreach to communities to encourage participation in the National Flood Insurance Program. <i>*Goal 2 Action #1</i>	FL	High	Self-funded	N/A	County	Ongoing	The County continues to participate in the NFIP and encourages the jurisdictions within the County to also join.

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2019 Action Implementation Status
PEA-6	Encourage participation in the Community Rating System of the NFIP.	FL, HU, TS, TH, HW	Medium	USDA Rural Dev., CDBG, Small Muni. Grant, FEMA, Others	Unknown	County, Town	Within 3 years	The County is still considering joining the CRS.
PEA-7	Encourage businesses to develop business continuity or contingency operating plans.	CH	High	DHS, SAFER, COPS, FIRE, Others	Unknown	County, Town	Within 2 years	Ongoing – contingent on funding
PEA-8	Discourage development within the Special Flood Hazard Area and in the floodway. <i>*Goal 1 Action #6</i>	Flood	Medium	HMGP	TBD	County and City	Ongoing	Ongoing

FL = Flood TH = Thunderstorm HU = Hurricane TS = Tropical Storm TO = Tornado BH = Biological Hazards HW = High Winds
 TT = Transportation and Technological Hazards RH = Roadway Hazards CH = Civil Hazards

JDCEMA = Forrest County Emergency Management Agency County BOS = Forrest County Board of Supervisors

**Denotes Action item from 2013 Forrest County HMP, no numbering methodology was utilized in the 2013 planning process, numbers were assigned based on Goal and associated action item on pages 5-2 and 5-3.*

Town of Petal Mitigation Action Plan

Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2019 Action Implementation Status
Prevention								
P-1	Identify high risk areas where hazards are most likely to occur.	All	High	None needed	No additional cost	County	Annual review	Ongoing
P-2	Site-locate vulnerable population on a County-wide map.	Multiple	High	Area Agency on Aging, USDA Rural Dev., COPS, FIRE	Unknown	JDCEMA, County	Within 1 year; Upon request	Ongoing
P-3	Strictly enforce the flood damage prevention ordinance.	FL	High	Self-funded	No additional cost	County Floodplain Administrator	Ongoing	Ongoing
P-4	Strictly enforce subdivision regulations concerning developments in flood hazard areas.	TH, FL, HU, TS	High	Self-funded	No cost	County	Ongoing	Completed and Ongoing as Needed
P-5	Continue to maintain and upgrade drainage facilities.	HU, TS, FL, BH	High	Self-funded	Part of annual County budget	County BOS, County Road Crews	Annual review	Ongoing as Funding Is Available

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2019 Action Implementation Status
P-6	Consider adoption of a comprehensive drainage plan.	FL, TS, HU	Medium	CDBG, Small Muni. Grant, MSDA, USDA Rural Dev.	No additional cost	County	Within 5 years	The Town is still considering this action/Ongoing
P-7	Map the easements and rights-of-way of roadways and drainage ways. <i>*Goal 4 Action #2</i>	All	Low to Medium	CDBG, Small Muni. Grant, MSDA, USDA Rural Dev.	Unknown	County	Within 5 years	The Town is still considering this action/Ongoing
P-8	Support the development of a shared geographic data system for land use and site planning. <i>*Goal 4 Action #1</i>	All	Medium to High	Self-funded	No additional cost	County	Ongoing	Ongoing
P-9	Update the existing Petal Comprehensive Development Plan. <i>*Goal 1 Action #3</i>	All	High	CDBG, MSDA	Unknown	County	Within 5 years	The Town is still considering this action
P-10	Incorporate the hazard mitigation plan into the comprehensive plan.	All	Medium	CDBG, MSDA	No additional cost	County	Concurrent with prep. of Comp Plan	The Town is still considering this action/Ongoing

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2019 Action Implementation Status
P-11	Address the threat of unhealthy trees that are near critical facilities. <i>*Goal 1 Action #7</i>	High Winds, Winter Storms and Hail	Medium	Local funds and Grant Sources	TBD	City Urban Forestry, Forrest County Road Department, Forrest County Planning Department and Emergency Management	Ongoing	Ongoing
P-12	Address the local need of debris removal and related items after a storm . <i>*Goal 3 Action #1</i>	High Winds, Flooding, Landslides, Winter Storms, and Hail	High	HMGP and other grant sources	\$500,000	Forrest County Road Department, Forrest County Planning Department and Emergency Management	Ongoing	Ongoing
P-13	Preserve classified, confidential and/or important governmental documents. <i>*Goal 4 Action #3</i>	All Hazards	High	Local and Grant Sources	TBD	County and City	Ongoing	Ongoing

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2019 Action Implementation Status
P-14	Provide first responders in Petal with necessary equipment and training to respond to gas plant disasters. <i>*Goal 3 Action #2</i>	HAZMAT	High	HMGP	\$850,000	City of Petal Fire Department	Ongoing	Ongoing
P-15	Develop a police response unit in Petal designed to deter acts of terrorism. <i>*Goal 3 Action #3</i>	Terrorism	High	Grant Sources	TBD	City of Petal Fire Department	Ongoing	Ongoing
Property Protection								
PP-1	Promote alternative construction techniques such as the building of “safe rooms” in new construction and when remodeling existing structures.	HU, TS, TO, TH	HU, TS, TO, TH	Medium	Self-funded	No additional cost	Within 5 years	Two Completed and Ten Underway. Action is Ongoing

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2019 Action Implementation Status
PP-2	Ensure that structures in floodplain areas are elevated. <i>*Goal 1 Action #1</i>	FL	FL	High	Self-funded	No additional cost	2024	New construction is regulated by the flood damage prevention ordinance. Existing structures in the flood zone that need to be elevated will be evaluated on a case by case basis pending funding and desire to be elevated. /Ongoing
PP-3	Ensure that new public buildings are designed and built to hurricane resistant building codes.	HU, TS, TO, HW	HU, TS, TO, HW	High	Self-funded	No additional cost	2024	Ongoing
PP-4	Continue to retrofit public buildings and other critical facilities to withstand natural hazards.	All	All	High	HMGP	Unknown	2024	Ongoing as funding becomes available

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2019 Action Implementation Status
PP-5	Ensure secure operation of water wells and wastewater treatment facilities.	All	High	HMGP, USDA Rural Dev., CDBG, Small Muni. Grant	Unknown	County, Town	2024	Ongoing pending funding availability
PP-6	Actively pursue and buy those properties that are considered repetitive loss properties. <i>*Goal 1 Action #4</i>	FL	High	HMGP, PDM, FMA Self-funded	TBD	County	2024	Ongoing
Natural Resource Protection								
NRP-1	Preserve natural wetlands and riparian areas through acquisition of conservation easements.	HU, TS, FL	Low to Medium	Donation	Low or no cost	MS Land Trust, Land Trust of MS Coastal Plain; County, Town	2024	Ongoing pending funding availability

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2019 Action Implementation Status
Emergency Services								
ES-1	Encourage participation by staff and elected officials in voluntary or extracurricular activities related to emergency management, disaster preparedness, civil defense, or other hazard mitigation activities.	All	Medium	Self-funded, MEMA	Low or no cost	JDCEMA	2024	Ongoing
ES-2	Establish a notification procedure for populations in high risk areas.	All	Medium	Self-funded	No additional cost	JDCEMA, County	Within 2 years	Ongoing
ES-3	Survey the existing emergency shelters and study the feasibility of expanding the capacity of shelters. <i>*Goal 1 Action #8</i>	All	High	HMGP	Unknown	JDCEMA, County	Within 2 years	Ongoing
ES-4	Explore potential sites for a new special needs shelter.	TO, HU, TS, FL	High	HMGP	Unknown	JDCEMA, County	Within 2 years	Ongoing
ES-5	Improve disaster communication systems within the County.	All	High	State, Federal, Local funds	Unknown	JDCEMA, County	2024	Ongoing
ES-6	Consider generators for local radio station service areas.	All	High	State, Federal funds	Unknown	JDCEMA, County	Contingent upon funding	Ongoing

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2019 Action Implementation Status
ES-7	Install warning sirens in each jurisdiction. <i>*Goal 2 Action #3</i>	All	High	State, Federal, Local funds	Unknown	JDCEMA, County	Contingent upon funding	Ongoing pending funding availability 5 Installed and Ongoing
ES-8	Explore upgrade/enhancement of 911 system in Forrest County.	All	Medium	HMGP	Unknown	JDCEMA, County	Within 2 years; Contingent upon funding	Ongoing – contingent on funding Some Portions complete
ES-9	Explore potential to install Reverse 911 system.	All	Low to Medium	HMGP	Unknown	JDCEMA, County	Ongoing	Completed pending upgrades
ES-10	Coordinate with neighboring jurisdictions to ensure consistency of evacuation plans.	FL, HU, TS, Others	Medium	Self-funded	No additional cost	County BOS, JDCEMA	Within 2 years	Ongoing
ES-11	Enhance identification of evacuation routes through distribution of MDOT maps.	FL, HU, TS, Others	High	Self-funded	No additional cost	JDCEMA	Ongoing	Ongoing
ES-12	Ensure continuity of utility services for public buildings and other critical facilities. <i>*Goal 1 Action #2</i>	All	High	HMGP	Unknown	County	Within 2 years; Next round of HMGP funding	Ongoing – contingent on funding

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2019 Action Implementation Status
ES-13	Develop a government services continuity plan.	All	Medium	USDA Rural Dev., CDBG, Small Muni. Grant	Unknown	County	Within 5 years; Annual review	Ongoing – contingent on funding
ES-14	Host a meeting to review Forrest County Comprehensive Emergency Management Plan.	TT	Medium	Self-funded	No additional cost	County	Ongoing	Completed
ES-15	Actively search for and identify funding sources for the enhancement of emergency response abilities of Fire and Sheriff's Departments.	TT	Medium to High	DHS, SAFER, COPS, FIRE, Others	Unknown	County	Ongoing	Ongoing – contingent on funding. Added paid firemen and approximately five fire trucks for Districts 2, 3, and 5.
ES-16	Adoption of building codes in Forrest County. <i>*Goal 1 Action #5</i>	All Hazards	Medium	Local	TBD	County and City	2025	Deferred

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2019 Action Implementation Status
Structural Projects								
SP-1	Address cross-jurisdictional issues related to response, recovery and mitigation on key projects with overlapping boundaries.	HU, TS, FL, RH	Low to Medium	Self-funded	No additional cost	County, Town	Within 2 years	Ongoing as needed
Public Education and Awareness								
PEA-1	Explore continuing education programs/ opportunities for staff and elected officials.	FL, TH, HU, TS	Medium	Self-funded, MEMA	Low cost	County, Town	Within 2 years	Ongoing – contingent on funding
PEA-2	Provide education and outreach materials to citizens and visitors. <i>*Goal 2 Action #2</i>	All	High	Self-funded	No cost	JDCEMA	Within 1 year	Ongoing – contingent on funding
PEA-3	Encourage the development of Family Disaster Plans.	All	High	Self-funded, COPS, FIRE	Low or no cost	JDCEMA	Annual presentations	Ongoing – contingent on funding
PEA-4	Expand outreach information to property owners regarding retrofitting and flood-proofing techniques through community workshops, brochures, and newspaper articles.	FL, Multiple	High	Self-funded	No additional cost	JDCEMA, County, Town	Upon request	Ongoing – contingent on funding

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2019 Action Implementation Status
PEA-5	Provide education/outreach to communities to encourage participation in the National Flood Insurance Program. <i>*Goal 2 Action #1</i>	FL	High	Self-funded	N/A	Town	Ongoing	The County continues to participate in the NFIP and encourages the jurisdictions within the County to also join.
PEA-6	Encourage participation in the Community Rating System of the NFIP.	FL, HU, TS, TH, HW	Medium	USDA Rural Dev., CDBG, Small Muni. Grant, FEMA, Others	Unknown	County, Town	Within 3 years	The County is still considering joining the CRS.
PEA-7	Encourage businesses to develop business continuity or contingency operating plans.	CH	High	DHS, SAFER, COPS, FIRE, Others	Unknown	County, Town	Within 2 years	Ongoing – contingent on funding
PEA-8	Discourage development within the Special Flood Hazard Area and in the floodway. <i>*Goal 1 Action #6</i>	Flood	Medium	HMGP	TBD	County and City	Ongoing	Ongoing

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2019 Action Implementation Status
FL = Flood TH = Thunderstorm HU = Hurricane TS = Tropical Storm TO = Tornado BH = Biological Hazards HW = High Winds TT = Transportation and Technological Hazards RH = Roadway Hazards CH = Civil Hazards								
JDCEMA = Forrest County Emergency Management County BOS = Forrest County Board of Supervisors <i>*Denotes Action item from 2013 Forrest County HMP, no numbering methodology was utilized in the 2013 planning process, numbers were assigned based on Goal and associated action item on pages 5-2 and 5-3.</i>								

Jefferson Davis County Mitigation Action Plan

Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2019 Action Implementation Status
Prevention								
P-1	Identify high risk areas where hazards are most likely to occur.	All	High	None needed	No additional cost	County	Annual review	Ongoing
P-2	Site-locate vulnerable population on a County-wide map.	Multiple	High	Area Agency on Aging, USDA Rural Dev., COPS, FIRE	Unknown	JDCEMA, County	Annual review	Ongoing
P-3	Strictly enforce the flood damage prevention ordinance.	FL	High	Self-funded	No additional cost	County Floodplain Administrator	Ongoing	Ongoing
P-4	Consider adoption of subdivision regulations in Jefferson Davis County.	TH, FL, HU, TS	High	Self-funded	No cost	County	2024	Ongoing
P-5	Continue to maintain and upgrade drainage facilities.	HU, TS, FL, BH	High	Self-funded	Part of annual County budget	County BOS, County Road Crews	Annual review	Ongoing

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2019 Action Implementation Status
P-6	Consider adoption of a comprehensive drainage plan.	FL, TS, HU	Medium	CDBG, Small Muni. Grant, MSDA, USDA Rural Dev.	No additional cost	County	Within 5 years	The County is still considering this action
P-7	Map the easements and rights-of-way of roadways and drainage ways.	All	Low to Medium	CDBG, Small Muni. Grant, MSDA, USDA Rural Dev.	Unknown	County	Within 5 years	The County is still considering this action
P-8	Support the development of a shared geographic data system for land use and site planning.	All	Medium to High	Self-funded	No additional cost	County	2024	Ongoing
P-9	Develop a comprehensive development plan.	All	High	CDBG, MSDA	Unknown	County	Within 2 years	The County is still considering this action
P-10	Incorporate the hazard mitigation plan into the comprehensive plan.	All	Medium	CDBG, MSDA	No additional cost	County	Concurrent with prep. of Comp Plan	Pending status change in action P-9

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2019 Action Implementation Status
Property Protection								
PP-1	Promote alternative construction techniques such as the building of “safe rooms” in new construction and when remodeling existing structures.	HU, TS, TO, TH	Medium	Self-funded	No additional cost	County	Within 5 years	Pending funding availability
PP-2	Ensure that structures in floodplain areas are elevated.	FL	High	Self-funded	No additional cost	County	Within 3 years	Ongoing/New construction is regulated by the flood damage prevention ordinance. Existing structures in the flood zone that need to be elevated will be evaluated on a case by case basis pending funding and desire to be elevated.
PP-3	Ensure that new public buildings are designed and built to hurricane resistant building codes.	HU, TS, TO, HW	High	Self-funded	No additional cost	County	Annual Review	Ongoing/Pending Funding availability

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2019 Action Implementation Status
PP-4	Continue to retrofit public buildings and other critical facilities to withstand natural hazards.	All	High	HMGP	Unknown	County	Within 2 years; Next round of HMGP funding	Ongoing as funding becomes available
PP-5	Ensure secure operation of water wells and wastewater treatment facilities.	All	High	HMGP, USDA Rural Dev., CDBG, Small Muni. Grant	Unknown	County	Within 5 years; Next round of HMGP funding	Ongoing pending funding availability
PP-6	Property Acquisitions and elevations of flood prone structures	FL	Medium	FEMA, HMGP, PDM	N/A	County	2024	New
PP-7	Construct new multipurpose EOC facility to serve as EOC and safe room for emergency personnel during disaster situations.	All Hazards	High	FEMA, HMGP, PGM Local Sources	\$3,000,000-\$10,000.00	County	2024	New
Natural Resource Protection								
NRP-1	Preserve natural wetlands and riparian areas through acquisition of conservation easements.	HU, TS, FL	Low to Medium	Donation	Low or no cost	MS Land Trust, Land Trust of MS Coastal Plain; County	Within 5 years	Ongoing pending funding availability

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2019 Action Implementation Status
Emergency Services								
ES-1	Encourage participation by staff and elected officials in voluntary or extracurricular activities related to emergency management, disaster preparedness, civil defense, or other hazard mitigation activities.	All	Medium	Self-funded, MEMA	Low or no cost	JDCEMA	Annual Review	Ongoing
ES-2	Establish a notification procedure for populations in high risk areas.	All	Medium	Self-funded	No additional cost	JDCEMA, County	Ongoing	Completed/Ongoing
ES-3	Survey the existing emergency shelters and study the feasibility of expanding the capacity of shelters.	All	High	HMGP	Unknown	JDCEMA, County	Annual Review	Ongoing
ES-4	Explore potential sites for a new special needs shelter.	TO, HU, TS, FL	High	HMGP	Unknown	JDCEMA, County	Completed	Completed/Ongoing
ES-5	Improve disaster communication systems within the County.	All	High	State, Federal, Local funds	Unknown	JDCEMA, County	Ongoing	Ongoing Pending Funding
ES-6	Consider generators for local radio station service areas.	All	High	State, Federal funds	Unknown	JDCEMA, County	Contingent upon funding	Deferred. No radio station within the county as of the last year.

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2019 Action Implementation Status
ES-7	Install warning sirens in each jurisdiction.	All	High	State, Federal, Local funds	Unknown	JDCEMA, County	Contingent upon funding	Ongoing pending funding availability 2 sites have been completed in 2018
ES-8	Explore upgrade/enhancement of 911 system in Jefferson Davis County.	All	Medium	HMGP	Unknown	JDCEMA, County Sheriff	Contingent upon funding	Ongoing – contingent on funding
ES-9	Explore potential to install Reverse 911 system.	All	Low to Medium	HMGP	Unknown	JDCEMA, County Sheriff	Contingent upon funding	Ongoing – contingent on funding
ES-10	Coordinate with neighboring jurisdictions to ensure consistency of evacuation plans.	FL, HU, TS, Others	Medium	Self-funded	No additional cost	County BOS, JDCEMA	Annual Review	Ongoing
ES-11	Enhance identification of evacuation routes through distribution of MDOT maps.	FL, HU, TS, Others	High	Self-funded	No additional cost	JDCEMA	Ongoing	Ongoing
ES-12	Ensure continuity of utility services for public buildings and other critical facilities.	All	High	HMGP	Unknown	County	Ongoing – contingent on funding	Ongoing – contingent on funding

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2019 Action Implementation Status
ES-13	Develop a government services continuity plan.	All	Medium	USDA Rural Dev., CDBG, Small Muni. Grant	Unknown	County	Within 5 years; Annual review	Ongoing – contingent on funding
ES-14	Host a meeting to review Jefferson Davis County Comprehensive Emergency Management Plan.	TT	Medium	Self-funded	No additional cost	County	Annual Review	Ongoing as needed
ES-15	Actively search for and identify funding sources for the enhancement of emergency response abilities of Fire and Sheriff's Departments.	TT	Medium to High	DHS, SAFER, COPS, FIRE, Others	Unknown	County	Ongoing	Ongoing – contingent on funding
Structural Projects								
SP-1	Address cross-jurisdictional issues related to response, recovery and mitigation on key projects with overlapping boundaries.	HU, TS, FL, RH	Low to Medium	Self-funded	No additional cost	County	Within 2 years	Ongoing as needed
Public Education and Awareness								
PEA-1	Explore continuing education programs/opportunities for staff and elected officials.	FL, TH, HU, TS	Medium	Self-funded, MEMA	Low cost	County	Ongoing	Ongoing – contingent on funding

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2019 Action Implementation Status
PEA-2	Provide education and outreach materials to citizens and visitors.	All	High	Self-funded	No cost	JDCEMA	Ongoing	Ongoing – contingent on funding
PEA-3	Encourage the development of Family Disaster Plans.	All	High	Self-funded, COPS, FIRE	Low or no cost	JDCEMA	Annual presentations	Ongoing – contingent on funding
PEA-4	Expand outreach information to property owners regarding retrofitting and flood-proofing techniques through community workshops, brochures, and newspaper articles.	FL, Multiple	High	Self-funded	No additional cost	JDCEMA, County	Upon request	Ongoing – contingent on funding
PEA-5	Provide education/outreach to communities to encourage participation in the National Flood Insurance Program.	FL	High	Self-funded	N/A	JDCEMA, County	Ongoing	Ongoing

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2019 Action Implementation Status
PEA-6	Encourage participation in the Community Rating System of the NFIP.	FL, HU, TS, TH, HW	Medium	USDA Rural Dev., CDBG, Small Muni. Grant, FEMA, Others	Unknown	County	Ongoing	The County is still considering joining the CRS.
PEA-7	Encourage businesses to develop business continuity or contingency operating plans.	CH	High	DHS, SAFER, COPS, FIRE, Others		County	Ongoing	Ongoing – contingent on funding
PEA-8	Develop/encourage water conservation measures during times of shortage	Drought	Medium	HMGP	N/A	County	2024	New
FL = Flood TH = Thunderstorm HU = Hurricane TS = Tropical Storm TO = Tornado BH = Biological Hazards HW = High Winds TT = Transportation and Technological Hazards RH = Roadway Hazards CH = Civil Hazards JDCEMA = Jefferson Davis County Emergency Management Agency County BOS = Jefferson Davis County Board of Supervisors								

Town of Bassfield Mitigation Action Plan

Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2013 Action Implementation Status
Prevention								
P-1	Identify high risk areas where hazards are most likely to occur.	All	High	Self-funded	No additional cost	County, Town	Annual review	Ongoing
P-2	Site-locate vulnerable population on a County-wide map.	Multiple	High	Area Agency on Aging, USDA Rural Dev., COPS, FIRE	No additional cost	JDCEMA, County, Town	Annual review	Ongoing
P-3	Strictly enforce the flood damage prevention ordinance.	FL	High	Self-funded	No additional cost	Town Floodplain Administrator	Ongoing	Ongoing
P-4	Strictly enforce subdivision regulations concerning developments in flood hazard areas.	FL	High	Self-funded	No additional cost	Town	2024	Ongoing
P-5	Continue to maintain and upgrade drainage facilities.	HU, TS, FL, BH	High	Self-funded	Budget restraints	County BOS, County Road Crews, Town	Annual review	Ongoing

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2013 Action Implementation Status
P-6	Consider adoption of a comprehensive drainage plan.	FL, TS, HU	Medium	CDBG, Small Muni. Grant, MSDA, USDA Rural Dev.	Unknown	County, Town	Within 5 years	The County is still considering this action
P-7	Map the easements and rights-of-way of roadways and drainage ways.	All	Low to Medium	CDBG, Small Muni. Grant, MSDA, USDA Rural Dev.	Unknown	County, Town	Within 5 years	The County is still considering this action
P-8	Support the development of a shared geographic data system for land use and site planning.	All	Medium to High	Self-funded	No additional cost	County, Town	2024	Ongoing
P-9	Develop a comprehensive development plan.	All	High	CDBG, MSDA	Unknown	County, Town	Within 2 years	The County is still considering this action
P-10	Incorporate the hazard mitigation plan into the comprehensive plan.	All	Medium	Self-funded	No additional cost	County, Town	Concurrent with prep. of Comp Plan	Pending status change in action P-9

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2013 Action Implementation Status
Property Protection								
PP-1	Promote alternative construction techniques such as the building of “safe rooms” in new construction and when remodeling existing structures.	HU, TS, TO, TH	Medium	Self-funded	No additional cost	County, Town	Within 5 years	Pending funding availability
PP-2	Ensure that structures in floodplain areas are elevated.	FL	High	Self-funded	No additional cost	County, Town	Within 3 years	Ongoing/New construction is regulated by the flood damage prevention ordinance. Existing structures in the flood zone that need to be elevated will be evaluated on a case by case basis pending funding and desire to be elevated.
PP-3	Ensure that new public buildings are designed and built to hurricane resistant building codes.	HU, TS, TO, HW	High	Self-funded	No additional cost	County, Town	Annual Review	Ongoing/Pending Funding availability

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2013 Action Implementation Status
PP-4	Continue to retrofit public buildings and other critical facilities to withstand natural hazards.	All	High	HMGP	Budget restraints	County, Town	Within 2 years; Next round of HMGP funding	Ongoing as funding becomes available
PP-5	Ensure secure operation of water wells and wastewater treatment facilities.	All	High	HMGP, USDA Rural Dev., CDBG, Small Muni. Grant	Unknown	County, Town	Within 5 years; Next round of HMGP funding	Ongoing pending funding availability
PP-6	Property Acquisitions and elevations of flood prone structures	FL	Medium	FEMA, HMGP, PDM	N/A	County	2024	New
PP-7	Construct new multipurpose EOC facility to serve as EOC and safe room for emergency personnel during disaster situations.	All Hazards	High	FEMA, HMGP, PGM Local Sources	\$3,000,000-\$10,000.00	County	2024	New
Natural Resource Protection								
NRP-1	Preserve natural wetlands and riparian areas through acquisition of conservation easements.	HU, TS, FL	Low to Medium	Donation	Low or no cost	MS Land Trust, Land Trust of MS Coastal Plain; County, Town	Within 5 years	Ongoing pending funding availability

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2013 Action Implementation Status
Emergency Services								
ES-1	Encourage participation by staff and elected officials in voluntary or extracurricular activities related to emergency management, disaster preparedness, civil defense, or other hazard mitigation activities.	All	Medium	Self-funded, MEMA	Low or no cost	JDCEMA	Annual Review	Ongoing
ES-2	Establish a notification procedure for populations in high risk areas.	All	Medium	Self-funded	No additional cost	JDCEMA, Town	Ongoing	Completed/Ongoing
ES-3	Survey the existing emergency shelters and study the feasibility of expanding the capacity of shelters.	All	High	HMGP	Unknown	JDCEMA, County, Town	Annual Review	Ongoing
ES-4	Explore potential sites for a new special needs shelter.	TO, HU, TS, FL	High	HMGP	Unknown	JDCEMA, County, Town	Completed	Completed/Ongoing
ES-5	Improve disaster communication systems within the County.	All	High	State, Federal, Local funds	Unknown	JDCEMA, County	Ongoing	Ongoing Pending Funding
ES-6	Consider generators for local radio station service areas.	TO, HU, TS	High	State, Federal funds	Unknown	JDCEMA, County	Contingent upon funding	Deferred. No radio station within the county as of the last year.

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2013 Action Implementation Status
ES-7	Install warning sirens in each jurisdiction.	TO, HU, TS	High	State, Federal, Local funds	Unknown	JDCEMA, County	Contingent upon funding	Ongoing pending funding availability 2 sites have been completed in 2018
ES-8	Explore upgrade/enhancement of 911 system in Jefferson Davis County.	All	Medium	HMGP	Unknown	JDCEMA, County, Town	Contingent upon funding	Ongoing – contingent on funding
ES-9	Explore potential to install Reverse 911 system.	All	Low to Medium	HMGP	Unknown	JDCEMA, County, Town	Contingent upon funding	Ongoing – contingent on funding
ES-10	Coordinate with neighboring jurisdictions to ensure consistency of evacuation plans.	FL, HU, TS, Others	Medium	Self-funded	No additional cost	County BOS, JDCEMA, Town	Annual Review	Ongoing
ES-11	Enhance identification of evacuation routes through distribution of MDOT maps.	FL, HU, TS, Others	High	Self-funded	No additional cost	JDCEMA	Ongoing	Ongoing
ES-12	Ensure continuity of utility services for public buildings and other critical facilities.	All	High	HMGP	No additional costs	County, Town	Ongoing – contingent on funding	Ongoing – contingent on funding

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2013 Action Implementation Status
ES-13	Develop a government services continuity plan.	All	Medium	USDA Rural Dev., CDBG, Small Muni. Grant	Unknown	County, Town	Within 5 years; Annual review	Ongoing – contingent on funding
ES-14	Host a meeting to review Jefferson Davis County Comprehensive Emergency Management Plan.	TT	Medium	Self-funded	No additional cost	County, Town	Annual Review	Ongoing as needed
ES-15	Actively search for and identify funding sources for the enhancement of emergency response abilities of Fire and Sheriff's Departments.	TT	Medium to High	DHS, SAFER, COPS, FIRE, Others	Unknown	County, Town	Ongoing	Ongoing – contingent on funding
Structural Projects								
SP-1	Address cross-jurisdictional issues related to response, recovery and mitigation on key projects with overlapping boundaries.	HU, TS, FL, RH	Low to Medium	Self-funded	No additional cost	County, Town	Within 2 years	Ongoing
Public Education and Awareness								
PEA-1	Explore continuing education programs/ opportunities for staff and elected officials.	FL, TH, HU, TS	Medium	Self-funded, MEMA	Low cost	County, Town	Ongoing	Ongoing – contingent on funding

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2013 Action Implementation Status
PEA-2	Provide education and outreach materials to citizens and visitors.	All	High	Self-funded	No cost	JDCEMA	Ongoing	Ongoing – contingent on funding
PEA-3	Encourage the development of Family Disaster Plans.	All	High	Self-funded, COPS, FIRE	Low or no cost	JDCEMA	Annual presentations	Ongoing – contingent on funding
PEA-4	Expand outreach information to property owners regarding retrofitting and flood-proofing techniques through community workshops, brochures, and newspaper articles.	FL, Multiple	High	Self-funded	No additional cost	JDCEMA, County, Town	Upon request	Ongoing – contingent on funding
PEA-5	Provide education/outreach to communities to encourage participation in the National Flood Insurance Program.	FL	High	Self-funded	N/A	JDCEMA, County	Ongoing	Ongoing

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2013 Action Implementation Status
PEA-6	Encourage participation in the Community Rating System of the NFIP.	FL, HU, TS, TH, HW	Medium	USDA Rural Dev., CDBG, Small Muni. Grant, FEMA, Others	Unknown	County, Town	Ongoing	The County is still considering joining the CRS.
PEA-7	Encourage businesses to develop business continuity or contingency operating plans.	CH	High	DHS, SAFER, COPS, FIRE, Others	Unknown	County, Town	Ongoing	Ongoing – contingent on funding
PEA-8	Develop/encourage water conservation measures during times of shortage	Drought	Medium	HMGP	N/A	County	2024	New
FL = Flood TH = Thunderstorm HU = Hurricane TS = Tropical Storm TO = Tornado BH = Biological Hazards HW = High Winds TT = Transportation and Technological Hazards RH = Roadway Hazards CH = Civil Hazards								
JDCEMA = Jefferson Davis County Emergency Management Agency County BOS = Jefferson Davis County Board of Supervisors								

Town of Prentiss Mitigation Action Plan

Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2013 Action Implementation Status
Prevention								
P-1	Identify high risk areas where hazards are most likely to occur.	All	High	None needed	No additional cost	County	Annual review	Ongoing
P-2	Site-locate vulnerable population on a County-wide map.	Multiple	High	Area Agency on Aging, USDA Rural Dev., COPS, FIRE	Unknown	JDCEMA, County	Annual review	Ongoing
P-3	Strictly enforce the flood damage prevention ordinance.	FL	High	Self-funded	No additional cost	County Floodplain Administrator	Ongoing	Ongoing
P-4	Strictly enforce subdivision regulations concerning developments in flood hazard areas.	TH, FL, HU, TS	High	Self-funded	No cost	County	2024	Ongoing
P-5	Continue to maintain and upgrade drainage facilities.	HU, TS, FL, BH	High	Self-funded	Part of annual County budget	County BOS, County Road Crews	Annual review	Ongoing

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2013 Action Implementation Status
P-6	Consider adoption of a comprehensive drainage plan.	FL, TS, HU	Medium	CDBG, Small Muni. Grant, MSDA, USDA Rural Dev.	No additional cost	County	Within 5 years	The County is still considering this action
P-7	Map the easements and rights-of-way of roadways and drainage ways.	All	Low to Medium	CDBG, Small Muni. Grant, MSDA, USDA Rural Dev.	Unknown	County	Within 5 years	The County is still considering this action
P-8	Support the development of a shared geographic data system for land use and site planning.	All	Medium to High	Self-funded	No additional cost	County	2024	Ongoing
P-9	Update the existing Prentiss Comprehensive Development Plan.	All	High	CDBG, MSDA	Unknown	County	Within 2 years	The County is still considering this action
P-10	Incorporate the hazard mitigation plan into the comprehensive plan.	All	Medium	CDBG, MSDA	No additional cost	County	Concurrent with prep. of Comp Plan	Pending status change in action P-9

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2013 Action Implementation Status
Property Protection								
PP-1	Promote alternative construction techniques such as the building of “safe rooms” in new construction and when remodeling existing structures.	HU, TS, TO, TH	HU, TS, TO, TH	Medium	Self-funded	No additional cost	Within 5 years	Pending funding availability
PP-2	Ensure that structures in floodplain areas are elevated.	FL	FL	High	Self-funded	No additional cost	Within 3 years	Ongoing/New construction is regulated by the flood damage prevention ordinance. Existing structures in the flood zone that need to be elevated will be evaluated on a case by case basis pending funding and desire to be elevated.
PP-3	Ensure that new public buildings are designed and built to hurricane resistant building codes.	HU, TS, TO, HW	HU, TS, TO, HW	High	Self-funded	No additional cost	Annual Review	Ongoing/Pending Funding availability

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2013 Action Implementation Status
PP-4	Continue to retrofit public buildings and other critical facilities to withstand natural hazards.	All	All	High	HMGP	Unknown	Within 2 years; Next round of HMGP funding	Ongoing as funding becomes available
PP-5	Ensure secure operation of water wells and wastewater treatment facilities.	All	High	HMGP, USDA Rural Dev., CDBG, Small Muni. Grant	Unknown	County, Town	Within 5 years; Next round of HMGP funding	Ongoing pending funding availability
PP-6	Property Acquisitions and elevations of flood prone structures	FL	Medium	FEMA, HMGP, PDM	N/A	County	2024	New
PP-7	Construct new multipurpose EOC facility to serve as EOC and safe room for emergency personnel during disaster situations.	All Hazards	High	FEMA, HMGP, PGM Local Sources	\$3,000,000-\$10,000,000	County	2024	New
Natural Resource Protection								
NRP-1	Preserve natural wetlands and riparian areas through acquisition of conservation easements.	HU, TS, FL	Low to Medium	Donation	Low or no cost	MS Land Trust, Land Trust of MS Coastal Plain; County, Town	Within 5 years	Ongoing pending funding availability

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2013 Action Implementation Status
Emergency Services								
ES-1	Encourage participation by staff and elected officials in voluntary or extracurricular activities related to emergency management, disaster preparedness, civil defense, or other hazard mitigation activities.	All	Medium	Self-funded, MEMA	Low or no cost	JDCEMA	Annual Review	Ongoing
ES-2	Establish a notification procedure for populations in high risk areas.	All	Medium	Self-funded	No additional cost	JDCEMA, County	Ongoing	Completed/Ongoing
ES-3	Survey the existing emergency shelters and study the feasibility of expanding the capacity of shelters.	All	High	HMGP	Unknown	JDCEMA, County	Annual Review	Ongoing
ES-4	Explore potential sites for a new special needs shelter.	TO, HU, TS, FL	High	HMGP	Unknown	JDCEMA, County	Completed	Completed/Ongoing
ES-5	Improve disaster communication systems within the County.	All	High	State, Federal, Local funds	Unknown	JDCEMA, County	Ongoing	Ongoing Pending Funding
ES-6	Consider generators for local radio station service areas.	All	High	State, Federal funds	Unknown	JDCEMA, County	Contingent upon funding	Deferred. No radio station within the county as of the last year.

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2013 Action Implementation Status
ES-7	Install warning sirens in each jurisdiction.	All	High	State, Federal, Local funds	Unknown	JDCEMA, County	Contingent upon funding	Ongoing pending funding availability 2 sites have been completed in 2018
ES-8	Explore upgrade/enhancement of 911 system in Jefferson Davis County.	All	Medium	HMGP	Unknown	JDCEMA, County	Contingent upon funding	Ongoing – contingent on funding
ES-9	Explore potential to install Reverse 911 system.	All	Low to Medium	HMGP	Unknown	JDCEMA, County	Contingent upon funding	Ongoing – contingent on funding
ES-10	Coordinate with neighboring jurisdictions to ensure consistency of evacuation plans.	FL, HU, TS, Others	Medium	Self-funded	No additional cost	County BOS, JDCEMA	Annual Review	Ongoing
ES-11	Enhance identification of evacuation routes through distribution of MDOT maps.	FL, HU, TS, Others	High	Self-funded	No additional cost	JDCEMA	Ongoing	Ongoing
ES-12	Ensure continuity of utility services for public buildings and other critical facilities.	All	High	HMGP	Unknown	County	Ongoing – contingent on funding	Ongoing – contingent on funding

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2013 Action Implementation Status
ES-13	Develop a government services continuity plan.	All	Medium	USDA Rural Dev., CDBG, Small Muni. Grant	Unknown	County	Within 5 years; Annual review	Ongoing – contingent on funding
ES-14	Host a meeting to review Jefferson Davis County Comprehensive Emergency Management Plan.	TT	Medium	Self-funded	No additional cost	County	Annual Review	Ongoing as needed
ES-15	Actively search for and identify funding sources for the enhancement of emergency response abilities of Fire and Sheriff's Departments.	TT	Medium to High	DHS, SAFER, COPS, FIRE, Others	Unknown	County	Ongoing	Ongoing – contingent on funding
Structural Projects								
SP-1	Address cross-jurisdictional issues related to response, recovery and mitigation on key projects with overlapping boundaries.	HU, TS, FL, RH	Low to Medium	Self-funded	No additional cost	County, Town	Within 2 years	Ongoing as needed
Public Education and Awareness								
PEA-1	Explore continuing education programs/ opportunities for staff and elected officials.	FL, TH, HU, TS	Medium	Self-funded, MEMA	Low cost	County, Town	Ongoing	Ongoing – contingent on funding

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2013 Action Implementation Status
PEA-2	Provide education and outreach materials to citizens and visitors.	All	High	Self-funded	No cost	JDCEMA	Ongoing	Ongoing – contingent on funding
PEA-3	Encourage the development of Family Disaster Plans.	All	High	Self-funded, COPS, FIRE	Low or no cost	JDCEMA	Annual presentations	Ongoing – contingent on funding
PEA-4	Expand outreach information to property owners regarding retrofitting and flood-proofing techniques through community workshops, brochures, and newspaper articles.	FL, Multiple	High	Self-funded	No additional cost	JDCEMA, County, Town	Upon request	Ongoing – contingent on funding
PEA-5	Provide education/outreach to communities to encourage participation in the National Flood Insurance Program.	FL	High	Self-funded	N/A	Town	Ongoing	Ongoing

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2013 Action Implementation Status
PEA-6	Encourage participation in the Community Rating System of the NFIP.	FL, HU, TS, TH, HW	Medium	USDA Rural Dev., CDBG, Small Muni. Grant, FEMA, Others	Unknown	County, Town	Ongoing	The County is still considering joining the CRS.
PEA-7	Encourage businesses to develop business continuity or contingency operating plans.	CH	High	DHS, SAFER, COPS, FIRE, Others	Unknown	County, Town	Ongoing	Ongoing – contingent on funding
PEA-8	Develop/encourage water conservation measures during times of shortage	Drought	Medium	HMGP	N/A	County	2024	New
FL = Flood TH = Thunderstorm HU = Hurricane TS = Tropical Storm TO = Tornado BH = Biological Hazards HW = High Winds TT = Transportation and Technological Hazards RH = Roadway Hazards CH = Civil Hazards JDCEMA = Jefferson Davis County Emergency Management County BOS = Jefferson Davis County Board of Supervisors								

Jones County Mitigation Action Plan

Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2019 Action Implementation Status
Prevention								
P-1	Explore solutions to reduce or eliminate sources of stagnant water and address methods to eradicate insects, birds, etc that may carry diseases.	FL	Low	To be determined	To be determined	To be determined	2014	Completed
P-2	Coordinate a floodplain management council with representatives from each of the participating jurisdictions. Conduct meetings to educate and develop a floodplain management program that will address future development and administration of a floodplain program.	FL	High	Local Budget and FMA	To be determined	Jones County	To be determined	Completed
P-3	Evaluate existing land-use studies and determine if any changes need to be made to address land-use in the new designated floodplain areas.	FL	Moderate	To be determined	To be determined	Jones County	2024	Ongoing

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2019 Action Implementation Status
P-4	Assign data collection of each disaster/weather event countywide. This process will aid community leaders in assessing needs as an ongoing process.	Multi	High	To be determined	To be determined	Jones County Emergency Management Agency	Annual	Completed/Ongoing
P-5	Conduct a study throughout the county identifying storm water issues and determine areas that need improvement. Issues include physical and regulatory interventions.	Multi	Moderate	CDBD, Federal, State and Local	\$150,000	Jones County Board of Supervisors	3-5 years	Ongoing
P-6	Continue to enforce building codes and exceed the standards when proven cost-effective to withstand higher wind forces that could be delivered by a natural disaster. Develop and training program for city employees	Multi	Moderate	Local Funds	\$20,000	Municipalities	Ongoing	Ongoing

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2019 Action Implementation Status
Property Protection								
PP-1	Upon receipt of the new floodplain maps, review repetitive loss structures and implement a plan to complete the acquisition process.	FL	Moderate	FMA	To be determined	Jones County	2024	Ongoing
Natural Resource Protection								
NRP-1	Evaluate streams and identify potential projects to mitigate stream bank restoration.	FL	Moderate	To be determined	To be determined	Jones County	Ongoing as projects are identified	Completed/Ongoing
Emergency Services								
ES-1	Develop a drought council to implement an emergency response plan for the County	DR	Moderate	To be determined	To be determined	Jones County Emergency Management Agency	N/A	Deferred—No drought council
ES-2	Jones County proposes to build a FEMA 361 Shelter to be located at the South Mississippi State Fairgrounds in Laurel, MS. This site will give easy access to I-59, highway 84 and highway 11.	HU	High	HMGP and State Global Match	\$3,250,000	Jones County	2011	Delete

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2019 Action Implementation Status
ES-3	Install generators at the following critical facilities: Jones County Courthouse – Laurel – 150 KW- \$49,000 Jones County Courthouse – Ellisville – 150 KW - \$49,000 Jones County Annex Building – 150 KW - \$49,000 Jones County Maintenance Facility - \$25 KW - \$35,000	Multi	High	HMGP	\$182,000	Jones County Board of Supervisors	2009	Delete
ES-4	Install emergency notification warning systems at the following facilities: Pleasant Ridge VFD West Jones High/Middle School City of Soso City of Sandersville Moselle VFD North Jones Elementary Glade Elementary School Northeast Jones School	Multi	High	HMGP	\$155,556	Jones County Board of Supervisors	2010	Delete
ES-5	Identify and implement automated mass notification/warning system County wide	All Hazards	High	TBD	\$15,000-\$20,000 Annually	Jones County and Municipalities	2024	New

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2019 Action Implementation Status
Structural Projects								
SP-1	Develop a floodplain council with representatives from each jurisdiction to develop and monitor development within the floodplain.	FL	Moderate	To be determined	To be determined	Jones County	2014	Completed. Delete
SP-2	Flood Elevations	FL	Medium	FEMA	N/A	Jones County	2024	New
Public Education and Awareness								
PEA-1	Partner with various stakeholder groups to develop an all hazard public outreach and education program.	Multi	High	To be determined	To be determined	Jones County	Ongoing	Completed/Ongoing
PEA-2	Become a Firewise Community	WUF	High	To be determined	To be determined	Jones County		Delete
DR = Drought FL = Flood HU = Hurricane WUF = Wild/Urban Fire								

City of Ellisville Mitigation Action Plan

Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2013 Action Implementation Status
Prevention								
P-1	Explore solutions to reduce or eliminate sources of stagnant water and address methods to eradicate insects, birds, etc that may carry diseases.	FL	Low	To be determined	To be determined	To be determined	2014	Completed
P-2	Coordinate a floodplain management council with representatives from each of the participating jurisdictions. Conduct meetings to educate and develop a floodplain management program that will address future development and administration of a floodplain program.	FL	High	Local Budget and FMA	To be determined	Jones County	To be determined	Completed
P-3	Evaluate existing land-use studies and determine if any changes need to be made to address land-use in the new designated floodplain areas.	FL	Moderate	To be determined	To be determined	Jones County	2024	Ongoing

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2013 Action Implementation Status
P-4	Assign data collection of each disaster/weather event countywide. This process will aid community leaders in assessing needs as an ongoing process.	Multi	High	To be determined	To be determined	Jones County Emergency Management Agency	Annual	Completed/Ongoing
P-5	Conduct a study throughout the county identifying storm water issues and determine areas that need improvement. Issues include physical and regulatory interventions.	Multi	Moderate	CDBD, Federal, State and Local	\$150,000	Jones County Board of Supervisors	3-5 years	Ongoing
P-6	Continue to enforce building codes and exceed the standards when proven cost-effective to withstand higher wind forces that could be delivered by a natural disaster. Develop and training program for city employees	Multi	Moderate	Local Funds	\$20,000	Jones County Board of Supervisors	Ongoing	Ongoing

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2013 Action Implementation Status
Property Protection								
PP-1	Upon receipt of the new floodplain maps, review repetitive loss structures and implement a plan to complete the acquisition process.	FL	Moderate	FMA	To be determined	Jones County	2024	Ongoing
Natural Resource Protection								
NRP-1	Evaluate streams and identify potential projects to mitigate stream bank restoration.	FL	Moderate	To be determined	To be determined	Jones County	Ongoing as projects are identified	Completed/Ongoing
Emergency Services								
ES-1	Develop a drought council to implement an emergency response plan for the County	DR	Moderate	To be determined	To be determined	Jones County Emergency Management Agency	N/A	Deferred—No drought council
ES-2	Jones County proposes to build a FEMA 361 Shelter to be located at the South Mississippi State Fairgrounds in Laurel, MS. This site will give easy access to I-59, highway 84 and highway 11.	HU	High	HMGP and State Global Match	\$3,250,000	Jones County	2011	Delete
ES-3	Install a 35-KW generator to support the Ellisville City Hall during a hazard event.	Multi	High	HMGP	\$31,000	Emergency Services	2009	Delete

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2013 Action Implementation Status
ES-4	Identify and implement automated mass notification/warning system County wide	All Hazards	High	TBD	\$15,000-\$20,000 Annually	Jones County and Municipalities	2024	New
Structural Projects								
SP-1	Develop a floodplain council with representatives from each jurisdiction to develop and monitor development within the floodplain.	FL	Moderate	To be determined	To be determined	Jones County	2014	Completed. Delete
SP-2	Flood Elevations	FL	Medium	FEMA	N/A	Jones County	2024	New
Public Education and Awareness								
PEA-1	Partner with various stakeholder groups to develop an all hazard public outreach and education program.	Multi	High	To be determined	To be determined	Jones County	Ongoing	Completed/Ongoing
PEA-2	Become a Firewise Community	WUF	High	To be determined	To be determined	Jones County		Delete
DR = Drought FL = Flood HU = Hurricane WUF = Wild/Urban Fire								

City of Laurel Mitigation Action Plan

Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2013 Action Implementation Status
Prevention								
P-1	Explore solutions to reduce or eliminate sources of stagnant water and address methods to eradicate insects, birds, etc that may carry diseases.	FL	Low	To be determined	To be determined	To be determined	2014	Completed
P-2	Coordinate a floodplain management council with representatives from each of the participating jurisdictions. Conduct meetings to educate and develop a floodplain management program that will address future development and administration of a floodplain program.	FL	High	Local Budget and FMA	To be determined	Jones County	To be determined	Completed
P-3	Evaluate existing land-use studies and determine if any changes need to be made to address land-use in the new designated floodplain areas.	FL	Moderate	To be determined	To be determined	Jones County	2024	Ongoing

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2013 Action Implementation Status
P-4	Assign data collection of each disaster/weather event countywide. This process will aid community leaders in assessing needs as an ongoing process.	Multi	High	To be determined	To be determined	Jones County Emergency Management Agency	Annual	Completed/Ongoing
P-5	Conduct a study throughout the county identifying storm water issues and determine areas that need improvement. Issues include physical and regulatory interventions.	Multi	Moderate	CDBD, Federal, State and Local	\$150,000	Jones County Board of Supervisors	3-5 years	Ongoing
P-6	Continue to enforce building codes and exceed the standards when proven cost-effective to withstand higher wind forces that could be delivered by a natural disaster. Develop and training program for city employees	Multi	Moderate	Local Funds	\$20,000	Jones County Board of Supervisors	Ongoing	Ongoing

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2013 Action Implementation Status
Property Protection								
PP-1	Upon receipt of the new floodplain maps, review repetitive loss structures and implement a plan to complete the acquisition process.	FL	Moderate	FMA	To be determined	Jones County	2024	Ongoing
Natural Resource Protection								
NRP-1	Evaluate streams and identify potential projects to mitigate stream bank restoration.	FL	Moderate	To be determined	To be determined	Jones County	Ongoing as projects are identified	Completed/Ongoing
Emergency Services								
ES-1	Develop a drought council to implement an emergency response plan for the County	DR	Moderate	To be determined	To be determined	Jones County Emergency Management Agency	N/A	Deferred—No drought council
ES-2	Jones County proposes to build a FEMA 361 Shelter to be located at the South Mississippi State Fairgrounds in Laurel, MS. This site will give easy access to I-59, highway 84 and highway 11.	HU	High	HMGP and State Global Match	\$3,250,000	Jones County	2011	Delete

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2013 Action Implementation Status
ES-3	Install generators at the following critical facilities: Laurel City Hall -150KW - \$49,000 LT Ellis Center – Special needs shelter – 45 KW - \$49,000 Laurel Fire Department Station 2 – 16KW- \$12,000 Laurel Fire Department Station 6 – 16KW- \$12,000	Multi	High	HMGP	\$122,000	City of Laurel	2009	Delete
ES-4	Identify and implement automated mass notification/warning system County wide	All Hazards	High	TBD	\$15,000-\$20,000 Annually	Jones County and Municipalities	2024	New
Structural Projects								
SP-1	Develop a floodplain council with representatives from each jurisdiction to develop and monitor development within the floodplain.	FL	Moderate	To be determined	To be determined	Jones County	2014	Completed. Delete
SP-2	Flood Elevations	FL	Medium	FEMA	N/A	Jones County	2024	New
Public Education and Awareness								
PEA-1	Partner with various stakeholder groups to develop an all hazard public outreach and education program.	Multi	High	To be determined	To be determined	Jones County	Ongoing	Completed/Ongoing

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2013 Action Implementation Status
PEA-2	Become a Firewise Community	WUF	High	To be determined	To be determined	Jones County		Delete
DR = Drought FL = Flood HU = Hurricane WUF = Wild/Urban Fire								

Town of Sandersville Mitigation Action Plan

Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2013 Action Implementation Status
Prevention								
P-1	Explore solutions to reduce or eliminate sources of stagnant water and address methods to eradicate insects, birds, etc that may carry diseases.	FL	Low	To be determined	To be determined	To be determined	2014	Completed
P-2	Coordinate a floodplain management council with representatives from each of the participating jurisdictions. Conduct meetings to educate and develop a floodplain management program that will address future development and administration of a floodplain program.	FL	High	Local Budget and FMA	To be determined	Jones County	To be determined	Completed
P-3	Evaluate existing land-use studies and determine if any changes need to be made to address land-use in the new designated floodplain areas.	FL	Moderate	To be determined	To be determined	Jones County	2024	Ongoing

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2013 Action Implementation Status
P-4	Assign data collection of each disaster/weather event countywide. This process will aid community leaders in assessing needs as an ongoing process.	Multi	High	To be determined	To be determined	Jones County Emergency Management Agency	Annual	Completed/Ongoing
P-5	Conduct a study throughout the county identifying storm water issues and determine areas that need improvement. Issues include physical and regulatory interventions.	Multi	Moderate	CDBD, Federal, State and Local	\$150,000	Jones County Board of Supervisors	3-5 years	Ongoing
P-6	Continue to enforce building codes and exceed the standards when proven cost-effective to withstand higher wind forces that could be delivered by a natural disaster. Develop and training program for city employees	Multi	Moderate	Local Funds	\$20,000	Jones County Board of Supervisors	Ongoing	Ongoing

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2013 Action Implementation Status
Property Protection								
PP-1	Upon receipt of the new floodplain maps, review repetitive loss structures and implement a plan to complete the acquisition process.	FL	Moderate	FMA	To be determined	Jones County	2024	Ongoing
Natural Resource Protection								
NRP-1	Evaluate streams and identify potential projects to mitigate stream bank restoration.	FL	Moderate	To be determined	To be determined	Jones County	Ongoing as projects are identified	Completed/Ongoing
Emergency Services								
ES-1	Develop a drought council to implement an emergency response plan for the County	DR	Moderate	To be determined	To be determined	Jones County Emergency Management Agency	N/A	Deferred—No drought council
ES-2	Jones County proposes to build a FEMA 361 Shelter to be located at the South Mississippi State Fairgrounds in Laurel, MS. This site will give easy access to I-59, highway 84 and highway 11.	HU	High	HMGP and State Global Match	\$3,250,000	Jones County	2011	Delete

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2013 Action Implementation Status
ES-3	Install emergency notification warning systems at the Town of Sandersville	Multi	High	HMGP	\$155,556	Jones County Board of Supervisors	2009	Delete
ES-4	Identify and implement automated mass notification/warning system County wide	All Hazards	High	TBD	\$15,000-\$20,000 Annually	Jones County and Municipalities	2024	New
Structural Projects								
SP-1	Develop a floodplain council with representatives from each jurisdiction to develop and monitor development within the floodplain.	FL	Moderate	To be determined	To be determined	Jones County	2014	Completed. Delete
SP-2	Flood Elevations	FL	Medium	FEMA	N/A	Jones County	2024	New
Public Education and Awareness								
PEA-1	Partner with various stakeholder groups to develop an all hazard public outreach and education program.	Multi	High	To be determined	To be determined	Jones County	Ongoing	Completed/Ongoing
PEA-2	Become a Firewise Community	WUF	High	To be determined	To be determined	Jones County		Delete
DR = Drought FL = Flood HU = Hurricane WUF = Wild/Urban Fire								

Town of Soso Mitigation Action Plan

Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2013 Action Implementation Status
Prevention								
P-1	Explore solutions to reduce or eliminate sources of stagnant water and address methods to eradicate insects, birds, etc that may carry diseases.	FL	Low	To be determined	To be determined	To be determined	2014	Completed
P-2	Coordinate a floodplain management council with representatives from each of the participating jurisdictions. Conduct meetings to educate and develop a floodplain management program that will address future development and administration of a floodplain program.	FL	High	Local Budget and FMA	To be determined	Jones County	To be determined	Completed
P-3	Evaluate existing land-use studies and determine if any changes need to be made to address land-use in the new designated floodplain areas.	FL	Moderate	To be determined	To be determined	Jones County	2024	Ongoing

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2013 Action Implementation Status
P-4	Assign data collection of each disaster/weather event countywide. This process will aid community leaders in assessing needs as an ongoing process.	Multi	High	To be determined	To be determined	Jones County Emergency Management Agency	Annual	Completed/Ongoing
P-5	Conduct a study throughout the county identifying storm water issues and determine areas that need improvement. Issues include physical and regulatory interventions.	Multi	Moderate	CDBD, Federal, State and Local	\$150,000	Jones County Board of Supervisors	3-5 years	Ongoing
P-6	Continue to enforce building codes and exceed the standards when proven cost-effective to withstand higher wind forces that could be delivered by a natural disaster. Develop and training program for city employees	Multi	Moderate	Local Funds	\$20,000	Jones County Board of Supervisors	Ongoing	Ongoing

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2013 Action Implementation Status
Property Protection								
PP-1	Upon receipt of the new floodplain maps, review repetitive loss structures and implement a plan to complete the acquisition process.	FL	Moderate	FMA	To be determined	Jones County	2024	Ongoing
Natural Resource Protection								
NRP-1	Evaluate streams and identify potential projects to mitigate stream bank restoration.	FL	Moderate	To be determined	To be determined	Jones County	Ongoing as projects are identified	Completed/Ongoing
Emergency Services								
ES-1	Develop a drought council to implement an emergency response plan for the County	DR	Moderate	To be determined	To be determined	Jones County Emergency Management Agency	N/A	Deferred—No drought council
ES-2	Jones County proposes to build a FEMA 361 Shelter to be located at the South Mississippi State Fairgrounds in Laurel, MS. This site will give easy access to I-59, highway 84 and highway 11.	HU	High	HMGP and State Global Match	\$3,250,000	Jones County	2011	Delete

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2013 Action Implementation Status
ES-3	Install emergency notification warning systems at the Town of Soso	Multi	High	HMGP	\$155,556	Jones County Board of Supervisors	2009	Delete
ES-4	Identify and implement automated mass notification/warning system County wide	All Hazards	High	TBD	\$15,000-\$20,000 Annually	Jones County and Municipalities	2024	New
Structural Projects								
SP-1	Develop a floodplain council with representatives from each jurisdiction to develop and monitor development within the floodplain.	FL	Moderate	To be determined	To be determined	Jones County	2014	Completed. Delete
SP-2	Flood Elevations	FL	Medium	FEMA	N/A	Jones County	2024	New
Public Education and Awareness								
PEA-1	Partner with various stakeholder groups to develop an all hazard public outreach and education program.	Multi	High	To be determined	To be determined	Jones County	Ongoing	Completed/Ongoing
PEA-2	Become a Firewise Community	WUF	High	To be determined	To be determined	Jones County		Delete
DR = Drought FL = Flood HU = Hurricane WUF = Wild/Urban Fire								

Marion County Mitigation Action Plan

Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2019 Action Implementation Status
Prevention								
P-1	Identify high risk areas where hazards are most likely to occur.	All	High	N/A	No additional cost	County	Annual review	Complete. High risk areas are identified in the hazard mitigation plan. Ongoing
P-2	Site-locate vulnerable population on a County-wide map.	Multiple	High	Area Agency on Aging, USDA Rural Dev., COPS, FIRE	TBD	MCEMA, County	Within 1 year; Upon request	Ongoing – the County is currently working to develop a GIS shapefile that identifies the vulnerable populations in the County.
P-3	Strictly enforce the flood damage prevention ordinance.	FL	High	CDBG, HMGP, PDM, USDA Rural Dev, Self-funding	TBD	County Floodplain Administrator	Ongoing	Ongoing

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2019 Action Implementation Status
P-4	Strictly enforce subdivision regulations concerning developments in flood hazard areas.	FL	High	CDBG, HMGP, PDM, USDA Rural Dev, Self-funding	TBD	County BOS	Ongoing	Ongoing
P-5	Continue to maintain and upgrade drainage facilities.	HI, TS, FL, BH	High	CDBG, HMGP, PDM, USDA Rural Dev, Self-funding	Unknown	County BOS, County Road Crews	Annual review	Ongoing as funding becomes available
P-6	Consider adoption of a comprehensive drainage plan.	FL, TS, HU	Medium	CDBG, Small Muni. Grant, MSDA, USDA Rural Dev.	Unknown	County	Within 5 years	Ongoing/Pending staff availability and funding
P-7	Map the easements and rights-of-way of roadways and drainage ways.	All	Low to Medium	CDBG, Small Muni. Grant, MSDA, USDA Rural Dev.	Unknown	County	Within 5 years	Ongoing /Pending staff availability and funding

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2019 Action Implementation Status
P-8	Support the development of a shared geographic data system for land use and site planning.	All	Medium to High	CDBG, HMGP, PDM, USDA Rural Dev, Self-funding	No additional cost	County	2024	Ongoing/Pending staff availability and funding
P-9	Develop a comprehensive development plan.	All	High	CDBG, MSDA	Unknown	County	Within 2 years	Ongoing/Pending staff availability and funding
P-10	Incorporate the hazard mitigation plan into the comprehensive plan.	All	Medium	N/A	No additional cost	County	Concurrent with prep. of Comp Plan	Ongoing/Pending staff availability and funding
Property Protection								
PP-1	Promote alternative construction techniques such as the building of “safe rooms” in new construction and when remodeling existing structures.	HU, TS, TO, TH	Medium	Self-funded	No additional cost	County	Within 5 years	Pending staff availability and funding

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2019 Action Implementation Status
PP-2	Ensure that structures in floodplain areas are elevated.	FL	High	Self-funded	TBD	County	Within 3 years	The flood damage prevention ordinance ensures that new construction in the floodplain is elevated. Existing floodprone structures are evaluated on a case by case basis pending funding and willingness of property owner.
PP-3	Ensure that new public buildings are designed and built to hurricane resistant buildings codes.	HU, TS, TO, HW	High	Self-funded	No additional cost	County	Within 2 years	Ongoing
PP-4	Continue to retrofit public buildings and other critical facilities to withstand natural hazards.	All	High	CDBG, HMGP, PDM, USDA Rural Dev	Unknown	County	Within 2 years; Next round of HMGP funding	Ongoing pending funding availability

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2019 Action Implementation Status
PP-5	Ensure secure operation of water wells and wastewater treatment facilities.	All	High	HMGP, USDA Rural Dev., CDBG, Small Muni. Grant	Unknown	County	Within 5 years; Next round of HMGP funding	Ongoing
Natural Resource Protection								
NRP-1	Preserve natural wetlands and riparian areas through acquisition of conservation easements.	HU, TS, FL	Low to Medium	Donation	TBD	MS Land Trust, Land Trust for MS Coastal Plain, County	Within 5 years	Ongoing pending funding availability
Emergency Services								
ES-1	Encourage participation by staff and elected officials in voluntary or extracurricular activities related to emergency management, disaster preparedness, civil defense, or other hazard mitigation activities.	All	Medium	Self-funded, MEMA	Low or no cost	MCCEMA	Within 2 years	Ongoing pending staff availability and funding
ES-2	Establish a notification procedure for populations in high risk areas.	All	Medium	Self-funded	TBD	MCCEMA, County	Ongoing/Within 2 years	Ongoing/Pending staff availability and funding

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2019 Action Implementation Status
ES-3	Survey the existing emergency shelters and study the feasibility of expanding the capacity of shelters.	All	High	HMGP	TBD	MCEMA, County	Within 2 years	Ongoing/Pending staff availability and funding
ES-4	Explore potential sites for a new special needs shelter.	TO, HU, TS, FL	High	HMGP	TBD	MCEMA, County	2024	Ongoing/Pending staff availability and funding
ES-5	Improve disaster communication systems within the county.	All	High	CDBG, HMGP, PDM, USDA Rural Dev, Self-funding	TBD	MCEMA	Ongoing	Ongoing/Pending staff availability and funding
ES-6	Consider generators for local radio station service areas.	TO, HU, TS	High	HMGP	TBD	MCEMA	Contingent upon funding	Pending funding
ES-7	Install warning sirens.	TO, HU, TS	High	HMGP	\$350,000-\$400,000	MCEMA	Contingent upon funding	Pending funding
ES-8	Enhance Central Dispatch.	All	Medium	HMGP	Unknown	MCEMA, County	Ongoing	Initial upgrades completed in 2018/Ongoing
ES-9	Explore potential to install Reverse 911 system.	All	Low to Medium	HMGP	Unknown	MCEMA, County	Within 2 years; Contingent upon funding	Ongoing/Pending funding

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2019 Action Implementation Status
ES-10	Coordinate with neighboring jurisdictions to ensure consistency of evacuation plans.	FL, HU, TS, Others	Medium	Self-funded	TBD	County BOS, MCEMA	Annual Review	Ongoing
ES-11	Enhance identification of evacuation routes through the distribution of MDOT maps.	FL, HU, TS, Others	High	Self-funded	No additional cost	MCEMA	Ongoing	Ongoing
ES-12	Ensure continuity of utility services for public buildings and other critical facilities.	All	High	HMGP	Unknown	County	Within 2 years; Next round of HMGP funding	Ongoing pending funding availability
ES-13	Develop a government services continuity plan.	All	Medium	USDA Rural Dev., CDBG, Small Muni. Grant	Unknown	County	Annual review	Completed/Ongoing
ES-14	Host a meeting to review Marion County Comprehensive Emergency Management Plan.	TT	Medium	Self-funded	No additional cost	County	Annual Review	Ongoing
ES-15	Actively search for and identify funding sources for the enhancement of emergency response abilities of Fire and Sheriff's Departments.	TT	Medium to High	DHS, SAFER, COPS, FIRE, Others	Unknown	County	Ongoing	Ongoing/Pending staff availability and funding

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2019 Action Implementation Status
Structural Projects								
SP-1	Address cross-jurisdictional issues related to response, recovery and mitigation on key projects with overlapping boundaries.	HU, TS, FL, RH	Low to Medium	Self-funded	No additional cost	County	Ongoing	Ongoing

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2019 Action Implementation Status
SP-2	Generators for all existing and future fire stations and 911 critical facilities including comm tower sites	All	High	CDBG, HMGP, PDM, USDA Rural Dev, Self-funding	TBD	MCEMA, County	2024	New
SP-3	Elevation/Acquisition Rep Loss properties	FL	Medium/High	HMGP, PDM	TBD	MCEMA, County	2024	New
SP-4	Harden existing structures to serve as safe rooms (schools, emergency shelters).	All	High	CDBG, HMGP, PDM, USDA Rural Dev, Self-funding	TBD	MCEMA, County	2024	New
SP-5	Construct community multipurpose facilities/saferooms in vulnerable communities throughout the county.	All	High	CDBG, HMGP, PDM, USDA Rural Dev, Self-funding	TBD	MCEMA, County	2024	New
Public Education and Awareness								
PEA-1	Explore continuing education programs/opportunities for staff and elected officials.	FL, TH, HU, TS	Medium	Self-funded, MEMA	Low cost	County	Ongoing	Ongoing pending funding

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2019 Action Implementation Status
PEA-2	Provide education and outreach materials to citizens and visitors.	All	High	Self-funded	TBD	MCEMA	Annual Review	Ongoing
PEA-3	Encourage the development of Family Disaster Plans.	All	High	Self-funded, COPS, FIRE	Low or no cost	MCEMA	Annual presentations	Ongoing
PEA-4	Expand outreach information to property owners regarding retrofitting and flood-proofing techniques through community workshops, brochures, and newspaper articles.	FL, Multiple	High	Self-funded	TBD	MCEMA, County	Upon request	Ongoing
PEA-5	Encourage businesses to develop business continuity or contingency operating plans.	CH	High	DHS, SAFER, COPS, FIRE, Others	TBD	County	Annual Review	Ongoing
FL = Flood TH = Thunderstorm HU = Hurricane TS = Tropical Storm TO = Tornado BH = Biological Hazards HW = High Winds TT = Transportation and Technological Hazards RH = Roadway Hazards CH = Civil Hazards MCEMA = Marion County Emergency Management Agency County BOS = Marion County Board of Supervisors								

City of Columbia Mitigation Action Plan

Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2019 Action Implementation Status
Prevention								
P-1	Identify high risk areas where hazards are most likely to occur.	All	High	N/A	No additional cost	City	Annual review	Complete. High risk areas are identified in the hazard mitigation plan. Ongoing
P-2	Site-locate vulnerable population on a County-wide map.	Multiple	High	Area Agency on Aging, USDA Rural Dev., COPS, FIRE	Unknown	MCEMA, City	Within 1 year; Upon request	Ongoing – the County is currently working to develop a GIS shapefile that identifies the vulnerable populations in the County.
P-3	Strictly enforce the flood damage prevention ordinance.	FL	High	Self-funded	No additional cost	City Floodplain Administrator	Ongoing	Ongoing
P-4	Strictly enforce subdivision regulations concerning developments in flood hazard areas.	FL	High	Self-funded	No additional cost	County BOS, City	Ongoing	Ongoing
P-5	Continue to maintain and upgrade drainage facilities.	HI, TS, FL, BH	High	Self-funded	Unknown	County BOS, County Road Crews, City	Annual review	Ongoing as funding becomes available

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2019 Action Implementation Status
P-6	Consider adoption of a comprehensive drainage plan.	FL, TS, HU	Medium	CDBG, Small Muni. Grant, MSDA, USDA Rural Dev.	Unknown	County, City	Within 5 years	Ongoing/Pending staff availability and funding
P-7	Map the easements and rights-of-way of roadways and drainage ways.	All	Low to Medium	CDBG, Small Muni. Grant, MSDA, USDA Rural Dev.	Unknown	City	Within 5 years	Ongoing /Pending staff availability and funding
P-8	Support the development of a shared geographic data system for land use and site planning.	All	Medium to High	Self-funded	No additional cost	County, City	2024	Ongoing/Pending staff availability and funding
P-9	Develop a comprehensive development plan.	All	High	CDBG, MSDA	Unknown	County, City	Within 2 years	Ongoing/Pending staff availability and funding
P-10	Incorporate the hazard mitigation plan into the comprehensive plan.	All	Medium	N/A	No additional cost	County, City	Concurrent with prep. of Comp Plan	Ongoing/Pending staff availability and funding

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2019 Action Implementation Status
Property Protection								
PP-1	Promote alternative construction techniques such as the building of “safe rooms” in new construction and when remodeling existing structures.	HU, TS, TO, TH	Medium	Self-funded	No additional cost	City	Within 5 years	Pending staff availability and funding
PP-2	Ensure that structures in floodplain areas are elevated.	FL	High	Self-funded	No additional cost	County, City	Within 3 years	The flood damage prevention ordinance ensures that new construction in the floodplain is elevated. Existing floodprone structures are evaluated on a case by case basis pending funding and willingness of property owner.
PP-3	Ensure that new public buildings are designed and built to hurricane resistant buildings codes.	HU, TS, TO, HW	High	Self-funded	No additional cost	City	Within 2 years	Ongoing

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2019 Action Implementation Status
PP-4	Continue to retrofit public buildings and other critical facilities to withstand natural hazards.	All	High	HMGP	Unknown	City	Within 2 years; Next round of HMGP funding	Ongoing pending funding availability
PP-5	Ensure secure operation of water wells and wastewater treatment facilities.	All	High	HMGP, USDA Rural Dev., CDBG, Small Muni. Grant	Unknown	City	Within 5 years; Next round of HMGP funding	Ongoing
Natural Resource Protection								
NRP-1	Preserve natural wetlands and riparian areas through acquisition of conservation easements.	HU, TS, FL	Low to Medium	Donation	Low or no cost	MS Land Trust, Land Trust for MS Coastal Plain, County	Within 5 years	Ongoing pending funding availability
Emergency Services								
ES-1	Encourage participation by staff and elected officials in voluntary or extracurricular activities related to emergency management, disaster preparedness, civil defense, or other hazard mitigation activities.	All	Medium	Self-funded, MEMA	Low or no cost	MCEMA	Within 2 years	Ongoing pending staff availability and funding

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2019 Action Implementation Status
ES-2	Establish a notification procedure for populations in high risk areas.	All	Medium	Self-funded	No additional cost	MCEMA, City	Ongoing/Within 2 years	Ongoing/Pending staff availability and funding
ES-3	Survey the existing emergency shelters and study the feasibility of expanding the capacity of shelters.	All	High	HMGP	Unknown	MCEMA, City	Within 2 years	Ongoing/Pending staff availability and funding
ES-4	Explore potential sites for a new special needs shelter.	TO, HU, TS, FL	High	HMGP	Unknown	MCEMA, City	2024	Ongoing/Pending staff availability and funding
ES-5	Improve disaster communication systems within the county.	All	High	Unknown	Unknown	MCEMA	Ongoing	Ongoing/Pending staff availability and funding
ES-6	Consider generators for local radio station service areas.	TO, HU, TS	High	HMGP	Unknown	MCEMA	Contingent upon funding	Pending funding
ES-7	Install warning sirens.	TO, HU	High	HMGP	Unknown	MCEMA	Contingent upon funding	Pending funding
ES-8	Enhance Central Dispatch.	All	Medium	HMGP	Unknown	MCEMA, City	Ongoing	Initial upgrades completed in 2018/Ongoing
ES-9	Explore potential to install Reverse 911 system.	All	Low to Medium	HMGP	Unknown	MCEMA, City	Within 2 years; Contingent upon funding	Ongoing/Pending funding

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2019 Action Implementation Status
ES-10	Coordinate with neighboring jurisdictions to ensure consistency of evacuation plans.	FL, HU, TS, Others	Medium	Self-funded	No additional cost	County BOS, MCEMA, City	Annual Review	Ongoing
ES-11	Enhance identification of evacuation routes through the distribution of MDOT maps.	FL, HU, TS, Others	High	Self-funded	No additional cost	MCEMA	Ongoing	Ongoing
ES-12	Ensure continuity of utility services for public buildings and other critical facilities.	All	High	HMGP	Unknown	City	Within 2 years; Next round of HMGP funding	Ongoing pending funding availability
ES-13	Develop a government services continuity plan.	All	Medium	USDA Rural Dev., CDBG, Small Muni. Grant	Unknown	City	Annual review	Completed/Ongoing
ES-14	Host a meeting to review Marion County Comprehensive Emergency Management Plan.	TT	Medium	Self-funded	No additional cost	City	Annual Review	Ongoing
ES-15	Actively search for and identify funding sources for the enhancement of emergency response abilities of Fire and Sheriff's Departments.	TT	Medium to High	DHS, SAFER, COPS, FIRE, Others	Unknown	County, City	Ongoing	Ongoing/Pending staff availability and funding

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2019 Action Implementation Status
Structural Projects								
SP-1	Address cross-jurisdictional issues related to response, recovery and mitigation on key projects with overlapping boundaries.	HU, TS, FL, RH	Low to Medium	Self-funded	No additional cost	City	Ongoing	Ongoing

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2019 Action Implementation Status
SP-2	Generators for all existing and future fire stations and 911 critical facilities including comm tower sites	All	High	CDBG, HMGP, PDM, USDA Rural Dev, Self-funding	TBD	MCEMA, County	2024	New
SP-3	Elevation/Acquisition Rep Loss properties	FL	Medium/High	HMGP, PDM	TBD	MCEMA, County	2024	New
SP-4	Harden existing structures to serve as safe rooms (schools, emergency shelters).	All	High	CDBG, HMGP, PDM, USDA Rural Dev, Self-funding	TBD	MCEMA, County	2024	New
SP-5	Construct community multipurpose facilities/saferooms in vulnerable communities throughout the county.	All	High	CDBG, HMGP, PDM, USDA Rural Dev, Self-funding	TBD	MCEMA, County	2024	New
Public Education and Awareness								
PEA-1	Explore continuing education programs/opportunities for staff and elected officials.	FL, TH, HU, TS	Medium	Self-funded, MEMA	Low cost	City	Ongoing	Ongoing pending funding

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Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2019 Action Implementation Status
PEA-2	Provide education and outreach materials to citizens and visitors.	All	High	Self-funded	No cost	MCEMA	Annual Review	Ongoing
PEA-3	Encourage the development of Family Disaster Plans.	All	High	Self-funded, COPS, FIRE	Low or no cost	MCEMA	Annual presentations	Ongoing
PEA-4	Explore continuing education programs/opportunities for staff and elected officials.	FL, TH, HU, TS	High	Self-funded	No additional cost	MCEMA, City	Upon request	Ongoing
PEA-5	Provide education and outreach materials to citizens and visitors.	All	High	DHS, SAFER, COPS, FIRE, Others	Unknown	City	Annual Review	Ongoing
FL = Flood TH = Thunderstorm HU = Hurricane TS = Tropical Storm TO = Tornado BH = Biological Hazards HW = High Winds TT = Transportation and Technological Hazards RH = Roadway Hazards CH = Civil Hazards MCEMA = Marion County Emergency Management Agency County BOS = Marion County Board of Supervisors								

Perry County Mitigation Action Plan

Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2019 Action Implementation Status
Prevention								
P-1	Identify high risk areas where hazards are most likely to occur.	All	High	N/A	TBD	County	Annual review	This action has been implemented/Ongoing. High risk areas are identified in this hazard mitigation plan.
P-2	Site-locate vulnerable populations on a County-wide map.	Multiple	High	Area Agency on Aging, USDA Rural Dev., COPS, FIRE	TBD	County EMA, County BOS	Within 1 year; Upon request	This action has been deferred until funding is available to implement the action.
P-3	Consider adoption of flood damage prevention ordinance in Perry County.	FL	High	Self-funded	No cost	County, County Floodplain Administrator	Ongoing	This action has been implemented. Completed
P-4	Consider adoption of subdivision regulations.	TH, FL, HU, TS	Medium	Self-funded	No cost	County	Ongoing	This action has been deferred.

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2019 Action Implementation Status
P-5	Continue to maintain and upgrade drainage facilities.	HU, TS, FL, BH	High	CDBG, Small Muni. Grant, MSDA, USDA Rural Dev. Self-funded	TBD	County BOS, County Road Crews	Annual review	This action has been implemented/Ongoing.
P-6	Consider adoption of a comprehensive drainage plan.	FL, TS, HU	Medium	CDBG, Small Muni. Grant, MSDA, USDA Rural Dev.	Unknown	County	Within 5 years funding availability	Deferred based on funding availability.
P-7	Map the easements and rights-of-way of roadways and drainage ways.	All	Low to Medium	CDBG, Small Muni. Grant, MSDA, USDA Rural Dev.	Unknown	County	Within 5 years of funding availability	This action has been deferred due to lack of funding.

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2019 Action Implementation Status
P-8	Support the development of a shared geographic data system for land use and site planning.	All	Medium to High	CDBG, Small Muni. Grant, MSDA, USDA Rural Dev. Self-funded	TBD	County	Within 2 years of funding availability	Deferred based on funding availability.
P-9	Develop a comprehensive development plan.	All	High	CDBG, MSDA	TBD	County	Within 2 years of funding availability	Deferred based on funding availability.
P-10	Incorporate the hazard mitigation plan into the comprehensive plan.	All	Medium	N/A	TBD	County	Concurrent with prep. of Comp Plan	This action has been deferred.
Property Protection								
PP-1	Promote alternative construction techniques such as the building of “safe rooms” in new construction and when remodeling existing structures.	HU, TS, TO, TH	Medium	CDBG, Small Muni. Grant, MSDA, USDA Rural Dev. Self-funded	TBD	County	Within 5 years of funding availability	This action has been implemented/Ongoing.

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2019 Action Implementation Status
PP-2	Ensure that structures in floodplain areas are elevated. Including Repetitive Loss Properties	FL	High	CDBG, Small Muni. Grant, MSDA, USDA Rural Dev. Self-funded	TBD	County	Within 3 years of funding availability	This action has been implemented and ongoing.
PP-3	Ensure that new public buildings are designed and built to hurricane resistant building codes.	HU, TS, TO, HW	High	CDBG, Small Muni. Grant, MSDA, USDA Rural Dev. Self-funded	TBD	County	Annual Review	This action has been implemented and ongoing.
PP-4	Continue to retrofit public buildings and other critical facilities to withstand natural hazards.	All	High	HMGP	TBD	County	Within 2 years; Next round of HMGP funding	This action has been deferred awaiting funding.

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2019 Action Implementation Status
PP-5	Ensure secure operation of water wells, water tanks and wastewater treatment facilities.	All	High	HGMP, USDA Rural Dev., CDBG, Small Muni. Grant	TBD	County	Annual Review	This action has been completed and ongoing.
Natural Resource Protection								
NRP-1	Preserve natural wetlands and riparian areas through acquisition of conservation easements.	HU, TS, FL	Low to Medium	Donation	Low or no cost	MS Land Trust, Land Trust for the MS Coastal Plain, County	Within 5 years	No action taken.
Emergency Services								
ES-1	Encourage participation by staff and elected officials in voluntary or extracurricular activities related to emergency management, disaster preparedness, civil defense, or other hazard mitigation activities.	All	Medium	Self-funded, MEMA	Low or no cost	County EMA	Annual Review	This action has been implemented and ongoing.

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Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2019 Action Implementation Status
ES-2	Establish a notification procedure for populations in high risk areas.	All	Medium	HGMP, USDA Rural Dev., CDBG, Small Muni. Grant Self-funded	Unknown	County EMA, County BOS	Within 2 years with funding availability	This action has been deferred awaiting funding.
ES-3	Survey the existing emergency shelters and study the feasibility of expanding the capacity of shelters.	All	High	HMGP	Unknown	County EMA	Within 2 years	This action has been completed and ongoing.
ES-4	Explore potential sites for a new special needs shelter.	HU, TS, FL	High	HMGP	Unknown	County EMA, County	Within 2 years	This action has been completed. No Change
ES-5	Improve disaster communication systems within the County.	All	High	HGMP, USDA Rural Dev., CDBG, Small Muni. Grant Self-funded	Unknown	County EMA	Ongoing	This action has been implemented and ongoing.

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Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2019 Action Implementation Status
ES-6	Consider generators for local radio station service areas.	HU, TO, TS	Medium	HMGP	Unknown	County EMA	Contingent upon funding	This action has been completed.
ES-7	Install warning sirens in the County.	TO, HU	Medium	HMGP	Unknown	County EMA	Contingent upon funding	This action has been deferred. Due to lack of funding
ES-8	Enhance Central Dispatch and other communications equipment.	All	Medium	HMGP	Unknown	County EMA	Within 2 years; Contingent upon funding	This action has been completed and ongoing.
ES-9	Explore upgrade/enhancement of 911 system in Perry County.	All	Low to Medium	HMGP, Self Funded	Unknown	County EMA	Within 5 years; Contingent upon funding	This action has been completed and ongoing.
ES-10	Explore potential to install Reverse 911 system.	All	Low to Medium	HMGP	Unknown	County EMA, County	Within 5 years; Contingent upon funding	In process included in new 911 system.
ES-11	Coordinate with neighboring jurisdictions to ensure consistency of evacuation plans.	FL, HU, TS, Others	Medium	Self-funded	No additional cost	County BOS, County EMA	Annual Review	This action has been implemented and ongoing.
ES-12	Enhance identification of evacuation routes through the distribution of MDOT maps.	FL, HU, TS, Others	High	Self-funded	No additional cost	County EMA	Ongoing	This action has been implemented and ongoing.

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Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2019 Action Implementation Status
ES-13	Ensure continuity of utility services for public buildings and other critical facilities. This includes purchasing backup generators and/or transfer switches to existing and future critical assets.	All	High	HMGP	Unknown	County	Within 2 years; Next round of HMGP funding	This action has been implemented and ongoing.
ES-14	Develop a government services continuity plan.	All	Medium	USDA Rural Dev., CDBG, Small Muni. Grant	Unknown	County	Annual review	This action has been implemented.
ES-15	Explore funding sources to renovate existing County Multi-Purpose Center into Emergency Operations Center.	All	High	HMGP, USDA Rural Dev., CDBG, Small Muni. Grant	Unknown	County	Within 5 years; Annual review	This action has been deleted.
ES-16	Host a meeting to review Perry County Comprehensive Emergency Management Plan.	All	Medium	Self-funded	No additional cost	County	Annual Meeting	This action has been implemented and ongoing.

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2019 Action Implementation Status
ES-17	Actively search for identify funding sources for the enhancement of emergency response abilities of Fire and Sheriff's Departments.	TT	Medium to High	DHS, SAFER, COPS, FIRE, Others	Unknown	County	Ongoing	This action has been implemented.
ES-18	Explore continuing education programs/ opportunities for first responders, especially in hazardous materials training.	Range	Medium	Self-funded, MEMA	Low cost	County	Ongoing	This action has been implemented and ongoing.
Structural Projects								
SP-1	Address cross-jurisdictional issues related to response, recovery and mitigation on key projects with overlapping boundaries.	HU, TS, FL, RH	Low to Medium	Self-funded	No additional cost	County	Within 2 years of funding availability.	Deferred due to lack of funding.
SP-2	Acquisitions of RL/SRL Properties	FL	High	FEMA, HMGP and PDM	TBD	County	2024	New
Public Education and Awareness								
PEA-1	Explore continuing education programs/ opportunities for staff and elected officials.	FL, TH, HU, TS	Medium	MEMA, FEMA, EMI		County	Ongoing	This action has been implemented and ongoing.

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Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2019 Action Implementation Status
PEA-2	Provide education and outreach materials to citizens and visitors.	All	High	Self-funded	No cost	County EMA	Ongoing	This action has been implemented and ongoing.
PEA-3	Encourage the development of Family Disaster Plans.	All	High	Self-funded, COPS, FIRE	Low or no cost	County EMA	Annual presentations	This action has been implemented and ongoing.
PEA-4	Expand outreach information to property owners regarding retrofitting and flood-proofing techniques through community workshops, brochures, and newspaper articles.	FL, Multiple	High	Self-funded	No additional cost	County EMA, County	Upon request	This action has been implemented and ongoing.
PEA-5	Provide education/outreach to communities to encourage participation in the National Flood Insurance Program.	FL	High	Self-funded	No additional cost	County EMA	Ongoing	This action has been completed and ongoing .

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2019 Action Implementation Status
PEA-6	Encourage participation in the Community Rating System of the NFIP.	FL, HU, TS, TH, HW	Medium	USDA Rural Dev., CDBG, Small Muni. Grant, FEMA, Others	Unknown	County	Within 3 years`	No action taken.
FL = Flood TH = Thunderstorm HU = Hurricane TS = Tropical Storm TO = Tornado BH = Biological Hazards HW = High Winds RH = Roadway Hazards TT = Transportation and Technological Hazards CH = Civil Hazards County EMA = Perry County Emergency Management Agency County BOS = Perry County Board of Supervisors								

Town of Beaumont Mitigation Action Plan

Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2013 Action Implementation Status
Prevention								
P-1	Identify high risk areas where hazards are most likely to occur.	All	High	N/A	No additional cost	Town	Annual review	This action has been implemented/Ongoing. High risk areas are identified in this hazard mitigation plan.
P-2	Site-locate vulnerable populations on a County-wide map.	Multiple	High	Area Agency on Aging, USDA Rural Dev., COPS, FIRE	Unknown	County EMA, County BOS, Town	Within 1 year; Upon request	This action has been deferred until funding is available to implement the action.
P-3	Strictly enforce the Flood Damage Prevention Ordinance	FL	High	Self-funded	No cost	Town Floodplain Administrator	Ongoing	This action has been implemented. Completed
P-4	Consider adoption of subdivision regulations.	TH, FL, HU, TS	Medium	Self-funded	No cost	County, Town	Ongoing	This action has been deferred.

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Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2013 Action Implementation Status
P-5	Continue to maintain and upgrade drainage facilities.	HU, TS, FL, BH	High	CDBG, Small Muni. Grant, MSDA, USDA Rural Dev., Self-funded	Unknown	County BOS, County Road Crews, Town	Annual review	This action has been implemented/Ongoing.
P-6	Consider adoption of a comprehensive drainage plan.	FL, TS, HU	Medium	CDBG, Small Muni. Grant, MSDA, USDA Rural Dev.	Unknown	County, Town	Within 5 years funding availability	Deferred based on funding availability.
P-7	Map the easements and rights-of-way of roadways and drainage ways.	All	Low to Medium	CDBG, Small Muni. Grant, MSDA, USDA Rural Dev.	Unknown	County, Town	Within 5 years of funding availability	This action has been deferred due to lack of funding.

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Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2013 Action Implementation Status
P-8	Support the development of a shared geographic data system for land use and site planning.	All	Medium to High	CDBG, Small Muni. Grant, MSDA, USDA Rural Dev., Self-funded	No additional cost	County, Town	Within 2 years of funding availability	Deferred based on funding availability.
P-9	Develop a comprehensive development plan.	All	High	CDBG, MSDA		County, Town	Within 2 years of funding availability	Deferred based on funding availability.
P-10	Incorporate the hazard mitigation plan into the comprehensive plan.	All	Medium	N/A	No additional cost	County, Town	Concurrent with prep. of Comp Plan	This action has been deferred.
Property Protection								
PP-1	Promote alternative construction techniques such as the building of "safe rooms" in new construction and when remodeling existing structures.	HU, TS, TO, TH	Medium	CDBG, Small Muni. Grant, MSDA, USDA Rural Dev., Self-funded	No additional cost	Town	Within 5 years of funding availability	This action has been implemented/Ongoing.

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2013 Action Implementation Status
PP-2	Ensure that structures in floodplain areas are elevated.	FL	High	CDBG, Small Muni. Grant, MSDA, USDA Rural Dev., Self-funded	No additional cost	County, Town	Within 3 years of funding availability	This action has been implemented and ongoing.
PP-3	Ensure that new public buildings are designed and built to hurricane resistant building codes.	HU, TS, TO, HW	High	CDBG, Small Muni. Grant, MSDA, USDA Rural Dev., Self-funded	No additional cost	County, Town	Annual Review	This action has been implemented and ongoing.
PP-4	Continue to retrofit public buildings and other critical facilities to withstand natural hazards.	All	High	HMGP	Unknown	County, Town	Within 2 years; Next round of HMGP funding	This action has been deferred awaiting funding.

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2013 Action Implementation Status
PP-5	Ensure secure operation of water wells, water tanks and wastewater treatment facilities.	All	High	HGMP, USDA Rural Dev., CDBG, Small Muni. Grant	Unknown	County, Town	Annual Review	This action has been completed and ongoing.
Natural Resource Protection								
NRP-1	Preserve natural wetlands and riparian areas through acquisition of conservation easements.	HU, TS, FL	Low to Medium	Donation	Low or no cost	MS Land Trust, Land Trust for the MS Coastal Plain, County	Within 5 years	No action taken.
Emergency Services								
ES-1	Encourage participation by staff and elected officials in voluntary or extracurricular activities related to emergency management, disaster preparedness, civil defense, or other hazard mitigation activities.	All	Medium	Self-funded, MEMA	Low or no cost	County EMA	Annual Review	This action has been implemented and ongoing.
ES-2	Establish a notification procedure for populations in high risk areas.	All	Medium	Self-funded	No additional cost	County EMA, County BOS, Town	Within 2 years with funding availability	This action has been deferred awaiting funding.

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Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2013 Action Implementation Status
ES-3	Survey the existing emergency shelters and study the feasibility of expanding the capacity of shelters.	All	High	HMGP	Unknown	County EMA, Town	Within 2 years	This action has been completed and ongoing.
ES-4	Explore potential sites for a new special needs shelter.	HU, TS, FL	High	HMGP	Unknown	County EMA, County, Town	Within 2 years	This action has been completed. No Change
ES-5	Improve disaster communication systems within the County.	All	High	HMGP	Unknown	County EMA	Ongoing	This action has been implemented and ongoing.
ES-6	Consider generators for local radio station service areas.	HU, TS, FL	High	HMGP	Unknown	County EMA, County	Contingent upon funding	This action has been completed.
ES-7	Install warning sirens in the County.	All	Medium	Unknown	Unknown	County EMA	Contingent upon funding	This action has been deferred. Due to lack of funding
ES-8	Enhance Central Dispatch and other communications equipment.	All	Medium	HMGP	Unknown	County EMA	Within 2 years; Contingent upon funding	This action has been completed and ongoing. Cities do not have their own dispatch- they use county resource.

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2013 Action Implementation Status
ES-9	Explore upgrade/enhancement of 911 system in Perry County.	All	Low to Medium	HMGP	Unknown	County EMA	Within 5 years; Contingent upon funding	This action has been completed and ongoing.
ES-10	Explore potential to install Reverse 911 system.	All	Low to Medium	HMGP	Unknown	County EMA, County	Within 5 years; Contingent upon funding	In process included in new 911 system.
ES-11	Coordinate with neighboring jurisdictions to ensure consistency of evacuation plans.	FL, HU, TS, Others	Medium	Self-funded	No additional cost	County BOS, County EMA	Annual Review	This action has been implemented and ongoing.
ES-12	Enhance identification of evacuation routes through the distribution of MDOT maps.	FL, HU, TS, Others	High	Self-funded	No additional cost	County EMA	Ongoing	This action has been implemented and ongoing.
ES-13	Ensure continuity of utility services for public buildings and other critical facilities.	All	High	HMGP	Unknown	County	Within 2 years; Next round of HMGP funding	This action has been implemented and ongoing.
ES-14	Develop a government services continuity plan.	All	Medium	USDA Rural Dev., CDBG, Small Muni. Grant	Unknown	County	2024	Deferred

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2013 Action Implementation Status
ES-15	Explore funding sources to renovate existing County Multi-Purpose Center into Emergency Operations Center.	All	High	HMGP, USDA Rural Dev., CDBG, Small Muni. Grant	Unknown	County	Within 5 years; Annual review	This action has been deleted.
ES-16	Host a meeting to review Perry County Comprehensive Emergency Management Plan.	All	Medium	Self-funded	No additional cost	County	Annual Meeting	This action has been implemented and ongoing.
ES-17	Actively search for identify funding sources for the enhancement of emergency response abilities of Fire and Sheriff's Departments.	TT	Medium to High	DHS, SAFER, COPS, FIRE, Others	Unknown	County, Town	Ongoing	This action has been implemented.
ES-18	Explore continuing education programs/ opportunities for first responders, especially in hazardous materials training.	Range	Medium	Self-funded, MEMA	Low cost	County, Town	Ongoing	This action has been implemented and ongoing.

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Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2013 Action Implementation Status
Structural Projects								
SP-1	Address cross-jurisdictional issues related to response, recovery and mitigation on key projects with overlapping boundaries.	HU, TS, FL, RH	Low to Medium	Self-funded	No additional cost	County, Town	Within 2 years of funding availability.	Deferred due to lack of funding.
SP-2	Acquisitions of RL/SRL Properties	FL	High	FEMA, HMGP and PDM	TBD	County	2024	New
Public Education and Awareness								
PEA-1	Explore continuing education programs/ opportunities for staff and elected officials.	FL, TH, HU, TS	Medium	MEMA, FEMA, EMI	Unknown	County	Ongoing	This action has been implemented and ongoing.
PEA-2	Provide education and outreach materials to citizens and visitors.	All	High	Self-funded	No cost	County EMA	Ongoing	This action has been implemented and ongoing.
PEA-3	Encourage the development of Family Disaster Plans.	All	High	Self-funded, COPS, FIRE	Low or no cost	County EMA	Annual presentations	This action has been implemented and ongoing.

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2013 Action Implementation Status
PEA-4	Expand outreach information to property owners regarding retrofitting and flood-proofing techniques through community workshops, brochures, and newspaper articles.	FL, Multiple	High	Self-funded	No additional cost	County EMA, County	Upon request	This action has been implemented and ongoing.
PEA-5	Provide education/outreach to communities to encourage participation in the National Flood Insurance Program.	FL	High	Self-funded	No additional cost	County EMA	Ongoing	This action has been completed and ongoing .

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2013 Action Implementation Status
PEA-6	Encourage participation in the Community Rating System of the NFIP.	FL, HU, TS, TH, HW	Medium	USDA Rural Dev., CDBG, Small Muni. Grant, FEMA, Others	Unknown	County, Town	Within 3 years`	No action taken.
PEA-7	Encourage businesses to develop business continuity or contingency operating plans.	Civil Hazards	High	Self-funded, SBA, SCORE	Low or no cost	County, Town	Within 2 years	This action has been deferred.
FL = Flood TH = Thunderstorm HU = Hurricane TS = Tropical Storm TO = Tornado BH = Biological Hazards HW = High Winds RH = Roadway Hazards TT = Transportation and Technological Hazards CH = Civil Hazards County EMA = Perry County Emergency Management Agency County BOS = Perry County Board of Supervisors								

Town of New Augusta Mitigation Action Plan

Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2019 Action Implementation Status
Prevention								
P-1	Identify high risk areas where hazards are most likely to occur.	All	High	N/A	No additional cost	Town	Annual review	This action has been implemented/Ongoing. High risk areas are identified in this hazard mitigation plan.
P-2	Site-locate vulnerable populations on a County-wide map.	Multiple	High	Area Agency on Aging, USDA Rural Dev., COPS, FIRE	Unknown	County EMA, County BOS, Town	Within 1 year; Upon request	This action has been deferred until funding is available to implement the action.
P-3	Strictly enforce the Flood Damage Prevention Ordinance	FL	High	Self-funded	No cost	Town Floodplain Administrator	Ongoing	This action has been implemented. Completed
P-4	Consider adoption of subdivision regulations.	TH, FL, HU, TS	Medium	Self-funded	No cost	County, Town	Ongoing	This action has been deferred.

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2019 Action Implementation Status
P-5	Continue to maintain and upgrade drainage facilities.	HU, TS, FL, BH	High	CDBG, Small Muni. Grant, MSDA, USDA Rural Dev., Self-funded	Unknown	County BOS, County Road Crews, Town	Annual review	This action has been implemented/Ongoing.
P-6	Consider adoption of a comprehensive drainage plan.	FL, TS, HU	Medium	CDBG, Small Muni. Grant, MSDA, USDA Rural Dev.	Unknown	County, Town	Within 5 years funding availability	Deferred based on funding availability.
P-7	Map the easements and rights-of-way of roadways and drainage ways.	All	Low to Medium	CDBG, Small Muni. Grant, MSDA, USDA Rural Dev.	Unknown	County	Within 5 years of funding availability	This action has been deferred due to lack of funding.

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2019 Action Implementation Status
P-8	Support the development of a shared geographic data system for land use and site planning.	All	Medium to High	CDBG, Small Muni. Grant, MSDA, USDA Rural Dev., Self-funded	No additional cost	County	Within 2 years of funding availability	Deferred based on funding availability.
P-9	Develop a comprehensive development plan.	All	High	CDBG, MSDA	Unknown	County	Within 2 years of funding availability	Deferred based on funding availability.
P-10	Incorporate the hazard mitigation plan into the comprehensive plan.	All	Medium	N/A	No additional cost	County	Concurrent with prep. of Comp Plan	This action has been deferred.
Property Protection								
PP-1	Promote alternative construction techniques such as the building of "safe rooms" in new construction and when remodeling existing structures.	HU, TS, TO, TH	Medium	CDBG, Small Muni. Grant, MSDA, USDA Rural Dev., Self-funded	No additional cost	Town	Within 5 years of funding availability	This action has been implemented/Ongoing.

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2019 Action Implementation Status
PP-2	Ensure that structures in floodplain areas are elevated.	FL	High	CDBG, Small Muni. Grant, MSDA, USDA Rural Dev., Self-funded	No additional cost	County, Town	Within 3 years of funding availability	This action has been implemented and ongoing.
PP-3	Ensure that new public buildings are designed and built to hurricane resistant building codes.	HU, TS, TO, HW	High	CDBG, Small Muni. Grant, MSDA, USDA Rural Dev., Self-funded	No additional cost	County, Town	Annual Review	This action has been implemented and ongoing.
PP-4	Continue to retrofit public buildings and other critical facilities to withstand natural hazards.	All	High	HMGP	Unknown	County, Town	Within 2 years; Next round of HMGP funding	This action has been deferred awaiting funding.

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2019 Action Implementation Status
PP-5	Ensure secure operation of water wells, water tanks and wastewater treatment facilities.	All	High	HGMP, USDA Rural Dev., CDBG, Small Muni. Grant	Unknown	County, Town	Annual Review	This action has been completed and ongoing.
Natural Resource Protection								
NRP-1	Preserve natural wetlands and riparian areas through acquisition of conservation easements.	HU, TS, FL	Low to Medium	Donation	Low or no cost	MS Land Trust, Land Trust for the MS Coastal Plain, County	Within 5 years	No action taken.
Emergency Services								
ES-1	Encourage participation by staff and elected officials in voluntary or extracurricular activities related to emergency management, disaster preparedness, civil defense, or other hazard mitigation activities.	All	Medium	Self-funded, MEMA	Low or no cost	County EMA	Annual Review	This action has been implemented and ongoing.
ES-2	Establish a notification procedure for populations in high risk areas.	All	Medium	Self-funded	No additional cost	County EMA, County BOS	Within 2 years with funding availability	This action has been deferred awaiting funding.

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2019 Action Implementation Status
ES-3	Survey the existing emergency shelters and study the feasibility of expanding the capacity of shelters.	All	High	HMGP	Unknown	County EMA	Within 2 years	This action has been completed and ongoing.
ES-4	Explore potential sites for a new special needs shelter.	HU, TS, FL	High	HMGP	Unknown	County EMA, County	Within 2 years	This action has been completed. No Change
ES-5	Improve disaster communication systems within the County.	All	Medium	Unknown	Unknown	County EMA	Ongoing	This action has been implemented and ongoing.
ES-6	Consider generators for local radio station service areas.	HU, TO, TS	Medium	HMGP	Unknown	County EMA	Contingent upon funding	This action has been completed.
ES-7	Install warning sirens in the County.	TO, HU	Medium	HMGP	Unknown	County EMA	Contingent upon funding	This action has been deferred. Due to lack of funding. Two sirens installed in New Augusta since previous plan.

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2019 Action Implementation Status
ES-8	Enhance Central Dispatch and other communications equipment.	All	Medium	HMGP	Unknown	County EMA	Within 2 years; Contingent upon funding	This action has been completed and ongoing. Cities do not have their own dispatch- use County resource.
ES-9	Explore upgrade/enhancement of 911 system in Perry County.	All	Low to Medium	HMGP	Unknown	County EMA	Within 5 years; Contingent upon funding	This action has been completed and ongoing.
ES-10	Explore potential to install Reverse 911 system.	All	Low to Medium	HMGP	Unknown	County EMA, County	Within 5 years; Contingent upon funding	In process included in new 911 system.
ES-11	Coordinate with neighboring jurisdictions to ensure consistency of evacuation plans.	FL, HU, TS, Others	Medium	Self-funded	No additional cost	County BOS, County EMA	Annual Review	This action has been implemented and ongoing.
ES-12	Enhance identification of evacuation routes through the distribution of MDOT maps.	FL, HU, TS, Others	High	Self-funded	No additional cost	County EMA	Ongoing	This action has been implemented and ongoing.
ES-13	Ensure continuity of utility services for public buildings and other critical facilities.	All	High	HMGP	Unknown	County	Within 2 years; Next round of HMGP funding	This action has been implemented and ongoing.

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2019 Action Implementation Status
ES-14	Develop a government services continuity plan.	All	Medium	USDA Rural Dev., CDBG, Small Muni. Grant	Unknown	County	2024	Deferred
ES-15	Explore funding sources to renovate existing County Multi-Purpose Center into Emergency Operations Center.	All	High	HMGP, USDA Rural Dev., CDBG, Small Muni. Grant	Unknown	County	Within 5 years; Annual review	This action has been deleted.
ES-16	Host a meeting to review Perry County Comprehensive Emergency Management Plan.	All	Medium	Self-funded	No additional cost	County	Annual Meeting	This action has been implemented and ongoing.
ES-17	Actively search for identify funding sources for the enhancement of emergency response abilities of Fire and Sheriff's Departments.	TT	Medium to High	DHS, SAFER, COPS, FIRE, Others	Unknown	County, Town	Ongoing	This action has been implemented.

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2019 Action Implementation Status
ES-18	Explore continuing education programs/ opportunities for first responders, especially in hazardous materials training.	Range	Medium	Self-funded, MEMA	Low cost	County, Town	Ongoing	This action has been implemented and ongoing.
Structural Projects								
SP-1	Address cross-jurisdictional issues related to response, recovery and mitigation on key projects with overlapping boundaries.	HU, TS, FL, RH	Low to Medium	Self-funded	No additional cost	County, Town	Within 2 years of funding availability.	Deferred due to lack of funding.
SP-2	Acquisitions of RL/SRL Properties	FL	High	FEMA, HMGP and PDM	TBD	County	2024	New
Public Education and Awareness								
PEA-1	Explore continuing education programs/ opportunities for staff and elected officials.	FL, TH, HU, TS	Medium	MEMA, FEMA, EMI	Unknown	Town	Ongoing	This action has been implemented and ongoing.
PEA-2	Provide education and outreach materials to citizens and visitors.	All	High	Self-funded	No cost	County EMA	Ongoing	This action has been implemented and ongoing.
PEA-3	Encourage the development of Family Disaster Plans.	All	High	Self-funded, COPS, FIRE	Low or no cost	County EMA	Annual presentations	This action has been implemented and ongoing.

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2019 Action Implementation Status
PEA-4	Expand outreach information to property owners regarding retrofitting and flood-proofing techniques through community workshops, brochures, and newspaper articles.	FL, Multiple	High	Self-funded	No additional cost	County EMA, Town	Upon request	This action has been implemented and ongoing.
PEA-5	Provide education/outreach to communities to encourage participation in the National Flood Insurance Program.	FL	High	Self-funded	No additional cost	County EMA	Ongoing	This action has been completed and ongoing .

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2019 Action Implementation Status
PEA-6	Encourage participation in the Community Rating System of the NFIP.	FL, HU, TS, TH, HW	Medium	USDA Rural Dev., CDBG, Small Muni. Grant, FEMA, Others	Unknown	County, Town	Within 3 years`	No action taken.
PEA-7	Encourage businesses to develop business continuity or contingency operating plans.	Civil Hazards	High	Self-funded, SBA, SCORE	Low or no cost	County, Town	Within 2 years	This action has been deferred.
FL = Flood TH = Thunderstorm HU = Hurricane TS = Tropical Storm TO = Tornado BH = Biological Hazards HW = High Winds RH = Roadway Hazards TT = Transportation and Technological Hazards CH = Civil Hazards County EMA = Perry County Emergency Management Agency County BOS = Perry County Board of Supervisors								

Town of Richton Mitigation Action Plan

Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2019 Action Implementation Status
Prevention								
P-1	Identify high risk areas where hazards are most likely to occur.	All	High	N/A	No additional cost	Town	Annual review	This action has been implemented/Ongoing. High risk areas are identified in this hazard mitigation plan.
P-2	Site-locate vulnerable populations on a County-wide map.	Multiple	High	Area Agency on Aging, USDA Rural Dev., COPS, FIRE	Unknown	County EMA, County BOS, Town	Within 1 year; Upon request	This action has been deferred until funding is available to implement the action.
P-3	Strictly enforce the Flood Damage Prevention Ordinance	FL	High	Self-funded	No cost	Town Floodplain Administrator	Ongoing	This action has been implemented. Completed
P-4	Consider adoption of subdivision regulations.	TH, FL, HU, TS	Medium	Self-funded	No cost	County, Town	Ongoing	This action has been deferred.

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2019 Action Implementation Status
P-5	Continue to maintain and upgrade drainage facilities.	HU, TS, FL, BH	High	CDBG, Small Muni. Grant, MSDA, USDA Rural Dev., Self-funded	Unknown	County BOS, County Road Crews, Town	Annual review	This action has been implemented/Ongoing.
P-6	Consider adoption of a comprehensive drainage plan.	FL, TS, HU	Medium	CDBG, Small Muni. Grant, MSDA, USDA Rural Dev.	Unknown	County, Town	Within 5 years funding availability	Deferred based on funding availability.
P-7	Map the easements and rights-of-way of roadways and drainage ways.	All	Low to Medium	CDBG, Small Muni. Grant, MSDA, USDA Rural Dev.	Unknown	County, Town	Within 5 years of funding availability	This action has been deferred due to lack of funding.

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2019 Action Implementation Status
P-8	Support the development of a shared geographic data system for land use and site planning.	All	Medium to High	CDBG, Small Muni. Grant, MSDA, USDA Rural Dev., Self-funded	No additional cost	County, Town	Within 2 years of funding availability	Deferred based on funding availability.
P-9	Develop a comprehensive development plan.	All	High	CDBG, MSDA	Unknown	County, Town	Within 2 years of funding availability	Deferred based on funding availability.
P-10	Incorporate the hazard mitigation plan into the comprehensive plan.	All	Medium	N/A	No additional cost	County, Town	Concurrent with prep. of Comp Plan	This action has been deferred.
Property Protection								
PP-1	Promote alternative construction techniques such as the building of “safe rooms” in new construction and when remodeling existing structures.	HU, TS, TO, TH	Medium	CDBG, Small Muni. Grant, MSDA, USDA Rural Dev., Self-funded	No additional cost	Town	Within 5 years of funding availability	This action has been implemented/Ongoing.

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2019 Action Implementation Status
PP-2	Ensure that structures in floodplain areas are elevated.	FL	High	CDBG, Small Muni. Grant, MSDA, USDA Rural Dev., Self-funded	No additional cost	County, Town	Within 3 years of funding availability	This action has been implemented and ongoing.
PP-3	Ensure that new public buildings are designed and built to hurricane resistant building codes.	HU, TS, TO, HW	High	CDBG, Small Muni. Grant, MSDA, USDA Rural Dev., Self-funded	No additional cost	County, Town	Annual Review	This action has been implemented and ongoing.
PP-4	Continue to retrofit public buildings and other critical facilities to withstand natural hazards.	All	High	HMGP	Unknown	County, Town	Within 2 years; Next round of HMGP funding	This action has been deferred awaiting funding.

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2019 Action Implementation Status
PP-5	Ensure secure operation of water wells, water tanks and wastewater treatment facilities.	All	High	HGMP, USDA Rural Dev., CDBG, Small Muni. Grant	Unknown	County, Town	Annual Review	This action has been completed and ongoing.
Natural Resource Protection								
NRP-1	Preserve natural wetlands and riparian areas through acquisition of conservation easements.	HU, TS, FL	Low to Medium	Donation	Low or no cost	MS Land Trust, Land Trust for the MS Coastal Plain, County	Within 5 years	No action taken.
Emergency Services								
ES-1	Encourage participation by staff and elected officials in voluntary or extracurricular activities related to emergency management, disaster preparedness, civil defense, or other hazard mitigation activities.	All	Medium	Self-funded, MEMA	Low or no cost	County EMA	Annual Review	This action has been implemented and ongoing.
ES-2	Establish a notification procedure for populations in high risk areas.	All	Medium	Self-funded	No additional cost	County EMA, County BOS, Town	Within 2 years with funding availability	This action has been deferred awaiting funding.

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2019 Action Implementation Status
ES-3	Survey the existing emergency shelters and study the feasibility of expanding the capacity of shelters.	All	High	HMGP	Unknown	County EMA	Within 2 years	This action has been completed and ongoing.
ES-4	Explore potential sites for a new special needs shelter.	HU, TS, FL	High	HMGP	Unknown	County EMA, County	Within 2 years	This action has been completed. No Change
ES-5	Improve disaster communication systems within the County.	All	Medium	Unknown	Unknown	County EMA	Ongoing	This action has been implemented and ongoing.
ES-6	Consider generators for local radio station service areas.	HU, TO, TS	Medium	HMGP	Unknown	County EMA	Contingent upon funding	This action has been completed.
ES-7	Install warning sirens in the County.	TO, HU	Medium	HMGP	Unknown	County EMA	Contingent upon funding	This action has been deferred. Due to lack of funding
ES-8	Enhance Central Dispatch and other communications equipment.	All	Medium	HMGP	Unknown	County EMA	Within 2 years; Contingent upon funding	This action has been completed and ongoing. Cities do not have their own dispatch- they use county resource.

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2019 Action Implementation Status
ES-9	Explore upgrade/enhancement of 911 system in Perry County.	All	Low to Medium	HMGP	Unknown	County EMA	Within 5 years; Contingent upon funding	This action has been completed and ongoing.
ES-10	Explore potential to install Reverse 911 system.	All	Low to Medium	HMGP	Unknown	County EMA, County	Within 5 years; Contingent upon funding	In process included in new 911 system.
ES-11	Coordinate with neighboring jurisdictions to ensure consistency of evacuation plans.	FL, HU, TS, Others	Medium	Self-funded	No additional cost	County BOS, County EMA	Annual Review	This action has been implemented and ongoing.
ES-12	Enhance identification of evacuation routes through the distribution of MDOT maps.	FL, HU, TS, Others	High	Self-funded	No additional cost	County EMA	Ongoing	This action has been implemented and ongoing.
ES-13	Ensure continuity of utility services for public buildings and other critical facilities.	All	High	HMGP	Unknown	County	Within 2 years; Next round of HMGP funding	This action has been implemented and ongoing.
ES-14	Develop a government services continuity plan.	All	Medium	USDA Rural Dev., CDBG, Small Muni. Grant	Unknown	County	2024	Deferred

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2019 Action Implementation Status
ES-15	Explore funding sources to renovate existing County Multi-Purpose Center into Emergency Operations Center.	All	High	HMGP, USDA Rural Dev., CDBG, Small Muni. Grant	Unknown	County	Within 5 years; Annual review	This action has been deleted.
ES-16	Host a meeting to review Perry County Comprehensive Emergency Management Plan.	All	Medium	Self-funded	No additional cost	County	Annual Meeting	This action has been implemented and ongoing.
ES-17	Actively search for identify funding sources for the enhancement of emergency response abilities of Fire and Sheriff's Departments.	TT	Medium to High	DHS, SAFER, COPS, FIRE, Others	Unknown	County, Town	Ongoing	This action has been implemented.
ES-18	Explore continuing education programs/ opportunities for first responders, especially in hazardous materials training.	Range	Medium	Self-funded, MEMA	Low cost	County, Town	Ongoing	This action has been implemented and ongoing.

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2019 Action Implementation Status
Structural Projects								
SP-1	Address cross-jurisdictional issues related to response, recovery and mitigation on key projects with overlapping boundaries.	HU, TS, FL, RH	Low to Medium	Self-funded	No additional cost	County, Town	Within 2 years of funding availability.	Deferred due to lack of funding.
SP-2	Acquisitions of RL/SRL Properties	FL	High	FEMA, HMGP and PDM	TBD	County	2024	New
Public Education and Awareness								
PEA-1	Explore continuing education programs/ opportunities for staff and elected officials.	FL, TH, HU, TS	Medium	MEMA, FEMA, EMI	Unknown	Town	Ongoing	This action has been implemented and ongoing.
PEA-2	Provide education and outreach materials to citizens and visitors.	All	High	Self-funded	No cost	County EMA	Ongoing	This action has been implemented and ongoing.
PEA-3	Encourage the development of Family Disaster Plans.	All	High	Self-funded, COPS, FIRE	Low or no cost	County EMA	Annual presentations	This action has been implemented and ongoing.

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2019 Action Implementation Status
PEA-4	Expand outreach information to property owners regarding retrofitting and flood-proofing techniques through community workshops, brochures, and newspaper articles.	FL, Multiple	High	Self-funded	No additional cost	County EMA, Town	Upon request	This action has been implemented and ongoing.
PEA-5	Provide education/outreach to communities to encourage participation in the National Flood Insurance Program.	FL	High	Self-funded	No additional cost	County EMA	Ongoing	This action has been completed and ongoing .

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2019 Action Implementation Status
PEA-6	Encourage participation in the Community Rating System of the NFIP.	FL, HU, TS, TH, HW	Medium	USDA Rural Dev., CDBG, Small Muni. Grant, FEMA, Others	Unknown	County, Town	Within 3 years`	No action taken.
PEA-7	Encourage businesses to develop business continuity or contingency operating plans.	Civil Hazards	High	Self-funded, SBA, SCORE	Low or no cost	County, Town	Within 2 years	This action has been deferred.
FL = Flood TH = Thunderstorm HU = Hurricane TS = Tropical Storm TO = Tornado BH = Biological Hazards HW = High Winds RH = Roadway Hazards TT = Transportation and Technological Hazards CH = Civil Hazards County EMA = Perry County Emergency Management Agency County BOS = Perry County Board of Supervisors								

Wayne County Mitigation Action Plan

Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2019 Action Implementation Status
Prevention								
P-1	Identify high risk areas where hazards are most likely to occur.	All	High	N/A	No additional cost	County	Annual review	Action ongoing
P-2	Site-locate vulnerable population on a County-wide map.	Multiple	High	Area Agency on Aging, USDA Rural Dev., COPS, FIRE	Unknown	County EMA	Within 1 year; Upon request	Action ongoing
P-3	Consider adoption of flood damage prevention ordinance in Wayne County.	FL	High	Self-funded	No cost	County, County Floodplain Administrator	Ongoing	Action ongoing. Implemented 2011.
P-4	Consider adoption of subdivision regulations in Wayne County.	TH, FL, HU, TS	Medium	Self-funded	No cost	County	Ongoing	Deferred
P-5	Monitor flood levels of local rivers.	FL	High	HMGP	Unknown	County	Within 5 years	Action ongoing

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2019 Action Implementation Status
P-6	Continue to maintain and upgrade drainage facilities within the County.	HU, TS, FL, BH	High	Self-funded	Unknown	County	Within 2 years; Next round of HMGP funding; Annual review	Action ongoing. Some progress implemented-clean out ditches annually.
P-7	Consider adoption of a comprehensive drainage plan.	HU, TS, FL, NH	High	CDBG, Small Muni. Grant, MSDA, USDA Rural Dev.	Unknown	County	Annual review	Deferred. Waynesboro is mapping drainage areas and it will include elevations, cross sections, and flow directions.
P-8	Map the easements and rights-of-way of roadways and drainage ways.	All	Low to Medium	CDBG, Small Muni. Grant, MSDA, USDA Rural Dev.	Unknown	County	Within 5 years	Action ongoing
P-9	Develop a government services continuity plan.	All	Medium	USDA Rural Dev., CDBG, Small Muni. Grant	Unknown	County	Ongoing	Completed September 2019

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2019 Action Implementation Status
P-10	Support the development of a shared geographic data system for land use and site planning.	All	Medium to High	Self-funded	No additional cost	County	Within 2 years	Action ongoing
P-11	Develop a comprehensive plan.	All	High	CDBG, MSDA	Unknown	County		Completed. Delete
Property Protection								
PP-1	Promote alternative construction techniques such as the building of “safe rooms” in new construction and when remodeling existing structures.	HU, TS, TO, TH	Medium	Self-funded	No additional cost	County	Within 5 years	Action ongoing
PP-2	Ensure that structures in floodplain areas are elevated.	FL	High	Self-funded	No additional cost	County	Within 3 years	Action ongoing
PP-3	Continue to retrofit public buildings to withstand natural hazards such as hurricanes and flooding.	All	High	HMGP	Unknown	County	Within 2 years; Next round of HMGP funding	Action ongoing
PP-4	Ensure that public buildings are designed and built to hurricane resistant building codes.	HU, TS, TO	High	Self-funded	No additional cost	County	Within 1 year	Action ongoing

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2019 Action Implementation Status
PP-5	Ensure secure operation of water wells, water tanks and wastewater treatment facilities.	All	High	HMGP, USDA Rural Dev., CDBG, Small Muni. Grant	Unknown	County	Within 2 years; Next round of HMGP funding	Action ongoing
PP-6	Elevation and Acquisition of Flood prone structures	FL	Medium	HMA, MEMA	TBD	County	2024	New
PP-7	Generators and hook-ups for critical facilities	TH, HU, TS, TO	Medium	HMA, MEMA	TBD	County	2024	New
PP-8	Warning sirens throughout planning area	TH, TO	Medium	HMA, MEMA	TBD	County	2024	New
PP-9	Individual saferooms throughout planning area	TO	Medium	HMA, MEMA	\$5,000+	County	2024	New
PP-10	361 Saferooms were needed- location is TBD	TO	Medium	HMA, MEMA	TBD	County	2024	New
PP-11	Elevation of critical facilities, such as pumps, and equipment	FL	Medium	HMA, MEMA	TBD	County	2024	New
PP-12	Floodproofing measures for critical facilities prone to flood	FL	Medium	HMA, MEMA	TBD	County	2024	New

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2019 Action Implementation Status
Natural Resource Protection								
NRP-1	Preserve natural wetlands and riparian areas through acquisition of conservation easements.	HU, TS, FL	Medium	Donation	Low or no cost	MS Land Trust, Land Trust for the MS Coastal Plain, County	Within 5 years	Action ongoing
Emergency Services								
ES-1	Encourage participation by staff and elected officials in voluntary or extracurricular activities related to emergency management, disaster preparedness, civil defense, or other hazard mitigation activities.	All	Medium	Self-funded, MEMA	Low or no cost	County EMA	Within 2 years	Action ongoing
ES-2	Establish a notification procedure for populations in high risk areas.	All	Medium	Self-funded	No additional cost	County EMA, County SD, County VFDs	Within 2 years	Action ongoing. Waynesboro has reverse call back system in place as of 2018.
ES-3	Survey the existing emergency shelters and study the feasibility of expanding the capacity of shelters and adding safe rooms.	All	High	HMGP	Unknown	County EMA	Within 2 years	Action ongoing
ES-4	Explore potential sites for a new special needs shelter.	HU, TS, FL	High	HMGP	Unknown	County EMA	Within 2 years	Action ongoing

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2019 Action Implementation Status
ES-5	Improve disaster communication systems within the County.	All	High	HMGP	Unknown	County EMA	Within 2 years; Next round of HGMP funding	Action ongoing. MSWINN at Fire Department and all use social media.
ES-6	Explore establishment of a County-wide central dispatch system.	All	High	HMGP	Unknown	County EMA		Action completed. Delete
ES-7	Ensure that emergency sirens are in place county-wide.	All	High	HMGP	Unknown	County EMA	Within 2 years; Next round of HGMP funding	Action ongoing
ES-8	Install warning informers in buildings that house vulnerable populations.	All	High	HMGP	Unknown	County EMA	Within 2 years; Next round of HGMP funding	Action ongoing
ES-9	Install Alert FM service at radio station.	All	High	HMGP	Unknown	County EMA	Within 2 years; Next round of HGMP funding	Action completed
ES-10	Upgrade Emergency Broadcast System capabilities.	All	High	HMGP	Unknown	County EMA	Within 2 years; Next round of HGMP funding	Action ongoing
ES-11	Coordinate with neighboring jurisdictions to ensure consistency of evacuation plans.	HU, TS	Medium	Self-funded	No additional cost	County	Within 2 years	Action ongoing
ES-12	Enhance identification of evacuation routes through the distribution of MDOT maps.	HU, TS	Medium	Self-funded	No additional cost	County	Within 1 year	Action ongoing

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2019 Action Implementation Status
ES-13	Ensure continuity of utility services for public buildings and other critical facilities.	All	High	HMGP	Unknown	County	Within 2 years; Next round of HMGP funding	Action ongoing
ES-14	Host a meeting to review Wayne County Comprehensive Emergency Management Plan.	TT	High	Self-funded	No additional cost	County LEPC, County	Within 2 years; Next round of HMGP funding	Action ongoing
ES-15	Actively search for and identify funding sources for the enhancement of emergency response abilities of Fire and Sheriff's Departments.	TT	Medium to High	DHS, SAFER, COPS, FIRE, Others	Unknown	County	Ongoing	Action ongoing
Structural Projects								
SP-1	Address cross-jurisdictional issues related to response, recovery and mitigation on key projects with overlapping boundaries.	HU, TS, FL, RH	Low to Medium	Self-funded	No additional cost	County	Within 2 years	Action ongoing
Public Education and Awareness								
PEA-1	Explore continuing education programs/ opportunities for staff and elected officials.	FL, TH, HU, TS	Medium	Self-funded, MEMA	Low cost	County	Within 2 years	Action ongoing
PEA-2	Provide education and outreach materials to citizens and visitors.	All	High	Self-funded	No cost	County EMA	Within 1 year	Action ongoing

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2019 Action Implementation Status
PEA-3	Encourage the development of Family Disaster Plans.	All	High	Self-funded, COPS, FIRE	Low or no cost	County EMA, County Fire Coordinator	Within 1 year; Annual presentations	Action ongoing
PEA-4	Expand outreach information to property owners regarding retrofitting and flood-proofing techniques through community workshops, brochures, and newspaper articles.	FL; Multiple	High	Self-funded	No additional cost	County EMA	Upon request	Action ongoing
PEA-5	Encourage businesses to develop business continuity or contingency operating plans.	CH	High	Self-funded, Chamber of Comm., SCORE	Low or no cost	County	Within 2 years	Action ongoing
PEA-6	Education and outreach regarding drought and water conservation procedures	All	Medium	Self-funded	Low or no cost	County	2024	New

FL = Flood TH = Thunderstorm HU = Hurricane TS = Tropical Storm TO = Tornado BH = Biological Hazards TT = Transportation and Technological Hazards
 RH = Roadway Hazards CH = Civil Hazards

County EMA = Wayne County Emergency Management Agency County SD = Wayne County Sheriff's Dept. County VFD = Wayne County Volunteer Fire Dept. County LEPC = Wayne County Local Emergency Planning Committee

Town of State Line Mitigation Action Plan

Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2019 Action Implementation Status
Prevention								
P-1	Identify high risk areas where hazards are most likely to occur.	All	High	N/A	No additional cost	Town	Annual review	Action ongoing
P-2	Site-locate vulnerable population on a County-wide map.	Multiple	High	Area Agency on Aging, USDA Rural Dev., COPS, FIRE	Unknown	County EMA	Within 1 year; Upon request	Action ongoing
P-3	Consider adoption of flood damage prevention ordinance in Wayne County.	FL	High	Self-funded	No additional cost	County, County Floodplain Administrator	Ongoing	Action ongoing. Implemented 2011.
P-4	Consider adoption of subdivision regulations in Wayne County.	TH, FL, HU, TS	Medium	Self-funded	No cost	County	Ongoing	Deferred
P-5	Monitor flood levels of local rivers.	FL	High	HMGP	Unknown	Town	Within 5 years	Action ongoing

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2019 Action Implementation Status
P-6	Continue to maintain and upgrade drainage facilities within the County.	HU, TS, FL, BH	High	Self-funded	Unknown	Town	Within 2 years; Next round of HMGP funding; Annual review	Action ongoing. Some progress implemented-clean out ditches annually.
P-7	Consider adoption of a comprehensive drainage plan.	HU, TS, FL, NH	High	CDBG, Small Muni. Grant, MSDA, USDA Rural Dev.	Unknown	Town	Annual review	Deferred. Waynesboro is mapping drainage areas and it will include elevations, cross sections, and flow directions.
P-8	Map the easements and rights-of-way of roadways and drainage ways.	All	Low to Medium	CDBG, Small Muni. Grant, MSDA, USDA Rural Dev.	Unknown	Town	Within 5 years	Action ongoing
P-9	Develop a government services continuity plan.	All	Medium	USDA Rural Dev., CDBG, Small Muni. Grant	Unknown	County, Town	Ongoing	Completed September 2019

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2019 Action Implementation Status
P-10	Support the development of a shared geographic data system for land use and site planning.	All	Medium to High	Self-funded	No additional cost	Town	Within 2 years	Action ongoing
P-11	Develop a comprehensive plan.	All	High	CDBG, MSDA	Unknown	Town		Completed. Delete
Property Protection								
PP-1	Promote alternative construction techniques such as the building of “safe rooms” in new construction and when remodeling existing structures.	HU, TS, TO, TH	Medium	Self-funded	No additional cost	Town	Within 5 years	Action ongoing
PP-2	Ensure that structures in floodplain areas are elevated.	FL	High	Self-funded	No additional cost	County, Town	Within 3 years	Action ongoing
PP-3	Continue to retrofit public buildings to withstand natural hazards such as hurricanes and flooding.	All	High	HMGP	Unknown	Town	Within 2 years; Next round of HMGP funding	Action ongoing
PP-4	Ensure that public buildings are designed and built to hurricane resistant building codes.	HU, TS, TO	High	Self-funded	No additional cost	Town	Within 1 year	Action ongoing

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2019 Action Implementation Status
PP-5	Ensure secure operation of water wells, water tanks and wastewater treatment facilities.	All	High	HMGP, USDA Rural Dev., CDBG, Small Muni. Grant	Unknown	County, Town	Within 2 years; Next round of HMGP funding	Action ongoing
PP-6	Elevation and Acquisition of Flood prone structures	FL	Medium	HMA, MEMA	TBD	County	2024	New
PP-7	Generators and hook-ups for critical facilities	TH, HU, TS, TO	Medium	HMA, MEMA	TBD	County	2024	New
PP-8	Warning sirens throughout planning area	TH, TO	Medium	HMA, MEMA	TBD	County	2024	New
PP-9	Individual saferooms throughout planning area	TO	Medium	HMA, MEMA	\$5,000+	County	2024	New
PP-10	361 Saferooms were needed- location is TBD	TO	Medium	HMA, MEMA	TBD	County	2024	New
PP-11	Elevation of critical facilities, such as pumps, and equipment	FL	Medium	HMA, MEMA	TBD	County	2024	New
PP-12	Floodproofing measures for critical facilities prone to flood	FL	Medium	HMA, MEMA	TBD	County	2024	New

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2019 Action Implementation Status
Natural Resource Protection								
NRP-1	Preserve natural wetlands and riparian areas through acquisition of conservation easements.	HU, TS, FL	Medium	Donation	Low or no cost	MS Land Trust, Land Trust for the MS Coastal Plain, Town	Within 5 years	Action ongoing
Emergency Services								
ES-1	Encourage participation by staff and elected officials in voluntary or extracurricular activities related to emergency management, disaster preparedness, civil defense, or other hazard mitigation activities.	All	Medium	Self-funded, MEMA	Low or no cost	County EMA	Within 2 years	Action ongoing
ES-2	Establish a notification procedure for populations in high risk areas.	All	Medium	Self-funded	No additional cost	County EMA, County SD, County VFDs	Within 2 years	Action ongoing. Waynesboro has reverse call back system in place as of 2018.
ES-3	Survey the existing emergency shelters and study the feasibility of expanding the capacity of shelters and adding safe rooms.	All	High	HMGP	Unknown	County EMA	Within 2 years	Action ongoing
ES-4	Explore potential sites for a new special needs shelter.	HU, TS, FL	High	HMGP	Unknown	County EMA	Within 2 years	Action ongoing

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2019 Action Implementation Status
ES-5	Improve disaster communication systems within the County.	All	High	HMGP	Unknown	County EMA	Within 2 years; Next round of HGMP funding	Action ongoing. MSWINN at Fire Department and all use social media.
ES-6	Explore establishment of a County-wide central dispatch system.	All	High	HMGP	Unknown	County EMA		Action completed. Delete
ES-7	Ensure that emergency sirens are in place county-wide.	All	High	HMGP	Unknown	County EMA	Within 2 years; Next round of HGMP funding	Action ongoing
ES-8	Install warning informers in buildings that house vulnerable populations.	All	High	HMGP	Unknown	County EMA	Within 2 years; Next round of HGMP funding	Action ongoing
ES-9	Install Alert FM service at radio station.	All	High	HMGP	Unknown	County EMA	Within 2 years; Next round of HGMP funding	Action completed
ES-10	Upgrade Emergency Broadcast System capabilities.	All	High	HMGP	Unknown	County EMA	Within 2 years; Next round of HGMP funding	Action ongoing
ES-11	Coordinate with neighboring jurisdictions to ensure consistency of evacuation plans.	HU, TS	Medium	Self-funded	No additional cost	Town	Within 2 years	Action ongoing
ES-12	Enhance identification of evacuation routes through the distribution of MDOT maps.	HU, TS	Medium	Self-funded	No additional cost	Town	Within 1 year	Action ongoing

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2019 Action Implementation Status
ES-13	Ensure continuity of utility services for public buildings and other critical facilities.	All	High	HMGP	Unknown	County, Town	Within 2 years; Next round of HMGP funding	Action ongoing
ES-14	Host a meeting to review Wayne County Comprehensive Emergency Management Plan.	TT	High	Self-funded	No additional cost	County LEPC, County, Town	Within 2 years; Next round of HMGP funding	Action ongoing
ES-15	Actively search for and identify funding sources for the enhancement of emergency response abilities of Fire and Sheriff's Departments.	TT	Medium to High	DHS, SAFER, COPS, FIRE, Others	Unknown	County, Town	Ongoing	Action ongoing
Structural Projects								
SP-1	Address cross-jurisdictional issues related to response, recovery and mitigation on key projects with overlapping boundaries.	HU, TS, FL, RH	Low to Medium	Self-funded	No additional cost	County, Town	Within 2 years	Action ongoing
Public Education and Awareness								
PEA-1	Explore continuing education programs/ opportunities for staff and elected officials.	FL, TH, HU, TS	Medium	Self-funded, MEMA	Low cost	Town	Within 2 years	Action ongoing
PEA-2	Provide education and outreach materials to citizens and visitors.	All	High	Self-funded	No cost	County EMA	Within 1 year	Action ongoing

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2019 Action Implementation Status
PEA-3	Encourage the development of Family Disaster Plans.	All	High	Self-funded, COPS, FIRE	Low or no cost	County EMA, County Fire Coordinator	Within 1 year; Annual presentations	Action ongoing
PEA-4	Expand outreach information to property owners regarding retrofitting and flood-proofing techniques through community workshops, brochures, and newspaper articles.	FL; Multiple	High	Self-funded	No additional cost	County EMA	Upon request	Action ongoing
PEA-5	Encourage businesses to develop business continuity or contingency operating plans.	CH	High	Self-funded, Chamber of Comm., SCORE	Low or no cost	Town	Within 2 years	Action ongoing
PEA-6	Education and outreach regarding drought and water conservation procedures	All	Medium	Self-funded	Low or no cost	County	2024	New

FL = Flood TH = Thunderstorm HU = Hurricane TS = Tropical Storm TO = Tornado BH = Biological Hazards TT = Transportation and Technological Hazards

RH = Roadway Hazards CH = Civil Hazards

County EMA = Wayne County Emergency Management Agency County SD = Wayne County Sheriff's Dept. County VFD = Wayne County Volunteer Fire Dept. County LEPC = Wayne County Local Emergency Planning Committee

City of Waynesboro Mitigation Action Plan

Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2019 Action Implementation Status
Prevention								
P-1	Identify high risk areas where hazards are most likely to occur.	All	High		No additional cost	City	Annual review	Action ongoing
P-2	Site-locate vulnerable population on a County-wide map.	Multiple	High	Area Agency on Aging, USDA Rural Dev., COPS, FIRE	Unknown	County EMA	Within 1 year; Upon request	Action ongoing
P-3	Strictly enforce the flood damage prevention ordinance.	FL	High	Self-funded	No additional cost	City Floodplain Administrator	Ongoing	Action ongoing. Implemented 2011.
P-4	Strictly enforce subdivision regulations concerning developments in flood hazard areas.	TH, FL, HU, TS	Medium	Self-funded	No additional cost	City	Ongoing	Deferred
P-5	Monitor flood levels of local rivers.	FL	High	HMGP	Unknown	City	Within 5 years	Action ongoing

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2019 Action Implementation Status
P-6	Continue to maintain and upgrade drainage facilities within the County.	HU, TS, FL, BH	High	Self-funded	Unknown	City	Within 2 years; Next round of HMGP funding; Annual review	Action ongoing. Some progress implemented-clean out ditches annually.
P-7	Consider adoption of a comprehensive drainage plan.	HU, TS, FL, NH	High	CDBG, Small Muni. Grant, MSDA, USDA Rural Dev.	Unknown	City	Annual review	Deferred. Waynesboro is mapping drainage areas and it will include elevations, cross sections, and flow directions.
P-8	Map the easements and rights-of-way of roadways and drainage ways.	All	Low to Medium	CDBG, Small Muni. Grant, MSDA, USDA Rural Dev.	Unknown	City	Within 5 years	Action ongoing
P-9	Develop a government services continuity plan.	All	Medium	USDA Rural Dev., CDBG, Small Muni. Grant	Unknown	County, City	Ongoing	Completed September 2019

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2019 Action Implementation Status
P-10	Support the development of a shared geographic data system for land use and site planning.	All	Medium to High	Self-funded	No additional cost	City	Within 2 years	Action ongoing
P-11	Develop a comprehensive plan.	All	High	CDBG, MSDA	Unknown	City		Completed. Delete
P-12	Develop City-wide H&H study	FL	High	Self-Funded	Unknown	City	2024	New
Property Protection								
PP-1	Promote alternative construction techniques such as the building of “safe rooms” in new construction and when remodeling existing structures.	HU, TS, TO, TH	Medium	Self-funded	No additional cost	City	Within 5 years	Action ongoing
PP-2	Ensure that structures in floodplain areas are elevated.	FL	High	Self-funded	No additional cost	County, City	Within 3 years	Action ongoing
PP-3	Continue to retrofit public buildings to withstand natural hazards such as hurricanes and flooding.	All	High	HMGP	Unknown	City	Within 2 years; Next round of HMGP funding	Action ongoing
PP-4	Ensure that public buildings are designed and built to hurricane resistant building codes.	HU, TS, TO	High	Self-funded	No additional cost	City	Within 1 year	Action ongoing

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2019 Action Implementation Status
PP-5	Ensure secure operation of water wells, water tanks and wastewater treatment facilities.	All	High	HMGP, USDA Rural Dev., CDBG, Small Muni. Grant	Unknown	County, City	Within 2 years; Next round of HMGP funding	Action ongoing
PP-6	Elevation and Acquisition of Flood prone structures	FL	Medium	HMA, MEMA	TBD	County	2024	New
PP-7	Generators and hook-ups for critical facilities	TH, HU, TS, TO	Medium	HMA, MEMA	TBD	County	2024	New
PP-8	Warning sirens throughout planning area	TH, TO	Medium	HMA, MEMA	TBD	County	2024	New
PP-9	Individual saferooms throughout planning area	TO	Medium	HMA, MEMA	\$5,000+	County	2024	New
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SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2019 Action Implementation Status
Natural Resource Protection								
NRP-1	Preserve natural wetlands and riparian areas through acquisition of conservation easements.	HU, TS, FL	Medium	Donation	Low or no cost	MS Land Trust, Land Trust for the MS Coastal Plain, City	Within 5 years	Action ongoing
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ES-1	Encourage participation by staff and elected officials in voluntary or extracurricular activities related to emergency management, disaster preparedness, civil defense, or other hazard mitigation activities.	All	Medium	Self-funded, MEMA	Low or no cost	County EMA	Within 2 years	Action ongoing
ES-2	Establish a notification procedure for populations in high risk areas.	All	Medium	Self-funded	No additional cost	County EMA, County SD, County VFDs	Within 2 years	Action ongoing. Waynesboro has reverse call back system in place as of 2018.
ES-3	Survey the existing emergency shelters and study the feasibility of expanding the capacity of shelters and adding safe rooms.	All	High	HMGP	Unknown	County EMA	Within 2 years	Action ongoing
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SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2019 Action Implementation Status
ES-5	Improve disaster communication systems within the County.	All	High	HMGP	Unknown	County EMA	Within 2 years; Next round of HGMP funding	Action ongoing. MSWINN at Fire Department and all use social media.
ES-6	Explore establishment of a County-wide central dispatch system.	All	High	HMGP	Unknown	County EMA		Action completed. Delete
ES-7	Ensure that emergency sirens are in place county-wide.	All	High	HMGP	Unknown	County EMA	Within 2 years; Next round of HGMP funding	Action ongoing
ES-8	Install warning informers in buildings that house vulnerable populations.	All	High	HMGP	Unknown	County EMA	Within 2 years; Next round of HGMP funding	Action ongoing
ES-9	Install Alert FM service at radio station.	All	High	HMGP	Unknown	County EMA	Within 2 years; Next round of HGMP funding	Action completed
ES-10	Upgrade Emergency Broadcast System capabilities.	All	High	HMGP	Unknown	County EMA	Within 2 years; Next round of HGMP funding	Action ongoing
ES-11	Coordinate with neighboring jurisdictions to ensure consistency of evacuation plans.	HU, TS	Medium	Self-funded	No additional cost	City	Within 2 years	Action ongoing
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SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2019 Action Implementation Status
ES-13	Ensure continuity of utility services for public buildings and other critical facilities.	All	High	HMGP	Unknown	County, City	Within 2 years; Next round of HMGP funding	Action ongoing
ES-14	Host a meeting to review Wayne County Comprehensive Emergency Management Plan.	TT	High	Self-funded	No additional cost	County LEPC, County, City	Within 2 years; Next round of HMGP funding	Action ongoing
ES-15	Actively search for and identify funding sources for the enhancement of emergency response abilities of Fire and Sheriff's Departments.	TT	Medium to High	DHS, SAFER, COPS, FIRE, Others	Unknown	County, City	Ongoing	Action ongoing
Structural Projects								
SP-1	Address cross-jurisdictional issues related to response, recovery and mitigation on key projects with overlapping boundaries.	HU, TS, FL, RH	Low to Medium	Self-funded	No additional cost	County, City	Within 2 years	Action ongoing
Public Education and Awareness								
PEA-1	Explore continuing education programs/opportunities for staff and elected officials.	FL, TH, HU, TS	Medium	Self-funded, MEMA	Low cost	City	Within 2 years	Action ongoing
PEA-2	Provide education and outreach materials to citizens and visitors.	All	High	Self-funded	No cost	County EMA	Within 1 year	Action ongoing

SECTION 9: MITIGATION ACTION PLAN

Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2019 Action Implementation Status
PEA-3	Encourage the development of Family Disaster Plans.	All	High	Self-funded, COPS, FIRE	Low or no cost	County EMA, County Fire Coordinator	Within 1 year; Annual presentations	Action ongoing
PEA-4	Expand outreach information to property owners regarding retrofitting and flood-proofing techniques through community workshops, brochures, and newspaper articles.	FL; Multiple	High	Self-funded	No additional cost	County EMA	Upon request	Action ongoing
PEA-5	Encourage businesses to develop business continuity or contingency operating plans.	CH	High	Self-funded, Chamber of Comm., SCORE	Low or no cost	City	Within 2 years	Action ongoing
PEA-6	Education and outreach regarding drought and water conservation procedures	All	Medium	Self-funded	Low or no cost	County	2024	New

FL = Flood TH = Thunderstorm HU = Hurricane TS = Tropical Storm TO = Tornado BH = Biological Hazards TT = Transportation and Technological Hazards

RH = Roadway Hazards CH = Civil Hazards

County EMA = Wayne County Emergency Management Agency County SD = Wayne County Sheriff's Dept. County VFD = Wayne County Volunteer Fire Dept. County LEPC = Wayne County Local Emergency Planning Committee

SECTION 10

PLAN MAINTENANCE

This section discusses how the MEMA District 8 Mitigation Strategy and Mitigation Action Plan will be implemented and how the Regional Hazard Mitigation Plan will be evaluated and enhanced over time. This section also discusses how the public will continue to be involved in a sustained hazard mitigation planning process. It consists of the following three subsections:

- ❖ 10.1 Implementation and Integration
- ❖ 10.2 Monitoring, Evaluation, and Enhancement
- ❖ 10.3 Continued Public Involvement

44 CFR Requirement

44 CFR Part 201.6(c)(4)(i):

The plan shall include a plan maintenance process that includes a section describing the method and schedule of monitoring, evaluating and updating the mitigation plan within a five-year cycle.

44 CFR Part 201.6(c)(4)(ii):

The plan maintenance process shall include a process by which local governments incorporate the requirements of the mitigation plan into other planning mechanisms such as comprehensive or capital improvement plans, when appropriate

10.1 IMPLEMENTATION AND INTEGRATION

Each agency, department, or other partner participating under the MEMA District 8 Regional Hazard Mitigation Plan is responsible for implementing specific mitigation actions as prescribed in the Mitigation Action Plan. Every proposed action listed in the Mitigation Action Plan is assigned to a specific “lead” agency or department in order to assign responsibility and accountability and increase the likelihood of subsequent implementation.

In addition to the assignment of a local lead department or agency, an implementation time period or a specific implementation date has been assigned in order to assess whether actions are being implemented in a timely fashion. The counties in the MEMA District 8 Region will seek outside funding sources to implement mitigation projects in both the pre-disaster and post-disaster environments. When applicable, potential funding sources have been identified for proposed actions listed in the Mitigation Action Plan.

The participating jurisdictions will integrate this Hazard Mitigation Plan into relevant city and county government decision-making processes or mechanisms, where feasible. This includes integrating the requirements of the Hazard Mitigation Plan into other local planning documents, processes, or mechanisms, such as comprehensive or capital improvement plans, when appropriate. The members of the MEMA District 8 Regional Hazard Mitigation Council (RHMC) will remain charged with ensuring that the goals and mitigation actions of new and updated local planning documents for their agencies or

departments are consistent, or do not conflict with, the goals and actions of the Hazard Mitigation Plan, and will not contribute to increased hazard vulnerability in the MEMA District 8 Region.

Since the previous County-level plans were adopted, each County and participating jurisdiction has worked to integrate the hazard mitigation plan into other planning mechanisms where applicable/feasible. Examples of how this integration has occurred have been documented in the Implementation Status discussion provided for each of the mitigation actions found in Section 9. Specific examples of how integration has occurred include:

- ❖ Integrating the mitigation plan into reviews and updates of floodplain management ordinances;
- ❖ Integrating the mitigation plan into reviews and updates of County emergency operations plans;
- ❖ Integrating the mitigation plan into review and updates of building codes; and
- ❖ Integrating the mitigation plan into the capital improvements plan through identification of mitigation actions that require local funding

Opportunities to further integrate the requirements of this Plan into other local planning mechanisms shall continue to be identified through future meetings of the RHMC, individual county meetings, and the annual review process described herein. Although it is recognized that there are many possible benefits to integrating components of this Plan into other local planning mechanisms, the development and maintenance of this stand-alone Regional Hazard Mitigation Plan is deemed by the MEMA District 8 RHMC to be the most effective and appropriate method to implement local hazard mitigation actions at this time.

10.2 MONITORING, EVALUATION, AND ENHANCEMENT

Periodic revisions and updates of the Hazard Mitigation Plan are required to ensure that the goals of the Plan are kept current, taking into account potential changes in hazard vulnerability and mitigation priorities. In addition, revisions may be necessary to ensure that the Plan is in full compliance with applicable federal and state regulations. Periodic evaluation of the Plan will also ensure that specific mitigation actions are being reviewed and carried out according to the Mitigation Action Plan.

When determined necessary, the MEMA District 8 RHMC shall meet in March of every year to evaluate the progress attained and to revise, where needed, the activities set forth in the Plan. The findings and recommendations of the RHMC shall be documented in the form of a report that can be shared with interested municipal and County Council members. The RHMC will also meet following any disaster events warranting a reexamination of the mitigation actions being implemented or proposed for future implementation. This will ensure that the Plan is continuously updated to reflect changing conditions and needs within the region. MEMA will be responsible for reconvening the RHMC for these reviews.

FIVE YEAR PLAN REVIEW

The Plan will be thoroughly reviewed by the RHMC every five years to determine whether there have been any significant changes in the region that may, in turn, necessitate changes in the types of mitigation actions proposed. New development in identified hazard areas, an increased exposure to

SECTION 10: PLAN MAINTENANCE PROCEDURES

hazards, an increase or decrease in capability to address hazards, and changes to federal or state legislation are examples of factors that may affect the necessary content of the Plan.

The plan review provides MEMA District 8 county officials with an opportunity to evaluate those actions that have been successful and to explore the possibility of documenting potential losses avoided due to the implementation of specific mitigation measures. The plan review also provides the opportunity to address mitigation actions that may not have been successfully implemented as assigned. MEMA will be responsible for reconvening the RHMC and conducting the five-year review.

During the five-year plan review process, the following questions will be considered as criteria for assessing the effectiveness and appropriateness of the Plan:

- ❖ Do the goals address current and expected conditions?
- ❖ Has the nature or magnitude of risks changed?
- ❖ Are the current resources appropriate for implementing the Plan?
- ❖ Are there implementation problems, such as technical, political, legal or coordination issues with other agencies?
- ❖ Have the outcomes occurred as expected?
- ❖ Did County departments participate in the plan implementation process as assigned?

Following the five-year review, any revisions deemed necessary will be summarized and implemented according to the reporting procedures and plan amendment process outlined herein. Upon completion of the review and update/amendment process, the MEMA District 8 Regional Hazard Mitigation Plan will be submitted to the State Hazard Mitigation Officer at MEMA for final review and approval in coordination with the Federal Emergency Management Agency (FEMA).

DISASTER DECLARATION

Following a disaster declaration, the MEMA District 8 Regional Hazard Mitigation Plan will be revised as necessary to reflect lessons learned, or to address specific issues and circumstances arising from the event. It will be the responsibility of MEMA to reconvene the RHMC and ensure the appropriate stakeholders are invited to participate in the plan revision and update process following declared disaster events.

REPORTING PROCEDURES

The results of the five-year review will be summarized by the RHMC in a report that will include an evaluation of the effectiveness of the Plan and any required or recommended changes or amendments. The report will also include an evaluation of implementation progress for each of the proposed mitigation actions, identifying reasons for delays or obstacles to their completion along with recommended strategies to overcome them.

PLAN AMENDMENT PROCESS

Upon the initiation of the amendment process, the MEMA District 8 counties will forward information on the proposed change(s) to all interested parties including, but not limited to, all directly affected

SECTION 10: PLAN MAINTENANCE PROCEDURES

County departments, residents, and businesses. Information will also be forwarded to MEMA. This information will be disseminated in order to seek input on the proposed amendment(s) for no less than a 45-day review and comment period.

At the end of the 45-day review and comment period, the proposed amendment(s) and all comments will be forwarded to the RHMC for final consideration. The RHMC will review the proposed amendment along with the comments received from other parties, and if acceptable, the committee will submit a recommendation for the approval and adoption of changes to the Plan.

In determining whether to recommend approval or denial of a Plan amendment request, the following factors will be considered by the RHMC:

- ❖ There are errors, inaccuracies, or omissions made in the identification of issues or needs in the Plan.
- ❖ New issues or needs have been identified which are not adequately addressed in the Plan.
- ❖ There has been a change in information, data, or assumptions from those on which the Plan is based.

Upon receiving the recommendation from the RHMC, and prior to adoption of the Plan, the participating jurisdictions will hold a public hearing, if deemed necessary. The governing bodies of each participating jurisdiction will review the recommendation from the RHMC (including the factors listed above) and any oral or written comments received at the public hearing. Following that review, the governing bodies will take one of the following actions:

- ❖ Adopt the proposed amendments as presented;
- ❖ Adopt the proposed amendments with modifications;
- ❖ Refer the amendments request back to the RHMC for further revision; or
- ❖ Defer the amendment request back to the RHMC for further consideration and/or additional hearings.

10.3 CONTINUED PUBLIC INVOLVEMENT

44 CFR Requirement
44 CFR Part 201.6(c)(4)(iii): The plan maintenance process shall include a discussion on how the community will continue public participation in the plan maintenance process

Public participation is an integral component to the mitigation planning process and will continue to be essential as this Plan evolves over time. As described above, significant changes or amendments to the Plan shall require a public hearing prior to any adoption procedures.

Other efforts to involve the public in the maintenance, evaluation, and revision process will be made as necessary. These efforts may include:

- ❖ Advertising meetings of the RHMC in local newspapers, public bulletin boards and/or County office buildings;

SECTION 10: PLAN MAINTENANCE PROCEDURES

- ❖ Designating willing and voluntary citizens and private sector representatives as official members of the RHMC;
- ❖ Utilizing local media to update the public on any maintenance and/or periodic review activities taking place;
- ❖ Utilizing the MEMA District 8 county websites to advertise any maintenance and/or periodic review activities taking place; and
- ❖ Keeping copies of the Plan in public libraries.

Annex A

Covington County

This annex includes jurisdiction-specific information for Covington County and its participating municipalities. It consists of the following five subsections:

- ❖ A.1 Covington County Community Profile
- ❖ A.2 Covington County Risk Assessment
- ❖ A.3 Covington County Vulnerability Assessment
- ❖ A.4 Covington County Capability Assessment
- ❖ A.5 Covington County Mitigation Strategy

A.1 COVINGTON COUNTY COMMUNITY PROFILE

A.1.1 Geography and the Environment

Covington County is located in south central Mississippi just 63 miles south of Jackson, the state's capital, and provides easy access to other parts of the state and nation. It comprises one city and two towns, the City of Collins, the Town of Mount Olive, and the Town of Seminary, as well as many small unincorporated communities. An orientation map is provided as **Figure A.1**.

The county is an agricultural area consisting of approximately 60 percent commercial forestland. The total area of the county is 415 square miles, 1 square mile of which is water area. Additionally, the Okatoma River carves a winding path through the county, running through all three municipalities. Each year, several thousand tourists travel from across the Southeast to canoe and kayak a portion of the river from Seminary to Sanford.

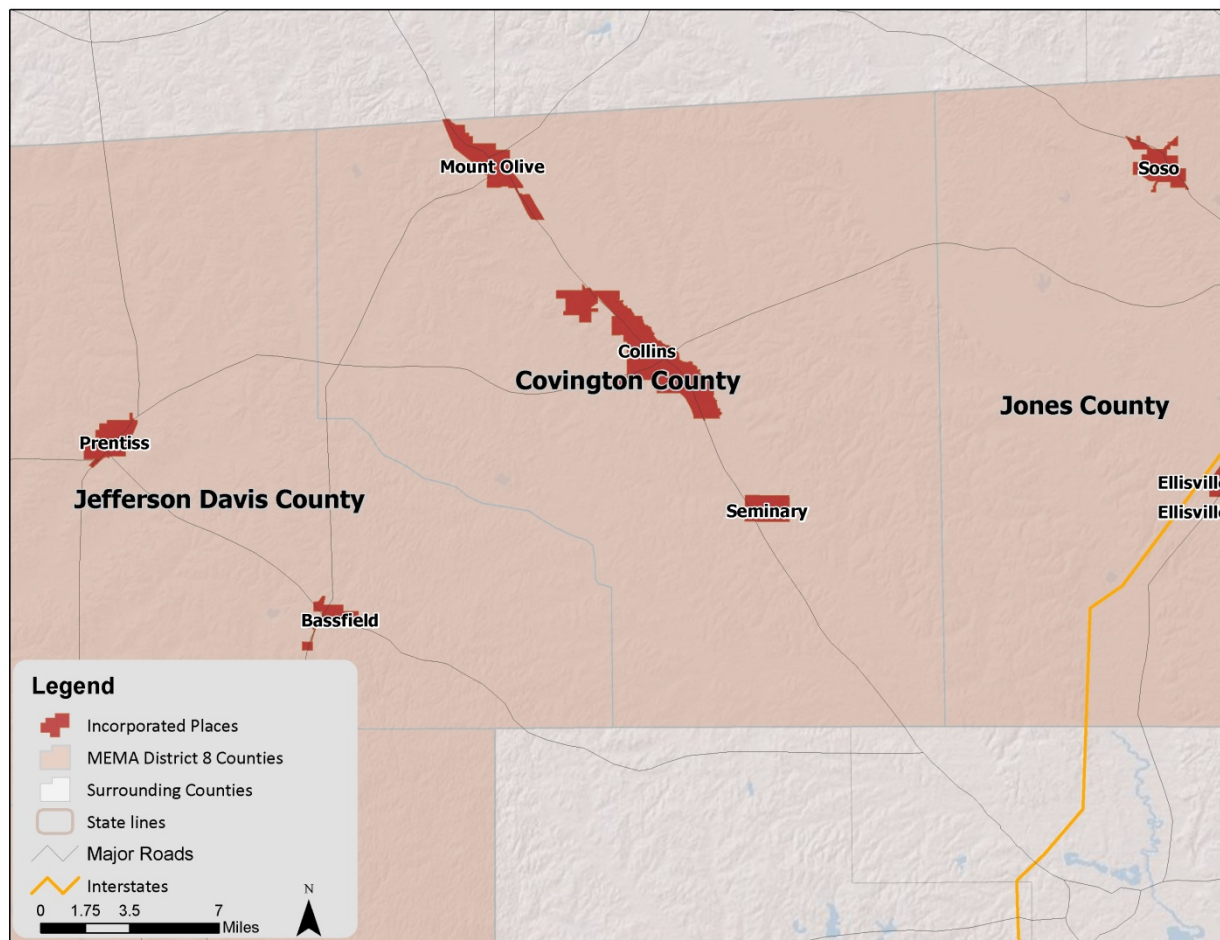
In Covington County, the summers are long, hot, and muggy; the winters are short and cold; and it is wet and partly cloudy year-round. Over the course of the year, the temperature typically varies from 39°F to 91°F and is rarely below 25°F or above 96°F. The hot season lasts for 4.1 months, from May 20 to September 25, with an average daily high temperature above 84°F. The hottest day of the year is July 22, with an average high of 91°F and low of 72°F. The cool season lasts for 2.8 months, from November 30 to February 22, with an average daily high temperature below 65°F. The coldest day of the year is January 17, with an average low of 39°F and high of 59°F.

A wet day is one with at least 0.04 inches of liquid or liquid-equivalent precipitation. The chance of wet days in Covington County varies throughout the year. The wetter season lasts 3.0 months, from May 29 to August 28, with a greater than 36% chance of a given day being a wet day. The chance of a wet day peaks at 51% on July 19. The drier season lasts 9.0 months, from August 28 to May 29. The smallest chance of a wet day is 21% on October 5.

Among wet days, we distinguish between those that experience rain alone, snow alone, or a mixture of the two. Based on this categorization, the most common form of precipitation throughout the year is rain alone, with a peak probability of 51% on July 19. To show variation within the months and not just

the monthly totals, we show the rainfall accumulated over a sliding 31-day period centered around each day of the year. Covington County experiences significant seasonal variation in monthly rainfall. Rain falls throughout the year in Covington County. The most rain falls during the 31 days centered around February 14, with an average total accumulation of 5.6 inches. The least rain falls around October 4, with an average total accumulation of 3.0 inches.

FIGURE A.1: COVINGTON COUNTY ORIENTATION MAP



A.1.2 Population and Demographics

According to the 2010 Census, Covington County has a population of 19,568 people. The county has seen a slight growth in population between 2000 and 2010, and the population density is 47 people per square mile. However, between the last official Census and the proposed estimates, there has been a decline. Per the Census Reports, in 2017, Covington County had a population of 19,079 which is a 1.9 percent decline. The household income is \$36,471, which grew 15.1 percent. Population counts from the US Census Bureau for 1990, 2000, and 2010 for the county and all of the participating jurisdictions are presented in **Table A.1**. Estimates for 2017 are also included.

TABLE A.1: POPULATION COUNTS FOR COVINGTON COUNTY

Jurisdiction	1990 Census Population	2000 Census Population	2010 Census Population	% Change 2000-2010	Estimated 2017 Census Population
Covington County	16,527	19,407	19,568	0.8%	19,079
Collins	2,541	2,683	2,586	-3.6%	2,481
Mount Olive	914	893	982	10.0%	936
Seminary	231	335	314	-6.3%	301

Source: US Census Bureau

Based on the 2010 Census, the median age of residents of Covington County is 37.6 years and per the 2017 estimates, that has not changed. The racial characteristics of the county are presented in **Table A.2** and will remain the same as the census data has not been officially updated. Due to the population decrease, the racial characteristics differ slightly. The population is 34.9 percent for black or African American persons and 1.9 percent are Hispanic or Latino. Whites continue to make up the majority of the population in the county, accounting for 63 percent of the population.

TABLE A.2: DEMOGRAPHICS OF COVINGTON COUNTY

Jurisdiction	White Persons, Percent (2010)	Black Persons, Percent (2010)	American Indian or Alaska Native, Percent (2010)	Other Race, Percent (2010)	Persons of Hispanic Origin, Percent (2010) *
Covington County	63.0%	34.9%	0.1%	1.0%	1.9%
Collins	44.2%	51.1%	0.1%	3.4%	4.2%
Mount Olive	43.5%	55.1%	0.3%	0.0%	0.9%
Seminary	94.9%	3.5%	0.6%	1.0%	1.6%

*Hispanics may be of any race, so also are included in applicable race categories

Source: US Census Bureau

A.1.3 Housing

According to the 2010 US Census, there are 8,501 housing units in Covington County, the majority of which are single family homes or mobile homes. Per 2018 estimates, the total number of houses rose to 16,649 units. However, the median home value is \$87,100, which shows growth by at least 6.22 percent. Housing information for the county and three towns is presented in **Table A.3**. As shown in the table, the three incorporated towns have a slightly lower percentage of seasonal housing units compared to the unincorporated county.

TABLE A.3: HOUSING CHARACTERISTICS OF COVINGTON COUNTY

Jurisdiction	Housing Units (2000)	Housing Units (2010)	Seasonal Units, Percent (2010)	Median Home Value (2007-2011)	Housing Units (2018)	Median Home Value (2018)
Covington County	8,083	8,501	2.2%	\$78,900	8,739	\$77,600
Collins	1,012	1,026	1.0%	\$93,300	1,249	\$93,595

Jurisdiction	Housing Units (2000)	Housing Units (2010)	Seasonal Units, Percent (2010)	Median Home Value (2007-2011)	Housing Units (2018)	Median Home Value (2018)
Mount Olive	396	458	0.9%	\$76,500	462	\$73,598
Seminary	150	148	2.7%	\$104,200	153	\$134,091

Source: US Census Bureau

A.1.4 Infrastructure

TRANSPORTATION

There are several US and state highways that serve Covington County and link it with other regions of Mississippi as well as the neighboring states of Louisiana, Arkansas, Tennessee, and Alabama. To the south, US Highway 49 serves the county directly and leads to the Mississippi Gulf Coast. Northward, US Highway 49 connects with Interstate 55 in Jackson, leading to Memphis, St. Louis, and the Great Lakes Region. In addition, US Highway 84 provides a route to major cities east and west. State Highways 35, 37, 532, 535, 588, 589, 590, and 598 link Covington County with the six neighboring counties.

Covington County enjoys the close proximity of the Jackson International Airport as well as the Hattiesburg-Laurel Regional Airport.

Covington County is also served by the Canadian National Railroad, but there is no passenger service offered at this time.

UTILITIES

Electrical power in Covington County is provided by several sources, including Mississippi Power Company, Southern Pine, Dixie Electric, South Mississippi Electric Power Association, Entergy, and the City of Collins.

Water and sewer service is provided to residents by the City of Collins and a variety of lift stations and rural water associations, including Cold Springs Water Association, Northwest Covington Water Association, Okatoma Water Association, Salem Water Association, Southwest Jones Water Association, and Willow Grove Water Association.

COMMUNITY FACILITIES

There are a number of buildings and community facilities located throughout Covington County. According to the data collected for the vulnerability assessment (Section 6.4.1), there are 12 fire stations, 3 police stations, and 10 public schools located within the county.

There is one hospital located in Covington County. Covington County Hospital is a 25-bed medical-surgical hospital located in the City of Collins.

Recreation-oriented tourism is one of Covington County's assets. There are two lakes offering quality outdoor opportunities in the County. Lake Mike Connor is located west of Collins and offers freshwater fishing, RV camping, swimming, picnicking, hiking, boating, and Florida Bass Fishing. Dry Creek Water

park, located in the Mount Olive area, offers camping, swimming, picnicking, hiking, boating, numerous ball fields, tennis courts, and swimming facilities. Also, the Okatoma River provides the only white water rapids in the state and offers unique opportunities for fishing and canoeing.

A.1.5 Land Use

Many areas of Covington County are undeveloped or sparsely developed due to the county's location just off the Gulf Coast and the conservation of land in state and national parks. There are a few incorporated municipalities located throughout the region, and these areas are where the region's population is generally concentrated. The incorporated areas are also where many businesses, commercial uses, and institutional uses are located. Land uses in the balance of the county generally consist of rural residential development, agricultural uses, and recreational areas.

A.1.6 Employment and Industry

According to the Mississippi Employment Security Commission, in 2018, Covington County had an average annual employment of 5,350 workers and an average unemployment rate of 8.2 percent (compared to 6.0 percent for the state). In 2018, the Manufacturing industry employed 26.2 percent of the County's workforce followed by Retail Trade (11.2%), and Transportation and Warehousing (8.0%). The average annual wage in 2018 for Covington County was \$35,880 compared to \$41,236 for the State of Mississippi.

A.2 COVINGTON COUNTY RISK ASSESSMENT

This subsection includes hazard profiles for each of the significant hazards identified in Section 4: *Hazard Identification* as they pertain to Covington County. Each hazard profile includes a description of the hazard's location and extent, notable historical occurrences, and the probability of future occurrences. Additional information can be found in Section 5: *Hazard Profiles*.

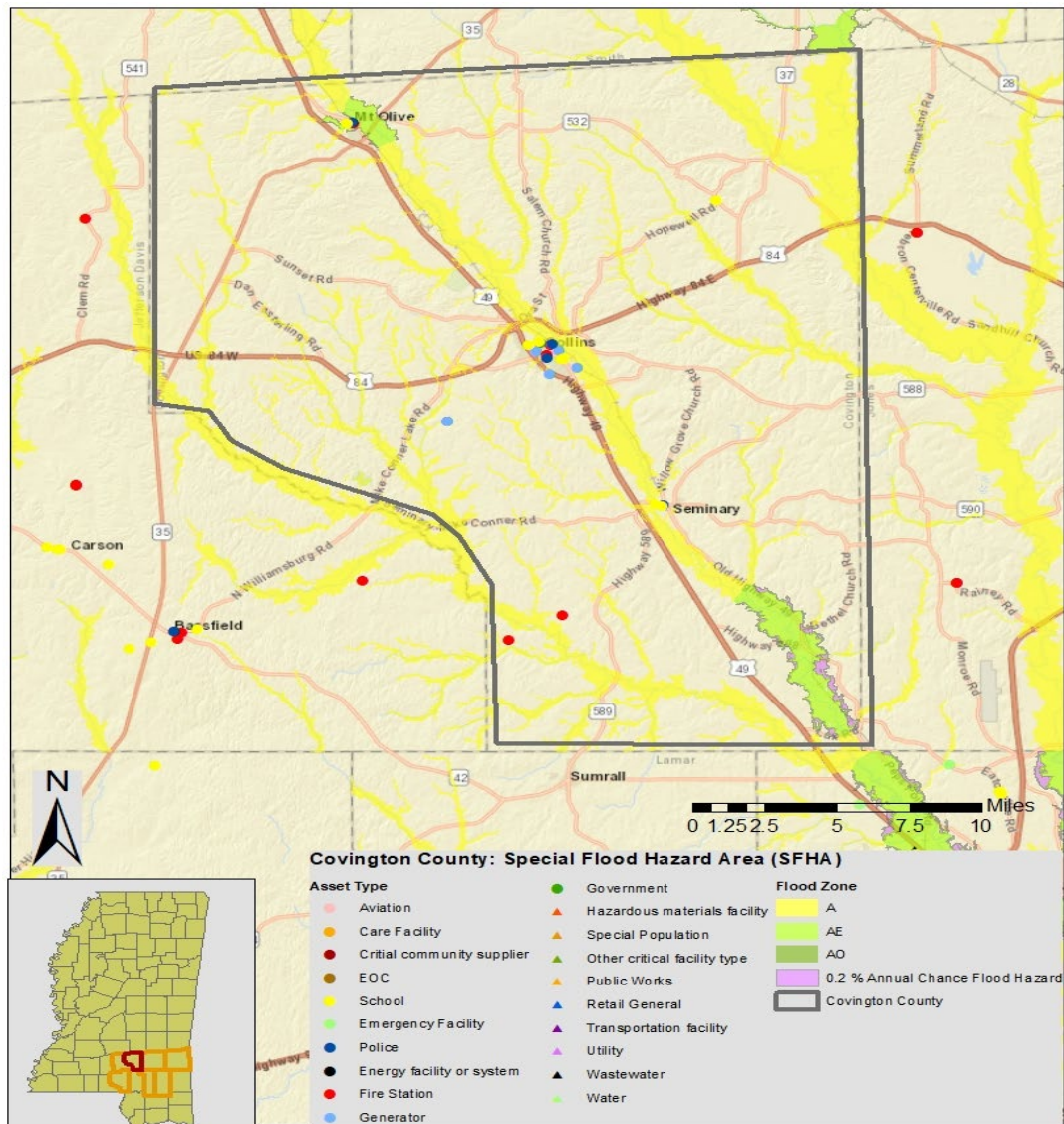
A.2.1 Flood

LOCATION AND SPATIAL EXTENT

There are areas in Covington County that are susceptible to flood events. Special flood hazard areas in the county were mapped using Geographic Information System (GIS) and FEMA Digital Flood Insurance Rate Maps (DFIRM).¹ This includes Zone A (1-percent annual chance floodplain), Zone AE (1-percent annual chance floodplain with elevation), and the 0.2-percent annual chance floodplain. According to GIS analysis, of the 412 square miles that make up Covington County, there are 80 square miles of land in zones A and AE (1-percent annual chance floodplain/100-year floodplain) and 1 square mile of land in the 0.2-percent annual chance floodplain (500-year floodplain).

These flood zone values account for 19.7 percent of the total land area in Covington County. It is important to note that while FEMA digital flood data is recognized as best available data for planning purposes, it does not always reflect the most accurate and up-to-date flood risk. Flooding and flood-related losses often do occur outside of delineated special flood hazard areas.

¹ The county-level DFIRM data used for Covington County were updated in 2010.

FIGURE A.2: SPECIAL FLOOD HAZARD AREAS IN COVINGTON COUNTY

Source: Federal Emergency Management Agency

HISTORICAL OCCURRENCES

Floods resulted in three disaster declarations in Covington County in 1974, 1983, and 1990.² Information from the National Centers for Environmental Information was used to ascertain historical flood events. The National Centers for Environmental Information reported a total of 26 events in Covington County since 1998.³ A summary of these events is presented in **Table A.4**. These events accounted for over \$3.3 million in property damage in the county. Specific information on flood events, including date, type of flooding, and deaths and injuries, can be found in **Table A.5**.

²A complete listing of historical disaster declarations can be found in Section 4: Hazard Identification.

³ These events are only inclusive of those reported by NCEI. It is likely that additional occurrences have occurred and have gone unreported.

TABLE A.4: SUMMARY OF FLOOD OCCURRENCES IN COVINGTON COUNTY

Location	Number of Occurrences	Deaths / Injuries	Property Damage
Collins	6	0/0	\$258,689
Mount Olive	3	0/0	\$314,460
Seminary	4	0/0	\$45,130
Unincorporated Area	13	0/0	\$2,762,537
COVINGTON COUNTY TOTAL	26	0/0	\$3,380,816

Source: National Centers for Environmental Information

TABLE A.5: HISTORICAL FLOOD EVENTS IN COVINGTON COUNTY

Location	Date	Type	Deaths / Injuries	Property Damage*
Collins				
COLLINS	07-MAR-98	FLASH FLOOD	0/0	\$0
COLLINS	02-MAR-01	FLASH FLOOD	0/0	\$0
COLLINS	03-SEP-01	FLASH FLOOD	0/0	\$35,644
COLLINS	09-MAR-11	FLASH FLOOD	0/0	\$53,045
COLLINS	10-MAR-16	FLASH FLOOD	0/0	\$20,000
COLLINS	11-MAR-16	FLASH FLOOD	0/0	\$150,000
Mount Olive				
MT OLIVE	21-FEB-03	FLASH FLOOD	0/0	\$21,386
MT OLIVE	21-FEB-03	FLASH FLOOD	0/0	\$6,720
MT OLIVE	12-APR-09	FLASH FLOOD	0/0	\$253,354
MT OLIVE	10-MAR-16	FLASH FLOOD	0/0	\$30,000
Seminary				
SEMINARY	14-DEC-09	FLASH FLOOD	0/0	\$5,628
SEMINARY	08-MAR-11	FLASH FLOOD	0/0	\$4,502
SEMINARY	10-FEB-16	FLASH FLOOD	0/0	\$25,000
SEMINARY	11-MAR-16	FLASH FLOOD	0/0	\$10,000
Unincorporated Area				
COUNTYWIDE	01-MAR-01	FLASH FLOOD	0/0	\$0
COUNTYWIDE	02-MAR-01	FLASH FLOOD	0/0	\$14,258
COUNTYWIDE	03-MAR-01	FLASH FLOOD	0/0	\$0
COUNTYWIDE	03-MAR-01	FLASH FLOOD	0/0	\$14,258
COUNTYWIDE	03-MAR-01	FLASH FLOOD	0/0	\$0
COUNTYWIDE	03-MAR-01	FLASH FLOOD	0/0	\$0
COUNTYWIDE	05-FEB-04	FLASH FLOOD	0/0	\$268,783
SOUTH PORTION	31-MAR-05	FLASH FLOOD	0/0	\$326,193
SOUTHEAST PORTION	01-APR-05	FLASH FLOOD	0/0	\$101,342
SOUTHEAST PORTION	29-AUG-05	FLASH FLOOD	0/0	\$380,031
WILLIAMSBURG	15-DEC-09	FLASH FLOOD	0/0	\$5,628
COLLINS JAYCEE ARPT	08-MAR-11	FLASH FLOOD	0/0	\$42,436
PICKERING	18-FEB-12	FLASH FLOOD	0/0	\$10,609
PICKERING	20-FEB-14	FLASH FLOOD	0/0	\$30,000
WILLIAMSBURG	21-FEB-14	FLOOD	0/0	\$10,000

Location	Date	Type	Deaths / Injuries	Property Damage*
SMITH	01-JAN-15	FLASH FLOOD	0/0	\$5,000
HOT COFFEE	10-MAR-16	FLASH FLOOD	0/0	\$8,000
LUX	11-MAR-16	FLASH FLOOD	0/0	\$25,000
SMITH	11-MAR-16	FLASH FLOOD	0/0	\$7,000
HOT COFFEE	11-MAR-16	FLASH FLOOD	0/0	\$4,000
SANFORD	11-MAR-16	FLASH FLOOD	0/0	\$10,000
SANFORD	06-JUN-17	FLASH FLOOD	0/0	\$1,500,000

Source: National Centers for Environmental Information

HISTORICAL SUMMARY OF INSURED FLOOD LOSSES

Recently, FEMA issued a directive that prevents states or local governments from sharing NFIP information such as rep loss or severe rep loss data with third parties. Third parties are considered as consultants, contractors, etc. As a result, for continuity of information so that the reader will have an idea of the historical occurrences along with the corresponding damage amounts, the decision was made to leave the existing information in the plan.

According to FEMA flood insurance policy records as of March 2013, there have been 48 flood losses reported in Covington County through the National Flood Insurance Program (NFIP) since 1978, totaling nearly \$529,000 in claims payments. Currently, this remains the best available data. A summary of these figures for the county is provided in **Table A.6**. It should be emphasized that these numbers include only those losses to structures that were insured through the NFIP policies, and for losses in which claims were sought and received. It is likely that many additional instances of flood loss in Covington County were either uninsured, denied claims payment, or not reported.

TABLE A.6: SUMMARY OF INSURED FLOOD LOSSES IN COVINGTON COUNTY

Location	Flood Losses	Claims Payments
Collins	18	\$124,503
Mount Olive	3	\$46,982
Seminary	0	\$0
Unincorporated Area	27	\$357,325
COVINGTON COUNTY TOTAL	48	\$528,810

Source: FEMA, NFIP

REPETITIVE LOSS PROPERTIES

No updates to this section can be provided at this time. Information normally used to update this section is not currently accessible. As a result, this information will remain the same for historical purposes.

As of May 2013, there are eight non-mitigated repetitive loss properties located in Covington County, which accounted for 18 losses and more than \$291,000 in claims payments under the NFIP. The average claim amount for these properties is \$16,168. All eight of the properties are single family residential. Without mitigation these properties will likely continue to experience flood losses. **Table A.7** presents detailed information on repetitive loss properties and NFIP claims and policies for Covington County. Currently, this remains the best available data.

TABLE A.7: REPETITIVE LOSS PROPERTIES IN COVINGTON COUNTY

Location	Number of Properties	Types of Properties	Number of Losses	Building Payments	Content Payments	Total Payments	Average Payment
Collins	0	--	0	\$0	\$0	\$0	\$0
Mount Olive	0	--	0	\$0	\$0	\$0	\$0
Seminary	0	--	0	\$0	\$0	\$0	\$0
Unincorporated Area	8	8 single family	18	\$227,470	\$63,562	\$291,033	\$16,169
COVINGTON COUNTY TOTAL	8		18	\$227,470	\$63,562	\$291,033	\$16,169

Source: National Flood Insurance Program

PROBABILITY OF FUTURE OCCURRENCES

Due to the unpredictable nature of this hazard, flood events will remain a threat in Covington County, and the probability of future occurrences will remain likely (between 10 and 100 percent annual probability). The participating jurisdictions and unincorporated areas have risk to flooding, though not all areas will experience flood. The probability of future flood events based on magnitude and according to best available data is illustrated in the figures above, which indicates those areas susceptible to the 1-percent annual chance flood (100-year floodplain) and the 0.2-percent annual chance flood (500-year floodplain).

It can be inferred from the floodplain location maps, previous occurrences, and repetitive loss properties that risk varies throughout the county. For example, the northeast corner of the county has more floodplain and thus a higher risk of flood than the northwest corner of the county. Flood is not the greatest hazard of concern but will continue to occur and cause damage. Therefore, mitigation actions may be warranted, particularly for repetitive loss properties.

A.2.2 Erosion

LOCATION AND SPATIAL EXTENT

Erosion in Covington County is typically caused by flash flooding events. Unlike coastal areas, areas of concern for erosion in Covington County are primarily rivers and streams. Generally, vegetation helps to prevent erosion in the area, and it is not an extreme threat to any of the participating counties and jurisdictions. No areas of concern were reported by the planning committee.

HISTORICAL OCCURRENCES

Several sources were vetted to identify areas of erosion in Covington County. This includes searching local newspapers, interviewing local officials, and reviewing previous hazard mitigation plans. No historical erosion occurrences were found in these sources.

Covington County has a flood damage prevention ordinance that includes measures to limit erosion, such as preventing damaging increases in erosion and controlling filling, grading, dredging, and other

development which may increase erosion. Such actions will continue to be implemented as necessary throughout the county.

PROBABILITY OF FUTURE OCCURRENCES

Erosion remains a natural, dynamic, and continuous process for Covington County, and it will continue to occur. The annual probability level assigned for erosion is possible (between 1 and 10 percent annually).

A.2.3 Dam Failure

LOCATION AND SPATIAL EXTENT

According to the Mississippi Division of Environmental Quality, there is one dam’s status was elevated to a high hazard dam. The high hazard dam is listed by name in **Table A.8**. According to a consensus of local government officials and the Regional Hazard Mitigation Council, a majority of these dams would not pose a major threat in a breach or failure occurrence.

TABLE A.8: COVINGTON COUNTY HIGH HAZARD DAMS

Dam Name	Hazard Potential
Covington County	
DRY CREEK WATERSHED STRUCTURE 3 DAM	High

Source: Mississippi Division of Environmental Quality

HISTORICAL OCCURRENCES

There is no record of dam breaches in Covington County. However, several breach scenarios in the county could be catastrophic.

PROBABILITY OF FUTURE OCCURRENCES

Given the current dam inventory and historic data, a dam breach is unlikely (less than 1 percent annual probability) in the future. However, as has been demonstrated in the past, regular monitoring is necessary to prevent these events.

A.2.4 Winter Storm and Freeze

LOCATION AND SPATIAL EXTENT

Nearly the entire continental United States is susceptible to winter storm and freeze events. Some ice and winter storms may be large enough to affect several states, while others might affect limited, localized areas. The degree of exposure typically depends on the normal expected severity of local winter weather. Covington County is not typically affected by major severe winter weather conditions

and seldom receives extremely devastating winter weather, even during the winter months. Given the atmospheric nature of the hazard the entire county has uniform exposure to a winter storm.

HISTORICAL OCCURRENCES

According to the National Centers for Environmental Information, there have been a total of two recorded winter storm events in Covington County since 2008 (**Table A.9**).⁴ These events resulted in almost \$350,000 in damages. Detailed information on the recorded winter storm events can be found in **Table A.10**.⁵

TABLE A.9: SUMMARY OF WINTER STORM EVENTS IN COVINGTON COUNTY

Location	Number of Occurrences	Deaths / Injuries	Property Damage
Covington County	6	0/0	\$349,819

Source: National Centers for Environmental Information

TABLE A.10: HISTORICAL WINTER STORM IMPACTS IN COVINGTON COUNTY

Location	Date	Type	Deaths / Injuries	Property Damage*
Collins				
None Reported	--	--	--	--
Mount Olive				
None Reported	--	--	--	--
Seminary				
None Reported	--	--	--	--
Unincorporated Area				
COVINGTON COUNTY	19-JAN-08	HEAVY SNOW	0/0	\$289,819
COVINGTON COUNTY	11-DEC-08	HEAVY SNOW	0/0	\$0
COVINGTON COUNTY	28-JAN-14	HEAVY SNOW	0/0	\$0
COVINGTON COUNTY	06-JAN-17	WINTER WEATHER	0/0	\$10,000
COVINGTON COUNTY	07-DEC-17	HEAVY SNOW	0/0	\$50,000
COVINGTON COUNTY	16-JAN-18	WINTER WEATHER	0/0	\$0

Source: National Centers for Environmental Information

There have been several severe winter weather events in Covington County. The text below describes one of the major events and associated impacts on the county. Similar impacts can be expected with severe winter weather.

January 2008 Winter Storm

This storm produced heavy snow across the region, with an average of three to four inches of snow. Some heavier amounts, between four to five inches, also fell in isolated areas. At the height of the snow, temperatures fell to near freezing, and accumulations occurred on roadways resulting in a number of traffic accidents. Additionally, some power outages occurred in the heaviest snow band due

⁴ These ice and winter storm events are only inclusive of those reported by the National Centers for Environmental Information (NCEI). It is certain that additional winter storm conditions have affected Covington County.

⁵ The dollar amount of damages provided by NCEI is divided by the number of affected counties to reflect a damage estimate for the county.

to the weight of wet snow on limbs and lines. The heaviest snow fell in the areas around Covington, Jefferson Davis, and Jones Counties.

Winter storms throughout the county have several negative externalities including hypothermia, cost of snow and debris cleanup, business and government service interruption, traffic accidents, and power outages. Furthermore, citizens may resort to using inappropriate heating devices that could lead to fire or an accumulation of toxic fumes.

January 2018 Winter Storm

During the early morning hours of January 15th, a strong arctic cold front was quickly moving through the Central Plains towards the Deep South, ushering in a brutally cold arctic airmass behind the frontal passage.

This snowfall occurred after sunset and quickly accumulated on roads causing extremely dangerous driving conditions during the evening and overnight hours. Another atypical aspect of this snow event was that the snow itself was very dry and powdery as it fell with temperatures well into the 20's. Snow fell across the county, with accumulations of up to 1.5 inches.

PROBABILITY OF FUTURE OCCURRENCES

Winter storm events will continue to occur in Covington County. According to historical information, the annual probability is possible (between 1 and 10 percent).

FIRE-RELATED HAZARDS

A.2.5 Drought

LOCATION AND SPATIAL EXTENT

Drought and heat waves typically cover a large area and cannot be confined to any geographic or political boundaries. Furthermore, it is assumed that Covington County would be uniformly exposed to drought and heat waves, making the spatial extent potentially widespread. It is also notable that drought and extreme heat conditions typically do not cause significant damage to the built environment but may exacerbate wildfire conditions.

HISTORICAL OCCURRENCES

Drought

According to the U.S. Drought Monitor, Covington County had drought levels (including abnormally dry) in all of the last nineteen years (2000-2018). **Table A.9** shows the most severe drought classification for each year, according to U.S. Drought Monitor classifications. It should be noted that the U.S. Drought Monitor also estimates what percentage of the county is in each classification of drought severity. For example, the most severe classification reported may be exceptional but a majority of the county may actually be in a less severe condition.

TABLE A. 9: HISTORICAL DROUGHT OCCURRENCES IN COVINGTON COUNTY

Abnormally Dry	Moderate Drought	Severe Drought	Extreme Drought	Exceptional Drought
				
		Covington County		
2000		EXCEPTIONAL		
2001		MODERATE		
2002		MODERATE		
2003		ABNORMAL		
2004		ABNORMAL		
2005		ABNORMAL		
2006		EXTREME		
2007		EXTREME		
2008		MODERATE		
2009		MODERATE		
2010		SEVERE		
2011		EXTREME		
2012		MODERATE		
2013		ABNORMAL		
2014		ABNORMAL		
2015		SEVERE		
2016		SEVERE		
2017		MODERATE		
2018		ABNORMAL		
2019		ABNORMAL		

Source: U.S. Drought Monitor

There were at least 3 reported drought events between 2015 – 2016 for Covington County according to the National Centers for Environmental Information. All three combined accounted for at least \$101,000 in crop damages.

Heat Wave

The National Centers for Environmental Information was used to determine historical heat wave occurrences in the county.

July 2005 – A five-day heat wave covered the area. Temperatures were consistently above 95 degrees. One heat-stress fatality was reported in Covington County. The agricultural industry was hit particularly hard in the cattle and catfish sectors. Water supply issues were encountered by cities and a burn ban was implemented due to the high fire risk.

August 2005 - A heat wave covering the south began in mid-August and lasted about 10 days. High temperatures were consistently over 95 degrees and surpassed 100 degrees on some days. It was the first time since August 2000 that 100-degree temperatures reached the area.

July 2006 – A short heat wave impacted most of the area temperatures in the 90s to around 100 for five straight days.

August 2007 – A heat wave gripped most of the area with the warmest temperatures since 2000. It lasted from August 5th to the 16th.

PROBABILITY OF FUTURE OCCURRENCES

Drought

Based on historical occurrence information, it is assumed that all of Covington County has a probability level of highly likely (100 percent annual probability) for future drought events. However, the extent (or magnitude) of drought and the amount of geographic area covered by drought, varies with each year. Historic information indicates that there is a much lower probability for extreme, long-lasting drought conditions.

Heat Wave

Based on historical occurrence information, it is assumed that all of Covington County has a probability level of highly likely (100 percent annual probability) for future heat wave events.

A.2.6 Wildfire

LOCATION AND SPATIAL EXTENT

The entire county is at risk to a wildfire occurrence. However, several factors such as drought conditions or high levels of fuel on the forest floor may make a wildfire more likely. Furthermore, areas in the urban-wildland interface are particularly susceptible to fire hazard as populations abut formerly undeveloped areas. The Fire Occurrence Areas in the figure below give an indication of historic location.

HISTORICAL OCCURRENCES

Based on data from the Mississippi Forestry Commission from 2008 to 2018, Covington County experiences an average of 26.9 wildfires annually which burn an average of 212 acres per year. The data indicates that most of these fires are small, averaging three acres per fire. **Table A.10** provides a summary of wildfire occurrences in Covington County and **Table A.13** lists the number of reported wildfire occurrences in the county between the years 2008 and 2018.

TABLE A.102: SUMMARY TABLE OF ANNUAL WILDFIRE OCCURRENCES (2008 -2018) *

	Covington County
Average Number of Fires per year	26.9
Average Number of Acres Burned per year	212
Average Number of Acres Burned per fire	7.9

*These values reflect averages over a 10-year period.
Source: Mississippi Forestry Commission

TABLE A.11: HISTORICAL WILDFIRE OCCURRENCES IN COVINGTON COUNTY

Year	2008	2010	2011	2012	2013	2014	2015	2016	2017	2018
Covington County										
Number of Fires	33	25	54	21	10	17	52	31	13	13
Number of Acres Burned	9.3	4.7	8.9	5.7	8.6	10.4	7.4	7.2	10.4	6.8

Source: Mississippi Forestry Commission

*No data reported for 2009

PROBABILITY OF FUTURE OCCURRENCES

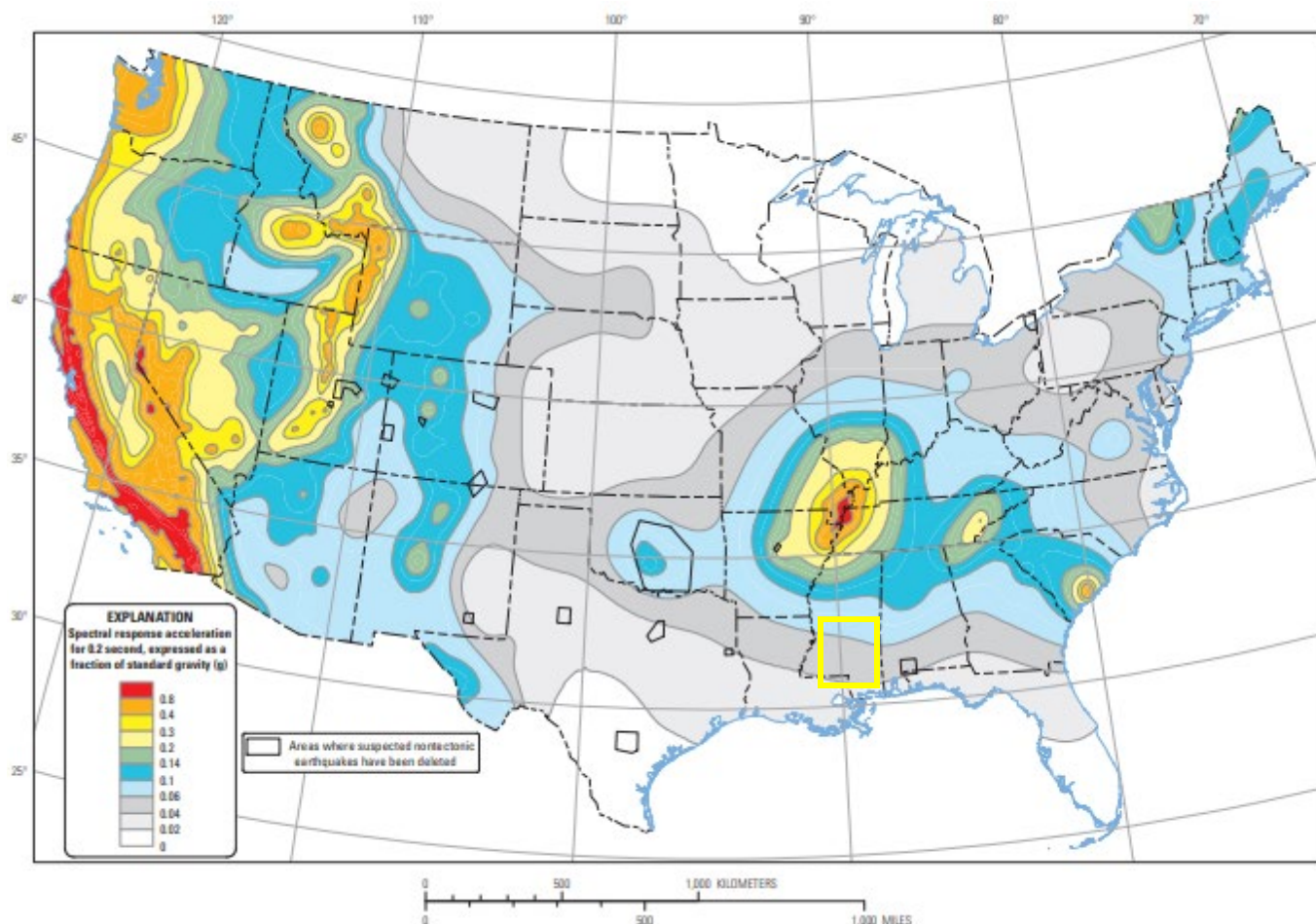
Wildfire events will be an ongoing occurrence in Covington County. The likelihood of wildfires increases during drought cycles and abnormally dry conditions. Fires are likely to stay small in size but could increase due local climate and ground conditions. Dry, windy conditions with an accumulation of forest floor fuel (potentially due to ice storms or lack of fire) could create conditions for a large fire that spreads quickly. It should also be noted that some areas do vary somewhat in risk. For example, highly developed areas are less susceptible unless they are located near the urban-wildland boundary. The risk will also vary due to assets. Areas in the urban-wildland interface will have much more property at risk, resulting in increased vulnerability and need to mitigate compared to rural, mainly forested areas. In this case, the participating jurisdictions appear to have a similar risk to the surrounding areas. The probability assigned to Covington County for future wildfire events is likely (a 10 and 100 percent annual probability).

GEOLOGIC HAZARDS

A.2.7 Earthquake

LOCATION AND SPATIAL EXTENT

Figure A.4 shows the intensity level associated with Covington County, based on the national USGS map of peak acceleration with 10 percent probability of exceedance in 50 years. It is the probability that ground motion will reach a certain level during an earthquake. The data show peak horizontal ground acceleration (the fastest measured change in speed, for a particle at ground level that is moving horizontally due to an earthquake) with a 10 percent probability of exceedance in 50 years. The map was compiled by the U.S. Geological Survey (USGS) Geologic Hazards Team, which conducts global investigations of earthquake, geomagnetic, and landslide hazards. According to this map, Covington County lies within an approximate zone of level .04 ground acceleration. This indicates that the county exists within an area of moderate seismic risk.

FIGURE A.4: PEAK ACCELERATION WITH 10 PERCENT PROBABILITY OF EXCEEDANCE IN 50 YEARS

Source: USGS, 2019

HISTORICAL OCCURRENCES

No earthquakes are known to have affected Covington County since 1638. **Table A.11** provides a summary of earthquake events reported by the National Geophysical Data Center between 1638 and 1985.⁶

TABLE A.12: SUMMARY OF SEISMIC ACTIVITY IN COVINGTON COUNTY

Location	Number of Occurrences	Greatest MMI Reported	Richter Scale Equivalent
Collins	0	--	--
Mount Olive	0	--	--
Seminary	0	--	--
Unincorporated Area	0	-	--
COVINGTON COUNTY TOTAL	0	--	--

Source: National Geophysical Data Center

⁶ Due to reporting mechanisms, not all earthquake events were recorded during this time.

PROBABILITY OF FUTURE OCCURRENCES

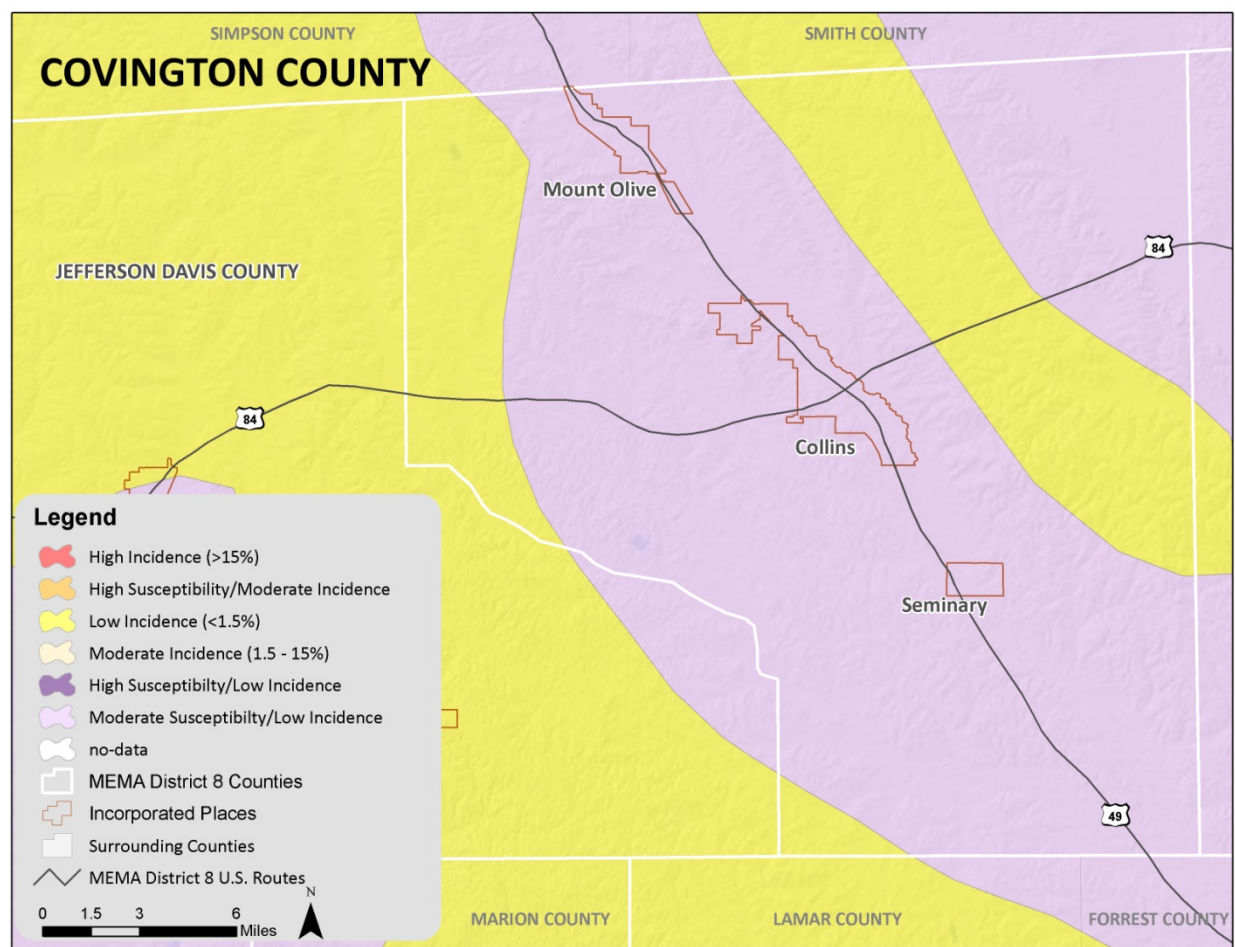
The probability of significant, damaging earthquake events affecting Covington County is unlikely. However, it is possible that future earthquakes resulting in light to moderate perceived shaking and damages ranging from none to very light will affect the county. The annual probability level for the county is estimated to be less than 1 percent (unlikely).

A.2.8 Landslide

LOCATION AND SPATIAL EXTENT

Landslides occur along steep slopes when the pull of gravity can no longer be resisted (often due to heavy rain). Human development can also exacerbate risk by building on previously undevelopable steep slopes. The most frequent and widespread damaging landslides in the U.S. are induced by prolonged or heavy rainfall. The majority of rainfall-induced landslides are shallow, small, and move quickly.ⁱ Landslides are possible throughout Covington County.

According to **Figure A.5** below, the entire county falls under a low incidence area (yellow and light purple). This indicates that less than 1.5 percent of the area is involved in landsliding. The areas in yellow are defined as low incidence and low susceptibility. The areas in light purple, however, indicate that a moderate susceptibility to landsliding activity is present. There are no changes with susceptibility to the landslide hazard since the last plan update.

FIGURE A.5: LANDSLIDE SUSCEPTIBILITY AND INCIDENCE MAP OF COVINGTON COUNTY

Source: USGS

HISTORICAL OCCURRENCES

There is no extensive history of landslides in Covington County. Landslide events typically occur in isolated areas. NCDI does not show any landslide events for Covington County.

PROBABILITY OF FUTURE OCCURRENCES

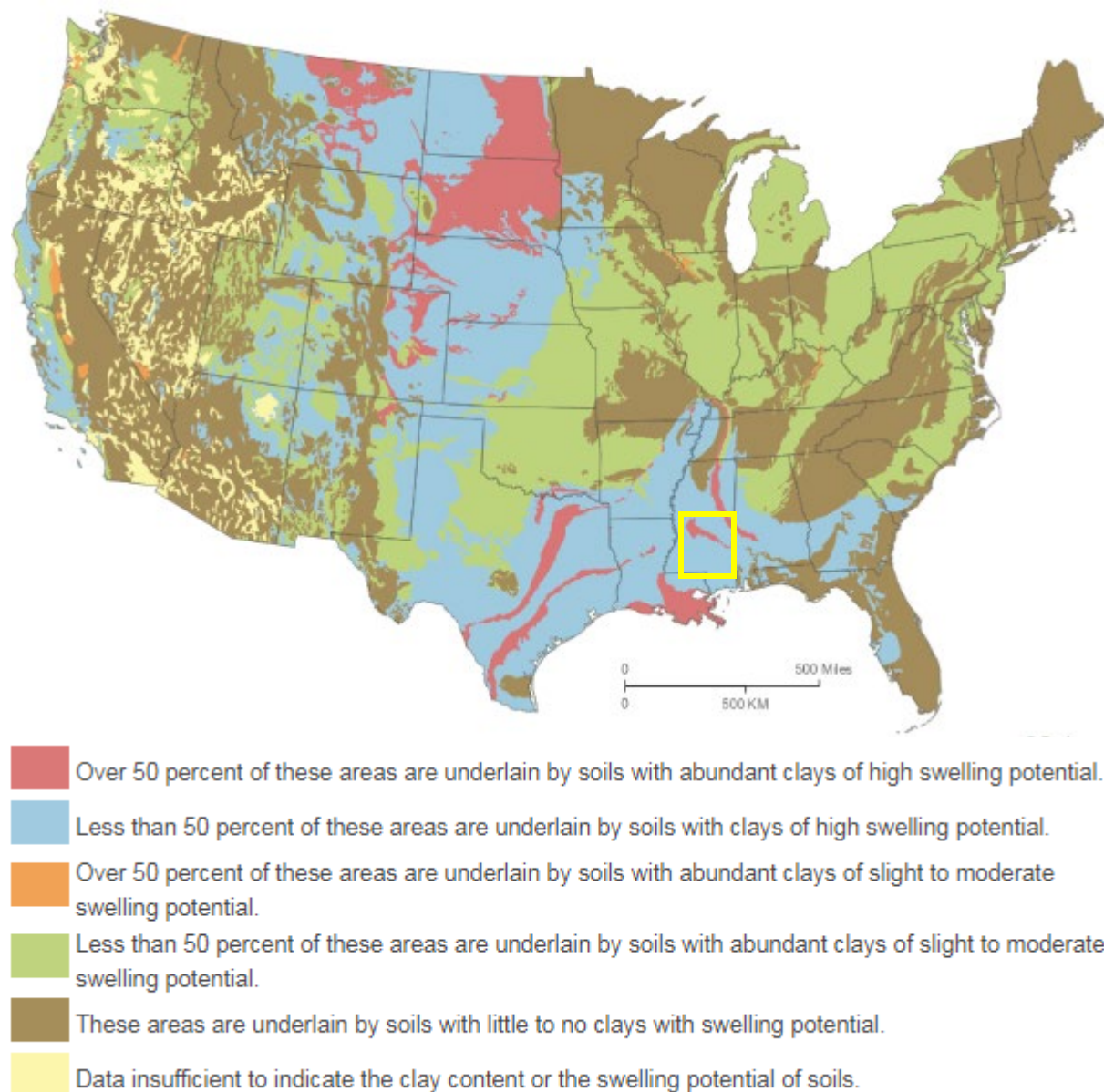
Based on historical information and the USGS susceptibility index, the probability of future landslide events is unlikely (less than 1 percent probability). The USGS data indicates that the all areas in Covington County have a low landslide incidence rate. However, some areas are reported as having moderate susceptibility to landsliding activity. Local conditions may become more favorable for landslides due to heavy rain, for example. This would increase the likelihood of occurrence. It should also be noted that some areas in Covington County have greater risk than others given factors such as steepness on slope and modification of slopes.

A.2.9 Expansive Soils

LOCATION AND SPATIAL EXTENT

Due to the amount of clay minerals present in Covington County, expansive soils present a threat to the county. Areas underlain by soils with swelling potential are shown in **Figure A.6**. Covington County is located in the blue area, which is underlain with generally less than 50 percent clay having high swelling potential.

FIGURE A.6: SWELLING CLAYS IN MISSISSIPPI



Source: USGS

HISTORICAL OCCURRENCES

There is no historical record of significant expansive soil events in Covington County. However, expansive soils can cause considerable damage to structural foundations in the county, although they do not pose a significant threat to human life.

PROBABILITY OF FUTURE OCCURRENCES

Based on historical information, the probability of future expansive soil events is possible (between 1 and 100 percent annually).

WIND-RELATED HAZARDS

A.2.10 Hurricane and Tropical Storm

LOCATION AND SPATIAL EXTENT

Hurricanes and tropical storms threaten the entire Atlantic and Gulf seaboard of the United States. While coastal areas are most directly exposed to the brunt of landfalling storms, their impact is often felt hundreds of miles inland and major hurricanes (category 3 or higher) may impact Covington County. All areas in Covington County are equally susceptible to hurricane and tropical storms.

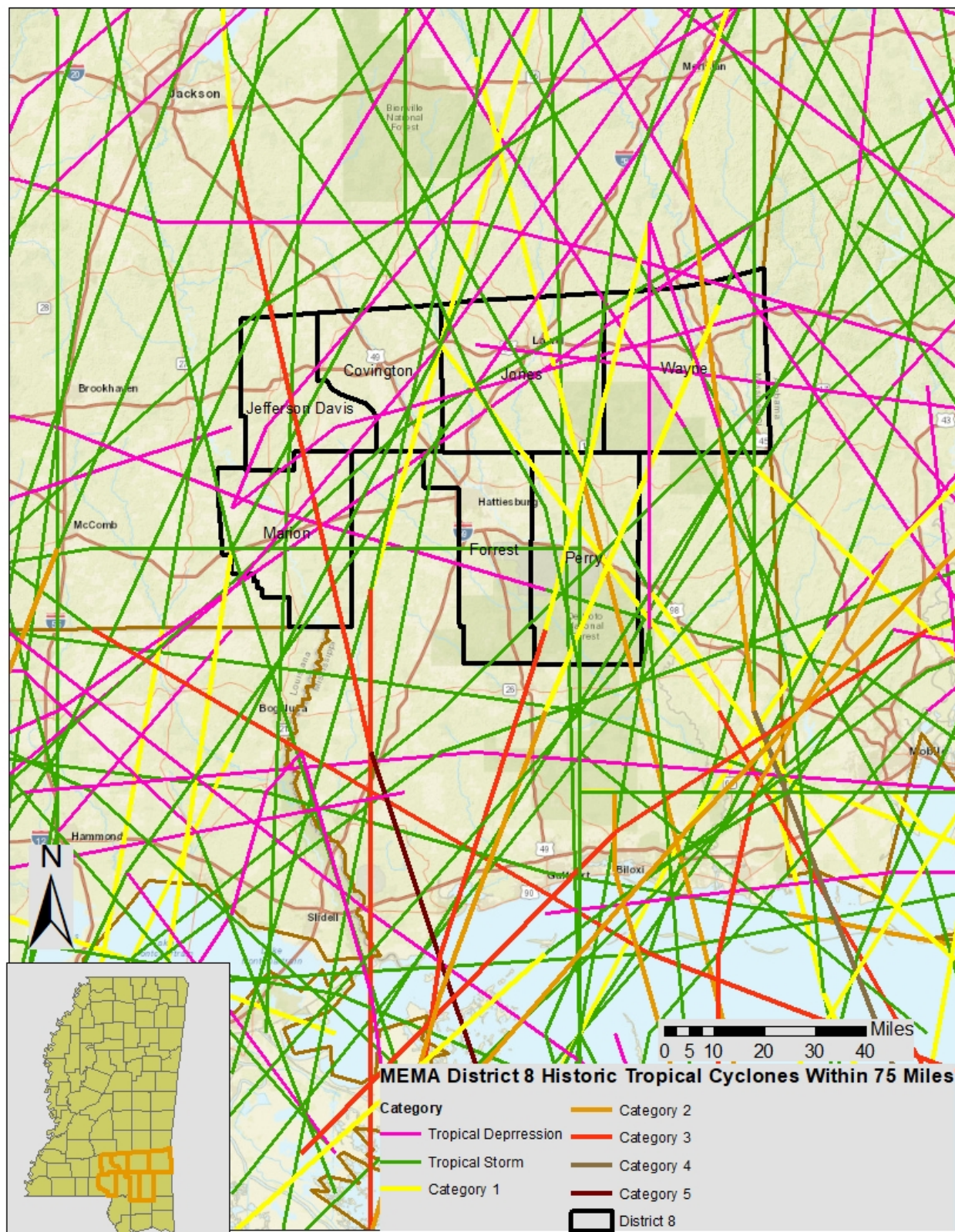
HISTORICAL OCCURRENCES

According to the National Hurricane Center's historical storm track records, a total of 54 hurricanes have passed within 75 miles of Covington County since 1851. This includes 1 category 5 storm, 0 category 4 storms, 7 category 3 storms, 7 category 2 storms, 7 category 1 storms, and 32 tropical storms as shown in **Figure A.7**.⁷

Of the recorded storm events, a total of eight tracks passed directly through the county including Hurricanes Katrina (2005) and Bill (2003). All storms were tropical storms when they traversed the county except Hurricane Katrina, which passed through the county as category 1 hurricane. **Table A.125** provides the detail for each storm that passed through the county including date of occurrence, name (if applicable), maximum wind speed (as recorded when traversing the county) and category of the storm based on the Saffir-Simpson Scale.

⁷ These storm track statistics do not include extra-tropical storms. Though these related hazard events are less severe in intensity, they may cause significant local impact in terms of rainfall and high winds.

FIGURE A.7: HISTORICAL HURRICANE STORM TRACKS WITHIN 75 MILES OF COVINGTON COUNTY



Source: National Oceanic and Atmospheric Administration; National Hurricane Center

**TABLE A.135: HISTORICAL STORM TRACKS WITHIN 75 MILES OF COVINGTON COUNTY
(1850–2018)**

Date of Occurrence	Storm Name	Maximum Wind Speed (miles per hour)	Storm Category
9/8/1893	NOT NAMED	63	Tropical Storm
6/13/1912	NOT NAMED	57	Tropical Storm
9/30/1915	NOT NAMED	69	Tropical Storm
7/6/1916	NOT NAMED	63	Tropical Storm
7/27/1936	NOT NAMED	40	Tropical Storm
9/4/1948	NOT NAMED	57	Tropical Storm
7/1/2003	BILL	52	Tropical Storm
8/29/2005	KATRINA	92	Category 1
9/5/2018	GORDON		Tropical Depression

Source: National Hurricane Center

Federal records indicate that disaster declarations were made in 1969 (Hurricane Camille), 1979 (Hurricane Frederic), 1998 (Hurricane Georges), 2004 (Hurricane Ivan), 2005 (Hurricane Dennis), 2005 (Hurricane Katrina), and 2012 (Hurricane Isaac).⁸ Hurricane and tropical storm events can cause substantial damage in the area due to high winds and flooding.

Flooding and high winds from hurricanes and tropical storms can cause damage throughout the county. Anecdotes are available from NCEI for the major storms that have impacted the county as found below:

Hurricane Lili – October 3, 2002

Hurricane Lili brought thunderstorm bands, strong winds, and associated tornadoes that created damage across central Mississippi. Most of the damage was caused by downed trees. The highest actual wind gust was measured at 56 miles per hour. Ground over most of the area was saturated from the combined rainfall of Lili and Isidore (which affected the same areas a week earlier), and this allowed tropical storm force winds to easily push down trees area-wide. Rainfall amounts were over 3 inches in the most persistent rainbands. Estimated damage across central Mississippi from Lili was \$500,000.

Hurricane Ivan – September 16, 2004

Thousands of trees were blown down across Eastern Mississippi during the event as well as hundreds of power lines. The strong wind itself did not cause much structural damage, however the fallen trees did. These downed trees accounted for several hundred homes, mobile homes and businesses to be damaged or destroyed. Most locations across Eastern Mississippi reported sustained winds between 30 and 40 mph with Tropical Storm force gusts between 48 and 54 mph. The strongest reported winds occurred in Newton, Lauderdale and Oktibbeha Counties.

Overall, rainfall totals were held in check as Ivan steadily moved north. The heaviest rains were confined to far Eastern Mississippi where 3 to 4 inches fell over a 15 hour period. Due to the duration of the rain no flooding was reported. Across Eastern Mississippi, Hurricane Ivan was responsible for one fatality. This fatality occurred in Brooksville (Noxubee County) when a tree fell on a man. Damage from Ivan was estimated at \$200 million.

⁸ A complete listing of historical disaster declarations can be found in Section 4: Hazard Identification.

Hurricane Katrina – August 25, 2005

Hurricane Katrina will likely go down as the worst and costliest natural disaster in United States history. The amount of destruction, the cost of damaged property/agriculture and the large loss of life across the affected region has been overwhelming. Catastrophic damage was widespread across a large portion of the Gulf Coast region. The devastation was not only confined to the coastal region, widespread and significant damage occurred well inland up to the Hattiesburg area and northward past Interstate 20.

Devastation from Hurricane Katrina was widespread across the region. Hurricane force winds were common across the area. The region received sustained winds of 60-80 mph with gusts ranging from 80-120 mph. There was widespread damage to trees and power lines. Wind damage to structures was also widespread, with roofs blown off or partially peeled. Hundreds of signs were shredded or blown down. Businesses sustained structural damage. Power outages lasted from a few days to as long as four weeks. Agriculture and timber industries were severely impacted. Row crops, including cotton, rice, corn, and soybeans, took a hard hit. Other impacted industries were the catfish industry, dairy and cattle industry, and nursery businesses.

Hurricane Gordon (Tropical Depression) – September 9, 2018

As Tropical Storm Gordon moved further inland, it was downgraded to a tropical depression. Gusty winds still occurred as the center moved through central Mississippi. A few trees were blown down across portions of Covington County.

PROBABILITY OF FUTURE OCCURRENCES

Based on historical evidence, the probability level of future occurrence is likely (annual probability between 10 and 100 percent). Given the regional nature of the hazard, all areas in the county are equally exposed to this hazard. However, when the county is impacted, the damage could be catastrophic, threatening lives and property throughout the planning area.

A.2.11 Thunderstorm

LOCATION AND SPATIAL EXTENT

Thunderstorm / High Wind

A thunderstorm event is an atmospheric hazard, and thus has no geographic boundaries. It is typically a widespread event that can occur in all regions of the United States. However, thunderstorms are most common in the central and southern states because atmospheric conditions in those regions are favorable for generating these powerful storms. Also, Covington County typically experiences several straight-line wind events each year. These wind events can and have caused significant damage. It is assumed that Covington County has uniform exposure to an event and the spatial extent of an impact could be large.

Hailstorm

Hailstorms frequently accompany thunderstorms, so their locations and spatial extents coincide. It is assumed that Covington County is uniformly exposed to severe thunderstorms; therefore, all areas of the county are equally exposed to hail which may be produced by such storms.

Lightning

Lightning occurs randomly, therefore it is impossible to predict where and with what frequency it will strike. It is assumed that all of Covington County is uniformly exposed to lightning.

HISTORICAL OCCURRENCES

Thunderstorm / High Wind

Severe storms resulted in three disaster declarations in Covington County in 1983, 1990, and 1992.⁹ According to NCEI, there have been 191 reported thunderstorm and high wind events since 1969 in Covington County.¹⁰ These events caused over \$3.2 million in damages. **Table A.1613** summarizes this information. **Table A.17** presents detailed thunderstorm and high wind event reports including date, magnitude, and associated damages for each event.¹¹

TABLE A.146: SUMMARY OF THUNDERSTORM / HIGH WIND OCCURRENCES IN COVINGTON COUNTY

Location	Number of Occurrences	Deaths / Injuries	Property Damage
Collins	50	0/0	\$1,071,872
Mount Olive	20	0/0	\$442,317
Seminary	19	0/0	\$213,420
Unincorporated Area	102	0/0	\$1,029,141
COVINGTON COUNTY TOTAL	191	0/0	\$3,199,067

Source: National Centers for Environmental Information

TABLE A.157: HISTORICAL THUNDERSTORM / HIGH WIND OCCURRENCES IN COVINGTON COUNTY

Location	Date	Type	Magnitude	Deaths / Injuries	Property Damage*
Collins					
Collins	17-NOV-93	THUNDERSTORM WINDS	0 kts.	0/0	\$875
Collins	07-MAR-95	THUNDERSTORM WINDS	0 kts.	0/0	\$3,314
Collins	01-JUN-95	THUNDERSTORM WINDS	0 kts.	0/0	\$3,314
COLLINS	21-FEB-97	TSTM WIND	0 kts.	0/0	\$1,573
COLLINS	27-MAY-97	TSTM WIND	0 kts.	0/0	\$3,146
COLLINS	10-FEB-98	TSTM WIND	0 kts.	0/0	\$1,549
COLLINS	09-FEB-99	TSTM WIND	0 kts.	0/0	\$30,252
COLLINS	08-MAR-99	TSTM WIND	0 kts.	0/0	\$75,629
COLLINS	08-MAR-99	TSTM WIND	0 kts.	0/0	\$3,025
COLLINS	11-JUN-99	TSTM WIND	0 kts.	0/0	\$15,126
COLLINS	26-JUL-99	TSTM WIND	0 kts.	0/0	\$12,101

⁹A complete listing of historical disaster declarations can be found in Section 4: Hazard Identification.

¹⁰ These thunderstorm events are only inclusive of those reported by the National Centers for Environmental Information (NCEI). It is likely that additional thunderstorm events have occurred in Covington County. As additional local data becomes available, this hazard profile will be amended.

¹¹ The dollar amount of damages provided by NCEI is divided by the number of affected counties to reflect a damage estimate for the county.

ANNEX A: COVINGTON COUNTY

Location	Date	Type	Magnitude	Deaths / Injuries	Property Damage*
COLLINS	09-JAN-00	TSTM WIND	0 kts.	0/0	\$1,469
COLLINS	03-APR-00	TSTM WIND	0 kts.	0/0	\$11,748
COLLINS	03-AUG-00	TSTM WIND	0 kts.	0/0	\$2,937
COLLINS	06-OCT-00	TSTM WIND	0 kts.	0/0	\$4,406
COLLINS	29-NOV-01	TSTM WIND	0 kts.	0/0	\$1,426
COLLINS	17-MAY-02	TSTM WIND	0 kts.	0/0	\$6,921
COLLINS	07-JUL-02	TSTM WIND	50 kts.	0/0	\$1,384
COLLINS	08-JUL-02	TSTM WIND	0 kts.	0/0	\$1,384
COLLINS	03-AUG-02	TSTM WIND	0 kts.	0/0	\$2,768
COLLINS	25-AUG-02	TSTM WIND	0 kts.	0/0	\$2,768
COLLINS	17-MAY-03	TSTM WIND	50 kts.	0/0	\$6,720
COLLINS	17-JUL-03	TSTM WIND	50 kts.	0/0	\$2,688
COLLINS	03-AUG-03	TSTM WIND	50 kts.	0/0	\$2,688
COLLINS	18-NOV-03	TSTM WIND	52 kts.	0/0	\$1,344
COLLINS	01-MAY-04	TSTM WIND	55 kts.	0/0	\$52,191
COLLINS	01-JUN-04	TSTM WIND	50 kts.	0/0	\$0
COLLINS	03-JUN-04	TSTM WIND	52 kts.	0/0	\$3,914
COLLINS	28-JUN-04	TSTM WIND	55 kts.	0/0	\$3,914
COLLINS	16-JUL-04	TSTM WIND	53 kts.	0/0	\$0
COLLINS	24-NOV-04	TSTM WIND	55 kts.	0/0	\$1,305
COLLINS	07-JAN-05	TSTM WIND	66 kts.	0/0	\$633,385
COLLINS	07-JAN-05	TSTM WIND	70 kts.	0/0	\$63,339
COLLINS	13-JAN-05	TSTM WIND	58 kts.	0/0	\$12,668
COLLINS	15-NOV-05	TSTM WIND	50 kts.	0/0	\$0
COLLINS	20-MAR-06	TSTM WIND	58 kts.	0/0	\$0
COLLINS	23-JUN-06	TSTM WIND	50 kts.	0/0	\$12,299
COLLINS	18-JUL-06	TSTM WIND	50 kts.	0/0	\$0
COLLINS	29-AUG-06	TSTM WIND	50 kts.	0/0	\$0
Collins	13-FEB-07	THUNDERSTORM WIND	50 kts.	0/0	\$0
Collins	14-APR-07	THUNDERSTORM WIND	50 kts.	0/0	\$17,911
Collins	10-AUG-07	THUNDERSTORM WIND	50 kts.	0/0	\$0
Collins	27-AUG-07	THUNDERSTORM WIND	50 kts.	0/0	\$0
Collins	29-JAN-08	THUNDERSTORM WIND	55 kts.	0/0	\$0
Collins	12-APR-09	THUNDERSTORM WIND	61 kts.	0/0	\$0
Collins	22-AUG-10	THUNDERSTORM WIND	55 kts.	0/0	\$16,391
COLLINS	15-FEB-16	THUNDERSTORM WIND	50 kts.	0/0	\$5,000
COLLINS	11-JUL-16	THUNDERSTORM WIND	60 kts.	0/0	\$35,000
COLLINS	28-NOV-16	THUNDERSTORM WIND	50 kts.	0/0	\$5,000
COLLINS	02-JAN-17	THUNDERSTORM WIND	50 kts.	0/0	\$9,000
Mount Olive					
Mt. Olive	01-JUN-95	THUNDERSTORM WINDS	0 kts.	0/0	\$8,286
MT OLIVE	23-JUN-97	TSTM WIND	0 kts.	0/0	\$3,146
MT OLIVE	10-MAR-00	TSTM WIND	0 kts.	0/0	\$2,937
MT OLIVE	21-MAY-01	TSTM WIND	0 kts.	0/0	\$1,426
MT OLIVE	17-MAY-02	TSTM WIND	0 kts.	0/0	\$1,384
MT OLIVE	17-MAY-02	TSTM WIND	0 kts.	0/0	\$1,384

ANNEX A: COVINGTON COUNTY

Location	Date	Type	Magnitude	Deaths / Injuries	Property Damage*
MT OLIVE	02-JUN-03	TSTM WIND	53 kts.	0/0	\$13,439
MT OLIVE	27-JUN-04	TSTM WIND	53 kts.	0/0	\$1,305
MT OLIVE	30-APR-05	TSTM WIND	55 kts.	0/0	\$5,067
MT OLIVE	09-MAR-06	TSTM WIND	50 kts.	0/0	\$0
MT OLIVE	10-MAY-06	TSTM WIND	52 kts.	0/0	\$0
Mt. Olive	19-JUN-07	THUNDERSTORM WIND	60 kts.	0/0	\$29,851
Mt. Olive	12-FEB-08	THUNDERSTORM WIND	60 kts.	0/0	\$81,149
Mt. Olive	03-MAY-09	THUNDERSTORM WIND	65 kts.	0/0	\$225,102
Mt. Olive	15-AUG-10	THUNDERSTORM WIND	53 kts.	0/0	\$16,391
Mt. Olive	31-MAY-12	THUNDERSTORM WIND	50 kts.	0/0	\$15,450
MT OLIVE	02-SEP-14	THUNDERSTORM WIND	43 kts.	0/0	\$1,000
MT OLIVE	04-JUL-15	THUNDERSTORM WIND	50 kts.	0/0	\$10,000
MT OLIVE	02-JAN-17	THUNDERSTORM WIND	50 kts.	0/0	\$5,000
MT OLIVE	14-APR-18	THUNDERSTORM WIND	50 kts.	0/0	\$20,000
Seminary					
Seminary	27-JAN-94	THUNDERSTORM WINDS	0 kts.	0/0	\$85,228
Seminary	09-MAR-94	THUNDERSTORM WINDS	0 kts.	0/0	\$852
Seminary	15-APR-94	THUNDERSTORM WINDS	0 kts.	0/0	\$ 8,523
SEMINARY	05-MAR-96	TSTM WIND/HAIL	40 kts.	0/0	\$805
SEMINARY	27-FEB-99	TSTM WIND	0 kts.	0/0	\$3,025
SEMINARY	30-JUL-99	TSTM WIND	0 kts.	0/0	\$3,025
SEMINARY	31-AUG-00	TSTM WIND	0 kts.	0/0	\$22,028
SEMINARY	31-AUG-00	TSTM WIND	0 kts.	0/0	\$2,937
SEMINARY	13-DEC-00	TSTM WIND	52 kts.	0/0	\$1,469
SEMINARY	12-MAR-01	TSTM WIND	0 kts.	0/0	\$7,129
SEMINARY	04-JUN-01	TSTM WIND	0 kts.	0/0	\$1,426
SEMINARY	24-NOV-04	TSTM WIND	55 kts.	0/0	\$1,305
SEMINARY	07-JAN-05	TSTM WIND	62 kts.	0/0	\$12,668
Seminary	24-FEB-07	THUNDERSTORM WIND	50 kts.	0/0	\$0
SEMINARY	13-JUN-14	THUNDERSTORM WIND	50 kts.	0/0	\$0
SEMINARY	21-JAN-17	THUNDERSTORM WIND	60 kts.	0/0	\$35,000
SEMINARY	16-JUN-17	THUNDERSTORM WIND	60 kts.	0/0	\$5,000
SEMINARY	14-APR-18	THUNDERSTORM WIND	52 kts.	0/0	\$3,000
SEMINARY	07-AUG-18	THUNDERSTORM WIND	50 kts.	0/0	\$20,000
Unincorporated Area					
COVINGTON COUNTY	13-APR-69	TSTM WIND	0 kts.	0/0	\$0
COVINGTON COUNTY	13-JUL-69	TSTM WIND	0 kts.	0/0	\$0
COVINGTON COUNTY	01-APR-71	TSTM WIND	0 kts.	0/0	\$0
COVINGTON COUNTY	07-MAY-75	TSTM WIND	0 kts.	0/0	\$0
COVINGTON COUNTY	08-MAY-77	TSTM WIND	0 kts.	0/0	\$0

ANNEX A: COVINGTON COUNTY

Location	Date	Type	Magnitude	Deaths / Injuries	Property Damage*
COVINGTON COUNTY	13-DEC-77	TSTM WIND	0 kts.	0/0	\$0
COVINGTON COUNTY	18-APR-78	TSTM WIND	0 kts.	0/0	\$0
COVINGTON COUNTY	10-JUL-81	TSTM WIND	0 kts.	0/0	\$0
COVINGTON COUNTY	12-JUN-82	TSTM WIND	0 kts.	0/0	\$0
COVINGTON COUNTY	05-APR-83	TSTM WIND	0 kts.	0/0	\$0
COVINGTON COUNTY	11-DEC-83	TSTM WIND	0 kts.	0/0	\$0
COVINGTON COUNTY	26-MAR-88	TSTM WIND	0 kts.	0/0	\$0
COVINGTON COUNTY	18-APR-88	TSTM WIND	0 kts.	0/0	\$0
COVINGTON COUNTY	15-JUL-88	TSTM WIND	0 kts.	0/0	\$0
COVINGTON COUNTY	15-FEB-90	TSTM WIND	0 kts.	0/0	\$0
COVINGTON COUNTY	14-APR-91	TSTM WIND	0 kts.	0/0	\$0
COVINGTON COUNTY	22-APR-91	TSTM WIND	0 kts.	0/0	\$0
COVINGTON COUNTY	02-DEC-91	TSTM WIND	0 kts.	0/0	\$0
COVINGTON COUNTY	18-MAR-92	TSTM WIND	0 kts.	0/0	\$0
Hot Coffee	17-JUL-94	THUNDERSTORM WINDS	0 kts.	0/0	\$852
Sanford	27-OCT-95	THUNDERSTORM WINDS	0 kts.	0/0	\$3,314
Southeast Mississippi	11-NOV-95	THUNDERSTORM WINDS	0 kts.	0/0	\$49,715
SANFORD	18-MAR-96	TSTM WIND	50 kts.	0/0	
SANFORD	13-JUL-96	TSTM WIND	0 kts.	0/0	\$1,609
COUNTYWIDE	05-JUN-98	TSTM WIND	0 kts.	0/0	\$15,489
SANFORD	20-JUN-98	TSTM WIND	0 kts.	0/0	\$7,744
COUNTYWIDE	22-JAN-99	TSTM WIND	0 kts.	0/0	\$3,025
WILLIAMSBURG	03-JAN-00	TSTM WIND	0 kts.	0/0	\$2,937
WILLIAMSBURG	18-JUL-00	TSTM WIND	0 kts.	0/0	\$29,371
COUNTYWIDE	22-JUL-00	TSTM WIND	0 kts.	0/0	\$7,343
COUNTYWIDE	10-AUG-00	TSTM WIND	0 kts.	0/0	\$7,343
SANFORD	19-JAN-01	TSTM WIND	0 kts.	0/0	\$1,426
COUNTYWIDE	29-JAN-01	TSTM WIND	0 kts.	0/0	\$11,406
SANFORD	16-FEB-01	TSTM WIND	0 kts.	0/0	\$1,426
SANFORD	12-MAR-01	TSTM WIND	0 kts.	0/0	\$7,129
HOT COFFEE	13-JUN-01	TSTM WIND	0 kts.	0/0	\$1,426
COUNTYWIDE	13-OCT-01	TSTM WIND	0 kts.	0/0	\$1,426
COUNTYWIDE	08-APR-02	TSTM WIND	0 kts.	0/0	\$1,384

ANNEX A: COVINGTON COUNTY

Location	Date	Type	Magnitude	Deaths / Injuries	Property Damage*
COUNTYWIDE	03-OCT-02	TSTM WIND	0 kts.	0/0	\$4,153
COUNTYWIDE	06-APR-03	TSTM WIND	55 kts.	0/0	\$20,159
COUNTYWIDE	27-NOV-03	TSTM WIND	50 kts.	0/0	\$6,720
COUNTYWIDE	27-NOV-03	TSTM WIND	50 kts.	0/0	\$6,720
WILLIAMSBURG	24-NOV-04	TSTM WIND	55 kts.	0/0	\$1,305
SANFORD	22-MAR-05	TSTM WIND	67 kts.	0/0	\$19,002
SANFORD	21-JUL-05	TSTM WIND	53 kts.	0/0	\$0
HOT COFFEE	30-JUL-06	TSTM WIND	50 kts.	0/0	\$0
SANFORD	23-SEP-06	TSTM WIND	53 kts.	0/0	\$18,448
Sanford	15-NOV-06	THUNDERSTORM WIND	57 kts.	0/0	\$0
COLLINS JAYCEE ARPT	04-JAN-07	THUNDERSTORM WIND	50 kts.	0/0	\$0
Gandsi	29-JAN-08	THUNDERSTORM WIND	55 kts.	0/0	\$0
Williamsburg	29-JAN-08	THUNDERSTORM WIND	55 kts.	0/0	\$0
Gandsi	12-FEB-08	THUNDERSTORM WIND	70 kts.	0/0	\$86,946
COLLINS JAYCEE ARPT	03-MAY-08	THUNDERSTORM WIND	50 kts.	0/0	\$0
COLLINS JAYCEE ARPT	15-JUN-08	THUNDERSTORM WIND	55 kts.	0/0	\$23,185
Sanford	17-JUN-08	THUNDERSTORM WIND	50 kts.	0/0	\$0
Hot Coffee	25-JUN-08	THUNDERSTORM WIND	60 kts.	0/0	\$2,319
Arbo	02-AUG-08	THUNDERSTORM WIND	60 kts.	0/0	\$0
PICKERING	07-AUG-08	THUNDERSTORM WIND	50 kts.	0/0	\$0
Smith	12-APR-09	THUNDERSTORM WIND	55 kts.	0/0	\$0
Williamsburg	03-MAY-09	THUNDERSTORM WIND	60 kts.	0/0	\$56,275
Lux	05-MAY-09	THUNDERSTORM WIND	50 kts.	0/0	\$563
COLLINS JAYCEE ARPT	12-MAY-09	THUNDERSTORM WIND	50 kts.	0/0	\$1,801
PICKERING	09-DEC-09	THUNDERSTORM WIND	50 kts.	0/0	\$3,377
COLLINS JAYCEE ARPT	15-JUN-10	THUNDERSTORM WIND	52 kts.	0/0	\$21,855
Gandsi	17-JUN-10	THUNDERSTORM WIND	52 kts.	0/0	\$27,318
Hot Coffee	17-JUN-10	THUNDERSTORM WIND	63 kts.	0/0	\$49,173
COLLINS JAYCEE ARPT	17-JUN-10	THUNDERSTORM WIND	58 kts.	0/0	\$27,318
Smith	01-FEB-11	THUNDERSTORM WIND	50 kts.	0/0	
Gandsi	04-APR-11	THUNDERSTORM WIND	62 kts.	0/0	\$58,350
COLLINS JAYCEE ARPT	13-JUN-11	THUNDERSTORM WIND	50 kts.	0/0	\$21,218
COLLINS JAYCEE ARPT	21-AUG-11	THUNDERSTORM WIND	50 kts.	0/0	\$1,061
Hot Coffee	11-JUN-12	THUNDERSTORM WIND	50 kts.	0/0	\$15,450
PICKERING	09-AUG-12	THUNDERSTORM WIND	50 kts.	0/0	\$0
Williamsburg	15-AUG-12	THUNDERSTORM WIND	50 kts.	0/0	\$1,030
Hot Coffee	20-DEC-12	THUNDERSTORM WIND	50 kts.	0/0	\$1,030
COVINGTON COUNTY	20-FEB-14	STRONG WIND	43 kts.	0/0	\$1,000
COVINGTON COUNTY	21-FEB-14	STRONG WIND	45 kts.	0/0	\$40,000

Location	Date	Type	Magnitude	Deaths / Injuries	Property Damage*
HOT COFFEE	28-APR-14	THUNDERSTORM WIND	50 kts.	0/0	\$13,000
HOT COFFEE	28-JUN-14	THUNDERSTORM WIND	35 kts.	0/0	\$5,000
COVINGTON COUNTY	03-AUG-14	STRONG WIND	40 kts.	0/0	\$3,000
GANDSI	09-AUG-14	THUNDERSTORM WIND	50 kts.	0/0	\$1,000
SANFORD	13-OCT-14	THUNDERSTORM WIND	50 kts.	0/0	\$0
SMITH	03-JAN-15	THUNDERSTORM WIND	52 kts.	0/0	\$10,000
WILLIAMSBURG	20-MAY-15	THUNDERSTORM WIND	52 kts.	0/0	\$6,000
GANDSI	13-JUN-15	THUNDERSTORM WIND	50 kts.	0/0	\$25,000
ARBO	24-JUN-15	THUNDERSTORM WIND	55 kts.	0/0	\$10,000
WILLIAMSBURG	24-JUN-15	THUNDERSTORM WIND	55 kts.	0/0	\$3,000
COVINGTON COUNTY	17-NOV-15	STRONG WIND	42 kts.	0/0	\$10,000
COVINGTON COUNTY	02-FEB-16	STRONG WIND	35 kts.	0/0	\$3,000
GANDSI	15-FEB-16	THUNDERSTORM WIND	50 kts.	0/0	\$7,000
PICKERING	25-SEP-16	THUNDERSTORM WIND	50 kts.	0/0	\$8,000
COVINGTON COUNTY	28-NOV-16	STRONG WIND	35 kts.	0/0	\$5,000
COVINGTON COUNTY	22-JUN-17	STRONG WIND	35 kts.	0/0	\$7,000
HOT COFFEE	01-JAN-17	THUNDERSTORM WIND	55 kts.	0/0	\$20,000
GANDSI	21-JAN-17	THUNDERSTORM WIND	55 kts.	0/0	\$20,000
HOT COFFEE	16-JUN-17	THUNDERSTORM WIND	55 kts.	0/0	\$60,000
SMITH	16-JUN-17	THUNDERSTORM WIND	65 kts.	0/0	\$50,000
GANDSI	23-SEP-17	THUNDERSTORM WIND	60 kts.	0/0	\$75,000
ORA	23-SEP-17	THUNDERSTORM WIND	50 kts.	0/0	\$5,000
WILLIAMSBURG	23-SEP-17	THUNDERSTORM WIND	50 kts.	0/0	\$5,000
GANDSI	16-AUG-18	THUNDERSTORM WIND	50 kts.	0/0	\$5,000
SMITH	11-NOV-18	THUNDERSTORM WIND	50 kts.	0/0	\$3,000

Source: National Centers for Environmental Information

Hailstorm

According to the National Centers for Environmental Information, 61 recorded hailstorm events have affected Covington County since 1995.¹² **Table A.14** is a summary of the hail events in Covington County. **Table A.159** provides detailed information about each event that occurred in the county. In all, hail occurrences resulted in over \$438,000 in property damages. Hail ranged in diameter from 0.75 inches to 2.5 inches. It should be noted that hail is notorious for causing substantial damage to cars, roofs, and other areas of the built environment that may not be reported to the National Centers for Environmental Information. Therefore, it is likely that damages are greater than the reported value.

¹² These hail events are only inclusive of those reported by the National Centers for Environmental Information (NCEI). It is likely that additional hail events have affected Covington County. As additional local data becomes available, this hazard profile will be amended.

TABLE A.16: SUMMARY OF HAIL OCCURRENCES IN COVINGTON COUNTY

Location	Number of Occurrences	Deaths / Injuries	Property Damage (2013)
Collins	10	0/0	\$42,397
Mount Olive	12	0/0	\$40,118
Seminary	12	0/0	\$283,360
Unincorporated Area	27	0/0	\$72,747
COVINGTON COUNTY TOTAL	61	0/0	\$438,622

Source: National Centers for Environmental Information

TABLE A.17: HISTORICAL HAIL OCCURRENCES IN COVINGTON COUNTY

Location	Date	Magnitude	Deaths / Injuries	Property Damage*
Collins				
Collins	13-JUN-96	0.88 in.	0/0	\$0
Collins	26-JAN-96	1.00 in.	0/0	\$0
Collins	10-MAR-00	1.00 in.	0/0	\$0
Collins	10-MAR-00	1.75 in.	0/0	\$14,685
Collins	20-AUG-03	0.75 in.	0/0	\$1,344
Collins	30-MAR-05	0.75 in.	0/0	\$0
Collins	04-DEC-05	0.75 in.	0/0	\$0
Collins	07-JUN-11	1.00 in.	0/0	\$21,218
Collins/Jaycee Airport	08-JAN-12	1.25 in.	0/0	\$5,150
COLLINS	11-JUL-16	.88 IN.	0/0	\$0
Mount Olive				
Mt. Olive	01-NOV-97	0.75 in.	0/0	\$0
Mt. Olive	22-APR-97	0.75 in.	0/0	\$0
Mt. Olive	02-APR-00	0.75 in.	0/0	\$0
Mt. Olive	15-JUN-03	0.75 in.	0/0	\$1,344
Mt. Olive	25-APR-03	1.75 in.	0/0	\$13,439
Mt. Olive	06-APR-05	1.00 in.	0/0	\$0
Mt. Olive	06-APR-05	1.75 in.	0/0	\$25,335
Mt. Olive	06-APR-05	1.00 in.	0/0	\$0
Mt. Olive	10-MAY-06	0.75 in.	0/0	\$0
Mt. Olive	03-FEB-06	1.00 in.	0/0	\$0
Mt. Olive	23-APR-10	1.00 in.	0/0	\$0
Mt. Olive	23-APR-10	1.00 in.	0/0	\$0
Seminary				
Seminary	27-OCT-95	1.75 in.	0/0	\$0
Seminary	28-MAY-96	0.75 in.	0/0	\$0
Seminary	17-MAY-03	0.75 in.	0/0	\$1,344
Seminary	03-MAY-03	1.00 in.	0/0	\$1,344
Seminary	26-MAR-05	2.75 in.	0/0	\$253,354
Seminary	08-MAY-06	0.75 in.	0/0	\$0
Seminary	03-FEB-06	1.00 in.	0/0	\$0
Seminary	20-JUN-08	0.75 in.	0/0	\$0
Seminary	10-JAN-08	0.75 in.	0/0	\$0

Location	Date	Magnitude	Deaths / Injuries	Property Damage*
Seminary	03-JAN-09	0.75 in.	0/0	\$0
Seminary	20-JAN-10	1.00 in.	0/0	\$27,318
Seminary	17-MAR-16	.88 IN.	0/0	\$0
Unincorporated Area				
COVINGTON COUNTY	11-APR-62	0.75 in.	0/0	\$0
COVINGTON COUNTY	07-MAY-75	0.75 in.	0/0	\$0
COVINGTON COUNTY	03-MAY-84	1.75 in.	0/0	\$0
COVINGTON COUNTY	18-MAY-86	1.00 in.	0/0	\$0
COVINGTON COUNTY	26-MAR-88	0.75 in.	0/0	\$0
COVINGTON COUNTY	24-MAY-88	1.00 in.	0/0	\$0
COVINGTON COUNTY	04-NOV-88	1.00 in.	0/0	\$0
COVINGTON COUNTY	05-MAR-89	1.75 in.	0/0	\$0
COVINGTON COUNTY	16-FEB-90	1.75 in.	0/0	\$0
COVINGTON COUNTY	09-APR-91	0.75 in.	0/0	\$0
Ellisville	27-OCT-95	0.88 in.	0/0	\$0
Hot Coffee	24-APR-03	0.75 in.	0/0	\$1,344
Hot Coffee	25-APR-03	1.50 in.	0/0	\$6,720
Sanford	03-MAY-03	1.00 in.	0/0	\$1,344
Sanford	22-APR-05	0.88 in.	0/0	\$0
Hot Coffee	22-APR-05	2.50 in.	0/0	\$63,339
Hot Coffee	20-MAR-06	0.88 in.	0/0	\$0
Sanford	08-MAY-06	1.00 in.	0/0	\$0
Hot Coffee	19-JUL-06	0.75 in.	0/0	\$0
Sanford	10-JAN-08	1.75 in.	0/0	\$0
Sanford	17-JUN-08	0.75 in.	0/0	\$0
Hot Coffee	25-JUN-08	0.75 in.	0/0	\$0
Williamsburg	09-DEC-08	0.75 in.	0/0	\$0
Williamsburg	09-DEC-08	0.88 in.	0/0	\$0
Williamsburg	12-MAY-09	0.75 in.	0/0	\$0
SMITH	03-AUG-14	1.00 in.	0/0	\$0
HOT COFFEE	18-MAR-15	1.00 in.	0/0	\$0

Source: National Centers for Environmental Information

Lightning

According to the National Centers for Environmental Information, there have been three recorded lightning events in Covington County since 1950, as listed in summary **Table A.20**.¹³ However, it is likely that more lightning events have in fact impacted the county. Many of the reported events are those that caused damage, and it should be expected that damages are likely much higher for this hazard than what is reported.

¹³ These lightning events are only inclusive of those reported by the National Centers for Environmental Information (NCEI). It is likely that additional lightning events have occurred in Covington County. As additional local data becomes available, this hazard profile will be amended.

TABLE A.18: SUMMARY OF LIGHTNING OCCURRENCES IN COVINGTON COUNTY

Location	Number of Occurrences	Deaths / Injuries	Property Damage (2013)
Collins	0	0/0	\$0
Mount Olive	0	0/0	\$0
Seminary	1	0/0	\$15,000
Unincorporated Area	2	0/0	\$25,000
COVINGTON COUNTY TOTAL	3	0/0	\$40,000

Source: National Centers for Environmental Information

TABLE A.21: HISTORICAL LIGHTNING OCCURRENCES IN COVINGTON COUNTY

Location	Date	Deaths / Injuries	Property Damage*	Details
Collins				
<i>None Reported</i>	--	--	--	--
Mount Olive				
<i>None Reported</i>	--	--	--	--
Seminary				
Seminary	04-JUL-14	0/0	\$15,000	A home was struck along Highway 540.
Unincorporated Area				
Arbo	24-JUN-15	0/0	\$15,000	A house on Jerry Drive was struck by lightning.
Gandsi	23-SEP-17	0/0	\$5,000	Lightning started a fire in a stand of trees near MS Highway 588 and Abercrombie-Knight Road northeast of Seminary.

Source: National Centers for Environmental Information

PROBABILITY OF FUTURE OCCURRENCES

Thunderstorm / High Wind

Given the high number of previous events, it is certain that wind events, including straight-line wind and thunderstorm wind, will occur in the future. This results in a probability level of highly likely (100 percent annual probability) for future wind events for the entire county.

Hailstorm

Based on historical occurrence information, it is assumed that the probability of future hail occurrences is likely (10 – 100 percent annual probability). Since hail is an atmospheric hazard (coinciding with thunderstorms), it is assumed that Covington County has equal exposure to this hazard. It can be expected that future hail events will continue to cause minor damage to property and vehicles throughout the county.

Lightning

Although there were no historical lightning events reported in Covington County via NCEI data, it is a regular occurrence accompanied by thunderstorms. In fact, lightning events will assuredly happen on an annual basis, though not all events will cause damage. According to Vaisala's U.S. National Lightning

Detection Network (NLDN®), Covington County is located in an area of the country that experienced an average of 6 to 8 lightning flashes per square kilometer per year between 1997 and 2010. Therefore, the probability of future events is highly likely (100 percent annual probability). It can be expected that future lightning events will continue to threaten life and cause minor property damages throughout the county.

A.2.12 Tornado

LOCATION AND SPATIAL EXTENT

Tornadoes occur throughout the state of Mississippi, and thus in Covington County. Tornadoes typically impact a relatively small area, but damage may be extensive. Event locations are completely random, and it is not possible to predict specific areas that are more susceptible to tornado strikes over time. Therefore, it is assumed that Covington County is uniformly exposed to this hazard.

HISTORICAL OCCURRENCES

Tornadoes resulted in three disaster declarations in Covington County in 1983, 1990, and 1992.¹⁴ According to the National Centers for Environmental Information, there have been a total of 46 recorded tornado events in Covington County since 1952 (**Table A.22**), resulting in over \$56 million in property damages.¹⁵ In addition, 132 injuries were reported. The magnitude of these tornadoes ranges from F0 to F3 in intensity, although an F5 event is possible. Detailed information on historic tornado events can be found in **Table A.16**.

TABLE A.19: SUMMARY OF TORNADO OCCURRENCES IN COVINGTON COUNTY

Location	Number of Occurrences	Deaths / Injuries	Property Damage (2013)
Collins	7	0/0	\$2,227,644
Mount Olive	5	0/0	\$208,984
Seminary	2	0/0	\$102,688
Unincorporated Area	32	0/132	\$56,171,386
COVINGTON COUNTY TOTAL	46	0/132	\$58,710,702

Source: National Centers for Environmental Information

TABLE A.20: HISTORICAL TORNADO IMPACTS IN COVINGTON COUNTY

Location	Date	Magnitude	Deaths / Injuries	Property Damage*	Details
Collins					
Collins	30-MAR-93	F0	0/0	\$875	A school teacher watched a funnel cloud until it touched down briefly and destroyed a chicken house.

¹⁴ A complete listing of historical disaster declarations can be found in Section 4: Hazard Identification.

¹⁵ These tornado events are only inclusive of those reported by the National Centers for Environmental Information (NCEI). It is likely that additional tornadoes have occurred in Covington County. As additional local data becomes available, this hazard profile will be amended.

Location	Date	Magnitude	Deaths / Injuries	Property Damage*	Details
Collins	04-DEC-93	F0	0/0	\$87,452	The second floor of a sawmill was blown off, several windows were broken out, and a few trees were blown down.
Collins	14-APR-99	F3	0/0	\$1,210,072	This strong tornado tracked across northeast Covington County before entering northwest Jones County. Many homes were damaged with several homes receiving major damage. Numerous trees and power lines were blown down and there were many livestock fatalities.
Collins	01-MAY-04	F1	0/0	\$32,619	This weak tornado briefly touched down 7 miles west northwest of Collins and damaged a mobile home, sheared many trees about 15 feet above the ground and downed several large trees.
Collins	01-MAY-04	F1	0/0	\$13,048	This is the continuation of the Jefferson Davis county tornado that moved just to the north of the Terrell community and into Covington county. This tornado stayed on the ground for 3 more miles, downing numerous trees, before dissipating 6 miles west southwest of Collins.
Collins	20-DEC-07	F1	0/0	\$835,837	This tornado touched down just south of Collins to just southeast of the Highway 84 and 37 intersection. The damage began on the south side of Collins where a billboard was blown over and a warehouse building was destroyed. Numerous trees were uprooted and snapped as the tornado tracked east-northeast. The tornado reached its peak intensity and maximum width along Dennis Knight Road. Here, numerous large trees were snapped and uprooted including a swath where a large majority of the trees were snapped off. The tornado continued moving east-northeast, where the roof of a chicken house was completely removed and caused minor to moderate roof damage to two homes.
Collins	26-APR-11	F1	0/0	\$47,741	A short lived tornado touched down just south of Collins on Kola Road and destroyed two barns and downed a few trees and many limbs. The concrete foundation of the barn, which was attached to metal poles, was pulled out of the ground. Also, a nearby FEMA trailer suffered some minor damage as the tornado passed with some skirting pulled away from another trailer. Maximum winds were around 95 mph.
Mount Olive					
Mt. Olive	06-APR-05	F0	0/0	\$6,334	This brief tornado touched down on the eastern side of Mt. Olive and damaged a few trees. The tornado was observed by a storm chaser as it briefly touched down.

Location	Date	Magnitude	Deaths / Injuries	Property Damage*	Details
Mt. Olive	06-APR-05	F0	0/0	\$6,334	This strong tornado developed from a long lived supercell thunderstorm, which had a history of producing tornadoes, that moved across a large portion of Southern and Central Mississippi. The tornado touched down just N of Mount Olive, in Covington county, and stayed on the ground for 28 miles across most of Smith county, where it dissipated around the Ted community just inside Jasper county. Where the tornado first touched down it was weak, F0, and only downed a few trees. As it moved NE, into Smith county, it quickly gained strength. F1 to F2 type damaged occurred across SW Smith county where hundreds of trees were snapped or uprooted and several homes and outbuildings had part or all of their roofs blown off. As the strong tornado approached Mize, MS, it became stronger and reached it maximum intensity, F3. Here the tornado was 600 yards wide and was significantly damaging nearly all the trees in its path. One mile to the SW of Mize, a mobile home was destroyed. The most significant damage occurred in Mize where the Attendance Center was nearly demolished. The top floor of the Attendance Center was almost completely taken off, 3 portable classrooms were destroyed along with several large light poles bent or snapped. The tornado continued to the NE toward the Center Ridge community. The damage between Mize and Center Ridge, a distance of nearly 9 miles, ranged between F2 and F3. Along Providence Road, a barn was destroyed, 2 homes were significantly damaged and a church was heavily damaged. The tornado crossed State Highway 37 and continued toward the Center Ridge community. Here, many more trees were uprooted along with several structures demolished or sustaining significant damage. As the tornado tracked toward Sylvarena, it began to weaken and become smaller. From this point, to where it dissipated in Jasper county, damage was confined to trees snapped and uprooted. This tornado affected 3 counties and had a total path length of 28 miles.

Location	Date	Magnitude	Deaths / Injuries	Property Damage*	Details
Mt. Olive	03-MAY-09	F1	0/0	\$11,255	The tornado began and tracked across rural northeast Jefferson Davis County, far northwest Covington County and then into southeast Simpson County. Snapped and uprooted large hardwood and softwood trees occurred along the path. The most intense damage occurred in the Saratoga Community in southeast Simpson County. A travel trailer was completely destroyed and two chicken houses were heavily damaged. Snapped pine trees fell on a church and damaged a roof and some shingle damage occurred on a few other homes. Skirting was blown off of a mobile home and a chicken house was damaged near the Simpson and Smith county line. Maximum winds were 100 mph. The track began three miles north of Clem and ended four miles north northeast of Mount Olive. Total path length across the 3 counties was around 9 miles.
Mt. Olive	03-MAY-09	F1	0/0	\$135,061	This tornado touched down just south of Mt. Olive and tracked generally northeast into southeast Smith County near Taylorsville. Along the path, numerous trees were uprooted and snapped. A tree fell on a house just south of Mt. Olive and several signs were downed and a TV antenna was bent. Several houses also received shingle damage. The total path was around 20 miles with maximum winds around 100 mph.
Mt. Olive	06-APR-18	F1	0/0	\$50,000	This tornado touched down near the Jefferson Davis-Covington County line along Lucas Hollow Road. It continued southeast, crossing the county line. Some large limbs and trees were snapped and uprooted at this location. It then crossed Lucas Hollow Road again before crossing Leonard Road. A tornado debris signature was indicated on radar in these locations. The tornado uprooted and snapped many trees in this region. It also overturned a small tractor trailer on Oakvale Road and caused some minor shingle damage to a home. After crossing Oakvale Road twice, the tornado lifted before crossing Highway 35. The maximum winds in this tornado was 105 mph and total path length was 2.91 miles. The maximum path width was 440 yards.
Seminary					
Seminary	27-NOV-03	F0	0/0	\$2,688	This weak tornado touched down southwest of Seminary and moved northeast snapping numerous trees before it lifted 1.5 miles south of Seminary.

Location	Date	Magnitude	Deaths / Injuries	Property Damage*	Details
Seminary	28-DEC-15	F1	0/0	\$100,000	This brief tornado touched down 2.5 miles southwest of Seminary and tracked to the northeast before crossing Seminary Sumrall Road where it destroyed a barn and snapped some trees. As it crossed the road, a shed was destroyed and more trees were uprooted and snapped. The tornado then crossed Tower Road and shortly after caused severe damage to a carport that fell on a vehicle. The tornado then crossed Seminary Mike Conner Road where it uprooted some trees. The tornado continued northeast and right before crossing Highway 49, several trailers were blown onto the highway and a fireworks stand was destroyed. Numerous trees were snapped in the area as the tornado crossed the highway. The tornado continued on the ground crossing Evergreen Church Road and Ray Harvey Road where it snapped more trees. In this area it produced severe roof damage to a home and snapped trees. The tornado then crossed Watts Road where large limbs were downed and a trampoline was destroyed. The tornado lifted soon after crossing Watts Road north of Seminary. The maximum estimated winds were 95mph.
Unincorporated Area					
COVINGTON COUNTY	29-JUL-52		0/0	\$238,034	
COVINGTON COUNTY	20-FEB-54	F2	0/0	\$2,352,500	
COVINGTON COUNTY	13-APR-69	F1	0/0	\$0	
COVINGTON COUNTY	13-APR-69	F2	0/11	\$1,719,135	
COVINGTON COUNTY	21-APR-72	F2	0/8	\$1,512,322	
COVINGTON COUNTY	31-MAR-81	F2	0/2	\$694,780	
COVINGTON COUNTY	05-SEP-86	F1	0/0	\$576,329	
COVINGTON COUNTY	20-APR-92	F1	0/0	\$449,975	
COVINGTON COUNTY	21-NOV-92	F3	0/100	\$44,997,486	

Location	Date	Magnitude	Deaths / Injuries	Property Damage*	Details
COVINGTON COUNTY	11-NOV-95		0/2	\$828,584	The tornado started at 0455 am one mile south of Mount Olive and moved east and lifted two miles northeast of Smith at 0505. Seven homes were severely damaged or destroyed. There were an unknown number of houses with at least some damage. Three mobile homes were destroyed. Three metal buildings were severely damaged. Numerous cars were totaled or severely damaged. Numerous trees were blown down along the path. Four chicken houses were demolished and nearly 20,000 chickens perished. The two injuries occurred in one of the mobile homes.
Hot Coffee	30-APR-05	F0	0/0	\$63,339	This weak tornado touched down just to the west of Hot Coffee and tracked northeast for 3 miles. Several trees were snapped and uprooted along the path along with a few damaged outbuildings.
Hot Coffee	20-MAR-06	F0	0/0	\$0	This weak tornado snapped and downed a number of trees around Hot Coffee.
Hot Coffee	20-DEC-07	F1	0/0	\$95,524	This tornado was brief and touched down just inside the Covington County border with Jones County. The roofs were blown off of two mobile homes with extensive debris strewn. One home had a part of the roof removed along with numerous pine trees snapped and uprooted in a convergent path.
Arbo	12-FEB-08	F1	0/0	\$231,855	This brief tornado touched down just southeast of Mt. Olive and tracked for about a mile to the northeast. Multiple large pine trees were snapped or uprooted, and the roof of a few chicken houses were peeled off. Maximum winds were around 105 mph.
Williamsburg	04-SEP-11	F1	0/0	\$26,523	Two barns were heavily damaged along the tornado path. One home suffered minor roof and structural damage. A number of trees were snapped and uprooted. A wooden light pole was snapped and a couple of power lines downed. Maximum winds were estimated at 90 mph.

Location	Date	Magnitude	Deaths / Injuries	Property Damage*	Details
Williamsburg	07-APR-14	F2	0/8	\$2,000,000	This tornado touched down just to the west of Sunset-Williamsburg Rd. Several trees were snapped at this location. The tornado moved northeast where it crossed Sunset Rd and Rock Hill Rd. Snapped & uprooted trees were the main damage. As the tornado neared and crossed Highway 49, the intensity increased to a high-end EF-1. Multiple power lines were downed along with numerous trees, two homes had minor damage along Rock Hill Rd. A home had a portion of the roof removed along Highway 49. As the tornado crossed Byrd Town Rd, more high-end tree damage occurred with some minor damage to a home and a couple mobile homes. Several sheds and carports were destroyed here as well. The tornado increased in intensity to a low-end EF-2 as it crossed George Speed Rd. Here significant tree damage was noted with hundreds of snapped or uprooted pines and hardwoods. A few homes had minor damage as they were on the edges of the tornadic circulation. The tornado weakened some as it moved just north of Jones Chapel Rd and across Highway 532. The tornado increased and reached peak intensity, EF-2 (125 mph), as it crossed Vester Pickering Rd. Three mobile homes were destroyed with one well-built brick home having the roof entirely removed. Heavy tree damaged was noted here with power poles and power lines down. Just to the north of Hot Coffee, a large church was heavily damaged with part of the roof removed and some outer brick fallen off the outer wall. Five other brick buildings had minor/major roof damage along with the windows blown out. Dozens of trees were snapped and uprooted here and along Highway 35. The tornado continued to the northeast toward the Leaf River where more trees were snapped and downed. The tornado dissipated just inside Jones County where some trees were damaged. Total path length was 16.5 miles. Maximum winds were around 125 mph.
Arbo	03-JAN-15	F1	0/0	\$20,000	The tornado began along Sunset Road, where the roof of a mobile home was damaged. It continued northeast and snapped trees along Cooley Spring-Coulter Road and Stroud Road before it lifted. The estimated maximum wind speed was 90 mph.
Arbo	03-JAN-15	F1	0/0	\$40,000	This tornado snapped numerous trees along its path from the east end of Stroud Road. It moved east northeast across Burtons Creek Road. It lifted near Rock Hill Road. The most impressive tree damage occurred along Burtons Creek Road and this is where it reached its peak intensity. The estimated wind speed was 110 mph.

Location	Date	Magnitude	Deaths / Injuries	Property Damage*	Details
Williamsburg	17-AUG-15	F0	0/0	\$15,000	This tornado downed numerous large limbs and snapped off the tops of several trees along its path. Two power poles were downed when limbs fell on power lines, taking the poles down. A carport was flipped by the tornado. The estimated peak wind was 75 mph.
Arbo	02-JAN-17	F2	0/0	\$100,000	This tornado touched down about a mile west of Highway 49, near Rock Hill Road, and tracked quickly northeast doing a variety of tree and structural damage along its relatively short path length. A few structures received heavy damage near the crossing point of Highway 49 with a few large chicken coops being destroyed or receiving extensive damage about a mile east of Highway 49. The tornado then continued on for a few more miles doing lesser amounts of damage to a few structures before lifting just after crossing County Road 532. The maximum estimated wind speeds were 115mph.
Hot Coffee	22-JAN-18	F1	0/1	\$30,000	An EF-1 tornado touched down in northeast Covington County along Highway 532 causing minor tree damage as it tracked northeast towards Gilmore Road. As the tornado continued its northeast track, it became its strongest as it approached Hwy 37 near J. Nelson Drive and Jewel Owens Lane. At this location the tornado uprooted and snapped several large trees and damaged a few structures, including homes. The tornado continued into northwest Jones County where a double wide mobile home was pushed off of its foundation and 3 sheds and a barn was destroyed on Carter Dees Road. An occupant of the mobile home suffered a minor injury. The tornado lifted just after this damage occurred. Total path length was 7.51 miles and estimated max wind speed was 100 mph.
Ora	06-APR-18	F1	0/0	\$30,000	This tornado touched down southeast of Mount Olive just to the west of Linda Sanford Lane, near the intersection of William Warren Road. Some trees were snapped and uprooted along and just west of William Warren Road. It then continued east-southeast before crossing Salem Church Road. Some large limbs were snapped in this area. It then crossed Rocky Valley Road, where some limbs were snapped, and a few pine trees were uprooted. Also, some minor shingle damage occurred to a home. The tornado became weaker and lifted soon after crossing the road. The maximum estimated winds with this tornado were 90mph.

Source: National Centers for Environmental Information

PROBABILITY OF FUTURE OCCURRENCES

According to historical information, tornado events pose a significant threat to Covington County. The probability of future tornado occurrences affecting Covington County is likely (10 – 100 percent annual probability).

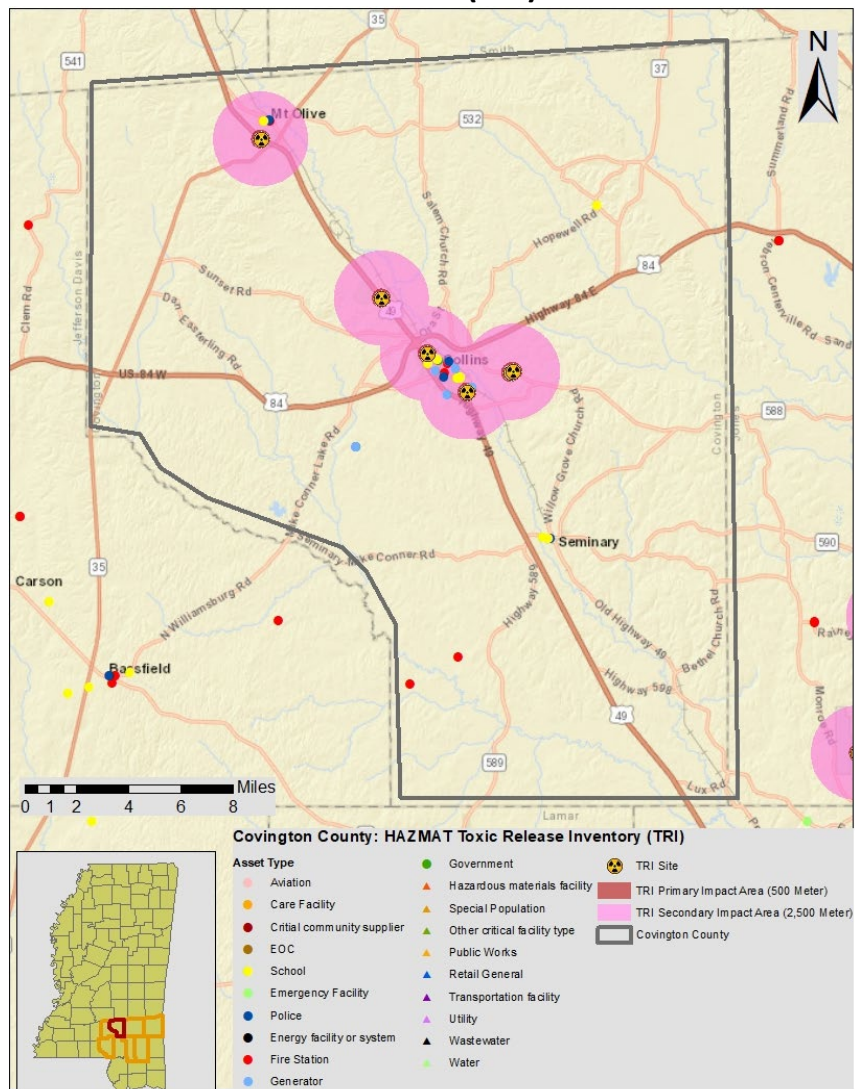
A.2.13 Hazardous Materials Incidents

LOCATION AND SPATIAL EXTENT

Hazardous Materials

Covington County has four TRI sites. These sites are shown in **Figure A.8**.

FIGURE A.8: TOXIC RELEASE INVENTORY (TRI) SITES IN COVINGTON COUNTY



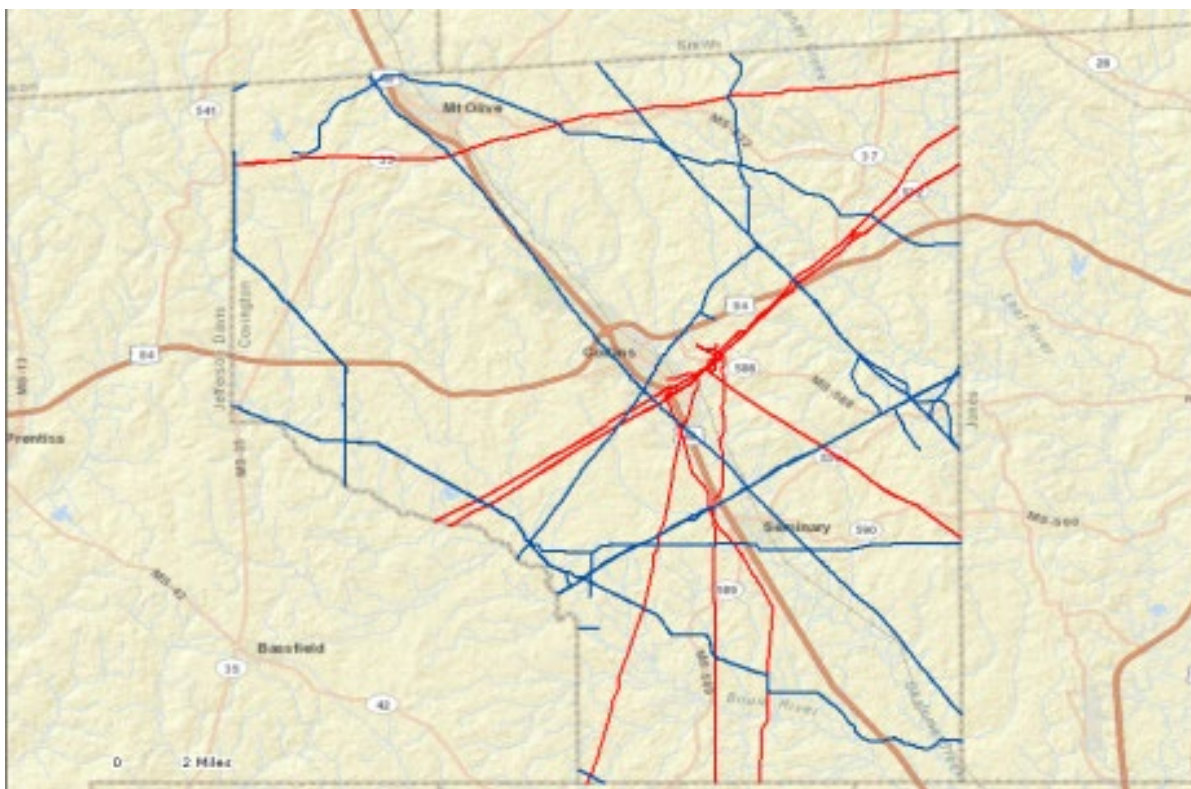
Source: EPA

In addition to “fixed” hazardous materials locations, hazardous materials may also impact the county via roadways and rail. Many roads in the county are narrow, making hazardous material transport in the area especially treacherous. All roads that permit hazardous material transport are considered potentially at risk to an incident.

Pipelines

There are two distinct types of pipelines that are used in the transport of potentially hazardous materials, gas lines and hazardous liquid lines. **Figure A.9** shows the trunk lines for each of these material types but does not show the gathering or distribution pipelines. Gas lines are in blue and hazardous liquid lines are in red. This data has not changed since the last plan update.

FIGURE A.9: PIPELINES IN COVINGTON COUNTY



Source: Pipeline and Hazardous Materials Safety Administration

Meth Labs

One of the greatest concerns about meth labs is that they are clandestine in nature. Additionally, once a meth lab has been identified, police authorities generally attempt to eliminate the site as quickly as possible. Therefore, it is nearly impossible to identify specific locations for meth labs and instead, the entire planning area is considered to be at risk to this hazard.

HISTORICAL OCCURRENCES

Hazardous Materials

There has been a total of 24 recorded HAZMAT incidents in Covington County since 1972 (**Table A.24**), resulting in \$19,750 in property damages. In addition, one death was reported. **Table A.17** presents detailed information on historic HAZMAT incidents in Covington County as reported by the U.S.

Department of Transportation Pipeline and Hazardous Materials Safety Administration (PHMSA). There are no changes to this data since the last plan update.

TABLE A.21: SUMMARY OF HAZMAT INCIDENTS IN COVINGTON COUNTY

Location	Number of Occurrences	Deaths / Injuries	Property Damage
Collins	21	1/0	\$9,650
Mount Olive	3	0/0	\$10,100
Seminary	0	0/0	\$0
Unincorporated Area	0	0/0	\$0
COVINGTON COUNTY TOTAL	24	1/0	\$19,750

Source: USDOT PHMSA

TABLE A.22: HAZMAT INCIDENTS IN COVINGTON COUNTY

Report Number	Date	City	Mode	Serious Incident?	Fatalities/ Injuries	Damages (\$)	Quantity Released
Collins							
I-1978060526	5/22/1978	COLLINS	Highway	0	0/1	\$0	25 LGA
I-1975020457	12/20/1974	COLLINS	Highway	0	0/0	\$0	0
I-1976110129	9/30/1976	COLLINS	Highway	0	0/0	\$0	111 LGA
I-1976030757	3/6/1976	COLLINS	Highway	0	0/0	\$0	50 LGA
I-2011100178	9/7/2011	COLLINS	Highway	0	0/0	\$3,575	20 LGA
I-1987050470	5/15/1987	COLLINS	Highway	0	0/0	\$0	25 LGA
I-2009030553	3/3/2009	COLLINS	Highway	0	0/0	\$6,075	30 LGA
I-1992070574	5/13/1992	COLLINS	Highway	0	0/0	\$0	20 LGA
I-1996020224	1/13/1996	COLLINS	Highway	0	0/0	\$0	0.125 LGA
I-1976081113	7/30/1976	COLLINS	Highway	0	0/0	\$0	0
I-1978031024	3/11/1978	COLLINS	Highway	0	0/0	\$0	38 LGA
I-1973110156	10/16/1973	COLLINS	Highway	0	0/0	\$0	0
I-1976120500	11/26/1976	COLLINS	Highway	0	0/0	\$0	66 LGA
I-2002090335	6/11/2002	COLLINS	Highway	0	0/0	\$0	1 LGA
I-1977080146	7/19/1977	COLLINS	Highway	0	0/0	\$0	58 LGA
I-1973020096	1/18/1973	COLLINS	Highway	0	0/0	\$0	0
I-1972070013	6/24/1972	COLLINS	Highway	0	0/0	\$0	0
I-1974050269	4/26/1974	COLLINS	Highway	0	0/0	\$0	0
I-1974010238	1/3/1974	COLLINS	Highway	0	0/0	\$0	0
I-1986100193	9/30/1986	COLLINS	Highway	1	1/0	\$0	7,980 LGA
I-1974070383	6/12/1974	COLLINS	Highway	0	0/0	\$0	0
Mount Olive							
I-2009030262	2/26/2009	MOUNT OLIVE	Highway	0	0/0	\$10,100	15 LGA
I-1978080318	7/24/1978	MOUNT OLIVE	Highway	1	0/0	\$0	300 LGA
I-1978050598	5/3/1978	MOUNT OLIVE	Highway	1	0/0	\$0	200 LGA
Seminary							
None Reported	--	--	--	--	--	--	--
Unincorporated Area							
None Reported	--	--	--	--	--	--	--

Report Number	Date	City	Mode	Serious Incident?	Fatalities/ Injuries	Damages (\$)	Quantity Released
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Source: USDOT PHMSA

Pipelines

Between 2002 and 2013, there has been 1 pipeline incident in Covington County. It occurred in 2009 and there were no deaths or injuries. The property damage was estimated at \$85,904.

Meth Labs

Meth lab incidents have occurred at various times throughout Covington County. Although there is not an extensive documented record of these events, they have occurred in the past and are generally confined to single sites, often in residential areas.

PROBABILITY OF FUTURE OCCURRENCES

Hazardous Materials

Given the location of four toxic release inventory sites in Covington County and several roadway and rail incidents, it is possible that a hazardous material incident may occur in the county (between one percent and ten percent annual probability). County and town officials are mindful of this possibility and take precautions to prevent such an event from occurring. Furthermore, there are detailed plans in place to respond to an occurrence.

Although there are just four TRI sites and a limited record of previous events in the county, hazardous materials incidents will continue to be a threat. The county may also be impacted by neighboring counties which also face risk due to TRI sites and narrow roadways.

Pipelines

Since there has been 1 major pipeline incident and there are 448 miles of gas and hazardous liquid lines in the region, it is anticipated that there will be future pipeline incidents in Covington County, so they are considered possible.

Meth Labs

Meth lab incidents will likely continue to occur throughout Covington County. Although it is difficult to predict where exactly these incidents would occur, the probability that they will is possible.

A.2.14 Cyber Attack

A cyber-attack is a malicious, intentional attempt to breach the information technology (IT) infrastructure of an individual or organization. The State of Mississippi defines a cyberterrorism incident as any adverse premeditated, politically, financially or maliciously motivated attack against informational systems. A cyberterrorism event can impact one or more of Covington County's and its, corresponding departments' and divisions' information assets by the following ways, which includes, but are not limited to, the following:

- Unauthorized use
- Denial of Service
- Malicious code

- Network system failures
- Application system failures
- Unauthorized disclosure or loss of information
- Information security breach
- Structured Query Language (SQL) Injection

LOCATION AND HAZARD EXTENT

The cyberterrorism hazard is not geographically based. Attacks can originate from any computer to affect any other computer in the world. If a system is connected to the Internet or operating on a wireless frequency, it is susceptible to exploitation. Targets of cyberterrorism can be individual computers, networks, organizations, business sectors, or governments. Financial institutions and retailers are often targeted to extract personal and financial data that can be used to steal money from individuals and banks.

HISTORICAL OCCURRENCES

There have been no known historical occurrences to have occurred in in Covington County to date.

PROBABILITY OF FUTURE OCCURRENCES

As is the case for any governmental organization, there will always be the potential for impact for Covington County. As such, the county will continue to be compelled to respond to cyberterrorisms in the future. The nature of these attacks is projected to evolve in sophistication over time. Covington County will take a proactive position in its cyber security efforts and is expected to remain vigilant in its efforts to prevent attacks from occurring and/or disrupting business operations.

The reality remains that many computers and networks in organizations of all sizes and industries around the United States will continue to suffer intrusion attempts on a daily basis from viruses and malware that are passed through web sites and emails. Again, the potential for harm via this hazard is always present.

A.2.15 Conclusions on Hazard Risk

The hazard profiles presented above were developed using best available data and result in what may be considered principally a qualitative assessment as recommended by FEMA in its “How-to” guidance document titled *Understanding Your Risks: Identifying Hazards and Estimating Losses* (FEMA Publication 386-2). It relies heavily on historical and anecdotal data, stakeholder input, and professional and experienced judgment regarding observed and/or anticipated hazard impacts. It also carefully considers the findings in other relevant plans, studies, and technical reports.

HAZARD EXTENT

Table A.18 describes the extent of each natural hazard identified for Covington County. The extent of a hazard is defined as its severity or magnitude, as it relates to the planning area.

TABLE A.23: EXTENT OF COVINGTON COUNTY HAZARDS

Flood-related Hazards	
Flood	Flood extent can be measured by the amount of land and property in the floodplain as well as flood height and velocity. The amount of land in the floodplain accounts for 19.7 percent of the total land area in Covington County. Flood depth and velocity are recorded via United States Geological Survey stream gages throughout the region. While a gage does not exist for each participating jurisdiction, there is one at or near many areas. The greatest peak discharge recorded for the county was at the Leaf River near Collins in 1856. Water reached a discharge of 56,000 cubic feet per second and the stream gage height was recorded at 33.00 feet.
Erosion	The extent of erosion can be defined by the measurable rate of erosion that occurs. There are no erosion rate records located in Covington County.
Dam Failure	Dam failure extent is defined using Mississippi Division of Environmental Quality criteria. There is one high hazard dam in the county.
Winter Storm and Freeze	The extent of winter storms can be measured by the amount of snowfall received (in inches). Official long-term snow records are not kept for Covington County. However, the greatest snowfall reported in Jackson (northwest of the county) was 11.7 inches in 1904 and in Meridian (northeast of the county) was 14.0 inches in 1963.
Fire-related Hazards	
Drought / Heat Wave	Drought extent is defined by the U.S. Drought Monitor Classifications which include Abnormally Dry, Moderate Drought, Severe Drought, Extreme Drought, and Exceptional Drought. According to the U.S. Drought Monitor Classifications, the most severe drought condition is Exceptional. Covington County has received this ranking once over the sixteen-year reporting period. The extent of extreme heat can be measures by the record high temperature recorded. Official long-term temperature records are not kept for any areas in Covington County. However, the highest recorded temperature in Hattiesburg (southeast of the county) was 106°F in 1989.
Wildfire	Wildfire data was provided by the Mississippi Forestry Commission and is reported annually by county from 2008-2018. The greatest number of fires to occur in Covington County in any year was 52 in 2015. The greatest number of acres to burn in the county in a single year occurred in both 2014 and 2017 when 10.1 acres were burned. Although this data lists the extent that has occurred, larger and more frequent wildfires are possible throughout the county.
Geologic Hazards	
Earthquake	Earthquake extent can be measured by the Richter Scale and the Modified Mercalli Intensity (MMI) scale and the distance of the epicenter from Covington County. According to data provided by the National Geophysical Data Center, no recorded earthquakes have been located in the county. However, the greatest MMI to impact Covington County was reported with an MMI of IV (moderate) with a correlating Richter Scale measurement of less than 4.8. Additionally, USGS data shows Covington County lies within an approximate zone of level .04 ground acceleration. This indicates that the county exists within an area of moderate seismic risk.
Landslide	As noted above in the landslide profile, there is no extensive history of landslides in Covington County and landslide events typically occur in isolated areas. This

	provides a challenge when trying to determine an accurate extent for the landslide hazard. However, when using USGS landslide susceptibility index, extent can be measured with incidence, which is low throughout the county. There is also susceptibility throughout the county.
Expansive Soils	As noted above in the expansive soils profile, there is no historical record of significant expansive soil events in Covington County. Again, this provides a challenge when trying to determine an accurate extent for the expansive soils hazard. However, when using USGS data on soils with clay swelling potential, extent can be measured with swelling potential, which is high in less than 50 percent of the soils Covington County.
Wind-related Hazards	
Hurricane and Tropical Storm	Hurricane extent is defined by the Saffir-Simpson Scale which classifies hurricanes into Category 1 through Category 5. The greatest classification of hurricane to traverse directly through Covington County was a Category 1 storm (Hurricane Katrina in 2005) which carried tropical force winds of 92 miles per hour upon arrival in the county.
Thunderstorm / Hail / Lightning	Thunderstorm extent is defined by the number of thunder events and wind speeds reported. According to a 63-year history from the National Centers for Environmental Information, the strongest recorded wind event in Covington County was last reported on February 12, 2008 at 70 knots (approximately 81 mph). It should be noted that future events may exceed these historical occurrences. Hail extent can be defined by the size of the hail stone. The largest hail stone reported in Covington County was 2.75 inches (on March 26, 2005). It should be noted that future events may exceed this. According to the Vaisala's flash density map, Covington County is located in an area that experiences 6 to 8 lightning flashes per square kilometer per year. It should be noted that future lightning occurrences may exceed these figures.
Tornado	Tornado hazard extent is measured by tornado occurrences in the US provided by FEMA as well as the Fujita/Enhanced Fujita Scale. The greatest magnitude reported in Covington County was an F3 (last reported on April 14, 1999).
Other Hazards	
Hazardous Materials Incident	According to USDOT PHMSA, the largest hazardous materials incident reported in the county is 7,980 LGA released on the highway in Collins. It should be noted that larger events are possible. A pipeline incident could have a potentially large impact in terms of extent. Based on recent history, the largest spill in the last 10 years in Mississippi caused over 10,000 barrels of hazardous liquid to be spilled. Because of the generally small-scale nature of most meth labs, the extent of a fire or explosion that was caused by a meth lab incident would likely not be larger than a few acres.
Cyber Attack	The extent of cyberterrorism is difficult to estimate. Attacks can originate from any computer to affect any other computer in the world. The resulting damages depends on the demands of the cyberterrorist.

PRIORITY RISK INDEX RESULTS

In order to draw some meaningful planning conclusions on hazard risk for Covington County, the results of the hazard profiling process were used to generate countywide hazard classifications according to a “Priority Risk Index” (PRI). More information on the PRI and how it was calculated can be found in Section 5.16.2.

Table A.19 summarizes the degree of risk assigned to each category for all initially identified hazards based on the application of the PRI. Assigned risk levels were based on the detailed hazard profiles developed for this section, as well as input from the Regional Hazard Mitigation Council. The results were then used in calculating PRI values and making final determinations for the risk assessment.

TABLE A.24: SUMMARY OF PRI RESULTS FOR COVINGTON COUNTY

Hazard	Category/Degree of Risk					
	Probability	Impact	Spatial Extent	Warning Time	Duration	PRI Score
Flood-related Hazards						
Flood	Likely	Limited	Moderate	6 to 12 hours	Less than 24 hours	2.6
Erosion	Possible	Minor	Small	More than 24 hours	More than 1 week	1.8
Dam Failure	Unlikely	Critical	Moderate	More than 24 hours	Less than 6 hours	2.0
Winter Storm and Freeze	Possible	Limited	Large	More than 24 hours	Less than 24 hours	2.3
Fire-related Hazards						
Drought / Heat Wave	Highly Likely	Minor	Large	More than 24 hours	More than 1 week	2.8
Wildfire	Likely	Minor	Small	Less than 6 hours	Less than 1 week	2.1
Geologic Hazards						
Earthquake	Unlikely	Minor	Moderate	Less than 6 hours	Less than 6 hours	1.7
Landslide	Unlikely	Minor	Small	Less than 6 hours	Less than 6 hours	1.5
Expansive	Possible	Minor	Small	Less than 6 hours	Less than 6 hours	1.8
Wind-related Hazards						
Hurricane and Tropical Storm	Likely	Catastrophic	Large	More than 24 hours	Less than 24 hours	3.2
Thunderstorm Wind / High Wind	Highly Likely	Limited	Moderate	Less than 6 hours	Less than 6 hours	2.9
Hailstorm	Likely	Minor	Small	Less than 6 hours	Less than 6 hours	2.1
Lightning	Highly Likely	Limited	Negligible	Less than 6 hours	Less than 6 hours	2.5
Tornado	Likely	Critical	Small	Less than 6 hours	Less than 6 hours	2.7
Other Hazards						
Hazardous Materials Incident	Unlikely	Limited	Small	Less than 6 hours	Less than 24 hours	1.9
Pipeline Incident	Possible	Limited	Small	Less than 6 hours	Less than 24 hours	2.2
Meth Lab Incident	Possible	Minor	Small	Less than 6 hours	Less than 6 hours	1.8
Cyber Attack	Possible					

A.2.16 Final Determinations on Hazard Risk

The conclusions drawn from the hazard profiling process for Covington County, including the PRI results and input from the Regional Hazard Mitigation Council, resulted in the classification of risk for each identified hazard according to three categories: High Risk, Moderate Risk, and Low Risk (**Table A.20**). For purposes of these classifications, risk is expressed in relative terms according to the estimated impact that a hazard will have on human life and property throughout all Covington County. A more quantitative analysis to estimate potential dollar losses for each hazard has been performed separately, and is described in Section 6: *Vulnerability Assessment* and below in Section A.3. It should be noted that although some hazards are classified below as posing low risk, their occurrence of varying or unprecedented magnitudes is still possible in some cases and their assigned classification will continue to be evaluated during future plan updates.

TABLE A.25: CONCLUSIONS ON HAZARD RISK FOR COVINGTON COUNTY

HIGH RISK	Hurricane and Tropical Storm Thunderstorm Wind / High Wind Tornado Flood
MODERATE RISK	Drought / Heat Wave Lightning Hailstorm Pipeline Incident Hazardous Material Incident Wildfire
LOW RISK	Winter Storm and Freeze Dam Failure Expansive Soils Erosion Earthquake Landslide Meth Lab Incident Cyber Attack

A.3 COVINGTON COUNTY VULNERABILITY ASSESSMENT

This subsection identifies and quantifies the vulnerability of Covington County to the significant hazards previously identified. This includes identifying and characterizing an inventory of assets in the county and assessing the potential impact and expected amount of damages caused to these assets by each identified hazard event. More information on the methodology and data sources used to conduct this assessment can be found in Section 6: *Vulnerability Assessment*.

A.3.1 Asset Inventory

Table A.21 lists the estimated number of improved properties and the total value of improvements for Covington County and its participating jurisdictions (study area of vulnerability assessment). This data was obtained from HAZUS-MH 4.2.

TABLE A.26: IMPROVED PROPERTY IN COVINGTON COUNTY

Location	Number of Parcels	Total Assessed Value of Improvements
Covington County	8,877	\$1,613,517,000

*Improvement values for these communities were obtained from HAZUS-MH 4.2

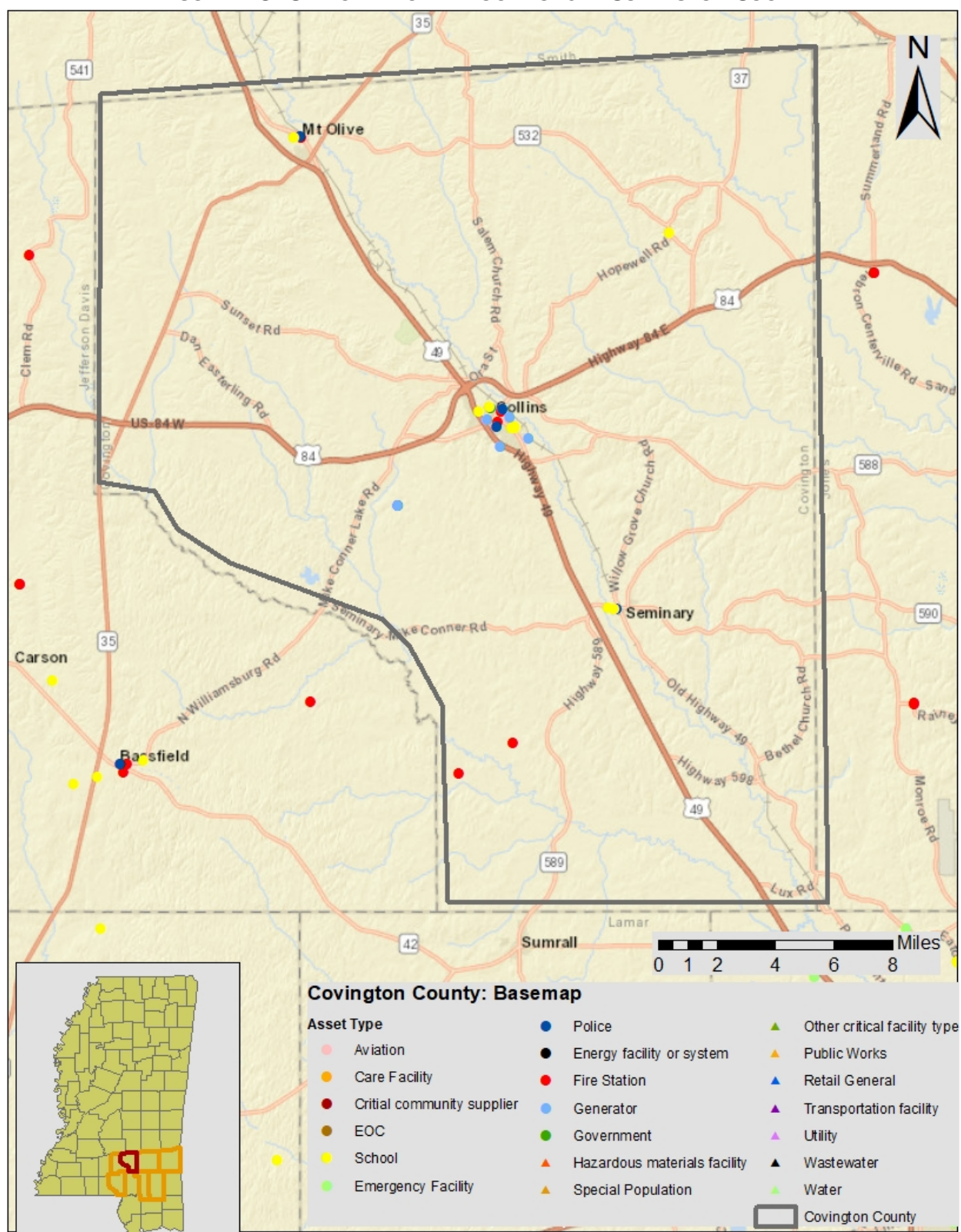
Table A.30 lists the fire stations, police stations, emergency operations centers (EOCs), medical care facilities, and schools and other critical facilities located in Covington County. HAZUS-MH 4.2 was used to obtain the critical facilities for the county and that data was modified to reflect more recent changes. In addition, **Figure A.10** shows the locations of essential facilities in Covington County. **Table A.32** near the end of this section, shows a complete list of the critical facilities by name, as well as the hazards that affect each facility. As noted previously, this list is not all-inclusive and only includes information provided by the county.

TABLE A.30: CRITICAL FACILITY INVENTORY IN COVINGTON COUNTY

Location	Fire Stations	Police Stations	Medical Care Facilities	EOC	Schools
Covington County	12	3	1	1	10
Collins	2	1	1	1	5
Mount Olive	1	1	0	0	2
Seminary	1	1	0	0	2
Unincorporated Area	8	0	0	0	1

Source: HAZUS-MH 4.2 and Planning Committee

FIGURE A.3: CRITICAL FACILITY LOCATIONS IN COVINGTON COUNTY



Source: HAZUS-MH 4.2

A.3.2 Social Vulnerability

In addition to identifying those assets potentially at risk to identified hazards, it is important to identify and assess those particular segments of the resident population in Covington County that are potentially at risk to these hazards.

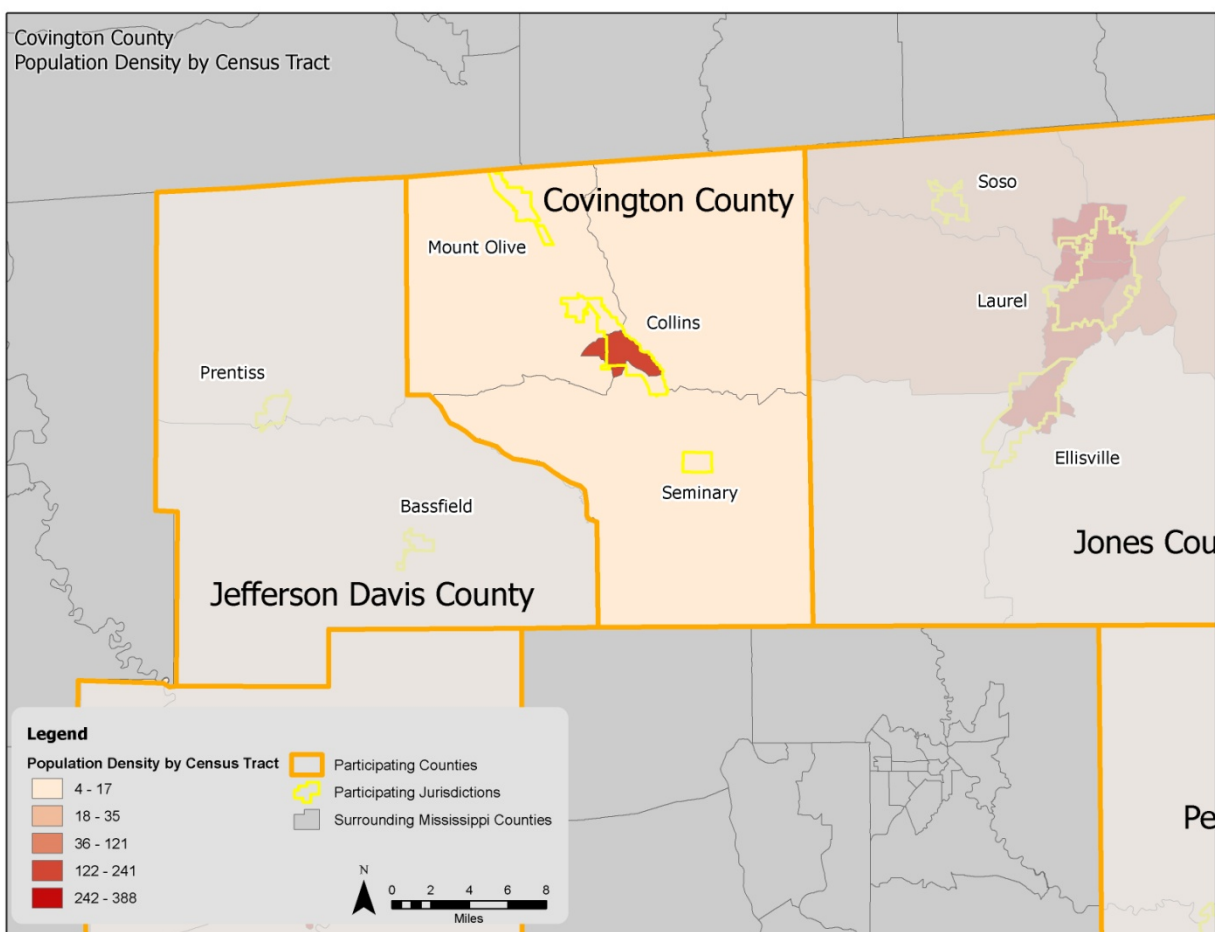
Table A.31 lists the population by jurisdiction according to U.S. Census 2010 population estimates. The results are presented at the county-wide level. The total population in Covington County according to Census data is 19,568 persons. Additional population estimates are presented above in Section A.1.

TABLE A.31: TOTAL POPULATION IN COVINGTON COUNTY

Location	Total 2010 Population
Collins	2,586
Mount Olive	982
Seminary	314
Unincorporated Area	15,686
COVINGTON COUNTY TOTAL	19,568

Source: U.S. Census 2010

In addition, **Figure A.2** illustrates the population density by census tract as it was reported by the U.S. Census Bureau in 2010.¹⁶ This information has not changed since the last plan update.

FIGURE A.4: POPULATION DENSITY IN COVINGTON COUNTY

Source: U.S. Census Bureau, 2010

¹⁶ Population by census block was not available at the time this plan was completed.

A.3.3 Vulnerability Assessment Results

As noted in Section 6: *Vulnerability Assessment*, only hazards with a specific geographic boundary, available modeling tool, or sufficient historical data allow for further analysis. Those results, specific to Covington County, are presented here. All other hazards are assumed to impact the entire planning region (drought, hailstorm, lightning, thunderstorm wind, tornado, and winter storm and freeze) or, due to lack of data, analysis would not lead to credible results (dam and levee failure, erosion, expansive soils, and landslide). The total county exposure, and thus risk, was presented in **Table A.29**.

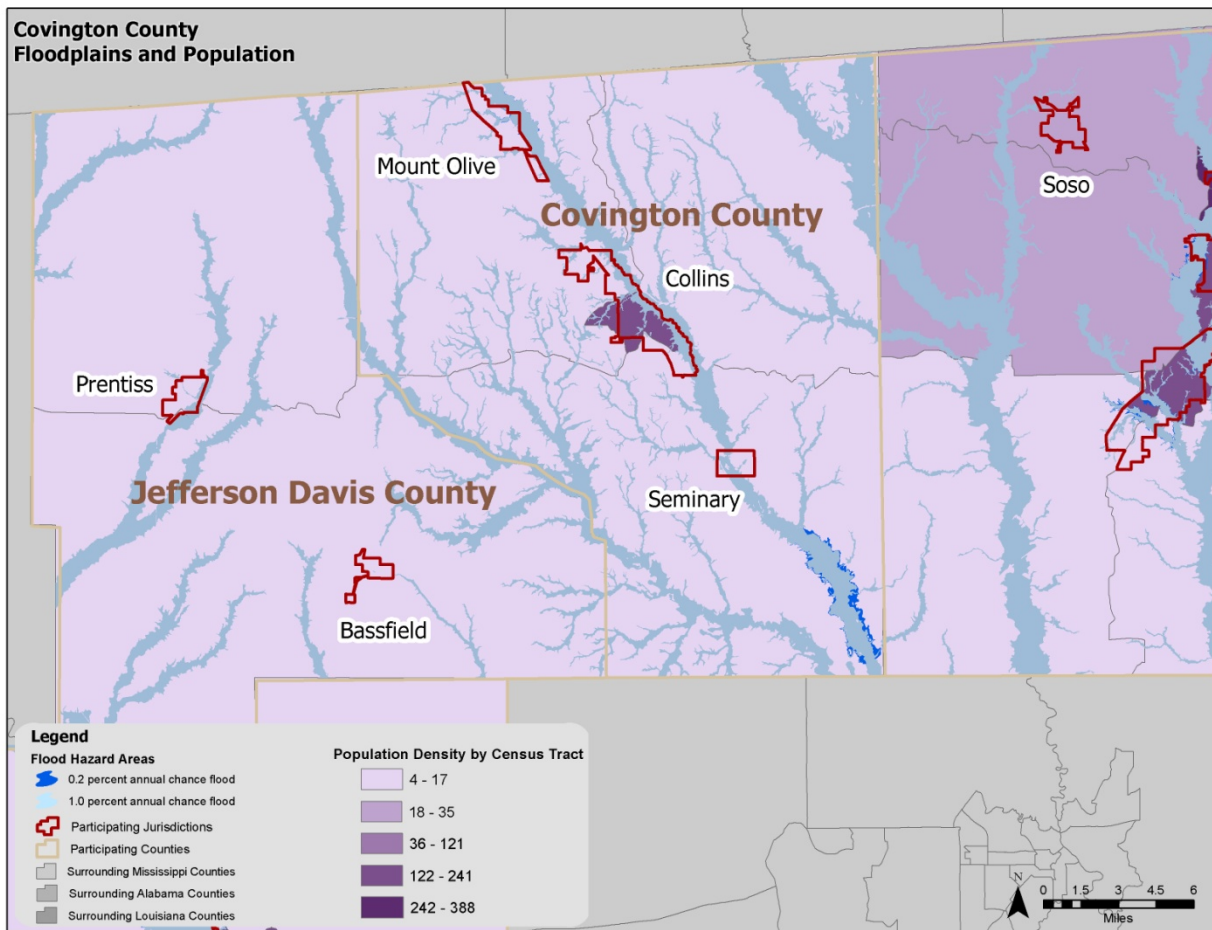
The hazards to be further analyzed in this section include: flood, wildfire, earthquake, hurricane and tropical storm winds, and hazardous materials incident.

FLOOD

Historical evidence indicates that Covington County is susceptible to flood events. A total of 24 flood events have been reported by the National Centers for Environmental Information resulting in \$3.096M in damages.

Social Vulnerability

Since 2010 population was available at the tract level, it was difficult to determine a reliable figure on population at-risk to flood due to tract level population data. **Figure A.15** is presented to gain a better understanding of at-risk population.

FIGURE A.5 : POPULATION DENSITY NEAR FLOODPLAINS

Source: FEMA DFIRM, U.S. Census 2010

Critical Facilities

The critical facility analysis revealed that there are six critical facilities located in the Covington County 1.0-percent annual chance floodplain valued at over \$5.9M based on FEMA DFIRM boundaries and GIS analysis. There are no critical facilities located in the 0.2 percent annual chance floodplain. A list of specific critical facilities and their associated risk can be found in **Table A.32** at the end of this section.

In conclusion, a flood has the potential to impact many existing and future buildings and populations in Covington County, though some areas are at a higher risk than others. All types of structures in a floodplain are at-risk, though elevated structures will have a reduced risk. As noted, the floodplains used in this analysis include the 100-year and 500-year FEMA regulated floodplain boundaries. It is certainly possible that more severe events could occur beyond these boundaries or urban (flash) flooding could impact additional structures. Such site-specific vulnerability determinations are outside the scope of this assessment but will be considered during future plan updates. Furthermore, areas subject to repetitive flooding should be analyzed for potential mitigation actions.

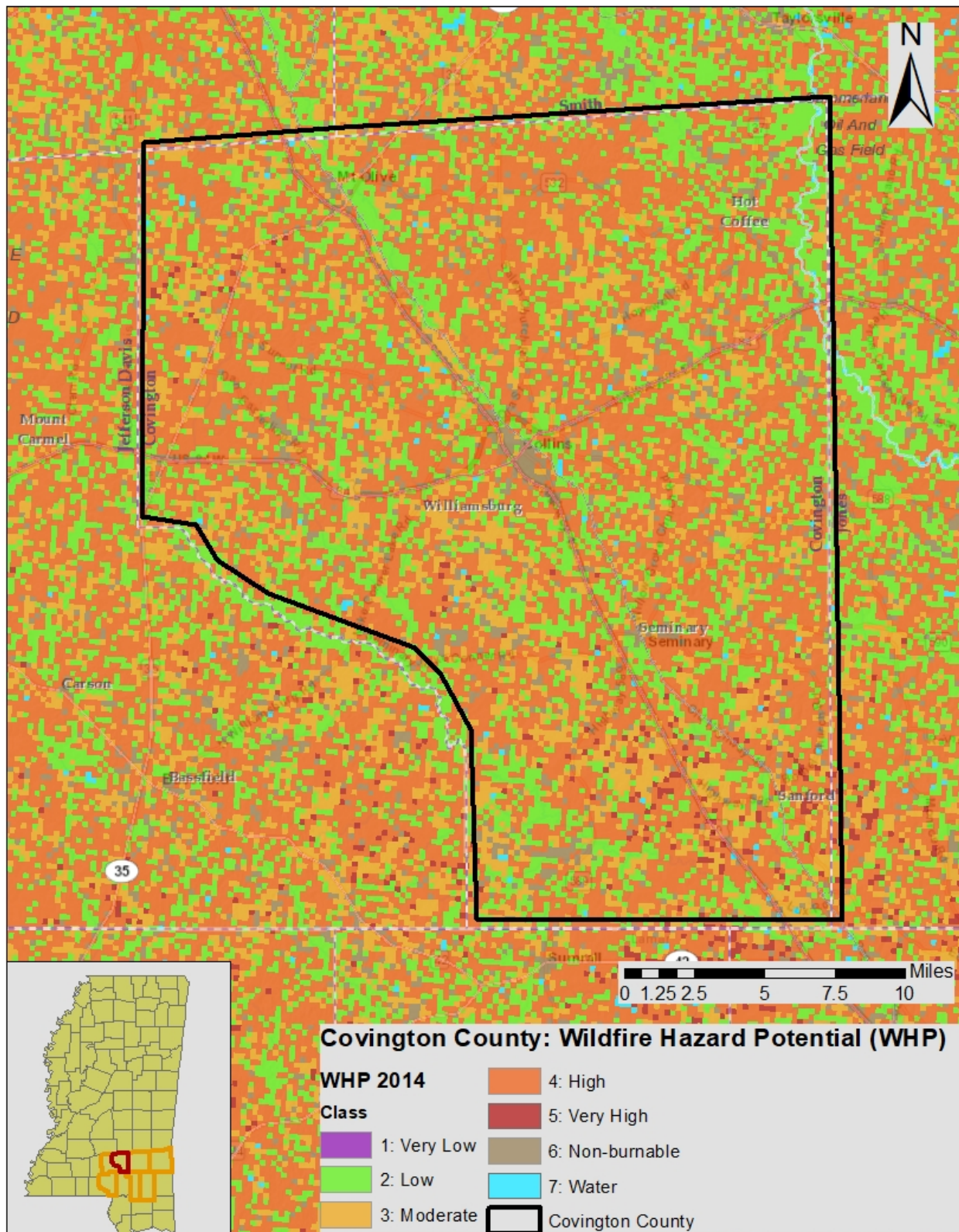
WILDFIRE

Although historical evidence indicates that Covington County is susceptible to wildfire events, there are few reports of damage.

To estimate exposure to wildfire, the wildfire hazard potential (WHP 2014) data provided via the US Forest Service was utilized. A GIS analysis was performed with the WHP dataset and identified critical facilities throughout MEMA District 8 in order to show the level of vulnerability.

Figure A.16 shows the wildfire hazard potential for Covington County. Most of the planning areas falls within the low to high category.

FIGURE A.6: WILDFIRE RISK AREAS IN COVINGTON COUNTY



Source: U.S. Forrest Service

Social Vulnerability

Although not all areas have equal vulnerability, there is some susceptibility across the entire county. It is assumed that the total population is at risk to the wildfire hazard. Determining the exact number of people in certain wildfire zones is difficult with existing data and could be misleading.

Critical Facilities

The critical facility analysis revealed that there are five critical facilities located in an area considered moderate risk valued at nearly \$1.2M. There are two critical facilities located in an area considered high risk valued at \$1.1M, and there is an additional structure located in an area considered very high risk. It should be noted, however, that several factors could impact the spread of a wildfire putting all facilities at risk. A list of specific critical facilities and their associated risk can be found in **Table A.32** at the end of this section.

In conclusion, a wildfire event has the potential to impact many existing and future buildings, critical facilities, and populations in Covington County.

EARTHQUAKE

The HAZUS-MH earthquake scenario was generated for the region only and not on an individual county basis. The HAZUS-MH model and historical occurrences confirm, any earthquake activity in the area is likely to inflict minor damage to the county. HAZUS-MH 4.2 estimates a total exposure of approximately \$20,561,000 which includes buildings, inventory, and contents throughout the region. While this number is not an exact representation of assessed tax value, it is helpful in assessing the results of the HAZUS-MH scenario.

For the earthquake hazard vulnerability assessment, an arbitrary scenario was created to estimate damages to the planning area. HAZUS-MH estimates that no buildings would be moderately damaged.

Social Vulnerability

It can be assumed that all existing future populations are at risk to the earthquake hazard. No fatalities or injuries were reported in the above HAZUS-MH arbitrary scenario.

Critical Facilities

There are 25 critical facilities identified for Covington County, valued at \$52,176,304. All are vulnerable to the earthquake hazard.

An earthquake has the potential to impact all existing and future buildings, facilities, and populations in Covington County. While Covington County may not experience a large earthquake, localized damage is possible with an occurrence. A list of specific critical facilities and their associated risk can be found in **Table A.32** at the end of this section.

HURRICANE AND TROPICAL STORM

Historical evidence indicates that Covington County has an elevated risk to the hurricane and tropical storm hazard. Several tracks have come near or traversed through the county, as shown and discussed in Section A.2.10.

Hurricanes and tropical storms can cause damage through numerous additional hazards such as flooding, erosion, tornadoes, and high winds, thus it is difficult to estimate total potential losses from these cumulative effects. The current HAZUS-MH hurricane model only analyzes hurricane winds and is not capable of modeling and estimating cumulative losses from all hazards associated with hurricanes; therefore, only hurricane winds are analyzed in this section. It can be assumed that all existing and future buildings and populations are at risk to the hurricane and tropical storm hazard. HAZUS-MH 4.2 was used to determine vulnerability to the hazard for a 100-Year event. There are an estimated 100,000 buildings in the region with a total building replacement value of \$20,562,000. A 100-year probabilistic scenario was created and modeled. HAZUS-MH estimated that approximately 1,892 buildings would be at least moderately damaged by the event; this is over two percent of the buildings in the Region. There is an estimated 69 buildings that would be damaged beyond repair.

Economic Losses

HAZUS-MH estimated economic losses for the scenario event. HAZUS-MH estimated losses at \$349.5M, which represents 1.7 percent of the total replacement value of the region's buildings. Nine percent of the losses were related to business interruption in the scenario region. 88 percent of the losses were sustained by residential structures.

Debris Generation

As part of the scenario, HAZUS-MH estimated the amount of debris that would be generated by the event. The types of debris considered were brick/wood, reinforced concrete/steel, eligible tree debris, and other tree debris. HAZUS-MH estimated that a total of 2,165,680 tons of debris would be generated by the event. Of that amount, 93 percent would be other tree debris, approximately 1.5 percent would be brick/wood, and the rest would comprise of would be eligible tree debris and brick/wood. Assuming a load of 25 tons per truck, this would equate to 1,190 truckloads of debris from this scenario.

Social Vulnerability

Given equal susceptibility across the county, it is assumed that the total population is at risk to the hurricane and tropical storm hazard.

Critical Facilities

Given equal vulnerability across Covington County, all critical facilities are considered to be at risk. Some buildings may perform better than others in the face of such an event due to construction and age, among other factors. There are 25 critical facilities identified for Covington County, valued at \$52,176,304. Some buildings may perform better than others in the face of such an event due to construction and age, among other factors. Determining individual building response is beyond the scope of this plan. However, this plan will consider mitigation action for especially vulnerable and/or critical facilities to mitigation against the effects of the hurricane hazard. A list of specific critical facilities can be found in **Table A.32** at the end of this section.

In conclusion, a hurricane event has the potential to impact many existing and future buildings, critical facilities, and populations in Covington County. Hurricane events can cause substantial damage in their wake including fatalities, extensive debris clean-up, and extended power outages.

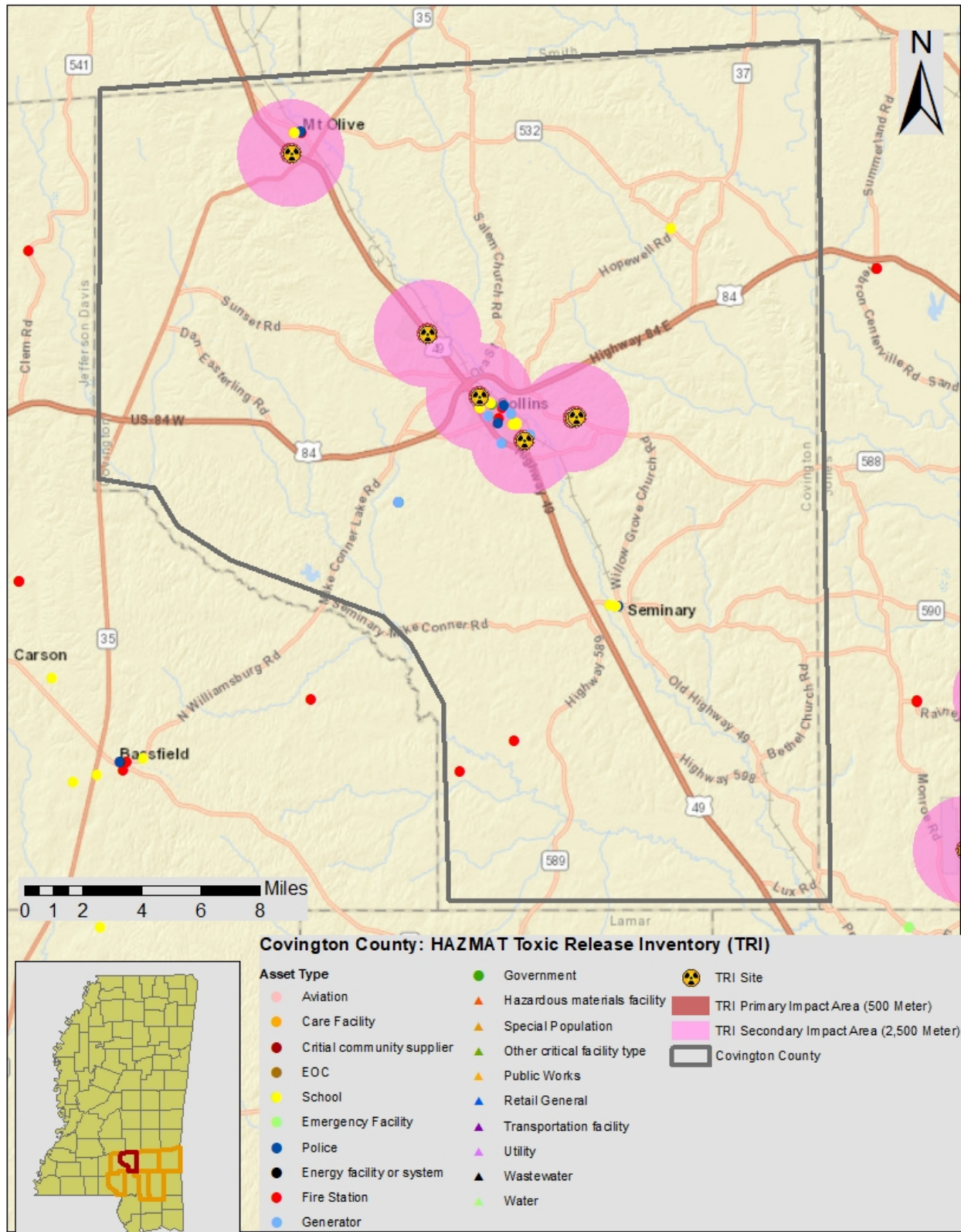
HAZARDOUS MATERIALS INCIDENT

Although historical evidence and existing Toxic Release Inventory sites indicate that Covington County is susceptible to hazardous materials events, there are few reports of damage.

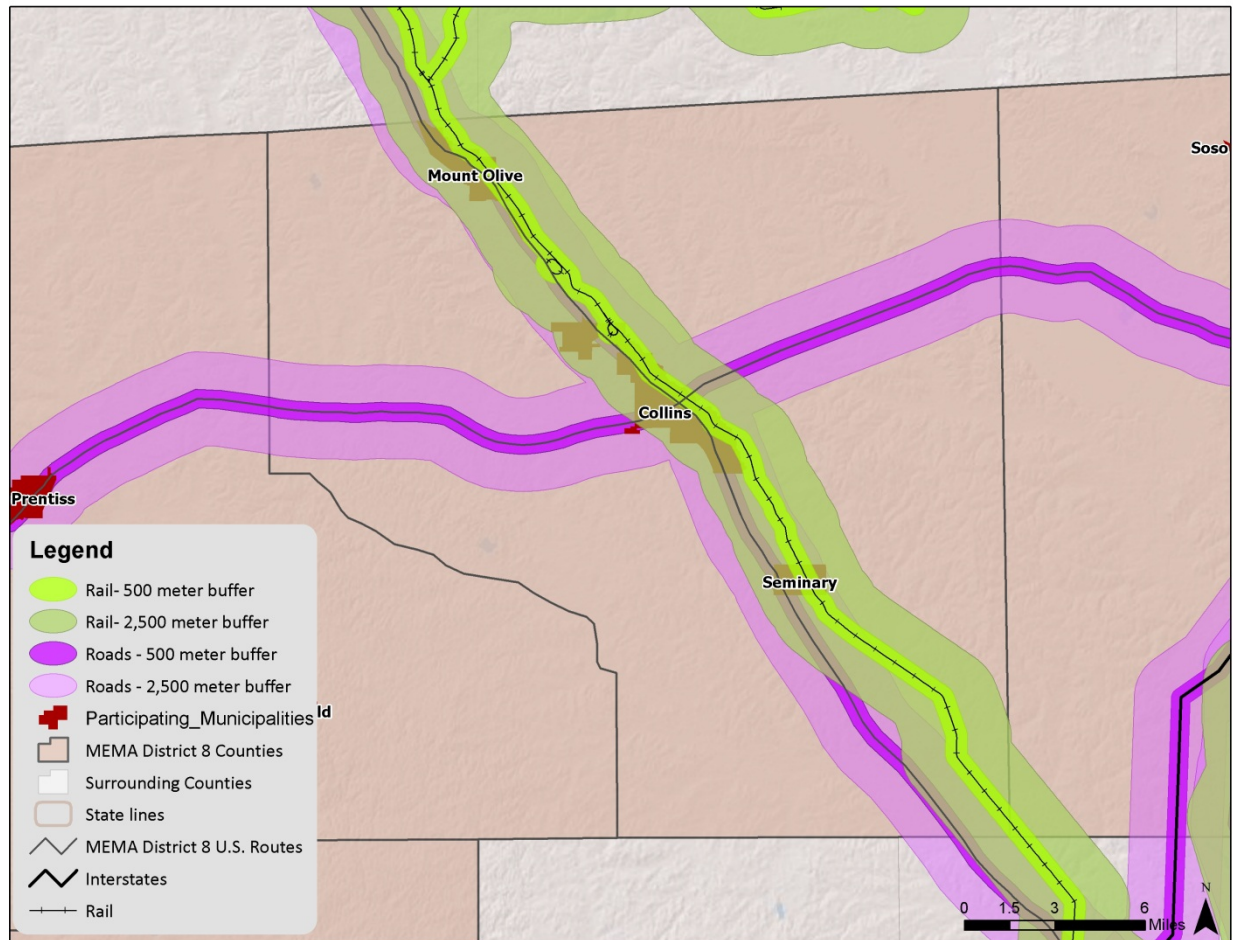
Most hazardous materials incidents that occur are contained and suppressed before destroying any property or threatening lives. However, they can have a significant negative impact. Such events can cause multiple deaths, completely shut down facilities for 30 days or more, and cause more than 50 percent of affected properties to be destroyed or suffer major damage. In a hazardous materials incident, solid, liquid, and/or gaseous contaminants may be released from fixed or mobile containers. Weather conditions will directly affect how the hazard develops. Certain chemicals may travel through the air or water, affecting a much larger area than the point of the incidence itself. Non-compliance with fire and building codes, as well as failure to maintain existing fire and containment features, can substantially increase the damage from a hazardous materials release. The duration of a hazardous materials incident can range from hours to days. Warning time is minimal to none.

In order to conduct the vulnerability assessment for this hazard, GIS analysis was used for fixed and mobile areas. In both scenarios, two sizes of buffers—500 and 2,500 meters—were used. These areas are assumed to respect the different levels of effect: immediate (primary) and secondary. Primary and secondary impact sites were selected based on guidance from FEMA 426, Reference Manual to Mitigate Potential Terrorist Attacks Against Buildings and engineering judgment. For the fixed site analysis, geo-referenced TRI listed toxic sites in Covington County, along with buffers, were used for analysis as shown in **Figure A.17**. For the mobile analysis, the major roads (Interstate highway, U.S. highway, and State highway) and railroads, where hazardous materials are primarily transported that could adversely impact people and buildings, were used for the GIS buffer analysis. **Figure A.18** shows the areas used for mobile toxic release buffer analysis. The mobile toxic release buffer data did not change since the last plan update.

FIGURE A.7 : TRI SITES WITH BUFFERS IN COVINGTON COUNTY



Source: EPA

FIGURE A.8 : MOBILE HAZMAT BUFFERS IN COVINGTON COUNTY

Social Vulnerability

Given high susceptibility across the entire county, it is assumed that the total population is at risk to a hazardous materials incident. It should be noted that areas of population concentration may be at an elevated risk due to a greater burden to evacuate population quickly.

Critical Facilities

Fixed Site Analysis:

The critical facility analysis for fixed TRI sites revealed that there are two critical facilities that would be impacted by only the 500M HAZMAT risk zone, which are valued at over \$5.2M. There are 16 critical facilities that would be impacted by the 2500M HAZMAT risk zone, valued at over \$30M. A list of specific critical facilities and their associated risk can be found in **Table A.32** at the end of this section.

Mobile Analysis:

The critical facility analysis for transportation corridors in Covington County revealed that there are 9 critical facilities located in the 500M Highway mobile HAZMAT buffer areas valued at over \$12M, and there are 14 critical facilities located in the 500M Railway mobile HAZMAT buffer areas valued at approximately \$40.8M.

Expanding to a 2500M HAZMAT risk zone reveals that all critical facilities located in the highway mobile HAZMAT buffer areas are vulnerable, and there are 19 critical facilities located in the railway mobile HAZMAT buffer area that are vulnerable. A list of specific critical facilities and their associated risk can be found in **Table A.32** at the end of this section.

In conclusion, a hazardous material incident has the potential to impact many existing and future buildings, critical facilities, and populations in Covington County. Those areas in a primary buffer are at the highest risk, though all areas carry some vulnerability due to variations in conditions that could alter the impact area (i.e., direction and speed of wind, volume of release, etc). Further, incidents from neighboring counties could also impact the county and participating jurisdictions.

CONCLUSIONS ON HAZARD VULNERABILITY

Table A.32 shows the critical facilities vulnerable to additional hazards analyzed in this section. The table lists those assets that are determined to be exposed to each of the identified hazards (marked with an “X”).

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TABLE A.32: AT-RISK CRITICAL FACILITIES IN COVINGTON COUNTY

		ATMOSPHERIC							GEOLOGIC			HYDROLOGIC			OTHER						
FACILITY NAME	FACILITY TYPE	Drought	Hailstorm	Hurricane and Tropical Storm	Lightning	Thunderstorm	Tornado	Winter Storm and Freeze	Earthquake	Landslide – Mod	Landslide- High	Dam and Levee Failure ¹⁷	Flood – 100 yr	Flood – 500 yr	Fixed HAZMAT 500m	Fixed HAZMAT 2,500 meter	Mobile HZMT Roads 500 METER	Mobile HZMT Roads 2,500 meter	Mobile HZMT Rails 500 METER	Mobile HZMT Rails 2,500 meter	Wildfire
COVINGTON COUNTY																					
City of Collins Fire Department	Fire Department	X	X	X	X	X	X	X	X							X	X	X		X	Non-burnable
Collins City Police Dept	Police Station	X	X	X	X	X		X	X				X			X	X	X	X	X	Non-burnable
COLLINS ELEMENTARY	School	X	X	X	X	X		X	X				X			X	X	X	X	X	Non-burnable
COLLINS FIRE STATION	Fire Station	X	X	X	X	X		X	X							X	X	X	X	X	Non-burnable
COLLINS HIGH SCHOOL	School	X	X	X	X	X		X	X							X		X	X	X	Non-burnable
COLLINS MAINTENANCE BUILDING	Government	X	X	X	X	X		X	X				X			X	X	X	X	X	Non-burnable
COLLINS MIDDLE SCHOOL	School	X	X	X	X	X		X	X						X	X	X	X		X	Non-burnable
COLLINS POLICE STATION	Police Station	X	X	X	X	X		X	X									X			Moderate
COLLINS POLICE STATION	Generator	X	X	X	X	X		X	X									X			Moderate
COVINGTON CO VOCATIONAL TECHNICAL	School	X	X	X	X	X		X	X							X		X	X	X	Non-burnable
COVINGTON COUNTY ALTERNATIVE SCHOOL	School	X	X	X	X	X		X	X							X		X	X	X	Non-burnable
Covington County Sheriff	Police Station	X	X	X	X	X	X	X	X							X	X	X		X	Non-

¹⁷ As noted previously, these facilities could be at risk to dam failure if located in an inundation area. Data was not available to conduct such an analysis. There was no local knowledge of these facilities being at risk to dam failure. As additional data becomes available, more in-depth analysis will be conducted.

FACILITY NAME	FACILITY TYPE	ATMOSPHERIC							GEOLOGIC			HYDROLOGIC			OTHER						
		Drought	Hailstorm	Hurricane and Tropical Storm	Lightning	Thunderstorm	Tornado	Winter Storm and Freeze	Earthquake	Landslide – Mod	Landslide- High	Dam and Levee Failure ¹⁷	Flood – 100 yr	Flood – 500 yr	Fixed HAZMAT 500m	Fixed HAZMAT 2,500 meter	Mobile HZMT Roads 500 METER	Mobile HZMT Roads 2,500 meter	Mobile HZMT Rails 500 METER	Mobile HZMT Rails 2,500 meter	Wildfire
																					burnable
EOC	Generator	X	X	X	X	X	X	X	X				X			X		X	X	X	High
HOPEWELL ELEMENTARY SCHOOL	School	X	X	X	X	X		X	X												Non-burnable
LAGOON	Generator	X	X	X	X	X		X	X						X	X		X	X	X	Moderate
WATER WELL 1	Generator	X	X	X	X	X		X	X				X			X	X	X		X	Moderate
WATER WELL 4	Generator	X	X	X	X	X		X	X							X	X	X		X	Non-burnable
MOUNT OLIVE ATTENDANCE CENTER	School	X	X	X	X	X		X	X							X		X	X	X	Non-burnable
CLEM VOLUNTEER FIRE DEPT	Fire Station	X	X	X	X	X		X	X												High
Hot Coffee Volunteer Fire Department	Fire Department	X	X	X	X	X		X	X							X		X	X	X	Non-burnable
Mt Olive City Police Dept	Police Station	X	X	X	X	X		X	X							X		X	X	X	Non-burnable
East Covington Volunteer Fire Department	Fire Department	X	X	X	X	X		X	X												Moderate
SEMINARY ATTENDANCE CENTER	School	X	X	X	X	X		X	X									X	X	X	Non-burnable
SEMINARY BAPTIST KINDERGARTEN	School	X	X	X	X	X		X	X									X	X	X	Non-burnable
Seminary Town Police Dept	Police Station	X	X	X	X	X		X	X									X	X	X	Non-burnable
Southwest Covington Volunteer Fire Department	Fire Department	X	X	X	X	X		X	X							X	X	X		X	Very High

A.4 COVINGTON COUNTY CAPABILITY ASSESSMENT

This subsection discusses the capability of Covington County to implement hazard mitigation activities. More information on the purpose and methodology used to conduct the assessment can be found in Section 7: *Capability Assessment*.

A.4.1 Planning and Regulatory Capability

Table A.41 provides a summary of the relevant local plans, ordinances, and programs already in place or under development for Covington County. A checkmark (✓) indicates that the given item is currently in place and being implemented. An asterisk (*) indicates that the given item is currently being developed for future implementation. Each of these local plans, ordinances, and programs should be considered available mechanisms for incorporating the requirements of the MEMA District 8 Regional Hazard Mitigation Plan.

TABLE A.271: RELEVANT PLANS, ORDINANCES, AND PROGRAMS

Planning Tool/Regulatory Tool	Hazard Mitigation Plan	Comprehensive Land Use Plan	Floodplain Management Plan	Open Space Management Plan (Parks & Rec/Greenway Plan)	Stormwater Management Plan/Ordinance	Natural Resource Protection Plan	Flood Response Plan	Emergency Operations Plan	Continuity of Operations Plan	Evacuation Plan	Disaster Recovery Plan	Capital Improvements Plan	Economic Development Plan	Historic Preservation Plan	Flood Damage Prevention Ordinance	Zoning Ordinance	Subdivision Ordinance	Unified Development Ordinance	Post-Disaster Redevelopment Ordinance	Building Code	Fire Code	National Flood Insurance Program (NFIP)	NFIP Community Rating System
COVINGTON COUNTY	✓						✓	✓				✓		✓								✓	
Collins	✓			✓			✓					✓		✓	✓	✓				✓	✓	✓	
Mount Olive	✓	✓		✓			✓					✓		✓	✓	✓						✓	
Seminary	✓			✓			✓					✓		✓	✓					✓		✓	

A more detailed discussion on the county's planning and regulatory capabilities follows.

EMERGENCY MANAGEMENT

Hazard Mitigation Plan

Covington County has previously adopted a hazard mitigation plan. The City of Collins, the Town of Mount Olive, and the Town of Seminary were also included in this plan.

Emergency Operations Plan

Covington County maintains an emergency operations plan through its Emergency Management Agency. The City of Collins, the Town of Mount Olive, and the Town of Seminary are each covered by this plan.

GENERAL PLANNING**Comprehensive Land Use Plan**

Covington County has not adopted a county comprehensive land use plan. However, the Town of Mount Olive adopted a community development plan in 1978.

Zoning Ordinance

Covington County does not have a zoning ordinance in place. However, the City of Collins and the Town of Mount Olive have zoning ordinances that were adopted in 1987 and 1978, respectively.

Subdivision Ordinance

Covington County does not have a subdivision ordinance in place. However, the City of Collins and the Town of Mount Olive adopted subdivision regulations in 1973 and 1978, respectively.

Building Codes, Permitting, and Inspections

Covington County has not adopted a building code. However, the City of Collins and the Town of Seminary have both adopted building codes.

FLOODPLAIN MANAGEMENT

Table A.22 provides NFIP policy and claim information for each participating jurisdiction in Covington County.

TABLE A.28: NFIP POLICY AND CLAIM INFORMATION

Jurisdiction	Date Joined NFIP	Current Effective Map Date	NFIP Policies in Force	Insurance in Force	Closed Claims	Total Payments to Date
COVINGTON COUNTY†	12/15/90	4/5/10	63	\$7,483,100	27	\$357,325
Collins	8/5/85	4/5/10(M)	16	\$3,121,600	18	\$124,503
Mount Olive	9/15/89	4/5/10	1	\$54,200	3	\$46,982
Seminary	4/5/10	4/5/10(M)	0	\$0	0	\$0

†Includes unincorporated areas of county only

(M) – No Elevation Determined, All Zone A, C and X

Source: NFIP Community Status information as of 3/31/13; NFIP claims and policy information as of 5/15/13

Flood Damage Prevention Ordinance

All communities participating in the NFIP are required to adopt a local flood damage prevention ordinance. Covington County, the City of Collins, the Town of Mount Olive, and the Town of Seminary all participate in the NFIP and have adopted flood damage prevention ordinances.

Open Space Management Plan

Covington County, the City of Collins, the Town of Mount Olive, and the Town of Seminary are all included in the Southern Mississippi Planning and Development District (SMPDD) Regional Open Space Plan that was written in 1973.

A.4.2 Administrative and Technical Capability

Table A.23 provides a summary of the capability assessment results for Covington County with regard to relevant staff and personnel resources. A checkmark (✓) indicates the presence of a staff member(s) in that jurisdiction with the specified knowledge or skill.

TABLE A.29: RELEVANT STAFF / PERSONNEL RESOURCES

Staff / Personnel Resource	Planners with knowledge of land development/land management practices	Engineers or professionals trained in construction practices related to buildings and/or infrastructure	Planners or engineers with an understanding of natural and/or human-caused hazards	Emergency Manager	Floodplain Manager	Land Surveyors	Scientists familiar with the hazards of the community	Staff with education or expertise to assess the community's vulnerability to hazards	Personnel skilled in GIS and/or Hazus	Resource development staff or grant writers
COVINGTON COUNTY		✓	✓	✓	✓		✓	✓		✓
Collins		✓		✓	✓		✓	✓		✓
Mount Olive		✓		✓	✓		✓	✓		✓
Seminary		✓		✓	✓		✓	✓		✓

Credit for having a floodplain manager was given to those jurisdictions that have a flood damage prevention ordinance, and therefore an appointed floodplain administrator, regardless of whether the appointee was dedicated solely to floodplain management. Credit was given for having a scientist familiar with the hazards of the community if a jurisdiction has a Cooperative Extension Service or Soil and Water Conservation Department. Credit was also given for having staff with education or expertise to assess the community's vulnerability to hazards if a staff member from the jurisdiction was a participant on the existing hazard mitigation plan's planning committee.

A.4.3 Fiscal Capability

Table A.24 provides a summary of the results for Covington County with regard to relevant fiscal resources. A checkmark (✓) indicates that the given fiscal resource is locally available for hazard

mitigation purposes (including match funds for state and federal mitigation grant funds) according to the previous county hazard mitigation plan.

TABLE A.30: RELEVANT FISCAL RESOURCES

Fiscal Tool / Resource	Capital Improvement Programming	Community Development Block Grants (CDBG)	Special Purpose Taxes (or taxing districts)	Gas/Electric Utility Fees	Water/Sewer Fees	Stormwater Utility Fees	Development Impact Fees	General Obligation, Revenue, and/or Special Tax Bonds	Partnering Arrangements or Intergovernmental Agreements
COVINGTON COUNTY		✓							✓
Collins	✓	✓							✓
Mount Olive	✓	✓							✓
Seminary		✓							✓

A.4.4 Political Capability

During the months immediately following a disaster, local public opinion in Covington County is more likely to shift in support of hazard mitigation efforts.

A.5 COVINGTON COUNTY MITIGATION STRATEGY

This subsection provides the blueprint for Covington County to follow in order to become less vulnerable to its identified hazards. It is based on general consensus of the Regional Hazard Mitigation Council and the findings and conclusions of the capability assessment and risk assessment. Additional Information can be found in Section 8: *Mitigation Strategy* and Section 9: *Mitigation Action Plan*.

A.5.1 Mitigation Goals

Covington County developed five mitigation goals in coordination with the other participating MEMA District 8 Region jurisdictions. The regional mitigation goals are presented in **Table A.25**.

TABLE A.31: MEMA DISTRICT 8 REGIONAL MITIGATION GOALS

	Goal
Goal #1	Develop a sustainable, comprehensive mitigation program to ensure safer communities.

	Goal
Goal #2	Reduce or avoid loss of life, injury, and damage to property, the economy, and the environment.
Goal #3	Enhance preparedness and effective response to hazards.
Goal #4	Strengthen and improve local mitigation capabilities.
Goal #5	Increase public awareness of hazard mitigation, hazard risk, and protective measures that can be taken to minimize potential loss and damage.

A.5.2 Mitigation Action Plan

The mitigation actions proposed by Covington County, the City of Collins, the Town of Mount Olive, and the Town of Seminary are listed in the following individual Mitigation Action Plans.

Covington County Mitigation Action Plan

Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2019 Action Implementation Status
Prevention								
P-1	Identify high risk areas where hazards are most likely to occur.	All	High	N/A	No additional cost	County	Annual plan review	Completed but ongoing
P-2	Site-locate vulnerable population on a County-wide map.	Multiple	High	Area Agency on Aging, USDA Rural Dev., COPS, FIRE	Unknown	County EMA, County BOS	Ongoing	Completed but ongoing
P-3	Consider adoption of flood damage prevention ordinance in Covington County.	FL	High	Self-funded	No cost	County, County Floodplain Administrator	Ongoing	Implemented April 2008 ongoing implementation
P-4	Consider adoption of subdivision regulations.	TH, FL, HU, TS	Medium	Self-funded	No cost	County	Ongoing	Ongoing
P-5	Continue to maintain and upgrade the County's drainage facilities.	HU, TS, FL, BH	High	Self-funded	Unknown	County BOS, County Road Crews	Annual review	Ongoing
P-6	Consider adoption of a comprehensive drainage plan.	FL, TS, HU	Medium	CDBG, Small Muni. Grant, MSDA, USDA Rural Dev.	Unknown	County	Within 5 years	Deferred until funding can be allocated
P-7	Map the easements and rights-of-way of roadways and drainage ways.	All	Low to Medium	CDBG, Small Muni. Grant, MSDA, USDA Rural Dev.	Unknown	County	Within 5 years	Deferred until funding can be allocated

Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2019 Action Implementation Status
P-8	Support the development of a shared geographic data system for land use and site planning.	All	Medium to High	Self-funded	No additional cost	County	Within 2 years	Deferred until funding can be allocated
P-9	Develop a comprehensive development plan.	All	High	CDBG, MSDA	Unknown	County	Within 2 years	Deferred until funding can be allocated
P-10	Incorporate the hazard mitigation plan into the comprehensive emergency management plan.	All	Medium	N/A	No additional cost	County	Ongoing	Implemented and ongoing
Property Protection								
PP-1	Promote alternative construction techniques such as the building of "safe rooms" in new construction and when remodeling existing structures.	HU, TS, TO, TH	Medium	Self-funded	No additional cost	County	Ongoing	Implemented and ongoing
PP-2	Ensure that structures in floodplain areas are elevated.	FL	High	Self-funded	No additional cost	County	Ongoing	Implemented and ongoing
PP-3	Ensure that new public buildings are designed and built to hurricane resistant building codes.	HU, TS, TO, HW	High	Self-funded	No additional cost	County	Within 2 years	Deferred until funding can be allocated
PP-4	Continue to retrofit public buildings and other critical facilities to withstand natural hazards.	All	High	HMGP	Unknown	County	Within 2 years; Next round of HMGP funding	Deferred
PP-5	Ensure secure operation of water wells, water tanks and wastewater treatment facilities.	All	High	HMGP, USDA Rural Dev., CDBG, Small Muni. Grant	Unknown	County	Ongoing	Implemented and ongoing
Natural Resource Protection								
NRP-1	Preserve natural wetlands and riparian areas through acquisition of conversation easements.	HU, TS, FL	Low to Medium	Donation	Low or no cost	MS Land Trust, Land Trust for MS Coastal Plain, County	Within 5 years	Deferred until funding can be allocated

Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2019 Action Implementation Status
Emergency Services								
ES-1	Encourage participation by staff and elected officials in voluntary or extracurricular activities related to emergency management, disaster preparedness, civil defense, or other hazard mitigation activities.	All	Medium	Self-funded, MEMA	Low or no cost	County EMA	Ongoing	Implemented and ongoing
ES-2	Establish a notification procedure for populations in high risk areas.	All	Medium	Self-funded	No additional cost	County EMA, County BOS	Ongoing	Implemented and ongoing
ES-3	Survey the existing emergency shelters and study the feasibility of expanding the capacity of shelters.	All	High	HMGP	Unknown	County EMA, County	Within 2 years	Deferred until funding can be allocated
ES-4	Explore potential sites for a new shelter and/or special needs shelter.	TO, HU, TS, FL	High	HMGP	Unknown	County, EMA, County	Within 2 years	Deferred until funding can be allocated
ES-5	Improve disaster communication systems within the County.	All	High	Unknown	Unknown	County EMA	Contingent on funding	Ongoing task
ES-6	Consider generators for local radio station service areas and /or other critical facilities	TO, HU, TS	High	HMGP	Unknown	County EMA	Contingent upon funding	Contingent on funding
ES-7	Install warning sirens in the County.	TO, HU	High	HMGP	Unknown	County EMA	Contingent upon funding	Added two sirens FY '13 and added eight sirens in 2016. Action is ongoing.
ES-8	Enhance or upgrade emergency response communications or Central Dispatch and other communications equipment.	All	High	Unknown	Unknown	County EMA	Contingent on funding	Planning upgrade 11 of 17. Action is ongoing.
ES-9	Explore upgrade/enhancement of 911 system in Covington County.	All	Medium	HMGP	Unknown	County EMA, County	Within 2 years; Contingent upon funding	Planning upgrade in 8 years

Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2019 Action Implementation Status
ES-10	Explore potential to install Reverse 911 system.	All	Low to Medium	HMGP	Unknown	County EMA, County	Within 5 years; Contingent upon funding	Deferred until funding becomes available
ES-11	Coordinate with neighboring jurisdictions to ensure consistency of evacuation plans.	FL, HU, TS, Others	Medium	Self-funded	No additional cost	County BOS, County EMA	Ongoing	Implemented, Evacuation plans/maps available upon request
ES-12	Enhance identification of evacuation routes through the distribution of MDOT maps.	FL, HU, TS, Others	High	Self-funded	No additional cost	County EMA	Ongoing	Implemented, Evacuation plans/maps available upon request
ES-13	Ensure continuity of utility services for public buildings and other critical facilities.	All	High	HGMP	Unknown	County	Ongoing	Implemented, Update critical facilities list on an annual basis
ES-14	Develop a government services continuity plan.	All	Medium	USDA Rural Dev., CDBG, Small Muni. Grant	Unknown	County	Within 5 years; Annual review	Implemented, FY'13 develop COOP/COG Plan. Revisions made in 2019. Maintained and ongoing action
ES-15	Host a meeting to review Covington County Comprehensive Emergency Management Plan.	TT	Medium	Self-funded	No additional cost	County	Ongoing	Updated CEMP 2013. Newly adopted in 2019
ES-16	Actively search for and identify funding sources for the enhancement of emergency response abilities of Fire and Sheriff's Departments.	TT	Medium to High	DHS, SFER, COPS, FIRE	Unknown	County	Ongoing	Implemented, as grants/funds become available
ES-17	Explore continuing education programs/ opportunities for first responders, especially in hazardous materials training.	Range	Medium	Self-funded, MEMA	Low cost	County	Within 2 years	Implemented, as grants/funds become available

Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2019 Action Implementation Status
Structural Projects								
SP-1	Address cross-jurisdictional issues related to response, recovery and mitigation on key projects with overlapping boundaries.	HU, TS, FL, RH	Low to Medium	Self-funded	No additional cost	County		Delete
SP-2	Acquisition / Demolition / Relocation or Elevation, Reconstruction of flood prone structures	FL	Medium	FEMA, MEMA,	TBD	County EMA	2024	New
SP-2	Individual Saferooms	TS, T	Medium	FEMA, MEMA	TBD	County EMA	2024	New
Public Education and Awareness								
PEA-1	Explore continuing education programs/ opportunities for staff and elected officials.	Range	Medium	Self-funded, MEMA	Low cost	County	Ongoing	Implemented, Started FY'09. Ongoing action
PEA-2	Provide education and outreach materials to citizens and visitors.	All	High	Self-funded	No cost	County EMA	Ongoing	Implemented and ongoing
PEA-3	Encourage development of Family Disaster Plans.	All	High	Self-funded, COPS FIRE	Low or no cost	County EMA	Ongoing	Implemented through annual presentations/ Workshops. Ongoing action
PEA-4	Expand outreach information to property owners regarding retrofitting and flood-proofing techniques through community workshops, brochures, and newspaper articles.	FL, Multiple	High	Self-funded	No additional cost	County EMA, County	Ongoing	Implemented through annual presentations/ Workshops. Ongoing action
PEA-5	Provide education/outreach to communities to encourage participation in the National Flood Insurance Program.	FL	High	N/A	No additional cost	County/Towns/ City	Ongoing	Implemented, County/Towns/ City has adopted NFIP

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Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2019 Action Implementation Status
PEA-6	Encourage participation in the Community Rating System of the NFIP.	FL, HU, TS, TH, HW	Medium	USDA Rural Dev., CDBG, Small Muni. Grant, FEMA, Others	Unknown	County	Within 3 years	Deferred
PEA-7	Encourage businesses to develop business continuity or contingency operating plans.	CH	High	Self-funded, Chamber of Comm., SCORE	Low or no cost	County	Ongoing	Implemented,, Education at EMA annual workshop. Ongoing action
FL = Flood HU = Hurricane TS = Tropical Storm TO = Tornado TH = Thunderstorm BH = Biological Hazards HW = High Winds TT = Transportation and Technological Hazards RH = Roadway Hazards CH = Civil Hazards County EMA = Covington County Emergency Management Agency County BOS = Covington County Board of Supervisors								

City of Collins Mitigation Action Plan

Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2019 Action Implementation Status
Prevention								
P-1	Identify high risk areas where hazards are most likely to occur.	All	High	N/A	No additional cost	County	Annual plan review	Completed but ongoing
P-2	Site-locate vulnerable population on a County-wide map.	Multiple	High	Area Agency on Aging, USDA Rural Dev., COPS, FIRE	Unknown	County EMA, County BOS	Ongoing	Completed but ongoing
P-3	Strictly enforce the flood damage prevention ordinance.	FL	High	Self-funded	No cost	County, County Floodplain Administrator	Ongoing	Implemented April 2008 ongoing implementation
P-4	Consider adoption of subdivision regulations.	TH, FL, HU, TS	Medium	Self-funded	No cost	County	Ongoing	Ongoing
P-5	Continue to maintain and upgrade the County's drainage facilities.	HU, TS, FL, BH	High	Self-funded	Unknown	County BOS, County Road Crews	Annual review	Ongoing
P-6	Consider adoption of a comprehensive drainage plan.	FL, TS, HU	Medium	CDBG, Small Muni. Grant, MSDA, USDA Rural Dev.	Unknown	County	Within 5 years	Deferred until funding can be allocated
P-7	Map the easements and rights-of-way of roadways and drainage ways.	All	Low to Medium	CDBG, Small Muni. Grant, MSDA, USDA Rural Dev.	Unknown	County	Within 5 years	Deferred until funding can be allocated

Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2019 Action Implementation Status
P-8	Support the development of a shared geographic data system for land use and site planning.	All	Medium to High	Self-funded	No additional cost	County, City	Within 2 years	Deferred until funding can be allocated
P-9	Develop a comprehensive development plan.	All	High	CDBG, MSDA	Unknown	County, City	Within 2 years	Deferred until funding can be allocated
P-10	Incorporate the hazard mitigation plan into the comprehensive plan.	All	Medium	N/A	No additional cost	County, City	Ongoing	Implemented and ongoing
Property Protection								
PP-1	Promote alternative construction techniques such as the building of "safe rooms" in new construction and when remodeling existing structures.	HU, TS, TO, TH	Medium	Self-funded	No additional cost	County, City	Ongoing	Implemented and ongoing
PP-2	Ensure that structures in floodplain areas are elevated.	FL	High	Self-funded	No additional cost	County, City	Ongoing	Implemented and ongoing
PP-3	Ensure that new public buildings are designed and built to hurricane resistant building codes.	HU, TS, TO, HW	High	Self-funded	No additional cost	County, City	Within 2 years	Deferred until funding can be allocated
PP-4	Continue to retrofit public buildings and other critical facilities to withstand natural hazards.	All	High	HMGP	Unknown	County, City	Within 2 years; Next round of HMGP funding	Deferred
PP-5	Ensure secure operation of water wells, water tanks and wastewater treatment facilities.	All	High	HMGP, USDA Rural Dev., CDBG, Small Muni. Grant	Unknown	County, City	Ongoing	Implemented and ongoing

Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2019 Action Implementation Status
Natural Resource Protection								
NRP-1	Preserve natural wetlands and riparian areas through acquisition of conversation easements.	HU, TS, FL	Low to Medium	Donation	Low or no cost	MS Land Trust, Land Trust for MS Coastal Plain, County, City	Within 5 years	Deferred until funding can be allocated
Emergency Services								
ES-1	Encourage participation by staff and elected officials in voluntary or extracurricular activities related to emergency management, disaster preparedness, civil defense, or other hazard mitigation activities.	All	Medium	Self-funded, MEMA	Low or no cost	County EMA	Ongoing	Implemented and ongoing
ES-2	Establish a notification procedure for populations in high risk areas.	All	Medium	Self-funded	No additional cost	County EMA, County BOS, City	Ongoing	Implemented and ongoing
ES-3	Survey the existing emergency shelters and study the feasibility of expanding the capacity of shelters.	All	High	HMGP	Unknown	County EMA, City	Within 2 years	Deferred until funding can be allocated
ES-4	Explore potential sites for a new special needs shelter.	TO, HU, TS, FL	High	HMGP	Unknown	County, EMA, City	Within 2 years	Deferred until funding can be allocated
ES-5	Improve disaster communication systems within the County.	All	High	Unknown	Unknown	County EMA	Contingent on funding	Ongoing task
ES-6	Consider generators for local radio station service areas.	TO, HU, TS	High	HMGP	Unknown	County EMA	Contingent upon funding	Contingent on funding
ES-7	Install warning sirens in the County.	TO, HU	High	HMGP	Unknown	County EMA	Contingent upon funding	Added two sirens FY '13 and added eight sirens in 2016. Action is ongoing.
ES-8	Enhance Central Dispatch and other communications equipment.	All	High	Unknown	Unknown	County EMA	Contingent on funding	Planning upgrade 11 of 17. Action is ongoing.

Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2019 Action Implementation Status
ES-9	Explore upgrade/enhancement of 911 system in Covington County.	All	Medium	HMGP	Unknown	County EMA, City	Within 2 years; Contingent upon funding	Planning upgrade in 8 years
ES-10	Explore potential to install Reverse 911 system.	All	Low to Medium	HMGP	Unknown	County EMA, City	Within 5 years; Contingent upon funding	Deferred until funding becomes available
ES-11	Coordinate with neighboring jurisdictions to ensure consistency of evacuation plans.	FL, HU, TS, Others	Medium	Self-funded	No additional cost	County BOS, County EMA, City	Ongoing	Implemented, Evacuation plans/maps available upon request
ES-12	Enhance identification of evacuation routes through the distribution of MDOT maps.	FL, HU, TS, Others	High	Self-funded	No additional cost	County EMA	Ongoing	Implemented, Evacuation plans/maps available upon request
ES-13	Ensure continuity of utility services for public buildings and other critical facilities.	All	High	HGMP	Unknown	County, City	Ongoing	Implemented, Update critical facilities list on an annual basis
ES-14	Develop a government services continuity plan.	All	Medium	USDA Rural Dev., CDBG, Small Muni. Grant	Unknown	County, City	Within 5 years; Annual review	Implemented, FY'13 develop COOP/COG Plan. Revisions made in 2019. Maintained and ongoing action
ES-15	Host a meeting to review Covington County Comprehensive Emergency Management Plan.	TT	Medium	Self-funded	No additional cost	City	Ongoing	Updated CEMP 2013. Newly adopted in 2019
ES-16	Actively search for and identify funding sources for the enhancement of emergency response abilities of Fire and Sheriff's Departments.	TT	Medium to High	DHS, SFER, COPS, FIRE	Unknown	County, City	Ongoing	Implemented, as grants/funds become available
ES-17	Explore continuing education programs/ opportunities for first responders, especially in hazardous materials training.	Range	Medium	Self-funded, MEMA	Low cost	City	Within 2 years	Implemented, as grants/funds become available

Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2019 Action Implementation Status
Structural Projects								
SP-1	Address cross-jurisdictional issues related to response, recovery and mitigation on key projects with overlapping boundaries.	HU, TS, FL, RH	Low to Medium	Self-funded	No additional cost	County, City		Delete
SP-2	Acquisition / Demolition / Relocation or Elevation, Reconstruction of flood prone structures	FL	Medium	FEMA, MEMA,	TBD	County EMA	2024	New
SP-2	Individual Saferooms	TS, T	Medium	FEMA, MEMA	TBD	County EMA	2024	New
Public Education and Awareness								
PEA-1	Explore continuing education programs/ opportunities for staff and elected officials.	Range	Medium	Self-funded, MEMA	Low cost	City	Ongoing	Implemented, Started FY'09. Ongoing action
PEA-2	Provide education and outreach materials to citizens and visitors.	All	High	Self-funded	No cost	County EMA	Ongoing	Implemented and ongoing
PEA-3	Encourage development of Family Disaster Plans.	All	High	Self-funded, COPS FIRE	Low or no cost	County EMA	Ongoing	Implemented through annual presentations/ Workshops. Ongoing action
PEA-4	Expand outreach information to property owners regarding retrofitting and flood-proofing techniques through community workshops, brochures, and newspaper articles.	FL, Multiple	High	Self-funded	No additional cost	County EMA, City	Ongoing	Implemented through annual presentations/ Workshops. Ongoing action
PEA-5	Provide education/outreach to communities to encourage participation in the National Flood Insurance Program.	FL	High	N/A	No additional cost	County/Towns/ City	Ongoing	Implemented, County/Towns/ City has adopted NFIP

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Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2019 Action Implementation Status
PEA-6	Encourage participation in the Community Rating System of the NFIP.	FL, HU, TS, TH, HW	Medium	USDA Rural Dev., CDBG, Small Muni. Grant, FEMA, Others	Unknown	County, City	Within 3 years	Deferred
PEA-7	Encourage businesses to develop business continuity or contingency operating plans.	CH	High	Self-funded, Chamber of Comm., SCORE	Low or no cost	County, City	Ongoing	Implemented,, Education at EMA annual workshop. Ongoing action
FL = Flood HU = Hurricane TS = Tropical Storm TO = Tornado TH = Thunderstorm BH = Biological Hazards HW = High Winds TT = Transportation and Technological Hazards RH = Roadway Hazards CH = Civil Hazards County EMA = Covington County Emergency Management Agency County BOS = Covington County Board of Supervisors								

Town of Mount Olive Mitigation Action Plan

Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2019 Action Implementation Status
Prevention								
P-1	Identify high risk areas where hazards are most likely to occur.	Low to Medium	N/A	No additional costs	County, Town	Within 5 years	Annual plan review	Completed but ongoing
P-2	Site-locate vulnerable population on a County-wide map.	Medium to High	Self-funded	No additional cost	County, Town	Within 2 years	Ongoing	Completed but ongoing
P-3	Strictly enforce the flood damage prevention ordinances.	High	Self-funded	No cost	County, Town	Within 2 years	Ongoing	Implemented April 2008 ongoing implementation
P-4	Consider adoption of subdivision regulations.	Medium	Self-funded	No additional cost	County, Town	Concurrent with prep. of Comp Plan	Ongoing	Ongoing
P-5	Continue to maintain and upgrade the County's drainage facilities.	Low to Medium	Self-funded	No cost	County, Town	Within 5 years	Annual review	Ongoing
P-6	Consider adoption of a comprehensive drainage plan.	Medium to High	Self-funded	No additional cost	County, Town	Within 2 years	Within 5 years	Deferred until funding can be allocated
P-7	Map the easements and rights-of-way of roadways and drainage ways.	High	CDBG, MSDA	Unknown	County, Town	Within 2 years	Within 5 years	Deferred until funding can be allocated
P-8	Support the development of a shared geographic data system for land use and site planning.	Medium	Self-funded	No additional cost	County, Town	Concurrent with prep. of Comp Plan	Within 2 years	Deferred until funding can be allocated
P-9	Develop a comprehensive development plan.	All	Low to Medium	CDBG, Small Muni. Grant, MSDA, USDA Rural Dev.	Unknown	County, Town	Within 2 years	Deferred until funding can be allocated

Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2019 Action Implementation Status
P-10	Incorporate the hazard mitigation plan into the comprehensive plan.	All	Medium to High	Self-funded	No additional cost	County, Town	Ongoing	Implemented and ongoing
Property Protection								
PP-1	Promote alternative construction techniques such as the building of "safe rooms" in new construction and when remodeling existing structures.	HU, TS, TO, TH	Medium	Self-funded	No additional cost	County, Town	Ongoing	Implemented and ongoing
PP-2	Ensure that structures in floodplain areas are elevated.	FL	High	Self-funded	No additional cost	County, Town	Ongoing	Implemented and ongoing
PP-3	Ensure that new public buildings are designed and built to hurricane resistant building codes.	HU, TS, TO, HW	High	Self-funded	No additional cost	County, Town	Within 2 years	Deferred until funding can be allocated
PP-4	Continue to retrofit public buildings and other critical facilities to withstand natural hazards.	All	High	HMGP	Unknown	County, Town	Within 2 years; Next round of HMGP funding	Deferred
PP-5	Ensure secure operation of water wells, water tanks and wastewater treatment facilities.	All	High	HMGP, USDA Rural Dev., CDBG, Small Muni. Grant	Unknown	County, Town	Ongoing	Implemented and ongoing
Natural Resource Protection								
NRP-1	Preserve natural wetlands and riparian areas through acquisition of conversation easements.	HU, TS, FL	Low to Medium	Donation	Low or no cost	MS Land Trust, Land Trust for MS Coastal Plain, County, Town	Within 5 years	Deferred until funding can be allocated

Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2019 Action Implementation Status
Emergency Services								
ES-1	Encourage participation by staff and elected officials in voluntary or extracurricular activities related to emergency management, disaster preparedness, civil defense, or other hazard mitigation activities.	All	Medium	Self-funded, MEMA	Low or no cost	County EMA	Ongoing	Implemented and ongoing
ES-2	Establish a notification procedure for populations in high risk areas.	All	Medium	Self-funded	No additional cost	County EMA, County BOS, Town	Ongoing	Implemented and ongoing
ES-3	Survey the existing emergency shelters and study the feasibility of expanding the capacity of shelters.	All	High	HMGP	Unknown	County EMA, Town	Within 2 years	Deferred until funding can be allocated
ES-4	Explore potential sites for a new special needs shelter.	TO, HU, TS, FL	High	HMGP	Unknown	County, EMA, Town	Within 2 years	Deferred until funding can be allocated
ES-5	Improve disaster communication systems within the County.	All	High	Unknown	Unknown	County EMA	Contingent on funding	Ongoing task
ES-6	Consider generators for local radio station service areas.	TO, HU, TS	High	HMGP	Unknown	County EMA	Contingent upon funding	Contingent on funding
ES-7	Install warning sirens in the County.	TO, HU	High	HMGP	Unknown	County EMA	Contingent upon funding	Added two sirens FY '13 and added eight sirens in 2016. Action is ongoing.
ES-8	Enhance Central Dispatch and other communications equipment.	All	High	Unknown	Unknown	County EMA	Contingent on funding	Planning upgrade 11 of 17. Action is ongoing.
ES-9	Explore upgrade/enhancement of 911 system in Covington County.	All	Medium	HMGP	Unknown	County EMA, Town	Ongoing	Updated 911 Equipment to NG911
ES-10	Explore potential to install Reverse 911 system.	All	Low to Medium	HMGP	Unknown	County EMA, Town	Within 5 years; Contingent upon funding	Deferred until funding becomes available

Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2019 Action Implementation Status
ES-11	Coordinate with neighboring jurisdictions to ensure consistency of evacuation plans.	FL, HU, TS, Others	Medium	Self-funded	No additional cost	County BOS, County EMA, Town	Ongoing	Implemented, Evacuation plans/maps available upon request
ES-12	Enhance identification of evacuation routes through the distribution of MDOT maps.	FL, HU, TS, Others	High	Self-funded	No additional cost	County EMA	Ongoing	Implemented, Evacuation plans/maps available upon request
ES-13	Ensure continuity of utility services for public buildings and other critical facilities.	All	High	HGMP	Unknown	County, Town	Ongoing	Implemented, Update critical facilities list on an annual basis. Applied for FEMA funding of new generator.
ES-14	Develop a government services continuity plan.	All	Medium	USDA Rural Dev., CDBG, Small Muni. Grant	Unknown	County, Town	Within 5 years; Annual review	Implemented, FY'13 develop COOP/COG Plan. Revisions made in 2019. Maintained and ongoing action
ES-15	Host a meeting to review Covington County Comprehensive Emergency Management Plan.	TT	Medium	Self-funded	No additional cost	Town	Ongoing	Updated CEMP 2013. Newly adopted in 2019
ES-16	Actively search for and identify funding sources for the enhancement of emergency response abilities of Fire and Sheriff's Departments.	TT	Medium to High	DHS, SFER, COPS, FIRE	Unknown	County, Town	Ongoing	Implemented, as grants/funds become available
ES-17	Explore continuing education programs/ opportunities for first responders, especially in hazardous materials training.	Range	Medium	Self-funded, MEMA	Low cost	Town	Within 2 years	Implemented, as grants/funds become available

Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2019 Action Implementation Status
Structural Projects								
SP-1	Address cross-jurisdictional issues related to response, recovery and mitigation on key projects with overlapping boundaries.	HU, TS, FL, RH	Low to Medium	Self-funded	No additional cost	County, Town		Delete
SP-2	Acquisition / Demolition / Relocation or Elevation, Reconstruction of flood prone structures	FL	Medium	FEMA, MEMA,	TBD	County EMA	2024	New
SP-2	Individual Saferooms	TS, T	Medium	FEMA, MEMA	TBD	County EMA	2024	New
Public Education and Awareness								
PEA-1	Explore continuing education programs/ opportunities for staff and elected officials.	Range	Medium	Self-funded, MEMA	Low cost	Town	Ongoing	Implemented, Started FY'09. Ongoing action
PEA-2	Provide education and outreach materials to citizens and visitors.	All	High	Self-funded	No cost	County EMA	Ongoing	Implemented and ongoing
PEA-3	Encourage development of Family Disaster Plans.	All	High	Self-funded, COPS FIRE	Low or no cost	County EMA	Ongoing	Implemented through annual presentations/ Workshops. Ongoing action
PEA-4	Expand outreach information to property owners regarding retrofitting and flood-proofing techniques through community workshops, brochures, and newspaper articles.	FL, Multiple	High	Self-funded	No additional cost	County EMA, Town	Ongoing	Implemented through annual presentations/ Workshops. Ongoing action
PEA-5	Provide education/outreach to communities to encourage participation in the National Flood Insurance Program.	FL	High	N/A	No additional cost	County/Towns/ City	Ongoing	Implemented, County/Towns/ City has adopted NFIP

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Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2019 Action Implementation Status
PEA-6	Encourage participation in the Community Rating System of the NFIP.	FL, HU, TS, TH, HW	Medium	USDA Rural Dev., CDBG, Small Muni. Grant, FEMA, Others	Unknown	County, Town	Within 3 years	Deferred
PEA-7	Encourage businesses to develop business continuity or contingency operating plans.	CH	High	Self-funded, Chamber of Comm., SCORE	Low or no cost	County, Town	Ongoing	Implemented,, Education at EMA annual workshop. Ongoing action
FL = Flood HU = Hurricane TS = Tropical Storm TO = Tornado TH = Thunderstorm BH = Biological Hazards HW = High Winds TT = Transportation and Technological Hazards RH = Roadway Hazards CH = Civil Hazards County EMA = Covington County Emergency Management Agency County BOS = Covington County Board of Supervisors								

Town of Seminary Mitigation Action Plan

Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2019 Action Implementation Status
Prevention								
P-1	Identify high risk areas where hazards are most likely to occur.	All	High	N/A	No additional cost	County, Town	Annual plan review	Completed but ongoing
P-2	Site-locate vulnerable population on a County-wide map.	Multiple	High	Area Agency on Aging, USDA Rural Dev., COPS, FIRE	Unknown	County EMA, County BOS, Town	Ongoing	Completed but ongoing
P-3	Strictly enforce the flood damage prevention ordinances.	FL	High	Self-funded	No cost	Town Floodplain Administrator	Ongoing	Implemented April 2008 ongoing implementation
P-4	Consider adoption of subdivision regulations.	TH, FL, HU, TS	Medium	Self-funded	No cost	County, Town	Ongoing	Ongoing
P-5	Continue to maintain and upgrade the County's drainage facilities.	HU, TS, FL, BH	High	Self-funded	Unknown	County BOS, County Road Crews, Town	Annual review	Ongoing
P-6	Consider adoption of a comprehensive drainage plan.	FL, TS, HU	Medium	CDBG, Small Muni. Grant, MSDA, USDA Rural Dev.	Unknown	County, Town	Within 5 years	Deferred until funding can be allocated
P-7	Map the easements and rights-of-way of roadways and drainage ways.	All	Low to Medium	CDBG, Small Muni. Grant, MSDA, USDA Rural Dev.	Unknown	County, Town	Within 5 years	Deferred until funding can be allocated

Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2019 Action Implementation Status
P-8	Support the development of a shared geographic data system for land use and site planning.	All	Medium to High	Self-funded	No additional cost	County, Town	Within 2 years	Deferred until funding can be allocated
P-9	Develop a comprehensive development plan.	All	High	CDBG, MSDA		County, Town	Within 2 years	Deferred until funding can be allocated
P-10	Incorporate the hazard mitigation plan into the comprehensive plan.	All	Medium	N/A	No additional cost	County, Town	Ongoing	Implemented and ongoing
Property Protection								
PP-1	Promote alternative construction techniques such as the building of “safe rooms” in new construction and when remodeling existing structures.	HU, TS, TO, TH	Medium	Self-funded	No additional cost	County, Town	Ongoing	Implemented and ongoing
PP-2	Ensure that structures in floodplain areas are elevated.	FL	High	Self-funded	No additional cost	County, Town	Ongoing	Implemented and ongoing
PP-3	Ensure that new public buildings are designed and built to hurricane resistant building codes.	HU, TS, TO, HW	High	Self-funded	No additional cost	County, Town	Within 2 years	Deferred until funding can be allocated
PP-4	Continue to retrofit public buildings and other critical facilities to withstand natural hazards.	All	High	HMGP	Unknown	County, Town	Within 2 years; Next round of HMGP funding	Deferred
PP-5	Ensure secure operation of water wells, water tanks and wastewater treatment facilities.	All	High	HMGP, USDA Rural Dev., CDBG, Small Muni. Grant	Unknown	County, Town	Ongoing	Implemented and ongoing

Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2019 Action Implementation Status
Natural Resource Protection								
NRP-1	Preserve natural wetlands and riparian areas through acquisition of conversation easements.	HU, TS, FL	Low to Medium	Donation	Low or no cost	MS Land Trust, Land Trust for MS Coastal Plain, County, Town	Within 5 years	Deferred until funding can be allocated
Emergency Services								
ES-1	Encourage participation by staff and elected officials in voluntary or extracurricular activities related to emergency management, disaster preparedness, civil defense, or other hazard mitigation activities.	All	Medium	Self-funded, MEMA	Low or no cost	County EMA	Ongoing	Implemented and ongoing
ES-2	Establish a notification procedure for populations in high risk areas.	All	Medium	Self-funded	No additional cost	County EMA, County BOS, Town	Ongoing	Implemented and ongoing
ES-3	Survey the existing emergency shelters and study the feasibility of expanding the capacity of shelters.	All	High	HMGP	Unknown	County EMA, Town	Within 2 years	Deferred until funding can be allocated
ES-4	Explore potential sites for a new special needs shelter.	TO, HU, TS, FL	High	HMGP	Unknown	County, EMA, Town	Within 2 years	Deferred until funding can be allocated
ES-5	Improve disaster communication systems within the County.	All	High	Unknown	Unknown	County EMA	Contingent on funding	Ongoing task
ES-6	Consider generators for local radio station service areas.	TO, HU, TS	High	HMGP	Unknown	County EMA	Contingent upon funding	Contingent on funding
ES-7	Install warning sirens in the County.	TO, HU	High	HMGP	Unknown	County EMA	Contingent upon funding	Added two sirens FY '13 and added eight sirens in 2016. Action is ongoing.
ES-8	Enhance Central Dispatch and other communications equipment.	All	High	Unknown	Unknown	County EMA	Contingent on funding	Planning upgrade 11 of 17. Action is ongoing.

Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2019 Action Implementation Status
ES-9	Explore upgrade/enhancement of 911 system in Covington County.	All	Medium	HMGP	Unknown	County EMA, Town	Within 2 years; Contingent upon funding	Planning upgrade in 8 years
ES-10	Explore potential to install Reverse 911 system.	All	Low to Medium	HMGP	Unknown	County EMA, Town	Within 5 years; Contingent upon funding	Deferred until funding becomes available
ES-11	Coordinate with neighboring jurisdictions to ensure consistency of evacuation plans.	FL, HU, TS, Others	Medium	Self-funded	No additional cost	County BOS, County EMA, Town	Ongoing	Implemented, Evacuation plans/maps available upon request
ES-12	Enhance identification of evacuation routes through the distribution of MDOT maps.	FL, HU, TS, Others	High	Self-funded	No additional cost	County EMA	Ongoing	Implemented, Evacuation plans/maps available upon request
ES-13	Ensure continuity of utility services for public buildings and other critical facilities.	All	High	HGMP	Unknown	County, Town	Ongoing	Implemented, Update critical facilities list on an annual basis
ES-14	Develop a government services continuity plan.	All	Medium	USDA Rural Dev., CDBG, Small Muni. Grant	Unknown	County, Town	Within 5 years; Annual review	Implemented, FY'13 develop COOP/COG Plan. Revisions made in 2019. Maintained and ongoing action
ES-15	Host a meeting to review Covington County Comprehensive Emergency Management Plan.	TT	Medium	Self-funded	No additional cost	Town	Ongoing	Updated CEMP 2013. Newly adopted in 2019
ES-16	Actively search for and identify funding sources for the enhancement of emergency response abilities of Fire and Sheriff's Departments.	TT	Medium to High	DHS, SFER, COPS, FIRE	Unknown	County, Town	Ongoing	Implemented, as grants/funds become available
ES-17	Explore continuing education programs/ opportunities for first responders, especially in hazardous materials training.	Range	Medium	Self-funded, MEMA	Low cost	Town	Within 2 years	Implemented, as grants/funds become available

Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2019 Action Implementation Status
Structural Projects								
SP-1	Address cross-jurisdictional issues related to response, recovery and mitigation on key projects with overlapping boundaries.	HU, TS, FL, RH	Low to Medium	Self-funded	No additional cost	County, Town		Delete
SP-2	Acquisition / Demolition / Relocation or Elevation, Reconstruction of flood prone structures	FL	Medium	FEMA, MEMA,	TBD	County EMA	2024	New
SP-2	Individual Saferooms	TS, T	Medium	FEMA, MEMA	TBD	County EMA	2024	New
Public Education and Awareness								
PEA-1	Explore continuing education programs/ opportunities for staff and elected officials.	Range	Medium	Self-funded, MEMA	Low cost	Town	Ongoing	Implemented, Started FY'09. Ongoing action
PEA-2	Provide education and outreach materials to citizens and visitors.	All	High	Self-funded	No cost	County EMA	Ongoing	Implemented and ongoing
PEA-3	Encourage development of Family Disaster Plans.	All	High	Self-funded, COPS FIRE	Low or no cost	County EMA	Ongoing	Implemented through annual presentations/ Workshops. Ongoing action
PEA-4	Expand outreach information to property owners regarding retrofitting and flood-proofing techniques through community workshops, brochures, and newspaper articles.	FL, Multiple	High	Self-funded	No additional cost	County EMA, Town	Ongoing	Implemented through annual presentations/ Workshops. Ongoing action
PEA-5	Provide education/outreach to communities to encourage participation in the National Flood Insurance Program.	FL	High	N/A	No additional cost	County/Towns/ City	Ongoing	Implemented, County/Towns/ City has adopted NFIP

ANNEX A: COVINGTON COUNTY

Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2019 Action Implementation Status
PEA-6	Encourage participation in the Community Rating System of the NFIP.	FL, HU, TS, TH, HW	Medium	USDA Rural Dev., CDBG, Small Muni. Grant, FEMA, Others	Unknown	County, Town	Within 3 years	Deferred
PEA-7	Encourage businesses to develop business continuity or contingency operating plans.	CH	High	Self-funded, Chamber of Comm., SCORE	Low or no cost	County, Town	Ongoing	Implemented,, Education at EMA annual workshop. Ongoing action
FL = Flood HU = Hurricane TS = Tropical Storm TO = Tornado TH = Thunderstorm BH = Biological Hazards HW = High Winds TT = Transportation and Technological Hazards RH = Roadway Hazards CH = Civil Hazards County EMA = Covington County Emergency Management Agency County BOS = Covington County Board of Supervisors								

ⁱ USGS. Landslide Hazard, Retrieved August 2019 from, <https://www.usgs.gov/natural-hazards/landslide-hazards/science/rainfall-induced-landslides>

Annex B

Forrest County

This annex includes jurisdiction-specific information for Forrest County and its participating municipalities. It consists of the following five subsections:

- ❖ B.1 Forrest County Community Profile
- ❖ B.2 Forrest County Risk Assessment
- ❖ B.3 Forrest County Vulnerability Assessment
- ❖ B.4 Forrest County Capability Assessment
- ❖ B.5 Forrest County Mitigation Strategy

B.1 FORREST COUNTY COMMUNITY PROFILE

B.1.1 Geography and the Environment

Forrest County is located in south central Mississippi approximately 90-miles from Jackson, the capitol city and 50-miles from the Mississippi Gulf Coast. It comprises two cities, the City of Hattiesburg and the City of Petal. An orientation map is provided as **Figure B.1**.

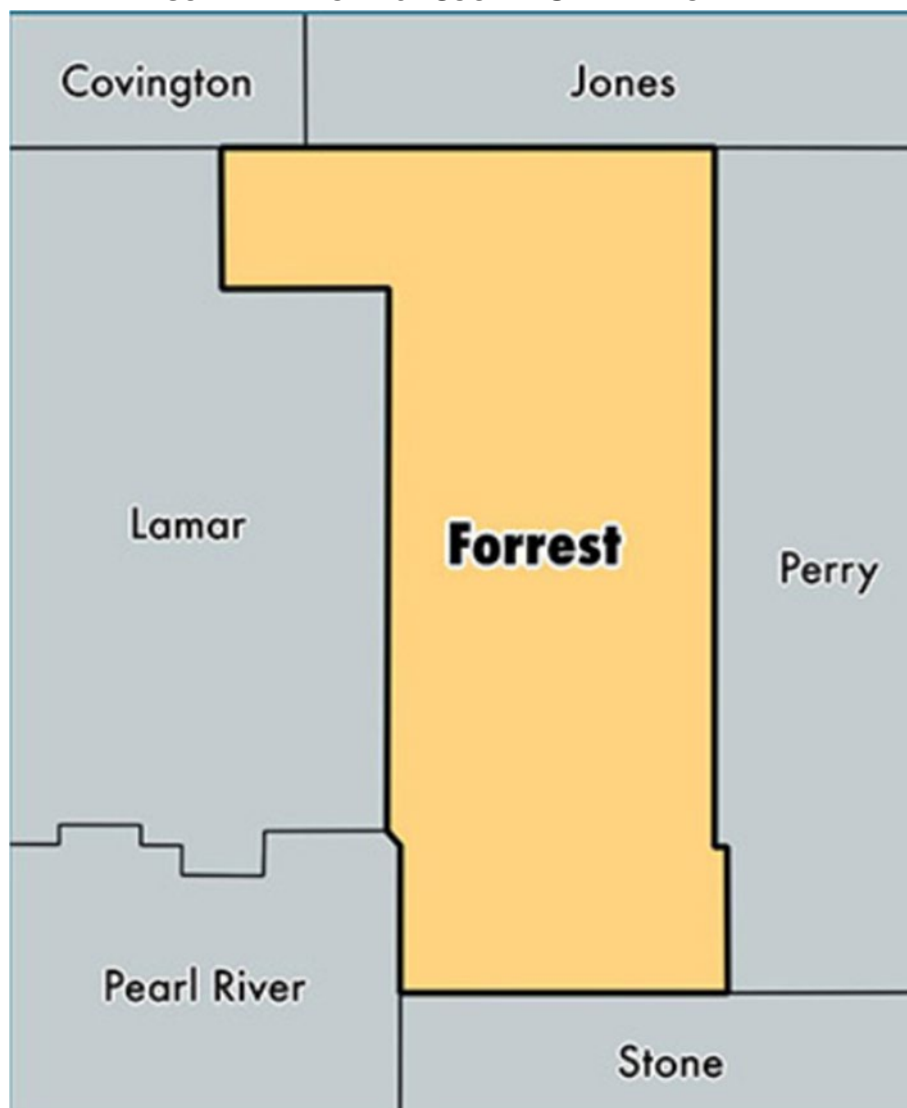
The county is a rural area of which 65 percent is characterized as forest land devoted primarily to timber production and recreation hunting. The total area of the county is 470 square miles, less than 4 square miles of which is water area.

In Forrest County, the summers are long, hot, and oppressive; the winters are short and cold; and it is wet and partly cloudy year-round. Over the course of the year, the temperature typically varies from 31°F to 93°F and is rarely below 28°F or above 97°F.

The hot season lasts for 5 months, from May to September, with an average daily temperature of 91°F. The hottest month of the year is August, with an average high of 92°F and low of 72°F. The cool season lasts for 3 months, from November to February, with an average daily high temperature 60°F. The coldest month of the year is January, with an average low of 31°F and high of 54°F.

The average daily rainfall for Forrest County is 0.17 inches with an average of 62.47" annually. The chance of wet days in Forrest County varies throughout the year. The wetter season lasts six months from November through April. Among wet days, we distinguish between those that experience rain alone, snow alone, or a mixture of the two. Based on this categorization, the most common form of precipitation throughout the year is rain alone. In 2018, the most rain fell in August with a total of 9.03" and the least rain fell in June with a total of 2.65".

FIGURE B.1: FORREST COUNTY ORIENTATION MAP



B.1.2 Population and Demographics

According to the 2010 Census, Forrest County has a population of 75,007 people. The county has seen almost 3.08 percent growth between 2000 and 2010, and the population density is 160 people per square mile. The population saw a slight increase. Per the Census Reports, in 2017, Forrest County had a population of 75,471, which is a .614 percent increase since 2010. The household income is \$39,555, which grew by 6.86 percent. Population counts from the US Census Bureau for 1990, 2000, and 2010 for the county and both of the participating jurisdictions are presented in **Table B.1**. Estimates for 2017 are also included.

TABLE B.1: POPULATION COUNTS FOR FORREST COUNTY

Jurisdiction	1990 Census Population	2000 Census Population	2010 Census Population	% Change 2000-2010	Estimated 2017 Census Population
Forrest County	68,325	72,156	75,007	3.8%	75,471
Hattiesburg	45,232	45,246	45,798	1.2%	46,377
Petal	7,897	9,724	10,477	7.2%	10,633

Source: US Census Bureau

Based on the 2010 Census, the median age of residents of Forrest County is 32.0 years. The racial characteristics of the county are presented in **Table B.2** and will remain the same as the census data has not been officially updated. However, according to the estimates provided by the Census Reports, the median age in 2017 remained the same at 32 years. The population of black persons is 36.8 percent and 3.04 percent is Hispanic or Latino. Whites make up the majority of the population in the county, accounting for 57.1 percent of the population.

TABLE B.2: DEMOGRAPHICS OF FORREST COUNTY

Jurisdiction	White Persons, Percent (2010)	Black Persons, Percent (2010)	American Indian or Alaska Native, Percent (2010)	Other Race, Percent (2010)	Persons of Hispanic Origin, Percent (2010)*
Forrest County	57.0%	37.8%	0.4%	1.5%	2.9%
Hattiesburg	40.5%	53.5%	0.1%	2.3%	2.8%
Petal	77.4%	13.4%	0.7%	1.8%	5.8%

*Hispanics may be of any race, so also are included in applicable race categories

Source: US Census Bureau

B.1.3 Housing

According to the 2010 US Census, there are 29,913 housing units in Forrest County, the majority of which are single family homes or mobile homes. Per 2018 estimates, the total number of houses increased to 32,282 units. However, the median home value is \$114,700, which increased by at least 3.05 percent. Housing information for the county and two cities is presented in **Table B.3**. As shown in the table, Hattiesburg has a significantly higher percentage of seasonal housing units compared to Petal and the unincorporated county.

TABLE B.3: HOUSING CHARACTERISTICS OF FORREST COUNTY

Jurisdiction	Housing Units (2000)	Housing Units (2010)	Housing Units (2018)	Median Home Value (2018)
Forrest County	16,420	29,913	33,282	\$114,000
Hattiesburg	144	144	145	\$86,111
Petal	537	498	511	\$111,650

Source: US Census Bureau

B.1.4 Infrastructure

TRANSPORTATION

Forrest County is located near the center of the southeast portion of Mississippi. The City of Hattiesburg is the county seat and is known as the “Hub City” because of its strategic location between New Orleans, Louisiana; Mobile, Alabama; Gulfport, Mississippi; and Jackson, Mississippi. The County is well served with a transportation network that includes one interstate highway and three U.S. highways. Interstate 59 is a north-south route that enters the County from Pearl River County to the southwest and runs in a northeasterly direction through Forrest County into Jones County to the north. U.S. Highway 49 bisects Forrest County from the southeast corner of the County to the northwest corner. U.S. Highway 11 is also a north-south route, while U.S. 98 is an east-west route. State Highways 42 and 13 are both east-west routes. Highway 42 is in the northern most portion of the county while Highway 13 is in the southern most portion of the county.

The city of Hattiesburg maintains the Hattiesburg Bobby L. Chain Municipal Airport (HBG) in the Hattiesburg/Forrest County Industrial Park. Located four miles south of the city center, the municipal airport provides business and general aviation services for much of South Mississippi. Commercial air transportation is available at the Hattiesburg-Laurel Regional Airport, 40-minutes drive from the South end of the county. International airports in Jackson, Gulfport, and New Orleans are all also within about a 100-mile radius of Forrest County.

There is passenger and freight rail service available in Hattiesburg.

UTILITIES

Electrical power in Forrest County is provided by several electrical power associations, including Mississippi Power Company and Cooperative Energy.

Water and sewer service is provided to rural residents of Forrest County water associations by aerated lagoons. Each of the municipalities have their own water and sewer departments.

COMMUNITY FACILITIES

There are a number of buildings and community facilities located throughout Forrest County. According to the data collected for the vulnerability assessment (Section 6.4.1), there are 10 fire stations, 3 police stations, and 5 public schools located within the county. There are also two universities.

There is one hospital located in Forrest County. Forrest General Hospital is a 545 inpatient bed facility with a 400-bed medical-surgical hospital located in the City of Hattiesburg.

Forrest County proudly claims to be the “Gateway to the Longleaf Trace,” a 41-mile linear park that offers premier running, biking, hiking, and equestrian trails. The Longleaf Trace is one of the longest “Rails to Trails” conversion in the United States. Another major attraction in the county is State Park, located two miles south of Hattiesburg city limits. The 225-acre lake is one of 21 state fishing lakes operated by the MS Department of Wildlife, Fisheries, and Parks. Water skiing is allowed on certain

days and times and additional amenities include boat rental, camp sites, restrooms, a covered pavilion, and a picnic area with grills.

B.1.5 Land Use

Many areas of Forrest County are undeveloped or sparsely developed due to the county's location just off the Gulf Coast and the conservation of land in state and national parks. There are a few incorporated municipalities located throughout the region, and these areas are where the region's population is generally concentrated. The incorporated areas are also where many businesses, commercial uses, and institutional uses are located. Land uses in the balance of the county generally consist of rural residential development, agricultural uses, and recreational areas.

B.1.6 Employment and Industry

According to the Mississippi Employment Security Commission (MESC), in 2018, Forrest County had an average annual employment of 32,270 workers and an average unemployment rate of 4.4% percent. According to the MESC, in 2018, the Government Agencies employed 26.8% percent of the workforce followed by Educational Services (13.3%) and Manufacturing (9.7%). The average annual wage in Forrest County was \$ 42,389.

B.2 FORREST COUNTY RISK ASSESSMENT

This subsection includes hazard profiles for each of the significant hazards identified in Section 4: *Hazard Identification* as they pertain to Forrest County. Each hazard profile includes a description of the hazard's location and extent, notable historical occurrences, and the probability of future occurrences. Additional information can be found in Section 5: *Hazard Profiles*.

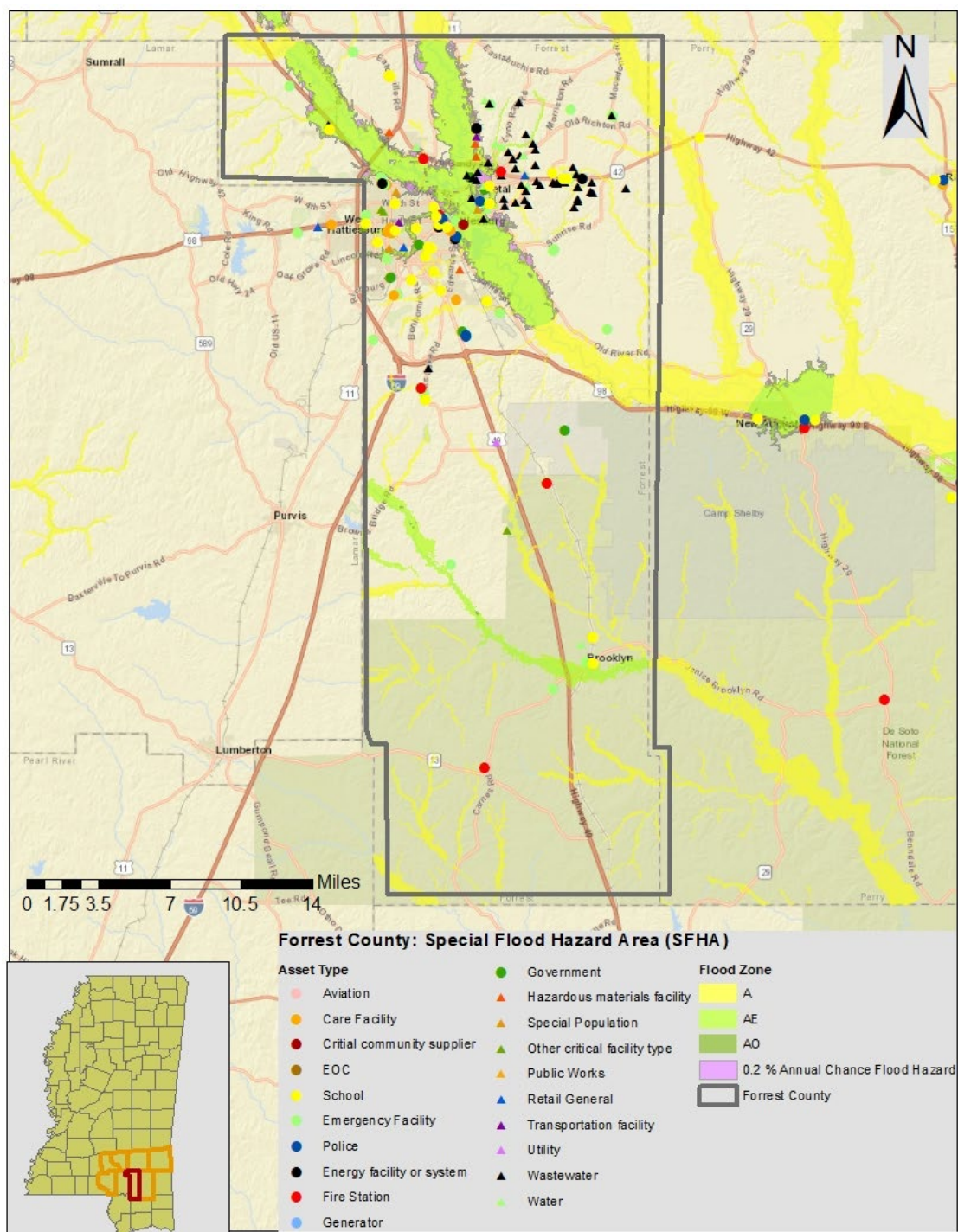
B.2.1 Flood

LOCATION AND SPATIAL EXTENT

There are areas in Forrest County that are susceptible to flood events. Special flood hazard areas in the county were mapped using Geographic Information System (GIS) and FEMA Digital Flood Insurance Rate Maps (DFIRM).¹ This includes Zone A (1-percent annual chance floodplain), Zone AE (1-percent annual chance floodplain with elevation), and the 0.2-percent annual chance floodplain).

¹ The county-level DFIRM data used for Forrest County were updated in 2010.

FIGURE B.2: SPECIAL FLOOD HAZARD AREAS IN FORREST COUNTY



Source: Federal Emergency Management Agency

HISTORICAL OCCURRENCES

Floods resulted in eight disaster declarations in Forrest County in 1950 and 2018.² Information from the National Centers for Environmental Information was used to ascertain historical flood events. The National Centers for Environmental Information reported a total of 109 events in Forrest County since 1997.³ A summary of these events is presented in **Table B.4**. These events accounted for over \$4.1 million in property damage in the county. Specific information on flood events, including date, type of flooding, and deaths and injuries, can be found in **Table B.5**.

TABLE B.4: SUMMARY OF FLOOD OCCURRENCES IN FORREST COUNTY

Location	Number of Occurrences	Deaths / Injuries	Property Damage
Hattiesburg	42	0/0	\$2,994,000
Petal	12	0/0	\$419,000
Unincorporated Area	55	1/0	\$699,559
FORREST COUNTY TOTAL	109	1/0	\$4,139,000

Source: National Centers for Environmental Information

TABLE B.5: HISTORICAL FLOOD EVENTS IN FORREST COUNTY

Location	Date	Type	Deaths / Injuries	Property Damage*
Hattiesburg				
Hattiesburg	07-JAN-98	FLASH FLOOD	0/0	\$500,000
Hattiesburg	07-MAR-98	FLASH FLOOD	0/0	\$50,000
Hattiesburg	02-MAR-01	FLASH FLOOD	0/0	\$0
Hattiesburg	03-MAR-01	FLASH FLOOD	0/0	\$0
Hattiesburg	04-SEP-01	FLASH FLOOD	0/0	\$100,000
Hattiesburg	13-DEC-01	FLASH FLOOD	0/0	\$0
Hattiesburg	21-JUN-03	FLASH FLOOD	0/0	\$30,000
Hattiesburg	27-JUN-03	FLASH FLOOD	0/0	\$1,000
Hattiesburg	30-JUN-03	FLASH FLOOD	0/0	\$10,000
Hattiesburg	20-AUG-03	FLASH FLOOD	0/0	\$20,000
Hattiesburg	24-FEB-04	FLASH FLOOD	0/0	\$45,000
Hattiesburg	01-JUN-04	FLASH FLOOD	0/0	\$300,000
Hattiesburg	01-JUN-04	FLASH FLOOD	0/0	\$2,000
Hattiesburg	06-JUL-04	FLASH FLOOD	0/0	\$0
Hattiesburg	14-APR-07	FLASH FLOOD	0/0	\$400,000
Hattiesburg	29-JUN-08	FLASH FLOOD	0/0	\$600,000
Hattiesburg	16-MAY-09	FLASH FLOOD	0/0	\$2,000
Hattiesburg	24-JAN-10	FLASH FLOOD	0/0	\$5,000
Hattiesburg	05-MAR-11	FLASH FLOOD	0/0	\$1,000
Hattiesburg	24-JUL-11	FLASH FLOOD	0/0	\$10,000
Hattiesburg	18-FEB-12	FLASH FLOOD	0/0	\$0
Hattiesburg	21-MAR-12	FLASH FLOOD	0/0	\$50,000
Hattiesburg	18-JUL-12	FLASH FLOOD	0/0	\$6,000
Hattiesburg	29-AUG-12	FLASH FLOOD	0/0	\$20,000

²A complete listing of historical disaster declarations can be found in Section 4: Hazard Identification.

³ These events are only inclusive of those reported by NCEI. It is likely that additional occurrences have occurred and have gone unreported.

Location	Date	Type	Deaths / Injuries	Property Damage*
Hattiesburg	06-JUN-13	FLASH FLOOD	0/0	\$0
Hattiesburg	13-AUG-13	FLASH FLOOD	0/0	\$0
Hattiesburg	04-FEB-14	FLASH FLOOD	0/0	\$10,000
Hattiesburg	20-FEB-14	FLASH FLOOD	0/0	\$5,000
Hattiesburg	24-DEC-15	FLASH FLOOD	0/0	\$3,000
Hattiesburg	10-MAR-16	FLASH FLOOD	0/0	\$2,000
Hattiesburg	31-MAR-16	FLASH FLOOD	0/0	\$1,000
Hattiesburg	31-MAR-16	FLASH FLOOD	0/0	\$15,000
Hattiesburg	31-MAR-16	FLASH FLOOD	0/0	\$15,000
Hattiesburg	21-JAN-17	FLASH FLOOD	0/0	\$700,000
Hattiesburg	22-JUN-17	FLASH FLOOD	0/0	\$20,000
Hattiesburg	09-AUG-17	FLASH FLOOD	0/0	\$20,000
Hattiesburg	09-AUG-17	FLASH FLOOD	0/0	\$5,000
Hattiesburg	18-AUG-18	FLASH FLOOD	0/0	\$7,000
Hattiesburg	01-NOV-18	FLASH FLOOD	0/0	\$20,000
Hattiesburg	27-DEC-18	FLASH FLOOD	0/0	\$7,000
Hattiesburg	23-JAN-19	FLASH FLOOD	0/0	\$2,000
Hattiesburg	23-JAN-19	FLASH FLOOD	0/0	\$10,000
Petal				
Petal	12-JUN-01	FLASH FLOOD	0/0	\$25,000
Petal	26-SEP-02	FLASH FLOOD	0/0	\$1,000
Petal	02-SEP-08	FLASH FLOOD	0/0	\$130,000
Petal	01-JUN-10	FLASH FLOOD	0/0	\$25,000
Petal	22-JUL-14	FLASH FLOOD	0/0	\$3,000
Petal	16-SEP-14	FLASH FLOOD	0/0	\$30,000
Petal	08-AUG-17	FLASH FLOOD	0/0	\$5,000
Petal	09-AUG-17	FLASH FLOOD	0/0	\$10,000
Petal	06-JUL-18	FLASH FLOOD	0/0	\$5,000
Petal	18-AUG-18	FLASH FLOOD	0/0	\$10,000
Petal	27-DEC-18	FLASH FLOOD	0/0	\$75,000
Petal	23-JAN-19	FLASH FLOOD	0/0	\$100,000
Unincorporated Area				
Brooklyn	18-JUN-97	FLASH FLOOD	0/0	\$0
Countywide	29-JAN-99	FLASH FLOOD	1/0	\$500,000
Countywide	13-MAR-99	FLASH FLOOD	0/0	\$0
Countywide	03-MAR-01	FLASH FLOOD	0/0	\$0
Countywide	11-JUN-01	FLASH FLOOD	0/0	\$1,000
Countywide	11-JUN-01	FLASH FLOOD	0/0	\$6,000
Countywide	13-OCT-01	FLASH FLOOD	0/0	\$0
Countywide	16-AUG-03	FLASH FLOOD	0/0	\$10,000
Countywide	31-MAR-05	FLASH FLOOD	0/0	\$40,000
North Portion	01-APR-05	FLASH FLOOD	0/0	\$100,000
Countywide	29-AUG-05	FLASH FLOOD	0/0	\$300,000
Rock Hill	05-SEP-08	FLASH FLOOD	0/0	\$20,000
Dixie Pine	25-MAR-09	FLASH FLOOD	0/0	\$200,000
Rock Hill	27-MAR-09	FLASH FLOOD	0/0	\$50,000
Macedonia	12-APR-09	FLASH FLOOD	0/0	\$400,000

Location	Date	Type	Deaths / Injuries	Property Damage*
Ragland	13-APR-09	FLASH FLOOD	0/0	\$200,000
Bonhomie	04-MAY-09	FLASH FLOOD	0/0	\$15,000
Rawls Springs	16-SEP-09	FLASH FLOOD	0/0	\$5,000
Brooklyn	14-DEC-09	FLASH FLOOD	0/0	\$25,000
McLaurin	08-MAR-11	FLASH FLOOD	0/0	\$250,000
Bonhomie	09-MAR-11	FLASH FLOOD	0/0	\$20,000
Epps	07-JUN-11	FLASH FLOOD	0/0	\$5,000
Riverside	12-JUL-11	FLASH FLOOD	0/0	\$5,000
Carnes	12-JUL-11	FLASH FLOOD	0/0	\$5,000
Riverside	05-SEP-11	FLASH FLOOD	0/0	\$50,000
Maybank	26-JAN-12	FLASH FLOOD	0/0	\$5,000
McLaurin	22-MAR-12	FLASH FLOOD	0/0	\$50,000
Bonhomie	14-APR-13	FLASH FLOOD	0/0	\$100,000
Riverside	28-APR-13	FLASH FLOOD	0/0	\$0
Dixie Pine	05-JUL-15	FLASH FLOOD	0/0	\$1,000
McCallum	11-MAR-16	FLASH FLOOD	0/0	\$8,000
Rawls Springs	11-MAR-16	FLASH FLOOD	0/0	\$40,000
Dixie Pine	11-MAR-16	FLASH FLOOD	0/0	\$50,000
Glendale	11-MAR-16	FLASH FLOOD	0/0	\$30,000
Dragon	11-MAR-16	FLASH FLOOD	0/0	\$300,000
Rock Hill	11-MAR-16	FLASH FLOOD	0/0	\$20,000
Carnes	17-MAR-16	FLASH FLOOD	0/0	\$10,000
Dixie Pine	31-MAR-16	FLASH FLOOD	0/0	\$10,000
Riverside	14-APR-16	FLASH FLOOD	0/0	\$10,000
Riverside	13-DEC-16	FLASH FLOOD	0/0	\$5,000
Riverside	01-JAN-17	FLASH FLOOD	0/0	\$3,000
Fruitland Park	02-JAN-17	FLASH FLOOD	0/0	\$2,000
Dixie Pine	02-JAN-17	FLASH FLOOD	0/0	\$1,000
Bonhomie	30-APR-17	FLASH FLOOD	0/0	\$15,000
Maybank	06-JUN-17	FLASH FLOOD	0/0	\$700,000
Macedonia	16-JUN-17	FLASH FLOOD	0/0	\$20,000
Carnes	24-JUL-17	FLASH FLOOD	0/0	\$5,000
Carnes	24-JUL-17	FLASH FLOOD	0/0	\$7,000
Carnes	24-JUL-17	FLASH FLOOD	0/0	\$7,000
Dixie Pine	10-AUG-17	FLASH FLOOD	0/0	\$30,000
Glendale	16-AUG-17	FLASH FLOOD	0/0	\$3,000
Riverside	27-DEC-18	FLASH FLOOD	0/0	\$75,000
Dixie Pine	27-DEC-18	FLASH FLOOD	0/0	\$150,000
Maybank	27-DEC-18	FLASH FLOOD	0/0	\$300,000
Rawls Springs	28-DEC-18	FLASH FLOOD	0/0	\$300,000
Dixie Pine	23-JAN-19	FLASH FLOOD	0/0	\$2,000

Source: National Centers for Environmental Information

HISTORICAL SUMMARY OF INSURED FLOOD LOSSES

Recently, FEMA issued a directive that prevents states or local governments from sharing NFIP information such as rep loss or severe rep loss data with third parties. Third parties are considered as consultants, contractors, etc. As a result, for continuity of information so that the reader will have an

idea of the historical occurrences along with the corresponding damage amounts, the decision was made to leave the existing information in the plan.

According to FEMA flood insurance policy records as of March 2016, there have been \$243,475 flood losses reported in Forrest County through the National Flood Insurance Program (NFIP). A summary of these figures for the county is provided in **Table B.6**. It should be emphasized that these numbers include only those losses to structures that were insured through the NFIP policies, and for losses in which claims were sought and received. It is likely that many additional instances of flood loss in Forrest County were either uninsured, denied claims payment, or not reported.

TABLE B.6: SUMMARY OF INSURED FLOOD LOSSES IN FORREST COUNTY

Location	Flood Losses	Claims Payments
Hattiesburg	23	\$243,475
Petal	0	\$
Unincorporated Area	0	\$0
FORREST COUNTY TOTAL	23	\$243,475

Source: FEMA, NFIP, Planning Committee

REPETITIVE LOSS PROPERTIES

No updates to this section can be provided at this time. Information normally used to update this section is not currently accessible. As a result, this information will remain the same for historical purposes.

As of May 2018, there are no non-mitigated repetitive loss properties located in Forrest County. **Table B.7** presents detailed information on repetitive loss properties and NFIP claims and policies for Forrest County. This remains the best available data.

TABLE B.7: REPETITIVE LOSS PROPERTIES IN FORREST COUNTY

Location	Number of Properties	Types of Properties	Number of Losses	Building Payments	Content Payments	Total Payments	Average Payment
		20 Residential 2 Commercial					
Hattiesburg	22	1	74	\$935,515.82	\$443,494.19	\$1,379,010.01	\$689,505.005
Petal	0	--	0	\$0	\$0	\$0	\$0
Unincorporated Area	0	--	0	\$0	\$0	\$0	\$0
FORREST COUNTY TOTAL	22		74	\$935,515.82	\$443,494.19	\$1,379,010.01	\$689,505.005

Source: Planning Committee

The previous Forrest County Hazard Mitigation Plan did not contain information on insured flood losses or repetitive loss and severe repetitive loss structures. At the time of the plan update, this information was provided by the Planning Committee for inclusion in the plan.

PROBABILITY OF FUTURE OCCURRENCES

Due to the unpredictable nature of this hazard, flood events will remain a threat in Forrest County, and

the probability of future occurrences will remain likely (between 10 and 100 percent annual probability). The participating jurisdictions and unincorporated areas have risk to flooding, though not all areas will experience flood. The probability of future flood events based on magnitude and according to best available data is illustrated in the figures above, which indicates those areas susceptible to the 1-percent annual chance flood (100-year floodplain) and the 0.2-percent annual chance flood (500-year floodplain).

It can be inferred from the floodplain location maps, previous occurrences, and repetitive loss properties that risk varies throughout the region. For example, the areas near Petal has more floodplain and thus a higher risk of flood than areas near Hattiesburg. Flood is not the greatest hazard of concern but will continue to occur and cause damage. Therefore, mitigation actions may be warranted, particularly for repetitive loss properties.

B.2.2 Erosion

LOCATION AND SPATIAL EXTENT

Erosion in Forrest County is typically caused by flash flooding events. Unlike coastal areas, areas of concern for erosion in Forrest County are primarily rivers and streams. Generally, vegetation helps to prevent erosion in the area, and it is not an extreme threat to any of the participating counties and jurisdictions. No areas of concern were reported by the planning committee.

HISTORICAL OCCURRENCES

Several sources were vetted to identify areas of erosion in Forrest County. This includes searching local newspapers, interviewing local officials, and reviewing previous hazard mitigation plans. No historical erosion occurrences were found in these sources.

Forrest County has a flood damage prevention ordinance that includes measures to limit erosion, such as restricting uses that result in damaging increases in erosion. Such actions will continue to be implemented as necessary throughout the region.

PROBABILITY OF FUTURE OCCURRENCES

Erosion remains a natural, dynamic, and continuous process for Forrest County, and it will continue to occur. The annual probability level assigned for erosion is possible (between 1 and 10 percent annually).

B.2.3 Dam Failure

LOCATION AND SPATIAL EXTENT

According to the Mississippi Division of Environmental Quality, there are seven high hazard dams in Forrest County.⁴ At least two dams, Lake B Dam and Lakeland Drive Lake Dam were initially rate low and a non-applicable status, respectively. Both have of their ratings have been escalated to high. However, there are no recorded incidents of dam failure or breach of dams in Forrest County. In 1983

⁴ The list of high hazard dams obtained from the Mississippi Division of Environmental Quality was reviewed and amended by local officials to the best of their knowledge.

however, a dam in neighboring Lamar County failed causing a significant amount of damages in the City of Hattiesburg. Beginning in 2006, owners of lakes are required to have an Emergency Action Plan on file with the State of Mississippi and local emergency management office.

According to a consensus of local government officials and the Regional Hazard Mitigation Council, a majority of these dams would not pose a major threat in a breach or failure occurrence

TABLE B.8: FORREST COUNTY HIGH HAZARD DAMS

Dam Name	Hazard Potential
Forrest County	
LYNN CARTLAGE LAKE DAM	High
COUNTRY CLUB LAKE	High
LAKE SEHOY (USM CAMPUS LAKE) DAM	High
LAKE B DAM	High
FORTIETH PLACE DAM	High
PLEASANT RIDGE ESTATES DAM	High
LAKELAND DRIVE LAKE DAM	High

Source: Mississippi Division of Environmental Quality

HISTORICAL OCCURRENCES

There is no record of dam breaches in Forrest County. However, several breach scenarios in the county could be catastrophic.

PROBABILITY OF FUTURE OCCURRENCES

Given the current dam inventory and historic data, a dam breach is unlikely (less than 1 percent annual probability) in the future. However, as has been demonstrated in the past, regular monitoring is necessary to prevent these events.

B.2.4 Winter Storm and Freeze

LOCATION AND SPATIAL EXTENT

Nearly the entire continental United States is susceptible to winter storm and freeze events. Some ice and winter storms may be large enough to affect several states, while others might affect limited, localized areas. The degree of exposure typically depends on the normal expected severity of local winter weather. Forrest County is not typically affected by major severe winter weather conditions and seldom receives extremely devastating winter weather, even during the winter months. Given the atmospheric nature of the hazard the entire county has uniform exposure to a winter storm.

HISTORICAL OCCURRENCES

According to the National Centers for Environmental Information, there have been a total of eight recorded winter storm events in Forrest County since 2002 (**Table B.8**).⁵ These events resulted in almost \$305,000 in damages. Detailed information on the recorded winter storm events can be found in **Table B.9**.⁶

TABLE B.9: SUMMARY OF WINTER STORM EVENTS IN FORREST COUNTY

Location	Number of Occurrences	Deaths / Injuries	Property Damage
Forrest County	6	0/0	\$305,000

Source: National Centers for Environmental Information

TABLE B.10: HISTORICAL WINTER STORM IMPACTS IN FORREST COUNTY

Location	Date	Type	Deaths / Injuries	Property Damage*
Hattiesburg				
None Reported	--	--	--	--
Petal				
None Reported	--	--	--	--
Unincorporated Area				
FORREST COUNTY	01-JAN-02	HEAVY SNOW	0/0	\$5,000
FORREST COUNTY	19-JAN-08	HEAVY SNOW	0/0	\$0
FORREST COUNTY	11-DEC-08	WINTER WEATHER	0/0	\$0
FORREST COUNTY	04-DEC-09	HEAVY SNOW	0/0	\$0
FORREST COUNTY	11-FEB-10	HEAVY SNOW	0/0	\$300,000
FORREST COUNTY	09-JAN-11	WINTER WEATHER	0/0	\$0
FORREST COUNTY	08-DEC-17	WINTER WEATHER	0/0	\$0
FORREST COUNTY	16-JAN-18	WINTER WEATHER	0/0	\$0

Source: National Centers for Environmental Information

There have been a couple of severe winter weather events in Forrest County. The text below describes one of the major events and associated impacts on the county. Similar impacts can be expected with severe winter weather.

January 2010 Winter Storm

This storm produced heavy snow across the region, with an average of three to four inches of snow. Some heavier amounts, between four to five inches, also fell in isolated areas. At the height of the snow, temperatures fell to near freezing, and accumulations occurred on roadways resulting in a number of traffic accidents. Additionally, some power outages occurred in the heaviest snow band due to the weight of wet snow on limbs and lines. The heaviest snow fell in the areas around Covington, Forrest, and Jones Counties.

⁵ These ice and winter storm events are only inclusive of those reported by the National Centers for Environmental Information (NCEI). It is certain that additional winter storm conditions have affected Forrest County.

⁶ The dollar amount of damages provided by NCEI is divided by the number of affected counties to reflect a damage estimate for the county.

Winter storms throughout the county have several negative externalities including hypothermia, cost of snow and debris cleanup, business and government service interruption, traffic accidents, and power outages. Furthermore, citizens may resort to using inappropriate heating devices that could lead to fire or an accumulation of toxic fumes.

PROBABILITY OF FUTURE OCCURRENCES

Winter storm events will continue to occur in Forrest County. According to historical information, the annual probability is possible (between 1 and 10 percent).

FIRE-RELATED HAZARDS

B.2.5 Drought

LOCATION AND SPATIAL EXTENT

Drought and heat waves typically cover a large area and cannot be confined to any geographic or political boundaries. Furthermore, it is assumed that Forrest County would be uniformly exposed to drought and heat waves, making the spatial extent potentially widespread. It is also notable that drought and extreme heat conditions typically do not cause significant damage to the built environment but may exacerbate wildfire conditions.

HISTORICAL OCCURRENCES

Drought

According to the U.S. Drought Monitor, Forrest County had drought levels (including abnormally dry) in all of the last eighteen years (2000-2018). **Table B.10** shows the most severe drought classification for each year, according to U.S. Drought Monitor classifications. It should be noted that the U.S. Drought Monitor also estimates what percentage of the county is in each classification of drought severity. For example, the most severe classification reported may be exceptional, but a majority of the county may actually be in a less severe condition.

TABLE B. 11: HISTORICAL DROUGHT OCCURRENCES IN FORREST COUNTY

Abnormally Dry	Moderate Drought	Severe Drought	Extreme Drought	Exceptional Drought
		Forrest County		
2000	EXCEPTIONAL			
2001	MODERATE			
2002	MODERATE			
2003	ABNORMAL			
2004	ABNORMAL			
2005	ABNORMAL			
2006	EXTREME			
2007	EXTREME			
2008	MODERATE			
2009	MODERATE			
2010	SEVERE			
2011	EXTREME			
2012	MODERATE			
2013	ABNORMAL			
2014	ABNORMAL			
2015	MODERATE			
2016	EXTREME			
2017	ABNORMAL			
2018	ABNORMAL			
2019	ABNORMAL			

Source: U.S. Drought Monitor

The National Centers for Environmental reported seven drought events for Forrest County, which caused approximately \$2 million in crop damages.

Heat Wave

The National Centers for Environmental Information was used to determine historical heat wave occurrences in the county.

October 2006 - The first half of October started off with high pressure in control and little or no rainfall over most areas. The second half of October closed out the D2 drought conditions

June 2007 - The month of June did not offer much rain as most of the forecast area saw less than 40% of the normal rainfall. If you would go back to the start of the drought, the portion of the forecast area under the drought has only seen 5 to 20% of the annual rainfall. Historical climate sites are running some 15 to 20 inches below normal for rainfall with deficits now higher than the yearly total. With the drought conditions reaching extreme levels, area farmers and crops began feeling the effects. Many crops from corn to soybeans was affected with yields forecasted to be much less than normal by harvest time. The quality of the crops was affected as well due to the dry conditions. The total losses were estimated at \$400,000.

October 2010 - The dry stretch resulted in severe (D2) drought conditions to expand during the month with even the portions of extreme (D3) drought conditions expanding as well. Crops were put under stress under the warm and dry conditions. Rainfall was 1 to 2 inches below normal for the month. This resulted in severe drought conditions across the county by the end of the month. Some rain of 0.5 to 1 inch did affect the county toward the end of the month. This provided some brief relief to the drought conditions. The total losses were estimated at \$500,000.

PROBABILITY OF FUTURE OCCURRENCES

Drought

Based on historical occurrence information, it is assumed that all of Forrest County has a probability level of highly likely (100 percent annual probability) for future drought events. However, the extent (or magnitude) of drought and the amount of geographic area covered by drought, varies with each year. Historic information indicates that there is a much lower probability for extreme, long-lasting drought conditions.

Heat Wave

Based on historical occurrence information, it is assumed that all of Forrest County has a probability level of highly likely (100 percent annual probability) for future heat wave events.

B.2.6 Wildfire

LOCATION AND SPATIAL EXTENT

The entire county is at risk to a wildfire occurrence. However, several factors such as drought conditions or high levels of fuel on the forest floor, may make a wildfire more likely. Furthermore, areas in the urban-wildland interface are particularly susceptible to fire hazard as populations abut formerly undeveloped areas. The Fire Occurrence Areas in the figure below give an indication of historic location.

HISTORICAL OCCURRENCES

Based on data from the Mississippi Forestry Commission from 2008 to 2018, Forrest County experiences an average of 49 wildfires annually which burn an average of 511 acres per year. The data indicates that most of these fires are small, averaging nine acres per fire. **Table B.11** provides a summary of wildfire occurrences in Forrest County and **Table B.12** lists the number of reported wildfire occurrences in the county between the years 2008 and 2018.

TABLE B.12: SUMMARY TABLE OF ANNUAL WILDFIRE OCCURRENCES (2008 -2018) *

	Forrest County
Average Number of Fires per year	47.8
Average Number of Acres Burned per year	510.6
Average Number of Acres Burned per fire	8.8

**These values reflect averages over a 10-year period.
Source: Mississippi Forestry Commission*

TABLE B.13: HISTORICAL WILDFIRE OCCURRENCES IN FORREST COUNTY

Year	2008	2010	2011	2012	2013	2014	2015	2016	2017	2018
Forrest County										
Number of Fires	32	33	59	25	27	21	7	17	8	10
Number of Acres Burned	482	112	742	391	177	104	167	167	55	156

Source: Mississippi Forestry Commission

PROBABILITY OF FUTURE OCCURRENCES

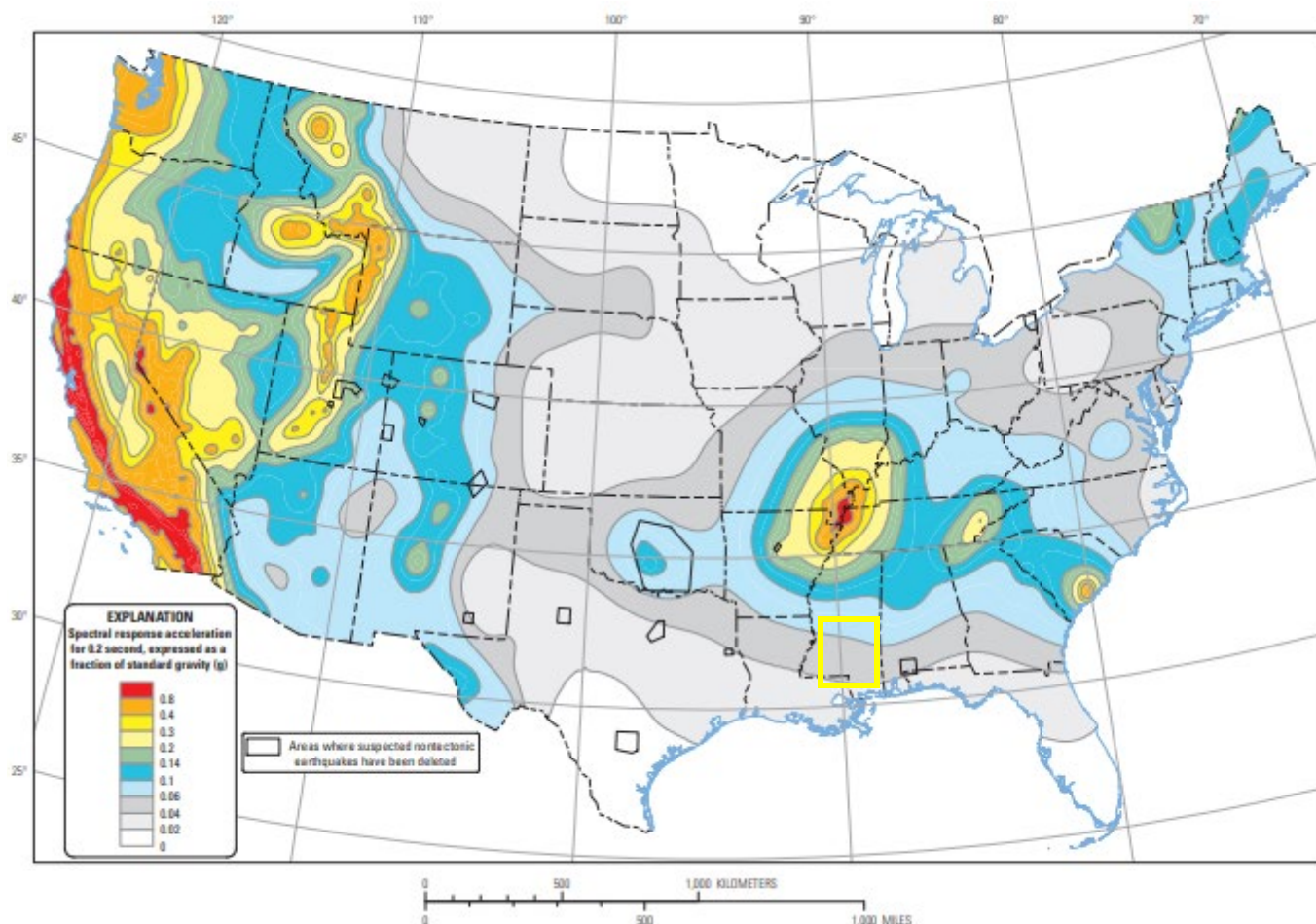
Wildfire events will be an ongoing occurrence in Forrest County. The likelihood of wildfires increases during drought cycles and abnormally dry conditions. Fires are likely to stay small in size but could increase due local climate and ground conditions. Dry, windy conditions with an accumulation of forest floor fuel (potentially due to ice storms or lack of fire) could create conditions for a large fire that spreads quickly. It should also be noted that some areas do vary somewhat in risk. For example, highly developed areas are less susceptible unless they are located near the urban-wildland boundary. The risk will also vary due to assets. Areas in the urban-wildland interface will have much more property at risk, resulting in increased vulnerability and need to mitigate compared to rural, mainly forested areas. In this case, the participating jurisdictions appear to have a similar risk to the surrounding areas. The probability assigned to Forrest County for future wildfire events is likely (a 10 and 100 percent annual probability).

GEOLOGIC HAZARDS

B.2.7 Earthquake

LOCATION AND SPATIAL EXTENT

Figure B.3 shows the intensity level associated with Forrest County, based on the national USGS map of peak acceleration with 10 percent probability of exceedance in 50 years. It is the probability that ground motion will reach a certain level during an earthquake. The data show peak horizontal ground acceleration (the fastest measured change in speed, for a particle at ground level that is moving horizontally due to an earthquake) with a 10 percent probability of exceedance in 50 years. The map was compiled by the U.S. Geological Survey (USGS) Geologic Hazards Team, which conducts global investigations of earthquake, geomagnetic, and landslide hazards. According to this map, Forrest County lies within an approximate zone of level .04 ground acceleration. This indicates that the county exists within an area of moderate seismic risk.

FIGURE B.3: PEAK ACCELERATION WITH 10 PERCENT PROBABILITY OF EXCEEDANCE IN 50 YEARS

Source: USGS, 2018

HISTORICAL OCCURRENCES

No earthquakes are known to have affected Forrest County since 1638. **Table B.13** provides a summary of earthquake events reported by the National Geophysical Data Center between 1638 and 1985.⁷

TABLE B.14: SUMMARY OF SEISMIC ACTIVITY IN FORREST COUNTY

Location	Number of Occurrences	Greatest MMI Reported	Richter Scale Equivalent
Hattiesburg	0	--	--
Petal	0	--	--
Unincorporated Area	0	--	--
FORREST COUNTY TOTAL	0	--	--

Source: National Geophysical Data Center

⁷ Due to reporting mechanisms, not all earthquake events were recorded during this time.

PROBABILITY OF FUTURE OCCURRENCES

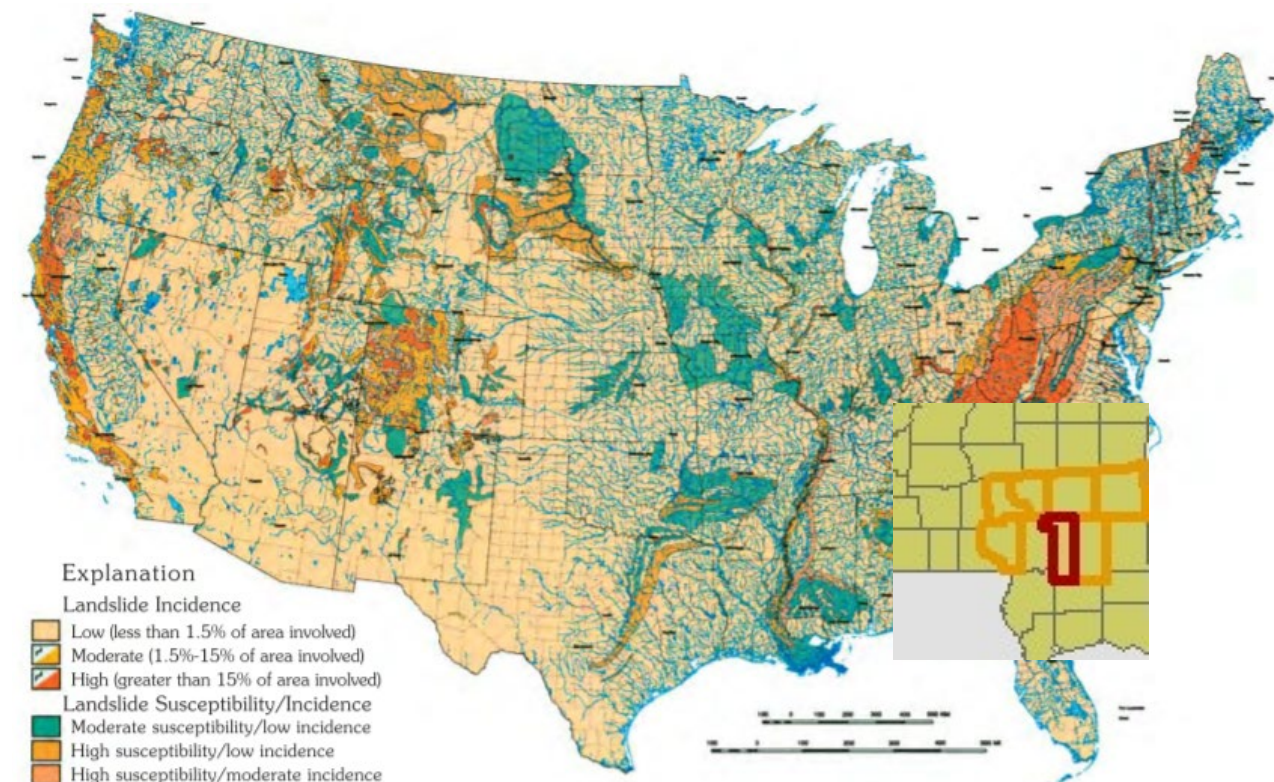
The probability of significant, damaging earthquake events affecting Forrest County is unlikely. However, it is possible that future earthquakes resulting in light to moderate perceived shaking and damages ranging from none to very light will affect the county. The annual probability level for the region is estimated to be less than 1 percent (unlikely).

B.2.8 Landslide

LOCATION AND SPATIAL EXTENT

Landslides occur along steep slopes when the pull of gravity can no longer be resisted (often due to heavy rain). Human development can also exacerbate risk by building on previously undevelopable steep slopes. The most frequent and widespread damaging landslides in the U.S. are induced by prolonged or heavy rainfall. The majority of rainfall-induced landslides are shallow, small, and move quickly.¹ Landslides are possible throughout Forrest County.

According to **Figure B.4** below, the entire county falls under a moderate possibility low incidence area (teal).

FIGURE B.4: LANDSLIDE SUSCEPTIBILITY AND INCIDENCE MAP OF FORREST COUNTY

Source: USGS

HISTORICAL OCCURRENCES

There is no extensive history of landslides in Forrest County. Landslide events typically occur in isolated areas.

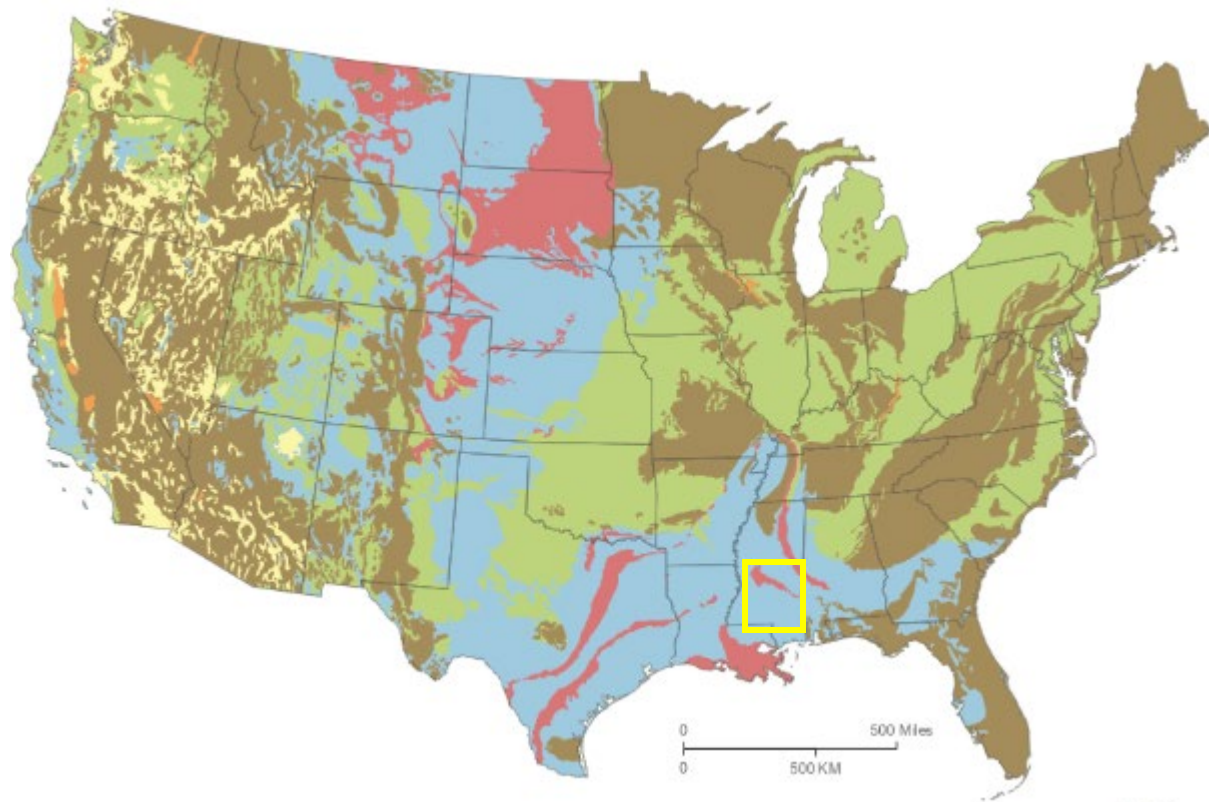
PROBABILITY OF FUTURE OCCURRENCES

Based on historical information and the USGS susceptibility index, the probability of future landslide events is unlikely (less than 1 percent probability). The USGS data indicates that the all areas in Forrest County have a low landslide incidence rate. However, some areas are reported as having moderate susceptibility to landsliding activity. Local conditions may become more favorable for landslides due to heavy rain, for example. This would increase the likelihood of occurrence. It should also be noted that some areas in Forrest County have greater risk than others given factors such as steepness on slope and modification of slopes.

B.2.9 Expansive Soils

LOCATION AND SPATIAL EXTENT

Due to the amount of clay minerals present in Forrest County, expansive soils present a threat to the county. Areas underlain by soils with swelling potential are shown in **Figure B.5**. The areas in blue are underlain with generally less than 50 percent clay having high swelling potential.

FIGURE B.5: SWELLING CLAYS IN MISSISSIPPI

Source: USGS

HISTORICAL OCCURRENCES

There is no historical record of significant expansive soil events in Forrest County. However, expansive soils can cause considerable damage to structural foundations in the county, although they do not pose a significant threat to human life.

PROBABILITY OF FUTURE OCCURRENCES

Based on historical information, the probability of future expansive soil events is possible (between 1 and 100 percent annually).

WIND-RELATED HAZARDS

B.2.10 Hurricane and Tropical Storm

LOCATION AND SPATIAL EXTENT

Hurricanes and tropical storms threaten the entire Atlantic and Gulf seaboard of the United States. While coastal areas are most directly exposed to the brunt of landfalling storms, their impact is often felt hundreds of miles inland and major hurricanes (category 3 or higher) may impact Forrest County. All areas in Forrest County are equally susceptible to hurricane and tropical storms.

HISTORICAL OCCURRENCES

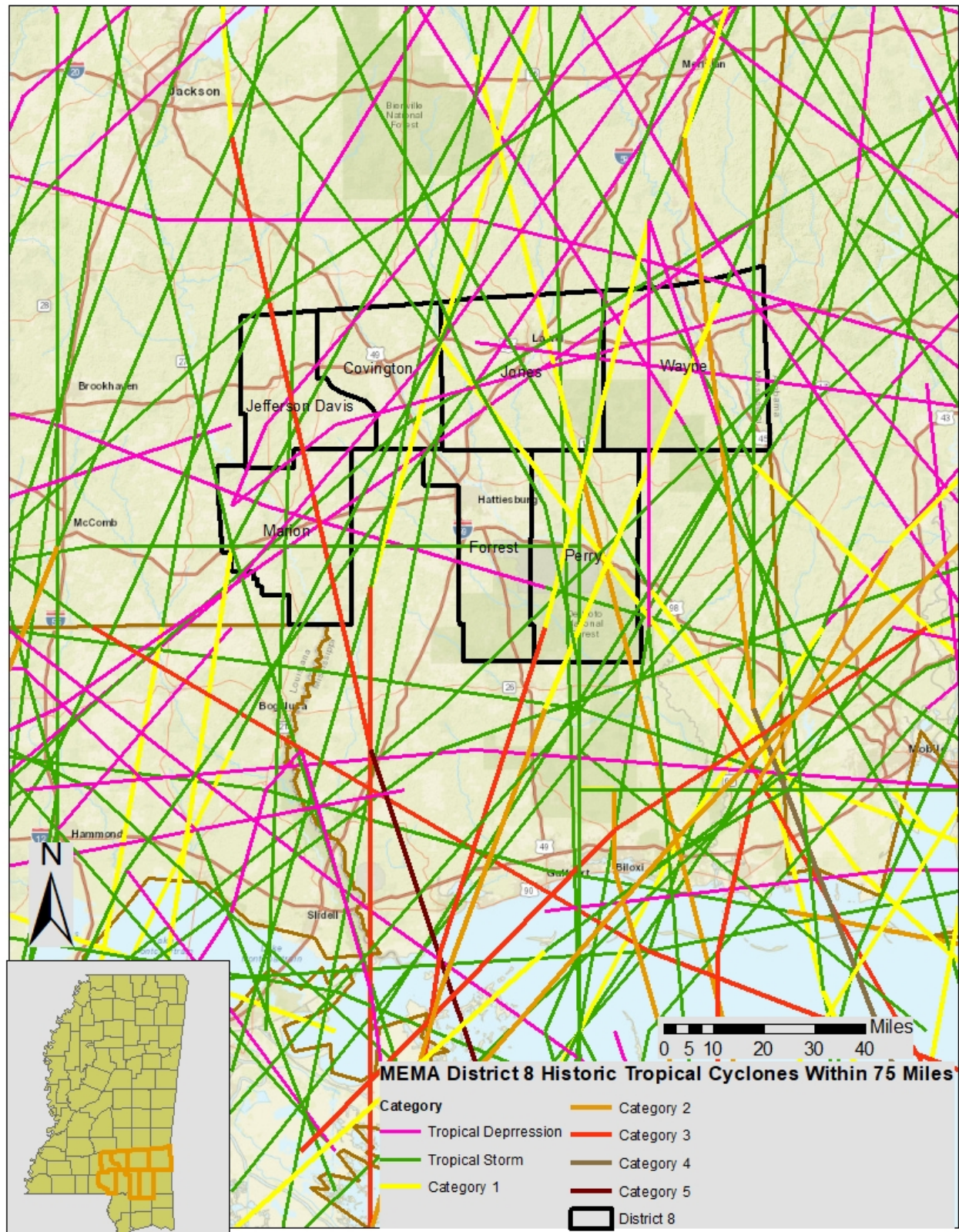
The National Centers for Environmental Information has not reported any hurricane hazards affecting the area during this planning period. As a result, the information will remain the same.

According to the National Hurricane Center's historical storm track records, a total of 54 hurricanes have passed within 75 miles of Forrest County since 1851. This includes 1 category 5 storm, 0 category 4 storms, 3 category 3 storms, 6 category 2 storms, 7 category 1 storms, and 37 tropical storms as shown in **Figure B.6**.⁸

A total of five tracks passed directly through the county including Hurricanes Camille (1969), Edith (1971), and Isidore (2002). All storms were tropical storms when they traversed the county except Hurricane Camille and Hurricane Katrina, which passed through the county as category 3 hurricane. **Table 5.14** provides the detail for each storm that passed through the county including date of occurrence, name (if applicable), maximum wind speed (as recorded when traversing the county) and category of the storm based on the Saffir-Simpson Scale.

**FIGURE B.6: HISTORICAL HURRICANE STORM TRACKS WITHIN 75 MILES OF
FORREST COUNTY**

⁸ These storm track statistics do not include extra-tropical storms. Though these related hazard events are less severe in intensity, they may cause significant local impact in terms of rainfall and high winds.



Source: National Oceanic and Atmospheric Administration; National Hurricane Center

**TABLE B.15: HISTORICAL STORM TRACKS WITHIN 75 MILES OF FORREST COUNTY
(1850–2018)**

Date of Occurrence	Storm Name	Maximum Wind Speed (miles per hour)	Storm Category
10/10/1905	NOT NAMED	40	Tropical Storm
9/30/1915	NOT NAMED	69	Tropical Storm
8/18/1969	CAMILLE	115	Category 3
9/16/1971	EDITH	69	Tropical Storm
9/26/2002	ISIDORE	63	Tropical Storm
8/29/2005	KATRINA	130	Category 3

Source: National Hurricane Center

Federal records indicate that disaster declarations were made in 1969 (Hurricane Camille), 1998 (Hurricane Georges), 2004 (Hurricane Ivan), 2005 (Hurricane Dennis), 2005 (Hurricane Katrina), 2008 (Hurricane Gustav), and 2012 (Hurricane Isaac).⁹ Hurricane and tropical storm events can cause substantial damage in the area due to high winds and flooding.

Flooding and high winds from hurricanes and tropical storms can cause damage throughout the county. Anecdotes are available from NCEI for the major storms that have impacted the county as found below:

Hurricane Katrina – August 29, 2005

Hurricane Katrina will likely go down as the worst and costliest natural disaster in United States history. The amount of destruction, the cost of damaged property/agriculture and the large loss of life across the affected region has been overwhelming. Catastrophic damage was widespread across a large portion of the Gulf Coast region. The devastation was not only confined to the coastal region, widespread and significant damage occurred well inland up to the Hattiesburg area and northward past Interstate 20.

Devastation from Hurricane Katrina was widespread across the region. Hurricane force winds were common across the area. The region received sustained winds of 60-80 mph with gusts ranging from 80-120 mph. There was widespread damage to trees and power lines. Wind damage to structures was also widespread, with roofs blown off or partially peeled. Hundreds of signs were shredded or blown down. Businesses sustained structural damage. Power outages lasted from a few days to as long as four weeks. Agriculture and timber industries were severely impacted. Row crops, including cotton, rice, corn, and soybeans, took a hard hit. Other impacted industries were the catfish industry, dairy and cattle industry, and nursery businesses.

Hurricane Rita – September 5, 2005

Hurricane Rita brought heavy rainfall, tropical storm force winds, and tornados to the region. Rainfall amounts ranged from 4-7 inches, which resulted in flooding. Winds between 25-35 mph, with gusts up to 40-50 mph, downed trees and power lines.

PROBABILITY OF FUTURE OCCURRENCES

Based on historical evidence, the probability level of future occurrence is likely (annual probability between 10 and 100 percent). Given the regional nature of the hazard, all areas in the county are

⁹ A complete listing of historical disaster declarations can be found in Section 4: Hazard Identification.

equally exposed to this hazard. However, when the county is impacted, the damage could be catastrophic, threatening lives and property throughout the planning area.

B.2.11 Thunderstorm

LOCATION AND SPATIAL EXTENT

Thunderstorm / High Wind

A thunderstorm event is an atmospheric hazard, and thus has no geographic boundaries. It is typically a widespread event that can occur in all regions of the United States. However, thunderstorms are most common in the central and southern states because atmospheric conditions in those regions are favorable for generating these powerful storms. Also, Forrest County typically experiences several straight-line wind events each year. These wind events can and have caused significant damage. It is assumed that Forrest County has uniform exposure to an event and the spatial extent of an impact could be large.

Hailstorm

Hailstorms frequently accompany thunderstorms, so their locations and spatial extents coincide. It is assumed that Forrest County is uniformly exposed to severe thunderstorms; therefore, all areas of the county are equally exposed to hail which may be produced by such storms.

Lightning

Lightning occurs randomly, therefore it is impossible to predict where and with what frequency it will strike. It is assumed that all of Forrest County is uniformly exposed to lightning.

HISTORICAL OCCURRENCES

Thunderstorm / High Wind

Severe storms resulted in eight disaster declarations in Forrest County in 1980, 1983, 1990, 2001, 2013, 2016, 2017, and 2018.¹⁰ According to NCEI, there have been 136 reported thunderstorm and high wind events since 1970 in Forrest County.¹¹ These events caused over \$1.5 million in damages. **Table B.15** summarizes this information. **Table B.16** presents detailed thunderstorm and high wind event reports including date, magnitude, and associated damages for each event.¹²

**TABLE B.16: SUMMARY OF THUNDERSTORM / HIGH WIND OCCURRENCES IN
FORREST COUNTY**

Location	Number of Occurrences	Deaths / Injuries	Property Damage (2013)
Hattiesburg	163	3/46	\$7,567,500
Petal	54	1/0	\$803,500
Unincorporated Area	259	1/2	\$2,821,700

¹⁰ A complete listing of historical disaster declarations can be found in Section 4: Hazard Identification.

¹¹ These thunderstorm events are only inclusive of those reported by the National Centers for Environmental Information (NCEI). It is likely that additional thunderstorm events have occurred in Forrest County. As additional local data becomes available, this hazard profile will be amended.

¹² The dollar amount of damages provided by NCEI is divided by the number of affected counties to reflect a damage estimate for the county.

Location	Number of Occurrences	Deaths / Injuries	Property Damage (2013)
FORREST COUNTY TOTAL	476	5/48	\$11,192,700

Source: National Centers for Environmental Information

TABLE B.17: HISTORICAL THUNDERSTORM / HIGH WIND OCCURRENCES IN FORREST COUNTY

Location	Date	Type	Magnitude	Deaths/ Injuries	Property Damage*
Hattiesburg					
Hattiesburg	17-JAN-94	THUNDERSTORM WIND	0 kts.	0/0	\$5,000
Hattiesburg	15-APR-94	THUNDERSTORM WIND	0 kts.	0/0	\$500
Hattiesburg	09-JUN-94	THUNDERSTORM WIND	0 kts.	0/0	\$500
Hattiesburg	07-MAR-95	THUNDERSTORM WIND	0 kts.	0/0	\$2,000
Hattiesburg	20-APR-95	THUNDERSTORM WIND	0 kts.	0/0	\$10,000
Hattiesburg	21-APR-95	THUNDERSTORM WIND	0 kts.	0/0	\$3,000
Hattiesburg	01-JUN-95	THUNDERSTORM WIND	0 kts.	0/0	\$2,000
Hattiesburg	13-JUL-95	THUNDERSTORM WIND	0 kts.	0/0	\$3,000
Hattiesburg	02-NOV-95	THUNDERSTORM WIND	0 kts.	0/0	\$2,000
Hattiesburg	17-DEC-95	THUNDERSTORM WIND	0 kts.	0/0	\$3000
Hattiesburg	17-DEC-95	THUNDERSTORM WIND	0 kts.	0/0	\$5,000
Hattiesburg	18-MAR-96	THUNDERSTORM WIND	0 kts.	0/0	\$100,000
Hattiesburg	28-MAY-96	THUNDERSTORM WIND	0 kts.	0/0	\$0
Hattiesburg	19-AUG-96	THUNDERSTORM WIND	0 kts.	0/0	\$100,000
Hattiesburg	26-OCT-96	THUNDERSTORM WIND	0 kts.	0/1	\$50,000
Hattiesburg	22-APR-97	THUNDERSTORM WIND	0 kts.	0/0	\$3,000
Hattiesburg	27-APR-97	THUNDERSTORM WIND	0 kts.	0/0	\$2,000
Hattiesburg	03-MAY-97	THUNDERSTORM WIND	0 kts.	0/0	\$1,000
Hattiesburg	07-JAN-98	THUNDERSTORM WIND	0 kts.	0/0	\$1,000
Hattiesburg	05-JUN-98	THUNDERSTORM WIND	0 kts.	2/45	\$1,000,000
Hattiesburg	20-JUN-98	THUNDERSTORM WIND	0 kts.	0/0	\$4,000
Hattiesburg	09-MAR-99	THUNDERSTORM WIND	0 kts.	0/0	\$8,000
Hattiesburg	09-MAR-99	THUNDERSTORM WIND	0 kts.	0/0	\$10,000
Hattiesburg	23-MAY-99	THUNDERSTORM WIND	0 kts.	0/0	\$2,000
Hattiesburg	02-AUG-99	THUNDERSTORM WIND	0 kts.	0/0	\$10,000
Hattiesburg	27-MAR-00	THUNDERSTORM WIND	0 kts.	0/0	\$20,000
Hattiesburg	27-MAR-00	THUNDERSTORM WIND	0 kts.	0/0	\$2,000
Hattiesburg	02-MAY-00	THUNDERSTORM WIND	0 kts.	0/0	\$5,000
Hattiesburg	25-JUN-00	THUNDERSTORM WIND	0 kts.	0/0	\$2,000
Hattiesburg	26-JUN-00	THUNDERSTORM WIND	0 kts.	0/0	\$1,000
Hattiesburg	16-JUL-00	THUNDERSTORM WIND	0 kts.	0/0	\$2,000
Hattiesburg	25-AUG-00	THUNDERSTORM WIND	0 kts.	0/0	\$2,000
Hattiesburg	06-OCT-00	THUNDERSTORM WIND	0 kts.	0/0	\$3,000
Hattiesburg	09-NOV-00	THUNDERSTORM WIND	0 kts.	0/0	\$2,000
Hattiesburg	29-JAN-01	THUNDERSTORM WIND	0 kts.	0/0	\$3,000
Hattiesburg	12-MAR-01	THUNDERSTORM WIND	0 kts.	0/0	\$25,000
Hattiesburg	13-JUN-01	THUNDERSTORM WIND	0 kts.	0/0	\$20,000
Hattiesburg	17-AUG-01	THUNDERSTORM WIND	0 kts.	0/0	\$2,000

ANNEX B: FORREST COUNTY

Location	Date	Type	Magnitude	Deaths/ Injuries	Property Damage*
Hattiesburg	13-OCT-01	THUNDERSTORM WIND	0 kts.	0/0	\$2,000
Hattiesburg	13-DEC-01	THUNDERSTORM WIND	0 kts.	0/0	\$1,000
Hattiesburg	13-DEC-01	THUNDERSTORM WIND	0 kts.	0/0	\$1,000
Hattiesburg	08-APR-02	THUNDERSTORM WIND	0 kts.	0/0	\$1,000
Hattiesburg	28-JUL-02	THUNDERSTORM WIND	0 kts.	0/0	\$1,000
Hattiesburg	24-DEC-02	THUNDERSTORM WIND	60 kts.	0/0	\$10,000
Hattiesburg	24-DEC-02	THUNDERSTORM WIND	60 kts.	0/0	\$7,000
Hattiesburg	31-DEC-02	THUNDERSTORM WIND	65 kts.	0/0	\$6,000
Hattiesburg	03-JUN-03	THUNDERSTORM WIND	50 kts.	0/0	\$5,000
Hattiesburg	22-JUL-03	THUNDERSTORM WIND	53 kts.	0/0	\$20,000
Hattiesburg	27-JUN-04	THUNDERSTORM WIND	43 kts.	0/0	\$1,000
Hattiesburg	27-JUN-04	THUNDERSTORM WIND	43 kts.	0/0	\$1,000
Hattiesburg	02-JUL-04	THUNDERSTORM WIND	53 kts.	0/0	\$3,000
Hattiesburg	27-NOV-04	THUNDERSTORM WIND	61 kts.	0/0	\$15,000
Hattiesburg	07-JAN-05	THUNDERSTORM WIND	57 kts.	0/0	\$5,000
Hattiesburg	22-MAR-05	THUNDERSTORM WIND	56 kts.	0/0	\$5,000
Hattiesburg	30-APR-05	THUNDERSTORM WIND	52 kts.	0/0	\$15,000
Hattiesburg	29-MAY-05	THUNDERSTORM WIND	55 kts.	0/0	\$30,000
Hattiesburg	09-JUL-05	THUNDERSTORM WIND	50 kts.	0/0	\$0
Hattiesburg	20-MAR-06	THUNDERSTORM WIND	50 kts.	0/0	\$0
Hattiesburg	08-MAY-06	THUNDERSTORM WIND	50 kts.	0/0	\$50,000
Hattiesburg	24-MAY-06	THUNDERSTORM WIND	50 kts.	0/0	\$0
Hattiesburg	23-JUN-06	THUNDERSTORM WIND	53 kts.	0/0	\$20,000
Hattiesburg	19-JUL-06	THUNDERSTORM WIND	52 kts.	0/0	\$1,000
Hattiesburg	15-AUG-06	THUNDERSTORM WIND	60 kts.	0/0	\$100,000
Hattiesburg	05-JAN-07	THUNDERSTORM WIND	53 kts.	0/0	\$0
Hattiesburg	05-JAN-07	THUNDERSTORM WIND	55 kts.	0/0	\$5,000
Hattiesburg	14-APR-07	THUNDERSTORM WIND	50 kts.	0/0	\$14,000
Hattiesburg	14-APR-07	THUNDERSTORM WIND	50 kts.	0/0	\$15,000
Hattiesburg	13-JUL-07	THUNDERSTORM WIND	50 kts.	0/0	\$0
Hattiesburg	18-OCT-07	THUNDERSTORM WIND	50 kts.	0/0	\$12,000
Hattiesburg	07-AUG-08	THUNDERSTORM WIND	50 kts.	0/0	\$0
Hattiesburg	10-DEC-08	THUNDERSTORM WIND	55 kts.	0/0	\$60,000
Hattiesburg	02-APR-09	THUNDERSTORM WIND	58 kts.	0/0	\$2,500
Hattiesburg	04-JUL-09	THUNDERSTORM WIND	50 kts.	0/0	\$0
Hattiesburg	09-OCT-09	THUNDERSTORM WIND	55 kts.	0/0	\$3,000
Hattiesburg	05-JUN-10	THUNDERSTORM WIND	58 kts.	0/0	\$5,000
Hattiesburg	16-JUL-10	THUNDERSTORM WIND	52 kts.	0/0	\$0
Hattiesburg	04-AUG-10	THUNDERSTORM WIND	45 kts.	0/0	\$4,000
Hattiesburg	04-AUG-10	THUNDERSTORM WIND	50 kts.	0/0	\$15,000
Hattiesburg	07-JUN-11	THUNDERSTORM WIND	54 kts.	0/0	\$0
Hattiesburg	07-JUN-11	THUNDERSTORM WIND	50 kts.	0/0	\$2,000
Hattiesburg	07-JUN-11	THUNDERSTORM WIND	50 kts.	0/0	\$30,000
Hattiesburg	04-JUL-11	THUNDERSTORM WIND	56 kts.	0/0	\$0
Hattiesburg	04-JUL-11	THUNDERSTORM WIND	56 kts.	0/0	\$100,000
Hattiesburg	13-JUL-11	THUNDERSTORM WIND	50 kts.	0/0	\$30,000
Hattiesburg	23-AUG-11	THUNDERSTORM WIND	51 kts.	0/0	\$0

ANNEX B: FORREST COUNTY

Location	Date	Type	Magnitude	Deaths/ Injuries	Property Damage*
Hattiesburg	03-APR-12	THUNDERSTORM WIND	50 kts.	0/0	\$5,000
Hattiesburg	31-MAY-12	THUNDERSTORM WIND	50 kts.	0/0	\$20,000
Hattiesburg	29-DEC-12	THUNDERSTORM WIND	50 kts.	0/0	\$3,000
Hattiesburg	20-FEB-14	THUNDERSTORM WIND	53 kts.	0/0	\$5,000
Hattiesburg	18-JUL-14	THUNDERSTORM WIND	53 kts.	0/0	\$3,000
Hattiesburg	30-JUL-15	THUNDERSTORM WIND	49 kts.	0/0	\$100
Hattiesburg	08-AUG-15	THUNDERSTORM WIND	54 kts.	0/0	\$10,000
Hattiesburg	15-FEB-16	THUNDERSTORM WIND	50 kts.	0/0	\$20,000
Hattiesburg	06-JUL-16	THUNDERSTORM WIND	50 kts.	0/0	\$4,000
Hattiesburg	16-JUN-17	THUNDERSTORM WIND	39 kts.	0/0	\$2,000
Hattiesburg	31-JUN-18	THUNDERSTORM WIND	50 kts.	0/0	\$15,000
Hattiesburg	18-AUG-18	THUNDERSTORM WIND	55 kts.	0/0	\$25,000
Petal					
Petal	09-JUN-94	THUNDERSTORM WIND	0 kts.	0/0	\$500
Petal	13-JAN-95	THUNDERSTORM WIND	0 kts.	0/0	\$15,000
Petal	10-JUL-98	THUNDERSTORM WIND	0 kts.	0/0	\$2,000
Petal	03-APR-00	THUNDERSTORM WIND	0 kts.	0/0	\$2,000
Petal	10-AUG-00	THUNDERSTORM WIND	0 kts.	0/0	\$2,000
Petal	19-JAN-02	THUNDERSTORM WIND	0 kts.	0/0	\$1,000
Petal	17-MAY-02	THUNDERSTORM WIND	0 kts.	0/0	\$1,000
Petal	17-MAY-03	THUNDERSTORM WIND	50 kts.	0/0	\$10,000
Petal	21-JUN-04	THUNDERSTORM WIND	53 kts.	0/0	\$1,000
Petal	22-JUN-04	THUNDERSTORM WIND	35 kts.	0/0	\$1,000
Petal	22-APR-00	THUNDERSTORM WIND	50 kts.	0/0	\$0
Petal	08-MAY-06	THUNDERSTORM WIND	60 kts.	0/0	\$50,000
Petal	19-JUL-06	THUNDERSTORM WIND	60 kts.	0/0	\$25,000
Petal	14-APR-07	THUNDERSTORM WIND	61 kts.	0/0	\$60,000
Petal	19-JUN-07	THUNDERSTORM WIND	55 kts.	0/0	\$80,000
Petal	15-MAY-08	THUNDERSTORM WIND	50 kts.	0/0	\$0
Petal	26-MAY-08	THUNDERSTORM WIND	50 kts.	0/0	\$0
Petal	27-JUN-08	THUNDERSTORM WIND	50 kts.	0/0	\$10,000
Petal	12-AUG-08	THUNDERSTORM WIND	50 kts.	0/0	\$12,000
Petal	05-MAY-09	THUNDERSTORM WIND	50 kts.	0/0	\$0
Petal	03-AUG-10	THUNDERSTORM WIND	52 kts.	0/0	\$15,000
Petal	11-JUL-11	THUNDERSTORM WIND	50 kts.	0/0	\$8,000
Petal	11-JUN-12	THUNDERSTORM WIND	55 kts.	0/0	\$50,000
Petal	13-OCT-14	THUNDERSTORM WIND	53 kts.	0/0	\$0
Petal	04-JUL-15	THUNDERSTORM WIND	63 kts.	0/0	\$7,000
Petal	23-FEB-16	THUNDERSTORM WIND	55 kts.	0/0	\$10,000
Unincorporated Area					
FORREST COUNTY	01-JUL-63	THUNDERSTORM WIND	75 kts.	0/0	\$0
FORREST COUNTY	15-MAY-66	THUNDERSTORM WIND	0 kts.	0/0	\$0
FORREST COUNTY	20-JUL-66	THUNDERSTORM WIND	0 kts.	0/0	\$0
FORREST COUNTY	18-JUN-68	THUNDERSTORM WIND	0 kts.	0/0	\$0
FORREST COUNTY	27-DEC-68	THUNDERSTORM WIND	0 kts.	0/0	\$0
FORREST COUNTY	09-JUL-69	THUNDERSTORM WIND	0 kts.	0/0	\$0
FORREST COUNTY	01-FEB-70	THUNDERSTORM WIND	60 kts.	0/0	\$0

ANNEX B: FORREST COUNTY

Location	Date	Type	Magnitude	Deaths/ Injuries	Property Damage*
FORREST COUNTY	12-MAY-71	THUNDERSTORM WIND	65 kts.	0/0	\$0
FORREST COUNTY	25-JUN-72	THUNDERSTORM WIND	60 kts.	0/0	\$0
FORREST COUNTY	21-JAN-73	THUNDERSTORM WIND	0 kts.	0/0	\$0
FORREST COUNTY	29-OCT-74	THUNDERSTORM WIND	0 kts.	0/0	\$0
FORREST COUNTY	10-JAN-75	THUNDERSTORM WIND	0 kts.	0/0	\$0
FORREST COUNTY	07-MAY-75	THUNDERSTORM WIND	70 kts.	0/0	\$0
FORREST COUNTY	21-JUL-75	THUNDERSTORM WIND	0 kts.	0/0	\$0
FORREST COUNTY	13-JUL-76	THUNDERSTORM WIND	0 kts.	0/0	\$0
FORREST COUNTY	12-MAR-77	THUNDERSTORM WIND	0 kts.	0/0	\$0
FORREST COUNTY	13-AUG-78	THUNDERSTORM WIND	0 kts.	0/0	\$0
FORREST COUNTY	12-JUN-82	THUNDERSTORM WIND	0 kts.	0/0	\$0
FORREST COUNTY	05-MAR-83	THUNDERSTORM WIND	0 kts.	0/0	\$0
FORREST COUNTY	05-APR-83	THUNDERSTORM WIND	0 kts.	0/0	\$0
FORREST COUNTY	04-JUN-83	THUNDERSTORM WIND	0 kts.	0/0	\$0
FORREST COUNTY	24-MAR-84	THUNDERSTORM WIND	0 kts.	0/0	\$0
FORREST COUNTY	03-MAY-84	THUNDERSTORM WIND	52kts.	0/0	\$0
FORREST COUNTY	04-FEB-86	THUNDERSTORM WIND	0 kts.	0/0	\$0
FORREST COUNTY	14-MAY-87	THUNDERSTORM WIND	0 kts.	0/0	\$0
FORREST COUNTY	15-JUL-88	THUNDERSTORM WIND	75 kts.	0/0	\$0
FORREST COUNTY	18-MAY-89	THUNDERSTORM WIND	0 kts.	0/0	\$0
FORREST COUNTY	10-JAN-90	THUNDERSTORM WIND	0 kts.	0/0	\$0
FORREST COUNTY	27-MAY-90	THUNDERSTORM WIND	0 kts.	0/0	\$0
FORREST COUNTY	02-AUG-90	THUNDERSTORM WIND	0 kts.	0/0	\$0
FORREST COUNTY	14-APR-91	THUNDERSTORM WIND	0 kts.	0/0	\$0
FORREST COUNTY	05-MAY-91	THUNDERSTORM WIND	0 kts.	0/0	\$0
FORREST COUNTY	03-JUN-91	THUNDERSTORM WIND	0 kts.	0/0	\$0
FORREST COUNTY	15-FEB-92	THUNDERSTORM WIND	0 kts.	0/0	\$0
FORREST COUNTY	29-JUN-92	THUNDERSTORM WIND	0 kts.	0/0	\$0
FORREST COUNTY	09-JUL-92	THUNDERSTORM WIND	0 kts.	0/0	\$0
FORREST COUNTY	16-JUL-92	THUNDERSTORM WIND	0 kts.	0/0	\$0
MAYBANK	27-JAN-94	TSTM WIND	0 kts.	0/0	\$500
BROOKLYN	25-MAR-94	TSTM WIND	0 kts.	0/0	\$500
GLENDALE	05-NOV-94	TSTM WIND	0 kts.	0/0	\$6,000
BROOKLYN	21-APR-95	TSTM WIND	0 kts.	0/0	\$5,000
BROOKLYN	01-JUN-95	TSTM WIND	0 kts.	0/0	\$10,000
FORREST COUNTY	26-JUL-95	THUNDERSTORM WIND	0 kts.	0/0	\$2,000
GLENDALE	17-DEC-95	THUNDERSTORM WIND	52 kts.	0/0	\$10,000
DIXIE	18-DEC-95	THUNDERSTORM WIND	0 kts.	0/0	\$10,000
BROOKLYN	13-JUL-97	THUNDERSTORM WIND	0 kts.	0/0	\$2,000
GLENDALE	20-JUN-98	THUNDERSTORM WIND	0 kts.	0/0	\$2,000
FRUITLAND PARK	10-JUL-98	THUNDERSTORM WIND	0 kts.	0/0	\$10,000
DIXIE PINE	02-JAN-99	THUNDERSTORM WIND	0 kts.	0/0	\$10,000
COUNTY WIDE	22-JAN-99	THUNDERSTORM WIND	0 kts.	0/0	\$25,000
COUNTY WIDE	27-FEB-99	THUNDERSTORM WIND	0 kts.	0/0	\$2,000
COUNTY WIDE	09-MAR-99	THUNDERSTORM WIND	0 kts.	0/0	\$40,000
BROOKLYN	25-AUG-99	THUNDERSTORM WIND	0 kts.	0/0	\$2,000
BROOKLYN	25-JUN-00	THUNDERSTORM WIND	0 kts.	0/0	\$2,000

ANNEX B: FORREST COUNTY

Location	Date	Type	Magnitude	Deaths/ Injuries	Property Damage*
COUNTY WIDE	22-JUL-00	THUNDERSTORM WIND	0 kts.	0/0	\$10,000
MCLAURIN	10-AUG-00	THUNDERSTORM WIND	0 kts.	0/0	\$1,000
MAEDONIA	25-AUG-00	THUNDERSTORM WIND	0 kts.	0/0	\$2,000
CARNES	13-DEC-00	THUNDERSTORM WIND	0 kts.	0/0	\$1,000
BROOKLYN	19-JAN-01	THUNDERSTORM WIND	0 kts.	0/0	\$15,000
COUNTY WIDE	11-JUN-01	THUNDERSTORM WIND	0 kts.	0/0	\$18,000
COUNTY WIDE	12-MAR-01	THUNDERSTORM WIND	0 kts.	0/0	\$10,000
ROCK HILL	12-MAR-01	THUNDERSTORM WIND	0 kts.	0/0	\$1,000
CARNES	07-JUL-02	THUNDERSTORM WIND	52 kts.	0/0	\$5,000
COUNTY WIDE	26-SEP-02	THUNDERSTORM WIND	0 kts.	0/0	\$3,000
COUNTY WIDE	07-APR-03	THUNDERSTORM WIND	50 kts.	0/0	\$10,000
CENTRAL PORTION	14-JUN-03	THUNDERSTORM WIND	50 kts.	0/0	\$1,000
CARNES	20-AUG-03	THUNDERSTORM WIND	52 kts.	0/0	\$3,000
BROOKLYN	26-OCT-03	THUNDERSTORM WIND	50 kts.	0/0	\$1,000
BROOKLYN	24-NOV-04	THUNDERSTORM WIND	53 kts.	0/0	\$0
BROOKLYN	02-JUL-05	THUNDERSTORM WIND	55 kts.	0/0	\$5,000
FORREST COUNTY	09-MAR-06	THUNDERSTORM WIND	39 kts.	0/0	\$1,000
FORREST COUNTY	30-JUL-06	THUNDERSTORM WIND	38 kts.	0/0	\$5,000
MCLAURIN	15-AUG-06	STRONG WIND	53 kts.	0/0	\$30,000
BROOKLYN	17-OCT-06	THUNDERSTORM WIND	50 kts.	0/0	\$0
MCLAURIN	27-OCT-06	THUNDERSTORM WIND	53 kts.	0/0	\$2,000
MCLAURIN	15-NOV-06	THUNDERSTORM WIND	50 kts.	0/0	\$20,000
FORREST COUNTY	24-JUN-07	THUNDERSTORM WIND	43 kts.	0/0	\$0
RAWLS SPRING	31-AUG-07	THUNDERSTORM WIND	50 kts.	0/0	\$100
FORREST COUNTY	15-DEC-07	THUNDERSTORM WIND	39 kts.	0/0	\$25,000
DIXIE PINE	10-JAN-08	THUNDERSTORM WIND	70 kts.	0/0	\$0
FORREST COUNTY	29-JAN-08	THUNDERSTORM WIND	39 kts.	0/0	\$50,000
RIVERSIDE	31-JAN-08	THUNDERSTORM WIND	53 kts.	0/0	\$60,000
MCLAURIN	03-MAR-08	THUNDERSTORM WIND	66 kts.	0/0	\$5,000
CARNES	03-MAR-08	THUNDERSTORM WIND	58 kts.	0/0	\$10,000
MCCALLUM	18-APR-08	THUNDERSTORM WIND	50 kts.	0/0	\$0
RAGLAND	18-APR-08	THUNDERSTORM WIND	50 kts.	0/0	\$5,000
BONHOMIE	03-MAY-08	THUNDERSTORM WIND	68 kts.	0/0	\$30,000
CARNES	20-JUN-08	THUNDERSTORM WIND	60 kts.	0/0	\$0
MCLAURIN	21-JUN-08	THUNDERSTORM WIND	50 kts.	0/0	\$0
BONHOMIE	25-JUN-08	THUNDERSTORM WIND	50 kts.	0/0	\$0
MCLAURIN	28-JUN-08	THUNDERSTORM WIND	55 kts.	0/0	\$2,000
DIXIE PINE	29-JUL-08	THUNDERSTORM WIND	61 kts.	0/0	\$75,000
GLENDALE	02-AUG-08	THUNDERSTORM WIND	53 kts.	0/0	\$0
MACEDONIA	27-MAR-09	THUNDERSTORM WIND	61 kts.	0/0	\$0
RAWLS SPRINGS	02-APR-09	THUNDERSTORM WIND	50 kts.	0/0	\$5,000
GLENDALE	12-APR-09	THUNDERSTORM WIND	60 kts.	0/0	\$10,000
RAWLS SPRINGS	03-MAY-09	THUNDERSTORM WIND	53 kts.	0/0	\$3,000
MACEDONIA	04-MAY-09	THUNDERSTORM WIND	50 kts.	0/0	\$0
MCCALLUM	04-JUL-09	THUNDERSTORM WIND	50 kts.	0/0	\$0
BROOKLYN	01-AUG-09	THUNDERSTORM WIND	50 kts.	0/0	\$0
GLENDALE	29-JAN-10	THUNDERSTORM WIND	55 kts.	0/0	\$35,000

ANNEX B: FORREST COUNTY

Location	Date	Type	Magnitude	Deaths/ Injuries	Property Damage*
FORREST COUNTY	01-MAR-10	STRONG WIND	36 kts.	0/0	\$1,000
CARNES	24-APR-10	THUNDERSTORM WIND	50 kts.	0/0	\$0
BROOKLYN	15-JUN-10	THUNDERSTORM WIND	43 kts.	0/0	\$8,000
DIXIE PINE	15-JUN-10	THUNDERSTORM WIND	55 kts.	0/0	\$3,000
BROOKLYN	15-AUG-10	THUNDERSTORM WIND	39 kts.	0/0	\$10,000
RAWLS SPRINGS	15-AUG-10	THUNDERSTORM WIND	53 kts.	0/0	\$5,000
FORREST COUNTY	22-AUG-10	STRONG WIND	50 kts.	0/0	\$1,000
EATONVILLE	04-APR-11	THUNDERSTORM WIND	60 kts.	0/0	\$200,000
MACEDONIA	13-MAY-11	THUNDERSTORM WIND	50 kts.	0/0	\$0
PALMERS CROSSING	07-JUN-11	THUNDERSTORM WIND	50 kts.	0/0	\$75,000
BROOKLYN	08-JUN-11	THUNDERSTORM WIND	50 kts.	0/0	\$5,000
MAXIE	10-JUN-11	THUNDERSTORM WIND	50 kts.	0/0	\$1,000
RIVERSIDE	13-JUN-11	THUNDERSTORM WIND	50 kts.	0/0	\$1,000
BONHOMIE	21-JUN-11	THUNDERSTORM WIND	50 kts.	0/0	\$5,000
BROOKLYN	04-JUL-11	THUNDERSTORM WIND	39 kts.	0/0	\$500
ROCK HILL	24-AUG-11	THUNDERSTORM WIND	50 kts.	0/0	\$3,000
FORREST COUNTY	04-SEP-11	STRONG WIND	35 kts.	0/0	\$3,000
FORREST COUNTY	05-SEP-11	STRONG WIND	39 kts.	0/0	\$4,000
MACEDONIA	02-APR-12	THUNDERSTORM WIND	50 kts.	0/0	\$1,000
EATONVILLE	18-JUL-12	THUNDERSTORM WIND	43 kts.	0/0	\$100
EATONVILLE	06-AUG-12	THUNDERSTORM WIND	50 kts.	0/0	\$0
EPPS	06-AUG-12	THUNDERSTORM WIND	50 kts.	0/0	\$0
BONHOMIE	09-AUG-12	THUNDERSTORM WIND	56 kts.	0/0	\$20,000
MACEDONIA	04-SEP-12	THUNDERSTORM WIND	50 kts.	0/0	\$2,000
MACEDONIA	11-APR-13	THUNDERSTORM WIND	60 kts.	0/0	\$100,000
DIXIE PINE	13-AUG-13	THUNDERSTORM WIND	50 kts.	0/0	\$1,000
FORREST COUNTY	20-FEB-14	STRONG WIND	35 kts.	1/0	\$50,000
DIXIE PINE	28-MAR-14	THUNDERSTORM WIND	50 kts.	0/0	\$1,000
MCLAURIN	24-JUN-14	THUNDERSTORM WIND	52 kts.	0/0	\$3,000
ROCK HILL	16-NOV-14	THUNDERSTORM WIND	52 kts.	0/0	\$2,000
ROCK HILL	15-APR-15	THUNDERSTORM WIND	55 kts.	0/0	\$10,000
BONHOMIE	05-JUL-15	THUNDERSTORM WIND	50 kts.	0/0	\$3,000
CARNES	08-AUG-15	THUNDERSTORM WIND	52 kts.	0/0	\$5,000
MCLAURIN	17-MAR-16	THUNDERSTORM WIND	50 kts.	0/0	\$10,000
CARNES	17-MAR-16	THUNDERSTORM WIND	52 kts.	0/0	\$6,000
ROCK HILL	17-MAR-16	THUNDERSTORM WIND	50 kts.	0/0	\$15,000
MCLAURIN	19-MAY-16	THUNDERSTORM WIND	50 kts.	0/0	\$10,000
FORREST COUNTY	17-JUN-16	THUNDERSTORM WIND	50 kts.	0/0	\$7,000
RIVERSIDE	17-JUN-16	THUNDERSTORM WIND	55 kts.	0/0	\$5,000
ROCK HILL	17-JUN-16	THUNDERSTORM WIND	50 kts.	0/0	\$20,000
ROCK HILL	25-SEP-16	THUNDERSTORM WIND	50 kts.	0/0	\$5,000
FORREST COUNTY	28-NOV-16	THUNDERSTORM WIND	39 kts.	0/0	\$5,000
EPPS	02-JAN-17	THUNDERSTORM WIND	50 kts.	0/0	\$5,000
MAXIE	02-JAN-17	THUNDERSTORM WIND	55 kts.	0/0	\$40,000
RAGLAND	02-JAN-17	THUNDERSTORM WIND	50 kts.	0/0	\$5,000
BONHOMIE	30-MAR-17	THUNDERSTORM WIND	50 kts.	0/0	\$3,000
FORREST COUNTY	03-APR-17	THUNDERSTORM WIND	50 kts.	0/0	\$7,000

Location	Date	Type	Magnitude	Deaths/ Injuries	Property Damage*
MAYBANK	30-APR-17	THUNDERSTORM WIND	50 kts.	0/0	\$8,000
GLENDALE	21-MAY-17	THUNDERSTORM WIND	50 kts.	0/0	\$16,000
BROOKLYN	16-JUN-17	THUNDERSTORM WIND	55 kts.	0/0	\$3,000
GLENDALE	16-JUN-17	THUNDERSTORM WIND	55 kts.	0/0	\$10,000
MACEDONIA	16-JUN-17	THUNDERSTORM WIND	55 kts.	0/0	\$10,000
FORREST COUNTY	22-JUN-17	STRONG WIND	35 kts.	0/0	\$3,000
FORREST COUNTY	22-JUN-17	STRONG WIND	35 kts.	0/0	\$3,000
FORREST COUNTY	22-JUN-17	STRONG WIND	35 kts.	0/1	\$5,000
MAXIE	07-JUL-17	THUNDERSTORM WIND	50 kts.	0/0	\$5,000
MACEDONIA	19-SEP-17	THUNDERSTORM WIND	48 kts.	0/0	\$2,000
BONHOMIE	14-APR-18	THUNDERSTORM WIND	56 kts.	0/0	\$30,000
MACEDONIA	14-APR-18	THUNDERSTORM WIND	52 kts.	0/0	\$15,000
GLENDALE	19-JUL-18	THUNDERSTORM WIND	50 kts.	0/0	\$10,000
RAWLS SPRINGS	01-NOV-18	THUNDERSTORM WIND	50 kts.	0/0	\$3,000
BONHOMIE	01-NOV-18	THUNDERSTORM WIND	50 kts.	0/0	\$10,000
EPPS	01-NOV-18	THUNDERSTORM WIND	52 kts.	0/0	\$8,000

*All damage may not have been reported.

Source: National Centers for Environmental Information

Hailstorm

According to the National Centers for Environmental Information, 160 recorded hailstorm events have affected Forrest County since 1965.¹³ **Table B.17** is a summary of the hail events in Forrest County. **Table B.18** provides detailed information about each event that occurred in the county. In all, hail occurrences resulted in over \$6 million in property damages. Hail ranged in diameter from 0.75 inches to 2.75 inches. It should be noted that hail is notorious for causing substantial damage to cars, roofs, and other areas of the built environment that may not be reported to the National Centers for Environmental Information. Therefore, it is likely that damages are greater than the reported value. However, NCEI noted minimal monetary damages for this planning period.

TABLE B.18: SUMMARY OF HAIL OCCURRENCES IN FORREST COUNTY

Location	Number of Occurrences	Deaths / Injuries	Property Damage
Hattiesburg	60	0/0	\$5,031,000
Petal	21	0/0	\$26,000
Unincorporated Area	85	0/0	\$928,000
FORREST COUNTY TOTAL	166	0/0	\$5,985,000

Source: National Centers for Environmental Information

TABLE B.19: HISTORICAL HAIL OCCURRENCES IN FORREST COUNTY

Location	Date	Magnitude	Deaths / Injuries	Property Damage*
Hattiesburg				
Hattiesburg	27-JAN-94	0.75 in.	0/0	\$0

¹³ These hail events are only inclusive of those reported by the National Centers for Environmental Information (NCEI). It is likely that additional hail events have affected Forrest County. As additional local data becomes available, this hazard profile will be amended.

ANNEX B: FORREST COUNTY

Location	Date	Magnitude	Deaths / Injuries	Property Damage*
Hattiesburg	09-JUN-94	1.75 in.	0/0	\$0
Hattiesburg	26-JUL-95	0.75 in.	0/0	\$0
Hattiesburg	26-JAN-96	2.75 in.	0/0	\$250,000
Hattiesburg	18-MAR-96	1.75 in.	0/0	\$2,000,000
Hattiesburg	18-MAR-96	2.75 in.	0/0	\$2,000,000
Hattiesburg	18-MAR-96	0.75 in.	0/0	\$0
Hattiesburg	19-AUG-96	0.75 in.	0/0	\$0
Hattiesburg	30-NOV-96	1.00 in.	0/0	\$0
Hattiesburg	29-MAR-97	0.75 in.	0/0	\$0
Hattiesburg	29-MAR-97	1.00 in.	0/0	\$0
Hattiesburg	22-APR-97	1.00 in.	0/0	\$0
Hattiesburg	28-MAY-97	0.88 in.	0/0	\$100,000
Hattiesburg	28-MAY-97	1.75 in.	0/0	\$0
Hattiesburg	23-DEC-97	1.75 in.	0/0	\$100,000
Hattiesburg	28-JAN-98	1.75 in.	0/0	\$0
Hattiesburg	26-FEB-98	0.88 in.	0/0	\$0
Hattiesburg	07-MAR-98	1.00 in.	0/0	\$0
Hattiesburg	17-APR-98	0.75 in.	0/0	\$0
Hattiesburg	17-APR-98	1.75 in.	0/0	\$0
Hattiesburg	17-APR-98	1.75 in.	0/0	\$0
Hattiesburg	17-APR-98	1.00 in.	0/0	\$0
Hattiesburg	17-APR-98	0.88 in.	0/0	\$0
Hattiesburg	29-JAN-99	0.75 in.	0/0	\$35,000
Hattiesburg	14-APR-99	1.75 in.	0/0	\$0
Hattiesburg	23-MAY-99	0.88 in.	0/0	\$0
Hattiesburg	23-APR-00	1.00 in.	0/0	\$3,000
Hattiesburg	22-JUL-00	1.00 in.	0/0	\$0
Hattiesburg	25-AUG-00	0.75 in.	0/0	\$0
Hattiesburg	30-AUG-00	0.75 in.	0/0	\$0
Hattiesburg	31-AUG-00	0.75 in.	0/0	\$0
Hattiesburg	31-AUG-00	0.75 in.	0/0	\$15,000
Hattiesburg	31-AUG-00	1.75 in.	0/0	\$0
Hattiesburg	05-SEP-00	0.75 in.	0/0	\$8,000
Hattiesburg	02-MAY-01	1.75 in.	0/0	\$0
Hattiesburg	02-MAY-01	0.75 in.	0/0	\$0
Hattiesburg	12-MAR-02	0.88 in.	0/0	\$0
Hattiesburg	24-DEC-02	0.75 in.	0/0	\$1,000
Hattiesburg	06-MAR-03	0.88 in.	0/0	\$5,000
Hattiesburg	06-MAR-03	1.00 in.	0/0	\$1,000
Hattiesburg	25-APR-03	1.00 in.	0/0	\$10,000
Hattiesburg	25-APR-03	1.75 in.	0/0	\$300,000
Hattiesburg	25-APR-03	2.50 in.	0/0	\$1,000
Hattiesburg	25-APR-03	0.75 in.	0/0	\$1,000
Hattiesburg	25-APR-03	0.75 in.	0/0	\$1,000
Hattiesburg	20-AUG-03	0.88 in.	0/0	\$0
Hattiesburg	11-MAY-04	1.00 in.	0/0	\$0
Hattiesburg	22-MAR-05	0.88 in.	0/0	\$0

ANNEX B: FORREST COUNTY

Location	Date	Magnitude	Deaths / Injuries	Property Damage*
Hattiesburg	01-APR-05	0.75 in.	0/0	\$0
Hattiesburg	06-APR-05	0.88 in.	0/0	\$0
Hattiesburg	11-APR-05	0.88 in.	0/0	\$80,000
Hattiesburg	22-APR-05	1.75 in.	0/0	\$0
Hattiesburg	30-APR-05	0.75 in.	0/0	\$100,000
Hattiesburg	29-MAY-05	1.75 in.	0/0	\$0
Hattiesburg	24-MAY-06	0.88 in.	0/0	\$0
Hattiesburg	19-JUL-06	0.75 in.	0/0	\$0
Hattiesburg	01-MAR-07	0.75 in.	0/0	\$0
Hattiesburg	01-MAR-10	0.88 in.	0/0	\$0
Hattiesburg	04-JUL-11	1.25 in.	0/0	\$0
Hattiesburg	18-MAR-13	1.00 in.	0/0	\$0
Hattiesburg	30-APR-17	1.75 in.	0/0	\$20,000
Petal				
Petal	20-APR-93	1.75 in.	0/0	\$5,000
Petal	14-APR-96	1.75 in.	0/0	\$0
Petal	07-MAR-98	1.00 in.	0/0	\$0
Petal	17-APR-98	0.75 in.	0/0	\$0
Petal	01-JUL-98	0.88 in.	0/0	\$0
Petal	25-AUG-99	1.00 in.	0/0	\$0
Petal	26-APR-00	0.88 in.	0/0	\$0
Petal	20-JUL-00	1.00 in.	0/0	\$10,000
Petal	10-AUG-00	0.88 in.	0/0	\$0
Petal	31-AUG-00	0.88 in.	0/0	\$0
Petal	01-MAR-01	1.00 in.	0/0	\$0
Petal	12-MAR-02	0.88 in.	0/0	\$0
Petal	07-MAR-03	0.75 in.	0/0	\$1,000
Petal	21-APR-06	0.88 in.	0/0	\$0
Petal	08-MAY-06	1.25 in.	0/0	\$10,000
Petal	13-FEB-07	0.88 in.	0/0	\$0
Petal	29-JUL-08	1.00 in.	0/0	\$0
Petal	22-FEB-10	1.00 in.	0/0	\$0
Petal	02-APR-12	1.00 in.	0/0	\$0
Petal	29-JUN-13	1.00 in.	0/0	\$0
Petal	11-SEP-16	.75 in.	0/0	\$0
Unincorporated Area				
FORREST COUNTY	19-APR-65	1.75 in.	0/0	\$0
FORREST COUNTY	12-FEB-71	1.75 in.	0/0	\$0
FORREST COUNTY	09-APR-75	1.75 in.	0/0	\$0
FORREST COUNTY	09-APR-75	1.75 in.	0/0	\$0
FORREST COUNTY	07-MAY-75	1.75 in.	0/0	\$0
FORREST COUNTY	03-APR-79	1.00 in.	0/0	\$0
FORREST COUNTY	11-JUN-82	1.75 in.	0/0	\$0
FORREST COUNTY	12-JUN-82	1.75 in.	0/0	\$0
FORREST COUNTY	03-MAY-84	1.75 in.	0/0	\$0
FORREST COUNTY	10-FEB-86	0.75 in.	0/0	\$0
FORREST COUNTY	10-AUG-86	1.00 in.	0/0	\$0

ANNEX B: FORREST COUNTY

Location	Date	Magnitude	Deaths / Injuries	Property Damage*
FORREST COUNTY	20-MAR-89	0.75 in.	0/0	\$0
FORREST COUNTY	29-MAR-89	1.00 in.	0/0	\$0
FORREST COUNTY	14-MAY-90	0.75 in.	0/0	\$0
GLENDALE	15-MAR-95	0.75 in.	0/0	\$0
BROOKLYN	18-MAR-96	1.75 in.	0/0	\$0
MACEDONIA	18-MAR-96	1.75 in.	0/0	\$500,000
BROOKLYN	24-MAR-96	1.75 in.	0/0	\$0
BROOKLYN	29-MAR-97	1.75 in.	0/0	\$0
CARNES	25-OCT-97	0.88 in.	0/0	\$0
CARNES	17-APR-98	4.50 in.	0/0	\$50,000
BROOKLYN	17-APR-98	0.88 in.	0/0	\$0
DIXIE PINE	17-APR-98	4.50 in.	0/0	\$0
BROOKLYN	25-AUG-99	1.75 in.	0/0	\$0
BROOKLYN	27-JUN-00	1.75 in.	0/0	\$5,000
MCLAURIN	31-JUN-00	1.00 in.	0/0	\$15,000
GLENDALE	26-AUG-00	1.75 in.	0/0	\$0
CARNES	13-DEC-00	1.00 in.	0/0	\$6,000
MCCALLUM	12-FEB-02	1.00 in.	0/0	\$0
BROOKLYN	12-FEB-02	0.88 in.	0/0	\$0
CARNES	07-JUL-02	1.00 in.	0/0	\$0
BONHOMIE	23-DEC-02	0.88 in.	0/0	\$0
MCLAURIN	23-DEC-02	0.75 in.	0/0	\$0
MCCALLUM	06-MAR-03	0.75 in.	0/0	\$0
MCCALLUM	06-MAR-03	0.88 in.	0/0	\$0
MCLAURIN	25-APR-03	1.00 in.	0/0	\$0
MCLAURIN	25-MAY-03	1.00 in.	0/0	\$0
MCLAURIN	23-FEB-04	0.75 in.	0/0	\$1,000
CARNES	30-MAR-05	1.00 in.	0/0	\$0
ROCK HILL	31-MAR-05	1.75 in.	0/0	\$0
MCCALLUM	01-APR-05	0.75 in.	0/0	\$0
ROCK HILL	06-APR-05	1.00 in.	0/0	\$15,000
RAWLS SPRINGS	08-MAY-06	1.75 in.	0/0	\$50,000
BROOKLYN	24-MAY-06	0.75 in.	0/0	\$100,00
CARNES	19-JUL-06	0.88 in.	0/0	\$0
BONHOMIE	10-JAN-08	in.	0/0	\$100,000
MCLAURIN	12-FEB-08	in.	0/0	\$0
CARNES	12-FEB-08	in.	0/0	\$0
ROCK HILL	17-FEB-08	in.	0/0	\$0
MCLAURIN	09-JUN-08	in.	0/0	\$0
MCLAURIN	09-JUN-08	in.	0/0	\$0
BROOKLYN	14-JUN-08	in.	0/0	\$0
BROOKLYN	14-JUN-08	in.	0/0	\$0
MCLAURIN	20-JUN-08	in.	0/0	\$0
MCLAURIN	20-JUN-08	in.	0/0	\$0
CARNES	20-JUN-08	in.	0/0	\$0
MAXIE	25-JUN-08	in.	0/0	\$0
RAWLS SPRINGS	03-JAN-09	in.	0/0	\$0

Location	Date	Magnitude	Deaths / Injuries	Property Damage*
BONHOMIE	27-FEB-09	in.	0/0	\$3,000
ROCK HILL	31-FEB-09	in.	0/0	\$20,000
RAWLS SPRINGS	13-APR-09	in.	0/0	\$0
CARNES	12-MAY-09	in.	0/0	\$0
BROOKLYN	14-MAY-09	in.	0/0	\$0
BONHOMIE	30-JUN-09		0/0	\$0
BROOKLYN	04-AUG-09		0/0	\$0
MAMMOTH SPRINGS	21-FEB-10		0/0	\$0
ROCK HILL	24-APR-10		0/0	\$0
ROCK HILL	08-MAR-11		0/0	\$0
MCLAURIN	08-MAR-11		0/0	\$0
BROOKLYN	15-APR-11		0/0	\$0
ROCK HILL	26-MAY-11		0/0	\$50,000
MCLAURIN	26-MAY-11		0/0	\$20,000
BROOKLYN	06-JUN-11		0/0	\$15,000
BROOKLYN	06-JUN-11		0/0	\$5,000
MCLAURIN	07-JUN-11		0/0	\$30,000
BROOKLYN	08-JUN-11		0/0	\$20,000
BROOKLYM	10-JUN-11		0/0	\$10,000
RIVERSIDE	28-SEP-11		0/0	\$0
EPPS	02-FEB-12		0/0	\$0
ROCK HILL	15-APR-15		0/0	\$6,000
MCLAURIN	15-APR-15		0/0	\$0
MCLAURIN	17-MAR-16		0/0	\$0
MCLAURIN	17-JUN-16		0/0	\$0
ROCK HILL	21-JAN-17		0/0	\$0
MCLAURIN	21-JAN-17		0/0	\$0

*All damage may not have been reported.

Source: National Centers for Environmental Information

Lightning

According to the National Centers for Environmental Information, there have been 22 recorded lightning events in Forrest County since 1996. These events resulted in almost \$1.2 million in damages as listed in summary **Table B.19**.¹⁴ However, it is likely that more lightning events have in fact impacted the county. Many of the reported events are those that caused damage, and it should be expected that damages are likely much higher for this hazard than what is reported. Detailed information on historical lightning events can be found in **Table B.20**.

TABLE B.20: SUMMARY OF LIGHTNING OCCURRENCES IN FORREST COUNTY

Location	Number of Occurrences	Deaths / Injuries	Property Damage (2013)
Hattiesburg	6	1/0	\$252,000
Petal	7	1/0	\$415,000

¹⁴ These lightning events are only inclusive of those reported by the National Centers for Environmental Information (NCEI). It is certain that additional lightning events have occurred in Forrest County. As additional local data becomes available, this hazard profile will be amended.

Location	Number of Occurrences	Deaths / Injuries	Property Damage (2013)
Unincorporated Area	9	0/1	\$498,000
FORREST COUNTY TOTAL	22	2/1	\$1,165,000

Source: National Centers for Environmental Information

TABLE B.21: HISTORICAL LIGHTNING OCCURRENCES IN FORREST COUNTY

Location	Date	Deaths / Injuries	Property Damage*	Details
Hattiesburg				
Hattiesburg	13-JUN-96	1/0	\$0	A National Guard sergeant was killed when lightning deflected off a tree and struck him while loading a truck.
Hattiesburg	21-JUL-05	0/0	\$200,00	Lightning damaged two homes in Hattiesburg.
Hattiesburg	19-JUN-07	0/0	\$10,000	Lightning struck an apartment complex on North 38th Avenue.
Hattiesburg	16-MAY-09	0/0	\$2,000	Three trees were struck by lightning and fell on some power lines.
Hattiesburg	14-DEC-09	0/0	\$10,000	Two homes were struck by lightning around the Hattiesburg Metro Area.
Hattiesburg	25-JUL-11	0/0		Two residences were struck by lightning. Several traffic signals were out in the area.
Petal				
Petal	20-JUL-00	1/0	\$0	A woman went into cardiac arrest and died the next day after being struck by lightning while feeding ducks at a pond. At the time, her husband said there was the sound of thunder in the distance, but not nearby.
Petal	21-JUL-05	0/0	\$50,000	Two houses were struck by lightning near Petal.
Petal	03-AUG-10	0/0	\$25,000	Lightning damaged a house in the Sunrise Community.
Petal	08-MAR-11	0/0	\$15,000	Lightning struck the Dixie Electric substation knocking out power in the area.
Petal	20-AUG-15	0/0	\$75,000	A house fire was caused by lightning on East 7th Avenue.
Petal	30-APR-17	0/0	\$150,000	Lightning struck a tree and caught the top floor of a nearby apartment complex on fire. Lightning also struck a power pole and the falling lines caught a mobile home on fire.
Petal	06-JUL-18	0/0	\$100,000	A house fire was caused by a lightning strike.
Unincorporated Area				
Carnes	01-APR-05	0/0	\$150,000	Lightning struck a house in Carnes and severely damaged the structure.
Eatonville	26-MAY-08	0/0	\$10,000	A home was struck by lightning.
Palmer's Crossing	09-JUN-08	0/0	\$250,000	A home was struck by lightning on the south end of Hattiesburg. This then caused a fire which spread to a mobile home next door.
McLaurin	09-JUN-08	0/0	\$15,000	A shed was struck by lightning and caught fire.
Carnes	16-JUL-09	0/1	\$0	An 18 year old male was struck by lightning in the Carnes Community.

Location	Date	Deaths / Injuries	Property Damage*	Details
Bonhomie	04-AUG-10		\$10,000	A mobile home was struck by lightning.
Ragland	08-JUN-11		\$3,000	Seventy seven Air Force cadets were in tents close to a power pole that was struck by lightning. The cadets were all taken to the hospital as a precautionary measure. No injuries were confirmed.
Macedonia	05-AUG-16		\$30,000	Lightning struck a home. It caused roof damage along with sheetrock damage inside the home.
Macedonia	12-JUL-17		\$30,000	Lightning struck a home. It caused roof damage along with sheetrock damage inside the home.

*All damage may not have been reported.

Source: National Centers for Environmental Information

PROBABILITY OF FUTURE OCCURRENCES

Thunderstorm / High Wind

Given the high number of previous events, it is certain that wind events, including straight-line wind and thunderstorm wind, will occur in the future. This results in a probability level of highly likely (100 percent annual probability) for future wind events for the entire county.

Hailstorm

Based on historical occurrence information, it is assumed that the probability of future hail occurrences is likely (10 – 100 percent annual probability). Since hail is an atmospheric hazard (coinciding with thunderstorms), it is assumed that Forrest County has equal exposure to this hazard. It can be expected that future hail events will continue to cause minor damage to property and vehicles throughout the county.

Lightning

Although there was not a high number of historical lightning events reported in Forrest County via NCEI data, it is a regular occurrence accompanied by thunderstorms. In fact, lightning events will assuredly happen on an annual basis, though not all events will cause damage. According to Vaisala's U.S. National Lightning Detection Network (NLDN*), Forrest County is located in an area of the country that experienced an average of 6 to 8 lightning flashes per square kilometer per year between 1997 and 2010. Therefore, the probability of future events is highly likely (100 percent annual probability). It can be expected that future lightning events will continue to threaten life and cause minor property damages throughout the county.

B.2.12 Tornado

LOCATION AND SPATIAL EXTENT

Tornadoes occur throughout the state of Mississippi, and thus in Forrest County. Tornadoes typically impact a relatively small area, but damage may be extensive. Event locations are completely random, and it is not possible to predict specific areas that are more susceptible to tornado strikes over time. Therefore, it is assumed that Forrest County is uniformly exposed to this hazard.

HISTORICAL OCCURRENCES

Tornadoes resulted in two disaster declarations in Forrest County in 1992 and 2009.¹⁵ According to the National Centers for Environmental Information, there have been a total of 27 recorded tornado events in Forrest County since 1961 (**Table B.22**), resulting in over \$9.3 million in property damages.¹⁶ In addition, 11 injuries were reported, but none in this planning period. The magnitude of these tornadoes ranges from F0 to F4 in intensity, although an F5 event is possible. Detailed information on historic tornado events can be found in **Table B.23**.

TABLE B.22: SUMMARY OF TORNADO OCCURRENCES IN FORREST COUNTY

Location	Number of Occurrences	Deaths / Injuries	Property Damage (2013)
Hattiesburg	7	0/68	\$31,152,000
Petal	1	0/0	\$200,000
Unincorporated Area	26	0/11	\$4,107,000
FORREST COUNTY TOTAL	34	0/11	\$35,459,000

Source: National Centers for Environmental Information

TABLE B.23: HISTORICAL TORNADO IMPACTS IN FORREST COUNTY

Location	Date	Magnitude	Deaths / Injuries	Property Damage*	Details
Hattiesburg					
Hattiesburg	07-MAR-95	F0	0/0	\$5,000	The tornado touched down in Camp Shelby, a reserve base, and blew down 50 trees, but did not damage any structures.
Hattiesburg	05-JUN-98	F1	0/0	\$20,000	This tornado blew down trees and a couple of signs. It also removed part of a roof of a building.
Hattiesburg	14-APR-99	F0	0/0	\$0	This weak tornado touched down in Hattiesburg with no damage reported.
					A supercell thunderstorm produced a tornado that moved out of Walthall County into Marion County, about two miles west of Kokomo. The total damage from the tornado in Forrest County was estimated to be around \$6 million. In Forrest County, the tornado tracked through populated areas of Hattiesburg and Petal. The tornado caused major damage to 112 houses, one mobile home, eight businesses, and six vehicles. Additionally, the tornado caused minor damage to 223 houses, four mobile homes, and 21 businesses. Despite the widespread damage across three counties, no serious injuries were reported in the storms.
Hattiesburg	12-MAR-01	F1	0/5	\$6,000,000	

¹⁵ A complete listing of historical disaster declarations can be found in Section 4: Hazard Identification.

¹⁶ These tornado events are only inclusive of those reported by the National Centers for Environmental Information (NCEI). It is likely that additional tornadoes have occurred in Forrest County. As additional local data becomes available, this hazard profile will be amended.

ANNEX B: FORREST COUNTY

Location	Date	Magnitude	Deaths / Injuries	Property Damage*	Details
Hattiesburg	07-JAN-05	F1	0/0	\$125,000	This tornado touched down just west of Interstate 59, 1 mile south of exit 59 for Highway 98, and tracked east for 2 miles crossing Browns Bridge Road and dissipating around Leffler Road. Just off Browns Bridge Road, one chicken house was destroyed and a mobile home had part of its roof torn off. Numerous trees were also blown down.
Hattiesburg	29-AUG-05	F1	0/0	\$2,000,000	This brief tornado occurred in the eyewall of Katrina and touched down on the east side Hattiesburg. Across the brief path, dozens of large trees were uprooted and snapped.
Hattiesburg	10-FEB-13	F1	0/0	\$25,00,000	The tornado then moved northeast into the heavily populated areas of Oak Grove and West Hattiesburg, including areas along Lincoln Road Extension, Weathersby Road, Oak Grove Road, and the area just south of Highway 98 along Clark, Lamar and Foxgate Avenues. Numerous homes were destroyed or suffered major damage, and a few homes showed evidence of The tornado continued across Highway 49 impacting multiple neighborhoods. Numerous roofs were blown off houses and many trees fell on houses and vehicles. The tornado crossed North Main Street causing significant damage to the Red Cross building, the Girl Scouts building, and bending large metal poles at the Hattiesburg High School athletic fields. The tornado then moved across east 7th Street causing significant damage to several large brick buildings. Damage in the area between north Main Street and east 7th Avenue was in the high-end EF-3 range with maximum winds around 160 mph. The tornado continued into Petal with the most significant damage occurring to an Ace Hardware store on South Main Street. Numerous homes in the vicinity of the hardware store also had roofs torn off and exterior walls collapsed. This damage was also rated high end EF-3 with maximum winds around 160 mph. In Forrest County, emergency management indicated that 133 homes were destroyed and 207 suffered major damage. There were 63 reported injuries.
Petal					
Petal	14-APR-07	F1	0/0	\$2,000	This tornado briefly touched down in the Country Park Drive area east of the Sunrise Community. One home was significantly damaged as the enclosed carport was destroyed, several windows were blown out and some siding was blown off along with other roof damage. Numerous trees were snapped and uprooted with one power pole snapped.
Unincorporated Area					
FORREST CO.	02-MAY-57	F1	0/0	\$0	

ANNEX B: FORREST COUNTY

Location	Date	Magnitude	Deaths / Injuries	Property Damage*	Details
FORREST CO.	20-FEB-61	F1	0/0	\$25,000	
FORREST CO.	12-DEC-65	F1	0/0	\$250	Numerous trees and a boat shed were blown down.
FORREST CO.	20-JUL-66	F1	0/0	\$250,000	Tornado destroyed one house and damaged several others including a church and the Elks Club at Palmer Crossing one mile south of Hattiesburg.
FORREST CO.	24-MAY-73	F1	0/0	\$2,500	Trees uprooted and roof damaged when tornado touched down briefly.
FORREST CO.	18-APR-78	F1	0/0	\$2,500	
FORREST CO.	07-MAY-82	F1	0/0	\$250,000	The tornado touchdown ¾ miles south of the Forrest/Jones county line between highways 49 and 59 before moving into the Providence Community where two chicken houses were destroyed and one damaged, the roof of two stores were blown off, one house heavily damaged, and trees were uprooted falling on houses and across roads.
FORREST CO.	21-NOV-92	F1	0/5	\$25,000	
FORREST CO.	04-DEC-93	F1	0/0	\$250,000	A tornado touched down just north of the Hattiesburg airport. It moved northeast along an intermittent path and lifted near Runnelstown in Perry County. Most of the damage occurred in the Sunrise community just east of Hattiesburg where one house, two barns and a number of out buildings received major damage. In Runnelstown a garage was destroyed and a house received major roof damage. A resident of the Sunrise community minor injuries when he was lifted and carried 50 feet by the tornado..
FORREST CO.	16-FEB-01	F1	0/0	\$250,000	
FORREST CO.	26-MAR-05	F1	0/0	\$25,000	This tornado was observed by a police officer near USM. The damage extended along three blocks with four trees and three power poles being blown down.
Lumberton	17-OCT-07	F1	0/0	\$50,000	Many trees and power lines were blown down. Two mobile homes were totally destroyed.
Lumberton	09-DEC-08	F1	0/0	\$2,000	This tornado was observed by local law officials. The only damage was a few trees blown down.
Carnes	03-MAY-09	F1	0/0	\$100,000	This short track tornado did a considerable amount of damage in the Carnes area. Two mobile home trailers were destroyed. Several sheds were destroyed. The roofs of a house and a church were damaged. Several barns were damaged. Numerous trees were blown down.
Carnes.	02-MAR-12	F0	0/0	\$5,000	A few trees were blown down and minor damage was done to some property.

ANNEX B: FORREST COUNTY

Location	Date	Magnitude	Deaths / Injuries	Property Damage*	Details
Rawls Springs	10-JUL-16	F1	0/0	\$2,000	This was the end of the Lamar County F3 tornado which remained on the ground for 1 mile in extreme northwest Forrest County. Damage in this part of Forrest County was rated F1 and consisted of numerous trees snapped and downed near Lott Town Road. The total path length across Lamar and Forrest Counties was 13 miles.
Mammoth Springs	30-MAR-17	F0	0/0	\$100,000	This tornado briefly touched down along Interstate 59. Numerous trees were snapped or uprooted along the Interstate and one car was blown off the Interstate causing 1 injury. A roof was blown off a garage and minor roof damage occurred to a home. Additionally, two metal doors were blown off metal buildings.
McLaurin	06-APR-18	F1	0/14	\$1,500,000	This tornado touched down at Camp Shelby and snapped or uprooted numerous trees, and downed several power lines along the short path. Twelve buildings, mostly barracks, were damaged. Several buildings had the roofs severely damaged with one roof nearly completely torn off. Several walls of the barrack buildings collapsed where the roof support was lost. A hummer was turned over and windows were blown out of several other vehicles. Maximum wind speed was 110 mph.

Location	Date	Magnitude	Deaths / Injuries	Property Damage*	Details
Rock Hill	06-APR-18	F1	0/0	\$700,000	This tornado began on the east side of Purvis, here it downed some limbs and small trees. The tornado intensified and widened as it approached and crossed Interstate 59 near Black Creek. Numerous trees and large limbs were snapped along the path as it moved through the area between the interstate and Highway 49. Additionally, a couple homes and outbuildings were damaged by limbs or trees falling on them. The tornado intensified again and narrowed as it approached Highway 49 and the south gate of Camp Shelby. A number of large trees were downed along the highway, and from there to the actual gate of Camp Shelby. One large tree fell on a mobile home on the east side of Highway 49, destroying it. Shingles were pulled off a couple commercial buildings along the highway as well and 2 power poles were snapped. This area was where the tornado reached its maximum intensity. As the tornado moved across Camp Shelby, it remained narrow, but not as intense, with winds likely in the 70 to 80 mph range. The tornado downed numerous large limbs and sporadic trees as it moved across the base. One large tree fell on base quarters home, causing serious damage to it, and another tree fell on a vehicle, destroying it. Some other minor roof damage was noted. The tornado continued causing sporadic tree damage as it crossed Highway 98 near the Perry County line where it dissipated. Maximum winds were around 105 mph. The total path length across Lamar and Forrest Counties was 15
McLaurin				\$80,000	This tornado occurred just south of the first, longer track tornado, and was on the ground for just over a mile. A concentrated path of trees, in a convergent pattern, was blown down. Additionally, half the roof of a small church was peeled off.
Maxie				\$2,000	A brief tornado touched down close to the intersection of Highway 49 and 13. A few trees blocked the south bound lane of Highway 49.
McLaurin				\$500	The public observed a brief tornado touchdown off Highway 49 near Camp Shelby. Maximum winds were estimated at 70 mph
Bonhomie				\$15,000	The tornado then crossed White Chapel Road causing extensive tree damage. It then moved into Forrest County and crossed over Interstate 59 knocking over several trees at a rest stop. The tornado then crossed Browns Bridge Road and Frye Road snapping numerous trees, one of which fell on a house. The tornado lifted shortly after crossing Frye Road.

Location	Date	Magnitude	Deaths / Injuries	Property Damage*	Details
Dragon	21-MAR-12	F0	0/0	\$20,000	The tornado began off of Longleaf Drive with a couple of softwood trees snapped. One tree fell on a fence and damaged it. The tornado continued north to Eastabuchie Road, where a few more trees were snapped and a few shingles were torn off a roof. It crossed Eastabuchie Road and ended just north of the road snapping a few more trees. Maximum estimated wind speeds were 85 mph.
Fruitland Park	25-DEC-12	F2	0/4	\$200,000	Numerous soft and hardwood trees were snapped and uprooted. Multiple power poles were snapped. Two double wide mobile homes were completely destroyed, a pickup truck was rolled, and a single-wide mobile home suffered major damage. Large oaks were uprooted and a travel trailer was demolished by a falling tree. Maximum wind speeds were estimated at 130 mph in Forrest County. This is the continuation of a longer tornado that started in Pearl River County at 3:10pm. This tornado was at it's strongest in Pearl River County with estimated wind speeds of 140 mph, which is EF-3 strength. The tornado finally ended in Greene County at 4:34pm. The total path length was 60.8 miles.

Source: National Centers for Environmental Information

Forrest County- On January 21, 2017, an early morning event impacted areas south of I-20 in Mississippi. Most notably, an EF-3 tornado tracked through Lamar and Forrest counties, killing four people in Hattiesburg and injuring over 50 others. In addition, damaging winds, large hail, and flash flooding occurred in other areas across south Mississippi. The evening event impacted a larger portion of the ArkLaMiss, and brought wind damage as well as large hail and a strong tornado.

PROBABILITY OF FUTURE OCCURRENCES

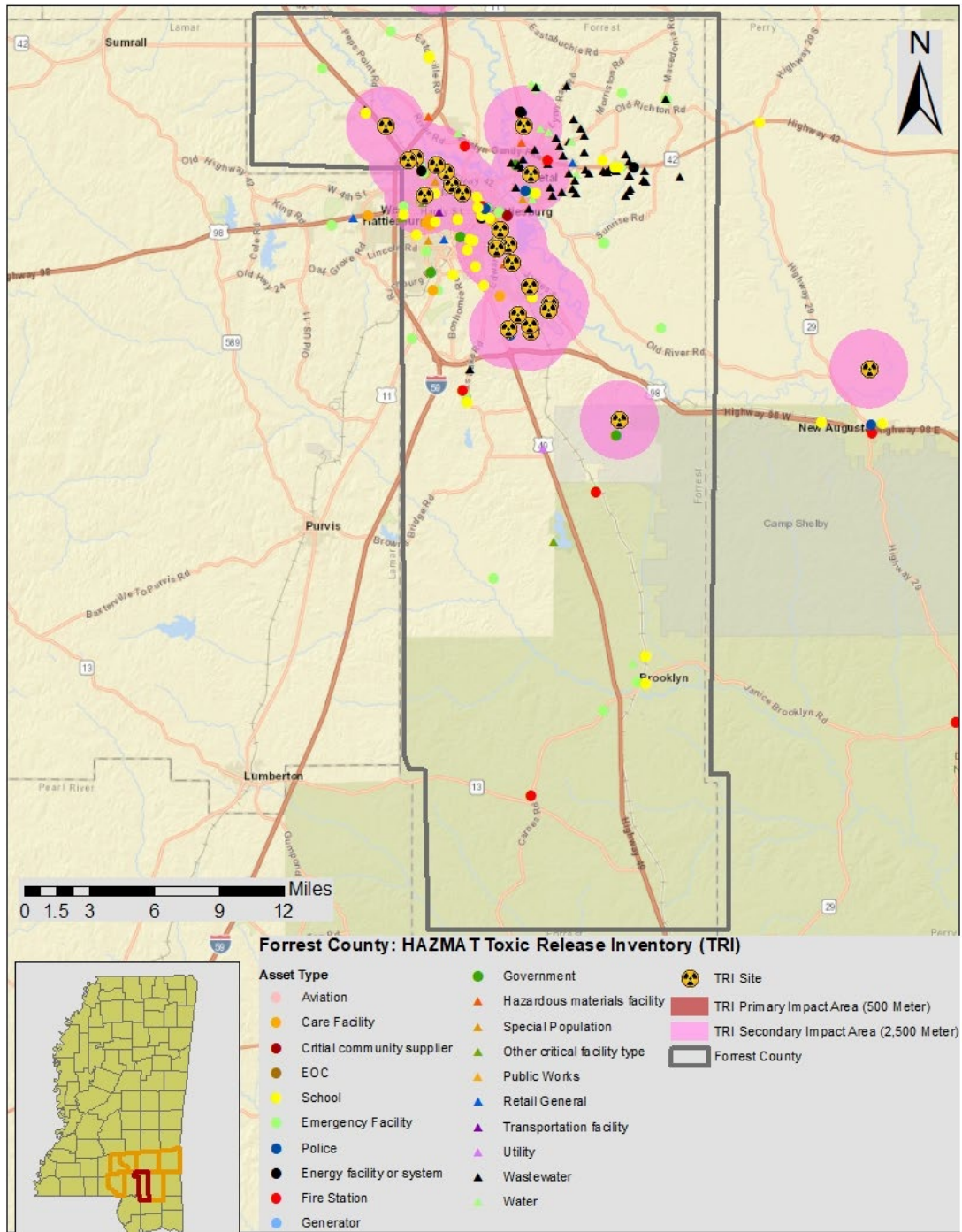
According to historical information, tornado events pose a significant threat to Forrest County. The probability of future tornado occurrences affecting Forrest County is likely (10 – 100 percent annual probability).

B.2.13 Hazardous Materials Incidents

LOCATION AND SPATIAL EXTENT

Hazardous Materials

Forrest County has numerous TRI sites as shown in **Figure B.7**.

FIGURE B.7: TOXIC RELEASE INVENTORY (TRI) SITES IN FORREST COUNTY

Source: EPA

In addition to “fixed” hazardous materials locations, hazardous materials may also impact the county via roadways and rail. Many roads in the county are narrow, making hazardous material transport in the area especially treacherous. All roads that permit hazardous material transport are considered potentially at risk to an incident.

Pipelines

There are two distinct types of pipelines that are used in the transport of potentially hazardous materials, gas lines and hazardous liquid lines. As of December 11, 2001, all or portions of three oil and gas fields were located in Forrest County, Mississippi. The 2001 annual production for Forrest County was 7,796 barrels of oil, 81,511 thousand cubic feet of gas, and 26,714 barrels of water, from 11 wells as reported in the Mississippi State Oil and Gas Board's 2001 Annual Report.

Meth Labs

Meth lab incidents have occurred at various times throughout Forrest County. Although there is not an extensive documented record of these events, they have occurred in the past and are generally confined to single sites, often in residential areas.

HISTORICAL OCCURRENCES

Hazardous Materials

There has been a total of one recorded HAZMAT incident in Forrest County since 2003 (**Table B.24**), resulting in \$55,300 in property damages. **Table B.25** presents detailed information on historic HAZMAT incidents in Forrest County as reported by the U.S. Department of Transportation Pipeline and Hazardous Materials Safety Administration (PHMSA).

TABLE B.24: SUMMARY OF HAZMAT INCIDENTS IN FORREST COUNTY

Location	Number of Occurrences	Deaths / Injuries	Property Damage
Hattiesburg	0	0/0	\$0
Petal	0	0/0	\$0
Unincorporated Area	0	0/0	\$0
FORREST COUNTY TOTAL	0	0/0	\$0

Source: USDOT PHMSA

TABLE B.25: HAZMAT INCIDENTS IN FORREST COUNTY

Report Number	Date	City	Mode	Serious Incident?	Fatalities/ Injuries	Damages (\$)	Quantity Released
Hattiesburg							
None Reported	--	--	--	--	--	--	--
Petal							
I-2003120943	4/22/2003	PETAL	Highway	Yes	0/0	\$55,300	200 LGA
Unincorporated Area							
None Reported	--	--	--	--	--	--	--

Source: USDOT PHMSA

Pipelines

Between 2002 and 2018, there have been no pipeline incidents in Forrest County.

Meth Labs

Meth lab incidents have occurred at various times throughout Forrest County. Although there is not an extensive documented record of these events, they have occurred in the past and are generally confined to single sites, often in residential areas.

PROBABILITY OF FUTURE OCCURRENCES

Hazardous Materials

There are several toxic release inventory sites in Forrest County; however, there is no incident on record. There has only been one roadway or rail incident, it is unlikely that a hazardous material incident may occur in the county (less than one percent annual probability). County and town officials are mindful of this possibility and take precautions to prevent such an event from occurring. Furthermore, there are detailed plans in place to respond to an occurrence.

Although there are several TRI sites and a very limited record of previous events in the county, hazardous materials incidents will continue to be a threat. The county may also be impacted by neighboring counties which also face risk due to TRI sites and narrow roadways.

Pipelines

Although there have been no major pipeline incidents, there are miles of gas and hazardous liquid lines in the region. Therefore, it is anticipated that there will be future pipeline incidents in Forrest County, and they are considered possible.

Meth Labs

Meth lab incidents will likely continue to occur throughout Forrest County. Although it is difficult to predict where exactly these incidents would occur, the probability that they will is possible.

B.2.14 Cyber Attacks

A cyber-attack is a malicious, intentional attempt to breach the information technology (IT) infrastructure of an individual or organization. The State of Mississippi defines a cyberterrorism incident as any adverse premeditated, politically, financially or maliciously motivated attack against informational systems. A cyberterrorism event can impact one or more of Forrest County's and its, corresponding departments' and divisions' information assets by the following ways, which includes, but are not limited to, the following:

- Unauthorized use
- Denial of Service
- Malicious code
- Network system failures
- Application system failures
- Unauthorized disclosure or loss of information
- Information security breach
- Structured Query Language (SQL) Injection

LOCATION AND HAZARD EXTENT

The cyberterrorism hazard is not geographically based. Attacks can originate from any computer to affect any other computer in the world. If a system is connected to the Internet or operating on a wireless frequency, it is susceptible to exploitation. Targets of cyberterrorism can be individual computers, networks, organizations, business sectors, or governments. Financial institutions and retailers are often targeted to extract personal and financial data that can be used to steal money from individuals and banks.

HISTORICAL OCCURRENCES

There have been no known historical occurrences to have occurred in in Forrest County to date.

PROBABILITY OF FUTURE OCCURRENCES

As is the case for any governmental organization, there will always be the potential for impact for Forrest County. As such, the county will continue to be compelled to respond to cyberterrorisms in the future. The nature of these attacks is projected to evolve in sophistication over time. Forrest County will take a proactive position in its cyber security efforts and is expected to remain vigilant in its efforts to prevent attacks from occurring and/or disrupting business operations.

The reality remains that many computers and networks in organizations of all sizes and industries around the United States will continue to suffer intrusion attempts on a daily basis from viruses and malware that are passed through web sites and emails. Again, the potential for harm via this hazard is always present.

B.2.15 Conclusions on Hazard Risk

The hazard profiles presented above were developed using best available data and result in what may be considered principally a qualitative assessment as recommended by FEMA in its “How-to” guidance document titled *Understanding Your Risks: Identifying Hazards and Estimating Losses* (FEMA Publication 386-2). It relies heavily on historical and anecdotal data, stakeholder input, and professional and experienced judgment regarding observed and/or anticipated hazard impacts. It also carefully considers the findings in other relevant plans, studies, and technical reports.

HAZARD EXTENT

Table B.21 describes the extent of each natural hazard identified for Forrest County. The extent of a hazard is defined as its severity or magnitude, as it relates to the planning area.

TABLE B.26: EXTENT OF FORREST COUNTY HAZARDS

Flood-related Hazards	
Flood	Flood extent can be measured by the amount of land and property in the floodplain as well as flood height and velocity. The amount of land in the floodplain accounts for 11.2 percent of the total land area in Forrest County. Flood depth and velocity are recorded via United States Geological Survey stream gages throughout the region. While a gage does not exist for each participating jurisdiction, there is one at or near many areas. The greatest peak discharge recorded for the county was at the Goines Draw near Petal in 1974. Water reached a discharge of 610 cubic feet per second and the stream gage height was recorded at 9.10 feet.
Erosion	The extent of erosion can be defined by the measurable rate of erosion that occurs. There are no erosion rate records located in Forrest County.
Dam Failure	Dam Failure extent is defined using the Mississippi Division of Environmental Quality criteria. Seven dams are classified as high-hazard in the county.
Winter Storm and Freeze	The extent of winter storms can be measured by the amount of snowfall received (in inches). Official long-term snow records are not kept for any areas in the MEMA District 8 Region. However, the greatest snowfall reported in Jackson (north of the county) was 11.7 inches in 1904 and in Meridian (northeast of the county) was 14.0 inches in 1963.
Fire-related Hazards	
Drought / Heat Wave	Drought extent is defined by the U.S. Drought Monitor Classifications which include Abnormally Dry, Moderate Drought, Severe Drought, Extreme Drought, and Exceptional Drought. According to the U.S. Drought Monitor Classifications, the most severe drought condition is Exceptional. Forrest County has received this ranking once over the eighteen-year reporting period. The extent of extreme heat can be measures by the record high temperature recorded. Official long-term temperature records are not kept for any areas in Forrest County. However, the highest recorded temperature in Hattiesburg (southeast of the county) was 106°F in 1989.
Wildfire	Wildfire data was provided by the Mississippi Forestry Commission and is reported annually by county from 2008-2018. The greatest number of fires to occur in Forrest County in any year was 59 in 2011. The greatest number of acres to burn in the county in a single year occurred in 2011 when 742 acres were burned. Although this data lists the extent that has occurred, larger and more frequent wildfires are possible throughout the county.
Geologic Hazards	
Earthquake	Earthquake extent can be measured by the Richter Scale and the Modified Mercalli Intensity (MMI) scale and the distance of the epicenter from Forrest County. According to data provided by the National Geophysical Data Center, no recorded earthquakes have been located in the county. However, USGS data shows Forrest County lies within an approximate zone of level .04 ground acceleration. This indicates that the county exists within an area of moderate seismic risk.

Landslide	As noted above in the landslide profile, there is no extensive history of landslides in Forrest County and landslide events typically occur in isolated areas. This provides a challenge when trying to determine an accurate extent for the landslide hazard. However, when using USGS landslide susceptibility index, extent can be measured with incidence, which is low throughout the county. There is also susceptibility throughout the county.
Expansive Soils	As noted above in the expansive soils profile, there is no historical record of significant expansive soil events in Forrest County. Again, this provides a challenge when trying to determine an accurate extent for the expansive soils hazard. However, when using USGS data on soils with clay swelling potential, extent can be measured with swelling potential, which is high in less than 50 percent of the soils Forrest County.
Wind-related Hazards	
Hurricane and Tropical Storm	Hurricane extent is defined by the Saffir-Simpson Scale which classifies hurricanes into Category 1 through Category 5. The greatest classification of hurricane to traverse directly through Forrest County was a Category 3 storm (Hurricane Camille in 1969) which carried tropical force winds of 155 miles per hour upon arrival in the county.
Thunderstorm / Hail / Lightning	Thunderstorm extent is defined by the number of thunder events and wind speeds reported. According to a 63-year history from the National Centers for Environmental Information, the strongest recorded wind event in Forrest County was last reported on March 26, 2009 at 75 knots (approximately 86 mph). It should be noted that future events may exceed these historical occurrences. Hail extent can be defined by the size of the hail stone. The largest hail stone reported in Forrest County was 1.75 inches (last reported on April 2, 2012). It should be noted that future events may exceed this. According to the Vaisala's flash density map, Forrest County is located in an area that experiences 6 to 8 lightning flashes per square kilometer per year. It should be noted that future lightning occurrences may exceed these figures.
Tornado	Tornado hazard extent is measured by tornado occurrences in the US provided by FEMA as well as the Fujita/Enhanced Fujita Scale. The greatest magnitude reported in Forrest County was an F4 (reported on April 18, 1978).
Other Hazards	
Hazardous Materials Incident	According to USDOT PHMSA, the largest hazardous materials incident reported in the county is 200 LGA released on the highway in Petal. It should be noted that larger events are possible. A pipeline incident could have a potentially large impact in terms of extent. Based on recent history, the largest spill in the last 10 years in Mississippi caused over 10,000 barrels of hazardous liquid to be spilled. Because of the generally small-scale nature of most meth labs, the extent of a fire or explosion that was caused by a meth lab incident would likely not be larger than a few acres.
Cyber Attack	The extent of cyberterrorism is difficult to estimate. Attacks can originate from any computer to affect any other computer in the world. The resulting damages depends on the demands of the cyberterrorist.

PRIORITY RISK INDEX RESULTS

In order to draw some meaningful planning conclusions on hazard risk for Forrest County, the results of the hazard profiling process were used to generate countywide hazard classifications according to a “Priority Risk Index” (PRI). More information on the PRI and how it was calculated can be found in Section 5.16.2.

Table B.22 summarizes the degree of risk assigned to each category for all initially identified hazards based on the application of the PRI. Assigned risk levels were based on the detailed hazard profiles developed for this section, as well as input from the Regional Hazard Mitigation Council. The results were then used in calculating PRI values and making final determinations for the risk assessment.

TABLE B.27: SUMMARY OF PRI RESULTS FOR FORREST COUNTY

Hazard	Category/Degree of Risk					
	Probability	Impact	Spatial Extent	Warning Time	Duration	PRI Score
Flood-related Hazards						
Flood	Likely	Limited	Small	6 to 12 hours	Less than 24 hours	2.4
Erosion	Possible	Minor	Small	More than 24 hours	More than 1 week	1.8
Dam Failure	Unlikely	Critical	Moderate	More than 24 hours	Less than 6 hours	2.0
Winter Storm and Freeze	Possible	Limited	Large	More than 24 hours	Less than 24 hours	2.3
Fire-related Hazards						
Drought / Heat Wave	Highly Likely	Minor	Large	More than 24 hours	More than 1 week	2.8
Wildfire	Likely	Minor	Small	Less than 6 hours	Less than 1 week	2.1
Geologic Hazards						
Earthquake	Unlikely	Minor	Moderate	Less than 6 hours	Less than 6 hours	1.7
Landslide	Unlikely	Minor	Small	Less than 6 hours	Less than 6 hours	1.5
Expansive Soils	Possible	Minor	Small	Less than 6 hours	Less than 6 hours	1.8
Wind-related Hazards						
Hurricane and Tropical Storm	Likely	Catastrophic	Large	More than 24 hours	Less than 24 hours	3.2
Thunderstorm Wind / High Wind	Highly Likely	Limited	Moderate	Less than 6 hours	Less than 6 hours	2.9
Hailstorm	Likely	Minor	Small	Less than 6 hours	Less than 6 hours	2.1
Lightning	Highly Likely	Limited	Negligible	Less than 6 hours	Less than 6 hours	2.5
Tornado	Likely	Critical	Small	Less than 6 hours	Less than 6 hours	2.7
Other Hazards						
Hazardous Materials Incident	Unlikely	Limited	Small	Less than 6 hours	Less than 24 hours	1.9
Pipeline Incident	Possible	Limited	Small	Less than 6 hours	Less than 24 hours	2.2
Meth Lab Incident	Possible	Minor	Small	Less than 6 hours	Less than 6 hours	1.8
Cyber-Attack	Unlikely					

B.2.16 Final Determinations on Hazard Risk

The conclusions drawn from the hazard profiling process for Forrest County, including the PRI results and input from the Regional Hazard Mitigation Council, resulted in the classification of risk for each identified hazard according to three categories: High Risk, Moderate Risk, and Low Risk (**Table B.28**). For purposes of these classifications, risk is expressed in relative terms according to the estimated impact that a hazard will have on human life and property throughout all of Forrest County. A more quantitative analysis to estimate potential dollar losses for each hazard has been performed separately and is described in Section 6: *Vulnerability Assessment* and below in Section B.3. It should be noted that although some hazards are classified below as posing low risk, their occurrence of varying or unprecedented magnitudes is still possible in some cases and their assigned classification will continue to be evaluated during future plan updates.

TABLE B.28: CONCLUSIONS ON HAZARD RISK FOR FORREST COUNTY

HIGH RISK	Hurricane and Tropical Storm Thunderstorm Wind / High Wind Tornado Flood
MODERATE RISK	Drought / Heat Wave Dam Failure Lightning Hailstorm Pipeline Incident Hazardous Material Incident Wildfire
LOW RISK	Winter Storm and Freeze Dam Failure Expansive Soils Erosion Earthquake Landslide Meth Lab Incident Cyber Attack

B.3 FORREST COUNTY VULNERABILITY ASSESSMENT

This subsection identifies and quantifies the vulnerability of Forrest County to the significant hazards previously identified. This includes identifying and characterizing an inventory of assets in the county and assessing the potential impact and expected amount of damages caused to these assets by each identified hazard event. More information on the methodology and data sources used to conduct this assessment can be found in Section 6: *Vulnerability Assessment*.

B.3.1 Asset Inventory

Table B.29 lists the estimated number of improved properties and the total value of improvements for Forrest County and its participating jurisdictions (study area of vulnerability assessment). This data was obtained from HAZUS-MH 4.2 since digital parcel data was not available in this county.

TABLE B.29: IMPROVED PROPERTY IN FORREST COUNTY

Location	Number of Improved Properties	Total Assessed Value of Improvements
Forrest County	28,780	\$7,621,195,000

*Improvement values for these communities were obtained from HAZUS-MH 4.2

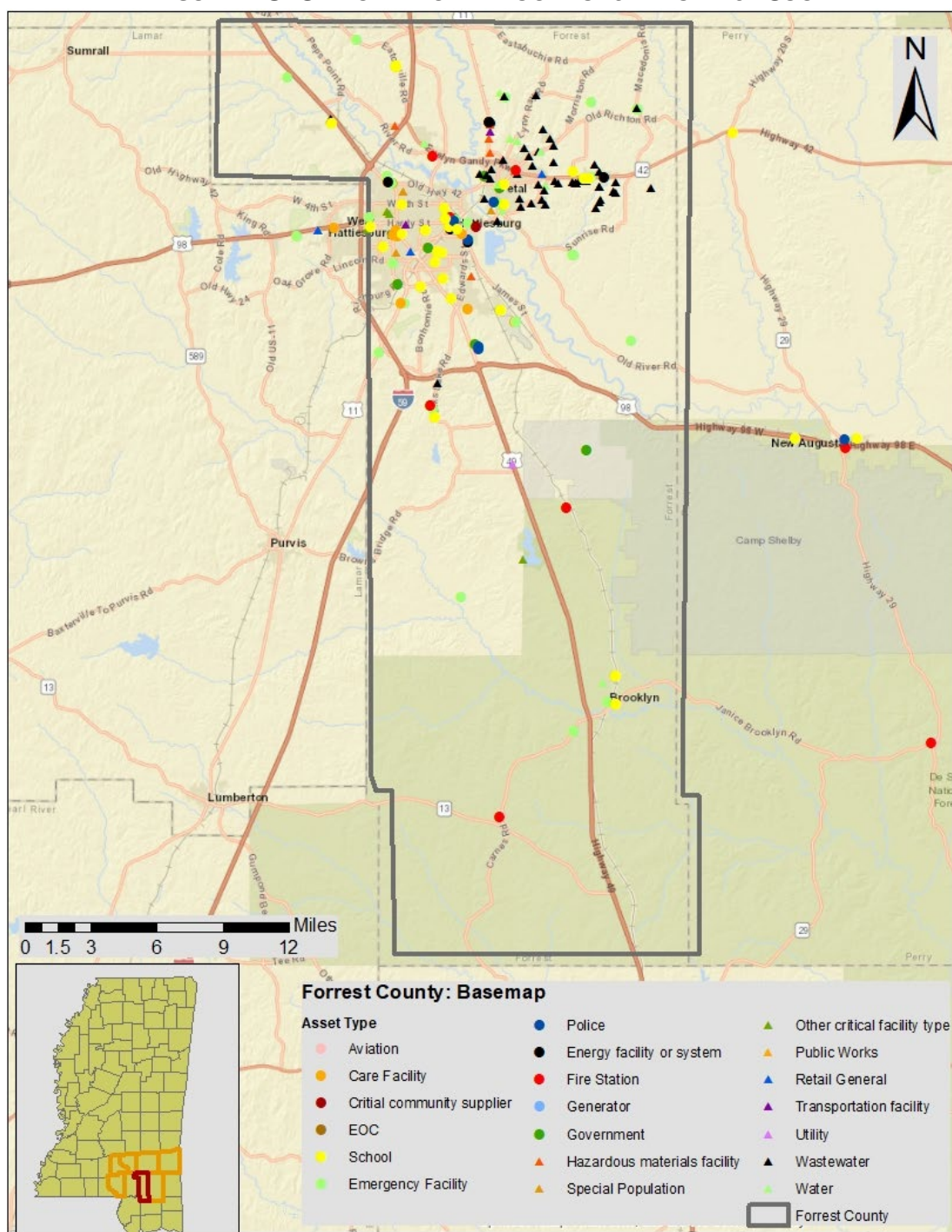
Table B.30 lists the fire stations, police stations, emergency operations centers (EOCs), medical care facilities, and schools and other critical facilities located in Forrest County. HAZUS-MH 4.2 was used to obtain the critical facilities for the county and this data was modified to reflect recent changes. In addition, **Figure B.8** shows the locations of essential facilities in Forrest County. **Table B.32**, near the end of this section, shows a complete list of the critical facilities by name, as well as the hazards that affect each facility. As noted previously, this list is not all-inclusive and only includes information provided by the county.

TABLE B.30: CRITICAL FACILITY INVENTORY IN FORREST COUNTY

Location	Fire Stations	Police Stations	Medical Care Facilities	EOC	Schools
Hattiesburg	8	1	2	1	14
Petal	3	1	0	0	5
Unincorporated Area	14	1	0	0	7
FORREST COUNTY TOTAL	25	3	2	1	26

Source: HAZUS-MH and Forrest County Emergency Management and Planning Committee

*The Forrest EOC is located in Hattiesburg.

FIGURE B.8: CRITICAL FACILITY LOCATIONS IN FORREST COUNTY

Source: HAZUS-MH 4.2

B.3.2 Social Vulnerability

In addition to identifying those assets potentially at risk to identified hazards, it is important to identify and assess those particular segments of the resident population in Forrest County that are potentially at risk to these hazards.

Table B.23 lists the population by jurisdiction according to U.S. Census 2010 population estimates. Unfortunately, estimates were not available at the census block level, limited the results to county-wide estimates. The total estimated population in Forrest County according to the 2017 Census data is 75,471 persons. Additional population estimates are presented above in Section B.1.

TABLE B.31: TOTAL POPULATION IN FORREST COUNTY

Location	Estimated 2017 Population
Hattiesburg	46,377
Petal	10,633
Unincorporated Area	18,461
FORREST COUNTY TOTAL	75,471

Source: U.S. Census 2010

B.3.3 Vulnerability Assessment Results

As noted in Section 6: *Vulnerability Assessment*, only hazards with a specific geographic boundary, available modeling tool, or sufficient historical data allow for further analysis. Those results, specific to Forrest County, are presented here. All other hazards are assumed to impact the entire planning region (drought, hailstorm, lightning, thunderstorm wind, tornado, and winter storm and freeze) or, due to lack of data, analysis would not lead to credible results (dam and levee failure, erosion, expansive soils, and landslide). The total county exposure, and thus risk, was presented in **Table B.29**.

The hazards to be further analyzed in this section include: flood, wildfire, earthquake, hurricane and tropical storm winds, and hazardous materials incident.

FLOOD

Historical evidence indicates that Forrest County is susceptible to flood events. A total of 84 flood events have been reported by the National Centers for Environmental Information resulting in \$7.6 million in damages.

Since digital parcel data was not available, an analysis of improved property was not completed as it was determined that an analysis using the inventory from HAZUS-MH 4.2 would have been inaccurate and the results would not have been useful.

Social Vulnerability

Since 2010 population was available at the tract level, it was difficult to determine a reliable figure on population at-risk to flood due to tract level population data

Critical Facilities

The critical facility analysis revealed that there are 15 critical facilities located in the Forrest County 1.0-percent annual chance floodplain, valued at over \$10.8M. There are seven critical facilities located in the Forrest County 0.2-percent annual chance floodplain, valued at \$5.6M. A list of specific critical facilities and their associated risk can be found in **Table B.32** at the end of this section.

In conclusion, a flood has the potential to impact many existing and future buildings and populations in Forrest County, though some areas are at a higher risk than others. All types of structures in a floodplain are at-risk, though elevated structures will have a reduced risk. As noted, the floodplains used in this analysis include the 100-year and 500-year FEMA regulated floodplain boundaries. It is certainly possible that more severe events could occur beyond these boundaries or urban (flash) flooding could impact additional structures. Such site-specific vulnerability determinations are outside the scope of this assessment but will be considered during future plan updates. Furthermore, areas subject to repetitive flooding should be analyzed for potential mitigation actions.

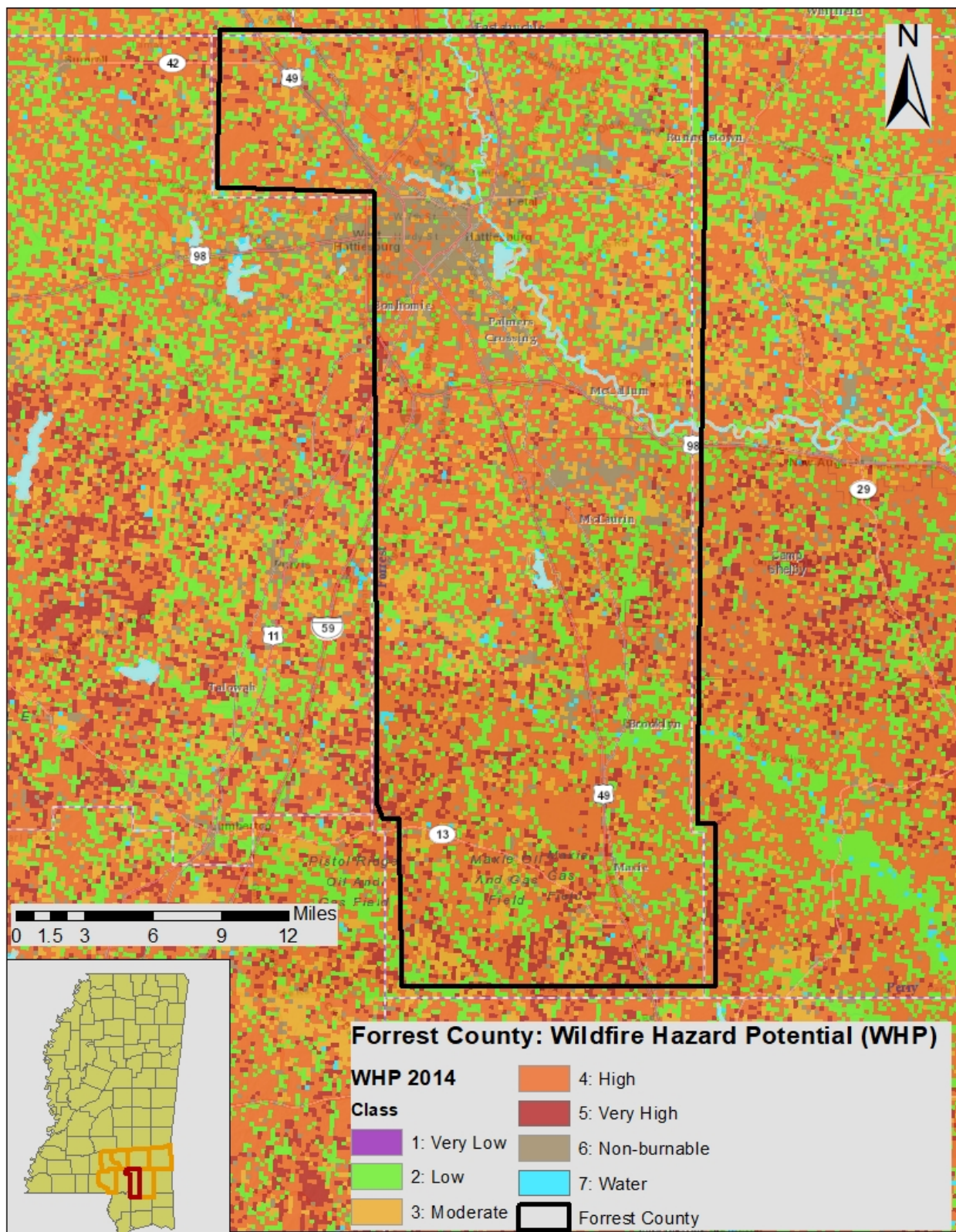
WILDFIRE

Although historical evidence indicates that Forrest County is susceptible to wildfire events, there are few reports of damage.

To estimate exposure to wildfire, the wildfire hazard potential (WHP 2014) data provided via the US Forest Service was utilized. A GIS analysis was performed with the WHP dataset and identified critical facilities throughout MEMA District 8 in order to show the level of vulnerability.

Figure B.10 shows the wildfire hazard potential for Forrest County. Most of the planning areas falls within the low to high category.

FIGURE B.10: WILDFIRE RISK AREAS IN FORREST COUNTY



Source: U.S. Forreast Service

Social Vulnerability

Although not all areas have equal vulnerability, there is some susceptibility across the entire county. It is assumed that the total population is at risk to the wildfire hazard. Determining the exact number of people in certain wildfire zones is difficult with existing data and could be misleading.

Critical Facilities

The critical facility analysis revealed that there are 18 critical facilities located in an area considered low risk valued at over \$12.7M. There are 25 critical facilities located in an area considered moderate risk valued at \$27.4M. There are 53 structures located in an area considered high risk, valued at over \$124.7M. It should be noted, however, that several factors could impact the spread of a wildfire putting all facilities at risk. A list of specific critical facilities and their associated risk can be found in **Table A.32** at the end of this section.

In conclusion, a wildfire event has the potential to impact many existing and future buildings, critical facilities, and populations in Forrest County.

EARTHQUAKE

The HAZUS-MH earthquake scenario was generated for the region only and not on an individual county basis. The HAZUS-MH model and historical occurrences confirm, any earthquake activity in the area is likely to inflict minor damage to the county. HAZUS-MH 4.2 estimates a total exposure of approximately \$20,561,000 which includes buildings, inventory, and contents throughout the region. While this number is not an exact representation of assessed tax value, it is helpful in assessing the results of the HAZUS-MH scenario.

For the earthquake hazard vulnerability assessment, an arbitrary scenario was created to estimate damages to the planning area. HAZUS-MH estimates that no buildings would be moderately damaged.

Social Vulnerability

It can be assumed that all existing future populations are at risk to the earthquake hazard. No fatalities or injuries were reported in the above HAZUS-MH arbitrary scenario.

Critical Facilities

There are 206 critical facilities identified for Forrest County, valued at over \$336M. All are vulnerable to the earthquake hazard.

In conclusion, an earthquake has the potential to impact all existing and future buildings, facilities, and populations in Forrest County. The HAZUS-MH scenario indicates that minimal damage is expected from an earthquake occurrence. While Forrest County may not experience a large earthquake (there are none on record), localized damage is possible with an occurrence. A list of specific critical facilities and their associated risk can be found in **Table B.32** at the end of this section.

HURRICANE AND TROPICAL STORM

Historical evidence indicates that Forrest County has an elevated risk to the hurricane and tropical storm hazard. Several tracks have come near or traversed through the county, as shown and discussed in Section B.2.10.

Hurricanes and tropical storms can cause damage through numerous additional hazards such as flooding, erosion, tornadoes, and high winds, thus it is difficult to estimate total potential losses from these cumulative effects. The current HAZUS-MH hurricane model only analyzes hurricane winds and is not capable of modeling and estimating cumulative losses from all hazards associated with hurricanes; therefore, only hurricane winds are analyzed in this section. It can be assumed that all existing and future buildings and populations are at risk to the hurricane and tropical storm hazard. HAZUS-MH 4.2 was used to determine vulnerability to the hazard for a 100-Year event. There are an estimated 100,000 buildings in the region with a total building replacement value of \$20,562,000. A 100-year probabilistic scenario was created and modeled. HAZUS-MH estimated that approximately 1,892 buildings would be at least moderately damaged by the event; this is over two percent of the buildings in the Region. There is an estimated 69 buildings that would be damaged beyond repair.

Economic Losses

HAZUS-MH estimated economic losses for the scenario event. HAZUS-MH estimated losses at \$349.5M, which represents 1.7 percent of the total replacement value of the region's buildings. Nine percent of the losses were related to business interruption in the scenario region. 88 percent of the losses were sustained by residential structures.

Debris Generation

As part of the scenario, HAZUS-MH estimated the amount of debris that would be generated by the event. The types of debris considered were brick/wood, reinforced concrete/steel, eligible tree debris, and other tree debris. HAZUS-MH estimated that a total of 2,165,680 tons of debris would be generated by the event. Of that amount, 93 percent would be other tree debris, approximately 1.5 percent would be brick/wood, and the rest would comprise of would be eligible tree debris and brick/wood. Assuming a load of 25 tons per truck, this would equate to 1,190 truckloads of debris from this scenario.

Social Vulnerability

Given equal susceptibility across the county, it is assumed that the total population is at risk to the hurricane and tropical storm hazard.

Critical Facilities

Given equal vulnerability across Forrest County, all critical facilities are considered to be at risk. Some buildings may perform better than others in the face of such an event due to construction and age, among other factors. There are 206 critical facilities identified for Forrest County, valued at \$336M. Some buildings may perform better than others in the face of such an event due to construction and age, among other factors. Determining individual building response is beyond the scope of this plan. However, this plan will consider mitigation action for especially vulnerable and/or critical facilities to mitigation against the effects of the hurricane hazard. A list of specific critical facilities can be found in **Table A.32** at the end of this section.

In conclusion, a hurricane event has the potential to impact many existing and future buildings, critical facilities, and populations in Forrest County. Hurricane events can cause substantial damage in their wake including fatalities, extensive debris clean-up, and extended power outages.

HAZARDOUS MATERIALS INCIDENT

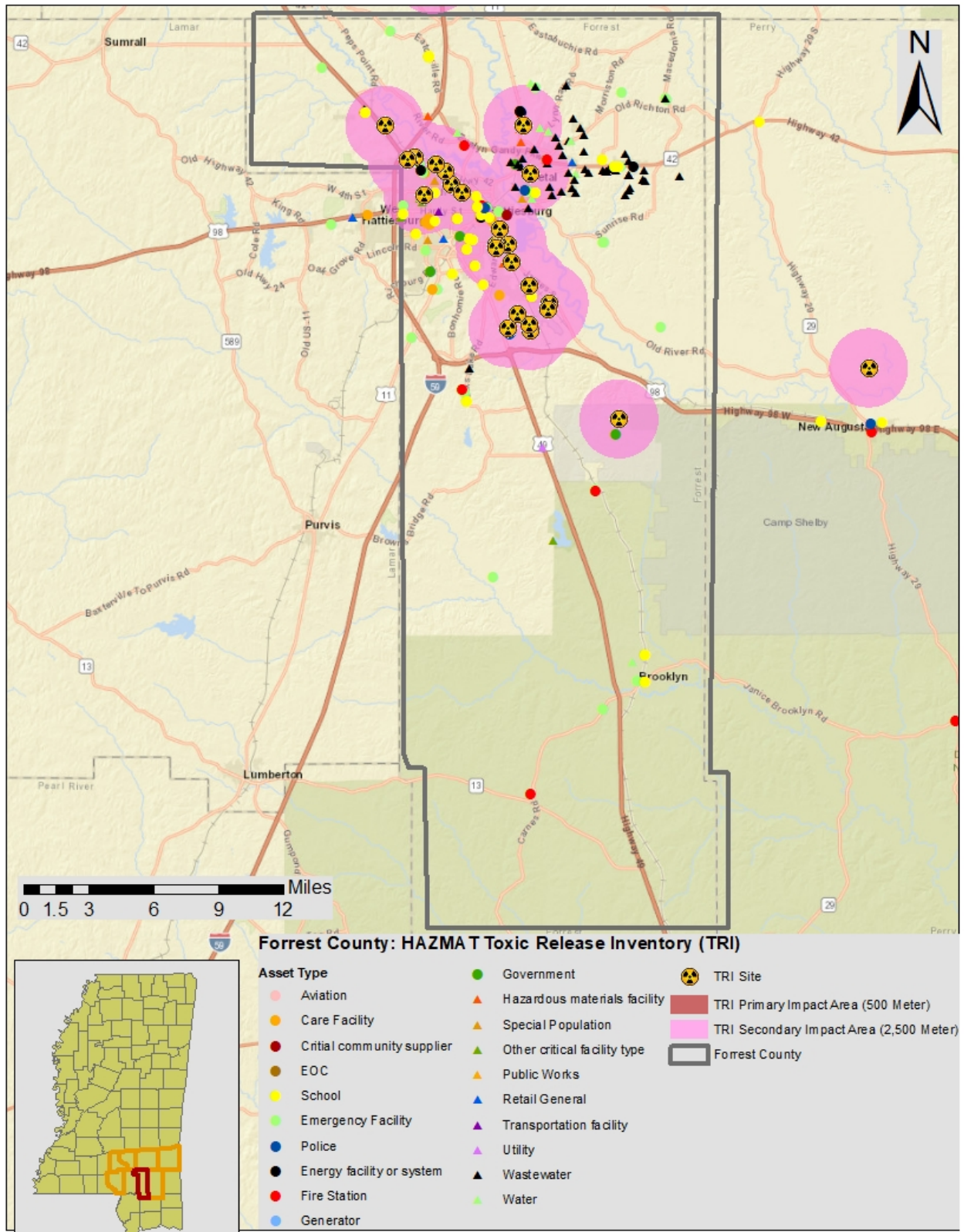
Although historical evidence and existing Toxic Release Inventory sites indicate that Forrest County is susceptible to hazardous materials events, there are few reports of damage.

Most hazardous materials incidents that occur are contained and suppressed before destroying any property or threatening lives. However, they can have a significant negative impact. Such events can cause multiple deaths, completely shut down facilities for 30 days or more, and cause more than 50 percent of affected properties to be destroyed or suffer major damage. In a hazardous materials incident, solid, liquid, and/or gaseous contaminants may be released from fixed or mobile containers. Weather conditions will directly affect how the hazard develops. Certain chemicals may travel through the air or water, affecting a much larger area than the point of the incidence itself. Non-compliance with fire and building codes, as well as failure to maintain existing fire and containment features, can substantially increase the damage from a hazardous materials release. The duration of a hazardous materials incident can range from hours to days. Warning time is minimal to none.

In order to conduct the vulnerability assessment for this hazard, GIS intersection analysis was used for fixed and mobile areas and parcels.¹⁷ In both scenarios, two sizes of buffers—500 and 2,500 meters—were used. These areas are assumed to respect the different levels of effect: immediate (primary) and secondary. Primary and secondary impact sites were selected based on guidance from FEMA 426, Reference Manual to Mitigate Potential Terrorist Attacks against Buildings and engineering judgment. For the fixed site analysis, geo-referenced TRI listed toxic sites in Forrest County, along with buffers, were used for analysis. There are several TRI sites located in Forrest County. For the mobile analysis, the major roads (Interstate highway, U.S. highway, and State highway) and railroads, where hazardous materials are primarily transported that could adversely impact people and buildings, were used for the GIS buffer analysis.

¹⁷ This type of analysis will likely yield conservative results (generally higher than what is actually reported after an event).

FIGURE B.3 : TRI SITES WITH BUFFERS IN FORREST COUNTY



Social Vulnerability

Given high susceptibility across the entire county, it is assumed that the total population is at risk to a hazardous materials incident. It should be noted that areas of population concentration may be at an elevated risk due to a greater burden to evacuate population quickly.

Critical Facilities

Fixed Site Analysis:

The critical facility analysis for fixed TRI sites revealed that there are 18 critical facilities that would be impacted by only the 500M HAZMAT risk zone, which are valued at over \$59.2M. There are 110 critical facilities that would be impacted by the 2500M HAZMAT risk zone, valued at over \$297.5M. A list of specific critical facilities and their associated risk can be found in **Table A.32** at the end of this section.

Mobile Analysis:

The critical facility analysis for transportation corridors in Covington County revealed that there are 15 critical facilities located in the 500M Highway mobile HAZMAT buffer areas valued at over \$8M, and there are 8 critical facilities located in the 500M Railway mobile HAZMAT buffer areas valued at approximately \$3M.

Expanding to a 2500M HAZMAT risk zone reveals there are 130 critical facilities located in the highway mobile HAZMAT buffer areas are vulnerable, valued at over \$330M. There are 119 critical facilities located in the railway mobile HAZMAT buffer area that are vulnerable, valued at over \$319M. A list of specific critical facilities and their associated risk can be found in **Table A.32** at the end of this section.

In conclusion, a hazardous material incident has the potential to impact many existing and future buildings, critical facilities, and populations in Forrest County. Those areas in a primary buffer are at the highest risk, though all areas carry some vulnerability due to variations in conditions that could alter the impact area (i.e., direction and speed of wind, volume of release, etc). Further, incidents from neighboring counties could also impact the county and participating jurisdictions.

CONCLUSIONS ON HAZARD VULNERABILITY

Table B.24 shows the critical facilities vulnerable to additional hazards analyzed in this section. The table lists those assets that are determined to be exposed to each of the identified hazards (marked with an "X").

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TABLE B.32: AT-RISK CRITICAL FACILITIES IN FORREST COUNTY

FACILITY NAME	FACILITY TYPE	ATMOSPHERIC							GEOLOGIC			HYDROLOGIC			OTHER				
		Drought	Hailstorm	Hurricane and Tropical Storm	Lightning	Thunderstorm	Tornado	Winter Storm and Freeze	Earthquake	Landslide – Mod	Landslide- High	Dam and Levee Failure ¹⁸	Flood – 100 yr	Flood – 500 yr	Fixed HAZMAT 500m	Fixed HAZMAT 2,500 meter	Mobile HZMT 500 METER	Mobile HZMT 2,500 meter	Wildfire
Forrest County																			
Forrest County EOC	EOC	X	X	X	X	X	X	X	X								X	X	
J. E. Johnson Elementary School	School	X	X	X	X	X	X	X	X									X	
Petal Police Department	Police Station	X	X	X	X	X	X	X	X								X	X	
Hattiesburg Fire Department	Fire Station	X	X	X	X	X	X	X	X										
Five County Child Development Program (Petal)	School	X	X	X	X	X	X	X	X								X	X	
Five County Child Development Program (Hattiesburg)	School	X	X	X	X	X	X	X	X										
Hattiesburg High School	School	X	X	X	X	X	X	X	X									X	
Carver Elementary School	School	X	X	X	X	X	X	X	X									X	
Forrest Community Hospital	Medical	X	X	X	X	X	X	X	X								X	X	
Forrest Sheriff	Police Station	X	X	X	X	X	X	X	X								X	X	
Petal Fire Department	Fire Station	X	X	X	X	X	X	X	X								X	X	
Petal Senior High School	School	X	X	X	X	X	X	X	X									X	
Petal Christian School	School	X	X	X	X	X	X	X	X								X	X	
Jeff Davis Co Voc Tech Center	School	X	X	X	X	X	X	X	X									X	

¹⁸ As noted previously, these facilities could be at risk to dam failure if located in an inundation area. Data was not available to conduct such an analysis. There was no local knowledge of these facilities being at risk to dam failure. As additional data becomes available, more in-depth analysis will be conducted.

B.4 FORREST COUNTY CAPABILITY ASSESSMENT

This subsection discusses the capability of Forrest County to implement hazard mitigation activities. More information on the purpose and methodology used to conduct the assessment can be found in Section 7: *Capability Assessment*.

B.4.1 Planning and Regulatory Capability

Table B.25 provides a summary of the relevant local plans, ordinances, and programs already in place or under development for Forrest County. A checkmark (✓) indicates that the given item is currently in place and being implemented. An asterisk (*) indicates that the given item is currently being developed for future implementation. Each of these local plans, ordinances, and programs should be considered available mechanisms for incorporating the requirements of the MEMA District 8 Regional Hazard Mitigation Plan.

TABLE B.33: RELEVANT PLANS, ORDINANCES, AND PROGRAMS

Planning Tool/Regulatory Tool	Hazard Mitigation Plan	Comprehensive Land Use Plan	Floodplain Management Plan	Open Space Management Plan (Parks & Rec/Greenway Plan)	Stormwater Management Plan/Ordinance	Natural Resource Protection Plan	Flood Response Plan	Emergency Operations Plan	Continuity of Operations Plan	Evacuation Plan	Disaster Recovery Plan	Capital Improvements Plan	Economic Development Plan	Historic Preservation Plan	Flood Damage Prevention Ordinance	Zoning Ordinance	Subdivision Ordinance	Unified Development Ordinance	Post-Disaster Redevelopment Ordinance	Building Code	Fire Code	National Flood Insurance Program (NFIP)	NFIP Community Rating System
FORREST COUNTY	✓			✓	✓			✓					✓		✓		✓					✓	
Hattiesburg	✓	✓	✓	✓	✓			✓		✓	✓		✓		✓	✓	✓	✓		✓	✓	✓	✓
Petal	✓	✓		✓	✓			✓					✓		✓	✓	✓			✓	✓	✓	

A more detailed discussion on the county's planning and regulatory capabilities follows.

EMERGENCY MANAGEMENT

Hazard Mitigation Plan

Forrest County has previously adopted a hazard mitigation plan. The City of Hattiesburg and the Town of Petal were also included in this plan.

Emergency Operations Plan

Forrest County maintains an emergency operations plan through its Emergency Management Agency. The City of Hattiesburg and the Town of Petal are each covered by this plan.

GENERAL PLANNING

Comprehensive Land Use Plan

Forrest County has not adopted a county comprehensive land use plan. However, the City of Hattiesburg adopted a community development plan in 1972 and Town of Petal adopted a comprehensive plan in 1973.

Zoning Ordinance

Forrest County does not have a zoning ordinance in place. However, the City of Hattiesburg and Town of Petal have zoning ordinances that were adopted in 1972 and 1973, respectively.

Subdivision Ordinance

Forrest County does not have a subdivision ordinance in place. However, the City of Hattiesburg and Town of Petal adopted subdivision regulations in 1972 and 1966, respectively.

Building Codes, Permitting, and Inspections

Forrest County has not adopted a building code. However, the City of Hattiesburg and the Town of Petal have both adopted building codes.

FLOODPLAIN MANAGEMENT

Table B.26 provides NFIP policy and claim information for each participating jurisdiction in Forrest County.

TABLE B.34: NFIP POLICY AND CLAIM INFORMATION

Jurisdiction	Date Joined NFIP	Current Effective Map Date	NFIP Policies in Force	Insurance in Force	Closed Claims	Total Payments to Date
FORREST COUNTY†	12/17/10	12/17/10(M)	7	\$762,600	0	\$0
Hattiesburg	4/3/1970	3/16/2015	472	\$500,296	1,092	\$5,285,448
Petal	12/17/10	12/17/10(M)	0	\$0	2	\$4,613

†Includes unincorporated areas of county only

*Community does not participate in the NFIP

(M) – No Elevation Determined, All Zone A, C and X

Source: NFIP Community Status information as of 3/31/13; NFIP claims and policy information as of 5/15/13

Flood Damage Prevention Ordinance

All communities participating in the NFIP are required to adopt a local flood damage prevention ordinance. Forrest County, Town of Petal, and City of Hattiesburg all participate in the NFIP and have adopted flood damage prevention ordinances.

Open Space Management Plan

Forrest County, the City of Hattiesburg, and the Town of Petal are all included in the Southern Mississippi Planning and Development District (SMPDD) Regional Open Space Plan that was written in 1973.

B.4.2 Administrative and Technical Capability

Table B.27 provides a summary of the capability assessment results for Forrest County with regard to relevant staff and personnel resources. A checkmark (✓) indicates the presence of a staff member(s) in that jurisdiction with the specified knowledge or skill.

TABLE B.35: RELEVANT STAFF / PERSONNEL RESOURCES

Staff / Personnel Resource	Planners with knowledge of land development/land management practices	Engineers or professionals trained in construction practices related to buildings and/or infrastructure	Planners or engineers with an understanding of natural and/or human-caused hazards	Emergency Manager	Floodplain Manager	Land Surveyors	Scientists familiar with the hazards of the community	Staff with education or expertise to assess the community's vulnerability to hazards	Personnel skilled in GIS and/or Hazus	Resource development staff or grant writers
FORREST COUNTY	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Hattiesburg	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Petal	✓	✓	✓	✓	✓	✓	✓	✓		

Credit for having a floodplain manager was given to those jurisdictions that have a flood damage prevention ordinance, and therefore an appointed floodplain administrator, regardless of whether the appointee was dedicated solely to floodplain management. Credit was given for having a scientist familiar with the hazards of the community if a jurisdiction has a Cooperative Extension Service or Soil and Water Conservation Department. Credit was also given for having staff with education or expertise to assess the community's vulnerability to hazards if a staff member from the jurisdiction was a participant on the existing hazard mitigation plan's planning committee.

B.4.3 Fiscal Capability

Table B.28 provides a summary of the results for Forrest County with regard to relevant fiscal resources. A checkmark (✓) indicates that the given fiscal resource is locally available for hazard mitigation purposes (including match funds for state and federal mitigation grant funds) according to the previous county hazard mitigation plan.

TABLE B.36: RELEVANT FISCAL RESOURCES

Fiscal Tool / Resource	Capital Improvement Programming	Community Development Block Grants (CDBG)	Special Purpose Taxes (or taxing districts)	Gas/Electric Utility Fees	Water/Sewer Fees	Stormwater Utility Fees	Development Impact Fees	General Obligation, Revenue, and/or Special Tax Bonds	Partnering Arrangements or Intergovernmental Agreements
FORREST COUNTY	✓	✓						✓	✓
Hattiesburg	✓	✓	✓			✓		✓	✓
Petal	✓	✓						✓	✓

B.4.4 Political Capability

During the months immediately following a disaster, local public opinion in Forrest County is more likely to shift in support of hazard mitigation efforts.

B.5 FORREST COUNTY MITIGATION STRATEGY

This subsection provides the blueprint for Forrest County to follow in order to become less vulnerable to its identified hazards. It is based on general consensus of the Regional Hazard Mitigation Council and the findings and conclusions of the capability assessment and risk assessment. Additional Information can be found in Section 8: *Mitigation Strategy* and Section 9: *Mitigation Action Plan*.

B.5.1 Mitigation Goals

Forrest County developed five mitigation goals in coordination with the other participating MEMA District 8 Region jurisdictions. The regional mitigation goals are presented in **Table B.29**.

TABLE B.37: MEMA DISTRICT 8 REGIONAL MITIGATION GOALS

	Goal
Goal #1	Encourage the development and maintenance of facilities and infrastructure that will mitigate hazards
Goal #2	Foster an on-going community education program on hazard mitigation safety and preparation.
Goal #3	Enhance response procedures and capabilities.

	Goal
Goal #4	Utilize technology to protect and develop records and data.

B.5.2 Mitigation Action Plan

The mitigation actions proposed by Forrest County, the City of Hattiesburg, and the Town of Petal are listed in the following individual Mitigation Action Plans.

Forrest County Mitigation Action Plan

Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2019 Action Implementation Status
Prevention								
P-1	Identify high risk areas where hazards are most likely to occur.	All	High	None needed	No additional cost	County	Annual review	Ongoing
P-2	Site-locate vulnerable population on a County-wide map.	Multiple	High	Area Agency on Aging, USDA Rural Dev., COPS, FIRE	Unknown	Emergency Management District, County	Within 1 year; Upon request	Ongoing
P-3	Strictly enforce the flood damage prevention ordinance.	FL	High	Self-funded	No additional cost	County Floodplain Administrator	Ongoing	Ongoing
P-4	Consider adoption of subdivision regulations in Forrest County.	TH, FL, HU, TS	High	Self-funded	No cost	County	Ongoing	Completed and Ongoing as Needed
p-5	Continue to maintain and upgrade drainage facilities.	HU, TS, FL, BH	High	Self-funded	Part of annual County budget	County BOS, County Road Crews	Annual review	Ongoing as Funding Is Available
P-6	Consider adoption of a comprehensive drainage plan.	FL, TS, HU	Medium	CDBG, Small Muni. Grant, MSDA, USDA Rural Dev.	No additional cost	County	Within 5 years	The County is still considering this action/Ongoing
P-7	Map the easements and rights-of-way of roadways and drainage ways. <i>*Goal 4 Action #2</i>	All	Low to Medium	CDBG, Small Muni. Grant, MSDA, USDA Rural Dev.	Unknown	County	Within 5 years	The County is still considering this action/Ongoing

Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2019 Action Implementation Status
P-8	Support the development of a shared geographic data system for land use and site planning. <i>*Goal 4 Action #1</i>	All	High	Self-funded	No additional cost	County	Ongoing	Ongoing
P-9	Develop a comprehensive development plan. <i>*Goal 1 Action #3</i>	All	Low	CDBG, MSDA	Unknown	County	Within 5 years	The County is still considering this action
P-10	Incorporate the hazard mitigation plan into the comprehensive plan.	All	Medium	CDBG, MSDA	No additional cost	County	Concurrent with prep. of Comp Plan	The County is still considering this action/Ongoing
P-11	Address the threat of unhealthy trees that are near critical facilities. <i>*Goal 1 Action #7</i>	High Winds, Winter Storms and Hail	Medium	Local funds and Grant Sources	T TBD	City Urban Forestry, Forrest County Road Department, Forrest County Planning Department and Emergency Management	Ongoing	Ongoing
P-12	Address the local need of debris removal and related items after a storm . <i>*Goal 3 Action #1</i>	High Winds, Flooding, Landslides, Winter Storms, and Hail	High	HMGP and other grant sources	\$500,000	Forrest County Road Department, Forrest County Planning Department and Emergency Management	Ongoing	Ongoing

Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2019 Action Implementation Status
P-13	Preserve classified, confidential and/or important governmental documents. <i>*Goal 4 Action #3</i>	All Hazards	High	Local and Grant Sources	TBD	County	Ongoing	Ongoing
Property Protection								
PP-1	Promote alternative construction techniques such as the building of “safe rooms” in new construction and when remodeling existing structures.	HU, TS, TO, TH	High	Self-funded	No additional cost \$10,000,000- \$15,000,000	County	Within 5 years	Two Completed and Ten Underway. Action is Ongoing
PP-2	Ensure that structures in floodplain areas are elevated. <i>*Goal 1 Action #1</i>	FL	High	Self-funded	No additional cost	County	2024	New construction is regulated by the flood damage prevention ordinance. Existing structures in the flood zone that need to be elevated will be evaluated on a case by case basis pending funding and desire to be elevated. /Ongoing
PP-3	Ensure that new public buildings are designed and built to hurricane resistant building codes.	HU, TS, TO, HW	High	Self-funded	No additional cost	County	2024	Ongoing
PP-4	Continue to retrofit public buildings and other critical facilities to withstand natural hazards.	All	High	HMGP	Unknown	County	2024	Ongoing as funding becomes available

Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2019 Action Implementation Status
PP-5	Ensure secure operation of water wells and wastewater treatment facilities.	All	High	HMGP, USDA Rural Dev., CDBG, Small Muni. Grant	Unknown	County	2024	Ongoing pending funding availability
PP-6	Actively pursue and buy those properties that are considered repetitive loss properties. <i>*Goal 1 Action #4</i>	FL	High	HMGP, PDM, FMA Self-funded	TBD	County	2024	Ongoing
Natural Resource Protection								
NRP-1	Preserve natural wetlands and riparian areas through acquisition of conservation easements.	HU, TS, FL	Low to Medium	Donation	Low or no cost	MS Land Trust, Land Trust of MS Coastal Plain; County	2024	Ongoing pending funding availability
Emergency Services								
ES-1	Encourage participation by staff and elected officials in voluntary or extracurricular activities related to emergency management, disaster preparedness, civil defense, or other hazard mitigation activities.	All	Medium	Self-funded, MEMA	Low or no cost	Emergency Management District	2024	Ongoing
ES-2	Establish a notification procedure for populations in high risk areas.	All	Medium	Self-funded	No additional cost	Emergency Management District, County	Within 2 years	Ongoing
ES-3	Survey the existing emergency shelters and study the feasibility of expanding the capacity of shelters. <i>*Goal 1 Action #8</i>	All	High	HMGP	Unknown	Emergency Management District, County	Within 2 years	Ongoing

ANNEX B: FORREST COUNTY

Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2019 Action Implementation Status
ES-4	Explore potential sites for a new special needs shelter.	TO, HU, TS, FL	High	HMGP	Unknown	Emergency Management District, County	Within 2 years	Ongoing
ES-5	Improve disaster communication systems within the County.	All	High	State, Federal, Local funds	Unknown	Emergency Management District, County	2024	Ongoing
ES-6	Consider generators for local radio station service areas.	All	High	State, Federal funds	Unknown	Emergency Management District, County	Contingent upon funding	Ongoing
ES-7	Install warning sirens in each jurisdiction. <i>*Goal 2 Action #3</i>	All	High	State, Federal, Local funds	Unknown	Emergency Management District, County	Contingent upon funding	Ongoing pending funding availability 5 Installed and Ongoing
ES-8	Explore upgrade/enhancement of 911 system in Forrest County.	All	Medium	HMGP	Unknown	Emergency Management District, County	Within 2 years; Contingent upon funding	Ongoing – contingent on funding Some Portions complete
ES-9	Explore potential to install Reverse 911 system.	All	Low to Medium	HMGP	Unknown	Emergency Management District, County	Ongoing	Completed pending upgrades
ES-10	Coordinate with neighboring jurisdictions to ensure consistency of evacuation plans.	FL, HU, TS, Others	Medium	Self-funded	No additional cost	County BOS, Emergency Management District	Within 2 years	Ongoing
ES-11	Enhance identification of evacuation routes through distribution of MDOT maps.	FL, HU, TS, Others	High	Self-funded	No additional cost	Emergency Management District	Ongoing	Ongoing
ES-12	Ensure continuity of utility services for public buildings and other critical facilities. <i>*Goal 1 Action #2</i>	All	High	HMGP	Unknown	County	Within 2 years; Next round of HMGP funding	Ongoing – contingent on funding

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Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2019 Action Implementation Status
ES-13	Develop a government services continuity plan.	All	Medium	USDA Rural Dev., CDBG, Small Muni. Grant	Unknown	County	Within 5 years; Annual review	Ongoing – contingent on funding
ES-14	Host a meeting to review Forrest County Comprehensive Emergency Management Plan.	TT	Medium	Self-funded	No additional cost	Emergency Management District, County	Ongoing	Completed
ES-15	Actively search for and identify funding sources for the enhancement of emergency response abilities of Fire and Sheriff's Departments.	TT	Medium to High	DHS, SAFER, COPS, FIRE, Others	Unknown	County	Ongoing	Ongoing – contingent on funding. Added paid firemen and approximately five fire trucks for Districts 2, 3, and 5.
ES-16	Adoption of building codes in Forrest County. <i>*Goal 1 Action #5</i>	All Hazards	Medium	Local	TBD	County	2025	Deferred
Structural Projects								
SP-1	Address cross-jurisdictional issues related to response, recovery and mitigation on key projects with overlapping boundaries.	HU, TS, FL, RH	Low to Medium	Self-funded	No additional cost	County	Within 2 years	Ongoing as needed
Public Education and Awareness								
PEA-1	Explore continuing education programs/ opportunities for staff and elected officials.	FL, TH, HU, TS	Medium	Self-funded, MEMA	Low cost	County	Within 2 years	Ongoing – contingent on funding
PEA-2	Provide education and outreach materials to citizens and visitors. <i>*Goal 2 Action #2</i>	All	High	Self-funded	No cost	Emergency Management District	Within 1 year	Ongoing – contingent on funding
PEA-3	Encourage the development of Family Disaster Plans.	All	High	Self-funded, COPS, FIRE	Low or no cost	Emergency Management District	Annual presentations	Ongoing – contingent on funding

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Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2019 Action Implementation Status
PEA-4	Expand outreach information to property owners regarding retrofitting and flood-proofing techniques through community workshops, brochures, and newspaper articles.	FL, Multiple	High	Self-funded	No additional cost	Emergency Management District, County	Upon request	Ongoing – contingent on funding
PEA-5	Provide education/outreach to communities to encourage participation in the National Flood Insurance Program. <i>*Goal 2 Action #1</i>	FL	High	Self-funded	N/A	Emergency Management District, County	Ongoing	The County continues to participate in the NFIP and encourages the jurisdictions within the County to also join.
PEA-6	Encourage participation in the Community Rating System of the NFIP.	FL, HU, TS, TH, HW	Medium	USDA Rural Dev., CDBG, Small Muni. Grant, FEMA, Others	Unknown	County	Within 3 years	The County is still considering joining the CRS.
PEA-7	Encourage businesses to develop business continuity or contingency operating plans.	CH	Medium	DHS, SAFER, COPS, FIRE, Others	TBD	County	Within 2 years	Ongoing – contingent on funding
PEA-8	Discourage development within the Special Flood Hazard Area and in the floodway. <i>*Goal 1 Action #6</i>	Flood	Medium	HMGP	TBD	County	Ongoing	Ongoing
FL = Flood TH = Thunderstorm HU = Hurricane TS = Tropical Storm TO = Tornado BH = Biological Hazards HW = High Winds TT = Transportation and Technological Hazards RH = Roadway Hazards CH = Civil Hazards JDCEMA = Forrest County Emergency Management Agency County BOS = Forrest County Board of Supervisors <i>*Denotes Action item from 2013 Forrest County HMP, no numbering methodology was utilized in the 2013 planning process, numbers were assigned based on Goal and associated action item on pages 5-2 and 5-3.</i>								

City of Hattiesburg Mitigation Action Plan

Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2019 Action Implementation Status
Prevention								
P-1	Identify high risk areas where hazards are most likely to occur.	All	High	Self-funded	No additional cost	County, Town Emergency Management District	Annual review	Ongoing
P-2	Site-locate vulnerable population on a County-wide map.	Multiple	High	Area Agency on Aging, USDA Rural Dev., COPS, FIRE	No additional cost	Emergency Management District, County, Town	Within 1 year; Upon request	Ongoing
P-3	Strictly enforce the flood damage prevention ordinance.	FL	High	Self-funded	No additional cost	Town Floodplain Administrator	Ongoing	Ongoing
P-4	Strictly enforce subdivision regulations concerning developments in flood hazard areas.	FL	High	Self-funded	No additional cost	Town	Ongoing	Completed and Ongoing as Needed
P-5	Continue to maintain and upgrade drainage facilities.	HU, TS, FL, BH	High	Self-funded	Budget restraints	County BOS, County Road Crews, Town	Annual review	Ongoing as Funding Is Available
P-6	Consider adoption of a comprehensive drainage plan.	FL, TS, HU	Medium	CDBG, Small Muni. Grant, MSDA, USDA Rural Dev.	Unknown	County, Town	Within 5 years	The Town is still considering this action/Ongoing

Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2019 Action Implementation Status
P-7	Map the easements and rights-of-way of roadways and drainage ways. <i>*Goal 4 Action #2</i>	All	Low to Medium	CDBG, Small Muni. Grant, MSDA, USDA Rural Dev.	Unknown	County, Town	Within 5 years	The Town is still considering this action/Ongoing
P-8	Support the development of a shared geographic data system for land use and site planning. <i>*Goal 4 Action #1</i>	All	Medium to High	Self-funded	No additional cost	County, Town	Ongoing	Ongoing
P-9	Develop a comprehensive development plan. <i>*Goal 1 Action #3</i>	All	High	CDBG, MSDA	Unknown	County, Town, Emergency Management District	Within 5 years	The Town is still considering this action
P-10	Incorporate the hazard mitigation plan into the comprehensive plan.	All	Medium	Self-funded	No additional cost	County, Town, Emergency Management District	Concurrent with prep. of Comp Plan	Complete and Ongoing
P-11	Address the threat of unhealthy trees that are near critical facilities. <i>*Goal 1 Action #7</i>	High Winds, Winter Storms and Hail	Medium	Local funds and Grant Sources	T TBD	City Urban Forestry, Forrest County Road Department, Forrest County Planning Department and Emergency Management	Ongoing	Ongoing

Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2019 Action Implementation Status
P-12	Address the local need of debris removal and related items after a storm . <i>*Goal 3 Action #1</i>	High Winds, Flooding, Landslides, Winter Storms, and Hail	High	HMGP and other grant sources	\$500,000	Forrest County Road Department, Forrest County Planning Department and Emergency Management	Ongoing	Ongoing
P-13	Preserve classified, confidential and/or important governmental documents. <i>*Goal 4 Action #3</i>	All Hazards	High	Local and Grant Sources	TBD	County and City	Ongoing	Ongoing
Property Protection								
PP-1	Promote alternative construction techniques such as the building of “safe rooms” in new construction and when remodeling existing structures.	HU, TS, TO, TH	Medium	Self-funded	No additional cost	County, Town	Within 5 years	Two Completed and Ten Underway. Action is Ongoing
PP-2	Ensure that structures in floodplain areas are elevated. <i>*Goal 1 Action #1</i>	FL	High	Self-funded	No additional cost	County, Town	2024	New construction is regulated by the flood damage prevention ordinance. Existing structures in the flood zone that need to be elevated will be evaluated on a case by case basis pending funding and desire to be elevated. /Ongoing
PP-3	Ensure that new public buildings are designed and built to hurricane resistant building codes.	HU, TS, TO, HW	High	Self-funded	No additional cost	County, Town	2024	Ongoing

Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2019 Action Implementation Status
PP-4	Continue to retrofit public buildings and other critical facilities to withstand natural hazards.	All	High	HMGP	Budget restraints	County, Town	2024	Ongoing as funding becomes available
PP-5	Ensure secure operation of water wells and wastewater treatment facilities.	All	High	HMGP, USDA Rural Dev., CDBG, Small Muni. Grant	Unknown	County, Town	2024	Ongoing pending funding availability
PP-6	Actively pursue and buy those properties that are considered repetitive loss properties. <i>*Goal 1 Action #4</i>	FL	High	HMGP, PDM, FMA Self-funded	TBD	County	2024	Ongoing
Natural Resource Protection								
NRP-1	Preserve natural wetlands and riparian areas through acquisition of conservation easements.	HU, TS, FL	Low to Medium	Donation	Low or no cost	MS Land Trust, Land Trust of MS Coastal Plain; County, Town	2024	Ongoing pending funding availability
Emergency Services								
ES-1	Encourage participation by staff and elected officials in voluntary or extracurricular activities related to emergency management, disaster preparedness, civil defense, or other hazard mitigation activities.	All	Medium	Self-funded, MEMA	Low or no cost	Emergency Management District	2024	Ongoing
ES-2	Establish a notification procedure for populations in high risk areas.	All	Medium	Self-funded	No additional cost	Emergency Management District, Town	Within 2 years	Ongoing

Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2019 Action Implementation Status
ES-3	Survey the existing emergency shelters and study the feasibility of expanding the capacity of shelters. <i>*Goal 1 Action #8</i>	All	High	HMGP	Unknown	Emergency Management District, County, Town	Within 2 years	Ongoing
ES-4	Explore potential sites for a new special needs shelter.	TO, HU, TS, FL	High	HMGP	Unknown	Emergency Management District, County, Town	Within 2 years	Ongoing
ES-5	Improve disaster communication systems within the County.	All	High	State, Federal, Local funds	Unknown	Emergency Management District, County	2024	Ongoing
ES-6	Consider generators for local radio station service areas.	TO, HU, TS	High	State, Federal funds	Unknown	Emergency Management District, County	Contingent upon funding	Ongoing
ES-7	Install warning sirens in each jurisdiction. <i>*Goal 2 Action #3</i>	TO, HU, TS	High	State, Federal, Local funds	Unknown	Emergency Management District, County	Contingent upon funding	Ongoing pending funding availability 5 Installed and Ongoing
ES-8	Explore upgrade/enhancement of 911 system in Forrest County.	All	Medium	HMGP	Unknown	Emergency Management District, County, Town	Within 2 years; Contingent upon funding	Ongoing – contingent on funding Some Portions complete
ES-9	Explore potential to install Reverse 911 system.	All	Low to Medium	HMGP	Unknown	Emergency Management District, County, Town	Ongoing	Completed pending upgrades
ES-10	Coordinate with neighboring jurisdictions to ensure consistency of evacuation plans.	FL, HU, TS, Others	Medium	Self-funded	No additional cost	County BOS, Emergency Management District, Town	Within 2 years	Ongoing

Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2019 Action Implementation Status
ES-11	Enhance identification of evacuation routes through distribution of MDOT maps.	FL, HU, TS, Others	High	Self-funded	No additional cost	Emergency Management District	Ongoing	Ongoing
ES-12	Ensure continuity of utility services for public buildings and other critical facilities. <i>*Goal 1 Action #2</i>	All	High	HMGP	No additional costs	County, Town	Within 2 years; Next round of HMGP funding	Ongoing – contingent on funding
ES-13	Develop a government services continuity plan.	All	Medium	USDA Rural Dev., CDBG, Small Muni. Grant	Unknown	County, Town, Emergency Management District	Within 5 years; Annual review	Ongoing – contingent on funding
ES-14	Host a meeting to review Forrest County Comprehensive Emergency Management Plan.	TT	Medium	Self-funded	No additional cost	County, Town, Emergency Management District	Ongoing	Completed
ES-15	Actively search for and identify funding sources for the enhancement of emergency response abilities of Fire and Sheriff's Departments.	TT	Medium to High	DHS, SAFER, COPS, FIRE, Others	Unknown	County, Town	Ongoing	Ongoing – contingent on funding. Added paid firemen and approximately five fire trucks for Districts 2, 3, and 5.
ES-16	Adoption of building codes in Forrest County. <i>*Goal 1 Action #5</i>	All Hazards	Medium	Local	TBD	County and City	2025	Deferred
Structural Projects								
SP-1	Address cross-jurisdictional issues related to response, recovery and mitigation on key projects with overlapping boundaries.	HU, TS, FL, RH	Low to Medium	Self-funded	No additional cost	County, Town	Within 2 years	Ongoing as needed

Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2019 Action Implementation Status
Public Education and Awareness								
PEA-1	Explore continuing education programs/ opportunities for staff and elected officials.	FL, TH, HU, TS	Medium	Self-funded, MEMA	Low cost	County, Town	Within 2 years	Ongoing – contingent on funding
PEA-2	Provide education and outreach materials to citizens and visitors. <i>*Goal 2 Action #2</i>	All	High	Self-funded	No cost	Emergency Management District	Within 1 year	Ongoing – contingent on funding
PEA-3	Encourage the development of Family Disaster Plans.	All	High	Self-funded, COPS, FIRE	Low or no cost	Emergency Management District	Annual presentations	Ongoing – contingent on funding
PEA-4	Expand outreach information to property owners regarding retrofitting and flood-proofing techniques through community workshops, brochures, and newspaper articles.	FL, Multiple	High	Self-funded	No additional cost	County, Town	Upon request	Ongoing – contingent on funding
PEA-5	Provide education/outreach to communities to encourage participation in the National Flood Insurance Program. <i>*Goal 2 Action #1</i>	FL	High	Self-funded	N/A	County	Ongoing	The County continues to participate in the NFIP and encourages the jurisdictions within the County to also join.
PEA-6	Encourage participation in the Community Rating System of the NFIP.	FL, HU, TS, TH, HW	Medium	USDA Rural Dev., CDBG, Small Muni. Grant, FEMA, Others	Unknown	County, Town	Within 3 years	The County is still considering joining the CRS.
PEA-7	Encourage businesses to develop business continuity or contingency operating plans.	CH	High	DHS, SAFER, COPS, FIRE, Others	Unknown	County, Town	Within 2 years	Ongoing – contingent on funding

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Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2019 Action Implementation Status
PEA-8	Discourage development within the Special Flood Hazard Area and in the floodway. <i>*Goal 1 Action #6</i>	Flood	Medium	HMGP	TBD	County and City	Ongoing	Ongoing
FL = Flood TH = Thunderstorm HU = Hurricane TS = Tropical Storm TO = Tornado BH = Biological Hazards HW = High Winds TT = Transportation and Technological Hazards RH = Roadway Hazards CH = Civil Hazards JDCEMA = Forrest County Emergency Management Agency County BOS = Forrest County Board of Supervisors <i>*Denotes Action item from 2013 Forrest County HMP, no numbering methodology was utilized in the 2013 planning process, numbers were assigned based on Goal and associated action item on pages 5-2 and 5-3.</i>								

Town of Petal Mitigation Action Plan

Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2019 Action Implementation Status
Prevention								
P-1	Identify high risk areas where hazards are most likely to occur.	All	High	None needed	No additional cost	County	Annual review	Ongoing
P-2	Site-locate vulnerable population on a County-wide map.	Multiple	High	Area Agency on Aging, USDA Rural Dev., COPS, FIRE	Unknown	JDCEMA, County	Within 1 year; Upon request	Ongoing
P-3	Strictly enforce the flood damage prevention ordinance.	FL	High	Self-funded	No additional cost	County Floodplain Administrator	Ongoing	Ongoing
P-4	Strictly enforce subdivision regulations concerning developments in flood hazard areas.	TH, FL, HU, TS	High	Self-funded	No cost	County	Ongoing	Completed and Ongoing as Needed
p-5	Continue to maintain and upgrade drainage facilities.	HU, TS, FL, BH	High	Self-funded	Part of annual County budget	County BOS, County Road Crews	Annual review	Ongoing as Funding Is Available
P-6	Consider adoption of a comprehensive drainage plan.	FL, TS, HU	Medium	CDBG, Small Muni. Grant, MSDA, USDA Rural Dev.	No additional cost	County	Within 5 years	The Town is still considering this action/Ongoing

Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2019 Action Implementation Status
P-7	Map the easements and rights-of-way of roadways and drainage ways. <i>*Goal 4 Action #2</i>	All	Low to Medium	CDBG, Small Muni. Grant, MSDA, USDA Rural Dev.	Unknown	County	Within 5 years	The Town is still considering this action/Ongoing
P-8	Support the development of a shared geographic data system for land use and site planning. <i>*Goal 4 Action #1</i>	All	Medium to High	Self-funded	No additional cost	County	Ongoing	Ongoing
P-9	Update the existing Petal Comprehensive Development Plan. <i>*Goal 1 Action #3</i>	All	High	CDBG, MSDA	Unknown	County	Within 5 years	The Town is still considering this action
P-10	Incorporate the hazard mitigation plan into the comprehensive plan.	All	Medium	CDBG, MSDA	No additional cost	County	Concurrent with prep. of Comp Plan	The Town is still considering this action/Ongoing
P-11	Address the threat of unhealthy trees that are near critical facilities. <i>*Goal 1 Action #7</i>	High Winds, Winter Storms and Hail	Medium	Local funds and Grant Sources	T TBD	City Urban Forestry, Forrest County Road Department, Forrest County Planning Department and Emergency Management	Ongoing	Ongoing

Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2019 Action Implementation Status
P-12	Address the local need of debris removal and related items after a storm . <i>*Goal 3 Action #1</i>	High Winds, Flooding, Landslides, Winter Storms, and Hail	High	HMGP and other grant sources	\$500,000	Forrest County Road Department, Forrest County Planning Department and Emergency Management	Ongoing	Ongoing
P-13	Preserve classified, confidential and/or important governmental documents. <i>*Goal 4 Action #3</i>	All Hazards	High	Local and Grant Sources	TBD	County and City	Ongoing	Ongoing
P-14	Provide first responders in Petal with necessary equipment and training to respond to gas plant disasters. <i>*Goal 3 Action #2</i>	HAZMAT	High	HMGP	\$850,000	City of Petal Fire Department	Ongoing	Ongoing
P-15	Develop a police response unit in Petal designed to deter acts of terrorism. <i>*Goal 3 Action #3</i>	Terrorism	High	Grant Sources	TBD	City of Petal Fire Department	Ongoing	Ongoing
Property Protection								
PP-1	Promote alternative construction techniques such as the building of “safe rooms” in new construction and when remodeling existing structures.	HU, TS, TO, TH	HU, TS, TO, TH	Medium	Self-funded	No additional cost	Within 5 years	Two Completed and Ten Underway. Action is Ongoing

Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2019 Action Implementation Status
PP-2	Ensure that structures in floodplain areas are elevated. <i>*Goal 1 Action #1</i>	FL	FL	High	Self-funded	No additional cost	2024	New construction is regulated by the flood damage prevention ordinance. Existing structures in the flood zone that need to be elevated will be evaluated on a case by case basis pending funding and desire to be elevated. /Ongoing
PP-3	Ensure that new public buildings are designed and built to hurricane resistant building codes.	HU, TS, TO, HW	HU, TS, TO, HW	High	Self-funded	No additional cost	2024	Ongoing
PP-4	Continue to retrofit public buildings and other critical facilities to withstand natural hazards.	All	All	High	HMGP	Unknown	2024	Ongoing as funding becomes available
PP-5	Ensure secure operation of water wells and wastewater treatment facilities.	All	High	HMGP, USDA Rural Dev., CDBG, Small Muni. Grant	Unknown	County, Town	2024	Ongoing pending funding availability
PP-6	Actively pursue and buy those properties that are considered repetitive loss properties. <i>*Goal 1 Action #4</i>	FL	High	HMGP, PDM, FMA Self-funded	TBD	County	2024	Ongoing
Natural Resource Protection								
NRP-1	Preserve natural wetlands and riparian areas through acquisition of conservation easements.	HU, TS, FL	Low to Medium	Donation	Low or no cost	MS Land Trust, Land Trust of MS Coastal Plain; County, Town	2024	Ongoing pending funding availability

ANNEX B: FORREST COUNTY

Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2019 Action Implementation Status
Emergency Services								
ES-1	Encourage participation by staff and elected officials in voluntary or extracurricular activities related to emergency management, disaster preparedness, civil defense, or other hazard mitigation activities.	All	Medium	Self-funded, MEMA	Low or no cost	JDCEMA	2024	Ongoing
ES-2	Establish a notification procedure for populations in high risk areas.	All	Medium	Self-funded	No additional cost	JDCEMA, County	Within 2 years	Ongoing
ES-3	Survey the existing emergency shelters and study the feasibility of expanding the capacity of shelters. <i>*Goal 1 Action #8</i>	All	High	HMGP	Unknown	JDCEMA, County	Within 2 years	Ongoing
ES-4	Explore potential sites for a new special needs shelter.	TO, HU, TS, FL	High	HMGP	Unknown	JDCEMA, County	Within 2 years	Ongoing
ES-5	Improve disaster communication systems within the County.	All	High	State, Federal, Local funds	Unknown	JDCEMA, County	2024	Ongoing
ES-6	Consider generators for local radio station service areas.	All	High	State, Federal funds	Unknown	JDCEMA, County	Contingent upon funding	Ongoing
ES-7	Install warning sirens in each jurisdiction. <i>*Goal 2 Action #3</i>	All	High	State, Federal, Local funds	Unknown	JDCEMA, County	Contingent upon funding	Ongoing pending funding availability 5 Installed and Ongoing
ES-8	Explore upgrade/enhancement of 911 system in Forrest County.	All	Medium	HMGP	Unknown	JDCEMA, County	Within 2 years; Contingent upon funding	Ongoing – contingent on funding Some Portions complete
ES-9	Explore potential to install Reverse 911 system.	All	Low to Medium	HMGP	Unknown	JDCEMA, County	Ongoing	Completed pending upgrades

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Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2019 Action Implementation Status
ES-10	Coordinate with neighboring jurisdictions to ensure consistency of evacuation plans.	FL, HU, TS, Others	Medium	Self-funded	No additional cost	County BOS, JDCEMA	Within 2 years	Ongoing
ES-11	Enhance identification of evacuation routes through distribution of MDOT maps.	FL, HU, TS, Others	High	Self-funded	No additional cost	JDCEMA	Ongoing	Ongoing
ES-12	Ensure continuity of utility services for public buildings and other critical facilities. <i>*Goal 1 Action #2</i>	All	High	HMGP	Unknown	County	Within 2 years; Next round of HMGP funding	Ongoing – contingent on funding
ES-13	Develop a government services continuity plan.	All	Medium	USDA Rural Dev., CDBG, Small Muni. Grant	Unknown	County	Within 5 years; Annual review	Ongoing – contingent on funding
ES-14	Host a meeting to review Forrest County Comprehensive Emergency Management Plan.	TT	Medium	Self-funded	No additional cost	County	Ongoing	Completed
ES-15	Actively search for and identify funding sources for the enhancement of emergency response abilities of Fire and Sheriff's Departments.	TT	Medium to High	DHS, SAFER, COPS, FIRE, Others	Unknown	County	Ongoing	Ongoing – contingent on funding. Added paid firemen and approximately five fire trucks for Districts 2, 3, and 5.
ES-16	Adoption of building codes in Forrest County. <i>*Goal 1 Action #5</i>	All Hazards	Medium	Local	TBD	County and City	2025	Deferred
Structural Projects								
SP-1	Address cross-jurisdictional issues related to response, recovery and mitigation on key projects with overlapping boundaries.	HU, TS, FL, RH	Low to Medium	Self-funded	No additional cost	County, Town	Within 2 years	Ongoing as needed

Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2019 Action Implementation Status
Public Education and Awareness								
PEA-1	Explore continuing education programs/ opportunities for staff and elected officials.	FL, TH, HU, TS	Medium	Self-funded, MEMA	Low cost	County, Town	Within 2 years	Ongoing – contingent on funding
PEA-2	Provide education and outreach materials to citizens and visitors. <i>*Goal 2 Action #2</i>	All	High	Self-funded	No cost	JDCEMA	Within 1 year	Ongoing – contingent on funding
PEA-3	Encourage the development of Family Disaster Plans.	All	High	Self-funded, COPS, FIRE	Low or no cost	JDCEMA	Annual presentations	Ongoing – contingent on funding
PEA-4	Expand outreach information to property owners regarding retrofitting and flood-proofing techniques through community workshops, brochures, and newspaper articles.	FL, Multiple	High	Self-funded	No additional cost	JDCEMA, County, Town	Upon request	Ongoing – contingent on funding
PEA-5	Provide education/outreach to communities to encourage participation in the National Flood Insurance Program. <i>*Goal 2 Action #1</i>	FL	High	Self-funded	N/A	Town	Ongoing	The County continues to participate in the NFIP and encourages the jurisdictions within the County to also join.
PEA-6	Encourage participation in the Community Rating System of the NFIP.	FL, HU, TS, TH, HW	Medium	USDA Rural Dev., CDBG, Small Muni. Grant, FEMA, Others	Unknown	County, Town	Within 3 years	The County is still considering joining the CRS.
PEA-7	Encourage businesses to develop business continuity or contingency operating plans.	CH	High	DHS, SAFER, COPS, FIRE, Others	Unknown	County, Town	Within 2 years	Ongoing – contingent on funding

ANNEX B: FORREST COUNTY

Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2019 Action Implementation Status
PEA-8	Discourage development within the Special Flood Hazard Area and in the floodway. <i>*Goal 1 Action #6</i>	Flood	Medium	HMGP	TBD	County and City	Ongoing	Ongoing
FL = Flood TH = Thunderstorm HU = Hurricane TS = Tropical Storm TO = Tornado BH = Biological Hazards HW = High Winds TT = Transportation and Technological Hazards RH = Roadway Hazards CH = Civil Hazards JDCEMA = Forrest County Emergency Management County BOS = Forrest County Board of Supervisors <i>*Denotes Action item from 2013 Forrest County HMP, no numbering methodology was utilized in the 2013 planning process, numbers were assigned based on Goal and associated action item on pages 5-2 and 5-3.</i>								

ⁱ USGS. Landslide Hazard, Retrieved August 2019 from, <https://www.usgs.gov/natural-hazards/landslide-hazards/science/rainfall-induced-landslides>

Annex C

Jefferson Davis County

This annex includes jurisdiction-specific information for Jefferson Davis County and its participating municipalities. It consists of the following five subsections:

- ❖ C.1 Jefferson Davis County Community Profile
- ❖ C.2 Jefferson Davis County Risk Assessment
- ❖ C.3 Jefferson Davis County Vulnerability Assessment
- ❖ C.4 Jefferson Davis County Capability Assessment
- ❖ C.5 Jefferson Davis County Mitigation Strategy

C.1 JEFFERSON DAVIS COUNTY COMMUNITY PROFILE

C.1.1 Geography and the Environment

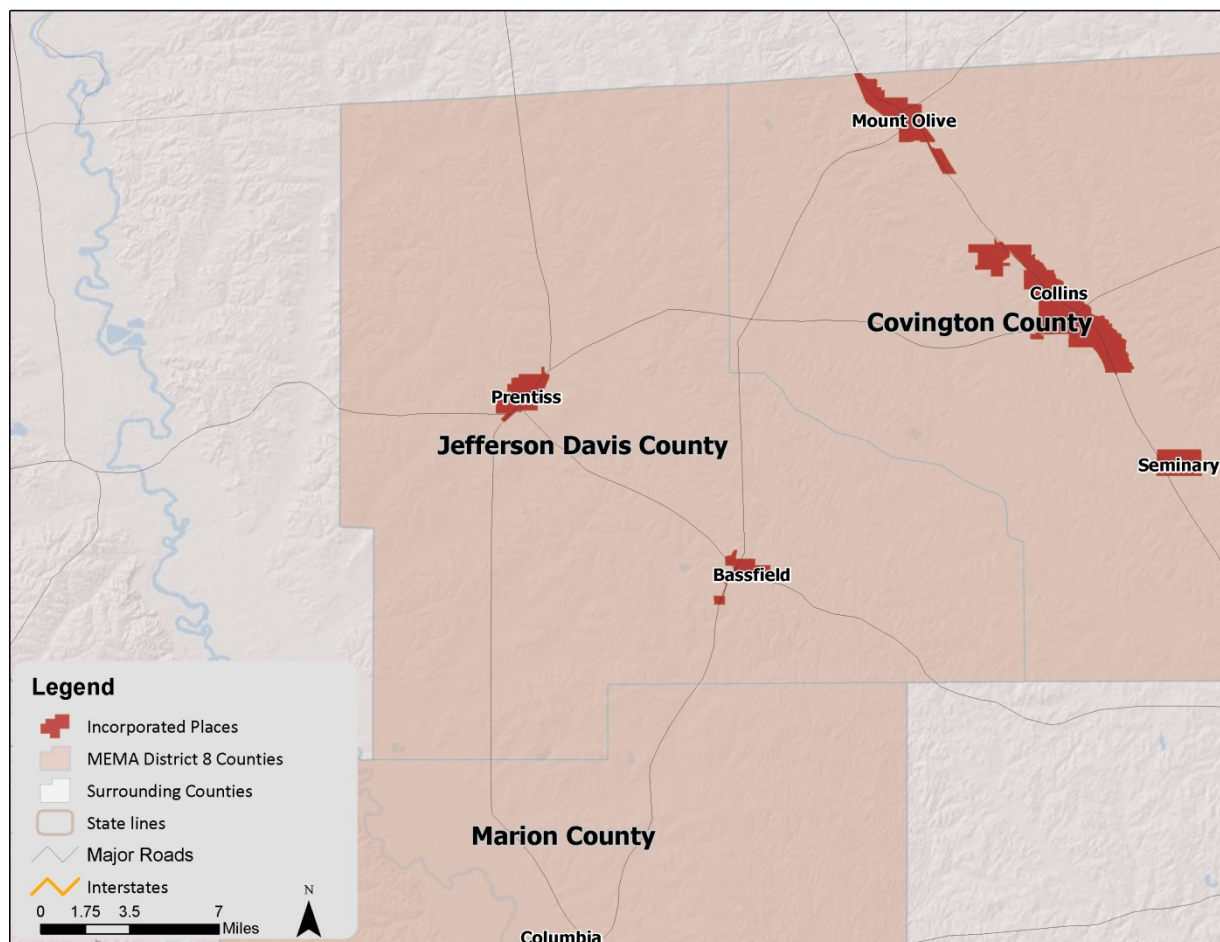
Jefferson Davis County is located in south central Mississippi approximately 2 hours from New Orleans and the Mississippi Gulf Coast. It comprises two towns, the Town of Bassfield and the Town of Prentiss, as well two small unincorporated communities. An orientation map is provided as **Figure C.1**.

The county is a rural area of which 65 percent is characterized as forest land devoted primarily to timber production and recreation hunting. The total area of the county is 409 square miles, less than 1 square mile of which is water area.

In Prentiss, the summers are long, hot, and oppressive; the winters are short and cold; and it is wet and partly cloudy year-round. Over the course of the year, the temperature typically varies from 39°F to 91°F and is rarely below 25°F or above 96°F.

The hot season lasts for 4.2 months, from May 20 to September 25, with an average daily high temperature above 84°F. The hottest day of the year is July 23, with an average high of 91°F and low of 72°F. The cool season lasts for 2.8 months, from November 30 to February 22, with an average daily high temperature below 65°F. The coldest day of the year is January 17, with an average low of 39°F and high of 59°F.

A wet day is one with at least 0.04 inches of liquid or liquid-equivalent precipitation. The chance of wet days in Prentiss varies throughout the year. The wetter season lasts 3.0 months, from May 26 to August 28, with a greater than 35% chance of a given day being a wet day. The chance of a wet day peaks at 50% on July 19. The drier season lasts 9.0 months, from August 28 to May 26. The smallest chance of a wet day is 21% on October 8. Among wet days, we distinguish between those that experience rain alone, snow alone, or a mixture of the two. Based on this categorization, the most common form of precipitation throughout the year is rain alone, with a peak probability of 50% on July 19. Rain falls throughout the year in Prentiss. The most rain falls during the 31 days centered around February 14, with an average total accumulation of 5.7 inches. The least rain falls around October 4, with an average total accumulation of 3.1 inches.

FIGURE C.1: JEFFERSON DAVIS COUNTY ORIENTATION MAP

C.1.2 Population and Demographics

According to the 2010 Census, Jefferson Davis County has a population of 12,487 people. The county has seen almost 13% growth between 2000 and 2010, and the population density is 31 people per square mile. The growth continues to decline. Per the Census Reports, in 2017, Jefferson Davis County had a population of 11,314, which is a .90 percent decrease since 2010. The household income is \$26,736, which grew 1.16 percent. Population counts from the US Census Bureau for 1990, 2000, and 2010 for the county and both of the participating jurisdictions are presented in **Table C.1**. Estimates for 2017 are also included.

TABLE C.1: POPULATION COUNTS FOR JEFFERSON DAVIS COUNTY

Jurisdiction	1990 Census Population	2000 Census Population	2010 Census Population	% Change 2000-2010	Estimated 2017 Census Population
Jefferson Davis County	14,051	13,962	12,487	-10.6%	11,314
Bassfield	249	315	254	-19.4%	216

Jurisdiction	1990 Census Population	2000 Census Population	2010 Census Population	% Change 2000-2010	Estimated 2017 Census Population
Prentiss	1,487	1,158	1,081	-6.6%	960

Source: US Census Bureau

Based on the 2010 Census, the median age of residents of Jefferson Davis County is 41.0 years. The racial characteristics of the county are presented in **Table C.2** and will remain the same as the census data has not been officially updated. However, according to the estimates provided by the Census Reports, the median age in 2017 was 43.6. Due to the population decrease, the racial characteristics differ slightly. The population of white persons is 37.9 percent and .335 percent is Hispanic or Latino. Blacks make up the majority of the population in the county, accounting for 61.6 percent of the population.

TABLE C.2: DEMOGRAPHICS OF JEFFERSON DAVIS COUNTY

Jurisdiction	White Persons, Percent (2010)	Black Persons, Percent (2010)	American Indian or Alaska Native, Percent (2010)	Other Race, Percent (2010)	Persons of Hispanic Origin, Percent (2010) *
Jefferson Davis County	38.7%	59.9%	0.3%	0.3%	0.8%
Bassfield	59.1%	37.8%	0.0%	2.8%	2.8%
Prentiss	60.3%	37.3%	0.6%	0.5%	0.6%

*Hispanics may be of any race, so also are included in applicable race categories

Source: US Census Bureau

C.1.3 Housing

According to the 2010 US Census, there are 5,876 housing units in Jefferson Davis County, the majority of which are single family homes or mobile homes. Per 2018 estimates, the total number of houses increased to 5,990 units. However, the median home value is \$80,600, which increased by at least .983 percent. Housing information for the county and two towns is presented in **Table C.3**. As shown in the table, Bassfield has a significantly higher percentage of seasonal housing units compared to Prentiss and the unincorporated county.

TABLE C.3: HOUSING CHARACTERISTICS OF JEFFERSON DAVIS COUNTY

Jurisdiction	Housing Units (2000)	Housing Units (2010)	Seasonal Units, Percent (2010)	Median Home Value (2006-2010)	Housing Units (2018)	Median Home Value (2018)
Jefferson Davis County	5,891	5,876	3.6%	\$69,500	5,990	\$80,600
Bassfield	144	144	6.9%	\$80,200	145	\$86,111
Prentiss	537	498	2.6%	\$69,500	511	\$111,650

Source: US Census Bureau

C.1.4 Infrastructure

TRANSPORTATION

In Jefferson Davis County, State Highway 13 provides access to the north and south. State Highway 42 travels through Bassfield and Prentiss in a northwesterly direction. US Highway 84, which crosses east and west through Prentiss, provides direct access to US Highway 49 and Interstate 59 to the east to the City of Natchez to the west.

Commercial air transportation is available at the Hattiesburg-Laurel Regional Airport, less than an hour's drive from the county. International airports in Jackson, Gulfport, and New Orleans are all also within about a 100-mile radius of Jefferson Davis County.

There is no passenger or freight rail service offered at this time.

UTILITIES

Electrical power in Jefferson Davis County is provided by several electrical power associations, including Mississippi Power Company and Southern Pine Electric.

Water and sewer service is provided to residents of Prentiss from wells and by aerated lagoon. The water system has two elevated storage tanks. The County also has 11 elevated storage tanks and one standpipe water storage tank. There is no centralized sewage treatment in the County and the two most common types of sewer systems in use are septic tanks and aerobic treatment units.

COMMUNITY FACILITIES

There are a number of buildings and community facilities located throughout Jefferson Davis County. According to the data collected for the vulnerability assessment (Section 6.4.1), there are 2 fire stations, 1 police station, and 8 public schools located within the county.

There is one hospital located in Jefferson Davis County. Jefferson Davis Community Hospital is a 35-bed medical-surgical hospital located in the Town of Prentiss.

Jefferson Davis County proudly claims to be the "Gateway to the Longleaf Trace," a 41-mile linear park that offers premier running, biking, hiking, and equestrian trails. The Longleaf Trace is one of the longest "Rails to Trails" conversion in the United States. Another major attraction in the county is Lake Jeff Davis, located three miles east of Prentiss. The 164-acre lake is one of 21 state fishing lakes operated by the MS Department of Wildlife, Fisheries, and Parks. Water skiing is allowed on certain days and times and additional amenities include boat rental, camp sites, restrooms, a covered pavilion, and a picnic area with grills.

C.1.5 Land Use

Many areas of Jefferson Davis County are undeveloped or sparsely developed due to the county's location just off the Gulf Coast and the conservation of land in state and national parks. There are a few incorporated municipalities located throughout the region, and these areas are where the region's

population is generally concentrated. The incorporated areas are also where many businesses, commercial uses, and institutional uses are located. Land uses in the balance of the county generally consist of rural residential development, agricultural uses, and recreational areas.

C.1.6 Employment and Industry

According to the Mississippi Employment Security Commission, in 2019, Jefferson Davis County had an average annual employment of 1,630 workers and an average unemployment rate of 6.8 percent. According to the MESC, in 2018, the Construction industry employed 16 percent of the workforce followed by Retail Trade (14.1 %) and Health Care and Social Assistance (8.6%). The average annual wage in Jefferson Davis County was \$26,736

C.2 JEFFERSON DAVIS COUNTY RISK ASSESSMENT

This subsection includes hazard profiles for each of the significant hazards identified in Section 4: *Hazard Identification* as they pertain to Jefferson Davis County. Each hazard profile includes a description of the hazard's location and extent, notable historical occurrences, and the probability of future occurrences. Additional information can be found in Section 5: *Hazard Profiles*.

C.2.1 Flood

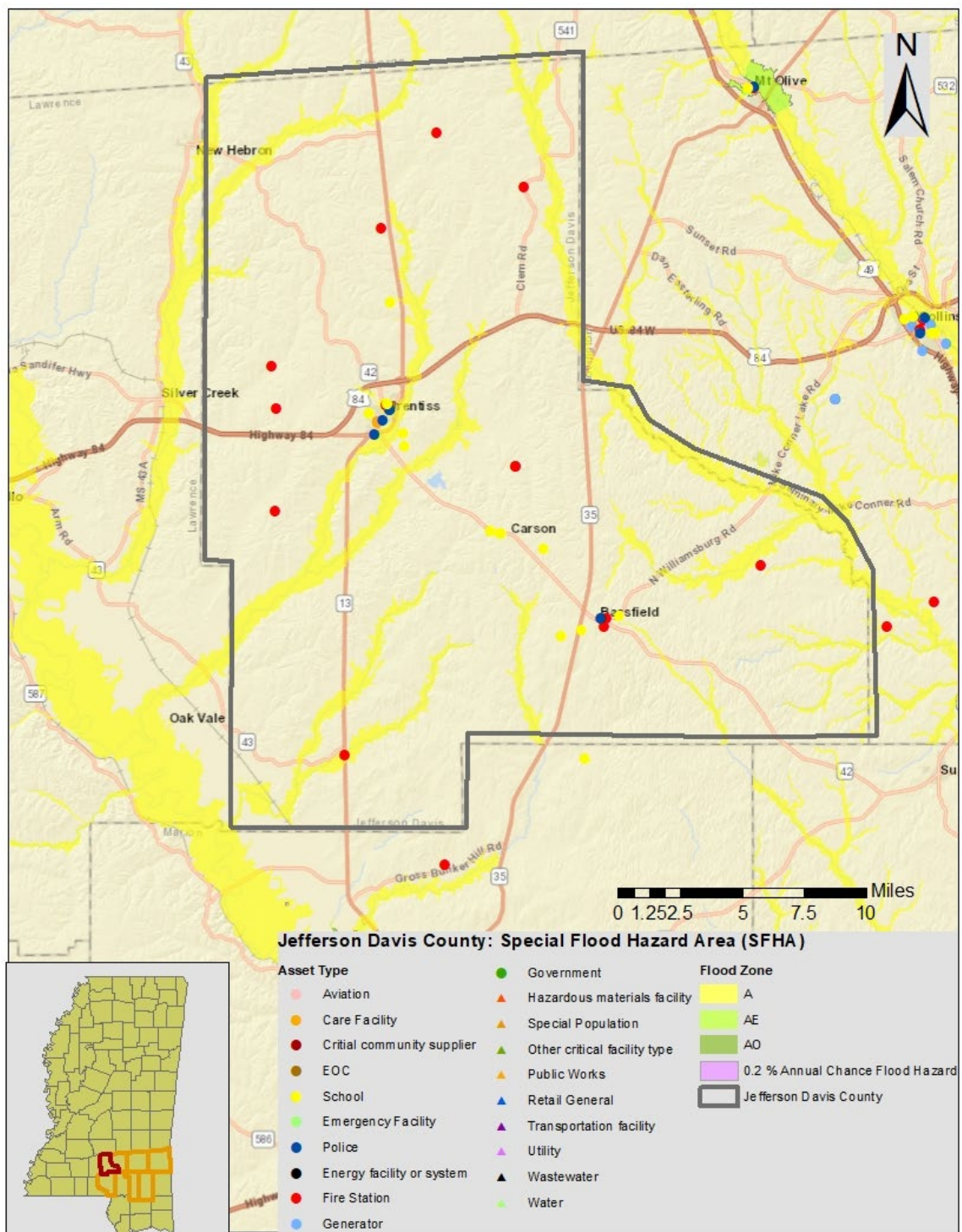
LOCATION AND SPATIAL EXTENT

There are areas in Jefferson Davis County that are susceptible to flood events. Special flood hazard areas in the county were mapped using Geographic Information System (GIS) and FEMA Digital Flood Insurance Rate Maps (DFIRM).¹ This includes Zone A (1-percent annual chance floodplain), Zone AE (1-percent annual chance floodplain with elevation), and the 0.2-percent annual chance floodplain). According to GIS analysis, of the 410 square miles that make up Jefferson Davis County, there are 46 square miles of land in zones A and AE (1-percent annual chance floodplain/100-year floodplain) and 0 square miles of land in the 0.2-percent annual chance floodplain (500-year floodplain).

These flood zone values account for 11.2 percent of the total land area in Jefferson Davis County. It is important to note that while FEMA digital flood data is recognized as best available data for planning purposes, it does not always reflect the most accurate and up-to-date flood risk. Flooding and flood-related losses often do occur outside of delineated special flood hazard areas.

¹ The county-level DFIRM data used for Jefferson Davis County were updated in 2010.

FIGURE C.2: SPECIAL FLOOD HAZARD AREAS IN JEFFERSON DAVIS COUNTY



Source: Federal Emergency Management Agency

HISTORICAL OCCURRENCES

Floods resulted in two disaster declarations in Jefferson Davis County in 1974 and 2009.² Information from the National Centers for Environmental Information was used to ascertain historical flood events. The National Centers for Environmental Information reported a total of 30 events in Jefferson Davis County since 1997.³ A summary of these events is presented in **Table C.4**. These events accounted for over \$1.3 million in property damage in the county. Specific information on flood events, including date, type of flooding, and deaths and injuries, can be found in **Table C.5**.

TABLE C.4: SUMMARY OF FLOOD OCCURRENCES IN JEFFERSON DAVIS COUNTY

Location	Number of Occurrences	Deaths / Injuries	Property Damage
Bassfield	8	0/0	\$96,512
Prentiss	7	0/0	\$528,156
Unincorporated Area	14	0/0	\$699,559
JEFFERSON DAVIS COUNTY TOTAL	29	0/0	\$1,324,227

Source: National Centers for Environmental Information

TABLE C.5: HISTORICAL FLOOD EVENTS IN JEFFERSON DAVIS COUNTY

Location	Date	Type	Deaths / Injuries	Property Damage*
Bassfield				
Bassfield	27-MAR-09	FLASH FLOOD	0/0	\$45,020
Basefield	20-JAN-10	FLASH FLOOD	0/0	\$3,278
Bassfield	09-MAR-11	FLASH FLOOD	0/0	\$15,914
Bassfield	30-AUG-12	FLASH FLOOD	0/0	\$10,300
Bassfield	03-JAN-15	FLASH FLOOD	0/0	\$5,000
Bassfield	03-JAN-15	FLASH FLOOD	0/0	\$5,000
Bassfield	10-MAR-16	FLASH FLOOD	0/0	\$5,000
Bassfield	16-AUG-18	FLASH FLOOD	0/0	\$7,000
Prentiss				
Prentiss	27-APR-97	FLOOD	0/0	\$0
PRENTISS	02-MAR-01	FLASH FLOOD	0/0	\$0
Prentiss	21-FEB-03	FLASH FLOOD	0/0	\$1,344
Prentiss	05-FEB-04	FLASH FLOOD	0/0	\$195,716
Prentiss	20-MAR-06	FLASH FLOOD	0/0	\$0
Prentiss	12-APR-09	FLASH FLOOD	0/0	\$112,551
Prentiss	13-AUG-10	FLASH FLOOD	0/0	\$218,545
Unincorporated Area				
Countywide	03-MAR-01	FLASH FLOOD	0/0	\$14,258
Countywide	03-MAR-01	FLASH FLOOD	0/0	\$0
Countywide	03-MAR-01	FLASH FLOOD	0/0	\$0
Countywide	03-SEP-01	FLASH FLOOD	0/0	\$0
Countywide	03-SEP-01	FLASH FLOOD	0/0	\$114,061
Gwinville	21-FEB-03	FLASH FLOOD	0/0	\$1,344
South Portion	31-MAR-05	FLASH FLOOD	0/0	\$253,354

²A complete listing of historical disaster declarations can be found in Section 4: Hazard Identification.

³ These events are only inclusive of those reported by NCEI. It is likely that additional occurrences have occurred and have gone unreported.

Location	Date	Type	Deaths / Injuries	Property Damage*
South Portion	01-APR-05	FLASH FLOOD	0/0	\$101,342
Southeast Portion	29-AUG-05	FLASH FLOOD	0/0	\$126,677
Hebron	09-MAR-11	FLASH FLOOD	0/0	\$21,218
Carson	05-SEP-11	FLASH FLOOD	0/0	\$5,305
Terrell	03-JAN-15	FLASH FLOOD	0/0	\$7,000
Hathorn	25-JuN-17	FLASH FLOOD	0/0	\$5,000
Hebron	25-JuN-17	FLASH FLOOD	0/0	\$50,000

Source: National Centers for Environmental Information

HISTORICAL SUMMARY OF INSURED FLOOD LOSSES

Recently, FEMA issued a directive that prevents states or local governments from sharing NFIP information such as rep loss or severe rep loss data with third parties. Third parties are considered as consultants, contractors, etc. As a result, for continuity of information so that the reader will have an idea of the historical occurrences along with the corresponding damage amounts, the decision was made to leave the existing information in the plan.

According to FEMA flood insurance policy records as of March 2013, there have been 48 flood losses reported in Jefferson Davis County through the National Flood Insurance Program (NFIP) since 1978, totaling over \$4,600 in claims payments. A summary of these figures for the county is provided in **Table C.6**. It should be emphasized that these numbers include only those losses to structures that were insured through the NFIP policies, and for losses in which claims were sought and received. It is likely that many additional instances of flood loss in Jefferson Davis County were either uninsured, denied claims payment, or not reported.

TABLE C.6: SUMMARY OF INSURED FLOOD LOSSES IN JEFFERSON DAVIS COUNTY

Location	Flood Losses	Claims Payments
Bassfield*	--	--
Prentiss	2	\$4,613
Unincorporated Area	0	\$0
JEFFERSON DAVIS COUNTY TOTAL	2	\$4,613

*This community does not participate in the National Flood Insurance Program. Therefore, no values are reported.

Source: FEMA, NFIP

REPETITIVE LOSS PROPERTIES

No updates to this section can be provided at this time. Information normally used to update this section is not currently accessible. As a result, this information will remain the same for historical purposes.

As of May 2013, there are no non-mitigated repetitive loss properties located in Jefferson Davis County. **Table C.7** presents detailed information on repetitive loss properties and NFIP claims and policies for Jefferson Davis County. This remains the best available data.

TABLE C.7: REPETITIVE LOSS PROPERTIES IN JEFFERSON DAVIS COUNTY

Location	Number of Properties	Types of Properties	Number of Losses	Building Payments	Content Payments	Total Payments	Average Payment
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Location	Number of Properties	Types of Properties	Number of Losses	Building Payments	Content Payments	Total Payments	Average Payment
Bassfield*	--	--	--	--	--	--	--
Prentiss	0	--	0	\$0	\$0	\$0	\$0
Unincorporated Area	0	--	0	\$0	\$0	\$0	\$0
JEFFERSON DAVIS COUNTY TOTAL	0		0	\$0	\$0	\$0	\$0

*This community does not participate in the National Flood Insurance Program. Therefore, no values are reported.

Source: National Flood Insurance Program

PROBABILITY OF FUTURE OCCURRENCES

Due to the unpredictable nature of this hazard, flood events will remain a threat in Jefferson Davis County, and the probability of future occurrences will remain likely (between 10 and 100 percent annual probability). The participating jurisdictions and unincorporated areas have risk to flooding, though not all areas will experience flood. The probability of future flood events based on magnitude and according to best available data is illustrated in the figures above, which indicates those areas susceptible to the 1-percent annual chance flood (100-year floodplain) and the 0.2-percent annual chance flood (500-year floodplain).

It can be inferred from the floodplain location maps, previous occurrences, and repetitive loss properties that risk varies throughout the region. For example, the areas near Prentiss has more floodplain and thus a higher risk of flood than areas near Bassfield. Flood is not the greatest hazard of concern but will continue to occur and cause damage. Therefore, mitigation actions may be warranted, particularly for repetitive loss properties.

C.2.2 Erosion

LOCATION AND SPATIAL EXTENT

Erosion in Jefferson Davis County is typically caused by flash flooding events. Unlike coastal areas, areas of concern for erosion in Jefferson Davis County are primarily rivers and streams. Generally, vegetation helps to prevent erosion in the area, and it is not an extreme threat to any of the participating counties and jurisdictions. No areas of concern were reported by the planning committee.

HISTORICAL OCCURRENCES

Several sources were vetted to identify areas of erosion in Jefferson Davis County. This includes searching local newspapers, interviewing local officials, and reviewing previous hazard mitigation plans. No historical erosion occurrences were found in these sources.

Jefferson Davis County has a flood damage prevention ordinance that includes measures to limit erosion, such as restricting uses that result in damaging increases in erosion. Such actions will continue to be implemented as necessary throughout the region.

PROBABILITY OF FUTURE OCCURRENCES

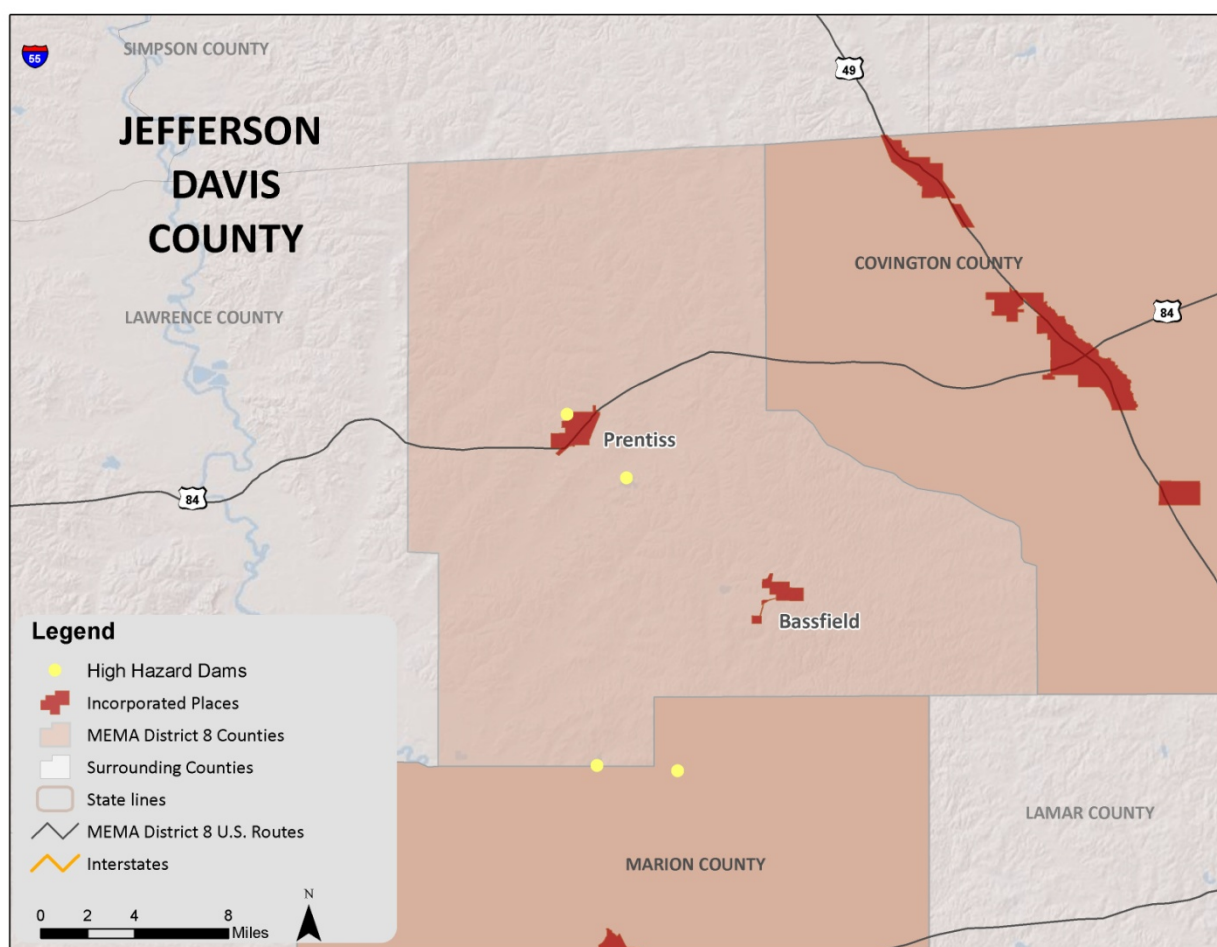
Erosion remains a natural, dynamic, and continuous process for Jefferson Davis County, and it will continue to occur. The annual probability level assigned for erosion is possible (between 1 and 10 percent annually).

C.2.3 Dam Failure

LOCATION AND SPATIAL EXTENT

According to the Mississippi Division of Environmental Quality, there are two high hazard dams in Jefferson Davis County.⁴ **Figure C.3** shows the location of each of these high hazard dams and **Table C.8** lists them by name. There are no changes to this section. According to a consensus of local government officials and the Regional Hazard Mitigation Council, a majority of these dams would not pose a major threat in a breach or failure occurrence.

FIGURE C.3: JEFFERSON DAVIS COUNTY HIGH HAZARD DAM LOCATIONS



Source: Mississippi Division of Environmental Quality

⁴ The list of high hazard dams obtained from the Mississippi Division of Environmental Quality was reviewed and amended by local officials to the best of their knowledge.

TABLE C.8: JEFFERSON DAVIS COUNTY HIGH HAZARD DAMS

Dam Name	Hazard Potential
Jefferson Davis County	
LAKE JEFFERSON DAVIS DAM	High
WHITE SAND - GREENS CREEK STR 11E DAM	High

Source: Mississippi Division of Environmental Quality

HISTORICAL OCCURRENCES

There is no record of dam breaches in Jefferson Davis County. However, several breach scenarios in the county could be catastrophic.

PROBABILITY OF FUTURE OCCURRENCES

Given the current dam inventory and historic data, a dam breach is unlikely (less than 1 percent annual probability) in the future. However, as has been demonstrated in the past, regular monitoring is necessary to prevent these events.

C.2.4 Winter Storm and Freeze

LOCATION AND SPATIAL EXTENT

Nearly the entire continental United States is susceptible to winter storm and freeze events. Some ice and winter storms may be large enough to affect several states, while others might affect limited, localized areas. The degree of exposure typically depends on the normal expected severity of local winter weather. Jefferson Davis County is not typically affected by major severe winter weather conditions and seldom receives extremely devastating winter weather, even during the winter months. Given the atmospheric nature of the hazard the entire county has uniform exposure to a winter storm.

HISTORICAL OCCURRENCES

According to the National Centers for Environmental Information, there have been a total of six recorded winter storm events in Jefferson Davis County since 2008 (**Table C.9**).⁵ These events resulted in almost \$8,700 in damages. Detailed information on the recorded winter storm events can be found in **Table C.10**.⁶

TABLE C.9: SUMMARY OF WINTER STORM EVENTS IN JEFFERSON DAVIS COUNTY

Location	Number of Occurrences	Deaths / Injuries	Property Damage (2013)
Jefferson Davis County	6	0/0	\$123,695

Source: National Centers for Environmental Information

⁵ These ice and winter storm events are only inclusive of those reported by the National Centers for Environmental Information (NCEI). It is certain that additional winter storm conditions have affected Jefferson Davis County.

⁶ The dollar amount of damages provided by NCEI is divided by the number of affected counties to reflect a damage estimate for the county.

TABLE C.10: HISTORICAL WINTER STORM IMPACTS IN JEFFERSON DAVIS COUNTY

Location	Date	Type	Deaths / Injuries	Property Damage*
Bassfield				
<i>None Reported</i>	--	--	--	--
Prentiss				
<i>None Reported</i>	--	--	--	--
Unincorporated Area				
JEFFERSON DAVIS COUNTY	19-JAN-08	HEAVY SNOW	0/0	\$8,695
JEFFERSON DAVIS COUNTY	11-DEC-08	HEAVY SNOW	0/0	\$0
JEFFERSON DAVIS COUNTY	28-JAN-14	HEAVY SNOW	0/0	\$0
JEFFERSON DAVIS COUNTY	06-JAN-17	SLEET	0/0	\$20,000
JEFFERSON DAVIS COUNTY	07-DEC-17	HEAVY SNOW	0/0	\$75,000
JEFFERSON DAVIS COUNTY	16-JAN-18	HEAVY SNOW	0/0	\$20,000

Source: National Centers for Environmental Information

There have been several severe winter weather events in Jefferson Davis County. The text below describes one of the major events and associated impacts on the county. Similar impacts can be expected with severe winter weather.

January 2008 Winter Storm

This storm produced heavy snow across the region, with an average of three to four inches of snow. Some heavier amounts, between four to five inches, also fell in isolated areas. At the height of the snow, temperatures fell to near freezing, and accumulations occurred on roadways resulting in a number of traffic accidents. Additionally, some power outages occurred in the heaviest snow band due to the weight of wet snow on limbs and lines. The heaviest snow fell in the areas around Covington, Jefferson Davis, and Jones Counties.

Winter storms throughout the county have several negative externalities including hypothermia, cost of snow and debris cleanup, business and government service interruption, traffic accidents, and power outages. Furthermore, citizens may resort to using inappropriate heating devices that could to fire or an accumulation of toxic fumes.

January 2017 Winter Storm

An early season winter storm brought heavy snow to much of Mississippi between the evening of the 7th and into the afternoon of the 8th. The greatest amounts fell mainly south and east of the Natchez Trace corridor. Amounts of up to 7 to 8 inches were measured in the Pine Belt. Heavier snow accumulations resulted in downed limbs and trees, power outages, and traffic accidents across the state.

An average of 4 to 6 inches of heavy snow fell across Jefferson Davis County, with the highest total of 6.5 inches falling in Prentiss. The snow resulted in numerous downed limbs and trees and power outages across the county. One downed tree landed on a home in Prentiss. An 8-year old boy in Bassfield suffered a head injury in his yard when a tree limb broke under the weight of the snow.

PROBABILITY OF FUTURE OCCURRENCES

Winter storm events will continue to occur in Jefferson Davis County. According to historical information, the annual probability is possible (between 1 and 10 percent).

FIRE-RELATED HAZARDS

C.2.5 Drought

LOCATION AND SPATIAL EXTENT

Drought and heat waves typically cover a large area and cannot be confined to any geographic or political boundaries. Furthermore, it is assumed that Jefferson Davis County would be uniformly exposed to drought and heat waves, making the spatial extent potentially widespread. It is also notable that drought and extreme heat conditions typically do not cause significant damage to the built environment but may exacerbate wildfire conditions.

HISTORICAL OCCURRENCES

Drought

According to the U.S. Drought Monitor, Jefferson Davis County had drought levels (including abnormally dry) in all of the last eighteen years (2000-2018). **Table C.11** shows the most severe drought classification for each year, according to U.S. Drought Monitor classifications. It should be noted that the U.S. Drought Monitor also estimates what percentage of the county is in each classification of drought severity. For example, the most severe classification reported may be exceptional, but a majority of the county may actually be in a less severe condition.

TABLE C. 11: HISTORICAL DROUGHT OCCURRENCES IN JEFFERSON DAVIS COUNTY

Abnormally Dry Moderate Drought Severe Drought Extreme Drought Exceptional Drought



	Jefferson Davis County
2000	EXCEPTIONAL
2001	MODERATE
2002	MODERATE
2003	ABNORMAL
2004	ABNORMAL
2005	ABNORMAL
2006	EXTREME
2007	EXTREME
2008	MODERATE
2009	MODERATE
2010	SEVERE
2011	EXTREME
2012	MODERATE
2013	ABNORMAL
2014	MODERATE
2015	EXTREME
2016	SEVERE
2017	ABNORMAL
2018	ABNORMAL
2019	ABNORMAL

Source: U.S. Drought Monitor

The National Centers for Environmental reported two drought events for Jefferson Davis County, which caused approximately \$51,000 in crop damages.

Heat Wave

The National Centers for Environmental Information was used to determine historical heat wave occurrences in the county.

July 2005 – A five-day heat wave covered the area. Temperatures were consistently above 95 degrees. The agricultural industry was hit particularly hard in the cattle and catfish sectors. Water supply issues were encountered by cities and a burn ban was implemented due to the high fire risk.

August 2005 - A heat wave covering the south began in mid-August and lasted about 10 days. High temperatures were consistently over 95 degrees and surpassed 100 degrees on some days. It was the first time since August 2000 that 100-degree temperatures reached the area.

July 2006 – A short heat wave impacted most of the area temperatures in the 90s to around 100 for five straight days.

August 2007 – A heat wave gripped most of the area with the warmest temperatures since 2000. It lasted from August 5th to the 16th.

November 2016 - Dry conditions were prevalent in October and continued into November, which created continued stress on crops. The drought continued to get worse across the state through the month before some relief came in the form of showers and thunderstorms near the end of November.

PROBABILITY OF FUTURE OCCURRENCES

Drought

Based on historical occurrence information, it is assumed that all of Jefferson Davis County has a probability level of highly likely (100 percent annual probability) for future drought events. However, the extent (or magnitude) of drought and the amount of geographic area covered by drought, varies with each year. Historic information indicates that there is a much lower probability for extreme, long-lasting drought conditions.

Heat Wave

Based on historical occurrence information, it is assumed that all of Jefferson Davis County has a probability level of highly likely (100 percent annual probability) for future heat wave events.

C.2.6 Wildfire

LOCATION AND SPATIAL EXTENT

The entire county is at risk to a wildfire occurrence. However, several factors such as drought conditions or high levels of fuel on the forest floor, may make a wildfire more likely. Furthermore, areas in the urban-wildland interface are particularly susceptible to fire hazard as populations abut formerly undeveloped areas. The Fire Occurrence Areas in the figure below give an indication of historic location.

HISTORICAL OCCURRENCES

Based on data from the Mississippi Forestry Commission from 2008 to 2018, Jefferson Davis County experiences an average of 65 wildfires annually which burn an average of 559 acres per year. The data indicates that most of these fires are small, averaging nine acres per fire. **Table C.12** provides a summary of wildfire occurrences in Jefferson Davis County and **Table C.13** lists the number of reported wildfire occurrences in the county between the years 2008 and 2018.

TABLE C.12: SUMMARY TABLE OF ANNUAL WILDFIRE OCCURRENCES (2008 -2018) *

	Jefferson Davis County
Average Number of Fires per year	65.0
Average Number of Acres Burned per year	559.0
Average Number of Acres Burned per fire	8.8

*These values reflect averages over a 10-year period.

Source: Mississippi Forestry Commission

TABLE C.13: HISTORICAL WILDFIRE OCCURRENCES IN JEFFERSON DAVIS COUNTY

Year	2008	2010	2011	2012	2013	2014	2015	2016	2017	2018
Jefferson Davis County										
Number of Fires	69	64	135	58	46	69	65	64	46	34
Number of Acres Burned	836	277	953	385	251	728	783	487	443	447

Source: Mississippi Forestry Commission

PROBABILITY OF FUTURE OCCURRENCES

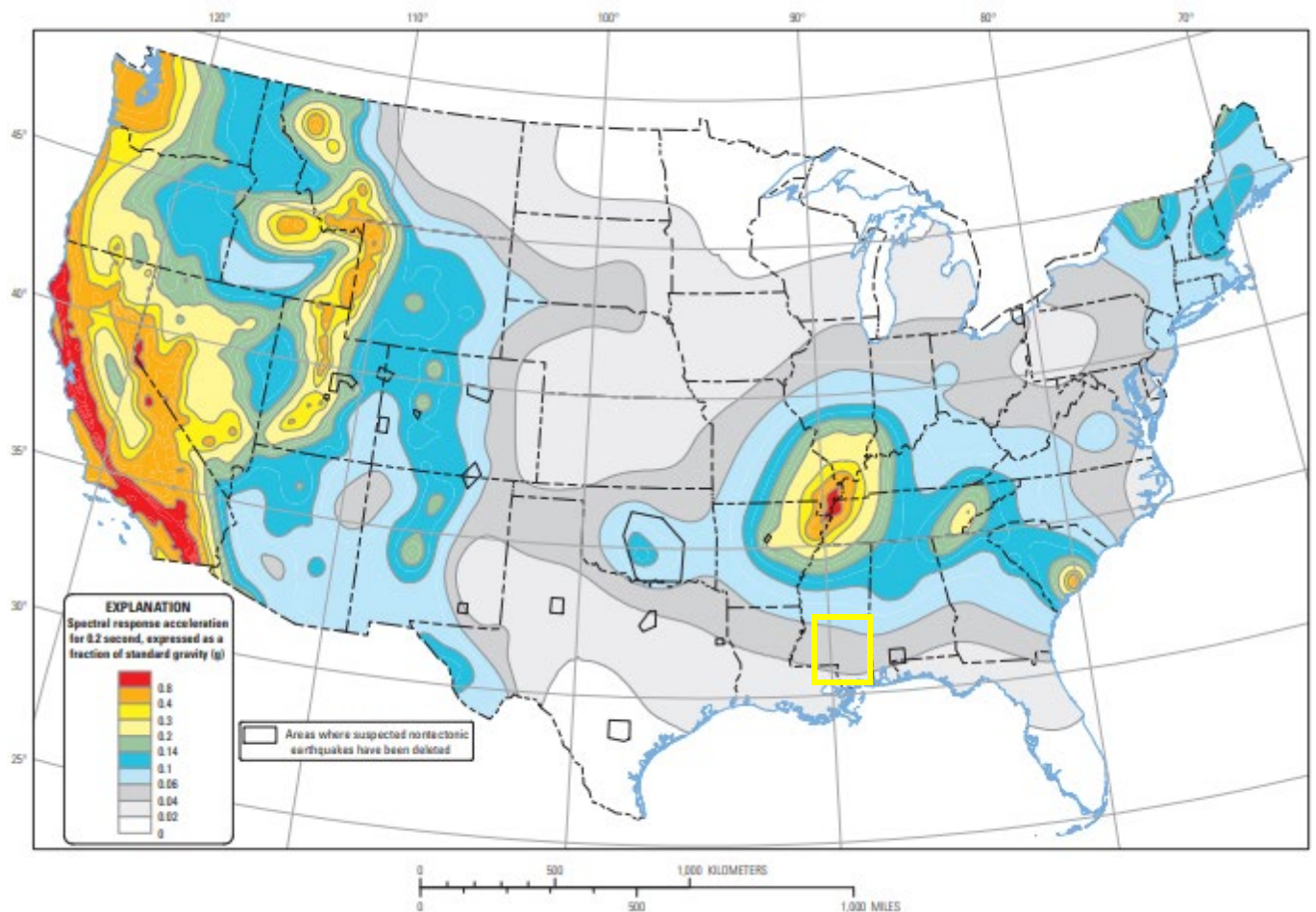
Wildfire events will be an ongoing occurrence in Jefferson Davis County. The likelihood of wildfires increases during drought cycles and abnormally dry conditions. Fires are likely to stay small in size but could increase due local climate and ground conditions. Dry, windy conditions with an accumulation of forest floor fuel (potentially due to ice storms or lack of fire) could create conditions for a large fire that spreads quickly. It should also be noted that some areas do vary somewhat in risk. For example, highly developed areas are less susceptible unless they are located near the urban-wildland boundary. The risk will also vary due to assets. Areas in the urban-wildland interface will have much more property at risk, resulting in increased vulnerability and need to mitigate compared to rural, mainly forested areas. In this case, the participating jurisdictions appear to have a similar risk to the surrounding areas. The probability assigned to Jefferson Davis County for future wildfire events is likely (a 10 and 100 percent annual probability).

GEOLOGIC HAZARDS

C.2.7 Earthquake

LOCATION AND SPATIAL EXTENT

Figure C.5 shows the intensity level associated with Jefferson Davis County, based on the national USGS map of peak acceleration with 10 percent probability of exceedance in 50 years. It is the probability that ground motion will reach a certain level during an earthquake. The data show peak horizontal ground acceleration (the fastest measured change in speed, for a particle at ground level that is moving horizontally due to an earthquake) with a 10 percent probability of exceedance in 50 years. The map was compiled by the U.S. Geological Survey (USGS) Geologic Hazards Team, which conducts global investigations of earthquake, geomagnetic, and landslide hazards. According to this map, Jefferson Davis County lies within an approximate zone of level “2” to “3” ground acceleration. This indicates that the county exists within an area of moderate seismic risk.

FIGURE C.5: PEAK ACCELERATION WITH 10 PERCENT PROBABILITY OF EXCEEDANCE IN 50 YEARS

Source: USGS, 2008

HISTORICAL OCCURRENCES

No earthquakes are known to have affected Jefferson Davis County since 1638. **Table C.14** provides a summary of earthquake events reported by the National Geophysical Data Center between 1638 and 1985.⁷

TABLE C.14: SUMMARY OF SEISMIC ACTIVITY IN JEFFERSON DAVIS COUNTY

Location	Number of Occurrences	Greatest MMI Reported	Richter Scale Equivalent
Bassfield	0	--	--
Prentiss	0	--	--
Unincorporated Area	0	--	--
JEFFERSON DAVIS COUNTY TOTAL	0	--	--

Source: National Geophysical Data Center

⁷ Due to reporting mechanisms, not all earthquake events were recorded during this time.

PROBABILITY OF FUTURE OCCURRENCES

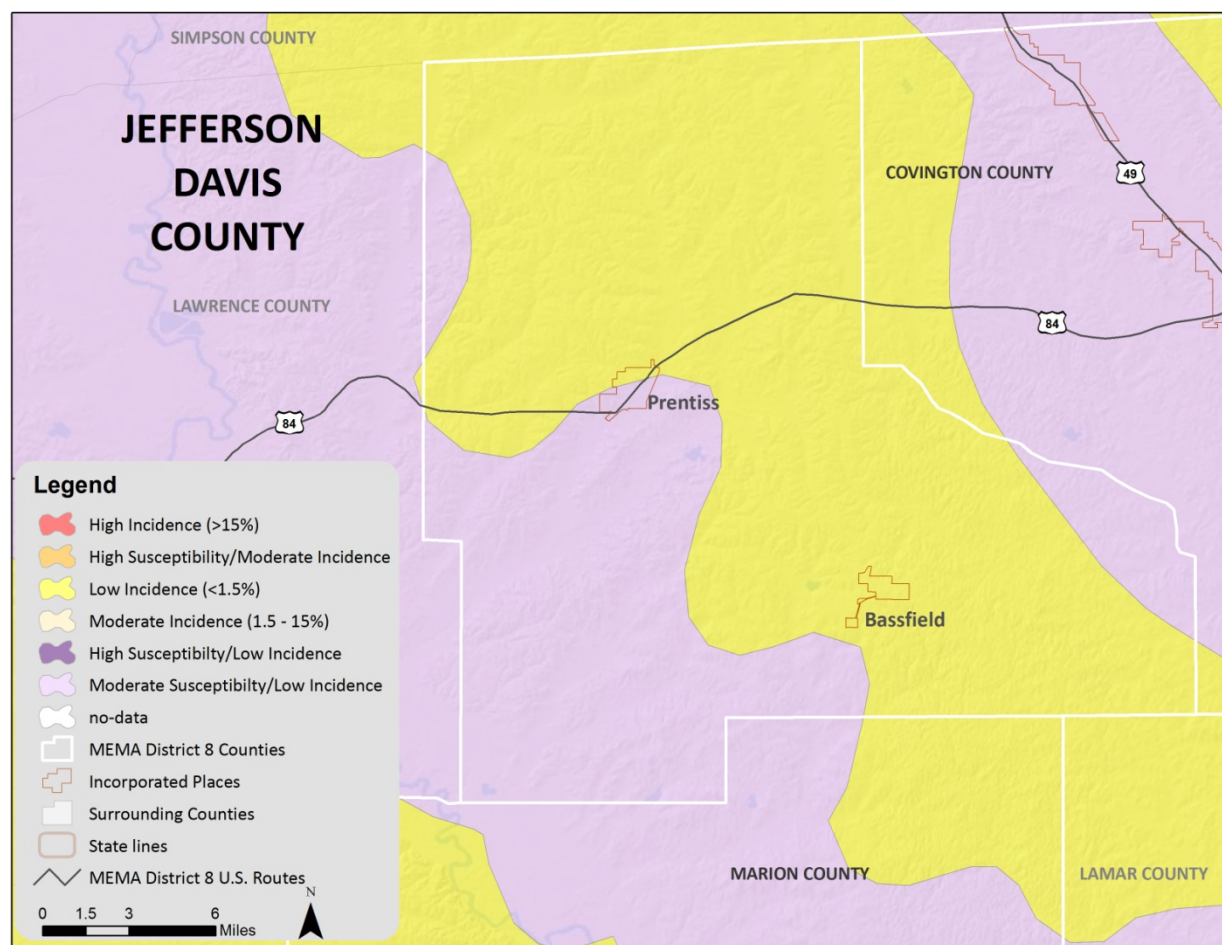
The probability of significant, damaging earthquake events affecting Jefferson Davis County is unlikely. However, it is possible that future earthquakes resulting in light to moderate perceived shaking and damages ranging from none to very light will affect the county. The annual probability level for the region is estimated to be less than 1 percent (unlikely).

C.2.8 Landslide

LOCATION AND SPATIAL EXTENT

Landslides occur along steep slopes when the pull of gravity can no longer be resisted (often due to heavy rain). Human development can also exacerbate risk by building on previously undevelopable steep slopes. The most frequent and widespread damaging landslides in the U.S. are induced by prolonged or heavy rainfall. The majority of rainfall-induced landslides are shallow, small, and move quickly.¹ Landslides are possible throughout Jefferson Davis County.

According to **Figure C.6** below, the entire county falls under a low incidence area (yellow and light purple). This indicates that less than 1.5 percent of the area is involved in landsliding. The areas in yellow are defined as low incidence and low susceptibility. The areas in light purple, however, indicate that a moderate susceptibility to landsliding activity is present. There are no changes with susceptibility to the landslide hazard since the last plan update.

FIGURE C.6: LANDSLIDE SUSCEPTIBILITY AND INCIDENCE MAP OF JEFFERSON DAVIS COUNTY

Source: USGS

HISTORICAL OCCURRENCES

There is no extensive history of landslides in Jefferson Davis County. Landslide events typically occur in isolated areas.

PROBABILITY OF FUTURE OCCURRENCES

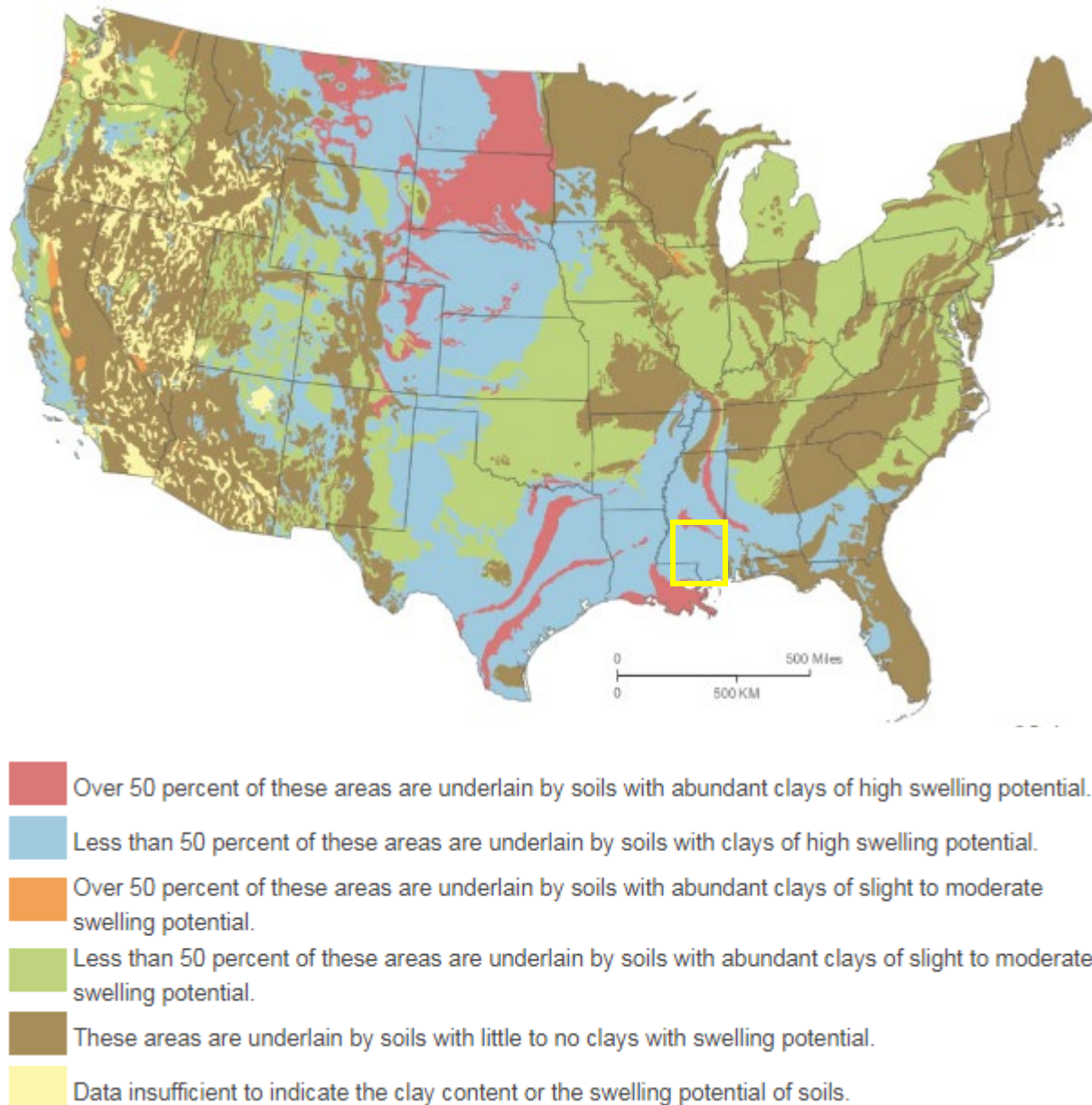
Based on historical information and the USGS susceptibility index, the probability of future landslide events is unlikely (less than 1 percent probability). The USGS data indicates that the all areas in Jefferson Davis County have a low landslide incidence rate. However, some areas are reported as having moderate susceptibility to landsliding activity. Local conditions may become more favorable for landslides due to heavy rain, for example. This would increase the likelihood of occurrence. It should also be noted that some areas in Jefferson Davis County have greater risk than others given factors such as steepness on slope and modification of slopes.

C.2.9 Expansive Soils

LOCATION AND SPATIAL EXTENT

Due to the amount of clay minerals present in Jefferson Davis County, expansive soils present a threat to the county. Areas underlain by soils with swelling potential are shown in **Figure C.7**. The areas in blue are underlain with generally less than 50 percent clay having high swelling potential.

FIGURE C.7: SWELLING CLAYS IN MISSISSIPPI



Source: USGS

HISTORICAL OCCURRENCES

There is no historical record of significant expansive soil events in Jefferson Davis County. However, expansive soils can cause considerable damage to structural foundations in the county, although they do not pose a significant threat to human life.

PROBABILITY OF FUTURE OCCURRENCES

Based on historical information, the probability of future expansive soil events is possible (between 1 and 100 percent annually).

WIND-RELATED HAZARDS

C.2.10 Hurricane and Tropical Storm

LOCATION AND SPATIAL EXTENT

Hurricanes and tropical storms threaten the entire Atlantic and Gulf seaboard of the United States. While coastal areas are most directly exposed to the brunt of landfalling storms, their impact is often felt hundreds of miles inland and major hurricanes (category 3 or higher) may impact Jefferson Davis County. All areas in Jefferson Davis County are equally susceptible to hurricane and tropical storms.

HISTORICAL OCCURRENCES

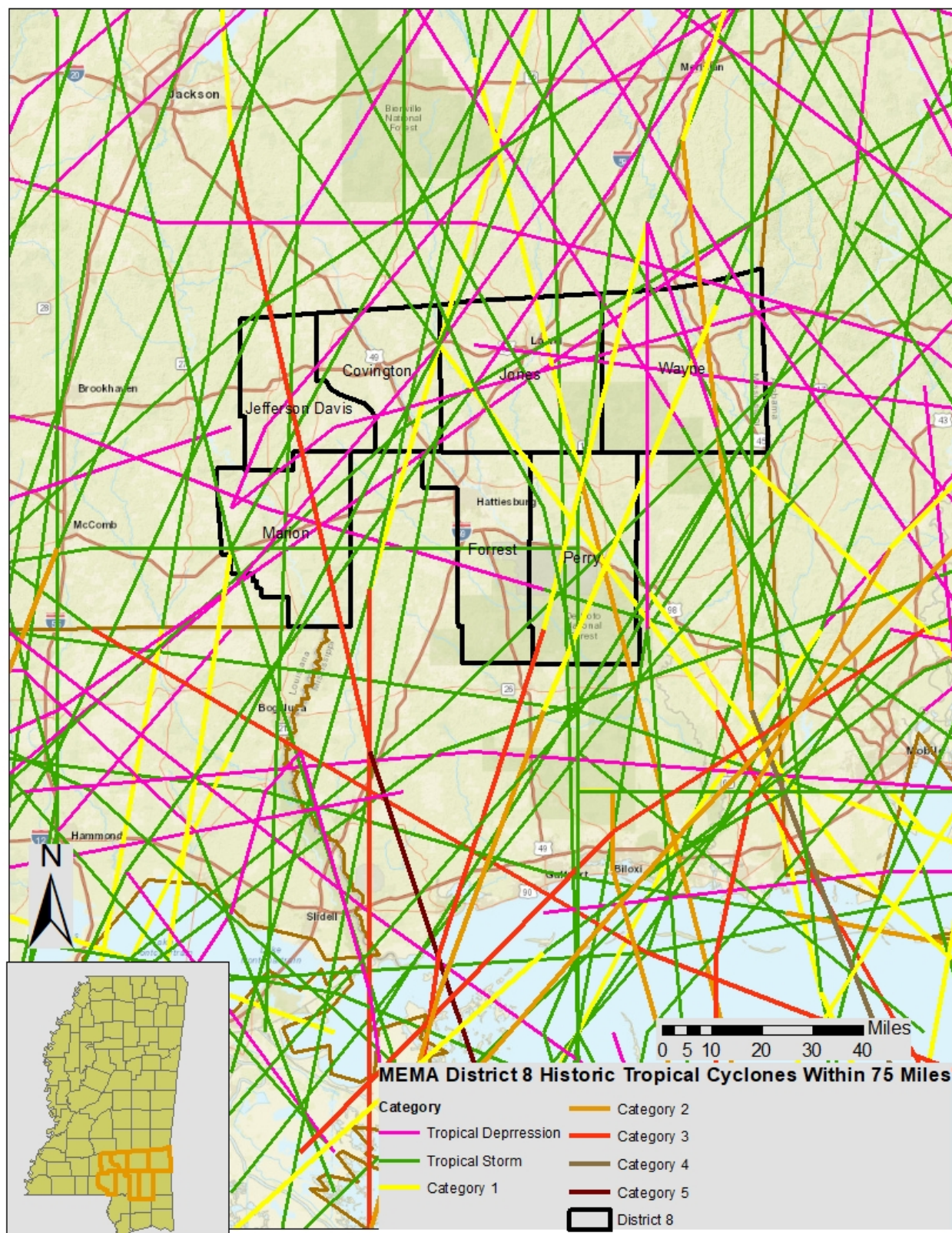
The National Centers for Environmental Information has not reported any hurricane hazards affecting the area during this planning period. As a result, the information will remain the same.

According to the National Hurricane Center's historical storm track records, a total of 54 hurricanes have passed within 75 miles of Jefferson Davis County since 1851. This includes 1 category 5 storm, 0 category 4 storms, 3 category 3 storms, 6 category 2 storms, 7 category 1 storms, and 37 tropical storms as shown in **Figure C.8**.⁸

A total of five tracks passed directly through the county including Hurricanes Camille (1969), Edith (1971), and Isidore (2002). All storms were tropical storms when they traversed the county except Hurricane Camille, which passed through the county as category 3 hurricane. **Table 5.14** provides the detail for each storm that passed through the county including date of occurrence, name (if applicable), maximum wind speed (as recorded when traversing the county) and category of the storm based on the Saffir-Simpson Scale.

⁸ These storm track statistics do not include extra-tropical storms. Though these related hazard events are less severe in intensity, they may cause significant local impact in terms of rainfall and high winds.

FIGURE C.8: HISTORICAL HURRICANE STORM TRACKS WITHIN 75 MILES OF JEFFERSON DAVIS COUNTY



Source: National Oceanic and Atmospheric Administration; National Hurricane Center

TABLE C.14: HISTORICAL STORM TRACKS WITHIN 75 MILES OF JEFFERSON DAVIS COUNTY (1850–2008)

Date of Occurrence	Storm Name	Maximum Wind Speed (miles per hour)	Storm Category
10/10/1905	NOT NAMED	40	Tropical Storm
9/30/1915	NOT NAMED	69	Tropical Storm
8/18/1969	CAMILLE	115	Category 3
9/16/1971	EDITH	69	Tropical Storm
9/26/2002	ISIDORE	63	Tropical Storm

Source: National Hurricane Center

Federal records indicate that disaster declarations were made in 1969 (Hurricane Camille), 1998 (Hurricane Georges), 2004 (Hurricane Ivan), 2005 (Hurricane Dennis), 2005 (Hurricane Katrina), 2008 (Hurricane Gustav), and 2012 (Hurricane Isaac).⁹ Hurricane and tropical storm events can cause substantial damage in the area due to high winds and flooding.

Flooding and high winds from hurricanes and tropical storms can cause damage throughout the county. Anecdotes are available from NCEI for the major storms that have impacted the county as found below:

Hurricane Rita – September 5, 2005

Hurricane Rita brought heavy rainfall, tropical storm force winds, and tornados to the region. Rainfall amounts ranged from 4-7 inches, which resulted in flooding. Winds between 25-35 mph, with gusts up to 40-50 mph, downed trees and power lines.

PROBABILITY OF FUTURE OCCURRENCES

Based on historical evidence, the probability level of future occurrence is likely (annual probability between 10 and 100 percent). Given the regional nature of the hazard, all areas in the county are equally exposed to this hazard. However, when the county is impacted, the damage could be catastrophic, threatening lives and property throughout the planning area.

C.2.11 Thunderstorm

LOCATION AND SPATIAL EXTENT

Thunderstorm / High Wind

A thunderstorm event is an atmospheric hazard, and thus has no geographic boundaries. It is typically a widespread event that can occur in all regions of the United States. However, thunderstorms are most common in the central and southern states because atmospheric conditions in those regions are favorable for generating these powerful storms. Also, Jefferson Davis County typically experiences several straight-line wind events each year. These wind events can and have caused significant damage. It is assumed that Jefferson Davis County has uniform exposure to an event and the spatial extent of an impact could be large.

⁹ A complete listing of historical disaster declarations can be found in Section 4: Hazard Identification.

Hailstorm

Hailstorms frequently accompany thunderstorms, so their locations and spatial extents coincide. It is assumed that Jefferson Davis County is uniformly exposed to severe thunderstorms; therefore, all areas of the county are equally exposed to hail which may be produced by such storms.

Lightning

Lightning occurs randomly, therefore it is impossible to predict where and with what frequency it will strike. It is assumed that all of Jefferson Davis County is uniformly exposed to lightning.

HISTORICAL OCCURRENCES

Thunderstorm / High Wind

Severe storms resulted in two disaster declarations in Jefferson Davis County in 1992 and 2009.¹⁰ According to NCEI, there have been 136 reported thunderstorm and high wind events since 1970 in Jefferson Davis County.¹¹ These events caused over \$1.5 million in damages. **Table C.15** summarizes this information. **Table C.16** presents detailed thunderstorm and high wind event reports including date, magnitude, and associated damages for each event.¹²

TABLE C.15: SUMMARY OF THUNDERSTORM / HIGH WIND OCCURRENCES IN JEFFERSON DAVIS COUNTY

Location	Number of Occurrences	Deaths / Injuries	Property Damage (2013)
Bassfield	29	0/0	\$309,589
Prentiss	52	0/0	\$583,390
Unincorporated Area	89	0/0	\$1,312,534
JEFFERSON DAVIS COUNTY TOTAL	170	0/0	\$2,205,513

Source: National Centers for Environmental Information

TABLE C.16: HISTORICAL THUNDERSTORM / HIGH WIND OCCURRENCES IN JEFFERSON DAVIS COUNTY

Location	Date	Type	Magnitude	Deaths/ Injuries	Property Damage*
Bassfield					
Bassfield	07-MAR-95	THUNDERSTORM WINDS	0 kts.	0/0	\$8,286
Bassfield	01-JUN-95	THUNDERSTORM WINDS	0 kts.	0/0	\$16,572
Bassfield	27-OCT-95	THUNDERSTORM WINDS	53 kts.	0/0	\$0
Bassfield	13-APR-96	TSTM WIND	0 kts.	0/0	\$10,300
Bassfield	30-MAR-97	TSTM WIND	0 kts.	0/0	\$1,573

¹⁰ A complete listing of historical disaster declarations can be found in Section 4: Hazard Identification.

¹¹ These thunderstorm events are only inclusive of those reported by the National Centers for Environmental Information (NCEI). It is likely that additional thunderstorm events have occurred in Jefferson Davis County. As additional local data becomes available, this hazard profile will be amended.

¹² The dollar amount of damages provided by NCEI is divided by the number of affected counties to reflect a damage estimate for the county.

ANNEX C: JEFFERSON DAVIS COUNTY

Location	Date	Type	Magnitude	Deaths/ Injuries	Property Damage*
Bassfield	22-APR-97	TSTM WIND	0 kts.	0/0	\$1,573
Bassfield	03-APR-00	TSTM WIND	0 kts.	0/0	\$4,406
Bassfield	08-APR-02	TSTM WIND	0 kts.	0/0	\$6,921
Bassfield	17-MAY-02	TSTM WIND	0 kts.	0/0	\$1,384
Bassfield	17-JUL-03	TSTM WIND	50 kts.	0/0	\$1,344
Bassfield	06-AUG-03	TSTM WIND	55 kts.	0/0	\$13,439
Bassfield	24-NOV-04	TSTM WIND	75 kts.	0/0	\$78,286
Bassfield	20-MAR-06	TSTM WIND	55 kts.	0/0	\$18,448
Bassfield	10-MAY-06	TSTM WIND	50 kts.	0/0	\$0
Bassfield	13-FEB-07	THUNDERSTORM WIND	55 kts.	0/0	\$17,911
Bassfield	13-FEB-07	THUNDERSTORM WIND	50 kts.	0/0	\$0
Bassfield	20-DEC-07	THUNDERSTORM WIND	60 kts.	0/0	\$0
Bassfield	12-FEB-08	THUNDERSTORM WIND	58 kts.	0/0	\$17,389
Bassfield	17-FEB-08	THUNDERSTORM WIND	50 kts.	0/0	\$11,593
Bassfield	21-FEB-08	THUNDERSTORM WIND	50 kts.	0/0	\$0
Bassfield	09-DEC-08	THUNDERSTORM WIND	50 kts.	0/0	\$0
Bassfield	27-MAR-09	THUNDERSTORM WIND	55 kts.	0/0	\$6,753
Bassfield	24-APR-10	THUNDERSTORM WIND	60 kts.	0/0	\$16,391
Bassfield	15-JUN-10	THUNDERSTORM WIND	43 kts.	0/0	\$3,278
Bassfield	22-AUG-10	THUNDERSTORM WIND	50 kts.	0/0	\$8,742
Bassfield	03-AUG-14	THUNDERSTORM WIND	50 kts.	0/0	\$4,000
Bassfield	17-MAR-16	THUNDERSTORM WIND	55 kts.	0/0	\$20,000
Bassfield	22-JUL-16	THUNDERSTORM WIND	50 kts.	0/0	\$15,000
Bassfield	29-JUN-17	THUNDERSTORM WIND	48 kts.	0/0	\$25,000
Prentiss					
Prentiss	09-MAR-94	THUNDERSTORM WINDS	0 kts.	0/0	\$852
Prentiss	07-MAR-95	THUNDERSTORM WINDS	0 kts.	0/0	\$3,314
Prentiss	11-JUN-95	THUNDERSTORM WINDS	0 kts.	0/0	\$4,972
Prentiss	16-SEP-96	TSTM WIND	0 kts.	0/0	\$1,609
Prentiss	20-MAY-97	TSTM WIND	52 kts.	0/0	\$0
Prentiss	25-OCT-97	TSTM WIND	0 kts.	0/0	\$3,146
Prentiss	10-FEB-98	TSTM WIND	0 kts.	0/0	\$15,489
Prentiss	03-MAY-98	TSTM WIND	0 kts.	0/0	\$1,549
Prentiss	02-OCT-98	TSTM WIND	0 kts.	0/0	\$3,098
Prentiss	10-MAR-00	TSTM WIND	0 kts.	0/0	\$1,469
Prentiss	12-APR-00	TSTM WIND	0 kts.	0/0	\$22,028
Prentiss	24-JUN-00	TSTM WIND	0 kts.	0/0	\$22,028
Prentiss	13-DEC-00	TSTM WIND	0 kts.	0/0	\$2,937
Prentiss	13-OCT-01	TSTM WIND	0 kts.	0/0	\$7,129
Prentiss	17-MAY-02	TSTM WIND	0 kts.	0/0	\$1,384
Prentiss	17-MAY-02	TSTM WIND	0 kts.	0/0	\$1,384
Prentiss	29-MAY-02	TSTM WIND	0 kts.	0/0	\$1,384
Prentiss	08-JUL-02	TSTM WIND	0 kts.	0/0	\$3,461
Prentiss	24-DEC-02	TSTM WIND	60 kts.	0/0	\$6,921

ANNEX C: JEFFERSON DAVIS COUNTY

Location	Date	Type	Magnitude	Deaths/ Injuries	Property Damage*
Prentiss	31-DEC-02	TSTM WIND	60 kts.	0/0	\$20,764
Prentiss	06-APR-03	TSTM WIND	50 kts.	0/0	\$13,439
Prentiss	02-JUN-03	TSTM WIND	55 kts.	0/0	\$33,598
Prentiss	01-MAY-04	TSTM WIND	55 kts.	0/0	\$6,524
Prentiss	22-MAR-05	TSTM WIND	70 kts.	0/0	\$38,003
Prentiss	06-APR-05	TSTM WIND	58 kts.	0/0	\$2,534
Prentiss	30-APR-05	TSTM WIND	50 kts.	0/0	\$0
Prentiss	29-MAY-05	TSTM WIND	60 kts.	0/0	\$101,342
Prentiss	02-JUL-05	TSTM WIND	52 kts.	0/0	\$0
Prentiss	09-MAR-06	TSTM WIND	50 kts.	0/0	\$0
Prentiss	20-MAR-06	TSTM WIND	65 kts.	0/0	\$122,987
Prentiss	04-JAN-07	THUNDERSTORM WIND	53 kts.	0/0	\$0
Prentiss	12-JUL-07	THUNDERSTORM WIND	52 kts.	0/0	\$5,970
Prentiss	29-JUL-08	THUNDERSTORM WIND	60 kts.	0/0	\$17,389
Prentiss	07-AUG-08	THUNDERSTORM WIND	50 kts.	0/0	\$0
Prentiss	26-MAR-09	THUNDERSTORM WIND	58 kts.	0/0	\$9,004
Prentiss	12-MAY-09	THUNDERSTORM WIND	50 kts.	0/0	\$4,502
Prentiss	15-AUG-10	THUNDERSTORM WIND	50 kts.	0/0	\$0
Prentiss	01-FEB-11	THUNDERSTORM WIND	50 kts.	0/0	\$0
Prentiss	08-MAR-11	THUNDERSTORM WIND	52 kts.	0/0	\$0
Prentiss	03-APR-12	THUNDERSTORM WIND	50 kts.	0/0	\$2,060
Prentiss	09-AUG-12	THUNDERSTORM WIND	50 kts.	0/0	\$4,120
Prentiss	07-APR-14	THUNDERSTORM WIND	54 kts.	0/0	\$10,000
Prentiss	13-OCT-14	THUNDERSTORM WIND	50 kts.	0/0	\$0
Prentiss	24-JUN-15	THUNDERSTORM WIND	50 kts.	0/0	\$10,000
Prentiss	08-AUG-15	THUNDERSTORM WIND	56 kts.	0/0	\$30,000
Prentiss	18-NOV-15	THUNDERSTORM WIND	55 kts.	0/0	\$10,000
Prentiss	15-FEB-16	THUNDERSTORM WIND	53 kts.	0/0	\$10,000
Prentiss	17-MAR-16	THUNDERSTORM WIND	50 kts.	0/0	\$1,000
Prentiss	11-JUL-16	THUNDERSTORM WIND	50 kts.	0/0	\$10,000
Prentiss	14-APR-18	THUNDERSTORM WIND	52 kts.	0/0	\$12,000
Prentiss	14-APR-18	THUNDERSTORM WIND	56 kts.	0/0	\$2,000
Prentiss	01-NOV-18	THUNDERSTORM WIND	50 kts.	0/0	\$2,000

Unincorporated Area

JEFFERSON DAVIS COUNTY	04-JUL-70	TSTM WIND	0 kts.	0/0	\$0
JEFFERSON DAVIS COUNTY	10-DEC-71	TSTM WIND	0 kts.	0/0	\$0
JEFFERSON DAVIS COUNTY	26-MAY-73	TSTM WIND	0 kts.	0/0	\$0
JEFFERSON DAVIS COUNTY	26-DEC-73	TSTM WIND	0 kts.	0/0	\$0
JEFFERSON DAVIS COUNTY	07-MAY-75	TSTM WIND	0 kts.	0/0	\$0
JEFFERSON DAVIS COUNTY	07-MAY-75	TSTM WIND	0 kts.	0/0	\$0
JEFFERSON DAVIS COUNTY	21-MAR-76	TSTM WIND	0 kts.	0/0	\$0

ANNEX C: JEFFERSON DAVIS COUNTY

Location	Date	Type	Magnitude	Deaths/ Injuries	Property Damage*
JEFFERSON DAVIS COUNTY	23-FEB-77	TSTM WIND	0 kts.	0/0	\$0
JEFFERSON DAVIS COUNTY	28-MAR-77	TSTM WIND	0 kts.	0/0	\$0
JEFFERSON DAVIS COUNTY	20-AUG-78	TSTM WIND	0 kts.	0/0	\$0
JEFFERSON DAVIS COUNTY	26-APR-79	TSTM WIND	0 kts.	0/0	\$0
JEFFERSON DAVIS COUNTY	04-MAY-79	TSTM WIND	0 kts.	0/0	\$0
JEFFERSON DAVIS COUNTY	12-JUN-82	TSTM WIND	0 kts.	0/0	\$0
JEFFERSON DAVIS COUNTY	06-APR-83	TSTM WIND	0 kts.	0/0	\$0
JEFFERSON DAVIS COUNTY	23-NOV-83	TSTM WIND	0 kts.	0/0	\$0
JEFFERSON DAVIS COUNTY	21-OCT-84	TSTM WIND	0 kts.	0/0	\$0
JEFFERSON DAVIS COUNTY	14-DEC-87	TSTM WIND	0 kts.	0/0	\$0
JEFFERSON DAVIS COUNTY	24-MAY-88	TSTM WIND	0 kts.	0/0	\$0
JEFFERSON DAVIS COUNTY	04-NOV-88	TSTM WIND	0 kts.	0/0	\$0
JEFFERSON DAVIS COUNTY	16-FEB-90	TSTM WIND	0 kts.	0/0	\$0
JEFFERSON DAVIS COUNTY	12-MAY-90	TSTM WIND	0 kts.	0/0	\$0
JEFFERSON DAVIS COUNTY	12-MAY-90	TSTM WIND	0 kts.	0/0	\$0
JEFFERSON DAVIS COUNTY	14-APR-91	TSTM WIND	0 kts.	0/0	\$0
JEFFERSON DAVIS COUNTY	20-APR-92	TSTM WIND	0 kts.	0/0	\$0
JEFFERSON DAVIS COUNTY	20-APR-92	TSTM WIND	0 kts.	0/0	\$0
Carson	21-FEB-97	TSTM WIND	0 kts.	0/0	\$3,146
Countywide	05-JUN-98	TSTM WIND	0 kts.	0/0	\$15,489
Melba	05-JUN-98	TSTM WIND	0 kts.	0/0	\$38,722
JEFFERSON DAVIS COUNTY	27-SEP-98	HIGH WIND	0 kts.	0/0	\$178,811
Countywide	27-FEB-99	TSTM WIND	0 kts.	0/0	\$22,689
Hebron	09-AUG-99	TSTM WIND	0 kts.	0/0	\$3,025
Countywide	29-JAN-01	TSTM WIND	0 kts.	0/0	\$2,852
Countywide	07-JUL-02	TSTM WIND	55 kts.	0/0	\$4,153
Countywide	22-JUL-03	TSTM WIND	50 kts.	0/0	\$2,688
Countywide	20-AUG-03	TSTM WIND	50 kts.	0/0	\$4,032
Countywide	01-JUN-04	TSTM WIND	50 kts.	0/0	\$3,914
Mt. Carmel	28-JUN-04	TSTM WIND	55 kts.	0/0	\$1,305
Oak Vale	12-AUG-05	TSTM WIND	55 kts.	0/0	\$25,335

ANNEX C: JEFFERSON DAVIS COUNTY

Location	Date	Type	Magnitude	Deaths/ Injuries	Property Damage*
Oak Vale	21-AUG-05	TSTM WIND	55 kts.	0/0	\$38,003
Oak Vale	08-MAY-06	TSTM WIND	50 kts.	0/0	\$0
Carson	19-JUL-06	TSTM WIND	50 kts.	0/0	\$0
Oak Vale	04-JAN-07	THUNDERSTORM WIND	55 kts.	0/0	\$0
Carson	19-JUN-07	THUNDERSTORM WIND	52 kts.	0/0	\$0
Carson	10-JUL-07	THUNDERSTORM WIND	50 kts.	0/0	\$23,881
Hathorn	13-JUL-07	THUNDERSTORM WIND	53 kts.	0/0	\$11,941
Hebron	12-FEB-08	THUNDERSTORM WIND	65 kts.	0/0	\$17,389
Hebron	17-FEB-08	THUNDERSTORM WIND	50 kts.	0/0	\$11,593
Oak Vale	03-MAR-08	THUNDERSTORM WIND	55 kts.	0/0	\$0
Gwinville	03-MAR-08	THUNDERSTORM WIND	55 kts.	0/0	\$13,911
Terrell	29-JUL-08	THUNDERSTORM WIND	60 kts.	0/0	\$8,115
Lucas	02-AUG-08	THUNDERSTORM WIND	55 kts.	0/0	\$0
Hebron	26-MAR-09	THUNDERSTORM WIND	75 kts.	0/0	\$84,413
PRENTISS ARPT	12-APR-09	THUNDERSTORM WIND	60 kts.	0/0	\$3,377
Lucas	03-MAY-09	THUNDERSTORM WIND	67 kts.	0/0	\$90,041
Lucas	03-MAY-09	THUNDERSTORM WIND	70 kts.	0/0	\$112,551
Gwinville	10-MAY-09	THUNDERSTORM WIND	50 kts.	0/0	\$0
Oak Vale	12-MAY-09	THUNDERSTORM WIND	50 kts.	0/0	\$2,251
Hebron	01-JUN-10	THUNDERSTORM WIND	50 kts.	0/0	\$1,093
Carson	03-AUG-10	THUNDERSTORM WIND	50 kts.	0/0	\$5,464
Mt. Carmel	03-AUG-10	THUNDERSTORM WIND	50 kts.	0/0	\$0
Mt. Carmel	04-AUG-10	THUNDERSTORM WIND	50 kts.	0/0	\$0
Carson	15-AUG-10	THUNDERSTORM WIND	50 kts.	0/0	\$0
Mt. Carmel	09-MAR-11	THUNDERSTORM WIND	57 kts.	0/0	\$5,305
Oak Vale	04-APR-11	THUNDERSTORM WIND	60 kts.	0/0	\$53,045
Hebron	13-JUN-11	THUNDERSTORM WIND	50 kts.	0/0	\$1,061
PRENTISS ARPT	13-JUN-11	THUNDERSTORM WIND	50 kts.	0/0	\$1,061
Hathorn	04-JUL-11	THUNDERSTORM WIND	50 kts.	0/0	\$3,183
Carson	18-AUG-11	THUNDERSTORM WIND	52 kts.	0/0	\$5,305
Hathorn	18-AUG-12	THUNDERSTORM WIND	50 kts.	0/0	\$5,150
Oak Vale	20-DEC-12	THUNDERSTORM WIND	50 kts.	0/0	\$8,240
Melba	20-FEB-14	THUNDERSTORM WIND	50 kts.	0/0	\$2,000
JEFFERSON DAVIS COUNTY	17-NOV-15	STRONG WIND	42 kts.	0/0	\$7,000
Hebron	15-APR-15	THUNDERSTORM WIND	50 kts.	0/0	\$2,000
Hebron	30-MAY-15	THUNDERSTORM WIND	50 kts.	0/0	\$2,000
Mt. Caramel	24-JUN-15	THUNDERSTORM WIND	50 kts.	0/0	\$2,000
Hebron	15-FEB-16	THUNDERSTORM WIND	50 kts.	0/0	\$2,000
Carson	15-FEB-16	THUNDERSTORM WIND	50 kts.	0/0	\$2,000
Carson	17-MAR-17	THUNDERSTORM WIND	50 kts.	0/0	\$2,000
Carson	21-JAN-17	THUNDERSTORM WIND	50 kts.	0/0	\$2,000
Lucas	09-MAR-17	THUNDERSTORM WIND	50 kts.	0/0	\$2,000
Mt. Caramel	03-APR-17	THUNDERSTORM WIND	50 kts.	0/0	\$2,000
Carson	26-APR-17	THUNDERSTORM WIND	50 kts.	0/0	\$2,000
Hebron	16-JUN-17	THUNDERSTORM WIND	50 kts.	0/0	\$2,000
Hebron	25-JUL-17	THUNDERSTORM WIND	50 kts.	0/0	\$2,000

Location	Date	Type	Magnitude	Deaths/ Injuries	Property Damage*
Carson	29-MAR-18	THUNDERSTORM WIND	50 kts.	0/0	\$2,000
Terrell	16-AUG-18	THUNDERSTORM WIND	50 kts.	0/0	\$2,000
Hebron	01-NOV-18	THUNDERSTORM WIND	50 kts.	0/0	\$2,000
Mt. Caramel	01-NOV-18	THUNDERSTORM WIND	50 kts.	0/0	\$2,000

*All damage may not have been reported.

Source: National Centers for Environmental Information

Hailstorm

According to the National Centers for Environmental Information, 78 recorded hailstorm events have affected Jefferson Davis County since 1972.¹³ **Table C.17** is a summary of the hail events in Jefferson Davis County. **Table C.18** provides detailed information about each event that occurred in the county. In all, hail occurrences resulted in over \$604,000 in property damages. Hail ranged in diameter from 0.75 inches to 1.75 inches. It should be noted that hail is notorious for causing substantial damage to cars, roofs, and other areas of the built environment that may not be reported to the National Centers for Environmental Information. Therefore, it is likely that damages are greater than the reported value. However, NCEI did not note any monetary damages for this planning period.

TABLE C.17: SUMMARY OF HAIL OCCURRENCES IN JEFFERSON DAVIS COUNTY

Location	Number of Occurrences	Deaths / Injuries	Property Damage
Bassfield	21	0/0	\$90,140
Prentiss	17	0/0	\$145,178
Unincorporated Area	40	0/0	\$368,790
JEFFERSON DAVIS COUNTY TOTAL	78	0/0	\$604,108

Source: National Centers for Environmental Information

TABLE C.18: HISTORICAL HAIL OCCURRENCES IN JEFFERSON DAVIS COUNTY

Location	Date	Magnitude	Deaths / Injuries	Property Damage*
Bassfield				
Bassfield	30-MAR-93	1.75 in.	0/0	\$87,452
Bassfield	27-NOV-94	0.75 in.	0/0	\$0
Bassfield	19-FEB-96	1.25 in.	0/0	\$0
Bassfield	19-FEB-96	1.25 in.	0/0	\$0
Bassfield	18-MAR-96	1.75 in.	0/0	\$0
Bassfield	30-MAR-97	1.75 in.	0/0	\$0
Bassfield	01-JUL-98	1.00 in.	0/0	\$0
Bassfield	09-FEB-99	0.75 in.	0/0	\$0
Bassfield	11-OCT-01	0.75 in.	0/0	\$0
Bassfield	01-MAR-01	0.88 in.	0/0	\$0
Bassfield	15-MAR-02	0.88 in.	0/0	\$0
Bassfield	15-NOV-02	0.75 in.	0/0	\$0
Bassfield	17-MAY-03	0.88 in.	0/0	\$1,344

¹³ These hail events are only inclusive of those reported by the National Centers for Environmental Information (NCEI). It is likely that additional hail events have affected Jefferson Davis County. As additional local data becomes available, this hazard profile will be amended.

ANNEX C: JEFFERSON DAVIS COUNTY

Location	Date	Magnitude	Deaths / Injuries	Property Damage*
Bassfield	24-APR-03	0.88 in.	0/0	\$1,344
Bassfield	26-MAR-05	1.50 in.	0/0	\$0
Bassfield	30-MAR-05	0.75 in.	0/0	\$0
Bassfield	22-APR-05	0.88 in.	0/0	\$0
Bassfield	22-APR-05	0.75 in.	0/0	\$0
Bassfield	12-FEB-08	0.75 in.	0/0	\$0
Bassfield	12-MAY-09	0.75 in.	0/0	\$0
Bassfield	21-JAN-17	1.00 in.	0/0	\$0
Prentiss				
Prentiss	07-MAR-95	0.75 in.	0/0	\$0
Prentiss	30-MAR-96	1.25 in.	0/0	\$0
Prentiss	17-APR-98	0.75 in.	0/0	\$0
Prentiss	07-JUL-02	1.75 in.	0/0	\$0
Prentiss	20-AUG-03	0.88 in.	0/0	\$1,344
Prentiss	01-MAY-04	0.75 in.	0/0	\$0
Prentiss	06-APR-05	1.75 in.	0/0	\$76,006
Prentiss	04-DEC-05	0.75 in.	0/0	\$0
Prentiss	06-APR-05	1.75 in.	0/0	\$6,334
Prentiss	08-MAY-06	1.75 in.	0/0	\$61,494
Prentiss	06-FEB-06	1.00 in.	0/0	\$0
Prentiss	24-MAY-09	0.75 in.	0/0	\$0
Prentiss	04-JUL-11	1.00 in.	0/0	\$0
Prentiss	02-APR-12	0.88 in.	0/0	\$0
Prentiss	21-MAY-12	1.00 in.	0/0	\$0
Prentiss	23-DEC-14	1.00 in.	0/0	\$0
Prentiss	17-MAR-16	0.75 in.	0/0	\$0
Unincorporated Area				
JEFFERSON DAVIS COUNTY	18-MAR-72	1.75 in.	0/0	\$0
JEFFERSON DAVIS COUNTY	26-MAY-73	1.75 in.	0/0	\$0
JEFFERSON DAVIS COUNTY	07-MAY-75	1.75 in.	0/0	\$0
JEFFERSON DAVIS COUNTY	03-MAY-87	1.00 in.	0/0	\$0
JEFFERSON DAVIS COUNTY	09-APR-91	1.00 in.	0/0	\$0
JEFFERSON DAVIS COUNTY	18-APR-88	1.75 in.	0/0	\$0
JEFFERSON DAVIS COUNTY	03-MAY-84	1.75 in.	0/0	\$0
JEFFERSON DAVIS COUNTY	23-JUL-84	1.00 in.	0/0	\$0
JEFFERSON DAVIS COUNTY	18-MAY-86	1.75 in.	0/0	\$0
JEFFERSON DAVIS COUNTY	12-APR-91	1.75 in.	0/0	\$0

Location	Date	Magnitude	Deaths / Injuries	Property Damage*
JEFFERSON DAVIS COUNTY	12-APR-86	0.75 in.	0/0	\$0
Carson	15-MAR-95	0.75 in.	0/0	\$0
Melba	26-JAN-96	1.00 in.	0/0	\$0
HATHORN	28-MAY-96	0.75 in.	0/0	\$0
Melba	18-MAR-96	1.75 in.	0/0	\$321,822
Hebron	22-APR-97	0.75 in.	0/0	\$0
Carson	10-MAR-00	0.75 in.	0/0	\$0
HATHORN	06-APR-05	1.75 in.	0/0	\$0
Hebron	06-APR-05	1.00 in.	0/0	\$0
Hebron	06-APR-05	1.00 in.	0/0	\$0
Hebron	26-MAR-05	1.00 in.	0/0	\$0
MT CARMEL	03-FEB-06	0.75 in.	0/0	\$0
Oak Vale	19-JUL-06	0.75 in.	0/0	\$0
Hebron	08-MAY-06	1.50 in.	0/0	\$0
Oak Vale	08-MAY-06	0.88 in.	0/0	\$0
Hebron	09-MAY-06	0.88 in.	0/0	\$0
Oak Vale	10-JAN-08	0.75 in.	0/0	\$0
Hebron	21-FEB-08	1.75 in.	0/0	\$0
Oak Vale	10-JAN-08	0.88 in.	0/0	\$0
Terrell	09-DEC-08	0.75 in.	0/0	\$0
Gwinville	29-JUL-08	0.75 in.	0/0	\$0
Lucas	05-MAY-09	0.88 in.	0/0	\$0
Lucas	12-MAY-09	0.88 in.	0/0	\$0
Carson	27-MAR-09	0.88 in.	0/0	\$0
HATHORN	02-APR-09	0.75 in.	0/0	\$0
PRENTISS ARPT	07-JUN-11	1.00 in.	0/0	\$21,218
PRENTISS ARPT	02-APR-12	1.75 in.	0/0	\$25,750
Gwinville	15-AUG-12	1.00 in.	0/0	\$0
Gwinville	03-MAR-16	0.75 in.	0/0	\$0
Lucas	09-MAR-17	1.00 in.	0/0	\$0

*All damage may not have been reported.

Source: National Centers for Environmental Information

Lightning

According to the National Centers for Environmental Information, there have been five recorded lightning events in Jefferson Davis County since 2005. These events resulted in almost \$431,000 in damages as listed in summary **Table C.19**.¹⁴ However, it is likely that more lightning events have in fact impacted the county. Many of the reported events are those that caused damage, and it should be expected that damages are likely much higher for this hazard than what is reported. Detailed information on historical lightning events can be found in **Table C.20**.

¹⁴ These lightning events are only inclusive of those reported by the National Centers for Environmental Information (NCEI). It is certain that additional lightning events have occurred in Jefferson Davis County. As additional local data becomes available, this hazard profile will be amended.

TABLE C.19: SUMMARY OF LIGHTNING OCCURRENCES IN JEFFERSON DAVIS COUNTY

Location	Number of Occurrences	Deaths / Injuries	Property Damage (2013)
Bassfield	1	0/0	\$380,031
Prentiss	2	0/0	\$16,365
Unincorporated Area	2	0/0	\$35,000
JEFFERSON DAVIS COUNTY TOTAL	5	0/0	\$431,396

Source: National Centers for Environmental Information

TABLE C.20: HISTORICAL LIGHTNING OCCURRENCES IN JEFFERSON DAVIS COUNTY

Location	Date	Deaths / Injuries	Property Damage*	Details
Bassfield				
Bassfield	12-AUG-05	0/0	\$380,031	Lightning struck a Beauty Shop and caused the building to catch fire. Significant damage occurred to the shop.
Prentiss				
Prentiss	04-JUL-11	0/0	\$6,365	The Sheriff's Office radio repeater was damaged by lightning.
Prentiss	03-JAN-15	0/0	\$10,000	Lightning caused a house fire along Mississippi Highway 42 West.
Unincorporated Area				
Mt. Carmel	03-JAN-15	0/0	\$10,000	Lightning caused a mobile home fire along James Berry Lane.
Terrell	30-APR-17	0/1	\$25,000	A person was struck by lightning as they were getting inside their truck. Other cars were struck at the residence as well along Black Polk Road.

*Property damage is reported in 2013 dollars; All damage may not have been reported.

Source: National Centers for Environmental Information

PROBABILITY OF FUTURE OCCURRENCES

Thunderstorm / High Wind

Given the high number of previous events, it is certain that wind events, including straight-line wind and thunderstorm wind, will occur in the future. This results in a probability level of highly likely (100 percent annual probability) for future wind events for the entire county.

Hailstorm

Based on historical occurrence information, it is assumed that the probability of future hail occurrences is likely (10 – 100 percent annual probability). Since hail is an atmospheric hazard (coinciding with thunderstorms), it is assumed that Jefferson Davis County has equal exposure to this hazard. It can be expected that future hail events will continue to cause minor damage to property and vehicles throughout the county.

Lightning

Although there was not a high number of historical lightning events reported in Jefferson Davis County via NCEI data, it is a regular occurrence accompanied by thunderstorms. In fact, lightning events will

assuredly happen on an annual basis, though not all events will cause damage. According to Vaisala's U.S. National Lightning Detection Network (NLDN®), Jefferson Davis County is located in an area of the country that experienced an average of 6 to 8 lightning flashes per square kilometer per year between 1997 and 2010. Therefore, the probability of future events is highly likely (100 percent annual probability). It can be expected that future lightning events will continue to threaten life and cause minor property damages throughout the county.

C.2.12 Tornado

LOCATION AND SPATIAL EXTENT

Tornadoes occur throughout the state of Mississippi, and thus in Jefferson Davis County. Tornadoes typically impact a relatively small area, but damage may be extensive. Event locations are completely random, and it is not possible to predict specific areas that are more susceptible to tornado strikes over time. Therefore, it is assumed that Jefferson Davis County is uniformly exposed to this hazard.

HISTORICAL OCCURRENCES

Tornadoes resulted in two disaster declarations in Jefferson Davis County in 1992 and 2009.¹⁵ According to the National Centers for Environmental Information, there have been a total of 27 recorded tornado events in Jefferson Davis County since 1961 (**Table C.21**), resulting in over \$9.3 million in property damages.¹⁶ In addition, 11 injuries were reported, but none in this planning period. The magnitude of these tornadoes ranges from F0 to F4 in intensity, although an F5 event is possible. Detailed information on historic tornado events can be found in **Table C.22**.

TABLE C.21: SUMMARY OF TORNADO OCCURRENCES IN JEFFERSON DAVIS COUNTY

Location	Number of Occurrences	Deaths / Injuries	Property Damage (2013)
Bassfield	6	0/0	\$987,816
Prentiss	2	0/0	\$39,144
Unincorporated Area	19	0/11	\$8,313,578
JEFFERSON DAVIS COUNTY TOTAL	27	0/11	\$9,340,538

Source: National Centers for Environmental Information

¹⁵ A complete listing of historical disaster declarations can be found in Section 4: Hazard Identification.

¹⁶ These tornado events are only inclusive of those reported by the National Centers for Environmental Information (NCEI). It is likely that additional tornadoes have occurred in Jefferson Davis County. As additional local data becomes available, this hazard profile will be amended.

TABLE C.22: HISTORICAL TORNADO IMPACTS IN JEFFERSON DAVIS COUNTY

Location	Date	Magnitude	Deaths / Injuries	Property Damage*	Details
Bassfield					
Bassfield	27-JAN-94	F1	0/0	\$852,283	Several houses were damaged, several barns were totaled, a couple of campers were damaged, numerous trees were blown down, and one 8600 pound horse trailer was blown over and moved 15 yards. A horse barn that was built to withstand hurricane force winds was heavily damaged.
Bassfield	27-OCT-95	F0	0/0	\$3,314	This tornado was sighted by a volunteer spotter. The tornado did some damage to some trees, but did no structural damage.
Bassfield	27-NOV-03	F1	0/0	\$20,159	A tornado touched down 3.5 miles southwest of Bassfield and tracked northeast for 2 miles. This tornado crossed over Highway 35 and damaged numerous trees with a few large trees uprooted. A portion of a chicken house was destroyed as well as a carport next to a house.
Bassfield	16-OCT-06	F0	0/0	\$0	This weak tornado briefly touched down just outside of Bassfield and snapped a few trees.
Bassfield	13-FEB-07	F0	0/0	\$5,970	This weak tornado downed several trees and broke off limbs along its 3 mile path across southern Jefferson Davis County.

Location	Date	Magnitude	Deaths / Injuries	Property Damage*	Details
Bassfield	16-NOV-11	F1	0/0	\$106,090	The tornado started in Marion County on Goss Bunker Hill Road with mostly minor tree damage. As it moved northeast, crossing Stuckey Road, more minor tree damage occurred along with home TV and radio antennas being blown down. As it moved along E. Reservoir Road, more substantial tree damage occurred along with roof damage to a few homes and mobile homes. As it continued northeast, more major tree damage occurred along with snapped power poles on Bufkin and Grice Roads. The most significant damage occurred along Bunker Hill Road where roof damage occurred to a home along with many trees snapped and uprooted. Several metal sheds were either severely damaged or destroyed. A cattle trailer was picked up and thrown approximately 200 yards. As it crossed Hwy 35, major tree damage continued where pines and hardwood trees were either snapped or uprooted. A carport was collapsed at a residence near Bryant Road. The tornado continued northeast crossing Robbins and F. Mcneese Road where mainly tree damage occurred. As the tornado crossed S Williamsburg Road, the roof of a newly built barn was torn off along with major tree damage. As it continued northeast from there, mostly tree damage occurred until it ended near Gates Road, just south of Hwy 42 in Jefferson Davis County. Maximum wind speeds were estimated at 100 mph.
Prentiss					
Prentiss	01-MAY-04	F1	0/0	\$19,572	This tornado tracked northeast across central portions of Jefferson Davis county and downed numerous trees along its path.
Prentiss	01-MAY-04	F1	0/0	\$19,572	This weak tornado downed dozens of trees as it moved east northeast into Covington county. This tornado crossed into Covington county just to the north of the Terrell community.
Unincorporated Area					
JEFFERSON DAVIS COUNTY	20-FEB-61	F2	0/4	\$211,725	
JEFFERSON DAVIS COUNTY	20-FEB-61	F2	0/2	\$2,117,250	
JEFFERSON DAVIS COUNTY	10-DEC-71	F3	0/0	\$15,592	
JEFFERSON DAVIS COUNTY	15-DEC-71	F3	0/0	\$155,922	

ANNEX C: JEFFERSON DAVIS COUNTY

Location	Date	Magnitude	Deaths / Injuries	Property Damage*	Details
JEFFERSON DAVIS COUNTY	09-JAN-72	F2	0/0	\$151,232	
JEFFERSON DAVIS COUNTY	18-APR-78	F4	0/0	\$969	
JEFFERSON DAVIS COUNTY	07-MAY-82	F3	0/0	\$654,110	
JEFFERSON DAVIS COUNTY	21-NOV-92	F3	0/5	\$4,499,799	
Carson	04-DEC-93	F0	0/0	\$875	The tornado moved through a wooded area and blew down several trees.
					An F0 tornado first touched down in extreme northeast Marion County. The tornado caused downed trees in this rural area, then moved northeast out of the county into a rural area of extreme northwest Lamar County. Damage was confined to downed trees. The tornado then moved northeast out of the county and into extreme southeast Jefferson Davis County about one mile southeast of Melba. Two barns sustained minor structural damage, and two houses had minor roof damage. A number of trees were also blown down. The tornado only tracked about .5 mile in Jefferson Davis County before dissipating. The total tornado track through all three counties was about three miles.
Melba	16-FEB-01	F0	0/0	\$21,386	
Hebron	26-MAR-05	F1	0/0	\$25,335	This tornado touched down just to the northeast of Hebron and tracked east-northeast for 2 miles. Numerous large trees were uprooted across Atkinson and Sykes Roads.
					Several trees were blown down along the short path and a storage building had its roof blown off. An addition to a house had a portion of the roof blown off and another storage building was destroyed. The tornado was rated EF1 with a path length of 1/3 mile and a width of 100 yards.
Carson	17-OCT-07	F1	0/0	\$119,405	
PRENTISS ARPT	09-DEC-08	F1	0/0	\$115,927	Most of the damage was minor to moderate tree damage along the tornado path. However, an outbuilding was destroyed on Burrow Road, with the tin strewn dozens of yards downstream. Additionally, one house on Fate Ward Road suffered some roof damage. Maximum winds were around 95 mph.

Location	Date	Magnitude	Deaths / Injuries	Property Damage*	Details
Gwinville	03-MAY-09	F1	0/0	\$2,251	The tornado began and tracked across rural northeast Jefferson Davis County, far northwest Covington County and then into southeast Simpson County. Snapped and uprooted large hardwood and softwood trees occurred along the path. The most intense damage occurred in the Saratoga Community in southeast Simpson County. A travel trailer was completely destroyed and two chicken houses were heavily damaged. Snapped pine trees fell on a church and damaged a roof and some shingle damage occurred on a few other homes. Skirting was blown off of a mobile home and a chicken house was damaged near the Simpson and Smith county line. Maximum winds were 100 mph. The track began three miles north of Clem and ended four miles north northeast of Mount Olive. Total path length across the 3 counties was around 9 miles.
Terrell	02-MAR-12	F0	0/0	\$61,800	The tornado began near the intersection of Mt. Carmel Road and East Granby Road, where a few large limbs were downed. The tornado continued east northeast, where it destroyed a mobile home's porch and also knocked another mobile home off of its piers. The tornado ended just past this location, where it snapped and uprooted a few hardwood and softwood trees. Maximum wind speeds were estimated at 85 miles per hour.
Lucas	10-JUL-16	F1	0/0	\$110,000	A brief weak tornado with 90 mph winds touched down in Lucas along Highway 84 and moved north along Lucas-Warner Road for 0.77 miles causing tree and roof damage. Two homes had significant roof damage with half of the roof torn off. A church steeple was removed and the roof peeled. A mobile home was also damaged. The estimated peak wind was 90 mph.
Terrell	30-MAR-17	F0	0/0	\$15,000	This brief tornado touched down at Williams Ln, just off Highway 35, and tracked north for about one mile. At Williams Ln, a large tree was blown down onto a truck, the tree was laid to the west. Other large limbs and tree debris was also blown down here and laid to the west. The tornado broke off several limbs a Granby Road where it then dissipated. Maximum winds were around 80 mph.

Location	Date	Magnitude	Deaths / Injuries	Property Damage*	Details
Hebron	06-APR-18	F1	0/0	\$25,000	This tornado touched down just east-northeast of New Hebron, along Old Hebron Gwinville Road. Some trees were snapped and uprooted in this area. It continued east-southeast towards Silver Swamp Road and New Hebron Janesville Road. More trees and limbs were snapped or uprooted in this area, especially along New Hebron Janesville Road. The tornado continued across Highway 13 and Dale Road, where a few large trees were uprooted in the fields and woods nearby. The tornado lifted soon after before crossing Sugar Ridge Road. The maximum estimated winds with this tornado were 95mph.
Mt. Caramel	06-APR-18	F1	0/0	\$10,000	This tornado touched down near the Jefferson Davis-Covington County line along Lucas Hollow Road. It continued southeast, crossing the county line. Some large limbs and trees were snapped and uprooted at this location. It then crossed Lucas Hollow Road again before crossing Leonard Road. A tornado debris signature was indicated on radar in these locations. The tornado uprooted and snapped many trees in this region. It also overturned a small tractor trailer on Oakvale Road and caused some minor shingle damage to a home. After crossing Oakvale Road twice, the tornado lifted before crossing Highway 35. The maximum winds in this tornado was 105mph and total path length was 2.91 miles. The maximum path width was 440 yards.

Source: National Centers for Environmental Information

PROBABILITY OF FUTURE OCCURRENCES

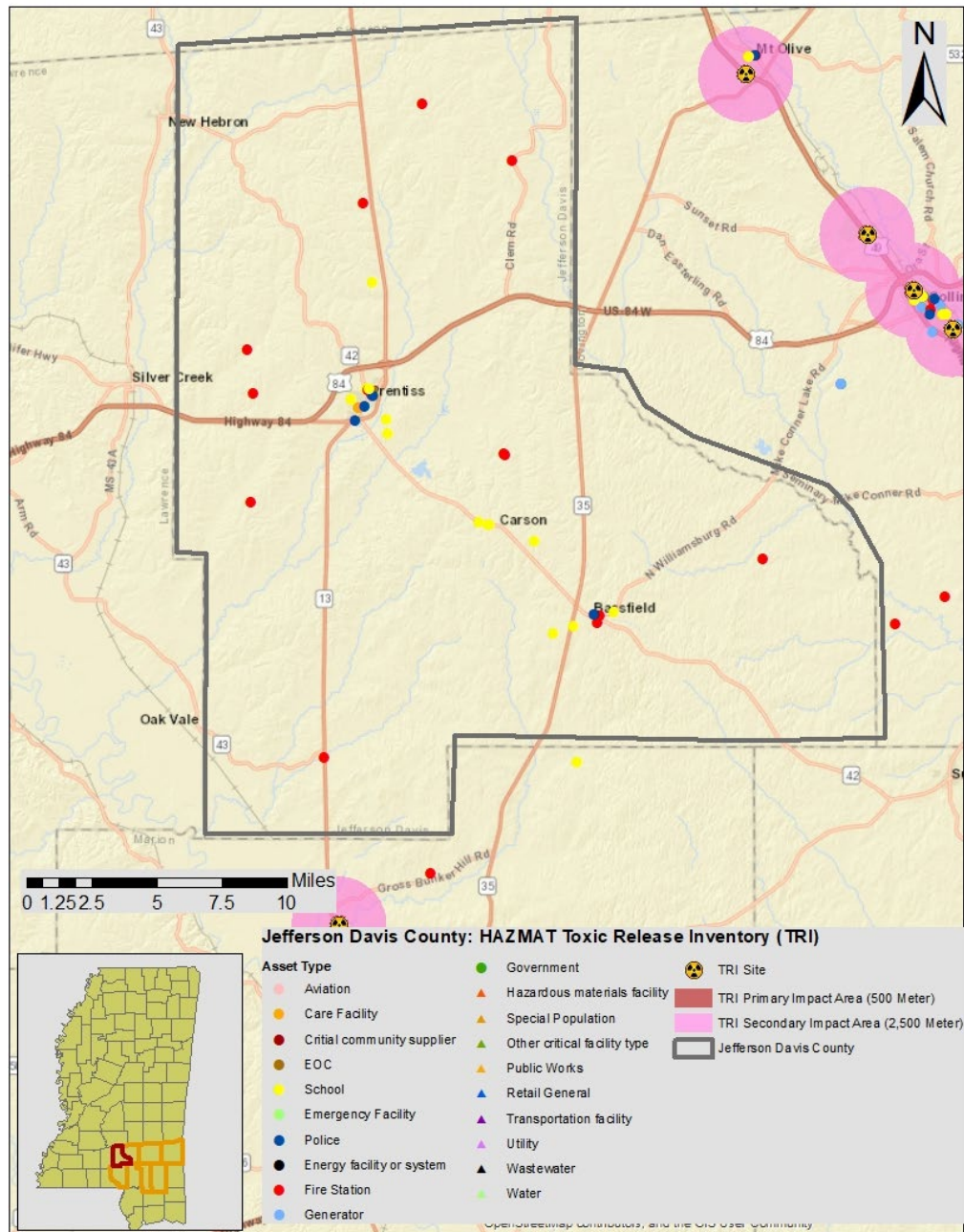
According to historical information, tornado events pose a significant threat to Jefferson Davis County. The probability of future tornado occurrences affecting Jefferson Davis County is likely (10 – 100 percent annual probability).

C.2.13 Hazardous Materials Incidents

LOCATION AND SPATIAL EXTENT

Hazardous Materials

Jefferson Davis County has no TRI sites as shown in **Figure C.9**.

FIGURE C.9: TOXIC RELEASE INVENTORY (TRI) SITES IN JEFFERSON DAVIS COUNTY

Source: EPA

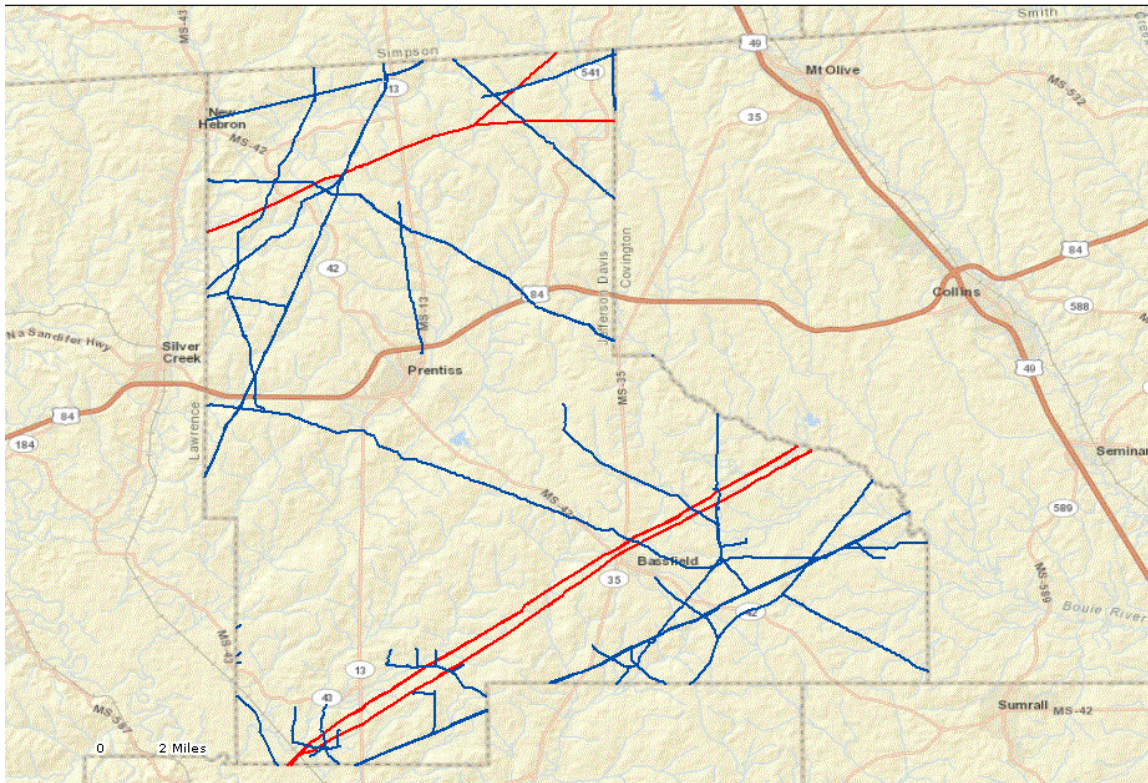
In addition to “fixed” hazardous materials locations, hazardous materials may also impact the county via roadways and rail. Many roads in the county are narrow, making hazardous material transport in the area especially treacherous. All roads that permit hazardous material transport are considered potentially at risk to an incident.

Pipelines

There are two distinct types of pipelines that are used in the transport of potentially hazardous materials, gas lines and hazardous liquid lines. **Figure A.10** shows the trunk lines for each of these

material types but does not show the gathering or distribution pipelines. Gas lines are in blue and hazardous liquid lines are in red. There are no changes to this data since the last plan.

FIGURE C.10: PIPELINES IN JEFFERSON DAVIS COUNTY



Source: Pipeline and Hazardous Materials Safety Administration

Meth Labs

Meth lab incidents have occurred at various times throughout Jefferson Davis County. Although there is not an extensive documented record of these events, they have occurred in the past and are generally confined to single sites, often in residential areas.

HISTORICAL OCCURRENCES

Hazardous Materials

There has been a total of one recorded HAZMAT incident in Jefferson Davis County since 2003 (**Table C.23**), resulting in \$55,300 in property damages. **Table C.24** presents detailed information on historic HAZMAT incidents in Jefferson Davis County as reported by the U.S. Department of Transportation Pipeline and Hazardous Materials Safety Administration (PHMSA).

TABLE C.23: SUMMARY OF HAZMAT INCIDENTS IN JEFFERSON DAVIS COUNTY

Location	Number of Occurrences	Deaths / Injuries	Property Damage
Bassfield	0	0/0	\$0
Prentiss	1	0/0	\$55,300
Unincorporated Area	0	0/0	\$0

Location	Number of Occurrences	Deaths / Injuries	Property Damage
JEFFERSON DAVIS COUNTY TOTAL	1	0/0	\$55,300

Source: USDOT PHMSA

TABLE C.24: HAZMAT INCIDENTS IN JEFFERSON DAVIS COUNTY

Report Number	Date	City	Mode	Serious Incident?	Fatalities/ Injuries	Damages (\$)	Quantity Released
Bassfield							
None Reported	--	--	--	--	--	--	--
Prentiss							
I-2003120943	4/22/2003	PRENTISS	Highway	Yes	0/0	\$55,300	200 LGA
Unincorporated Area							
None Reported	--	--	--	--	--	--	--

Source: USDOT PHMSA

Pipelines

Between 2002 and 2019, there have been no pipeline incidents in Jefferson Davis County.

Meth Labs

Meth lab incidents have occurred at various times throughout Jefferson Davis County. Although there is not an extensive documented record of these events, they have occurred in the past and are generally confined to single sites, often in residential areas.

PROBABILITY OF FUTURE OCCURRENCES

Hazardous Materials

Since there are no toxic release inventory sites in Jefferson Davis County and there has only been one roadway or rail incident, it is unlikely that a hazardous material incident may occur in the county (less than one percent annual probability). County and town officials are mindful of this possibility and take precautions to prevent such an event from occurring. Furthermore, there are detailed plans in place to respond to an occurrence.

Although there are no TRI sites and a very limited record of previous events in the county, hazardous materials incidents will continue to be a threat. The county may also be impacted by neighboring counties which also face risk due to TRI sites and narrow roadways.

Pipelines

Although there have been no major pipeline incidents, there are 409 miles of gas and hazardous liquid lines in the region. Therefore, it is anticipated that there will be future pipeline incidents in Jefferson Davis County, and they are considered possible.

Meth Labs

Meth lab incidents will likely continue to occur throughout Jefferson Davis County. Although it is difficult to predict where exactly these incidents would occur, the probability that they will be possible.

C.2.14 Cyber Attacks

A cyber-attack is a malicious, intentional attempt to breach the information technology (IT) infrastructure of an individual or organization. The State of Mississippi defines a cyberterrorism incident as any adverse premeditated, politically, financially or maliciously motivated attack against informational systems. A cyberterrorism event can impact one or more of Jefferson Davis County's and its, corresponding departments' and divisions' information assets by the following ways, which includes, but are not limited to, the following:

- Unauthorized use
- Denial of Service
- Malicious code
- Network system failures
- Application system failures
- Unauthorized disclosure or loss of information
- Information security breach
- Structured Query Language (SQL) Injection

LOCATION AND HAZARD EXTENT

The cyberterrorism hazard is not geographically based. Attacks can originate from any computer to affect any other computer in the world. If a system is connected to the Internet or operating on a wireless frequency, it is susceptible to exploitation. Targets of cyberterrorism can be individual computers, networks, organizations, business sectors, or governments. Financial institutions and retailers are often targeted to extract personal and financial data that can be used to steal money from individuals and banks.

HISTORICAL OCCURRENCES

There have been no known historical occurrences to have occurred in in Jefferson Davis County to date.

PROBABILITY OF FUTURE OCCURRENCES

As is the case for any governmental organization, there will always be the potential for impact for Jefferson Davis County. As such, the county will continue to be compelled to respond to cyberterrorisms in the future. The nature of these attacks is projected to evolve in sophistication over time. Jefferson Davis County will take a proactive position in its cyber security efforts and is expected to remain vigilant in its efforts to prevent attacks from occurring and/or disrupting business operations.

The reality remains that many computers and networks in organizations of all sizes and industries around the United States will continue to suffer intrusion attempts on a daily basis from viruses and malware that are passed through web sites and emails. Again, the potential for harm via this hazard is always present.

C.2.15 Conclusions on Hazard Risk

The hazard profiles presented above were developed using best available data and result in what may be considered principally a qualitative assessment as recommended by FEMA in its “How-to” guidance document titled *Understanding Your Risks: Identifying Hazards and Estimating Losses* (FEMA Publication 386-2). It relies heavily on historical and anecdotal data, stakeholder input, and professional and experienced judgment regarding observed and/or anticipated hazard impacts. It also carefully considers the findings in other relevant plans, studies, and technical reports.

HAZARD EXTENT

Table C.25 describes the extent of each natural hazard identified for Jefferson Davis County. The extent of a hazard is defined as its severity or magnitude, as it relates to the planning area.

TABLE C.25: EXTENT OF JEFFERSON DAVIS COUNTY HAZARDS

Flood-related Hazards	
Flood	Flood extent can be measured by the amount of land and property in the floodplain as well as flood height and velocity. The amount of land in the floodplain accounts for 11.2 percent of the total land area in Jefferson Davis County. Flood depth and velocity are recorded via United States Geological Survey stream gages throughout the region. While a gage does not exist for each participating jurisdiction, there is one at or near many areas. The greatest peak discharge recorded for the county was at the Goines Draw near Prentiss in 1974. Water reached a discharge of 610 cubic feet per second and the stream gage height was recorded at 9.10 feet.
Erosion	The extent of erosion can be defined by the measurable rate of erosion that occurs. There are no erosion rate records located in Jefferson Davis County.
Dam Failure	Dam Failure extent is defined using the Mississippi Division of Environmental Quality criteria. Two dams are classified as high-hazard in the county.
Winter Storm and Freeze	The extent of winter storms can be measured by the amount of snowfall received (in inches). Official long-term snow records are not kept for any areas in the MEMA District 8 Region. However, the greatest snowfall reported in Jackson (north of the county) was 11.7 inches in 1904 and in Meridian (northeast of the county) was 14.0 inches in 1963.
Fire-related Hazards	
Drought / Heat Wave	Drought extent is defined by the U.S. Drought Monitor Classifications which include Abnormally Dry, Moderate Drought, Severe Drought, Extreme Drought, and Exceptional Drought. According to the U.S. Drought Monitor Classifications, the most severe drought condition is Exceptional. Jefferson Davis County has received this ranking once over the eighteen-year reporting period. The extent of extreme heat can be measures by the record high temperature recorded. Official long-term temperature records are not kept for any areas in Jefferson Davis County. However, the highest recorded temperature in Hattiesburg (southeast of the county) was 106°F in 1989.

Wildfire	Wildfire data was provided by the Mississippi Forestry Commission and is reported annually by county from 2008-2018. The greatest number of fires to occur in Jefferson Davis County in any year was 135 in 2011. The greatest number of acres to burn in the county in a single year occurred in 2011 when 953 acres were burned. Although this data lists the extent that has occurred, larger and more frequent wildfires are possible throughout the county.
Geologic Hazards	
Earthquake	Earthquake extent can be measured by the Richter Scale and the Modified Mercalli Intensity (MMI) scale and the distance of the epicenter from Jefferson Davis County. According to data provided by the National Geophysical Data Center, no recorded earthquakes have been located in the county. However, USGS data shows Jefferson Davis County lies within an approximate zone of level .04 ground acceleration. This indicates that the county exists within an area of moderate seismic risk.
Landslide	As noted above in the landslide profile, there is no extensive history of landslides in Jefferson Davis County and landslide events typically occur in isolated areas. This provides a challenge when trying to determine an accurate extent for the landslide hazard. However, when using USGS landslide susceptibility index, extent can be measured with incidence, which is low throughout the county. There is also susceptibility throughout the county.
Expansive Soils	As noted above in the expansive soils profile, there is no historical record of significant expansive soil events in Jefferson Davis County. Again, this provides a challenge when trying to determine an accurate extent for the expansive soils hazard. However, when using USGS data on soils with clay swelling potential, extent can be measured with swelling potential, which is high in less than 50 percent of the soils Jefferson Davis County.
Wind-related Hazards	
Hurricane and Tropical Storm	Hurricane extent is defined by the Saffir-Simpson Scale which classifies hurricanes into Category 1 through Category 5. The greatest classification of hurricane to traverse directly through Jefferson Davis County was a Category 3 storm (Hurricane Camille in 1969) which carried tropical force winds of 155 miles per hour upon arrival in the county.
Thunderstorm / Hail / Lightning	Thunderstorm extent is defined by the number of thunder events and wind speeds reported. According to a 63-year history from the National Centers for Environmental Information, the strongest recorded wind event in Jefferson Davis County was last reported on March 26, 2009 at 75 knots (approximately 86 mph). It should be noted that future events may exceed these historical occurrences. Hail extent can be defined by the size of the hail stone. The largest hail stone reported in Jefferson Davis County was 1.75 inches (last reported on April 2, 2012). It should be noted that future events may exceed this. According to the Vaisala's flash density map (Figure 5.16), Jefferson Davis County is located in an area that experiences 6 to 8 lightning flashes per square kilometer per year. It should be noted that future lightning occurrences may exceed these figures.
Tornado	Tornado hazard extent is measured by tornado occurrences in the US provided by FEMA as well as the Fujita/Enhanced Fujita Scale. The greatest magnitude reported in Jefferson Davis County was an F4 (reported on April 18, 1978).

Other Hazards	
Hazardous Materials Incident	According to USDOT PHMSA, the largest hazardous materials incident reported in the county is 200 LGA released on the highway in Prentiss. It should be noted that larger events are possible.
	A pipeline incident could have a potentially large impact in terms of extent. Based on recent history, the largest spill in the last 10 years in Mississippi caused over 10,000 barrels of hazardous liquid to be spilled.
	Because of the generally small-scale nature of most meth labs, the extent of a fire or explosion that was caused by a meth lab incident would likely not be larger than a few acres.
Cyber Attack	The extent of cyberterrorism is difficult to estimate. Attacks can originate from any computer to affect any other computer in the world. The resulting damages depends on the demands of the cyberterrorist.

PRIORITY RISK INDEX RESULTS

In order to draw some meaningful planning conclusions on hazard risk for Jefferson Davis County, the results of the hazard profiling process were used to generate countywide hazard classifications according to a “Priority Risk Index” (PRI). More information on the PRI and how it was calculated can be found in Section 5.16.2.

Table C.26 summarizes the degree of risk assigned to each category for all initially identified hazards based on the application of the PRI. Assigned risk levels were based on the detailed hazard profiles developed for this section, as well as input from the Regional Hazard Mitigation Council. The results were then used in calculating PRI values and making final determinations for the risk assessment.

TABLE C.26: SUMMARY OF PRI RESULTS FOR JEFFERSON DAVIS COUNTY

Hazard	Category/Degree of Risk					
	Probability	Impact	Spatial Extent	Warning Time	Duration	PRI Score
Flood-related Hazards						
Flood	Likely	Limited	Small	6 to 12 hours	Less than 24 hours	2.4
Erosion	Possible	Minor	Small	More than 24 hours	More than 1 week	1.8
Dam Failure	Unlikely	Critical	Moderate	More than 24 hours	Less than 6 hours	2.0
Winter Storm and Freeze	Possible	Limited	Large	More than 24 hours	Less than 24 hours	2.3
Fire-related Hazards						
Drought / Heat Wave	Highly Likely	Minor	Large	More than 24 hours	More than 1 week	2.8
Wildfire	Likely	Minor	Small	Less than 6 hours	Less than 1 week	2.1
Geologic Hazards						
Earthquake	Unlikely	Minor	Moderate	Less than 6 hours	Less than 6 hours	1.7
Landslide	Unlikely	Minor	Small	Less than 6 hours	Less than 6 hours	1.5
Expansive Soils	Possible	Minor	Small	Less than 6 hours	Less than 6 hours	1.8

Wind-related Hazards						
Hurricane and Tropical Storm	Likely	Catastrophic	Large	More than 24 hours	Less than 24 hours	3.2
Thunderstorm Wind / High Wind	Highly Likely	Limited	Moderate	Less than 6 hours	Less than 6 hours	2.9
Hailstorm	Likely	Minor	Small	Less than 6 hours	Less than 6 hours	2.1
Lighting	Highly Likely	Limited	Negligible	Less than 6 hours	Less than 6 hours	2.5
Tornado	Likely	Critical	Small	Less than 6 hours	Less than 6 hours	2.7
Other Hazards						
Hazardous Materials Incident	Unlikely	Limited	Small	Less than 6 hours	Less than 24 hours	1.9
Pipeline Incident	Possible	Limited	Small	Less than 6 hours	Less than 24 hours	2.2
Meth Lab Incident	Possible	Minor	Small	Less than 6 hours	Less than 6 hours	1.8
Cyber-Attack	Unlikely					

C.2.16 Final Determinations on Hazard Risk

The conclusions drawn from the hazard profiling process for Jefferson Davis County, including the PRI results and input from the Regional Hazard Mitigation Council, resulted in the classification of risk for each identified hazard according to three categories: High Risk, Moderate Risk, and Low Risk (**Table C.27**). For purposes of these classifications, risk is expressed in relative terms according to the estimated impact that a hazard will have on human life and property throughout all of Jefferson Davis County. A more quantitative analysis to estimate potential dollar losses for each hazard has been performed separately and is described in Section 6: *Vulnerability Assessment* and below in Section C.3. It should be noted that although some hazards are classified below as posing low risk, their occurrence of varying or unprecedented magnitudes is still possible in some cases and their assigned classification will continue to be evaluated during future plan updates.

TABLE C.27: CONCLUSIONS ON HAZARD RISK FOR JEFFERSON DAVIS COUNTY

HIGH RISK	Hurricane and Tropical Storm Thunderstorm Wind / High Wind Tornado Flood
MODERATE RISK	Drought / Heat Wave Dam Failure Lightning Hailstorm Pipeline Incident Hazardous Material Incident Wildfire
LOW RISK	Winter Storm and Freeze Dam Failure Expansive Soils Erosion Earthquake Landslide Meth Lab Incident Cyber-Attack

C.3 JEFFERSON DAVIS COUNTY VULNERABILITY ASSESSMENT

This subsection identifies and quantifies the vulnerability of Jefferson Davis County to the significant hazards previously identified. This includes identifying and characterizing an inventory of assets in the county and assessing the potential impact and expected amount of damages caused to these assets by each identified hazard event. More information on the methodology and data sources used to conduct this assessment can be found in Section 6: *Vulnerability Assessment*.

C.3.1 Asset Inventory

Table C.28 lists the estimated number of improved properties and the total value of improvements for Jefferson Davis County and its participating jurisdictions (study area of vulnerability assessment). This data was obtained from HAZUS-MH 4.2 since digital parcel data was not available in this county.

TABLE C.28: IMPROVED PROPERTY IN JEFFERSON DAVIS COUNTY

Location	Number of Improved Properties	Total Assessed Value of Improvements
Jefferson Davis County	5,782	\$852,147,000

*Improvement values for these communities were obtained from HAZUS-MH 4.2

Table C.29 lists the fire stations, police stations, emergency operations centers (EOCs), medical care facilities, and schools and other critical facilities located in Jefferson Davis County. HAZUS-MH 4.2 was used to obtain the critical facilities for the county and this data was modified to reflect recent changes. In addition, **Figure C.11** shows the locations of essential facilities in Jefferson Davis County. **Table C.32**, near the end of this section, shows a complete list of the critical facilities by name, as well as the hazards that affect each facility. As noted previously, this list is not all-inclusive and only includes information provided by the county.

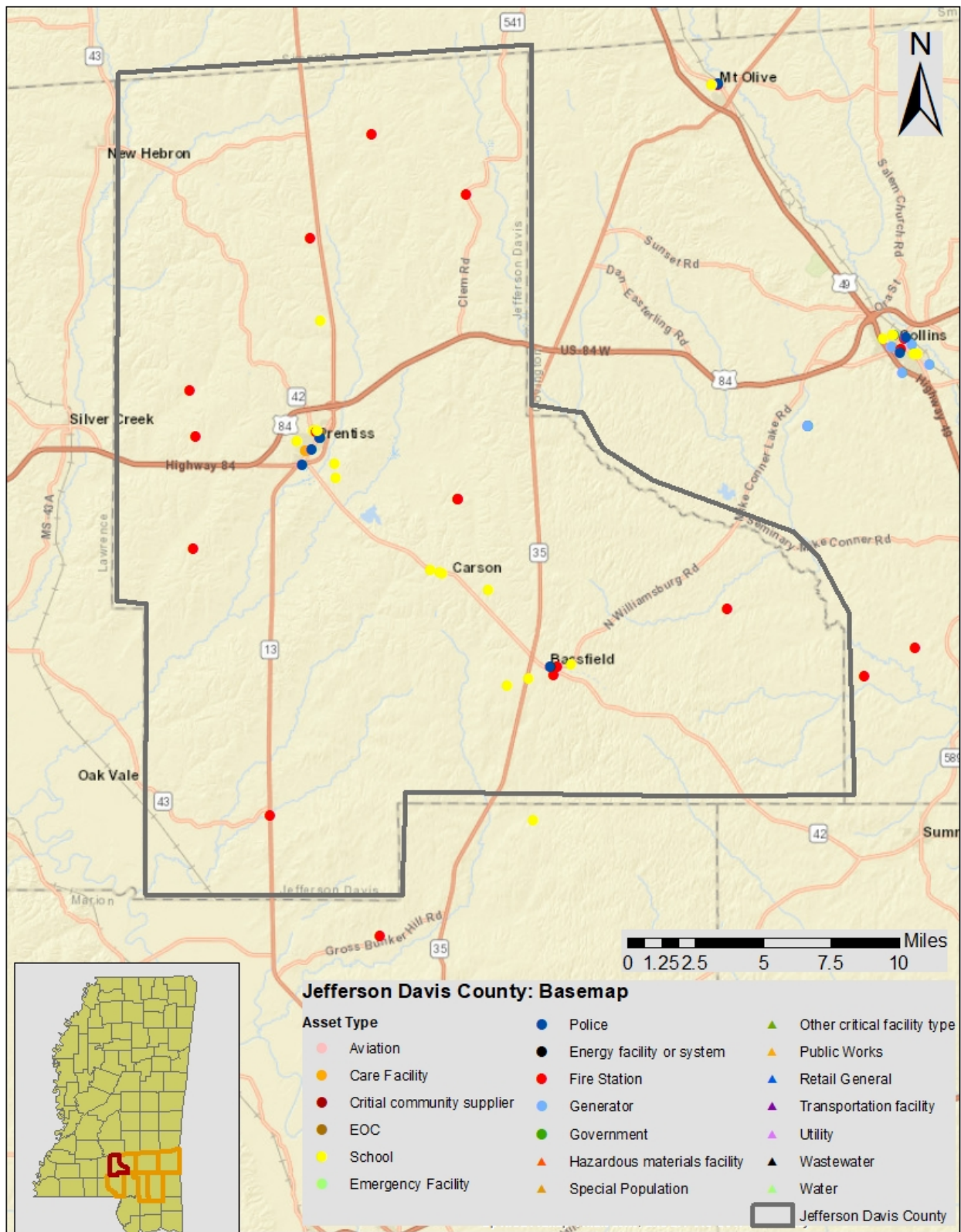
TABLE C.29: CRITICAL FACILITY INVENTORY IN JEFFERSON DAVIS COUNTY

Location	Fire Stations	Police Stations	Medical Care Facilities	EOC	Schools
Jefferson Davis County	2	1	1	1	8
Bassfield	1	0	0	0	3
Prentiss	1	1	1	1	4
Unincorporated Area	0	0	0	0	1

Source: HAZUS-MH 4.2

*The Jefferson Davis EOC is located in Prentiss.

FIGURE C.11: CRITICAL FACILITY LOCATIONS IN JEFFERSON DAVIS COUNTY



Source: HAZUS-MH 4.2

C.3.2 Social Vulnerability

In addition to identifying those assets potentially at risk to identified hazards, it is important to identify and assess those particular segments of the resident population in Jefferson Davis County that are potentially at risk to these hazards.

Table C.30 lists the population by jurisdiction according to U.S. Census 2010 population estimates. Unfortunately, estimates were not available at the census block level, limited the results to county-wide estimates. The total population in Jefferson Davis County according to Census data is 12,487 persons. Additional population estimates are presented above in Section C.1.

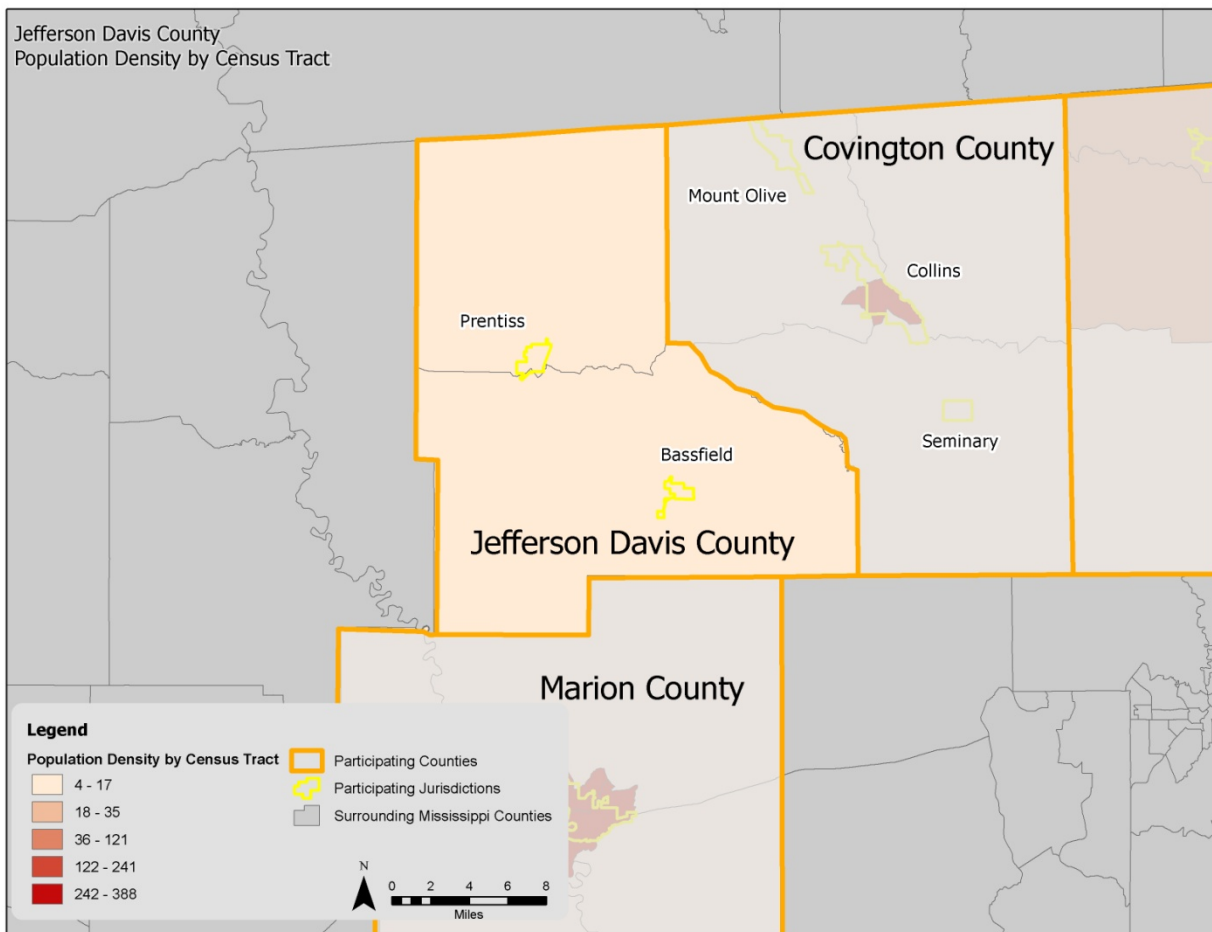
TABLE C.30: TOTAL POPULATION IN JEFFERSON DAVIS COUNTY

Location	Total 2010 Population
Bassfield	254
Prentiss	1,081
Unincorporated Area	11,152
JEFFERSON DAVIS COUNTY TOTAL	12,487

Source: U.S. Census 2010

In addition, **Figure C.12** illustrates the population density by census tract as it was reported by the U.S. Census Bureau in 2010.¹⁷ This information has not changed since the last plan update.

¹⁷ Population by census block was not available at the time this plan was completed.

FIGURE C.12: POPULATION DENSITY IN JEFFERSON DAVIS COUNTY

Source: U.S. Census Bureau, 2010

C.3.3 Vulnerability Assessment Results

As noted in Section 6: *Vulnerability Assessment*, only hazards with a specific geographic boundary, available modeling tool, or sufficient historical data allow for further analysis. Those results, specific to Jefferson Davis County, are presented here. All other hazards are assumed to impact the entire planning region (drought, hailstorm, lightning, thunderstorm wind, tornado, and winter storm and freeze) or, due to lack of data, analysis would not lead to credible results (dam and levee failure, erosion, expansive soils, and landslide). The total county exposure, and thus risk, was presented in **Table C.28**.

The hazards to be further analyzed in this section include: flood, wildfire, earthquake, hurricane and tropical storm winds, and hazardous materials incident.

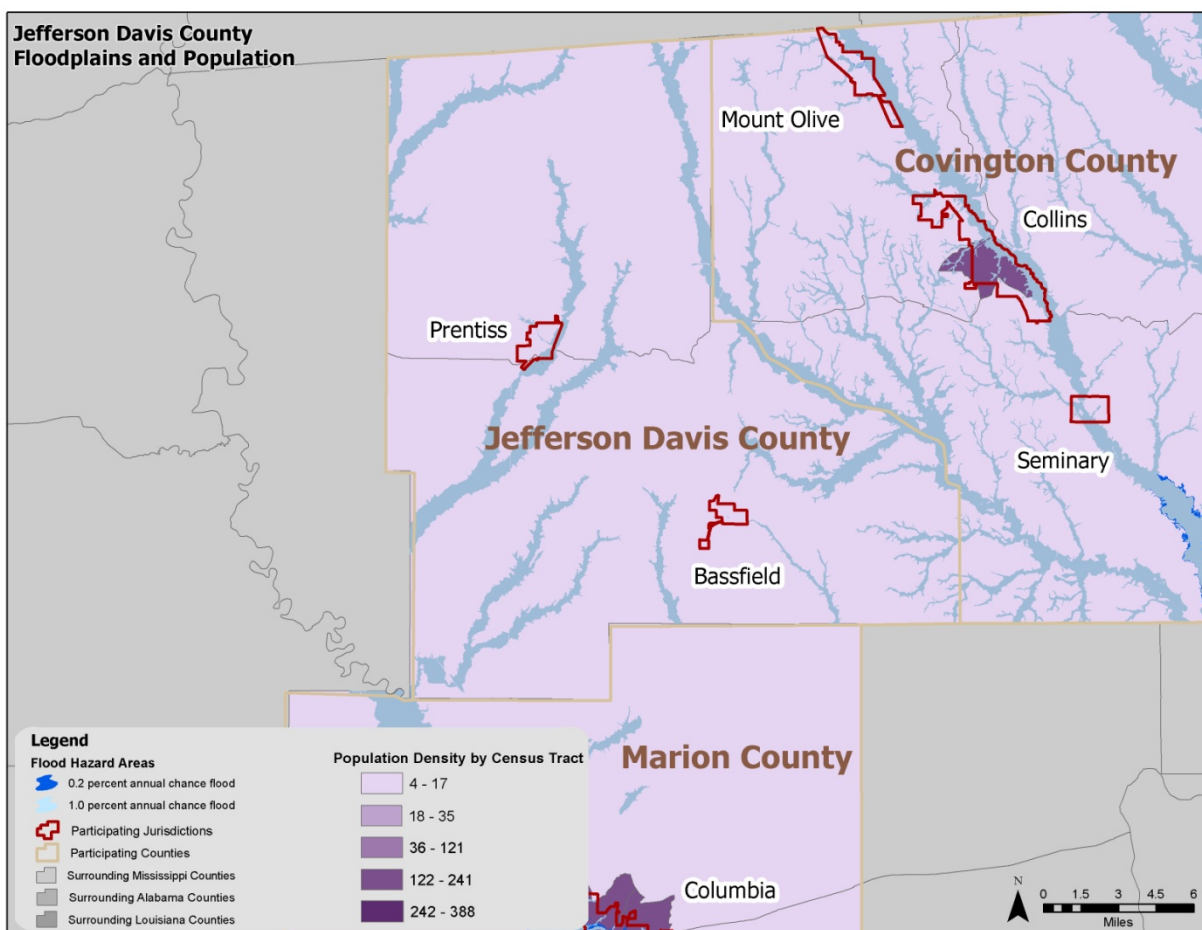
FLOOD

Historical evidence indicates that Jefferson Davis County is susceptible to flood events. A total of 23 flood events have been reported by the National Centers for Environmental Information resulting in \$1.1 million in damages.

Social Vulnerability

Since 2010 population was available at the tract level, it was difficult to determine a reliable figure on population at-risk to flood due to tract level population data. **Figure C.13** is presented to gain a better understanding of at-risk population.

FIGURE C.13: POPULATION DENSITY NEAR FLOODPLAINS



Source: FEMA DFIRM, U.S. Census 2010

Critical Facilities

The critical facility analysis revealed that there are no critical facilities located in the Jefferson Davis County 1.0-percent annual chance floodplain and 0.2-percent annual chance floodplain based on FEMA DFIRM boundaries and GIS analysis. A list of specific critical facilities and their associated risk can be found in **Table C.31** at the end of this section.

In conclusion, a flood has the potential to impact many existing and future buildings and populations in Jefferson Davis County, though some areas are at a higher risk than others. All types of structures in a floodplain are at-risk, though elevated structures will have a reduced risk. As noted, the floodplains used in this analysis include the 100-year and 500-year FEMA regulated floodplain boundaries. It is certainly possible that more severe events could occur beyond these boundaries or urban (flash) flooding could impact additional structures. Such site-specific vulnerability determinations are outside

the scope of this assessment but will be considered during future plan updates. Furthermore, areas subject to repetitive flooding should be analyzed for potential mitigation actions.

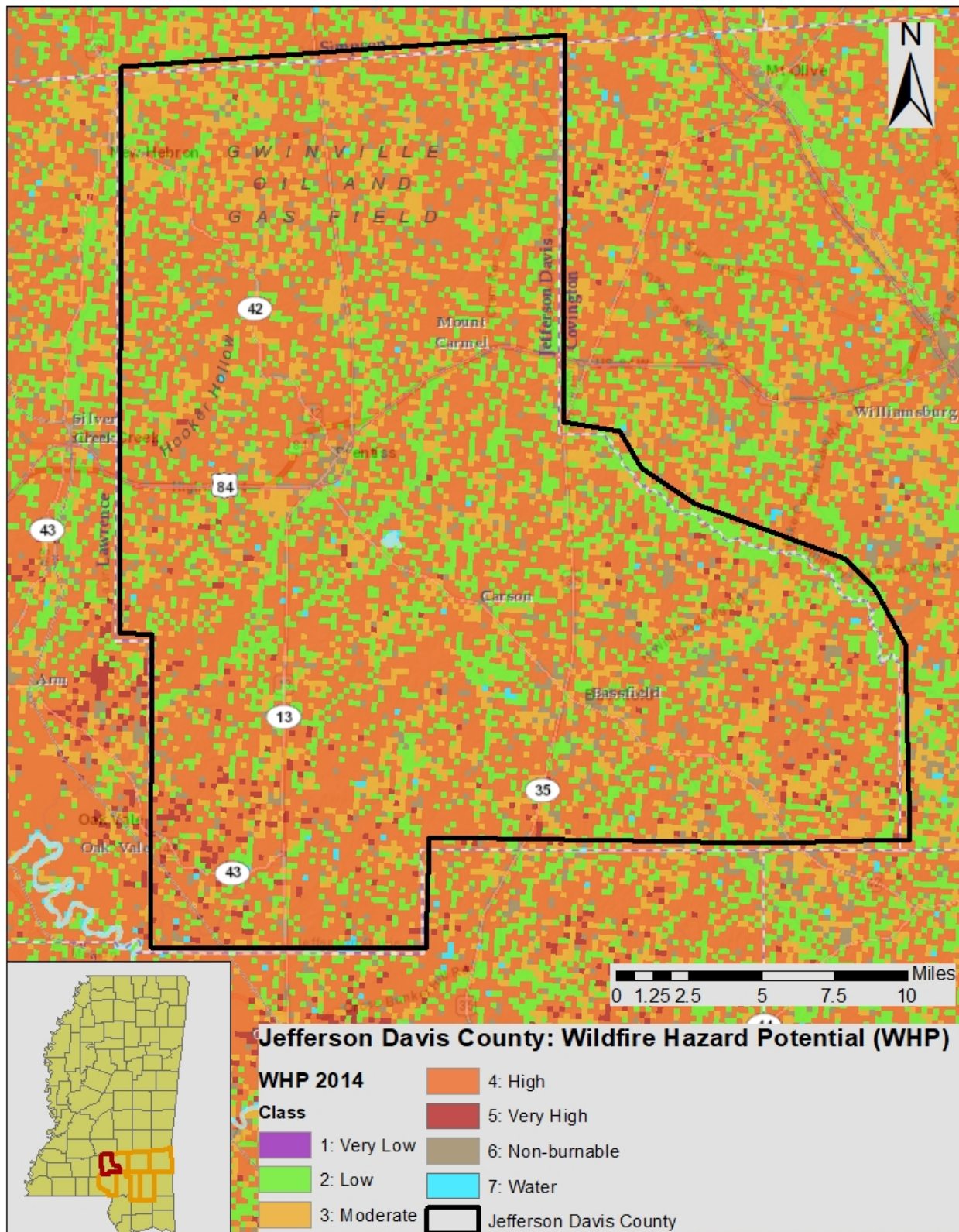
WILDFIRE

Although historical evidence indicates that Jefferson Davis County is susceptible to wildfire events, there are few reports of damage.

To estimate exposure to wildfire, the wildfire hazard potential (WHP 2014) data provided via the US Forest Service was utilized. A GIS analysis was performed with the WHP dataset and identified critical facilities throughout MEMA District 8 in order to show the level of vulnerability.

Figure A.14 shows the wildfire hazard potential for Jefferson Davis County. Most of the planning areas falls within the low to high category.

FIGURE C.14: WILDFIRE RISK AREAS IN JEFFERSON DAVIS COUNTY



Source: U.S. Forrester Service

Social Vulnerability

Although not all areas have equal vulnerability, there is some susceptibility across the entire county. It is assumed that the total population is at risk to the wildfire hazard. Determining the exact number of people in certain wildfire zones is difficult with existing data and could be misleading.

Critical Facilities

The critical facility analysis revealed that there are three critical facilities located in an area considered low risk valued at nearly \$26,000. There are six critical facilities located in an area considered moderate risk valued at \$8.5 M, and there is an additional nine structures located in an area considered high risk valued at nearly \$15M. It should be noted, however, that several factors could impact the spread of a wildfire putting all facilities at risk. A list of specific critical facilities and their associated risk can be found in **Table A.31** at the end of this section.

In conclusion, a wildfire event has the potential to impact many existing and future buildings, critical facilities, and populations in Jefferson Davis County.

EARTHQUAKE

The HAZUS-MH earthquake scenario was generated for the region only and not on an individual county basis. The HAZUS-MH model and historical occurrences confirm, any earthquake activity in the area is likely to inflict minor damage to the county. HAZUS-MH 4.2 estimates a total exposure of approximately \$20,561,000 which includes buildings, inventory, and contents throughout the region. While this number is not an exact representation of assessed tax value, it is helpful in assessing the results of the HAZUS-MH scenario.

For the earthquake hazard vulnerability assessment, an arbitrary scenario was created to estimate damages to the planning area. HAZUS-MH estimates that no buildings would be moderately damaged.

Social Vulnerability

It can be assumed that all existing future populations are at risk to the earthquake hazard. No fatalities or injuries were reported in the above HAZUS-MH arbitrary scenario.

Critical Facilities

There are 32 critical facilities identified for Covington County, valued at \$54,124,051. All are vulnerable to the earthquake hazard.

An earthquake has the potential to impact all existing and future buildings, facilities, and populations in Covington County. While Covington County may not experience a large earthquake, localized damage is possible with an occurrence. A list of specific critical facilities and their associated risk can be found in **Table A.32** at the end of this section.

HURRICANE AND TROPICAL STORM

Historical evidence indicates that Jefferson Davis County has an elevated risk to the hurricane and tropical storm hazard. Several tracks have come near or traversed through the county, as shown and discussed in Section C.2.10.

Hurricanes and tropical storms can cause damage through numerous additional hazards such as flooding, erosion, tornadoes, and high winds, thus it is difficult to estimate total potential losses from these cumulative effects. The current HAZUS-MH hurricane model only analyzes hurricane winds and is not capable of modeling and estimating cumulative losses from all hazards associated with hurricanes; therefore, only hurricane winds are analyzed in this section. It can be assumed that all existing and future buildings and populations are at risk to the hurricane and tropical storm hazard. HAZUS-MH 4.2 was used to determine vulnerability to the hazard for a 100-Year event. There are an estimated 100,000 buildings in the region with a total building replacement value of \$20,562,000. A 100-year probabilistic scenario was created and modeled. HAZUS-MH estimated that approximately 1,892 buildings would be at least moderately damaged by the event; this is over two percent of the buildings in the Region. There are an estimated 69 buildings that would be damaged beyond repair.

Economic Losses

HAZUS-MH estimated economic losses for the scenario event. HAZUS-MH estimated losses at \$349.5M, which represents 1.7 percent of the total replacement value of the region's buildings. Nine percent of the losses were related to business interruption in the scenario region. 88 percent of the losses were sustained by residential structures.

Debris Generation

As part of the scenario, HAZUS-MH estimated the amount of debris that would be generated by the event. The types of debris considered were brick/wood, reinforced concrete/steel, eligible tree debris, and other tree debris. HAZUS-MH estimated that a total of 2,165,680 tons of debris would be generated by the event. Of that amount, 93 percent would be other tree debris, approximately 1.5 percent would be brick/wood, and the rest would comprise of would be eligible tree debris and brick/wood. Assuming a load of 25 tons per truck, this would equate to 1,190 truckloads of debris from this scenario.

Social Vulnerability

Given equal susceptibility across the county, it is assumed that the total population is at risk to the hurricane and tropical storm hazard.

Critical Facilities

Given equal vulnerability across Jefferson Davis County, all critical facilities are considered to be at risk. Some buildings may perform better than others in the face of such an event due to construction and age, among other factors. There are 32 critical facilities identified for Covington County, valued at \$54,124,051. Some buildings may perform better than others in the face of such an event due to construction and age, among other factors. Determining individual building response is beyond the scope of this plan. However, this plan will consider mitigation action for especially vulnerable and/or critical facilities to mitigation against the effects of the hurricane hazard. A list of specific critical facilities can be found in **Table A.31** at the end of this section.

In conclusion, a hurricane event has the potential to impact many existing and future buildings, critical facilities, and populations in Jefferson Davis County. Hurricane events can cause substantial damage in their wake including fatalities, extensive debris clean-up, and extended power outages.

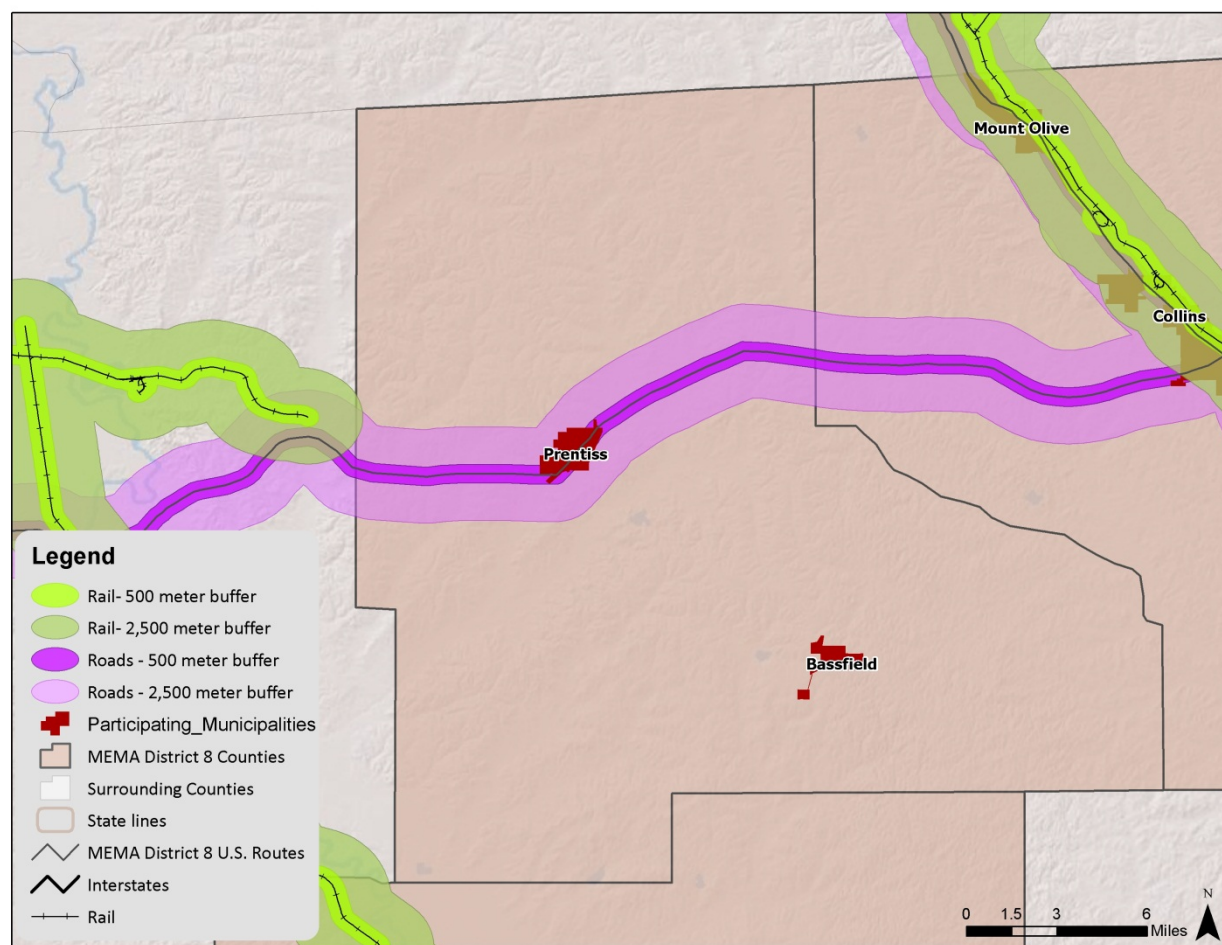
HAZARDOUS MATERIALS INCIDENT

Although historical evidence and existing Toxic Release Inventory sites indicate that Jefferson Davis County is susceptible to hazardous materials events, there are few reports of damage.

Most hazardous materials incidents that occur are contained and suppressed before destroying any property or threatening lives. However, they can have a significant negative impact. Such events can cause multiple deaths, completely shut down facilities for 30 days or more, and cause more than 50 percent of affected properties to be destroyed or suffer major damage. In a hazardous materials incident, solid, liquid, and/or gaseous contaminants may be released from fixed or mobile containers. Weather conditions will directly affect how the hazard develops. Certain chemicals may travel through the air or water, affecting a much larger area than the point of the incidence itself. Non-compliance with fire and building codes, as well as failure to maintain existing fire and containment features, can substantially increase the damage from a hazardous materials release. The duration of a hazardous materials incident can range from hours to days. Warning time is minimal to none.

In order to conduct the vulnerability assessment for this hazard, GIS intersection analysis was used for fixed and mobile areas and parcels.¹⁸ In both scenarios, two sizes of buffers—500 and 2,500 meters—were used. These areas are assumed to respect the different levels of effect: immediate (primary) and secondary. Primary and secondary impact sites were selected based on guidance from FEMA 426, Reference Manual to Mitigate Potential Terrorist Attacks against Buildings and engineering judgment. For the fixed site analysis, geo-referenced TRI listed toxic sites in Jefferson Davis County, along with buffers, were used for analysis. However, the data revealed that there are no TRI sites located in Jefferson Davis County. For the mobile analysis, the major roads (Interstate highway, U.S. highway, and State highway) and railroads, where hazardous materials are primarily transported that could adversely impact people and buildings, were used for the GIS buffer analysis. **Figure C.15** shows the areas used for mobile toxic release buffer analysis. The mobile toxic release buffer data did not change since the last plan update.

¹⁸ This type of analysis will likely yield conservative results (generally higher than what is actually reported after an event).

FIGURE C.15: MOBILE HAZMAT BUFFERS IN JEFFERSON DAVIS COUNTY

Social Vulnerability

Given high susceptibility across the entire county, it is assumed that the total population is at risk to a hazardous materials incident. It should be noted that areas of population concentration may be at an elevated risk due to a greater burden to evacuate population quickly.

Critical Facilities

Fixed Site Analysis:

The critical facility analysis for fixed TRI sites revealed that there are no Jefferson Davis County facilities located in a HAZMAT risk zone because there are no TRI sites located in the county. A list of specific critical facilities and their associated risk can be found in **Table C.31** at the end of this section.

Mobile Analysis:

The critical facility analysis for transportation corridors in Covington County revealed that there are 13 critical facilities located in the 500M Highway mobile HAZMAT buffer areas valued at over \$30M. Expanding to a 2500M HAZMAT risk zone reveals there are 18 critical facilities located in the highway mobile HAZMAT buffer areas are vulnerable valued at over \$33.8M. A list of specific critical facilities and their associated risk can be found in **Table C.31** at the end of this section.

In conclusion, a hazardous material incident has the potential to impact many existing and future buildings, critical facilities, and populations in Jefferson Davis County. Those areas in a primary buffer are at the highest risk, though all areas carry some vulnerability due to variations in conditions that could alter the impact area (i.e., direction and speed of wind, volume of release, etc). Further, incidents from neighboring counties could also impact the county and participating jurisdictions.

CONCLUSIONS ON HAZARD VULNERABILITY

Table C.31 shows the critical facilities vulnerable to additional hazards analyzed in this section. The table lists those assets that are determined to be exposed to each of the identified hazards (marked with an “X”).

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TABLE C.31: AT-RISK CRITICAL FACILITIES IN JEFFERSON DAVIS COUNTY

FACILITY NAME	FACILITY TYPE	ATMOSPHERIC							GEOLOGIC			HYDROLOGIC			OTHER						
		Drought	Hailstorm	Hurricane and Tropical Storm	Lightning	Thunderstorm	Tornado	Winter Storm and Freeze	Earthquake	Landslide – Mod	Landslide- High	Dam and Levee Failure ¹⁹	Flood – 100 yr	Flood – 500 yr	Fixed HAZMAT 500m	Fixed HAZMAT 2,500 meter	Mobile HZMT Roads 500 METER	Mobile HZMT Roads 2,500 meter	Mobile HZMT Rails 500 METER	Mobile HZMT Rails 2,500 meter	Wildfire
Jefferson Davis County																					
BASSFIELD HIGH SCHOOL	School	X	X	X	X	X		X	X												Moderate
Bassfield Police Dept	Police Station	X	X	X	X	X		X	X												Non-burnable
Bassfield Volunteer Fire Department	Fire Department	X	X	X	X	X		X	X												Low
CARVER ELEMENTARY SCHOOL	School	X	X	X	X	X		X	X												High
G W CARVER ELEMENTARY SCHOOL	School Safe Room	X	X	X	X	X		X	X												Moderate
GOOD HOPE FIRE DEPT	Fire Station	X	X	X	X	X	X	X	X												High
JEFFERSON DAVIS HIGH SCHOOL	School Safe Room	X	X	X	X	X		X	X												High
TOWN OF BASSFIELD FIRE DEPT	Fire Station	X	X	X	X	X		X	X												Non-burnable
JDCS LEARNING CENTER/ACADEMIC SUCCESS/ALTERNATIVE	School Safe Room	X	X	X	X	X		X	X												High
JEFF DAVIS CO VOC TECH CENTER	School	X	X	X	X	X		X	X												High
JEFFERSON DAVIS CO VO TECH	School Safe Room	X	X	X	X	X		X	X												High
RED HOUSE FIRE DEPT	Fire Station	X	X	X	X	X		X	X												High

¹⁹ As noted previously, these facilities could be at risk to dam failure if located in an inundation area. Data was not available to conduct such an analysis. There was no local knowledge of these facilities being at risk to dam failure. As additional data becomes available, more in-depth analysis will be conducted.

		ATMOSPHERIC							GEOLOGIC			HYDROLOGIC			OTHER							
FACILITY NAME	FACILITY TYPE	Drought	Hailstorm	Hurricane and Tropical Storm	Lightning	Thunderstorm	Tornado	Winter Storm and Freeze	Earthquake	Landslide – Mod	Landslide- High	Dam and Levee Failure ¹⁹	Flood – 100 yr	Flood – 500 yr	Fixed HAZMAT 500m	Fixed HAZMAT 2,500 meter	Mobile HZMT Roads 500 METER	Mobile HZMT Roads 2,500 meter	Mobile HZMT Rails 500 METER	Mobile HZMT Rails 2,500 meter	Wildfire	
OAKVALE VOLUNTEER FIRE DEPT/SOCIETY HILL STATION	Fire Station	X	X	X	X	X		X	X												Non- burnable	
CLEM VOLUNTEER FIRE DEPT/WILLIAMSON MILL STATION	Fire Station	X	X	X	X	X		X	X												High	
GRANBY FIRE DEPT	Fire Station	X	X	X	X	X		X	X												Moderate	
GRANBY FIRE DEPT	Fire Station	X	X	X	X	X		X	X												Moderate	
Highway 84 West Fire Station Inc.	Fire Department	X	X	X	X	X		X	X									X			High	
HWY 84 WEST FIRE STATION	Fire Station	X	X	X	X	X		X	X												Low	
HWY 84 WEST FIRE STATION	Fire Station	X	X	X	X	X		X	X												Low	
J E JOHNSON ELEMENTARY	School	X	X	X	X	X		X	X												High	
J E JOHNSON ELEMENTARY SCHOOL	School Safe Room	X	X	X	X	X	X	X	X								X	X			Non- burnable	
J E JOHNSON HEAD START/FIVE COUNTY	School Safe Room	X	X	X	X	X		X	X									X			High	
JEFFERSON DAVIS COUNTY ADMINISTRATION BUILDING	Government	X	X	X	X	X	X	X	X								X	X			Non- burnable	
JEFFERSON DAVIS COUNTY COURTHOUSE	Government	X	X	X	X	X		X	X								X	X			Non- burnable	
JEFFERSON DAVIS COUNTY EMA/EOC	EOC	X	X	X	X	X	X	X	X								X	X			Non- burnable	
JEFFERSON DAVIS COUNTY SHERIFF'S OFFICE	Police/Govern ment Offices	X	X	X	X	X		X	X								X	X			Non- burnable	
Jefferson Davis Sheriff	Police Station	X	X	X	X	X		X	X								X	X			Non- burnable	

		ATMOSPHERIC							GEOLOGIC			HYDROLOGIC			OTHER						
FACILITY NAME	FACILITY TYPE	Drought	Hailstorm	Hurricane and Tropical Storm	Lightning	Thunderstorm	Tornado	Winter Storm and Freeze	Earthquake	Landslide – Mod	Landslide- High	Dam and Levee Failure ¹⁹	Flood – 100 yr	Flood – 500 yr	Fixed HAZMAT 500m	Fixed HAZMAT 2,500 meter	Mobile HZMT Roads 500 METER	Mobile HZMT Roads 2,500 meter	Mobile HZMT Rails 500 METER	Mobile HZMT Rails 2,500 meter	Wildfire
Mississippi Dept Corrections	Police Station	X	X	X	X	X		X	X								X	X			Non- burnable
PRENTISS CHRISTIAN SCHOOL	School Safe Room	X	X	X	X	X		X	X									X			Moderate
PRENTISS CHRISTIAN SCHOOL	School	X	X	X	X	X	X	X	X									X			Moderate
PRENTISS CITY HALL	Government	X	X	X	X	X	X	X	X								X	X			Non- burnable
Prentiss Fire Department	Fire Department	X	X	X	X	X	X	X	X								X	X			Non- burnable
PRENTISS INSTITUTE (MAIN BLDG)(ROSENWALD BLDG)	School Safe Room	X	X	X	X	X		X	X									X			Non- burnable
PRENTISS REG HOSP & CARE FACIL	Care Facility	X	X	X	X	X	X	X	X								X	X			Non- burnable
PRENTISS REGIONAL EXTENDED CARE FACILITY	Care Facility	X	X	X	X	X	X	X	X								X	X			High
PRENTISS REGIONAL HOSPITAL	Care Facility	X	X	X	X	X	X	X	X								X	X			Non- burnable
PRENTISS SENIOR HIGH SCHOOL	School	X	X	X	X	X	X	X	X								X	X			Non- burnable
TOWN OF PRENTISS FIRE DEPT/POLICE DEPT	Police/Govern ment Offices	X	X	X	X	X		X	X								X	X			High
NEW MEDINAH ISLAMIC SCHOOL SYS	School	X	X	X	X	X		X	X												Moderate

C.4 JEFFERSON DAVIS COUNTY CAPABILITY ASSESSMENT

This subsection discusses the capability of Jefferson Davis County to implement hazard mitigation activities. More information on the purpose and methodology used to conduct the assessment can be found in Section 7: *Capability Assessment*.

C.4.1 Planning and Regulatory Capability

Table C.15 provides a summary of the relevant local plans, ordinances, and programs already in place or under development for Jefferson Davis County. A checkmark (✓) indicates that the given item is currently in place and being implemented. An asterisk (*) indicates that the given item is currently being developed for future implementation. Each of these local plans, ordinances, and programs should be considered available mechanisms for incorporating the requirements of the MEMA District 8 Regional Hazard Mitigation Plan.

TABLE C.15: RELEVANT PLANS, ORDINANCES, AND PROGRAMS

Planning Tool/Regulatory Tool	Hazard Mitigation Plan	Comprehensive Land Use Plan	Floodplain Management Plan	Open Space Management Plan (Parks & Rec/Greenway Plan	Stormwater Management Plan/Ordinance	Natural Resource Protection Plan	Flood Response Plan	Emergency Operations Plan	Continuity of Operations Plan	Evacuation Plan	Disaster Recovery Plan	Capital Improvements Plan	Economic Development Plan	Historic Preservation Plan	Flood Damage Prevention Ordinance	Zoning Ordinance	Subdivision Ordinance	Unified Development Ordinance	Post-Disaster Redevelopment Ordinance	Building Code	Fire Code	National Flood Insurance Program (NFIP)	NFIP Community Rating System
JEFFERSON DAVIS COUNTY	✓			✓				✓	✓				✓		✓							✓	✓
Bassfield	✓	✓		✓				✓					✓			✓	✓			✓	✓		
Prentiss	✓	✓		✓				✓					✓		✓	✓	✓			✓	✓	✓	✓

A more detailed discussion on the county's planning and regulatory capabilities follows.

EMERGENCY MANAGEMENT

Hazard Mitigation Plan

Jefferson Davis County has previously adopted a hazard mitigation plan. The Town of Bassfield and the Town of Prentiss were also included in this plan.

Emergency Operations Plan

Jefferson Davis County maintains an emergency operations plan through its Emergency Management Agency. The Town of Bassfield and the Town of Prentiss are each covered by this plan.

GENERAL PLANNING

Comprehensive Land Use Plan

Jefferson Davis County has not adopted a county comprehensive land use plan. However, the Town of Bassfield adopted a community development plan in 1972 and Town of Prentiss adopted a comprehensive plan in 1973.

Zoning Ordinance

Jefferson Davis County does not have a zoning ordinance in place. However, the Town of Bassfield and Town of Prentiss have zoning ordinances that were adopted in 1972 and 1973, respectively.

Subdivision Ordinance

Jefferson Davis County does not have a subdivision ordinance in place. However, the Town of Bassfield and Town of Prentiss adopted subdivision regulations in 1972 and 1966, respectively.

Building Codes, Permitting, and Inspections

Jefferson Davis County has not adopted a building code. However, the Town of Bassfield and the Town of Prentiss have both adopted building codes.

FLOODPLAIN MANAGEMENT

Table C.16 provides NFIP policy and claim information for each participating jurisdiction in Jefferson Davis County.

TABLE C.16: NFIP POLICY AND CLAIM INFORMATION

Jurisdiction	Date Joined NFIP	Current Effective Map Date	NFIP Policies in Force	Insurance in Force	Closed Claims	Total Payments to Date
JEFFERSON DAVIS COUNTY†	12/17/10	12/17/10(M)	7	\$762,600	0	\$0
Bassfield*	--	--	--	--	--	--
Prentiss	12/17/10	12/17/10(M)	0	\$0	2	\$4,613

†Includes unincorporated areas of county only

*Community does not participate in the NFIP

(M) – No Elevation Determined, All Zone A, C and X

Source: NFIP Community Status information as of 3/31/13; NFIP claims and policy information as of 5/15/13

Flood Damage Prevention Ordinance

All communities participating in the NFIP are required to adopt a local flood damage prevention ordinance. Jefferson Davis County and the Town of Prentiss both participate in the NFIP and have adopted flood damage prevention ordinances.

Open Space Management Plan

Jefferson Davis County, the Town of Bassfield, and the Town of Prentiss are all included in the Southern Mississippi Planning and Development District (SMPDD) Regional Open Space Plan that was written in 1973.

C.4.2 Administrative and Technical Capability

Table C.17 provides a summary of the capability assessment results for Jefferson Davis County with regard to relevant staff and personnel resources. A checkmark (✓) indicates the presence of a staff member(s) in that jurisdiction with the specified knowledge or skill.

TABLE C.17: RELEVANT STAFF / PERSONNEL RESOURCES

Staff / Personnel Resource	Planners with knowledge of land development/land management practices	Engineers or professionals trained in construction practices related to buildings and/or infrastructure	Planners or engineers with an understanding of natural and/or human-caused hazards	Emergency Manager	Floodplain Manager	Land Surveyors	Scientists familiar with the hazards of the community	Staff with education or expertise to assess the community's vulnerability to hazards	Personnel skilled in GIS and/or Hazus	Resource development staff or grant writers
JEFFERSON DAVIS COUNTY		✓		✓	✓		✓	✓	✓	✓
Bassfield		✓		✓	✓		✓	✓	✓	✓
Prentiss		✓		✓	✓		✓	✓	✓	✓

Credit for having a floodplain manager was given to those jurisdictions that have a flood damage prevention ordinance, and therefore an appointed floodplain administrator, regardless of whether the appointee was dedicated solely to floodplain management. Credit was given for having a scientist familiar with the hazards of the community if a jurisdiction has a Cooperative Extension Service or Soil and Water Conservation Department. Credit was also given for having staff with education or expertise to assess the community's vulnerability to hazards if a staff member from the jurisdiction was a participant on the existing hazard mitigation plan's planning committee.

C.4.3 Fiscal Capability

Table C.18 provides a summary of the results for Jefferson Davis County with regard to relevant fiscal resources. A checkmark (✓) indicates that the given fiscal resource is locally available for hazard mitigation purposes (including match funds for state and federal mitigation grant funds) according to the previous county hazard mitigation plan.

TABLE C.18: RELEVANT FISCAL RESOURCES

Fiscal Tool / Resource	Capital Improvement Programming	Community Development Block Grants (CDBG)	Special Purpose Taxes (or taxing districts)	Gas/Electric Utility Fees	Water/Sewer Fees	Stormwater Utility Fees	Development Impact Fees	General Obligation, Revenue, and/or Special Tax Bonds	Partnering Arrangements or Intergovernmental Agreements
JEFFERSON DAVIS COUNTY	✓	✓							✓
Bassfield	✓	✓							✓
Prentiss	✓	✓							✓

C.4.4 Political Capability

During the months immediately following a disaster, local public opinion in Jefferson Davis County is more likely to shift in support of hazard mitigation efforts.

C.5 JEFFERSON DAVIS COUNTY MITIGATION STRATEGY

This subsection provides the blueprint for Jefferson Davis County to follow in order to become less vulnerable to its identified hazards. It is based on general consensus of the Regional Hazard Mitigation Council and the findings and conclusions of the capability assessment and risk assessment. Additional Information can be found in Section 8: *Mitigation Strategy* and Section 9: *Mitigation Action Plan*.

C.5.1 Mitigation Goals

Jefferson Davis County developed five mitigation goals in coordination with the other participating MEMA District 8 Region jurisdictions. The regional mitigation goals are presented in **Table C.19**.

TABLE C.19: MEMA DISTRICT 8 REGIONAL MITIGATION GOALS

	Goal
Goal #1	Develop a sustainable, comprehensive mitigation program to ensure safer communities.
Goal #2	Reduce or avoid loss of life, injury, and damage to property, the economy, and the environment.
Goal #3	Enhance preparedness and effective response to hazards.

	Goal
Goal #4	Strengthen and improve local mitigation capabilities.
Goal #5	Increase public awareness of hazard mitigation, hazard risk, and protective measures that can be taken to minimize potential loss and damage.

C.5.2 Mitigation Action Plan

The mitigation actions proposed by Jefferson Davis County, the Town of Bassfield, and the Town of Prentiss are listed in the following individual Mitigation Action Plans.

Jefferson Davis County Mitigation Action Plan

Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2019 Action Implementation Status
Prevention								
P-1	Identify high risk areas where hazards are most likely to occur.	All	High	None needed	No additional cost	County	Annual review	Ongoing
P-2	Site-locate vulnerable population on a County-wide map.	Multiple	High	Area Agency on Aging, USDA Rural Dev., COPS, FIRE	Unknown	JDCEMA, County	Annual review	Ongoing
P-3	Strictly enforce the flood damage prevention ordinance.	FL	High	Self-funded	No additional cost	County Floodplain Administrator	Ongoing	Ongoing
P-4	Consider adoption of subdivision regulations in Jefferson Davis County.	TH, FL, HU, TS	High	Self-funded	No cost	County	2024	Ongoing
p-5	Continue to maintain and upgrade drainage facilities.	HU, TS, FL, BH	High	Self-funded	Part of annual County budget	County BOS, County Road Crews	Annual review	Ongoing
P-6	Consider adoption of a comprehensive drainage plan.	FL, TS, HU	Medium	CDBG, Small Muni. Grant, MSDA, USDA Rural Dev.	No additional cost	County	Within 5 years	The County is still considering this action
p-7	Map the easements and rights-of-way of roadways and drainage ways.	All	Low to Medium	CDBG, Small Muni. Grant, MSDA, USDA Rural Dev.	Unknown	County	Within 5 years	The County is still considering this action

Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2019 Action Implementation Status
P-8	Support the development of a shared geographic data system for land use and site planning.	All	Medium to High	Self-funded	No additional cost	County	2024	Ongoing
P-9	Develop a comprehensive development plan.	All	High	CDBG, MSDA	Unknown	County	Within 2 years	The County is still considering this action
P-10	Incorporate the hazard mitigation plan into the comprehensive plan.	All	Medium	CDBG, MSDA	No additional cost	County	Concurrent with prep. of Comp Plan	Pending status change in action P-9
Property Protection								
PP-1	Promote alternative construction techniques such as the building of “safe rooms” in new construction and when remodeling existing structures.	HU, TS, TO, TH	Medium	Self-funded	No additional cost	County	Within 5 years	Pending funding availability
PP-2	Ensure that structures in floodplain areas are elevated.	FL	High	Self-funded	No additional cost	County	Within 3 years	Ongoing/New construction is regulated by the flood damage prevention ordinance. Existing structures in the flood zone that need to be elevated will be evaluated on a case by case basis pending funding and desire to be elevated.
PP-3	Ensure that new public buildings are designed and built to hurricane resistant building codes.	HU, TS, TO, HW	High	Self-funded	No additional cost	County	Annual Review	Ongoing/Pending Funding availability
PP-4	Continue to retrofit public buildings and other critical facilities to withstand natural hazards.	All	High	HMGP	Unknown	County	Within 2 years; Next round of HMGP funding	Ongoing as funding becomes available

ANNEX B: JEFFERSON DAVIS COUNTY

Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2019 Action Implementation Status
PP-5	Ensure secure operation of water wells and wastewater treatment facilities.	All	High	HMGP, USDA Rural Dev., CDBG, Small Muni. Grant	Unknown	County	Within 5 years; Next round of HMGP funding	Ongoing pending funding availability
PP-6	Property Acquisitions and elevations of flood prone structures	FL	Medium	FEMA, HMGP, PDM	N/A	County	2024	New
PP-7	Construct new multipurpose EOC facility to serve as EOC and safe room for emergency personnel during disaster situations.	All Hazards	High	FEMA, HMGP, PGM Local Sources	\$3,000,000-\$10,000.00	County	2024	New
Natural Resource Protection								
NRP-1	Preserve natural wetlands and riparian areas through acquisition of conservation easements.	HU, TS, FL	Low to Medium	Donation	Low or no cost	MS Land Trust, Land Trust of MS Coastal Plain; County	Within 5 years	Ongoing pending funding availability
Emergency Services								
ES-1	Encourage participation by staff and elected officials in voluntary or extracurricular activities related to emergency management, disaster preparedness, civil defense, or other hazard mitigation activities.	All	Medium	Self-funded, MEMA	Low or no cost	JDCEMA	Annual Review	Ongoing
ES-2	Establish a notification procedure for populations in high risk areas.	All	Medium	Self-funded	No additional cost	JDCEMA, County	Ongoing	Completed/Ongoing
ES-3	Survey the existing emergency shelters and study the feasibility of expanding the capacity of shelters.	All	High	HMGP	Unknown	JDCEMA, County	Annual Review	Ongoing

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Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2019 Action Implementation Status
ES-4	Explore potential sites for a new special needs shelter.	TO, HU, TS, FL	High	HMGP	Unknown	JDCEMA, County	Completed	Completed/Ongoing
ES-5	Improve disaster communication systems within the County.	All	High	State, Federal, Local funds	Unknown	JDCEMA, County	Ongoing	Ongoing Pending Funding
ES-6	Consider generators for local radio station service areas.	All	High	State, Federal funds	Unknown	JDCEMA, County	Contingent upon funding	Deferred. No radio station within the county as of the last year.
ES-7	Install warning sirens in each jurisdiction.	All	High	State, Federal, Local funds	Unknown	JDCEMA, County	Contingent upon funding	Ongoing pending funding availability 2 sites have been completed in 2018
ES-8	Explore upgrade/enhancement of 911 system in Jefferson Davis County.	All	Medium	HMGP	Unknown	JDCEMA, County Sheriff	Contingent upon funding	Ongoing – contingent on funding
ES-9	Explore potential to install Reverse 911 system.	All	Low to Medium	HMGP	Unknown	JDCEMA, County Sheriff	Contingent upon funding	Ongoing – contingent on funding
ES-10	Coordinate with neighboring jurisdictions to ensure consistency of evacuation plans.	FL, HU, TS, Others	Medium	Self-funded	No additional cost	County BOS, JDCEMA	Annual Review	Ongoing
ES-11	Enhance identification of evacuation routes through distribution of MDOT maps.	FL, HU, TS, Others	High	Self-funded	No additional cost	JDCEMA	Ongoing	Ongoing
ES-12	Ensure continuity of utility services for public buildings and other critical facilities.	All	High	HMGP	Unknown	County	Ongoing – contingent on funding	Ongoing – contingent on funding
ES-13	Develop a government services continuity plan.	All	Medium	USDA Rural Dev., CDBG, Small Muni. Grant	Unknown	County	Within 5 years; Annual review	Ongoing – contingent on funding

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Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2019 Action Implementation Status
ES-14	Host a meeting to review Jefferson Davis County Comprehensive Emergency Management Plan.	TT	Medium	Self-funded	No additional cost	County	Annual Review	Ongoing as needed
ES-15	Actively search for and identify funding sources for the enhancement of emergency response abilities of Fire and Sheriff's Departments.	TT	Medium to High	DHS, SAFER, COPS, FIRE, Others	Unknown	County	Ongoing	Ongoing – contingent on funding
Structural Projects								
SP-1	Address cross-jurisdictional issues related to response, recovery and mitigation on key projects with overlapping boundaries.	HU, TS, FL, RH	Low to Medium	Self-funded	No additional cost	County	Within 2 years	Ongoing as needed
Public Education and Awareness								
PEA-1	Explore continuing education programs/ opportunities for staff and elected officials.	FL, TH, HU, TS	Medium	Self-funded, MEMA	Low cost	County	Ongoing	Ongoing – contingent on funding
PEA-2	Provide education and outreach materials to citizens and visitors.	All	High	Self-funded	No cost	JDCEMA	Ongoing	Ongoing – contingent on funding
PEA-3	Encourage the development of Family Disaster Plans.	All	High	Self-funded, COPS, FIRE	Low or no cost	JDCEMA	Annual presentations	Ongoing – contingent on funding
PEA-4	Expand outreach information to property owners regarding retrofitting and flood-proofing techniques through community workshops, brochures, and newspaper articles.	FL, Multiple	High	Self-funded	No additional cost	JDCEMA, County	Upon request	Ongoing – contingent on funding
PEA-5	Provide education/outreach to communities to encourage participation in the National Flood Insurance Program.	FL	High	Self-funded	N/A	JDCEMA, County	Ongoing	Ongoing

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Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2019 Action Implementation Status
PEA-6	Encourage participation in the Community Rating System of the NFIP.	FL, HU, TS, TH, HW	Medium	USDA Rural Dev., CDBG, Small Muni. Grant, FEMA, Others	Unknown	County	Ongoing	The County is still considering joining the CRS.
PEA-7	Encourage businesses to develop business continuity or contingency operating plans.	CH	High	DHS, SAFER, COPS, FIRE, Others		County	Ongoing	Ongoing – contingent on funding
PEA-8	Develop/encourage water conservation measures during times of shortage	Drought	Medium	HMGP	N/A	County	2024	New
FL = Flood TH = Thunderstorm HU = Hurricane TS = Tropical Storm TO = Tornado BH = Biological Hazards HW = High Winds TT = Transportation and Technological Hazards RH = Roadway Hazards CH = Civil Hazards JDCEMA = Jefferson Davis County Emergency Management Agency County BOS = Jefferson Davis County Board of Supervisors								

Town of Bassfield Mitigation Action Plan

Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2013 Action Implementation Status
Prevention								
P-1	Identify high risk areas where hazards are most likely to occur.	All	High	Self-funded	No additional cost	County, Town	Annual review	Ongoing
P-2	Site-locate vulnerable population on a County-wide map.	Multiple	High	Area Agency on Aging, USDA Rural Dev., COPS, FIRE	No additional cost	JDCEMA, County, Town	Annual review	Ongoing
P-3	Strictly enforce the flood damage prevention ordinance.	FL	High	Self-funded	No additional cost	Town Floodplain Administrator	Ongoing	Ongoing
P-4	Strictly enforce subdivision regulations concerning developments in flood hazard areas.	FL	High	Self-funded	No additional cost	Town	2024	Ongoing
P-5	Continue to maintain and upgrade drainage facilities.	HU, TS, FL, BH	High	Self-funded	Budget restraints	County BOS, County Road Crews, Town	Annual review	Ongoing
P-6	Consider adoption of a comprehensive drainage plan.	FL, TS, HU	Medium	CDBG, Small Muni. Grant, MSDA, USDA Rural Dev.	Unknown	County, Town	Within 5 years	The County is still considering this action
P-7	Map the easements and rights-of-way of roadways and drainage ways.	All	Low to Medium	CDBG, Small Muni. Grant, MSDA, USDA Rural Dev.	Unknown	County, Town	Within 5 years	The County is still considering this action

Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2013 Action Implementation Status
P-8	Support the development of a shared geographic data system for land use and site planning.	All	Medium to High	Self-funded	No additional cost	County, Town	2024	Ongoing
P-9	Develop a comprehensive development plan.	All	High	CDBG, MSDA	Unknown	County, Town	Within 2 years	The County is still considering this action
P-10	Incorporate the hazard mitigation plan into the comprehensive plan.	All	Medium	Self-funded	No additional cost	County, Town	Concurrent with prep. of Comp Plan	Pending status change in action P-9
Property Protection								
PP-1	Promote alternative construction techniques such as the building of "safe rooms" in new construction and when remodeling existing structures.	HU, TS, TO, TH	Medium	Self-funded	No additional cost	County, Town	Within 5 years	Pending funding availability
PP-2	Ensure that structures in floodplain areas are elevated.	FL	High	Self-funded	No additional cost	County, Town	Within 3 years	Ongoing/New construction is regulated by the flood damage prevention ordinance. Existing structures in the flood zone that need to be elevated will be evaluated on a case by case basis pending funding and desire to be elevated.
PP-3	Ensure that new public buildings are designed and built to hurricane resistant building codes.	HU, TS, TO, HW	High	Self-funded	No additional cost	County, Town	Annual Review	Ongoing/Pending Funding availability
PP-4	Continue to retrofit public buildings and other critical facilities to withstand natural hazards.	All	High	HMGP	Budget restraints	County, Town	Within 2 years; Next round of HMGP funding	Ongoing as funding becomes available

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Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2013 Action Implementation Status
PP-5	Ensure secure operation of water wells and wastewater treatment facilities.	All	High	HMGP, USDA Rural Dev., CDBG, Small Muni. Grant	Unknown	County, Town	Within 5 years; Next round of HMGP funding	Ongoing pending funding availability
PP-6	Property Acquisitions and elevations of flood prone structures	FL	Medium	FEMA, HMGP, PDM	N/A	County	2024	New
PP-7	Construct new multipurpose EOC facility to serve as EOC and safe room for emergency personnel during disaster situations.	All Hazards	High	FEMA, HMGP, PGM Local Sources	\$3,000,000-\$10,000.00	County	2024	New
Natural Resource Protection								
NRP-1	Preserve natural wetlands and riparian areas through acquisition of conservation easements.	HU, TS, FL	Low to Medium	Donation	Low or no cost	MS Land Trust, Land Trust of MS Coastal Plain; County, Town	Within 5 years	Ongoing pending funding availability
Emergency Services								
ES-1	Encourage participation by staff and elected officials in voluntary or extracurricular activities related to emergency management, disaster preparedness, civil defense, or other hazard mitigation activities.	All	Medium	Self-funded, MEMA	Low or no cost	JDCEMA	Annual Review	Ongoing
ES-2	Establish a notification procedure for populations in high risk areas.	All	Medium	Self-funded	No additional cost	JDCEMA, Town	Ongoing	Completed/Ongoing
ES-3	Survey the existing emergency shelters and study the feasibility of expanding the capacity of shelters.	All	High	HMGP	Unknown	JDCEMA, County, Town	Annual Review	Ongoing

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Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2013 Action Implementation Status
ES-4	Explore potential sites for a new special needs shelter.	TO, HU, TS, FL	High	HMGP	Unknown	JDCEMA, County, Town	Completed	Completed/Ongoing
ES-5	Improve disaster communication systems within the County.	All	High	State, Federal, Local funds	Unknown	JDCEMA, County	Ongoing	Ongoing Pending Funding
ES-6	Consider generators for local radio station service areas.	TO, HU, TS	High	State, Federal funds	Unknown	JDCEMA, County	Contingent upon funding	Deferred. No radio station within the county as of the last year.
ES-7	Install warning sirens in each jurisdiction.	TO, HU, TS	High	State, Federal, Local funds	Unknown	JDCEMA, County	Contingent upon funding	Ongoing pending funding availability 2 sites have been completed in 2018
ES-8	Explore upgrade/enhancement of 911 system in Jefferson Davis County.	All	Medium	HMGP	Unknown	JDCEMA, County, Town	Contingent upon funding	Ongoing – contingent on funding
ES-9	Explore potential to install Reverse 911 system.	All	Low to Medium	HMGP	Unknown	JDCEMA, County, Town	Contingent upon funding	Ongoing – contingent on funding
ES-10	Coordinate with neighboring jurisdictions to ensure consistency of evacuation plans.	FL, HU, TS, Others	Medium	Self-funded	No additional cost	County BOS, JDCEMA, Town	Annual Review	Ongoing
ES-11	Enhance identification of evacuation routes through distribution of MDOT maps.	FL, HU, TS, Others	High	Self-funded	No additional cost	JDCEMA	Ongoing	Ongoing
ES-12	Ensure continuity of utility services for public buildings and other critical facilities.	All	High	HMGP	No additional costs	County, Town	Ongoing – contingent on funding	Ongoing – contingent on funding
ES-13	Develop a government services continuity plan.	All	Medium	USDA Rural Dev., CDBG, Small Muni. Grant	Unknown	County, Town	Within 5 years; Annual review	Ongoing – contingent on funding

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Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2013 Action Implementation Status
ES-14	Host a meeting to review Jefferson Davis County Comprehensive Emergency Management Plan.	TT	Medium	Self-funded	No additional cost	County, Town	Annual Review	Ongoing as needed
ES-15	Actively search for and identify funding sources for the enhancement of emergency response abilities of Fire and Sheriff's Departments.	TT	Medium to High	DHS, SAFER, COPS, FIRE, Others	Unknown	County, Town	Ongoing	Ongoing – contingent on funding
Structural Projects								
SP-1	Address cross-jurisdictional issues related to response, recovery and mitigation on key projects with overlapping boundaries.	HU, TS, FL, RH	Low to Medium	Self-funded	No additional cost	County, Town	Within 2 years	Ongoing
Public Education and Awareness								
PEA-1	Explore continuing education programs/ opportunities for staff and elected officials.	FL, TH, HU, TS	Medium	Self-funded, MEMA	Low cost	County, Town	Ongoing	Ongoing – contingent on funding
PEA-2	Provide education and outreach materials to citizens and visitors.	All	High	Self-funded	No cost	JDCEMA	Ongoing	Ongoing – contingent on funding
PEA-3	Encourage the development of Family Disaster Plans.	All	High	Self-funded, COPS, FIRE	Low or no cost	JDCEMA	Annual presentations	Ongoing – contingent on funding
PEA-4	Expand outreach information to property owners regarding retrofitting and flood-proofing techniques through community workshops, brochures, and newspaper articles.	FL, Multiple	High	Self-funded	No additional cost	JDCEMA, County, Town	Upon request	Ongoing – contingent on funding
PEA-5	Provide education/outreach to communities to encourage participation in the National Flood Insurance Program.	FL	High	Self-funded	N/A	JDCEMA, County	Ongoing	Ongoing

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Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2013 Action Implementation Status
PEA-6	Encourage participation in the Community Rating System of the NFIP.	FL, HU, TS, TH, HW	Medium	USDA Rural Dev., CDBG, Small Muni. Grant, FEMA, Others	Unknown	County, Town	Ongoing	The County is still considering joining the CRS.
PEA-7	Encourage businesses to develop business continuity or contingency operating plans.	CH	High	DHS, SAFER, COPS, FIRE, Others	Unknown	County, Town	Ongoing	Ongoing – contingent on funding
PEA-8	Develop/encourage water conservation measures during times of shortage	Drought	Medium	HMGP	N/A	County	2024	New
FL = Flood TH = Thunderstorm HU = Hurricane TS = Tropical Storm TO = Tornado BH = Biological Hazards HW = High Winds TT = Transportation and Technological Hazards RH = Roadway Hazards CH = Civil Hazards JDCEMA = Jefferson Davis County Emergency Management Agency County BOS = Jefferson Davis County Board of Supervisors								

Town of Prentiss Mitigation Action Plan

Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2013 Action Implementation Status
Prevention								
P-1	Identify high risk areas where hazards are most likely to occur.	All	High	None needed	No additional cost	County	Annual review	Ongoing
P-2	Site-locate vulnerable population on a County-wide map.	Multiple	High	Area Agency on Aging, USDA Rural Dev., COPS, FIRE	Unknown	JDCEMA, County	Annual review	Ongoing
P-3	Strictly enforce the flood damage prevention ordinance.	FL	High	Self-funded	No additional cost	County Floodplain Administrator	Ongoing	Ongoing
P-4	Strictly enforce subdivision regulations concerning developments in flood hazard areas.	TH, FL, HU, TS	High	Self-funded	No cost	County	2024	Ongoing
p-5	Continue to maintain and upgrade drainage facilities.	HU, TS, FL, BH	High	Self-funded	Part of annual County budget	County BOS, County Road Crews	Annual review	Ongoing
P-6	Consider adoption of a comprehensive drainage plan.	FL, TS, HU	Medium	CDBG, Small Muni. Grant, MSDA, USDA Rural Dev.	No additional cost	County	Within 5 years	The County is still considering this action

Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2013 Action Implementation Status
P-7	Map the easements and rights-of-way of roadways and drainage ways.	All	Low to Medium	CDBG, Small Muni. Grant, MSDA, USDA Rural Dev.	Unknown	County	Within 5 years	The County is still considering this action
P-8	Support the development of a shared geographic data system for land use and site planning.	All	Medium to High	Self-funded	No additional cost	County	2024	Ongoing
P-9	Update the existing Prentiss Comprehensive Development Plan.	All	High	CDBG, MSDA	Unknown	County	Within 2 years	The County is still considering this action
P-10	Incorporate the hazard mitigation plan into the comprehensive plan.	All	Medium	CDBG, MSDA	No additional cost	County	Concurrent with prep. of Comp Plan	Pending status change in action P-9
Property Protection								
PP-1	Promote alternative construction techniques such as the building of "safe rooms" in new construction and when remodeling existing structures.	HU, TS, TO, TH	HU, TS, TO, TH	Medium	Self-funded	No additional cost	Within 5 years	Pending funding availability
PP-2	Ensure that structures in floodplain areas are elevated.	FL	FL	High	Self-funded	No additional cost	Within 3 years	Ongoing/New construction is regulated by the flood damage prevention ordinance. Existing structures in the flood zone that need to be elevated will be evaluated on a case by case basis pending funding and desire to be elevated.

Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2013 Action Implementation Status
PP-3	Ensure that new public buildings are designed and built to hurricane resistant building codes.	HU, TS, TO, HW	HU, TS, TO, HW	High	Self-funded	No additional cost	Annual Review	Ongoing/Pending Funding availability
PP-4	Continue to retrofit public buildings and other critical facilities to withstand natural hazards.	All	All	High	HMGP	Unknown	Within 2 years; Next round of HMGP funding	Ongoing as funding becomes available
PP-5	Ensure secure operation of water wells and wastewater treatment facilities.	All	High	HMGP, USDA Rural Dev., CDBG, Small Muni. Grant	Unknown	County, Town	Within 5 years; Next round of HMGP funding	Ongoing pending funding availability
PP-6	Property Acquisitions and elevations of flood prone structures	FL	Medium	FEMA, HMGP, PDM	N/A	County	2024	New
PP-7	Construct new multipurpose EOC facility to serve as EOC and safe room for emergency personnel during disaster situations.	All Hazards	High	FEMA, HMGP, PGM Local Sources	\$3,000,000-\$10,000.00	County	2024	New
Natural Resource Protection								
NRP-1	Preserve natural wetlands and riparian areas through acquisition of conservation easements.	HU, TS, FL	Low to Medium	Donation	Low or no cost	MS Land Trust, Land Trust of MS Coastal Plain; County, Town	Within 5 years	Ongoing pending funding availability
Emergency Services								
ES-1	Encourage participation by staff and elected officials in voluntary or extracurricular activities related to emergency management, disaster preparedness, civil defense, or other hazard mitigation activities.	All	Medium	Self-funded, MEMA	Low or no cost	JDCEMA	Annual Review	Ongoing

ANNEX B: JEFFERSON DAVIS COUNTY

Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2013 Action Implementation Status
ES-2	Establish a notification procedure for populations in high risk areas.	All	Medium	Self-funded	No additional cost	JDCEMA, County	Ongoing	Completed/Ongoing
ES-3	Survey the existing emergency shelters and study the feasibility of expanding the capacity of shelters.	All	High	HMGP	Unknown	JDCEMA, County	Annual Review	Ongoing
ES-4	Explore potential sites for a new special needs shelter.	TO, HU, TS, FL	High	HMGP	Unknown	JDCEMA, County	Completed	Completed/Ongoing
ES-5	Improve disaster communication systems within the County.	All	High	State, Federal, Local funds	Unknown	JDCEMA, County	Ongoing	Ongoing Pending Funding
ES-6	Consider generators for local radio station service areas.	All	High	State, Federal funds	Unknown	JDCEMA, County	Contingent upon funding	Deferred. No radio station within the county as of the last year.
ES-7	Install warning sirens in each jurisdiction.	All	High	State, Federal, Local funds	Unknown	JDCEMA, County	Contingent upon funding	Ongoing pending funding availability 2 sites have been completed in 2018
ES-8	Explore upgrade/enhancement of 911 system in Jefferson Davis County.	All	Medium	HMGP	Unknown	JDCEMA, County	Contingent upon funding	Ongoing – contingent on funding
ES-9	Explore potential to install Reverse 911 system.	All	Low to Medium	HMGP	Unknown	JDCEMA, County	Contingent upon funding	Ongoing – contingent on funding
ES-10	Coordinate with neighboring jurisdictions to ensure consistency of evacuation plans.	FL, HU, TS, Others	Medium	Self-funded	No additional cost	County BOS, JDCEMA	Annual Review	Ongoing
ES-11	Enhance identification of evacuation routes through distribution of MDOT maps.	FL, HU, TS, Others	High	Self-funded	No additional cost	JDCEMA	Ongoing	Ongoing
ES-12	Ensure continuity of utility services for public buildings and other critical facilities.	All	High	HMGP	Unknown	County	Ongoing – contingent on funding	Ongoing – contingent on funding

Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2013 Action Implementation Status
ES-13	Develop a government services continuity plan.	All	Medium	USDA Rural Dev., CDBG, Small Muni. Grant	Unknown	County	Within 5 years; Annual review	Ongoing – contingent on funding
ES-14	Host a meeting to review Jefferson Davis County Comprehensive Emergency Management Plan.	TT	Medium	Self-funded	No additional cost	County	Annual Review	Ongoing as needed
ES-15	Actively search for and identify funding sources for the enhancement of emergency response abilities of Fire and Sheriff's Departments.	TT	Medium to High	DHS, SAFER, COPS, FIRE, Others	Unknown	County	Ongoing	Ongoing – contingent on funding
Structural Projects								
SP-1	Address cross-jurisdictional issues related to response, recovery and mitigation on key projects with overlapping boundaries.	HU, TS, FL, RH	Low to Medium	Self-funded	No additional cost	County, Town	Within 2 years	Ongoing as needed
Public Education and Awareness								
PEA-1	Explore continuing education programs/ opportunities for staff and elected officials.	FL, TH, HU, TS	Medium	Self-funded, MEMA	Low cost	County, Town	Ongoing	Ongoing – contingent on funding
PEA-2	Provide education and outreach materials to citizens and visitors.	All	High	Self-funded	No cost	JDCEMA	Ongoing	Ongoing – contingent on funding
PEA-3	Encourage the development of Family Disaster Plans.	All	High	Self-funded, COPS, FIRE	Low or no cost	JDCEMA	Annual presentations	Ongoing – contingent on funding
PEA-4	Expand outreach information to property owners regarding retrofitting and flood-proofing techniques through community workshops, brochures, and newspaper articles.	FL, Multiple	High	Self-funded	No additional cost	JDCEMA, County, Town	Upon request	Ongoing – contingent on funding

Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2013 Action Implementation Status
PEA-5	Provide education/outreach to communities to encourage participation in the National Flood Insurance Program.	FL	High	Self-funded	N/A	Town	Ongoing	Ongoing
PEA-6	Encourage participation in the Community Rating System of the NFIP.	FL, HU, TS, TH, HW	Medium	USDA Rural Dev., CDBG, Small Muni. Grant, FEMA, Others	Unknown	County, Town	Ongoing	The County is still considering joining the CRS.
PEA-7	Encourage businesses to develop business continuity or contingency operating plans.	CH	High	DHS, SAFER, COPS, FIRE, Others	Unknown	County, Town	Ongoing	Ongoing – contingent on funding
PEA-8	Develop/encourage water conservation measures during times of shortage	Drought	Medium	HMGP	N/A	County	2024	New
FL = Flood TH = Thunderstorm HU = Hurricane TS = Tropical Storm TO = Tornado BH = Biological Hazards HW = High Winds TT = Transportation and Technological Hazards RH = Roadway Hazards CH = Civil Hazards JDCEMA = Jefferson Davis County Emergency Management County BOS = Jefferson Davis County Board of Supervisors								

ⁱ USGS. Landslide Hazard, Retrieved August 2019 from, <https://www.usgs.gov/natural-hazards/landslide-hazards/science/rainfall-induced-landslides>

Annex D

Jones County

This annex includes jurisdiction-specific information for Jones County and its participating municipalities. It consists of the following five subsections:

- ❖ D.1 Jones County Community Profile
- ❖ D.2 Jones County Risk Assessment
- ❖ D.3 Jones County Vulnerability Assessment
- ❖ D.4 Jones County Capability Assessment
- ❖ D.5 Jones County Mitigation Strategy

D.1 JONES COUNTY COMMUNITY PROFILE

D.1.1 Geography and the Environment

Jones County is located in southeastern Mississippi. It comprises four municipalities, the City of Ellisville, the City of Laurel, the Town of Sandersville, and the Town of Soso, as well as many small unincorporated communities. An orientation map is provided as **Figure D.1**.

The county is made up of pine forests and streams. The total area of the county is 700 square miles, 5 square miles of which is water area.

In Jones County, the summers are long, hot, and muggy; the winters are short and cold; and it is wet and partly cloudy year-round. Over the course of the year, the temperature typically varies from 39°F to 91°F and is rarely below 25°F or above 97°F.

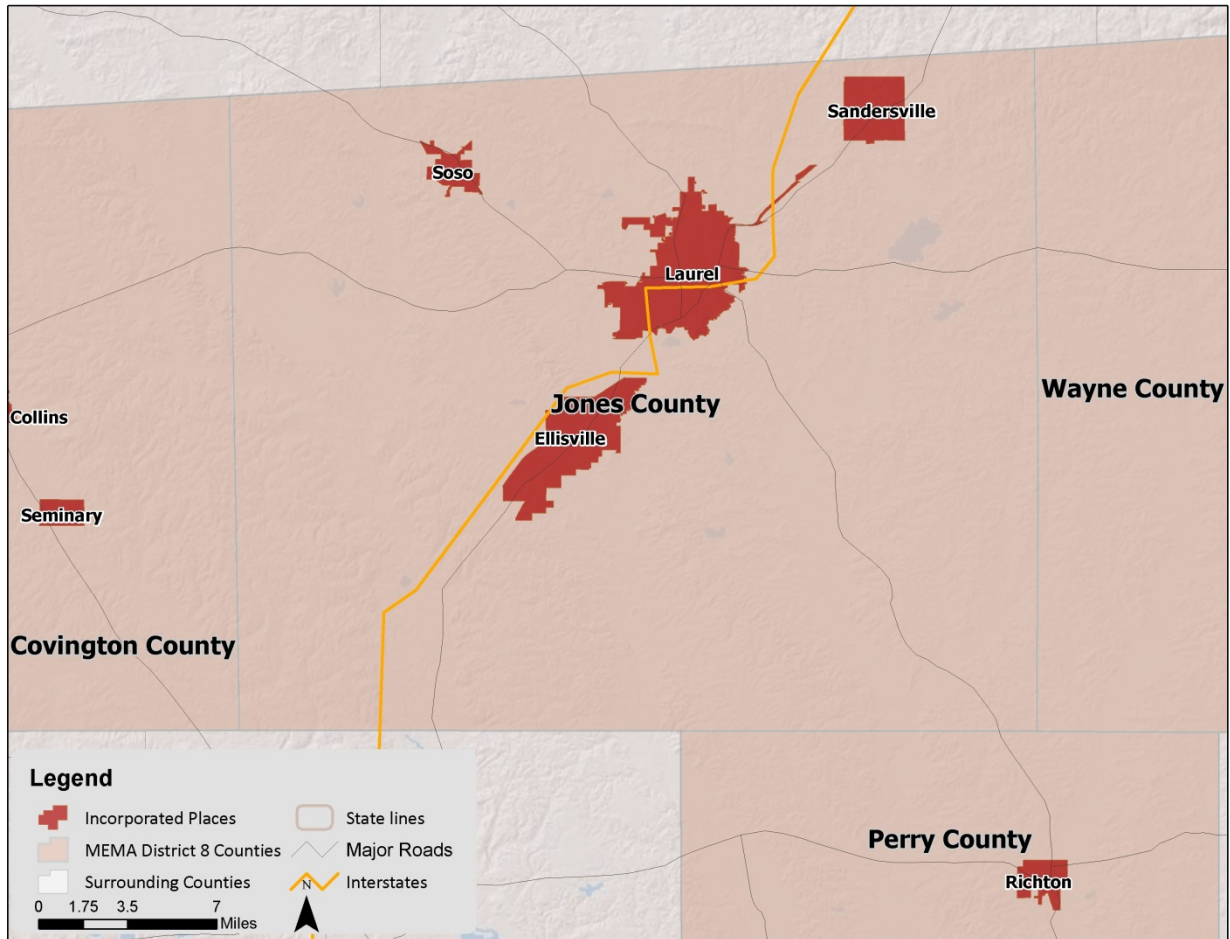
The hot season lasts for 4.1 months, from May 21 to September 25, with an average daily high temperature above 85°F. The hottest day of the year is July 22, with an average high of 91°F and low of 72°F. The cool season lasts for 2.8 months, from November 30 to February 23, with an average daily high temperature below 65°F. The coldest day of the year is January 17, with an average low of 39°F and high of 59°F.

A wet day is one with at least 0.04 inches of liquid or liquid-equivalent precipitation. The chance of wet days in Jones County varies significantly throughout the year. The wetter season lasts 3.0 months, from May 28 to August 27, with a greater than 36% chance of a given day being a wet day. The chance of a wet day peaks at 52% on July 25. The drier season lasts 9.0 months, from August 27 to May 28. The smallest chance of a wet day is 20% on October 8. Among wet days, we distinguish between those that experience rain alone, snow alone, or a mixture of the two. Based on this categorization, the most common form of precipitation throughout the year is rain alone, with a peak probability of 52% on July 25.

Rain falls throughout the year in Ellisville. The most rain falls during the 31 days centered around February 15, with an average total accumulation of 5.5 inches.

The least rain falls around October 5, with an average total accumulation of 3.1 inches.

FIGURE D.1: JONES COUNTY ORIENTATION MAP



D.1.2 Population and Demographics

According to the 2010 Census, Jones County has a population of 67,761 people. The county has seen just over 4% growth between 2000 and 2010, and the population density is 98 people per square mile. The growth continues. Per the Census Reports, in 2017, Jones County had a population of 67,930, which is a .22 percent increase since 2010. The household income is \$38,656, which grew 2.14 percent. Population counts from the US Census Bureau for 1990, 2000, and 2010 for the county and both of the participating jurisdictions are presented in **Table D.1**.

TABLE D.1: POPULATION COUNTS FOR JONES COUNTY

Jurisdiction	1990 Census Population	2000 Census Population	2010 Census Population	% Change 2000-2010	Estimated 2017 Census Population
Jones County	62,031	64,958	67,761	4.3%	67,930
Ellisville	3,634	3,465	4,448	28.4%	4,549

Jurisdiction	1990 Census Population	2000 Census Population	2010 Census Population	% Change 2000-2010	Estimated 2017 Census Population
Laurel	18,827	18,393	18,540	0.8%	18,478
Sandersville	853	789	731	-7.4%	779
Soso	366	379	408	7.7%	542

Source: US Census Bureau

Based on the 2010 Census, the median age of residents of Jones County is 36.8 years. Per 2017 estimates, the median age has increased slightly to 37.1 years. The racial characteristics of the county are presented in **Table D.2** and will remain the same as the census data has not been officially updated. Due to the population increase, the racial characteristics differ slightly. The population is 29 percent for black or African American persons, 4.7 percent Hispanic or Latino. Whites make up the majority of the population in the county, accounting for 64.9 percent of the population.

TABLE D.2: DEMOGRAPHICS OF JONES COUNTY

Jurisdiction	White Persons, Percent (2010)	Black Persons, Percent (2010)	American Indian or Alaska Native, Percent (2010)	Other Race, Percent (2010)	Persons of Hispanic Origin, Percent (2010)*
Jones County	67.2%	28.3%	0.5%	3.1%	4.7%
Ellisville	62.7%	35.3%	0.1%	1.8%	2.2%
Laurel	32.4%	61.3%	0.1%	6.1%	7.7%
Sandersville	92.6%	6.0%	0.7%	0.7%	0.8%
Soso	79.2%	20.3%	0.0%	0.5%	2.2%

*Hispanics may be of any race, so also are included in applicable race categories

Source: US Census Bureau

D.1.3 Housing

According to the 2010 US Census, there are 28,424 housing units in Jones County, the majority of which are single family homes or mobile homes. Per 2018 estimates, the total number of housing units increased to 28,861 units. The median home value is \$80,100, which also increased by at least 8.24 percent. Housing information for the county and four towns is presented in **Table D.3**. As shown in the table, the four incorporated towns have similar percentages of seasonal housing units compared to the unincorporated county.

TABLE D.3: HOUSING CHARACTERISTICS OF JONES COUNTY

Jurisdiction	Housing Units (2000)	Housing Units (2010)	Seasonal Units, Percent (2010)	Median Home Value (2006-2010)	Housing Units (2018)	Median Home Value (2018)
Jones County	26,921	28,424	1.1%	\$85,000	28,868	\$85,600
Ellisville	1,380	1,490	0.8%	\$79,300	1,499	\$86,356
Laurel	7,804	6,726	0.8%	\$81,600	7,721	\$90,909
Sandersville	350	302	0.7%	\$49,600	358	\$127,027

Jurisdiction	Housing Units (2000)	Housing Units (2010)	Seasonal Units, Percent (2010)	Median Home Value (2006-2010)	Housing Units (2018)	Median Home Value (2018)
Soso	174	178	0.0%	\$85,300	181	\$125,000

Source: US Census Bureau

D.1.4 Infrastructure

TRANSPORTATION

Jones County is served by US Interstate 59, US Highways 11 and 84, the Canadian National Railroad, and the Norfolk Southern Railway. Freight and passenger rail services are available in the county.

Jones County also enjoys the close proximity of the Jackson International Airport as well as the Hattiesburg-Laurel Regional Airport.

Rail service to the area is provided by Norfolk Southern Railroad, but there is no passenger service offered at this time.

UTILITIES

Electrical power in Jones County is provided by several sources, including Dixie Electric Power Association (EPA), Mississippi Power Company, South Mississippi EPA, and Southern Pine EPA.

Water and sewer services are provided to residents by a variety of rural water associations and sewer treatment providers.

COMMUNITY FACILITIES

There are a number of buildings and community facilities located throughout Jones County. According to the data collected for the vulnerability assessment (Section 6.4.1), there are 2 fire stations, 3 police stations, and 22 public schools located within the county.

There is one hospital located in Jones County. South Central Regional Medical Center is a 285-bed medical-surgical hospital located in the City of Laurel.

A portion of the De Soto National Forest is located in the southeast corner of Jones County, as well as the Bogue Homa Indian Reservation, which is east of Sandersville.

D.1.5 Land Use

Many areas of Jones County are undeveloped or sparsely developed due to the county's location just off the Gulf Coast and the conservation of land in state and national parks. There are a few incorporated municipalities located throughout the region, and these areas are where the region's population is generally concentrated. The incorporated areas are also where many businesses, commercial uses, and

institutional uses are located. Land uses in the balance of the county generally consist of rural residential development, agricultural uses, and recreational areas.

D.1.6 Employment and Industry

According to the Mississippi Employment Security Commission, in 2019, Jones County had an average annual employment of 27,860 workers in 2018 and an average unemployment rate of 4.8 percent. According to the MESC, in 2018, the Government Agencies employed the most people, with 25.1 percent of the workforce, followed by Manufacturing (23.7%) and Retail Trade (10.4%). The average annual wage in Jones County was \$ 39,310.

D.2 JONES COUNTY RISK ASSESSMENT

This subsection includes hazard profiles for each of the significant hazards identified in Section 4: *Hazard Identification* as they pertain to Jones County. Each hazard profile includes a description of the hazard's location and extent, notable historical occurrences, and the probability of future occurrences. Additional information can be found in Section 5: *Hazard Profiles*.

D.2.1 Flood

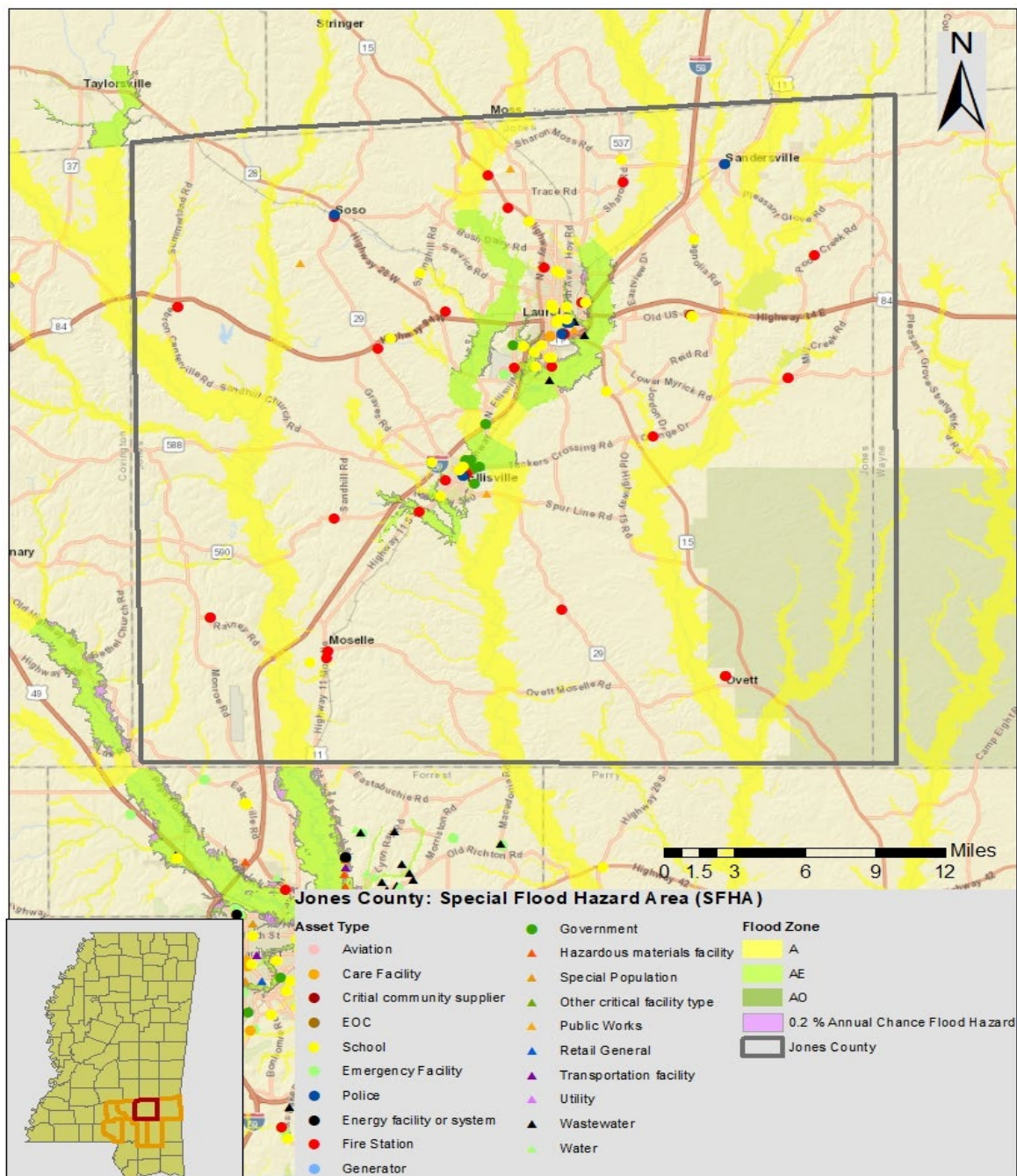
LOCATION AND SPATIAL EXTENT

There are areas in Jones County that are susceptible to flood events. Special flood hazard areas in the county were mapped using Geographic Information System (GIS) and FEMA Digital Flood Insurance Rate Maps (DFIRM).¹ This includes Zone A (1-percent annual chance floodplain), Zone AE (1-percent annual chance floodplain with elevation), and the 0.2-percent annual chance floodplain). According to GIS analysis, of the 695 square miles that make up Jones County, there are 137 square miles of land in zones A and AE (1-percent annual chance floodplain/100-year floodplain) and 1 square mile of land in the 0.2-percent annual chance floodplain (500-year floodplain).

These flood zone values account for 19.9 percent of the total land area in Jones County. It is important to note that while FEMA digital flood data is recognized as best available data for planning purposes, it does not always reflect the most accurate and up-to-date flood risk. Flooding and flood-related losses often do occur outside of delineated special flood hazard areas.

¹ The county-level DFIRM data used for Jones County were updated in 2010.

FIGURE D.2: SPECIAL FLOOD HAZARD AREAS IN JONES COUNTY



Source: Federal Emergency Management Agency

HISTORICAL OCCURRENCES

Floods resulted in four disaster declarations in Jones County in 1973, 1974, 1987, and 1990.² Information from the National Centers for Environmental Information was used to ascertain historical flood events. The National Centers for Environmental Information reported a total of 156 events in Jones County since

²A complete listing of historical disaster declarations can be found in Section 4: Hazard Identification.

1994.³ A summary of these events is presented in **Table D.4**. These events accounted for over \$6.0 million in property damage in the county. Specific information on flood events, including date, type of flooding, and deaths and injuries, can be found in **Table D.5**.

TABLE D.4: SUMMARY OF FLOOD OCCURRENCES IN JONES COUNTY

Location	Number of Occurrences	Deaths / Injuries	Property Damage (2013)
Ellisville	9	0/0	\$62,387
Laurel	35	0/0	\$1,265,051
Sandersville	4	0/0	\$35,855
Soso	2	0/0	\$8,000
Unincorporated Area	106	0/0	\$4,633,189
JONES COUNTY TOTAL	156	0/0	\$6,004,482

Source: National Centers for Environmental Information

TABLE D.5: HISTORICAL FLOOD EVENTS IN JONES COUNTY

Location	Date	Type	Deaths / Injuries	Property Damage*
Ellisville				
Ellisville	13-JAN-05	FLASH FLOOD	0/0	\$6,334
Ellisville	21-AUG-09	FLASH FLOOD	0/0	\$1,126
Ellisville	04-FEB-10	FLASH FLOOD	0/0	\$10,927
Ellisville	05-JUL-15	FLASH FLOOD	0/0	\$3,000
Ellisville	23-DEC-15	FLASH FLOOD	0/0	\$5,000
Ellisville	03-MAR-16	FLASH FLOOD	0/0	\$10,000
Ellisville	06-JUN-17	FLASH FLOOD	0/0	\$10,000
Ellisville	16-JUN-17	FLASH FLOOD	0/0	\$1,000
Ellisville	09-AUG-17	FLASH FLOOD	0/0	\$15,000
Laurel				
Laurel	07-SEP-94	FLASH FLOODING	0/0	\$0
Laurel	07-MAR-98	FLASH FLOOD	0/0	\$0
Laurel	07-JAN-98	FLASH FLOOD	0/0	\$92,934
Laurel	13-OCT-01	FLASH FLOOD	0/0	\$0
Laurel	26-SEP-02	FLASH FLOOD	0/0	\$2,768
Laurel	27-NOV-03	FLASH FLOOD	0/0	\$20,159
Laurel	28-JUN-04	FLASH FLOOD	0/0	\$52,191
Laurel	01-JUN-04	FLASH FLOOD	0/0	\$0
Laurel	02-JUL-04	FLASH FLOOD	0/0	\$0
Laurel	24-APR-10	FLASH FLOOD	0/0	\$5,464
Laurel	27-MAR-09	FLASH FLOOD	0/0	\$28,138
Laurel	24-DEC-09	FLASH FLOOD	0/0	\$13,506
Laurel	22-AUG-10	FLASH FLOOD	0/0	\$16,391
Laurel	13-JUL-12	FLASH FLOOD	0/0	\$0
Laurel	09-AUG-12	FLASH FLOOD	0/0	\$0
Laurel	29-AUG-12	FLASH FLOOD	0/0	\$51,500

³ These events are only inclusive of those reported by NCEI. It is likely that additional occurrences have occurred and have gone unreported.

Location	Date	Type	Deaths / Injuries	Property Damage*
Laurel	28-APR-14	FLASH FLOOD	0/0	\$500,000
Laurel	04-JUL-15	FLASH FLOOD	0/0	\$2,000
Laurel	31-OCT-15	FLASH FLOOD	0/0	\$5,000
Laurel	31-OCT-15	FLASH FLOOD	0/0	\$0
Laurel	23-DEC-15	FLASH FLOOD	0/0	\$5,000
Laurel	24-DEC-15	FLASH FLOOD	0/0	\$5,000
Laurel	10-MAR-16	FLASH FLOOD	0/0	\$22,000
Laurel	14-APR-16	FLASH FLOOD	0/0	\$5,000
Laurel	31-MAY-16	FLASH FLOOD	0/0	\$7,000
Laurel	03-APR-17	FLASH FLOOD	0/0	\$250,000
Laurel	30-APR-17	FLASH FLOOD	0/0	\$8,000
Laurel	16-JUN-17	FLASH FLOOD	0/0	\$1,000
Laurel	23-JUN-17	FLASH FLOOD	0/0	\$7,000
Laurel	09-AUG-17	FLASH FLOOD	0/0	\$5,000
Laurel	30-MAY-18	FLASH FLOOD	0/0	\$35,000
Laurel	31-JUL-18	FLASH FLOOD	0/0	\$50,000
Laurel	17-AUG-18	FLASH FLOOD	0/0	\$10,000
Laurel	01-NOV-18	FLASH FLOOD	0/0	\$25,000
Laurel	27-DEC-18	FLASH FLOOD	0/0	\$40,000
Sandersville				
Sandersville	30-JUN-10	FLASH FLOOD	0/0	\$21,855
Sandersville	23-JUN-17	FLASH FLOOD	0/0	\$5,000
Sandersville	26-SEP-18	FLASH FLOOD	0/0	\$4,000
Sandersville	28-DEC-18	FLOOD	0/0	\$5,000
Soso				
SOSO	31-OCT-15	HEAVY RAIN	0/0	\$0
SOSO	31-OCT-15	FLASH FLOOD	0/0	\$8,000
Unincorporated Area				
Countywide	29-JAN-99	FLASH FLOOD	0/0	\$75,629
South Portion	13-MAR-99	FLASH FLOOD	0/0	\$113,444
Countywide	02-MAR-01	FLASH FLOOD	0/0	\$0
Countywide	10-JUN-01	FLASH FLOOD	0/0	\$28,515
Countywide	02-MAR-01	FLASH FLOOD	0/0	\$17,109
Countywide	03-MAR-01	FLASH FLOOD	0/0	\$0
Countywide	03-MAR-01	FLASH FLOOD	0/0	\$0
Countywide	13-DEC-01	FLASH FLOOD	0/0	\$0
Countywide	11-AUG-01	FLASH FLOOD	0/0	\$0
Countywide	26-SEP-02	FLASH FLOOD	0/0	\$1,384
Ovett	30-JUN-03	FLASH FLOOD	0/0	\$6,720
Countywide	21-FEB-03	FLASH FLOOD	0/0	\$6,720
Countywide	01-APR-05	FLASH FLOOD	0/0	\$126,677
Countywide	31-MAR-05	FLASH FLOOD	0/0	\$506,708
West Portion	29-AUG-05	FLASH FLOOD	0/0	\$253,354
GITANO	12-APR-09	FLASH FLOOD	0/0	\$562,754
(LUL)HESLER FLD LAUR	09-MAR-11	FLASH FLOOD	0/0	\$31,827
Tuckers	04-FEB-10	FLOOD	0/0	\$1,093

Location	Date	Type	Deaths / Injuries	Property Damage*
Hoy	09-AUG-11	HEAVY RAIN	0/0	\$5,305
BLODGETT	18-FEB-12	FLASH FLOOD	0/0	\$0
Ovett	18-FEB-12	FLOOD	0/0	\$0
(LUL)HESLER FLD LAUR	26-JAN-12	FLASH FLOOD	0/0	\$5,150
Tuckers Crossing	22-MAR-12	FLASH FLOOD	0/0	\$257,500
Ovett	21-MAR-12	FLASH FLOOD	0/0	\$10,300
ERRATA		FLASH FLOOD	0/0	\$200,000
ERRATA		FLASH FLOOD	0/0	\$1,000
HEBRON		FLASH FLOOD	0/0	\$8,000
SERVICE		FLASH FLOOD	0/0	\$5,000
HOY		FLASH FLOOD	0/0	\$8,000
ERRATA		FLASH FLOOD	0/0	\$5,000
SERVICE		FLASH FLOOD	0/0	\$5,000
MOSELLE		FLASH FLOOD	0/0	\$8,000
HOY		FLASH FLOOD	0/0	\$5,000
HOY		FLASH FLOOD	0/0	\$200,000
REDDOCH		FLASH FLOOD	0/0	\$7,000
MOSELLE		FLASH FLOOD	0/0	\$3,000
WALTERS		FLASH FLOOD	0/0	\$3,000
EASTABUCHIE		FLASH FLOOD	0/0	\$40,000
MOSELLE		FLASH FLOOD	0/0	\$75,000
(PIB)PINE BELT RGNL		FLASH FLOOD	0/0	\$75,000
TUCKERS		FLASH FLOOD	0/0	\$2,000
REDDOCH		FLASH FLOOD	0/0	\$1,000
HEBRON		FLASH FLOOD	0/0	\$1,000
HEBRON		FLASH FLOOD	0/0	\$1,000
TUCKERS		FLASH FLOOD	0/0	\$10,000
ERRATA		FLASH FLOOD	0/0	\$3,000
MOSELLE		FLASH FLOOD	0/0	\$5,000
LANHAM		FLASH FLOOD	0/0	\$5,000
GITANO		FLASH FLOOD	0/0	\$5,000
TUCKERS CROSSING		FLASH FLOOD	0/0	\$3,000
(PIB)PINE BELT RGNL		FLASH FLOOD	0/0	\$2,000
EASTABUCHIE		FLASH FLOOD	0/0	\$5,000
(PIB)PINE BELT RGNL		FLASH FLOOD	0/0	\$4,000
HOY		FLASH FLOOD	0/0	\$2,000,000
OVETT		FLASH FLOOD	0/0	\$2,000
MACEDONIA		FLASH FLOOD	0/0	\$1,000

Source: National Centers for Environmental Information

HISTORICAL SUMMARY OF INSURED FLOOD LOSSES

Recently, FEMA issued a directive that prevents states or local governments from sharing NFIP information such as rep loss or severe rep loss data with third parties. Third parties are considered as consultants, contractors, etc. As a result, for continuity of information so that the reader will have an idea of the historical occurrences along with the corresponding damage amounts, the decision was made to leave the existing information in the plan.

According to FEMA flood insurance policy records as of March 2013, there have been 108 flood losses reported in Jones County through the National Flood Insurance Program (NFIP) since 1978, totaling nearly \$682,000 in claims payments. Currently, this remains the best available data. A summary of these figures for the county is provided in **Table D.6**. It should be emphasized that these numbers include only those losses to structures that were insured through the NFIP policies, and for losses in which claims were sought and received. It is likely that many additional instances of flood loss in Jones County were either uninsured, denied claims payment, or not reported.

TABLE D.6: SUMMARY OF INSURED FLOOD LOSSES IN JONES COUNTY

Location	Flood Losses	Claims Payments
Ellisville	5	\$46,027
Laurel	75	\$398,815
Sandersville*	--	--
Soso*	--	--
Unincorporated Area	28	\$237,123
JONES COUNTY TOTAL	108	\$681,965

*These communities do not participate in the National Flood Insurance Program. Therefore, no values are reported.

Source: FEMA, NFIP

REPETITIVE LOSS PROPERTIES

No updates to this section can be provided at this time. Information normally used to update this section is not currently accessible. As a result, this information will remain the same for historical purposes.

As of May 2013, there are 12 non-mitigated repetitive loss properties located in Jones County, which accounted for 34 losses and more than \$235,000 in claims payments under the NFIP. The average claim amount for these properties is \$6,914. Of the 12 properties, 9 are single family residential, 1 is other residential, and 2 are non-residential. Without mitigation these properties will likely continue to experience flood losses. **Table D.7** presents detailed information on repetitive loss properties and NFIP claims and policies for Jones County. Currently, this remains the best available data.

TABLE D.7: REPETITIVE LOSS PROPERTIES IN JONES COUNTY

Location	Number of Properties	Types of Properties	Number of Losses	Building Payments	Content Payments	Total Payments	Average Payment
Ellisville	1	1 single family	2	\$13,078	\$4,918	\$17,996	\$8,998
Laurel	9	7 single family, 2 non-residential	25	\$166,683	\$19,853	\$186,536	\$7,461
Sandersville*	--	--	--	--	--	--	--
Soso*	--	--	--	--	--	--	--
Unincorporated Area	2	1 single family, 1 other residential	7	\$28,950	\$1,604	\$30,554	\$4,365
JONES COUNTY TOTAL	12		34	\$208,712	\$26,374	\$235,086	\$6,914

* These communities do not participate in the National Flood Insurance Program. Therefore, no values are reported.

Location	Number of Properties	Types of Properties	Number of Losses	Building Payments	Content Payments	Total Payments	Average Payment
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Source: National Flood Insurance Program

PROBABILITY OF FUTURE OCCURRENCES

Due to the unpredictable nature of this hazard, flood events will remain a threat in Jones County, and the probability of future occurrences will remain highly likely (100 percent annual probability). The participating jurisdictions and unincorporated areas have risk to flooding, though not all areas will experience flood. The probability of future flood events based on magnitude and according to best available data is illustrated in the figures above, which indicates those areas susceptible to the 1-percent annual chance flood (100-year floodplain) and the 0.2-percent annual chance flood (500-year floodplain).

It can be inferred from the floodplain location maps, previous occurrences, and repetitive loss properties that risk varies throughout the county. For example, the areas surrounding Ellisville, Laurel, and Sandersville have more floodplain and thus a higher risk of flood than the area surrounding Soso. Flood is not the greatest hazard of concern but will continue to occur and cause damage. Therefore, mitigation actions may be warranted, particularly for repetitive loss properties.

D.2.2 Erosion

LOCATION AND SPATIAL EXTENT

Erosion in Jones County is typically caused by flash flooding events. Unlike coastal areas, areas of concern for erosion in Jones County are primarily rivers and streams. Generally, vegetation helps to prevent erosion in the area, and it is not an extreme threat to any of the participating counties and jurisdictions. No areas of concern were reported by the planning committee.

HISTORICAL OCCURRENCES

Several sources were vetted to identify areas of erosion in Jones County. This includes searching local newspapers, interviewing local officials, and reviewing previous hazard mitigation plans. No historical erosion occurrences were found in these sources.

PROBABILITY OF FUTURE OCCURRENCES

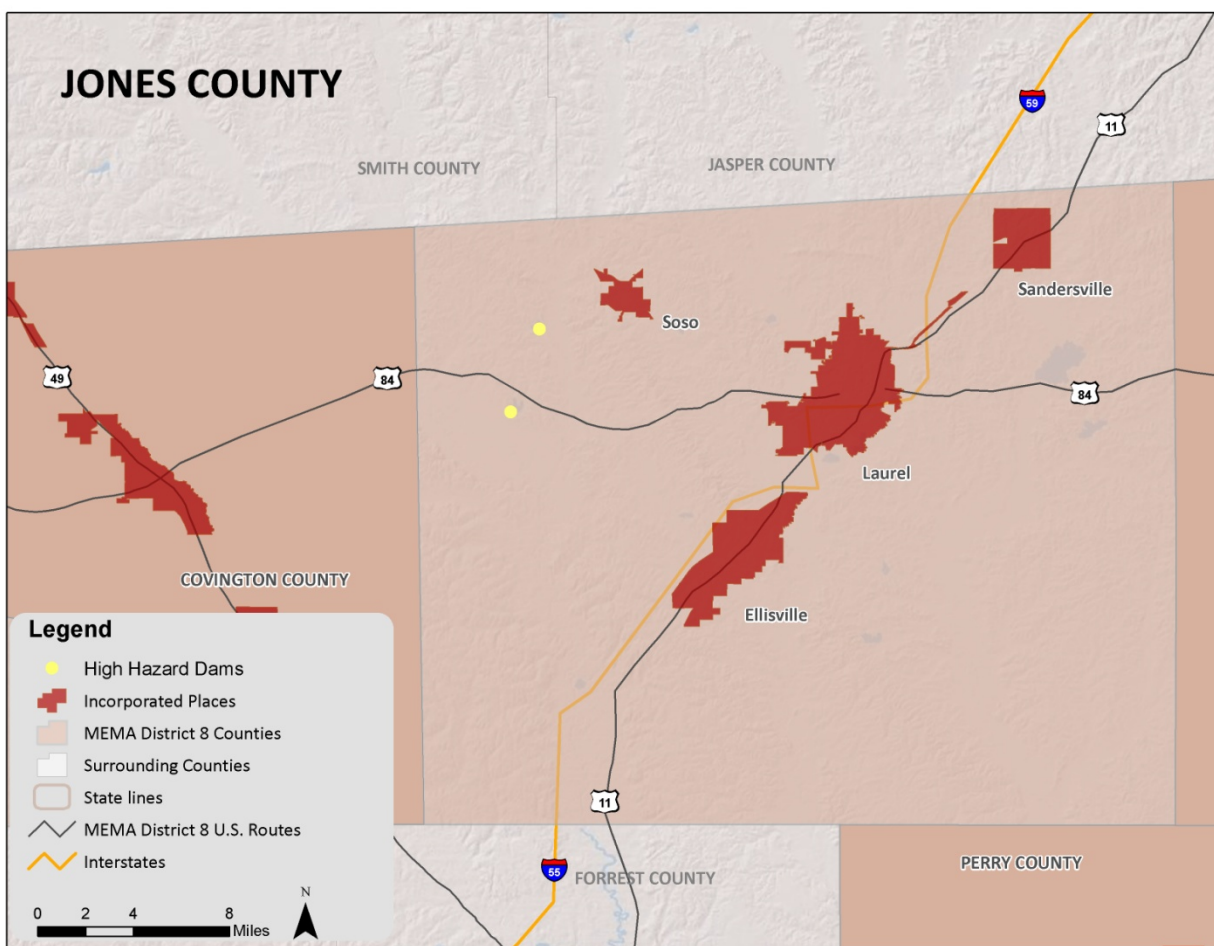
Erosion remains a natural, dynamic, and continuous process for Jones County, and it will continue to occur. The annual probability level assigned for erosion is possible (between 1 and 10 percent annually).

D.2.3 Dam Failure

LOCATION AND SPATIAL EXTENT

According to the Mississippi Division of Environmental Quality, there are two high hazard dams in Jones County.⁴ **Figure D.3** shows the location of each of these high hazard dams and **Table 5.8** lists them by name. This data has not changed since the last plan update. According to a consensus of local government officials and the Regional Hazard Mitigation Council, a majority of these dams would not pose a major threat in a breach or failure occurrence.

FIGURE D.3: JONES COUNTY REGION HIGH HAZARD DAM LOCATIONS



Source: Mississippi Division of Environmental Quality

⁴ The list of high hazard dams obtained from the Mississippi Division of Environmental Quality was reviewed and amended by local officials to the best of their knowledge.

TABLE D.8: JONES COUNTY HIGH HAZARD DAMS

Dam Name	Hazard Potential
Jones County	
BIG CREEK WATERSHED STRUCTURE 9 DAM	High
BIG CREEK WATER PARK DAM	High

Source: Mississippi Division of Environmental Quality

HISTORICAL OCCURRENCES

Two dam breaches were reported in Jones County at Indian Springs Lake in 1993 and Lake Getaway in 2010. There were no reports of deaths or injuries, and the damage caused by these events was minimal. However, several breach scenarios in the county could be catastrophic.

PROBABILITY OF FUTURE OCCURRENCES

Given the current dam inventory and historic data, a dam breach is unlikely (less than 1 percent annual probability) in the future. However, as has been demonstrated in the past, regular monitoring is necessary to prevent these events.

D.2.4 Winter Storm and Freeze

LOCATION AND SPATIAL EXTENT

Nearly the entire continental United States is susceptible to winter storm and freeze events. Some ice and winter storms may be large enough to affect several states, while others might affect limited, localized areas. The degree of exposure typically depends on the normal expected severity of local winter weather. Jones County is not typically affected by major severe winter weather conditions and seldom receives extremely devastating winter weather, even during the winter months. Given the atmospheric nature of the hazard the entire county has uniform exposure to a winter storm.

HISTORICAL OCCURRENCES

According to the National Centers for Environmental Information, there have been a total of two recorded winter storm events in Jones County since 2002 (**Table D.9**).⁵ These events resulted in almost \$227,000 in damages. Detailed information on the recorded winter storm events can be found in **Table D.10**.⁶

TABLE D.9: SUMMARY OF WINTER STORM EVENTS IN JONES COUNTY

Location	Number of Occurrences	Deaths / Injuries	Property Damage
Jones County	6	0/0	\$226,921

Source: National Centers for Environmental Information

⁵ These ice and winter storm events are only inclusive of those reported by the National Centers for Environmental Information (NCEI). It is certain that additional winter storm conditions have affected Jones County.

⁶ The dollar amount of damages provided by NCEI is divided by the number of affected counties to reflect a damage estimate for the county.

TABLE D.10: HISTORICAL WINTER STORM IMPACTS IN JONES COUNTY

Location	Date	Type	Deaths / Injuries	Property Damage*
Ellisville				
<i>None Reported</i>	--	--	--	--
Laurel				
<i>None Reported</i>	--	--	--	--
Sandersville				
<i>None Reported</i>	--	--	--	--
Soso				
<i>None Reported</i>	--	--	--	--
Unincorporated Area				
JONES COUNTY	01-JAN-02	HEAVY SNOW	0/0	\$6,921
JONES COUNTY	11-DEC-08	WINTER WEATHER	0/0	\$0
JONES COUNTY	11-DEC-08	HEAVY SNOW	0/0	\$0
JONES COUNTY	11-DEC-08	SLEET	0/0	\$20,000
JONES COUNTY	11-DEC-08	HEAVY SNOW	0/0	\$200,000
JONES COUNTY	11-DEC-08	WINTER WEATHER	0/0	\$0

Source: National Centers for Environmental Information

There have been several severe winter weather events in Jones County. The text below describes two of the major events and associated impacts on the county. Similar impacts can be expected with severe winter weather.

January 2002 Winter Storm

A winter storm produced heavy snow across portions of southeast Mississippi. The heaviest snow recorded during the storm was four to four- and one-half inches. Icy bridges made traveling across the region very treacherous. As a result, several accidents occurred with two fatalities in Jones County.

January 2008 Winter Storm

This storm produced heavy snow across the region, with an average of three to four inches of snow. Some heavier amounts, between four to five inches, also fell in isolated areas. At the height of the snow, temperatures fell to near freezing, and accumulations occurred on roadways resulting in a number of traffic accidents. Additionally, some power outages occurred in the heaviest snow band due to the weight of wet snow on limbs and lines. The heaviest snow fell in the areas around Covington, Jefferson Davis, and Jones Counties.

Winter storms throughout the county have several negative externalities including hypothermia, cost of snow and debris cleanup, business and government service interruption, traffic accidents, and power outages. Furthermore, citizens may resort to using inappropriate heating devices that could to fire or an accumulation of toxic fumes.

December 2017 Winter Storm

An average of 5 to 7 inches of heavy snow fell across Jones County, with up to 8 inches falling west of Ellisville. The accumulating snow downed trees and limbs across the county, resulting in power outages and blocking roadways. Numerous traffic accidents also occurred across the county.

PROBABILITY OF FUTURE OCCURRENCES

Winter storm events will continue to occur in Jones County. According to historical information, the annual probability is possible (between 1 and 10 percent).

FIRE-RELATED HAZARDS

D.2.5 Drought

LOCATION AND SPATIAL EXTENT

Drought and heat waves typically cover a large area and cannot be confined to any geographic or political boundaries. Furthermore, it is assumed that Jones County would be uniformly exposed to drought and heat waves, making the spatial extent potentially widespread. It is also notable that drought and extreme heat conditions typically do not cause significant damage to the built environment but may exacerbate wildfire conditions.

HISTORICAL OCCURRENCES

Drought

According to the U.S. Drought Monitor, Jones County had drought levels (including abnormally dry) in all of the last eighteen years (2000-2018). **Table D.11** shows the most severe drought classification for each year, according to U.S. Drought Monitor classifications. It should be noted that the U.S. Drought Monitor also estimates what percentage of the county is in each classification of drought severity. For example, the most severe classification reported may be exceptional, but a majority of the county may actually be in a less severe condition.

TABLE D. 11: HISTORICAL DROUGHT OCCURRENCES IN JONES COUNTY

Abnormally Dry	Moderate Drought	Severe Drought	Extreme Drought	Exceptional Drought
				
		Jones County		
	2000	EXCEPTIONAL		
	2001	MODERATE		
	2002	MODERATE		
	2003	ABNORMAL		
	2004	ABNORMAL		
	2005	ABNORMAL		
	2006	EXTREME		
	2007	EXTREME		
	2008	MODERATE		
	2009	MODERATE		
	2010	SEVERE		
	2011	EXTREME		
	2012	MODERATE		
	2013	ABNORMAL		

2014	ABNORMAL
2015	MODERATE
2016	EXTREME
2017	ABNORMAL
2018	ABNORMAL
2019	ABNORMAL

Source: U.S. Drought Monitor

There were four reported drought events for Jones County according to the National Centers for Environmental Information. These events created \$50,000 in property damages and at least \$81,000 in crop damages.

Heat Wave

The National Centers for Environmental Information was used to determine historical heat wave occurrences in the county.

July 2005 – A five-day heat wave covered the area. Temperatures were consistently above 95 degrees. The agricultural industry was hit particularly hard in the cattle and catfish sectors. Water supply issues were encountered by cities and a burn ban was implemented due to the high fire risk.

August 2005 - A heat wave covering the south began in mid-August and lasted about 10 days. High temperatures were consistently over 95 degrees and surpassed 100 degrees on some days. It was the first time since August 2000 that 100-degree temperatures reached the area.

July 2006 – A short heat wave impacted most of the area temperatures in the 90s to around 100 for five straight days.

August 2007 – A heat wave gripped most of the area with the warmest temperatures since 2000. It lasted from August 5th to the 16th.

December 2016 – Very dry conditions continued into December. Crops were put under more stress from the dry conditions. The drought eased by the middle of the month.

PROBABILITY OF FUTURE OCCURRENCES

Drought

Based on historical occurrence information, it is assumed that all of Jones County has a probability level of highly likely (100 percent annual probability) for future drought events. However, the extent (or magnitude) of drought and the amount of geographic area covered by drought, varies with each year. Historic information indicates that there is a much lower probability for extreme, long-lasting drought conditions.

Heat Wave

Based on historical occurrence information, it is assumed that all of Jones County has a probability level of highly likely (100 percent annual probability) for future heat wave events.

D.2.6 Wildfire

LOCATION AND SPATIAL EXTENT

The entire county is at risk to a wildfire occurrence. However, several factors such as drought conditions or high levels of fuel on the forest floor, may make a wildfire more likely. Furthermore, areas in the urban-wildland interface are particularly susceptible to fire hazard as populations abut formerly undeveloped areas. The Fire Occurrence Areas in the figure below give an indication of historic location.

HISTORICAL OCCURRENCES

Based on data from the Mississippi Forestry Commission from 2008 to 2018, Jones County experiences an average of 51.4 wildfires annually which burn an average of 390.2 acres per year. The data indicates that most of these fires are small, averaging ten acres per fire. **Table D.12** provides a summary of wildfire occurrences in Jones County and **Table D.13** lists the number of reported wildfire occurrences in the county between the years 2008 and 2018.

TABLE D.12: SUMMARY TABLE OF ANNUAL WILDFIRE OCCURRENCES (2008 -2018) *

	Jones County
Average Number of Fires per year	51.4
Average Number of Acres Burned per year	390.2
Average Number of Acres Burned per fire	13.2

*These values reflect averages over a 10-year period.

Source: Mississippi Forestry Commission

TABLE D.13: HISTORICAL WILDFIRE OCCURRENCES IN JONES COUNTY

Year	2008	2010	2011	2012	2013	2014	2015	2016	2017	2018
Jones County										
Number of Fires	27	48	53	22	11	30	33	21	5	7
Number of Acres Burned	259	372	400	84	157	358	164	111	30	16

Source: Mississippi Forestry Commission

PROBABILITY OF FUTURE OCCURRENCES

Wildfire events will be an ongoing occurrence in Jones County. The likelihood of wildfires increases during drought cycles and abnormally dry conditions. Fires are likely to stay small in size but could increase due local climate and ground conditions. Dry, windy conditions with an accumulation of forest floor fuel (potentially due to ice storms or lack of fire) could create conditions for a large fire that spreads quickly. It should also be noted that some areas do vary somewhat in risk. For example, highly developed areas are less susceptible unless they are located near the urban-wildland boundary. The risk will also vary due

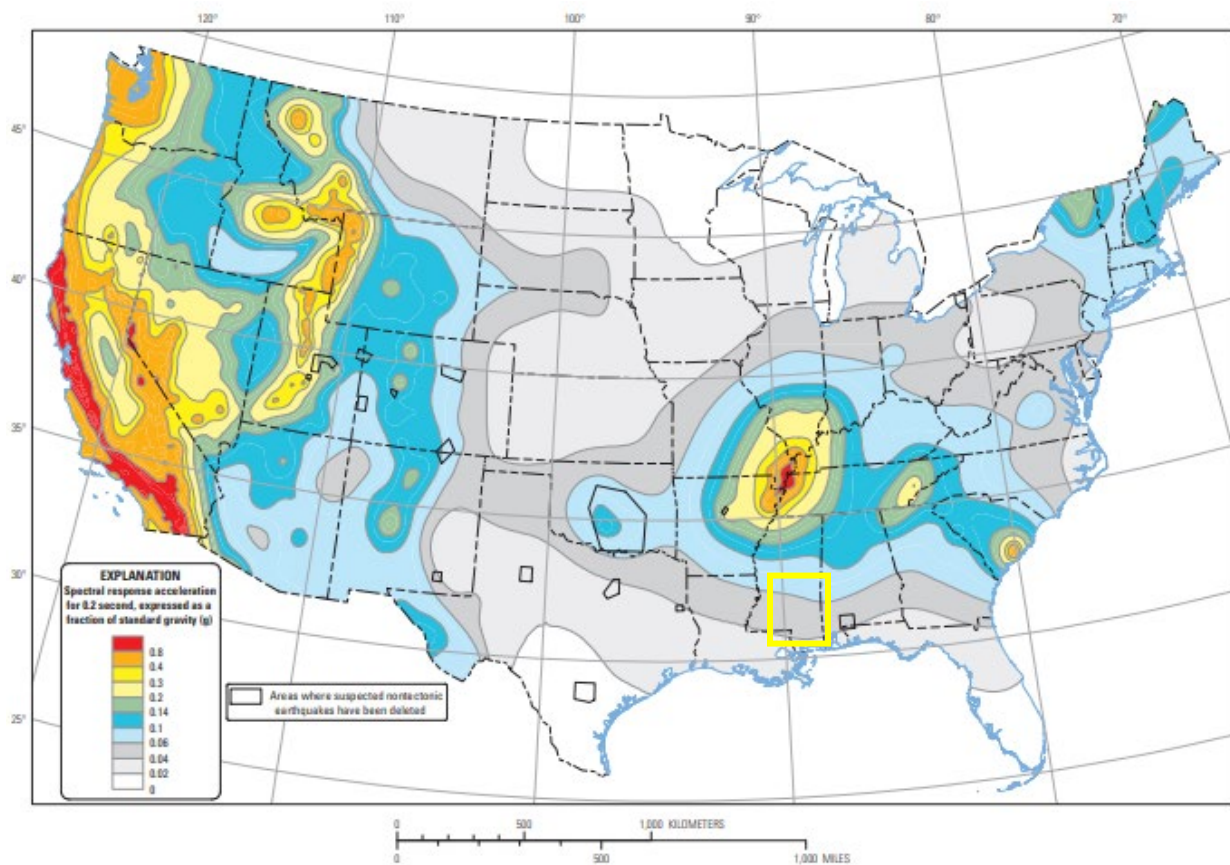
to assets. Areas in the urban-wildland interface will have much more property at risk, resulting in increased vulnerability and need to mitigate compared to rural, mainly forested areas. In this case, the participating jurisdictions appear to have a similar risk to the surrounding areas. The probability assigned to Jones County for future wildfire events is likely (a 10 and 100 percent annual probability).

GEOLOGIC HAZARDS

D.2.7 Earthquake

LOCATION AND SPATIAL EXTENT

Figure D.5 shows the intensity level associated with Jones County, based on the national USGS map of peak acceleration with 10 percent probability of exceedance in 50 years. It is the probability that ground motion will reach a certain level during an earthquake. The data show peak horizontal ground acceleration (the fastest measured change in speed, for a particle at ground level that is moving horizontally due to an earthquake) with a 10 percent probability of exceedance in 50 years. The map was compiled by the U.S. Geological Survey (USGS) Geologic Hazards Team, which conducts global investigations of earthquake, geomagnetic, and landslide hazards. According to this map, Jones County lies within an approximate zone of level “2” to “3” ground acceleration. This indicates that the county exists within an area of moderate seismic risk.

FIGURE D.5: PEAK ACCELERATION WITH 10 PERCENT PROBABILITY OF EXCEEDANCE IN 50 YEARS

Source: USGS, 2019

HISTORICAL OCCURRENCES

No earthquakes are known to have affected Jones County since 1638. **Table D.14** provides a summary of earthquake events reported by the National Geophysical Data Center between 1638 and 1985.⁷

TABLE D.14: SUMMARY OF SEISMIC ACTIVITY IN JONES COUNTY

Location	Number of Occurrences	Greatest MMI Reported	Richter Scale Equivalent
Ellisville	0	--	--
Laurel	0	--	--
Sandersville	0	--	--
Soso	0	--	--
Unincorporated Area	0	--	--
JONES COUNTY TOTAL	0	--	--

Source: National Geophysical Data Center

⁷ Due to reporting mechanisms, not all earthquakes events were recorded during this time.

PROBABILITY OF FUTURE OCCURRENCES

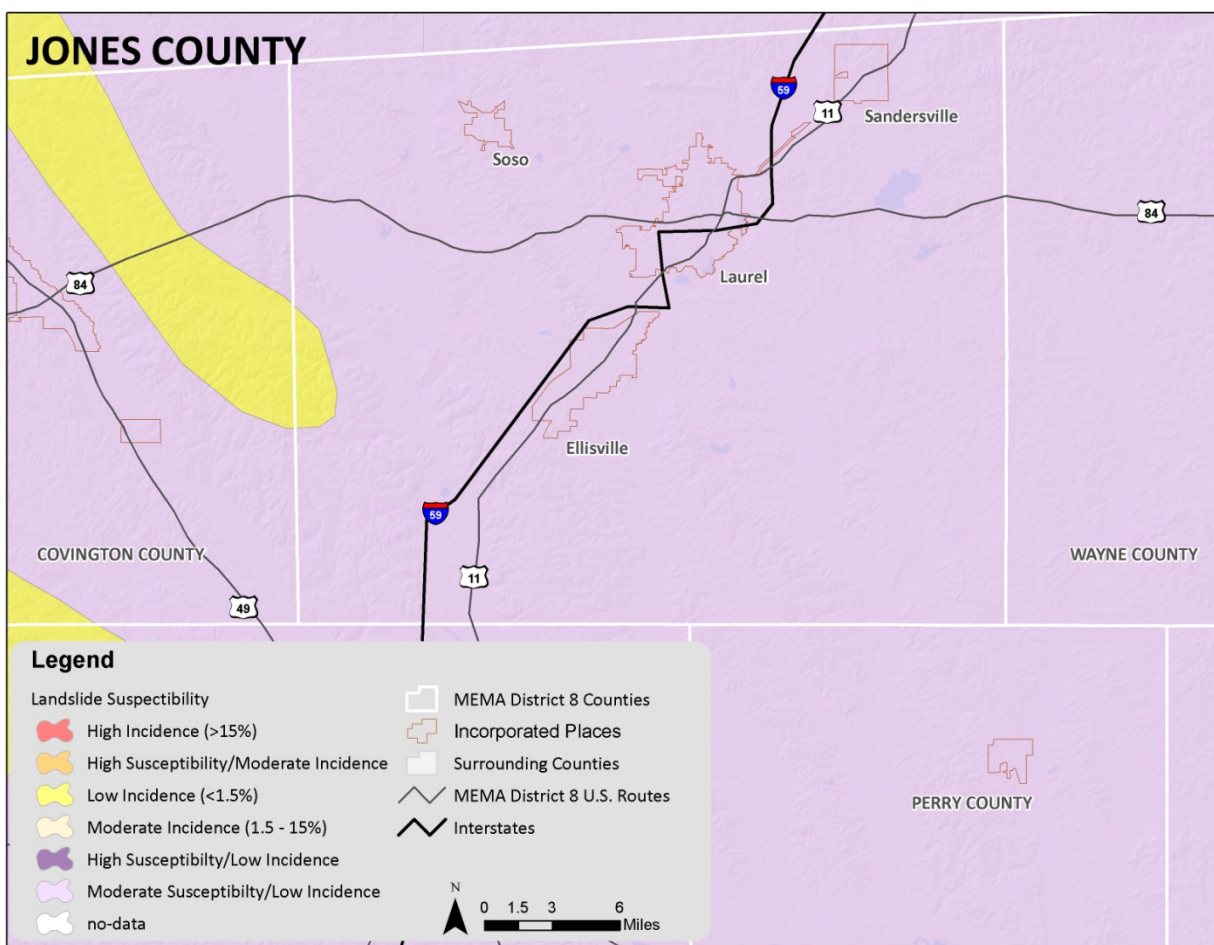
The probability of significant, damaging earthquake events affecting Jones County is unlikely. However, it is possible that future earthquakes resulting in light to moderate perceived shaking and damages ranging from none to very light will affect the county. The annual probability level for the region is estimated to be less than 1 percent (unlikely).

D.2.8 Landslide

LOCATION AND SPATIAL EXTENT

Landslides occur along steep slopes when the pull of gravity can no longer be resisted (often due to heavy rain). Human development can also exacerbate risk by building on previously undevelopable steep slopes. The most frequent and widespread damaging landslides in the U.S. are induced by prolonged or heavy rainfall. The majority of rainfall-induced landslides are shallow, small, and move quickly.¹ Landslides are possible throughout Jones County.

According to **Figure D.6** below, the entire county falls under a low incidence area (yellow and light purple). This indicates that less than 1.5 percent of the area is involved in landsliding. The areas in yellow are defined as low incidence and low susceptibility. The areas in light purple, however, indicate that a moderate susceptibility to landsliding activity is present. There are no changes with susceptibility to the landslide hazard since the last plan update.

FIGURE D.6: LANDSLIDE SUSCEPTIBILITY AND INCIDENCE MAP OF JONES COUNTY

Source: USGS

HISTORICAL OCCURRENCES

There is no extensive history of landslides in Jones County. Landslide events typically occur in isolated areas.

PROBABILITY OF FUTURE OCCURRENCES

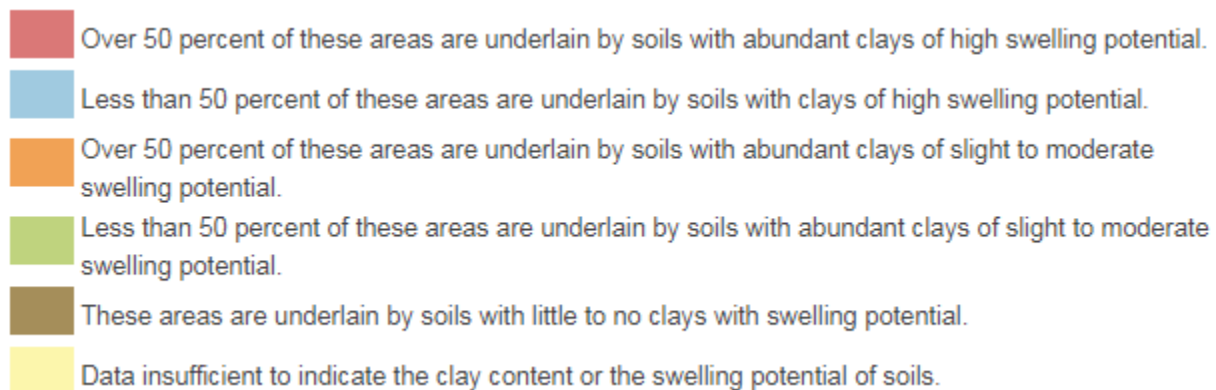
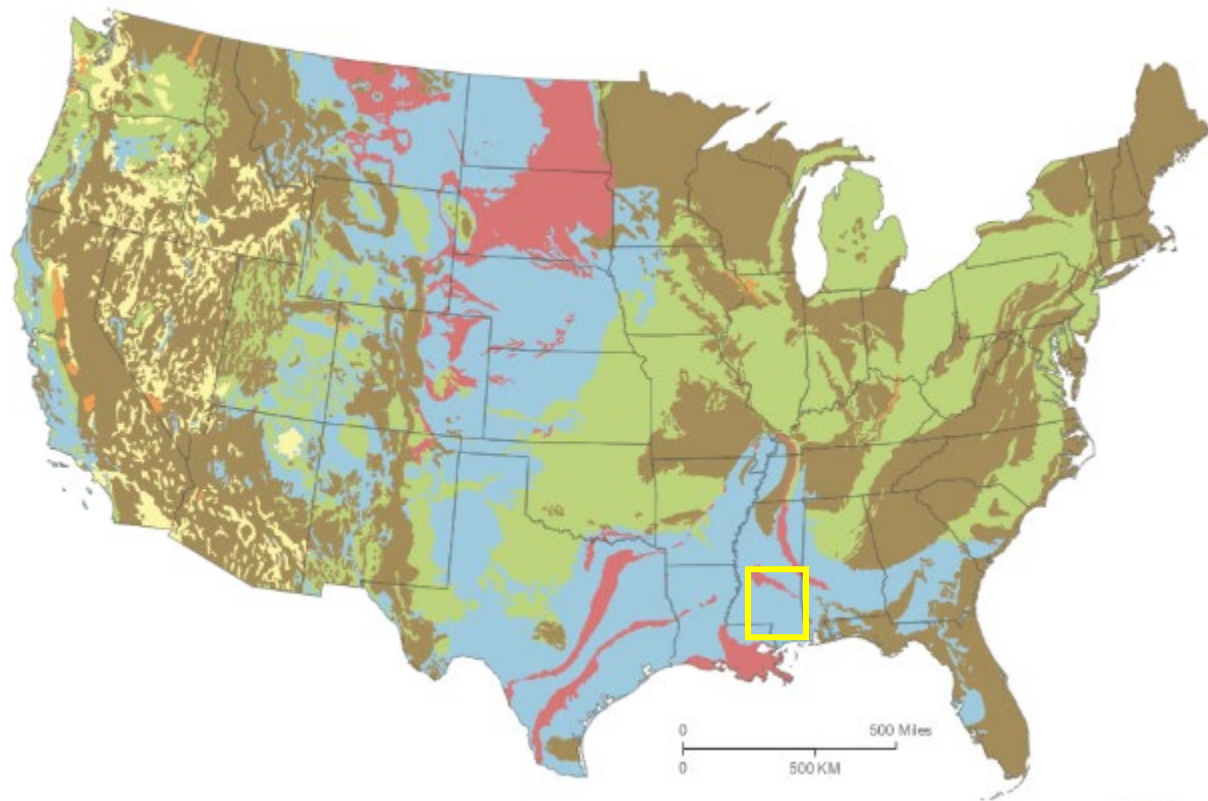
Based on historical information and the USGS susceptibility index, the probability of future landslide events is unlikely (less than 1 percent probability). The USGS data indicates that the all areas in Jones County have a low landslide incidence rate. However, nearly all areas are reported as having moderate susceptibility to landsliding activity. Local conditions may become more favorable for landslides due to heavy rain, for example. This would increase the likelihood of occurrence. It should also be noted that some areas in Jones County have greater risk than others given factors such as steepness on slope and modification of slopes.

D.2.9 Expansive Soils

LOCATION AND SPATIAL EXTENT

Due to the amount of clay minerals present in Jones County, expansive soils present a threat to the county. Areas underlain by soils with swelling potential are shown in **Figure D.7**. The areas in blue are underlain with generally less than 50 percent clay having high swelling potential.

FIGURE D.7: SWELLING CLAYS IN MISSISSIPPI



Source: USGS

HISTORICAL OCCURRENCES

There is no historical record of significant expansive soil events in Jones County. However, expansive soils can cause considerable damage to structural foundations in the county, although they do not pose a significant threat to human life.

PROBABILITY OF FUTURE OCCURRENCES

Based on historical information, the probability of future expansive soil events is possible (between 1 and 100 percent annually).

WIND-RELATED HAZARDS

D.2.10 Hurricane and Tropical Storm

LOCATION AND SPATIAL EXTENT

Hurricanes and tropical storms threaten the entire Atlantic and Gulf seaboard of the United States. While coastal areas are most directly exposed to the brunt of landfalling storms, their impact is often felt hundreds of miles inland and major hurricanes (category 3 or higher) may impact Jones County. All areas in Jones County are equally susceptible to hurricane and tropical storms.

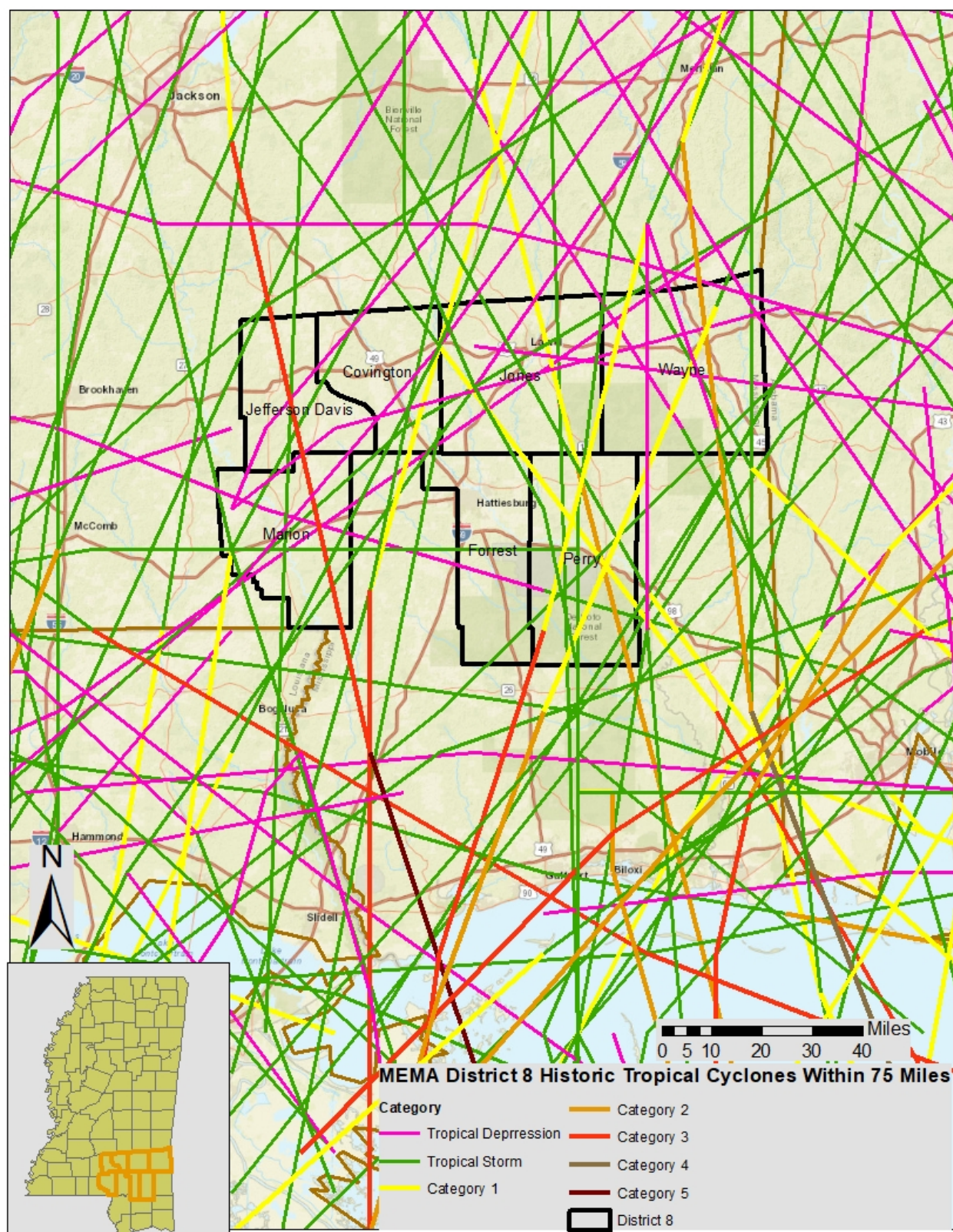
HISTORICAL OCCURRENCES

According to the National Hurricane Center's historical storm track records, a total of 65 hurricanes have passed within 75 miles of Jones County since 1851. This includes 1 category 5 storm, 1 category 4 storm, 6 category 3 storms, 5 category 2 storms, 10 category 1 storms, and 41 tropical storms as shown in **Figure D.8**.⁸

Of the recorded storm events, a total of 11 tracks passed directly through the county including Hurricanes Edith (1971), Bill (2003), and Katrina (2005). Most storms were tropical storms when they traversed the county with the exception of four Category 1 storms: Unnamed (1855), Unnamed (1609), Unnamed (1916) and Hurricane Katrina (2005). **Table D.15** provides the detail for each storm that passed through the county including date of occurrence, name (if applicable), maximum wind speed (as recorded when traversing the county) and category of the storm based on the Saffir-Simpson Scale.

⁸ These storm track statistics do not include extra-tropical storms. Though these related hazard events are less severe in intensity, they may cause significant local impact in terms of rainfall and high winds.

FIGURE D.8: HISTORICAL HURRICANE STORM TRACKS WITHIN 75 MILES OF JONES COUNTY



Source: National Oceanic and Atmospheric Administration; National Hurricane Center

**TABLE D.15: HISTORICAL STORM TRACKS WITHIN 75 MILES OF JONES COUNTY
(1850–2018)**

Date of Occurrence	Storm Name	Maximum Wind Speed (miles per hour)	Storm Category
9/16/1855	UNNAMED	80	Category 1
7/12/1872	UNNAMED	46	Tropical Storm
9/8/1883	UNNAMED	63	Tropical Storm
9/27/1906	UNNAMED	75	Category 1
6/13/1912	UNNAMED	52	Tropical Storm
7/6/1916	UNNAMED	92	Category 1
10/18/1923	UNNAMED	57	Tropical Storm
9/1/1932	UNNAMED	69	Tropical Storm
9/16/1960	ETHEL	40	Tropical Storm
7/1/2003	BILL	52	Tropical Storm
8/29/2005	KATRINA	92	Category 1
10/07/2017	NATE	40	Tropical Storm
10/08/2017	NATE	40	Tropical Storm
9/05/2008	GORDAN		Tropical Depression

Source: National Hurricane Center

Federal records indicate that disaster declarations were made in 1969 (Hurricane Camille), 1979 (Hurricane Frederic), 1998 (Hurricane Georges), 2004 (Hurricane Ivan), 2005 (Hurricane Dennis), 2005 (Hurricane Katrina), and 2012 (Hurricane Isaac).⁹ Hurricane and tropical storm events can cause substantial damage in the area due to high winds and flooding.

Flooding and high winds from hurricanes and tropical storms can cause damage throughout the county. Anecdotes are available from NCEI for the major storms that have impacted the county as found below:

Tropical Storm Isidore – September 26, 2002

Tropical Storm Isidore moved onshore along the Louisiana coast early in the morning of September 26. The weakening storm then moved northeast across eastern Mississippi during the day. The heavy rainfall associated with the storm resulted in significant river and flash flooding across much of Mississippi. Twenty-four hour rainfall totals between 5 and 10 inches were common over much of Mississippi, especially in the southern part of the state, where twenty-four hour amounts exceeded 9 inches near Hattiesburg. Gradient wind gusts between 35 and 45 miles per hour combined with the saturated ground to lead to numerous downed trees and powerlines over the state. Most of the damage was seen along and east of the Natchez Trace, near the path of the storm's diffuse center. One indirect fatality was reported just east of the Kalem community in Scott County. Here, a falling tree struck a truck driven by a 31 year-old male. Damage from Isidore was an estimated \$500,000.

Tropical Storm Bill – June 30, 2003

Tropical Storm Bill tracked along Interstate 59. Heavy rainfall caused flash flooding. Forty-eight-hour rainfall totals ranged between 3-7 inches, mainly across SE Mississippi. Gradient wind gusts between 30

⁹ A complete listing of historical disaster declarations can be found in Section 4: Hazard Identification.

and 40 mph combined with saturated soils downed numerous trees very close to center's track. Damage from Bill was an estimated \$100,000.

Hurricane Ivan – September 16, 2004

Thousands of trees were blown down across Eastern Mississippi during the event as well as hundreds of power lines. The strong wind itself did not cause much structural damage, however the fallen trees did. These downed trees accounted for several hundred homes, mobile homes and businesses to be damaged or destroyed. Most locations across Eastern Mississippi reported sustained winds between 30 and 40 mph with Tropical Storm force gusts between 48 and 54 mph. The strongest reported winds occurred in Newton, Lauderdale and Oktibbeha Counties.

Overall, rainfall totals were held in check as Ivan steadily moved north. The heaviest rains were confined to far Eastern Mississippi where 3 to 4 inches fell over a 15-hour period. Due to the duration of the rain no flooding was reported. Across Eastern Mississippi, Hurricane Ivan was responsible for one fatality. This fatality occurred in Brooksville (Noxubee County) when a tree fell on a man. Damage from Ivan was estimated at \$200 million.

Hurricane Dennis – July 10, 2005

Hurricane Dennis made landfall during the afternoon of July 10th near Navarre Beach Florida as a category 3 Hurricane. The storm moved north-northwest across Southwest Alabama and then into East-Central Mississippi and finally across Northeast Mississippi during the overnight hours. Wind gusts over tropical storm force were common across areas east of a line from Starkville to Newton to Hattiesburg. These winds caused several hundred trees to uproot or snap and took down numerous power lines. Additionally, a total of 21 homes or businesses sustained minor to major damage from fallen trees or gusty winds.

Heavy rainfall was not a major issue as Dennis steadily moved across the region. Rainfall totals between 2 and 5 inches fell across Eastern Mississippi over a 12-hour period. One indirect fatality occurred in Jasper County from an automobile accident due to wet roads.

Hurricane Katrina – August 25, 2005

Hurricane Katrina will likely go down as the worst and costliest natural disaster in United States history. The amount of destruction, the cost of damaged property/agriculture and the large loss of life across the affected region has been overwhelming. Catastrophic damage was widespread across a large portion of the Gulf Coast region. The devastation was not only confined to the coastal region, widespread and significant damage occurred well inland up to the Hattiesburg area and northward past Interstate 20.

Devastation from Hurricane Katrina was widespread across the region. Hurricane force winds were common across the area. The region received sustained winds of 60-80 mph with gusts ranging from 80-120 mph. There was widespread damage to trees and power lines. Wind damage to structures was also widespread, with roofs blown off or partially peeled. Hundreds of signs were shredded or blown down. Businesses sustained structural damage. Power outages lasted from a few days to as long as four weeks. Agriculture and timber industries were severely impacted. Row crops, including cotton, rice, corn, and soybeans, took a hard hit. Other impacted industries were the catfish industry, dairy and cattle industry, and nursery businesses.

PROBABILITY OF FUTURE OCCURRENCES

Based on historical evidence, the probability level of future occurrence is likely (annual probability between 10 and 100 percent). Given the regional nature of the hazard, all areas in the county are equally exposed to this hazard. However, when the county is impacted, the damage could be catastrophic, threatening lives and property throughout the planning area.

D.2.11 Thunderstorm

LOCATION AND SPATIAL EXTENT

Thunderstorm / High Wind

A thunderstorm event is an atmospheric hazard, and thus has no geographic boundaries. It is typically a widespread event that can occur in all regions of the United States. However, thunderstorms are most common in the central and southern states because atmospheric conditions in those regions are favorable for generating these powerful storms. Also, Jones County typically experiences several straight-line wind events each year. These wind events can and have caused significant damage. It is assumed that Jones County has uniform exposure to an event and the spatial extent of an impact could be large.

Hailstorm

Hailstorms frequently accompany thunderstorms, so their locations and spatial extents coincide. It is assumed that Jones County is uniformly exposed to severe thunderstorms; therefore, all areas of the county are equally exposed to hail which may be produced by such storms.

Lightning

Lightning occurs randomly, therefore it is impossible to predict where and with what frequency it will strike. It is assumed that all of Jones County is uniformly exposed to lightning.

HISTORICAL OCCURRENCES

Thunderstorm / High Wind

Severe storms resulted in four disaster declarations in Jones County in 1971, 1987, 1990, and 2001.¹⁰ According to NCDC, there have been 301 reported thunderstorm and high wind events since 1957 in Jones County.¹¹ These events caused over \$6.1 million in damages. There were also reports of four fatalities and one injury. **Table D.16** summarizes this information. **Table D.17** presents detailed thunderstorm and high wind event reports including date, magnitude, and associated damages for each event.¹²

TABLE D.16: SUMMARY OF THUNDERSTORM / HIGH WIND OCCURRENCES IN JONES COUNTY

Location	Number of Occurrences	Deaths / Injuries	Property Damage (2013)
Ellisville	31	0/0	\$766,008

¹⁰ A complete listing of historical disaster declarations can be found in Section 4: Hazard Identification.

¹¹ These thunderstorm events are only inclusive of those reported by the National Centers for Environmental Information (NCEI). It is likely that additional thunderstorm events have occurred in Jones County. As additional local data becomes available, this hazard profile will be amended.

¹² The dollar amount of damages provided by NCEI is divided by the number of affected counties to reflect a damage estimate for the county.

Location	Number of Occurrences	Deaths / Injuries	Property Damage (2013)
Laurel	79	2/1	\$2,054,391
Sandersville	26	0/0	\$1,332,184
Soso	16	0/0	\$148,985
Unincorporated Area	245	2/2	\$3,252,624
JONES COUNTY TOTAL	397	4/3	\$7,554.192

Source: National Centers for Environmental Information

TABLE D.17: HISTORICAL THUNDERSTORM / HIGH WIND OCCURRENCES IN JONES COUNTY

Location	Date	Type	Magnitude	Deaths / Injuries	Property Damage*
Ellisville					
Ellisville	20-AUG-95	THUNDERSTORM WINDS	0 kts.	0/0	\$8,286
Ellisville	18-MAR-96	TSTM WIND	0 kts.	0/0	\$16,091
Ellisville	29-JAN-01	TSTM WIND	0 kts.	0/0	\$5,703
Ellisville	22-JUL-03	TSTM WIND	0 kts.	0/0	\$40,317
Ellisville	22-JUL-03	TSTM WIND	0 kts.	0/0	\$33,598
Ellisville	06-AUG-03	TSTM WIND	0 kts.	0/0	\$1,344
Ellisville	21-JUN-04	TSTM WIND	0 kts.	0/0	\$2,610
Ellisville	02-JUL-04	TSTM WIND	0 kts.	0/0	\$0
Ellisville	16-JUL-04	TSTM WIND	0 kts.	0/0	\$6,524
Ellisville	30-APR-05	TSTM WIND	0 kts.	0/0	\$31,669
Ellisville	29-MAY-05	TSTM WIND	0 kts.	0/0	\$38,003
Ellisville	23-JUN-06	TSTM WIND	0 kts.	0/0	\$61,494
Ellisville	05-AUG-06	TSTM WIND	0 kts.	0/0	\$0
Ellisville	05-AUG-06	TSTM WIND	0 kts.	0/0	\$0
Ellisville	15-AUG-06	TSTM WIND	0 kts.	0/0	\$122,987
Ellisville	13-FEB-07	THUNDERSTORM WIND	50 kts.	0/0	\$0
Ellisville	18-JUN-07	THUNDERSTORM WIND	50 kts.	0/0	\$2,388
Ellisville	17-OCT-07	THUNDERSTORM WIND	50 kts.	0/0	\$0
Ellisville	29-JAN-08	THUNDERSTORM WIND	55 kts.	0/0	\$0
Ellisville	12-FEB-08	THUNDERSTORM WIND	55 kts.	0/0	\$9,274
Ellisville	04-APR-11	THUNDERSTORM WIND	74 kts.	0/0	\$318,270
Ellisville	13-JUL-11	THUNDERSTORM WIND	50 kts.	0/0	\$5,305
Ellisville	03-APR-12	THUNDERSTORM WIND	50 kts.	0/0	\$6,180
Ellisville	04-JUL-12	THUNDERSTORM WIND	55 kts.	0/0	\$15,450
Ellisville	12-JUL-12	THUNDERSTORM WIND	40 kts.	0/0	\$515
Ellisville	20-FEB-14	THUNDERSTORM WIND	55 kts.	0/0	\$5,000
Ellisville	05-JUL-15	THUNDERSTORM WIND	50 kts.	0/0	\$4,000
Ellisville	14-APR-16	THUNDERSTORM WIND	50 kts.	0/0	\$12,000
Ellisville	12-MAY-17	THUNDERSTORM WIND	50 kts.	0/0	\$15,000
Ellisville	21-MAY-17	THUNDERSTORM WIND	50 kts.	0/0	\$2,000
Ellisville	10-JUN-18	THUNDERSTORM WIND	39 kts.	0/0	\$2,000
Laurel					
Laurel	01-JUL-94	THUNDERSTORM WINDS	0 kts.	0/0	\$852
Laurel	11-APR-95	THUNDERSTORM WINDS	0 kts.	0/0	\$3,314
Laurel	13-JUL-96	TSTM WIND	0 kts.	0/0	\$3,218

ANNEX D: JONES COUNTY

Location	Date	Type	Magnitude	Deaths / Injuries	Property Damage*
Laurel	15-JAN-97	TSTM WIND	0 kts.	0/0	\$15,730
Laurel	05-APR-97	TSTM WIND/HAIL	0 kts.	0/0	\$3,146
Laurel	27-APR-97	TSTM WIND	0 kts.	0/0	\$6,292
Laurel	28-MAY-97	TSTM WIND	0 kts.	0/0	\$15,730
Laurel	25-OCT-97	TSTM WIND	0 kts.	0/0	\$4,719
Laurel	05-JUN-98	TSTM WIND	0 kts.	0/0	\$30,978
Laurel	03-JAN-00	TSTM WIND	0 kts.	0/0	\$2,937
Laurel	02-APR-00	TSTM WIND	0 kts.	0/0	\$139,511
Laurel	02-APR-00	TSTM WIND	0 kts.	0/0	\$22,028
Laurel	17-JUL-00	TSTM WIND	0 kts.	1/0	\$22,028
Laurel	20-JUL-00	TSTM WIND	0 kts.	0/0	\$4,406
Laurel	22-JUL-00	TSTM WIND	0 kts.	0/0	\$5,874
Laurel	10-AUG-00	TSTM WIND	0 kts.	0/0	\$2,937
Laurel	10-AUG-00	TSTM WIND	0 kts.	0/0	\$36,713
Laurel	31-AUG-00	TSTM WIND	0 kts.	0/0	\$22,028
Laurel	06-OCT-00	TSTM WIND	0 kts.	0/0	\$22,028
Laurel	13-DEC-00	TSTM WIND	0 kts.	0/0	\$2,937
Laurel	19-JAN-01	TSTM WIND	0 kts.	0/0	\$2,852
Laurel	12-MAR-01	TSTM WIND	0 kts.	1/0	\$142,576
Laurel	31-MAY-01	TSTM WIND	0 kts.	0/0	\$57,030
Laurel	27-JUN-01	TSTM WIND	0 kts.	0/0	\$1,426
Laurel	12-JUL-01	TSTM WIND	0 kts.	0/0	\$35,644
Laurel	13-DEC-01	TSTM WIND	0 kts.	0/0	\$1,426
Laurel	20-MAR-02	TSTM WIND	0 kts.	0/0	\$1,384
Laurel	08-APR-02	TSTM WIND	0 kts.	0/0	\$1,384
Laurel	17-MAY-02	TSTM WIND	0 kts.	0/0	\$1,384
Laurel	17-MAY-02	TSTM WIND	0 kts.	0/0	\$1,384
Laurel	08-JUL-02	TSTM WIND	0 kts.	0/0	\$692
Laurel	25-JUL-02	TSTM WIND	0 kts.	0/0	\$1,384
Laurel	25-JUL-02	TSTM WIND	0 kts.	0/0	\$1,384
Laurel	02-AUG-02	TSTM WIND	0 kts.	0/0	\$13,842
Laurel	24-DEC-02	TSTM WIND	0 kts.	0/0	\$3,461
Laurel	24-DEC-02	TSTM WIND	0 kts.	0/0	\$1,384
Laurel	06-APR-03	TSTM WIND	0 kts.	0/0	\$40,317
Laurel	17-MAY-03	TSTM WIND	0 kts.	0/0	\$13,439
Laurel	11-JUL-03	TSTM WIND	0 kts.	0/0	\$13,439
Laurel	22-JUL-03	TSTM WIND	0 kts.	0/0	\$4,032
Laurel	01-MAY-04	TSTM WIND	0 kts.	0/0	\$1,305
Laurel	02-JUL-04	TSTM WIND	0 kts.	0/0	\$3,914
Laurel	15-JUL-04	TSTM WIND	0 kts.	0/0	\$3,914
Laurel	13-JAN-05	TSTM WIND	0 kts.	0/0	\$19,002
Laurel	31-MAR-05	TSTM WIND	0 kts.	0/0	\$0
Laurel	31-MAR-05	TSTM WIND	0 kts.	0/0	\$25,335
Laurel	15-NOV-05	TSTM WIND	0 kts.	0/0	\$19,002
Laurel	09-MAY-06	TSTM WIND	0 kts.	0/0	\$73,792
Laurel	23-JUN-06	TSTM WIND	0 kts.	0/0	\$61,494
Laurel	23-JUN-06	TSTM WIND	0 kts.	0/0	\$12,299

ANNEX D: JONES COUNTY

Location	Date	Type	Magnitude	Deaths / Injuries	Property Damage*
Laurel	23-JUN-06	TSTM WIND	0 kts.	0/0	\$12,299
Laurel	09-AUG-06	TSTM WIND	0 kts.	0/0	\$491,950
Laurel	25-FEB-07	THUNDERSTORM WIND	53 kts.	0/0	\$14,329
Laurel	19-JUN-07	THUNDERSTORM WIND	53 kts.	0/0	\$83,584
Laurel	01-AUG-07	THUNDERSTORM WIND	50 kts.	0/0	\$0
Laurel	10-MAY-09	THUNDERSTORM WIND	60 kts.	0/0	\$225,102
Laurel	04-APR-11	THUNDERSTORM WIND	56 kts.	0/0	\$31,827
Laurel	26-APR-11	THUNDERSTORM WIND	50 kts.	0/0	\$0
Laurel	07-JUN-11	THUNDERSTORM WIND	50 kts.	0/0	\$5,305
Laurel	28-JUN-11	THUNDERSTORM WIND	43 kts.	0/0	\$5,305
Laurel	12-MAY-12	THUNDERSTORM WIND	50 kts.	0/0	\$51,500
Laurel	30-MAY-12	THUNDERSTORM WIND	50 kts.	0/0	\$41,200
Laurel	18-JUL-12	THUNDERSTORM WIND	35 kts.	0/0	\$103
Laurel	04-SEP-12	THUNDERSTORM WIND	50 kts.	0/0	\$2,060
Laurel	13-OCT-14	THUNDERSTORM WIND	52 kts.	0/0	\$3,000
Laurel	20-MAY-15	THUNDERSTORM WIND	55 kts.	0/0	\$10,000
Laurel	24-MAY-15	THUNDERSTORM WIND	52 kts.	0/0	\$30,000
Laurel	24-JUN-15	THUNDERSTORM WIND	50 kts.	0/0	\$3,000
Laurel	15-FEB-16	THUNDERSTORM WIND	50 kts.	0/0	\$14,000
Laurel	31-MAY-16	THUNDERSTORM WIND	50 kts.	0/0	\$7,000
Laurel	05-AUG-16	THUNDERSTORM WIND	39 kts.	0/0	\$15,000
Laurel	05-AUG-16	THUNDERSTORM WIND	35 kts.	0/1	\$500
Laurel	03-APR-17	THUNDERSTORM WIND	50 kts.	0/0	\$5,000
Laurel	30-APR-17	THUNDERSTORM WIND	50 kts.	0/0	\$5,000
Laurel	03-APR-18	THUNDERSTORM WIND	50 kts.	0/0	\$20,000
Laurel	06-APR-18	THUNDERSTORM WIND	50 kts.	0/0	\$5,000
Laurel	16-MAY-18	THUNDERSTORM WIND	50 kts.	0/0	\$20,000
Laurel	30-MAY-18	THUNDERSTORM WIND	52 kts.	0/0	\$30,000
Laurel	31-JUL-18	THUNDERSTORM WIND	50 kts.	0/0	\$5,000
Sandersville					
Sandersville	20-JUL-00	TSTM WIND	0 kts.	0/0	\$7,243
Sandersville	10-AUG-00	TSTM WIND	0 kts.	0/0	\$44,056
Sandersville	02-MAR-01	TSTM WIND	0 kts.	0/0	\$35,644
Sandersville	22-JUL-03	TSTM WIND	0 kts.	0/0	\$2,688
Sandersville	22-JUN-04	TSTM WIND	0 kts.	0/0	\$1,305
Sandersville	15-JUL-04	TSTM WIND	0 kts.	0/0	\$6,524
Sandersville	20-MAY-05	TSTM WIND	0 kts.	0/0	\$12,668
Sandersville	09-JUN-05	TSTM WIND	0 kts.	0/0	\$10,134
Sandersville	10-MAY-06	TSTM WIND	0 kts.	0/0	\$24,597
Sandersville	28-JUL-06	TSTM WIND	0 kts.	0/0	\$86,091
Sandersville	30-JUL-06	TSTM WIND	0 kts.	0/0	\$368,962
Sandersville	30-JUL-06	TSTM WIND	0 kts.	0/0	\$61,494
Sandersville	10-JAN-08	THUNDERSTORM WIND	78 kts.	0/0	\$405,746
Sandersville	10-DEC-08	THUNDERSTORM WIND	50 kts.	0/0	\$0
Sandersville	06-MAY-09	THUNDERSTORM WIND	50 kts.	0/0	\$0
Sandersville	15-MAY-09	THUNDERSTORM WIND	50 kts.	0/0	\$1,801
Sandersville	03-AUG-10	THUNDERSTORM WIND	52 kts.	0/0	\$27,318

ANNEX D: JONES COUNTY

Location	Date	Type	Magnitude	Deaths / Injuries	Property Damage*
Sandersville	12-OCT-10	THUNDERSTORM WIND	50 kts.	0/0	\$0
Sandersville	13-JUN-11	THUNDERSTORM WIND	50 kts.	0/0	\$106,090
Sandersville	22-JUN-11	THUNDERSTORM WIND	50 kts.	0/0	\$26,523
Sandersville	11-JUN-12	THUNDERSTORM WIND	53 kts.	0/0	\$10,300
Sandersville	16-NOV-14	THUNDERSTORM WIND	53 kts.	0/0	\$2,000
Sandersville	23-FEB-16	THUNDERSTORM WIND	53 kts.	0/0	\$2,000
Sandersville	17-JUN-16	THUNDERSTORM WIND	53 kts.	0/1	\$75,000
Sandersville	26-SEP-16	THUNDERSTORM WIND	53 kts.	0/0	\$9,000
Sandersville	23-JUN-17	THUNDERSTORM WIND	53 kts.	0/0	\$5,000
Soso					
Soso	25-AUG-00	TSTM WIND	0 kts.	0/0	\$2,937
Soso	19-JAN-01	TSTM WIND	0 kts.	0/0	\$1,426
Soso	12-MAR-01	TSTM WIND	0 kts.	0/0	\$11,406
Soso	17-MAY-02	TSTM WIND	0 kts.	0/0	\$1,384
Soso	07-JUL-02	TSTM WIND	0 kts.	0/0	\$1,384
Soso	07-JUL-02	TSTM WIND	0 kts.	0/0	\$1,384
Soso	12-JUL-02	TSTM WIND	0 kts.	0/0	\$1,384
Soso	12-JUL-02	TSTM WIND	0 kts.	0/0	\$692
Soso	10-JUL-07	THUNDERSTORM WIND	50 kts.	0/0	\$0
Soso	03-MAR-08	THUNDERSTORM WIND	60 kts.	0/0	\$34,778
Soso	02-APR-12	THUNDERSTORM WIND	50 kts.	0/0	\$7,210
Soso	28-APR-14	THUNDERSTORM WIND	60 kts.	0/0	\$50,000
Soso	22-JUL-14	THUNDERSTORM WIND	54 kts.	0/0	\$5,000
Soso	18-MAR-15	THUNDERSTORM WIND	50 kts.	0/0	\$1,000
Soso	15-FEB-16	THUNDERSTORM WIND	50 kts.	0/0	\$54,000
Soso	03-APR-17	THUNDERSTORM WIND	52 kts.	0/0	\$25,000
Unincorporated Area					
JONES COUNTY	02-JUL-57	TSTM WIND	0 kts.	0/0	\$0
JONES COUNTY	15-JAN-59	TSTM WIND	0 kts.	0/0	\$0
JONES COUNTY	08-MAY-61	TSTM WIND	0 kts.	0/0	\$0
JONES COUNTY	22-JAN-65	TSTM WIND	0 kts.	0/0	\$0
JONES COUNTY	22-JAN-65	TSTM WIND	0 kts.	0/0	\$0
JONES COUNTY	27-DEC-68	TSTM WIND	0 kts.	0/0	\$0
JONES COUNTY	05-APR-69	TSTM WIND	0 kts.	0/0	\$0
JONES COUNTY	04-JUL-70	TSTM WIND	0 kts.	0/0	\$0
JONES COUNTY	22-APR-72	TSTM WIND	0 kts.	0/0	\$0
JONES COUNTY	25-JUN-72	TSTM WIND	0 kts.	0/0	\$0

ANNEX D: JONES COUNTY

Location	Date	Type	Magnitude	Deaths / Injuries	Property Damage*
JONES COUNTY	06-MAR-73	TSTM WIND	0 kts.	0/0	\$0
JONES COUNTY	08-MAY-73	TSTM WIND	0 kts.	0/0	\$0
JONES COUNTY	08-MAY-73	TSTM WIND	0 kts.	0/0	\$0
JONES COUNTY	30-JUL-74	TSTM WIND	0 kts.	0/0	\$0
JONES COUNTY	13-AUG-74	TSTM WIND	0 kts.	0/0	\$0
JONES COUNTY	01-SEP-74	TSTM WIND	0 kts.	0/0	\$0
JONES COUNTY	10-JAN-75	TSTM WIND	0 kts.	0/0	\$0
JONES COUNTY	02-APR-75	TSTM WIND	0 kts.	0/0	\$0
JONES COUNTY	07-MAY-75	TSTM WIND	0 kts.	0/0	\$0
JONES COUNTY	09-JUL-75	TSTM WIND	0 kts.	0/0	\$0
JONES COUNTY	21-MAR-76	TSTM WIND	0 kts.	0/0	\$0
JONES COUNTY	07-MAY-76	TSTM WIND	0 kts.	0/0	\$0
JONES COUNTY	08-MAY-77	TSTM WIND	0 kts.	0/0	\$0
JONES COUNTY	08-MAY-77	TSTM WIND	0 kts.	0/0	\$0
JONES COUNTY	08-MAY-77	TSTM WIND	0 kts.	0/0	\$0
JONES COUNTY	15-JUL-77	TSTM WIND	0 kts.	0/0	\$0
JONES COUNTY	26-APR-79	TSTM WIND	0 kts.	0/0	\$0
JONES COUNTY	04-MAY-79	TSTM WIND	0 kts.	0/0	\$0
JONES COUNTY	25-MAY-80	TSTM WIND	0 kts.	0/0	\$0
JONES COUNTY	03-JAN-82	TSTM WIND	0 kts.	0/0	\$0
JONES COUNTY	09-JUL-82	TSTM WIND	0 kts.	0/0	\$0
JONES COUNTY	01-APR-83	TSTM WIND	0 kts.	0/0	\$0
JONES COUNTY	06-APR-83	TSTM WIND	0 kts.	0/0	\$0
JONES COUNTY	19-MAY-83	TSTM WIND	0 kts.	0/0	\$0
JONES COUNTY	03-DEC-83	TSTM WIND	0 kts.	0/0	\$0

ANNEX D: JONES COUNTY

Location	Date	Type	Magnitude	Deaths / Injuries	Property Damage*
JONES COUNTY	12-FEB-84	TSTM WIND	0 kts.	0/0	\$0
JONES COUNTY	03-MAY-84	TSTM WIND	0 kts.	0/0	\$0
JONES COUNTY	28-APR-85	TSTM WIND	0 kts.	0/0	\$0
JONES COUNTY	28-APR-85	TSTM WIND	0 kts.	0/0	\$0
JONES COUNTY	01-JUL-85	TSTM WIND	0 kts.	0/0	\$0
JONES COUNTY	11-JUL-85	TSTM WIND	0 kts.	0/0	\$0
JONES COUNTY	23-AUG-85	TSTM WIND	0 kts.	0/0	\$0
JONES COUNTY	23-AUG-85	TSTM WIND	0 kts.	0/0	\$0
JONES COUNTY	04-FEB-86	TSTM WIND	0 kts.	0/0	\$0
JONES COUNTY	10-AUG-86	TSTM WIND	0 kts.	0/0	\$0
JONES COUNTY	10-AUG-86	TSTM WIND	0 kts.	0/0	\$0
JONES COUNTY	15-FEB-87	TSTM WIND	0 kts.	0/0	\$0
JONES COUNTY	17-MAR-87	TSTM WIND	0 kts.	0/0	\$0
JONES COUNTY	25-JUL-87	TSTM WIND	0 kts.	0/0	\$0
JONES COUNTY	18-APR-88	TSTM WIND	0 kts.	0/0	\$0
JONES COUNTY	18-APR-88	TSTM WIND	0 kts.	0/0	\$0
JONES COUNTY	04-NOV-88	TSTM WIND	0 kts.	0/0	\$0
JONES COUNTY	20-FEB-89	TSTM WIND	0 kts.	0/0	\$0
JONES COUNTY	22-MAY-89	TSTM WIND	0 kts.	0/0	\$0
JONES COUNTY	14-JUN-89	TSTM WIND	0 kts.	0/0	\$0
JONES COUNTY	22-NOV-89	TSTM WIND	0 kts.	0/0	\$0
JONES COUNTY	22-NOV-89	TSTM WIND	0 kts.	0/0	\$0
JONES COUNTY	27-NOV-89	TSTM WIND	0 kts.	0/0	\$0
JONES COUNTY	10-FEB-90	TSTM WIND	0 kts.	0/0	\$0
JONES COUNTY	10-APR-90	TSTM WIND	0 kts.	1/0	\$0

ANNEX D: JONES COUNTY

Location	Date	Type	Magnitude	Deaths / Injuries	Property Damage*
JONES COUNTY	10-JUN-90	TSTM WIND	0 kts.	0/0	\$0
JONES COUNTY	10-JUN-90	TSTM WIND	0 kts.	0/0	\$0
JONES COUNTY	18-JUN-90	TSTM WIND	0 kts.	0/0	\$0
JONES COUNTY	22-AUG-90	TSTM WIND	0 kts.	0/0	\$0
JONES COUNTY	02-SEP-90	TSTM WIND	0 kts.	0/0	\$0
JONES COUNTY	09-APR-91	TSTM WIND	0 kts.	0/0	\$0
JONES COUNTY	09-APR-91	TSTM WIND	0 kts.	0/0	\$0
JONES COUNTY	05-MAY-91	TSTM WIND	0 kts.	0/0	\$0
JONES COUNTY	22-JUN-91	TSTM WIND	0 kts.	0/0	\$0
JONES COUNTY	14-JUL-91	TSTM WIND	0 kts.	0/0	\$0
JONES COUNTY	12-MAY-92	TSTM WIND	0 kts.	0/0	\$0
JONES COUNTY	09-JUN-94	THUNDERSTORM WINDS	0 kts.	0/0	\$8,523
JONES COUNTY	29-JUN-94	THUNDERSTORM WINDS	0 kts.	0/0	\$85,228
Moselle	06-JAN-95	THUNDERSTORM WINDS	0 kts.	0/0	\$6,629
JONES COUNTY	11-APR-95	THUNDERSTORM WINDS	0 kts.	0/0	\$3,314
JONES COUNTY	28-MAY-95	TSTM WIND	0 kts.	0/0	\$3,314
Eastabuchie	26-JUL-95	THUNDERSTORM WINDS	52 kts.	0/0	\$0
Eastabuchie	26-JUL-95	THUNDERSTORM WINDS	0 kts.	0/0	\$4,972
Moselle	27-OCT-95	THUNDERSTORM WINDS	56 kts.	0/0	\$3,314
Shady Grove	11-NOV-95	THUNDERSTORM WINDS	0 kts.	0/0	\$33,143
Lanham	06-MAR-96	TSTM WIND	0 kts.	0/0	\$0
Ovett	06-MAR-96	TSTM WIND	0 kts.	0/0	\$0
Ovett	26-OCT-96	TSTM WIND	0 kts.	0/0	\$4,827
EASTABUCHIE	26-FEB-98	TSTM WIND	0 kts.	0/0	\$30,978
JONES COUNTY	27-SEP-98	HIGH WIND	0 kts.	0/0	\$178,811
Countywide	22-JAN-99	TSTM WIND	0 kts.	0/0	\$37,815
Countywide	27-FEB-99	TSTM WIND	0 kts.	0/0	\$22,689
Countywide	08-MAR-99	TSTM WIND	0 kts.	0/0	\$75,629
Countywide	01-APR-00	TSTM WIND	0 kts.	0/0	\$2,937
Countywide	16-JUL-00	TSTM WIND	0 kts.	0/0	\$5,874
Countywide	20-JUL-00	TSTM WIND	0 kts.	0/0	\$14,685
Countywide	16-FEB-01	TSTM WIND	0 kts.	0/0	\$7,129
Ovett	02-MAR-01	TSTM WIND	0 kts.	0/0	\$7,129
EASTABUCHIE	12-MAR-01	TSTM WIND	0 kts.	0/0	\$7,129

ANNEX D: JONES COUNTY

Location	Date	Type	Magnitude	Deaths / Injuries	Property Damage*
Countywide	20-AUG-01	TSTM WIND	0 kts.	0/0	\$28,515
Ovett	19-JAN-02	TSTM WIND	0 kts.	0/0	\$1,384
Countywide	01-JUL-02	TSTM WIND	0 kts.	0/0	\$1,384
Hebron	02-JUL-02	TSTM WIND	0 kts.	0/0	\$2,768
Countywide	25-AUG-02	TSTM WIND	0 kts.	0/0	\$2,768
Moselle	24-DEC-02	TSTM WIND	0 kts.	0/0	\$2,768
Countywide	17-MAY-03	TSTM WIND	0 kts.	0/0	\$13,439
Countywide	22-JUL-03	TSTM WIND	0 kts.	0/0	\$20,159
Countywide	30-JUL-03	TSTM WIND	0 kts.	0/0	\$2,688
Moselle	03-AUG-03	TSTM WIND	0 kts.	0/0	\$4,032
Ovett	20-AUG-03	TSTM WIND	0 kts.	0/0	\$13,439
Countywide	18-NOV-03	TSTM WIND	0 kts.	0/0	\$13,439
Countywide	27-JUN-04	TSTM WIND	0 kts.	0/0	\$6,524
Tuckers Crossing	15-JUL-04	TSTM WIND	0 kts.	0/0	\$2,610
Countywide	16-JUL-04	TSTM WIND	0 kts.	0/0	\$1,305
(PIB)PINE BELT RGNL	30-APR-05	TSTM WIND	0 kts.	0/0	\$0
JONES COUNTY	09-MAR-06	STRONG WIND	45 kts.	0/0	\$73,792
Moselle	08-MAY-06	TSTM WIND	0 kts.	0/0	\$6,149
Ovett	09-AUG-06	TSTM WIND	0 kts.	0/0	\$0
Hebron	14-APR-07	THUNDERSTORM WIND	50 kts.	0/0	\$4,776
JONES COUNTY	09-JUN-07	STRONG WIND	39 kts.	0/0	\$12
Moselle	19-JUN-07	THUNDERSTORM WIND	50 kts.	0/0	\$0
Moselle	07-JUL-07	THUNDERSTORM WIND	50 kts.	0/0	\$0
MYRICK	10-JUL-07	THUNDERSTORM WIND	60 kts.	0/0	\$71,643
JONES COUNTY	14-JUL-07	STRONG WIND	39 kts.	0/0	\$3,582
Reddoch	10-JAN-08	THUNDERSTORM WIND	65 kts.	0/0	\$231,855
(LUL)HESLER FLD LAUR	29-JAN-08	THUNDERSTORM WIND	55 kts.	0/1	\$57,964
Moselle	31-JAN-08	THUNDERSTORM WIND	54 kts.	0/0	\$23,185
Ovett	12-FEB-08	THUNDERSTORM WIND	65 kts.	0/0	\$0
(PIB)PINE BELT RGNL	12-FEB-08	THUNDERSTORM WIND	55 kts.	0/0	\$11,593
Moselle	12-FEB-08	THUNDERSTORM WIND	70 kts.	0/0	\$13,911
Moselle	12-FEB-08	THUNDERSTORM WIND	55 kts.	0/0	\$9,274
Service	03-MAR-08	THUNDERSTORM WIND	50 kts.	0/0	\$0
Moselle	03-MAY-08	THUNDERSTORM WIND	60 kts.	0/0	\$11,593
BLODGETT	03-MAY-08	THUNDERSTORM WIND	65 kts.	0/0	\$28,892
JONES COUNTY	22-MAY-08	STRONG WIND	41 kts.	0/0	\$116
(LUL)HESLER FLD LAUR	07-AUG-08	THUNDERSTORM WIND	60 kts.	0/0	\$0
TAWANTA	07-AUG-08	THUNDERSTORM WIND	55 kts.	0/0	\$0
(PIB)PINE BELT RGNL	12-AUG-08	THUNDERSTORM WIND	53 kts.	0/0	\$2,319

ANNEX D: JONES COUNTY

Location	Date	Type	Magnitude	Deaths / Injuries	Property Damage*
Hebron	24-NOV-08	THUNDERSTORM WIND	50 kts.	0/0	\$0
Tuckers	24-NOV-08	THUNDERSTORM WIND	50 kts.	0/0	\$0
Tuckers Crossing	26-MAR-09	THUNDERSTORM WIND	65 kts.	0/0	\$90,041
Tuckers	02-APR-09	THUNDERSTORM WIND	50 kts.	0/0	\$1,688
Moselle	12-APR-09	THUNDERSTORM WIND	61 kts.	0/0	\$0
Reddoch	03-MAY-09	THUNDERSTORM WIND	70 kts.	0/0	\$146,316
Hebron	03-MAY-09	THUNDERSTORM WIND	68 kts.	1/0	\$191,336
JONES COUNTY	03-MAY-09	STRONG WIND	43 kts.	0/0	\$39,393
JONES COUNTY	28-JUL-09	STRONG WIND	43 kts.	0/0	\$2,814
Hebron	21-AUG-09	THUNDERSTORM WIND	50 kts.	0/0	\$0
Oak Bowery	21-AUG-09	THUNDERSTORM WIND	56 kts.	0/0	\$0
Tuckers Crossing	09-DEC-09	THUNDERSTORM WIND	50 kts.	0/0	\$0
Oak Bowery	09-DEC-09	THUNDERSTORM WIND	50 kts.	0/0	\$0
Lanham	01-JUN-10	THUNDERSTORM WIND	58 kts.	0/0	\$43,709
Hoy	05-JUN-10	THUNDERSTORM WIND	60 kts.	0/0	\$43,709
ERRATA	03-AUG-10	THUNDERSTORM WIND	50 kts.	0/0	\$0
ERRATA	03-AUG-10	THUNDERSTORM WIND	50 kts.	0/0	\$5,464
Tuckers	03-AUG-10	THUNDERSTORM WIND	52 kts.	0/0	\$0
TAWANTA	22-AUG-10	THUNDERSTORM WIND	60 kts.	0/0	\$10,927
(LUL)HESLER FLD LAUR	30-NOV-10	THUNDERSTORM WIND	50 kts.	0/0	\$5,464
Tuckers	30-NOV-10	THUNDERSTORM WIND	65 kts.	0/0	\$54,636
JONES COUNTY	12-DEC-10	STRONG WIND	40 kts.	0/0	\$27,318
TAWANTA	04-APR-11	THUNDERSTORM WIND	70 kts.	0/0	\$159,135
Hoy	11-APR-11	THUNDERSTORM WIND	52 kts.	0/0	\$0
Moselle	15-APR-11	THUNDERSTORM WIND	52 kts.	0/0	\$0
Lanham	15-APR-11	THUNDERSTORM WIND	50 kts.	0/0	\$4,244
(PIB)PINE BELT RGNL	07-JUN-11	THUNDERSTORM WIND	50 kts.	0/0	\$2,122
Reddoch	04-JUL-11	THUNDERSTORM WIND	60 kts.	0/0	\$21,218
Moselle	12-JUL-11	THUNDERSTORM WIND	50 kts.	0/0	\$3,183
Ellisville Jct.	10-AUG-11	THUNDERSTORM WIND	55 kts.	0/0	\$7,426
JONES COUNTY	03-SEP-11	STRONG WIND	35 kts.	0/0	\$15,914
Service	04-SEP-11	THUNDERSTORM WIND	45 kts.	0/0	\$530
JONES COUNTY	20-MAR-12	STRONG WIND	40 kts.	0/0	\$10,300
JONES COUNTY	20-MAR-12	STRONG WIND	40 kts.	0/0	\$10,300
JONES COUNTY	21-MAR-12	STRONG WIND	43 kts.	0/0	\$1,030
JONES COUNTY	21-MAR-12	STRONG WIND	43 kts.	0/0	\$1,030

ANNEX D: JONES COUNTY

Location	Date	Type	Magnitude	Deaths / Injuries	Property Damage*
JONES COUNTY	21-MAR-12	STRONG WIND	43 kts.	0/0	\$1,030
Reddoch	03-APR-12	THUNDERSTORM WIND	50 kts.	0/0	\$4,120
Oak Bowery	31-MAY-12	THUNDERSTORM WIND	55 kts.	0/0	\$41,200
Oak Bowery	07-JUL-12	THUNDERSTORM WIND	40 kts.	0/0	\$5,150
Moselle	06-AUG-12	THUNDERSTORM WIND	50 kts.	0/0	\$0
TAWANTA	06-AUG-12	THUNDERSTORM WIND	50 kts.	0/0	\$15,450
(PIB)PINE BELT RGNL	09-AUG-12	THUNDERSTORM WIND	50 kts.	0/0	\$4,120
JONES COUNTY	18-AUG-12	STRONG WIND	43 kts.	0/0	\$2,060
JONES COUNTY	28-AUG-12	STRONG WIND	40 kts.	0/0	\$5,150
Lanham	04-SEP-12	THUNDERSTORM WIND	50 kts.	0/0	\$2,060
(LUL)HESLER FLD LAUR	20-DEC-12	THUNDERSTORM WIND	50 kts.	0/0	\$3,090
HOY	28-APR-14	THUNDERSTORM WIND	60 kts.	0/0	\$35,000
LANHAM	28-APR-14	THUNDERSTORM WIND	50 kts.	0/0	\$1,000
GITANO	28-APR-14	THUNDERSTORM WIND	50 kts.	0/0	\$1,000
OVETT	28-APR-14	THUNDERSTORM WIND	50 kts.	0/0	\$1,000
ERRATA	22-JUN-14	THUNDERSTORM WIND	50 kts.	0/0	\$1,000
BLODGETT	28-JUN-14	THUNDERSTORM WIND	54 kts.	0/0	\$5,000
HEBRON	22-JUL-14	THUNDERSTORM WIND	53 kts.	0/0	\$5,000
SERVICE	02-OCT-14	THUNDERSTORM WIND	50 kts.	0/0	\$3,000
TUCKERS	16-NOV-14	THUNDERSTORM WIND	50 kts.	0/0	\$0
TAWANTA	23-DEC-14	THUNDERSTORM WIND	52 kts.	0/0	\$2,000
LANHAM	23-DEC-14	THUNDERSTORM WIND	50 kts.	0/0	\$200
ERRATA	18-MAR-15	THUNDERSTORM WIND	50 kts.	0/0	\$2,000
MYRICK	31-MAY-15	THUNDERSTORM WIND	50 kts.	0/0	\$15,000
MYRICK	24-JUN-15	THUNDERSTORM WIND	45 kts.	0/0	\$2,000
TAWANTA	04-JUL-15	THUNDERSTORM WIND	50 kts.	0/0	\$5,000
HOY	18-JUL-15	THUNDERSTORM WIND	39 kts.	0/0	\$1,000
(PIB)PINE BELT RGNL	30-JUL-15	THUNDERSTORM WIND	40 kts.	0/0	\$2,000
OVETT	30-JUL-15	THUNDERSTORM WIND	45 kts.	0/0	\$12,000
JONES COUNTY	22-FEB-16	STRONG WIND	35 kts.	0/0	\$20,000
BLODGETT	15-FEB-16	THUNDERSTORM WIND	50 kts.	0/0	\$4,000
ERRATA	23-FEB-16	THUNDERSTORM WIND	50 kts.	0/0	\$2,000
MOSELLE	17-MAR-16	THUNDERSTORM WIND	58 kts.	0/0	\$100,000
JONES COUNTY	27-APR-16	STRONG WIND	35 kts.	0/0	\$5,000
LANHAM	06-JUL-16	THUNDERSTORM WIND	50 kts.	0/0	\$15,000
SERVICE	13-JUL-16	THUNDERSTORM WIND	43 kts.	0/0	\$2,000
OAK BOWERY	13-JUL-16	THUNDERSTORM WIND	50 kts.	0/0	\$7,000
SERVICE	25-SEP-16	THUNDERSTORM WIND	46 kts.	0/0	\$10,000
JONES COUNTY	28-NOV-16	STRONG WIND	34 kts.	0/0	\$3,000
TUCKERS	30-NOV-16	THUNDERSTORM WIND	45 kts.	0/0	\$5,000

ANNEX D: JONES COUNTY

Location	Date	Type	Magnitude	Deaths / Injuries	Property Damage*
HOY	02-JAN-17	THUNDERSTORM WIND	50 kts.	0/0	\$10,000
BLODGETT	02-JAN-17	THUNDERSTORM WIND	50 kts.	0/0	\$8,000
TUCKERS	02-JAN-17	THUNDERSTORM WIND	50 kts.	0/0	\$7,000
(PIB)PINE BELT RGNL	02-JAN-17	THUNDERSTORM WIND	55 kts.	0/0	\$20,000
TUCKERS CROSSING	27-MAR-17	THUNDERSTORM WIND	50 kts.	0/0	\$75,000
LANHAM	22-APR-17	THUNDERSTORM WIND	50 kts.	0/0	\$10,000
OAK BOWERY	21-MAY-17	THUNDERSTORM WIND	50 kts.	0/0	\$2,000
MYRICK	13-JUN-17	THUNDERSTORM WIND	50 kts.	0/0	\$8,000
MILL CREEK	16-JUN-17	THUNDERSTORM WIND	39 kts.	0/0	\$3,000
GITANO	16-JUN-17	THUNDERSTORM WIND	65 kts.	0/0	\$200,000
(PIB)PINE BELT RGNL	16-JUN-17	THUNDERSTORM WIND	60 kts.	0/0	\$3,000
SERVICE	16-JUN-17	THUNDERSTORM WIND	55 kts.	0/0	\$500
HOY	16-JUN-17	THUNDERSTORM WIND	43 kts.	0/0	\$500
JONES COUNTY	22-JUN-17	STRONG WIND	35 kts.	0/0	\$13,000
OAK BOWERY	30-JUN-17	THUNDERSTORM WIND	43 kts.	0/0	\$4,000
WALTERS	30-JUN-17	THUNDERSTORM WIND	43 kts.	0/0	\$20,000
TUCKERS CROSSING	30-JUN-17	THUNDERSTORM WIND	43 kts.	0/0	\$5,000
WALTERS	09-AUG-17	THUNDERSTORM WIND	50 kts.	0/0	\$8,000
JONES COUNTY	07-OCT-17	STRONG WIND	35 kts.	0/0	\$5,000
MOSELLE	14-APR-18	THUNDERSTORM WIND	50 kts.	0/0	\$3,000
SERVICE	17-MAY-18	THUNDERSTORM WIND	50 kts.	0/0	\$5,000
LANHAM	20-MAY-18	THUNDERSTORM WIND	50 kts.	0/0	\$10,000
MOSELLE	09-JUN-18	THUNDERSTORM WIND	50 kts.	0/0	\$8,000
LANHAM	27-DEC-18	THUNDERSTORM WIND	50 kts.	0/0	\$3,000
EASTABUCHIE	19-JUL-18	THUNDERSTORM WIND	50 kts.	0/0	\$10,000
BLODGETT	31-JUL-18	THUNDERSTORM WIND	50 kts.	0/0	\$7,000
MYRICK	31-JUL-18	THUNDERSTORM WIND	50 kts.	0/0	\$9,000
MILL CREEK	31-JUL-18	THUNDERSTORM WIND	50 kts.	0/0	\$5,000
HOY	07-AUG-18	THUNDERSTORM WIND	39 kts.	0/0	\$2,000
TAWANTA	01-NOV-18	THUNDERSTORM WIND	56 kts.	0/0	\$20,000
HOY	27-DEC-18	THUNDERSTORM WIND	48 kts.	0/0	\$200,000
SERVICE	19-JAN-19	THUNDERSTORM WIND	50 kts.	0/0	\$3,000
HOY	19-JAN-19	THUNDERSTORM WIND	50 kts.	0/0	\$3,000
LANHAM	19-JAN-19	THUNDERSTORM WIND	60 kts.	0/0	\$30,000
(PIB)PINE BELT RGNL	23-JAN-19	THUNDERSTORM WIND	55 kts.	0/0	\$20,000

*All damage may not have been reported.

Source: National Centers for Environmental Information

Hailstorm

According to the National Centers for Environmental Information, 188 recorded hailstorm events have affected Jones County since 1962.¹³ **Table D.18** is a summary of the hail events in Jones County. **Table D.19** provides detailed information about each event that occurred in the county. In all, hail occurrences resulted in over \$3.8 million in property damages. Hail ranged in diameter from 0.75 inches to 4.5 inches. It should be noted that hail is notorious for causing substantial damage to cars, roofs, and other areas of the built environment that may not be reported to the National Centers for Environmental Information. Therefore, it is likely that damages are greater than the reported value.

TABLE D.18: SUMMARY OF HAIL OCCURRENCES IN JONES COUNTY

Location	Number of Occurrences	Deaths / Injuries	Property Damage
Ellisville	16	0/0	\$20,855
Laurel	48	0/0	\$47,409
Sandersville	11	0/0	\$1,537
Soso	8	0/0	\$1,051,231
Unincorporated Area	105	0/0	\$33,522
JONES COUNTY TOTAL	188	0/0	\$1,154,554

Source: National Centers for Environmental Information

TABLE D.19: HISTORICAL HAIL OCCURRENCES IN JONES COUNTY

Location	Date	Magnitude	Deaths / Injuries	Property Damage*
Ellisville				
Ellisville	09-JUN-94	0.75 in.	0/0	\$0
Ellisville	26-JAN-96	1.00 in.	0/0	\$0
Ellisville	06-MAR-96	2.75 in.	0/0	\$160,911
Ellisville	06-MAR-96	1.75 in.	0/0	\$0
Ellisville	18-MAR-96	0.88 in.	0/0	\$0
Ellisville	05-JUL-97	0.88 in.	0/0	\$0
Ellisville	26-FEB-98	0.75 in.	0/0	\$0
Ellisville	17-APR-98	1.00 in.	0/0	\$0
Ellisville	20-JUN-98	1.75 in.	0/0	\$77,445
Ellisville	29-NOV-01	1.75 in.	0/0	\$28,515
Ellisville	12-MAR-03	1.00 in.	0/0	\$1,344
Ellisville	13-MAR-03	0.75 in.	0/0	\$1,344
Ellisville	22-APR-05	1.75 in.	0/0	\$126,677
Ellisville	03-FEB-06	1.00 in.	0/0	\$0
Ellisville	28-JUL-06	0.75 in.	0/0	\$0
Ellisville	03-MAR-16	0.75 in.	0/0	\$0
Laurel				
Laurel	11-JAN-93	1.75 in.	0/0	\$0
Laurel	25-MAR-93	0.88 in.	0/0	\$0
Laurel	30-MAR-93	1..75 in.	0/0	\$87,452

¹³ These hail events are only inclusive of those reported by the National Centers for Environmental Information (NCEI). It is likely that additional hail events have affected Jones County. As additional local data becomes available, this hazard profile will be amended.

ANNEX D: JONES COUNTY

Location	Date	Magnitude	Deaths / Injuries	Property Damage*
Laurel	03-SEP-93	0.75 in.	0/0	\$0
Laurel	05-NOV-93	1.75 in.	0/0	\$0
Laurel	28-JAN-95	0.75 in.	0/0	\$0
Laurel	06-MAR-95	0.88 in.	0/0	\$6,629
Laurel	15-MAR-95	0.88 in.	0/0	\$0
Laurel	15-MAR-95	1.00 in.	0/0	\$0
Laurel	15-MAR-95	0.88 in.	0/0	\$0
Laurel	15-MAR-95	0.88 in.	0/0	\$0
Laurel	11-APR-95	0.75 in.	0/0	\$0
Laurel	26-JAN-96	0.75 in.	0/0	\$0
Laurel	06-MAR-96	4.50 in.	0/0	\$321,822
Laurel	06-MAR-96	1.75 in.	0/0	\$402,278
Laurel	07-MAR-96	0.75 in.	0/0	\$0
Laurel	22-APR-97	0.75 in.	0/0	\$0
Laurel	22-APR-97	1.75 in.	0/0	\$0
Laurel	24-MAY-97	0.88 in.	0/0	\$0
Laurel	10-FEB-98	0.75 in.	0/0	\$0
Laurel	31-MAR-98	1.00 in.	0/0	\$0
Laurel	03-MAY-98	0.88 in.	0/0	\$0
Laurel	30-JAN-99	0.75 in.	0/0	\$0
Laurel	30-JAN-99	1.75 in.	0/0	\$37,815
Laurel	09-FEB-99	1.00 in.	0/0	\$0
Laurel	08-MAR-99	1.75 in.	0/0	\$45,378
Laurel	09-MAR-99	1.00 in.	0/0	\$0
Laurel	24-APR-99	0.88 in.	0/0	\$0
Laurel	01-APR-00	1.75 in.	0/0	\$36,713
Laurel	17-JUL-00	0.75 in.	0/0	\$0
Laurel	10-AUG-00	0.75 in.	0/0	\$0
Laurel	31-AUG-00	0.88 in.	0/0	\$0
Laurel	07-JUL-02	0.75 in.	0/0	\$0
Laurel	15-JUL-02	1.00 in.	0/0	\$692
Laurel	15-NOV-02	0.75 in.	0/0	\$0
Laurel	06-APR-03	1.75 in.	0/0	\$6,720
Laurel	06-APR-03	1.00 in.	0/0	\$1,344
Laurel	14-MAY-03	0.75 in.	0/0	\$1,344
Laurel	22-MAR-05	0.75 in.	0/0	\$0
Laurel	22-APR-05	1.00 in.	0/0	\$0
Laurel	26-APR-05	0.75 in.	0/0	\$0
Laurel	09-MAY-06	0.88 in.	0/0	\$0
Laurel	23-JUN-06	0.75 in.	0/0	\$0
Laurel	14-APR-07	0.88 in.	0/0	\$0
Laurel	12-MAR-10	1.00 in.	0/0	\$0
Laurel	12-MAR-10	1.00 in.	0/0	\$0
Laurel	30-JUN-15	0.88 in.	0/0	\$0
Laurel	16-MAY-18	1.00 in.	0/0	\$0
Sandersville				
Sandersville	01-MAR-94	0.75 in.	0/0	\$0

ANNEX D: JONES COUNTY

Location	Date	Magnitude	Deaths / Injuries	Property Damage*
Sandersville	14-MAR-03	0.75 in.	0/0	\$1,344
Sandersville	25-APR-03	0.75 in.	0/0	\$1,344
Sandersville	15-JUL-04	1.00 in.	0/0	\$0
Sandersville	30-MAR-05	0.88 in.	0/0	\$0
Sandersville	26-APR-05	1.00 in.	0/0	\$0
Sandersville	01-JUN-08	1.00 in.	0/0	\$0
Sandersville	03-AUG-10	1.00 in.	0/0	\$0
Sandersville	13-JUN-11	1.00 in.	0/0	\$26,523
Sandersville	31-MAR-16	1.00 in.	0/0	\$0
Sandersville	14-APR-16	1.00 in.	0/0	\$0
Soso				
Soso	01-NOV-97	0.75 in.	0/0	\$0
Soso	08-MAR-99	1.75 in.	0/0	\$37,815
Soso	06-APR-05	1.00 in.	0/0	\$0
Soso	22-APR-05	0.75 in.	0/0	\$0
Soso	22-APR-05	2.75 in.	0/0	\$1,013,416
Soso	03-FEB-06	1.00 in.	0/0	\$0
Soso	14-APR-07	1.00 in.	0/0	\$0
Soso	28-APR-14	0.75 in.	0/0	\$0
Unincorporated Area				
JONES COUNTY	10-APR-62	2.00	0/0	\$0
JONES COUNTY	19-APR-65	1.00	0/0	\$0
JONES COUNTY	19-APR-65	1.50	0/0	\$0
JONES COUNTY	04-JUL-70	1.00	0/0	\$0
JONES COUNTY	08-MAY-73	0.75	0/0	\$0
JONES COUNTY	09-APR-75	1.75	0/0	\$0
JONES COUNTY	07-MAY-75	0.75	0/0	\$0
JONES COUNTY	14-MAY-76	1.75	0/0	\$0
JONES COUNTY	20-APR-82	2.75	0/0	\$0
JONES COUNTY	25-APR-82	1.75	0/0	\$0
JONES COUNTY	03-MAY-84	1.75	0/0	\$0
JONES COUNTY	05-APR-85	0.75	0/0	\$0
JONES COUNTY	28-APR-85	0.75	0/0	\$0
JONES COUNTY	01-JUL-85	1.75	0/0	\$0
JONES COUNTY	18-MAY-86	1.75	0/0	\$0
JONES COUNTY	18-MAY-86	0.75	0/0	\$0
JONES COUNTY	12-MAR-88	0.75	0/0	\$0
JONES COUNTY	22-MAY-88	0.75	0/0	\$0
JONES COUNTY	24-MAY-88	1.00	0/0	\$0
JONES COUNTY	24-MAY-88	1.00	0/0	\$0
JONES COUNTY	24-MAY-88	0.75	0/0	\$0
JONES COUNTY	04-NOV-88	1.75	0/0	\$0
JONES COUNTY	04-APR-89	0.75	0/0	\$0
JONES COUNTY	04-APR-89	0.75	0/0	\$0
JONES COUNTY	04-APR-89	0.75	0/0	\$0
JONES COUNTY	04-APR-89	0.75	0/0	\$0
JONES COUNTY	28-APR-89	1.00	0/0	\$0

ANNEX D: JONES COUNTY

Location	Date	Magnitude	Deaths / Injuries	Property Damage*
JONES COUNTY	20-MAY-89	1.00	0/0	\$0
JONES COUNTY	11-JUN-89	1.00	0/0	\$0
JONES COUNTY	30-JUN-89	0.75	0/0	\$0
JONES COUNTY	08-NOV-89	0.80	0/0	\$0
JONES COUNTY	15-NOV-89	0.75	0/0	\$0
JONES COUNTY	15-NOV-89	0.75	0/0	\$0
JONES COUNTY	16-FEB-90	0.75	0/0	\$0
JONES COUNTY	20-MAY-90	0.85	0/0	\$0
JONES COUNTY	09-APR-91	0.75	0/0	\$0
JONES COUNTY	09-APR-91	0.88	0/0	\$0
JONES COUNTY	14-APR-91	1.75	0/0	\$0
JONES COUNTY	25-APR-91	0.88	0/0	\$0
JONES COUNTY	16-MAY-91	0.80	0/0	\$0
JONES COUNTY	05-JUN-91	0.80	0/0	\$0
JONES COUNTY	05-JUN-91	0.80	0/0	\$0
JONES COUNTY	22-JUN-91	0.80	0/0	\$0
JONES COUNTY	14-JUL-91	0.88	0/0	\$0
JONES COUNTY	23-OCT-91	0.88	0/0	\$0
JONES COUNTY	18-MAR-92	0.88	0/0	\$0
JONES COUNTY	12-MAY-92	1.75	0/0	\$0
Ovett	20-APR-95	0.75	0/0	\$0
Moselle	27-OCT-95	1.75	0/0	\$0
Ovett	18-MAR-96	1.75	0/0	\$402,278
Ovett	18-MAR-96	1.75	0/0	\$804,555
Ovett	18-MAR-96	0.75	0/0	\$0
Moselle	29-MAR-97	0.88	0/0	\$0
Ovett	29-MAR-97	0.75	0/0	\$0
Moselle	12-JAN-98	0.75	0/0	\$0
Moselle	08-MAR-99	1.00	0/0	\$0
Countywide	08-MAR-99	0.75	0/0	\$0
Hebron	09-JAN-00	0.88	0/0	\$0
Ovett	03-MAR-00	1.00	0/0	\$0
Ovett	01-MAR-01	0.88	0/0	\$0
Moselle	12-MAR-02	0.75	0/0	\$0
EASTABUCHIE	06-MAR-03	0.88	0/0	\$1,344
Moselle	25-APR-03	1.00	0/0	\$1,344
OAK BOWERY	26-MAR-05	1.75	0/0	\$25,335
Ovett	30-MAR-05	1.75	0/0	\$12,668
Moselle	31-MAR-05	1.00	0/0	\$0
Ovett	31-MAR-05	1.75	0/0	\$19,002
Ovett	31-MAR-05	1.00	0/0	\$0
Moselle	22-APR-05	0.75	0/0	\$0
Hebron	20-MAR-06	1.00	0/0	\$0
Moselle	08-MAY-06	1.50	0/0	\$61,494
Ovett	09-MAY-06	1.00	0/0	\$0
Moselle	10-JAN-08	1.75	0/0	\$81,149
Ovett	10-JAN-08	0.75	0/0	\$0

Location	Date	Magnitude	Deaths / Injuries	Property Damage*
Tuckers Crossing	12-FEB-08	0.75	0/0	\$0
Moselle	03-MAR-08	1.00	0/0	\$0
(LUL)HESLER FLD LAUR	07-AUG-08	0.88	0/0	\$0
(LUL)HESLER FLD LAUR	10-DEC-08	1.00	0/0	\$0
Reddoch	10-DEC-08	1.75	0/0	\$0
Service	27-MAR-09	1.00	0/0	\$0
Ovett	27-MAR-09	0.88	0/0	\$0
EASTABUCHIE	05-MAY-09	0.88	0/0	\$0
(LUL)HESLER FLD LAUR	10-MAY-09	0.88	0/0	\$0
Tuckers	09-DEC-09	1.25	0/0	\$0
OAK BOWERY	12-MAR-10	0.88	0/0	\$0
Hoy	12-MAR-10	1.75	0/0	\$4,371
OAK BOWERY	12-MAR-10	1.00	0/0	\$0
Lanham	01-JUN-10	1.25	0/0	\$0
Ovett	15-APR-11	1.00	0/0	\$0
(LUL)HESLER FLD LAUR	04-JUL-11	1.00	0/0	\$5,305
Service	21-MAR-12	1.00	0/0	\$0
Service	21-MAR-12	1.00	0/0	\$0
Hoy	05-APR-12	1.00	0/0	\$0
Hoy	31-JUL-12	1.00	0/0	\$0
Hoy	31-JUL-12	1.75	0/0	\$10,300
Lanham	04-SEP-12	1.00	0/0	\$0
Gitano	23-DEC-14	1.00	0/0	\$0
Myrick	26-MAR-15	.75	0/0	\$0
(PIB) Pine Belt RGNL	14-APR-16	1.00	0/0	\$0
Tuckers	04-AUG-16	.75	0/0	\$0
Ovett	25-SEP-16	.75	0/0	\$0
Tawanta	17-MAR-16	1.00	0/0	\$0
Tawanta	17-MAR-16	1.75	0/0	\$6,000
Moselle	09-JUN-18	.75	0/0	\$1,000
Service	30-JUN-18	.88	0/0	\$500

All damage may not have been reported.

Source: National Centers for Environmental Information

Lightning

According to the National Centers for Environmental Information, there have been 15 recorded lightning events in Jones Davis County since 2008. These events resulted in almost \$652,000 in damages as listed in summary **Table D.20**.¹⁴ However, it is likely that more lightning events have in fact impacted the county. Many of the reported events are those that caused damage, and it should be expected that damages are likely much higher for this hazard than what is reported. Detailed information on historical lightning events can be found in **Table D.21**.

¹⁴ These lightning events are only inclusive of those reported by the National Centers for Environmental Information (NCEI). It is certain that additional lightning events have occurred in Jones County. As additional local data becomes available, this hazard profile will be amended.

TABLE D.20: SUMMARY OF LIGHTNING OCCURRENCES IN JONES DAVIS COUNTY

Location	Number of Occurrences	Deaths / Injuries	Property Damage (2013)
Ellisville	1	0/0	\$25,750
Laurel	4	0/0	\$117,850
Sandersville	0	0/0	\$0
Soso	0	0/0	\$0
Unincorporated Area	10	0/2	\$508,393
JONES COUNTY TOTAL	15	0/2	\$651,993

Source: National Centers for Environmental Information

TABLE D.21: HISTORICAL LIGHTNING OCCURRENCES IN JONES COUNTY

Location	Date	Deaths / Injuries	Property Damage*	Details
Ellisville				
ELLISVILLE	09-AUG-12	0/0	\$25,750	Lightning caused a transformer fire at Jones County Junior College. The fire caused damage to an adjacent building.
Laurel				
Laurel	03-APR-12	0/0	\$77,250	Lightning struck a house resulting in a fire.
Laurel	13-JUL-12	0/0	\$5,150	Lightning caused power outages and a transformer on fire.
Laurel	09-AUG-12	0/0	\$15,450	Lightning caused transformer fires at several locations in Laurel.
Laurel	20-FEB-14	0/0	\$20,000	Lightning struck a gas line along Daisy Drive, causing a fire.
Sandersville				
None Reported	--	--	--	--
Soso				
None Reported	--	--	--	--
Unincorporated Area				
Ovett	03-MAR-08	0/0	\$11,593	House was struck by lightning which caused a minor fire.
ELLISVILLE JCT	21-MAR-12	0/0	\$51,500	Lightning struck a house along Tuckers Crossing Road resulting in a fire.
ELLISVILLE JCT	31-JUL-12	0/1	\$0	A man was struck by lightning at the Best Western Hotel.
(LUL)HESLER FLD LAUR	06-AUG-12	0/0	\$10,300	Lightning hit a transformer at Highway 11 and Industrial Boulevard causing power outages in Ellisville and Laurel.
ERRATA	21-AUG-15	0/0	\$50,000	Lightning struck a tree next to a house, which traveled through the root system and the ground wiring. This resulted in the house catching on fire.
LANHAM	14-APR-18	0/0	\$5,000	A house on Acorn Road was struck by lightning.
MOSELLE	09-JUN-18	0/0	\$50,000	Lightning caused a structure fire at a home along Beeson Road near Moselle.

Location	Date	Deaths / Injuries	Property Damage*	Details
OAK BOWERY	31-JUL-18	0/0	\$300,000	County Line Missionary Baptist Church was struck by lightning, which resulted in a fire. The church was a complete loss.
HOY	10-AUG-18	0/1	\$0	A woman was injured by lightning while she was touching a metal building that was near a light pole. Her left arm and leg were affected.
TAWANTA	27-DEC-18	0/0	\$30,000	Lightning struck a home on Jordan Road in the Pittman Community.

*All damage may not have been reported.

Source: National Centers for Environmental Information

PROBABILITY OF FUTURE OCCURRENCES

Thunderstorm / High Wind

Given the high number of previous events, it is certain that wind events, including straight-line wind and thunderstorm wind, will occur in the future. This results in a probability level of highly likely (100 percent annual probability) for future wind events for the entire county.

Hailstorm

Based on historical occurrence information, it is assumed that the probability of future hail occurrences is likely (10 – 100 percent annual probability). Since hail is an atmospheric hazard (coinciding with thunderstorms), it is assumed that Jones County has equal exposure to this hazard. It can be expected that future hail events will continue to cause minor damage to property and vehicles throughout the county.

Lightning

Although there was not a high number of historical lightning events reported in Jones County via NCEI data, it is a regular occurrence accompanied by thunderstorms. In fact, lightning events will assuredly happen on an annual basis, though not all events will cause damage. According to Vaisala's U.S. National Lightning Detection Network (NLDN[®]), Jones County is located in an area of the country that experienced an average of 6 to 8 lightning flashes per square kilometer per year between 1997 and 2010. Therefore, the probability of future events is highly likely (100 percent annual probability). It can be expected that future lightning events will continue to threaten life and cause minor property damages throughout the county.

D.2.12 Tornado

LOCATION AND SPATIAL EXTENT

Tornadoes occur throughout the state of Mississippi, and thus in Jones County. Tornadoes typically impact a relatively small area, but damage may be extensive. Event locations are completely random, and it is not possible to predict specific areas that are more susceptible to tornado strikes over time. Therefore, it is assumed that Jones County is uniformly exposed to this hazard.

HISTORICAL OCCURRENCES

Tornadoes resulted in five disaster declarations in Jones County in 1971, 1973, 1987, 1990, 2001, and 2014.¹⁵ According to the National Centers for Environmental Information, there have been a total of 56 recorded tornado events in Jones County since 1951 (**Table D.22**), resulting in over \$190 million in property damages.¹⁶ In addition, 11 fatalities and 478 injuries were reported. The magnitude of these tornadoes ranges from F0 to F4 in intensity, although an F5 event is possible. Detailed information on historic tornado events can be found in **Table D.23**.

TABLE D.22: SUMMARY OF TORNADO OCCURRENCES IN JONES COUNTY

Location	Number of Occurrences	Deaths / Injuries	Property Damage (2013)
Ellisville	5	0/0	\$56,868
Laurel	5	0/0	\$12,745,780
Sandersville	0	0/0	\$0
Soso	2	0/0	\$212,541
Unincorporated Area	52	11/478	\$167,026,160
JONES COUNTY TOTAL	62	11/478	\$194,236,349

Source: National Centers for Environmental Information

TABLE D.23: HISTORICAL TORNADO IMPACTS IN JONES COUNTY

Location	Date	Magnitude	Deaths / Injuries	Property Damage*	Details
Ellisville					
Ellisville	26-FEB-98	F1	0/0	\$38,722	This tornado moved through a sparsely populated area but did extensive damage to trees.
Ellisville	16-FEB-01	F0	0/0	\$1,426	An F0 tornado briefly touched down in a rural area in southwest Jones County. Damage was restricted to a number of downed trees.
Ellisville	13-OCT-01	F0	0/0	\$0	A brief tornado touchdown occurred in an open field.
Ellisville	27-NOV-03	F1	0/0	\$6,720	This weak tornado touched down 10 miles west of Ellisville and destroyed a couple of chicken houses. This tornado stayed on the ground for 3 miles and downed numerous trees as it traveled northeast.
Ellisville	02- FEB -14	F0	0/0	\$10,000	This brief and weak tornado downed or snapped several trees in a pattern indicative of a tornado near the intersection of Buffalo Hill Road and Highway 588, a little west of the Ellisville city limits. Maximum wind speeds were estimated at 80 mph.
Laurel					

¹⁵ A complete listing of historical disaster declarations can be found in Section 4: Hazard Identification.

¹⁶ These tornado events are only inclusive of those reported by the National Centers for Environmental Information (NCEI). It is likely that additional tornadoes have occurred in Jones County. As additional local data becomes available, this hazard profile will be amended.

ANNEX D: JONES COUNTY

Location	Date	Magnitude	Deaths / Injuries	Property Damage*	Details
Laurel	27-JAN-94	F1	0/0	\$8,522,829	Thirty-three houses were damaged in northwest Laurel. Two houses were destroyed, 12 houses had major damage, and 19 houses had minor damage. Eleven businesses were damaged. Much of the damage occurred when large trees fell on buildings.
Laurel	13-JUN-01	F0	0/0	\$0	The pilot of a small plane reported seeing a tornado for a brief period of time about 10 miles south of Laurel. There were no reports of damage from this short lived tornado.
Laurel	13-OCT-01	F0	0/0	\$35,644	A weak tornado briefly touched down. The roof was blown off a house. Several trees and powerlines were also blown down.
Laurel	15-MAR-02	F1	0/0	\$4,187,307	A tornado formed about three miles northwest of Laurel or between the cities of Laurel and Soso in northwest Jones County. The tornado moved northeast 1 mile, before dissipating two miles northwest of the Laurel. West Jones County High School and Middle S
Laurel	15-NOV-06	F1	0/0	\$0	This tornado was a satellite tornado associated with the primary F3 tornado which moved across Jones County. A convergent path of trees were blown down and uprooted for nearly 3/4 of a mile and about 150 yards wide.
Sandersville					
None Reported	--	--	--	--	--
Soso	20-MAR-06	F1	0/0	\$122,987	This tornado touched down just south of Soso and tracked northeast to the Shady Grove Community. Many trees were damaged along the path with damage becoming more extensive near and around the Shady Grove Community. Here, numerous trees and power lines were taken down some snapped in half. One large tree was blown down on a new shed totally destroying the structure.
Soso	05-JAN-07	F1	0/0	\$89,554	This brief tornado snapped and uprooted numerous trees with one tree down on a car. A storage building was destroyed and a single wide mobile home was pushed off its blocks. Additionally, roof damage occurred to a double wide mobile home and several power lines were blown down along the path.
Unincorporated Area					
JONES COUNTY	21-APR-51	F3	2/10	\$242,336	
JONES COUNTY	28-DEC-54	F3	0/25	\$23,525,002	
JONES COUNTY	18-NOV-57	F2	0/2	\$224,736	

ANNEX D: JONES COUNTY

Location	Date	Magnitude	Deaths / Injuries	Property Damage*	Details
JONES COUNTY	23-NOV-60		0/0	\$212,845	
JONES COUNTY	22-NOV-61	F2	0/1	\$2,117,250	
JONES COUNTY	17-DEC-61	F1	0/0	\$21,172,501	
JONES COUNTY	14-MAR-66		0/0	\$234	
JONES COUNTY	26-JUN-66		0/0	\$195,280	
JONES COUNTY	29-JUN-66		0/0	\$195,280	
JONES COUNTY	02-DEC-67	F1	0/0	\$188,863	
JONES COUNTY	02-MAR-71	F2	0/0	\$1,559,215	
JONES COUNTY	15-DEC-71	F2	0/2	\$155,922	
JONES COUNTY	09-JAN-72	F3	0/12	\$15,123,215	
JONES COUNTY	02-MAR-72	F1	0/0	\$151,232	
JONES COUNTY	24-APR-73	F2	0/0	\$1,421,475	
JONES COUNTY	24-APR-73	F2	0/0	\$1,421,475	
JONES COUNTY	27-MAY-73	F3	1/35	\$14,214,754	
JONES COUNTY	03-APR-74	F3	0/1	\$1,281,139	
JONES COUNTY	22-APR-74	F2	0/0	\$128,114	
JONES COUNTY	13-DEC-77	F2	0/0	\$1,042,170	
JONES COUNTY	17-OCT-80	F2	0/0	\$766,243	
JONES COUNTY	27-OCT-80	F2	0/1	\$766,243	
JONES COUNTY	03-DEC-83	F2	0/0	\$6,345,071	
JONES COUNTY	11-DEC-83	F1	0/1	\$634,507	
JONES COUNTY	29-OCT-85	F0	0/0	\$5,873	
JONES COUNTY	08-APR-86	F2	0/1	\$5,763,288	
JONES COUNTY	28-FEB-87	F4	6/350	\$55,563,194	
JONES COUNTY	17-MAR-87	F1	0/0	\$555,632	

ANNEX D: JONES COUNTY

Location	Date	Magnitude	Deaths / Injuries	Property Damage*	Details
JONES COUNTY	08-JUN-89	F1	0/0	\$50,921	
Hebron	14-APR-99	F3	0/0	\$6,050,359	This strong tornado entered from Covington County and crossed northwest Jones County before entering Southwest Jasper county. One man was killed just north of Hebron (Lawrence Co) when his mobile home was thrown more than fifty yards and destroyed. There were thirty in
MOSELLE	17-MAY-03	F1	0/0	\$40,317	This tornado downed numerous trees, blew tin siding off a few buildings and threw tree debris across Interstate 59.
MOSELLE	22-MAR-05	F1	0/0	\$1,013,416	This tornado destroyed three chicken houses, snapped a row of power lines and uprooted or snapped several trees.
Hebron	20-MAR-06	F0	0/0	\$245,975	This weak tornado first touched down on Carter Dee Road where a few trees were downed. The tornado was then observed by Southern Pine Electric personnel downing a few trees as it cross Highway 28.
TUCKERS CROSSING	15-NOV-06	F3	0/1	\$2,090,786	This strong tornado touched down near the Glade and Tuckers Crossing Communities and tracked east northeast to near the Mill Creek Community before entering Wayne County near Highway 84. Around 25 homes suffered significant damage. The most intense damage was along a path from near the intersection of Highway 15 and Orange Drive northeast to the area along Township Road. Two metal high tension electric power truss towers were destroyed, hundreds of trees were snapped and uprooted, at least two mobile homes were destroyed, a travel trailer being used for post-Katrina housing was annihilated, and several houses suffered significant structural damage. Northeast of this area, the path continued all the way to the county line with Wayne County, but damage was generally less, F0 to occasionally F1, and limited to tree damage. The one exception was near the Mill Creek community, where a storage building was destroyed and a couple of homes suffered roof damage. Total path length across Jones and Wayne Counties was 17 miles.
OAK BOWERY	14-APR-07	F0	0/0	\$0	A brief tornado touchdown was witnessed in rural western Jones County.

Location	Date	Magnitude	Deaths / Injuries	Property Damage*	Details
Service	20-DEC-07	F2	0/2	\$537,324	This tornado began as a small, narrow path of minor damage, including a porch being blown off a house. It reached its maximum intensity as it crossed highway 29. Here, a brick home had all of its roof structure blown off along with a few walls blown down. Three mobile homes were rolled or tossed and destroyed, with debris strewn downstream along the path. Numerous trees were snapped off or uprooted. The last damage occurred along Leroy Hill Road. A home suffered significant roof damage, an outbuilding was destroyed, a car suffered major damage, and numerous large trees were snapped or uprooted. The tornado dissipated shortly after crossing Leroy Hill Road with only a few trees snapped at the end of the path.
Walters	10-DEC-08	F1	0/2	\$289,819	Numerous hardwood and softwood trees were snapped and uprooted along the brief 1 mile path. Damage occurred to 1 home and an unoccupied building. The unoccupied building was the most heavily damaged with two broken windows and damage to the roof, eaves, and siding. Two outbuildings were also damaged. One power pole was snapped high off the ground. A highway sign was blown over and a business sign was also turned over. Some of the trees were blown onto Interstate 59. Two motorists were injured when their vehicles were hit by the trees. Maximum winds were around 95 mph.

Location	Date	Magnitude	Deaths / Injuries	Property Damage*	Details
REDDOCH	26-MAR-09	F2	0/1	\$900,407	This tornado touched down along Mason Creek Rd about 6 miles west of Soso. Several trees were snapped and uprooted and some minor roof damage occurred to a few homes. The tornado intensified as it crossed Summerland Road. Here the tornado widened to 500 yds and reached peak intensity, especially within a narrow corridor which lasted about 3/4 of a mile. One well constructed home suffered major damage with half of the roof torn off and other wall sections of that side the house ripped out and thrown into the back yard. Two well built storage buildings were destroyed with the contents thrown into a field. Additionally, a weekly built barn was destroyed with tin thrown along the path. Numerous trees were snapped and uprooted in this area with splintered trees within the most intense core. One large tree in this location was uprooted and actually thrown and rolled a small distance. The tornado continued to track just east of north across several more roads, including Highway 28 and 503, uprooting and snapping numerous trees. On the east side of Highway 28, a mobile home was pushed off its foundation and the person inside was injured. The tornado continued to weaken as it crossed Highway 503 and damaged more trees and caused minor damage to several mobile homes and heavily damaged a couple sheds. Maximum winds were around 125 mph.
TUCKERS CROSSING	30-NOV-10	F0	0/0	\$76,491	A tornado was confirmed near Tuckers Crossing by a National Weather Service survey team. The roof was torn off a workshop, a flag pole was bent over, a power pole was snapped near the top, a barn roof was damaged, and a large pine tree was snapped. Maximum winds were around 80 mph.
Service	26-APR-11	F1	0/0	\$190,962	This tornado touched down west of Laurel and caused roof damage to a well built home and minor damage to several other well built homes. The roof of an outbuilding was blown off and a trampoline was thrown a considerable distance. A fence around a nearby pool was blown down and a car port was thrown some distance along with several trees and limbs down. Maximum winds were around 95 mph.

Location	Date	Magnitude	Deaths / Injuries	Property Damage*	Details
Service	16-NOV-11	F2	0/15	\$424,360	The tornado developed along Pat Holifield and Leroy Hill Roads, downing a few trees. The tornado moved northeast, widened and reached its maximum width in the area of Springhill Road, where high end EF-1 damage to trees occurred. The tornado then narrowed to about 150 to 250 yard wide path of mid to high end EF-2 damage on either side of State Highway 15 in the Shady Grove community northwest of Laurel. Several mobile homes were completely destroyed, numerous power poles were snapped, several frame and brick homes suffered major damage and other moderate damage, and extensive tree damage occurred. A few commercial buildings along State Highway 15 suffered major damage. As the tornado continued northeast across northeast Jones County, it caused EF-1 type damage as it crossed Sharon-Moss and Lake Como Roads, snapping and uprooting trees and causing some roof and minor structural damage to several homes. The tornado then intensified somewhat again as it crossed into Jasper County, destroying three large chicken houses and causing extensive tree damage along County Road 812 just inside the Jasper County line. The tornado dissipated shortly after causing this damage. Fifteen people were injured by this tornado, with nearly all of the injuries being relatively minor. Maximum winds were estimated at 130 mph.
Hebron	16-NOV-11	F1	0/0	\$63,654	This tornado developed and downed several trees along Fred Ellzey Road, and caused moderate damage to the roof of a large home north of the road. The tornado moved northeast, snapping several trees and heavily damaging an outbuilding as it crossed West Creek Road. The tornado then snapped a few trees and damaged the roof of an outbuilding just before crossing Highway 84 where it dissipated. Maximum wind speed was estimated at 95 mph.
REDDOCH	21-MAR-12	F0	0/0	\$25,750	There was a brief tornado touchdown at a chicken farm on Huey P Road which caused heavy roof damage to one chicken house and uprooted a tree. Maximum estimated wind speed was 75 mph.
MYRICK	09-DEC-12	F0	0/0	\$1,030	A brief tornado touchdown took the metal roof off a building along Weber Jordan Road. Maximum winds were 85 mph.
Ovett	25-DEC-12	F1	0/0	\$51,500	Numerous soft and hardwood trees were snapped and uprooted. A single-wide mobile home had partial roof damage. A small barn had the walls collapse. A small out building was blown over. The roof collapsed on a small barn. A family residence had significant roof and siding damage. Maximum winds were estimated at 105 mph.

Location	Date	Magnitude	Deaths / Injuries	Property Damage*	Details
(PIB)PINE BELT RGNL	20-FEB-14	F1	0/0	\$400,000	Significant damage occurred to the roofs of 5 chicken houses, heavy damage to a large metal shed occurred, minor damage to a single family dwelling, and destruction to a porch on a mobile home. Many trees were snapped and uprooted along the entire path of the tornado. A shop was damaged on Jenkins Road. Power poles were snapped along Sandford Road east of Interstate 59. A metal carport was damaged. Maximum wind speeds were estimated at 90 mph.
GITANO	07-APR-14	F0	0/0	\$10,000,000	This tornado touched down just to the west of Sunset-Williamsburg Rd. Several trees were snapped at this location. The tornado moved northeast where it crossed Sunset Rd and Rock Hill Rd. Snapped & uprooted trees were the main damage. As the tornado neared and crossed Highway 49, the intensity increased to a high end EF-1. Multiple power lines were downed along with numerous trees, two homes had minor damage along Rock Hill Rd. A home had a portion of the roof removed along Highway 49. As the tornado crossed Byrd Town Rd, more high end tree damage occurred with some minor damage to a home and a couple mobile homes. Several sheds and carports were destroyed here as well. The tornado increased in intensity to a low end EF-2 as it crossed George Speed Rd. Here significant tree damage was noted with hundreds of snapped or uprooted pines and hardwoods. A few homes had minor damage as they were on the edges of the tornadic circulation. The tornado weakened some as it moved just north of Jones Chapel Rd and across Highway 532. The tornado increased and reached peak intensity, EF-2 (125 mph), as it crossed Vester Pickering Rd. Three mobile homes were destroyed with one well-built brick home having the roof entirely removed. Heavy tree damaged was noted here with power poles and power lines down. Just to the north of Hot Coffee, a large church was heavily damaged with part of the roof removed and some outer brick fallen off the outer wall. Five other brick buildings had minor/major roof damage along with the windows blown out. Dozens of trees were snapped and uprooted here and along Highway 35. The tornado continued to the northeast toward the Leaf River where more trees were snapped and downed. The tornado dissipated just inside Jones County where some trees were damaged. Total path length was 16.5 miles. Maximum winds were around 125 mph.

Location	Date	Magnitude	Deaths / Injuries	Property Damage*	Details
ERRATA	28-APR-14	F3	0/15	\$1,500,000	This tornado developed just to the west of Interstate 59 southwest of Sandersville. The tornado crossed the interstate and moved northeast into areas along Dogwood Trail and Magnolia Roads, snapping hundreds of trees and heavily damaging a number of houses and mobile homes. The tornado then turned more to the east, continuing to cause heavy tree damage and destroying a mobile home. As the tornado moved near the intersection of Pleasant Grove and Davenport Road, it reached its maximum intensity in Jones County. It destroyed a wood frame home, leaving only some interior walls standing, and destroyed hundreds of trees, including leaving some denuded and partially debarked. After this point, the tornado weakened somewhat, crossed Dallas-Brownlee Road, and then moved into Wayne County. Total path length was almost 11 miles. Maximum winds were around 145 mph.
MILL CREEK	16-NOV-14	F1	0/0	\$45,000	An EF1 tornado touched down along Pavillion Road, tracked northeast across Holifield Road, US Highway 84 and lifted along Charlie Green Road. Two power poles were snapped, a barn was heavily damaged, the roof of a chicken house was heavily damaged and a mobile home was blown off of its blocks. Numerous trees were also blown down. The tornado tracked for 2.7 miles with estimated wind speeds of 95 mph. The maximum path width was 100 yards.

Location	Date	Magnitude	Deaths / Injuries	Property Damage*	Details
SERVICE	23-DEC-14	F2	2/0	\$2,200,000	This tornado started along Maxey Rd and tracked northeast for a little over 5 miles. Initially the damage was light with only a tree or two snapped and large limbs broken. As the tornado crossed State Highway 28, the width of the tornado increased as well as the intensity. Here, several large pine trees were uprooted and snapped along with a few portions of wooden fence torn down. Along Gardner Rd, more trees were damaged along with some minor roof damage to some homes. A large barn had most of the roof removed with the tin scattered along the path. Similar tree damage occurred as the tornado crossed Hines Rd, Tim Holifield Rd and Service Rd. The tornado reached peak intensity as it crossed Mullican Rd. Here three homes sustained moderate roof damage with dozens of trees snapped/uprooted. A mobile home at this location was totally destroyed and unrecognizable with the undercarriage thrown a considerable distance. Two fatalities occurred in the mobile home. Next to the mobile home was a small wood frame home on a slab. This structure was removed off the foundation. A large wooden storage shed was totally destroyed as well at this location. Peak winds here were at 125 mph. From this point, the tornado narrowed and weakened as it moved northeast and tracked across Bush Dairy Rd and then State Highway 15 where it eventually lifted.
LANHAM	22-JUL-16	F0	0/0	\$45,000	A brief weak EF-0 tornado with maximum estimated winds of 80mph, touched down along Lyon Ranch Road and moved southwest. It crossed Lyon Ranch Road near Boleware Road before dissipating over a field. Some trees were uprooted and several large tree branches were snapped off. A makeshift carport collapsed onto a car and two porches had sheet metal roofing peeled partially back. An awning was also removed from an outbuilding and one other home had a large branch fall on the roof.

Location	Date	Magnitude	Deaths / Injuries	Property Damage*	Details
GITANO	22-JAN-18	F0	0/0	\$15,000	An EF-1 tornado touched down in northeast Covington County along Highway 532 causing minor tree damage as it tracked northeast towards Gilmore Road. As the tornado continued its northeast track, it became its strongest as it approached Hwy 37 near J. Nelson Drive and Jewel Owens Lane. At this location the tornado uprooted and snapped several large trees and damaged a few structures, including homes. The tornado continued into northwest Jones County where a double wide mobile home was pushed off of its foundation and 3 sheds and a barn was destroyed on Carter Dees Road. An occupant of the mobile home suffered a minor injury. The tornado lifted just after this damage occurred. Total path length was 7.51 miles and estimated max wind speed was 100 mph.

Source: National Centers for Environmental Information

On February 28, 1987, a 1.25 mile-wide F4 tornado in Glade (unincorporated Jones County) was recorded as the second widest tornado on record in Mississippi. This tornado resulted in 6 deaths, 250 injuries, and \$55,563,194 in damages.

PROBABILITY OF FUTURE OCCURRENCES

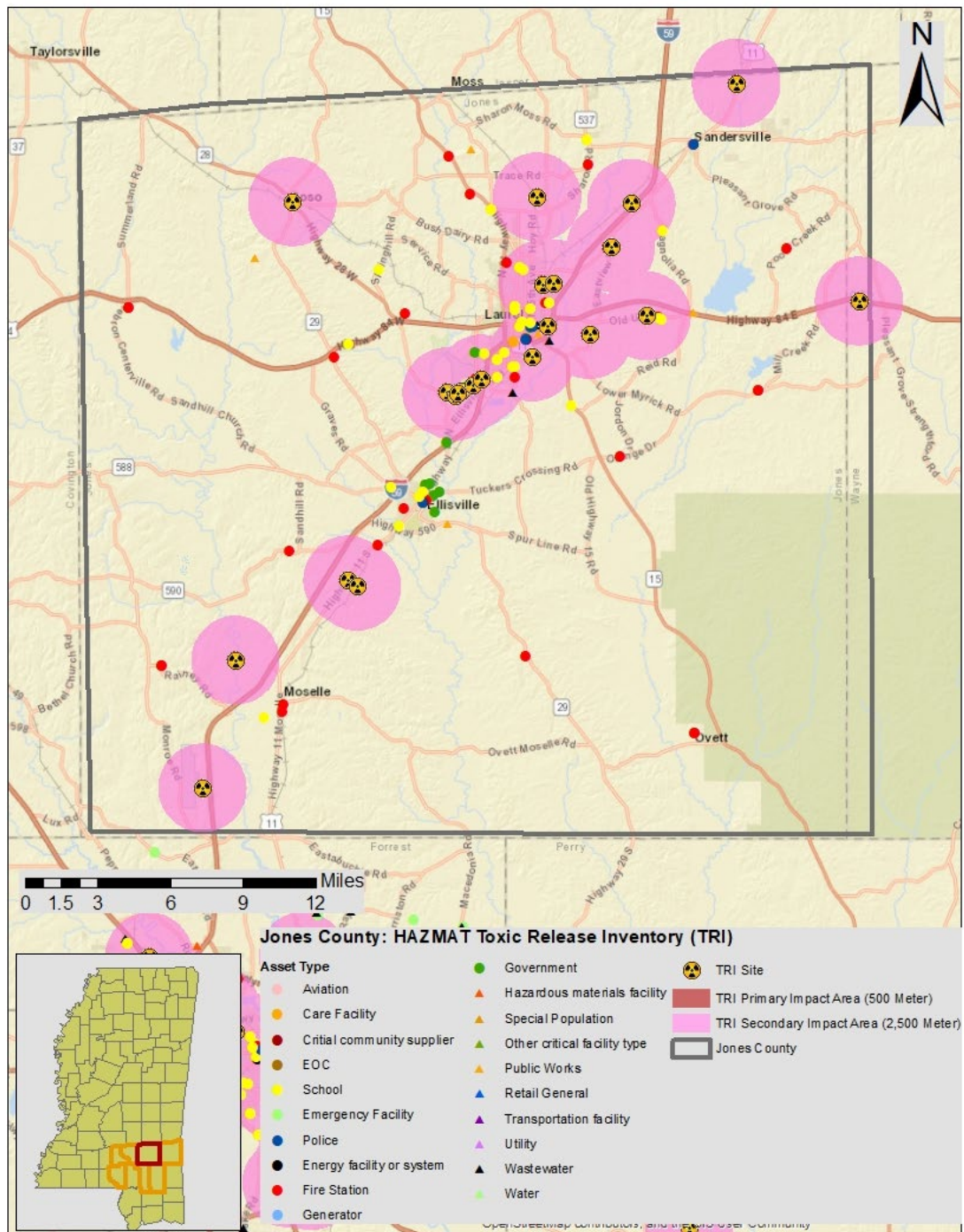
According to historical information, tornado events pose a significant threat to Jones County. The probability of future tornado occurrences affecting Jones County is likely (10 – 100 percent annual probability).

D.2.13 Hazardous Materials Incidents

LOCATION AND SPATIAL EXTENT

Hazardous Materials

Jones County has twelve TRI sites. These sites are shown in **Figure D.9**.

FIGURE D.3: TOXIC RELEASE INVENTORY (TRI) SITES IN JONES COUNTY

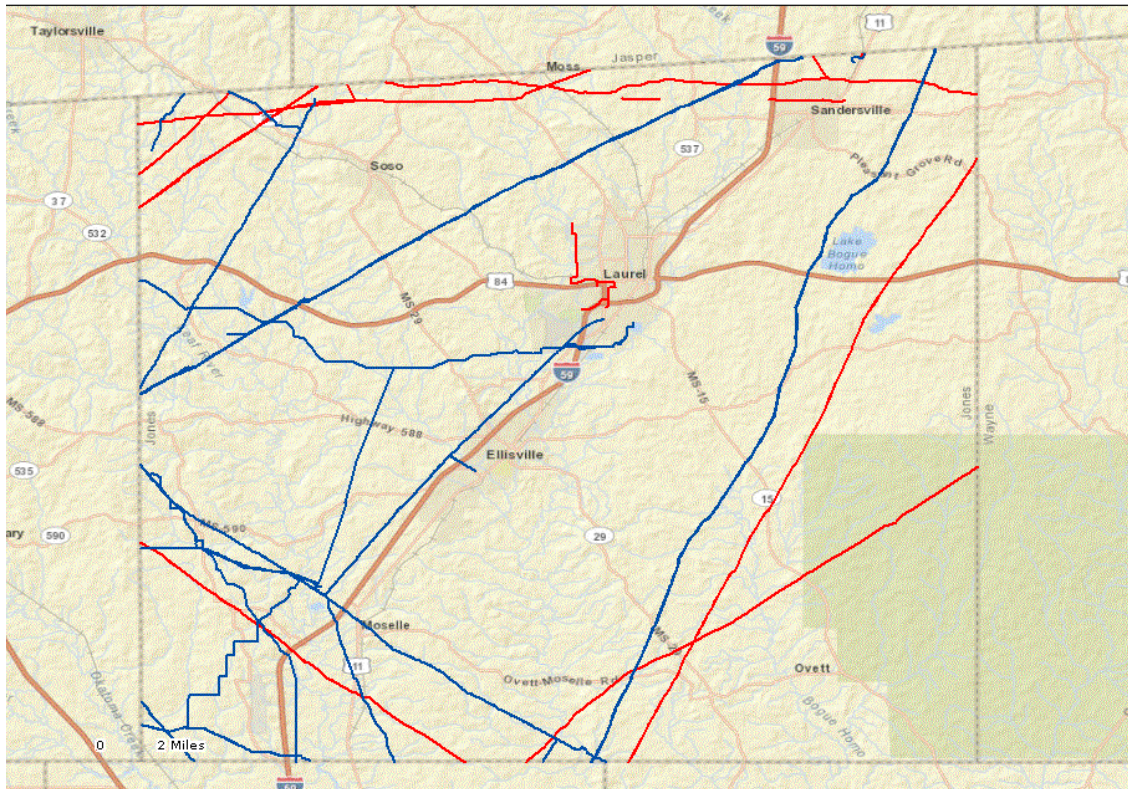
Source: EPA

In addition to “fixed” hazardous materials locations, hazardous materials may also impact the county via roadways and rail. Many roads in the county are narrow, making hazardous material transport in the area especially treacherous. All roads that permit hazardous material transport are considered potentially at risk to an incident.

Pipelines

There are two distinct types of pipelines that are used in the transport of potentially hazardous materials, gas lines and hazardous liquid lines. **Figure A.12** shows the trunk lines for each of these material types but does not show the gathering or distribution pipelines. Gas lines are in blue and hazardous liquid lines are in red. This data has not changed since the last plan update.

FIGURE D.4: PIPELINES IN JONES COUNTY



Source: Pipeline and Hazardous Materials Safety Administration

Meth Labs

One of the greatest concerns about meth labs is that they are clandestine in nature. Additionally, once a meth lab has been identified, police authorities generally attempt to eliminate the site as quickly as possible. Therefore, it is nearly impossible to identify specific locations for meth labs and instead, the entire planning area is considered to be at risk to this hazard.

HISTORICAL OCCURRENCES

Hazardous Materials

There has been a total of 54 recorded HAZMAT incidents in Jones County since 1971 (**Table D.24**), resulting in over \$102,000 in property damages. In addition, one death was reported. **Table D.25** presents detailed information on historic HAZMAT incidents in Jones County as reported by the U.S. Department of Transportation Pipeline and Hazardous Materials Safety Administration (PHMSA).

TABLE D.24: SUMMARY OF HAZMAT INCIDENTS IN JONES COUNTY

Location	Number of Occurrences	Deaths / Injuries	Property Damage
Ellisville	2	0/0	\$0
Laurel	37	0/0	\$96,021
Sandersville	4	0/0	\$400
Soso	0	0/0	\$0
Unincorporated Area	11	1/0	\$5,915
JONES COUNTY TOTAL	54	1/0	\$102,315

Source: USDOT PHMSA

TABLE D.25: HAZMAT INCIDENTS IN JONES COUNTY

Report Number	Date	City	Mode	Serious Incident?	Fatalities/ Injuries	Damages (\$)	Quantity Released
Ellisville							
I-1981020390	1/20/1981	ELLISVILLE	Highway	No	0/0	\$0	55 LGA
I-1974060418	6/6/1974	ELLISVILLE	Highway	No	0/0	\$0	0
Laurel							
I-1994060271	5/13/1994	LAUREL	Highway	No	0/0	\$0	0.03125 LGA
I-1980010323	12/21/1979	LAUREL	Highway	No	0/0	\$0	0
I-1992120046	11/19/1992	LAUREL	Highway	No	0/0	\$0	1 LGA
I-2008080089	6/28/2008	LAUREL	Highway	No	0/0	\$1,040	10 LGA
I-1999040931	1/26/1999	LAUREL	Highway	No	0/0	\$0	1 LGA
I-1999121599	11/30/1999	LAUREL	Highway	No	0/0	\$25	1 LGA
I-1984060045	6/5/1984	LAUREL	Highway	Yes	0/0	\$0	1,305 SLB
I-1994120079	11/12/1994	LAUREL	Highway	No	0/0	\$90	1 LGA
I-1992080645	8/3/1992	LAUREL	Highway	Yes	0/0	\$88,300	630 LGA
I-1990050072	4/23/1990	LAUREL	Highway	No	0/0	\$100	2.5 LGA
I-2004050459	11/21/2003	LAUREL	Highway	Yes	0/0	\$884	700 LGA
I-1976050157	4/24/1976	LAUREL	Rail	No	0/0	\$0	1 LGA
I-1971120155	11/20/1971	LAUREL	OTHER	No	0/0	\$0	0
I-1971090106	8/29/1971	LAUREL	Highway	No	0/0	\$0	0
I-1981060090	4/29/1981	LAUREL	Highway	No	0/0	\$0	112 LGA
I-1981110551	11/3/1981	LAUREL	Highway	No	0/0	\$0	10 LGA
I-1971100060	9/27/1971	LAUREL	Highway	No	0/0	\$0	0
I-2007100845	9/18/2007	LAUREL	Highway	No	0/0	\$0	0.015625 LGA
I-1978060527	5/21/1978	LAUREL	Highway	Yes	0/0	\$0	150 LGA
I-1971090227	9/15/1971	LAUREL	Highway	No	0/0	\$0	0
I-1975090380	8/27/1975	LAUREL	Highway	No	0/0	\$0	0
I-1975050292	4/14/1975	LAUREL	Highway	No	0/0	\$0	0
I-1980071410	6/16/1980	LAUREL	Highway	No	0/0	\$0	0
I-1971110207	11/10/1971	LAUREL	Highway	No	0/0	\$0	0
I-1988120082	11/10/1988	LAUREL	Highway	No	0/0	\$0	0.007 LGA
I-1995050030	4/18/1995	LAUREL	Highway	No	0/0	\$750	0.03125 LGA
I-1979070592	6/12/1979	LAUREL	Highway	No	0/0	\$0	0
I-1992080915	8/13/1992	LAUREL	Highway	No	0/0	\$7	1 LGA

Report Number	Date	City	Mode	Serious Incident?	Fatalities/ Injuries	Damages (\$)	Quantity Released
I-1980050562	4/30/1980	LAUREL	Highway	Yes	0/0	\$0	650 LGA
I-1993070937	6/23/1993	LAUREL	Highway	No	0/0	\$0	25 LGA
I-2010090316	9/8/2010	LAUREL	Highway	No	0/0	\$0	0.25 LGA
I-1971070159	7/15/1971	LAUREL	Highway	No	0/0	\$0	0
X-2013040015	8/16/2012	Laurel	Highway	No	0/0	\$0	0.25 LGA
I-1994071528	7/25/1994	LAUREL	Highway	No	0/0	\$615	55 LGA
I-1988020089	1/15/1988	LAUREL	Highway	No	0/0	\$0	0.016 LGA
I-1974070384	6/5/1974	LAUREL	Highway	No	0/0	\$0	0
I-1993010032	11/29/1992	LAUREL	Highway	No	0/0	\$4,210	0.25 LGA
Sandersville							
I-1999100303	8/31/1999	SANDERSVILLE	Highway	No	0/0	\$400	40 LGA
I-1989040045	3/24/1989	SANDERSVILLE	Highway	Yes	0/0	\$0	6,960 LGA
I-2002120544	11/17/2002	SANDERSVILLE	Highway	No	0/0	\$0	3 LGA
I-1977060053	5/10/1977	SANDERSVILLE	Highway	No	0/0	\$0	1 LGA
Soso							
<i>None Reported</i>	--	--	--	--	--	--	--
Unincorporated Area							
I-1978061581	6/14/1978	MOSELLE	Highway	Yes	0/0	\$0	1,000 LGA
I-1999020002	1/20/1999	MOSELLE	Highway	No	0/0	\$2,810	0.5 LGA
I-2002090623	8/26/2002	MOSELLE	Highway	No	0/0	\$475	8 LGA
I-1995060890	5/19/1995	MOSELLE	Highway	No	0/0	\$525	0.03125 LGA
I-1998100613	10/2/1998	MOSELLE	Highway	No	0/0	\$800	15 LGA
I-1998100283	9/21/1998	MOSELLE	Highway	No	0/0	\$420	1 LGA
I-2000090177	8/21/2000	MOSELLE	Highway	No	0/0	\$380	1 LGA
I-1995010081	11/30/1994	MOSELLE	Highway	No	0/0	\$505	0.125 LGA
I-1989090426	8/26/1989	OVETT	Highway	Yes	0/0	\$0	392 LGA
I-1988020220	1/22/1988	OVETT	Highway	Yes	1/0	\$0	200 LGA
I-1978051074	5/1/1978	SAND HILL	Highway	Yes	0/0	\$0	550 LGA

Source: USDOT PHMSA

Pipelines

Between 2002 and 2019, there have been no pipeline incidents in Jones County.

Meth Labs

Meth lab incidents have occurred at various times throughout the Jones County. Although there is not an extensive documented record of these events, they have occurred in the past and are generally confined to single sites, often in residential areas.

PROBABILITY OF FUTURE OCCURRENCES

Hazardous Materials

Given the location of twelve toxic release inventory sites in Jones County and several roadway and rail incidents, it is possible that a hazardous material incident may occur in the county (between one percent and ten percent annual probability). County and town officials are mindful of this possibility and take

precautions to prevent such an event from occurring. Furthermore, there are detailed plans in place to respond to an occurrence.

Since there are twelve TRI sites and a significant record of previous events in the county, hazardous materials incidents will continue to be a threat. The county may also be impacted by neighboring counties which also face risk due to TRI sites and curvy, mountain roadways.

Pipelines

Although there have been no pipeline incidents, there are 577 miles of gas and hazardous liquid lines in the county and it is anticipated that there will be future pipeline incidents in Jones County. These incidents are considered possible.

Meth Labs

Meth lab incidents will likely continue to occur throughout Jones County. Although it is difficult to predict where exactly these incidents would occur, the probability that they will is possible.

D.2.14 Cyber Attacks

A cyber-attack is a malicious, intentional attempt to breach the information technology (IT) infrastructure of an individual or organization. The State of Mississippi defines a cyberterrorism incident as any adverse premeditated, politically, financially or maliciously motivated attack against informational systems. A cyberterrorism event can impact one or more of Jones County's and its, corresponding departments' and divisions' information assets by the following ways, which includes, but are not limited to, the following:

- Unauthorized use
- Denial of Service
- Malicious code
- Network system failures
- Application system failures
- Unauthorized disclosure or loss of information
- Information security breach
- Structured Query Language (SQL) Injection

LOCATION AND HAZARD EXTENT

The cyberterrorism hazard is not geographically based. Attacks can originate from any computer to affect any other computer in the world. If a system is connected to the Internet or operating on a wireless frequency, it is susceptible to exploitation. Targets of cyberterrorism can be individual computers, networks, organizations, business sectors, or governments. Financial institutions and retailers are often targeted to extract personal and financial data that can be used to steal money from individuals and banks.

HISTORICAL OCCURRENCES

There have been no known historical occurrences to have occurred in Jones County to date.

PROBABILITY OF FUTURE OCCURRENCES

As is the case for any governmental organization, there will always be the potential for impact for Jones County. As such, the county will continue to be compelled to respond to cyberterrorisms in the future. The nature of these attacks is projected to evolve in sophistication over time. Jones County will take a proactive position in its cyber security efforts and is expected to remain vigilant in its efforts to prevent attacks from occurring and/or disrupting business operations.

The reality remains that many computers and networks in organizations of all sizes and industries around the United States will continue to suffer intrusion attempts on a daily basis from viruses and malware that are passed through web sites and emails. Again, the potential for harm via this hazard is always present.

D.2.15 Conclusions on Hazard Risk

The hazard profiles presented above were developed using best available data and result in what may be considered principally a qualitative assessment as recommended by FEMA in its “How-to” guidance document titled *Understanding Your Risks: Identifying Hazards and Estimating Losses* (FEMA Publication 386-2). It relies heavily on historical and anecdotal data, stakeholder input, and professional and experienced judgment regarding observed and/or anticipated hazard impacts. It also carefully considers the findings in other relevant plans, studies, and technical reports.

HAZARD EXTENT

Table D.26 describes the extent of each natural hazard identified for Jones County. The extent of a hazard is defined as its severity or magnitude, as it relates to the planning area.

TABLE D.26: EXTENT OF JONES COUNTY HAZARDS

Flood-related Hazards	
Flood	Flood extent can be measured by the amount of land and property in the floodplain as well as flood height and velocity. The amount of land in the floodplain accounts for 19.9 percent of the total land area in Jones County. Flood depth and velocity are recorded via United States Geological Survey stream gages throughout the region. While a gage does not exist for each participating jurisdiction, there is one at or near many areas. The greatest peak discharge recorded for the county was at Tallahala Creek Laurel in 1919. Water reached a discharge of 38,300 cubic feet per second and the stream gage height was recorded at 26.00 feet.
Erosion	The extent of erosion can be defined by the measurable rate of erosion that occurs. There are no erosion rate records located in Jones County.
Dam Failure	Dam Failure extent is defined using the Mississippi Division of Environmental Quality criteria. Two dams are classified as high-hazard in the county.
Winter Storm and Freeze	The extent of winter storms can be measured by the amount of snowfall received (in inches). Official long-term snow records are not kept for Jones County. However, the greatest snowfall reported in Jackson (northwest of the county) was 11.7 inches in 1904 and in Meridian (northeast of the county) was 14.0 inches in 1963.
Fire-related Hazards	

Drought / Heat Wave	Drought extent is defined by the U.S. Drought Monitor Classifications which include Abnormally Dry, Moderate Drought, Severe Drought, Extreme Drought, and Exceptional Drought. According to the U.S. Drought Monitor Classifications, the most severe drought condition is Exceptional. Jones County has received this ranking once over the eighteen-year reporting period. The extent of extreme heat can be measures by the record high temperature recorded. Official long-term temperature records are not kept for any areas in Jones County. However, the highest recorded temperature in Hattiesburg (south of the county) was 106°F in 1989.
Wildfire	Wildfire data was provided by the Mississippi Forestry Commission and is reported annually by county from 2008-2018. The greatest number of fires to occur in Jones County in any year was 53 in 2011. The greatest number of acres to burn in the county in a single year occurred in 2011 when 400 acres were burned. Although this data lists the extent that has occurred, larger and more frequent wildfires are possible throughout the county.
Geologic Hazards	
Earthquake	Earthquake extent can be measured by the Richter Scale and the Modified Mercalli Intensity (MMI) scale and the distance of the epicenter from Jones County. According to data provided by the National Geophysical Data Center, no recorded earthquakes have been located in the county. However, the greatest MMI to impact Jones County was reported with an MMI of IV (moderate) with a correlating Richter Scale measurement of less than 4.8. Additionally, USGS data shows Jones County lies within an approximate zone of level .04 ground acceleration. This indicates that the county exists within an area of moderate seismic risk.
Landslide	As noted above in the landslide profile, there is no extensive history of landslides in Jones County and landslide events typically occur in isolated areas. This provides a challenge when trying to determine an accurate extent for the landslide hazard. However, when using USGS landslide susceptibility index, extent can be measured with incidence, which is low throughout the county. There is also susceptibility throughout the county.
Expansive Soils	As noted above in the expansive soils profile, there is no historical record of significant expansive soil events in Jones County. Again, this provides a challenge when trying to determine an accurate extent for the expansive soils hazard. However, when using USGS data on soils with clay swelling potential, extent can be measured with swelling potential, which is high in less than 50 percent of the soils Jones County.
Wind-related Hazards	
Hurricane and Tropical Storm	Hurricane extent is defined by the Saffir-Simpson Scale which classifies hurricanes into Category 1 through Category 5. The greatest classification of hurricane to traverse directly through Jones County was a Category 1 storm (Hurricane Katrina in 2005) which carried tropical force winds of 92 miles per hour upon arrival in the county. Two additional Category 1 storms have also passed through the county (unnamed hurricanes in 1855, 1906, and 1916).

Thunderstorm / Hail / Lightning	Thunderstorm extent is defined by the number of thunder events and wind speeds reported. According to a 63-year history from the National Centers for Environmental Information, the strongest recorded wind event in Jones County was reported on January 10, 2008 at 78 knots (approximately 90 mph). It should be noted that future events may exceed these historical occurrences. Hail extent can be defined by the size of the hail stone. The largest hail stone reported in Jones County was 4.5 inches. It should be noted that future events may exceed this. According to the Vaisala's flash density map, Jones County is located in an area that experiences 6 to 8 lightning flashes per square kilometer per year. It should be noted that future lightning occurrences may exceed these figures.
Tornado	Tornado hazard extent is measured by tornado occurrences in the US provided by FEMA (Figure 5.17) as well as the Fujita/Enhanced Fujita Scale. The greatest magnitude reported was an F4 (reported on February 28, 1987).
Other Hazards	
Hazardous Materials Incident	According to USDOT PHMSA, the largest hazardous materials incident reported in the county is 6,960 LGA released on the highway in Sandersville, an unincorporated community. It should be noted that larger events are possible. A pipeline incident could have a potentially large impact in terms of extent. Based on recent history, the largest spill in the last 10 years in Mississippi caused over 10,000 barrels of hazardous liquid to be spilled. Because of the generally small-scale nature of most meth labs, the extent of a fire or explosion that was caused by a meth lab incident would likely not be larger than a few acres.
Cyber Attack	The extent of cyberterrorism is difficult to estimate. Attacks can originate from any computer to affect any other computer in the world. The resulting damages depends on the demands of the cyberterrorist.

PRIORITY RISK INDEX RESULTS

In order to draw some meaningful planning conclusions on hazard risk for Jones County, the results of the hazard profiling process were used to generate countywide hazard classifications according to a "Priority Risk Index" (PRI). More information on the PRI and how it was calculated can be found in Section 5.16.2.

Table D.27 summarizes the degree of risk assigned to each category for all initially identified hazards based on the application of the PRI. Assigned risk levels were based on the detailed hazard profiles developed for this section, as well as input from the Regional Hazard Mitigation Council. The results were then used in calculating PRI values and making final determinations for the risk assessment.

TABLE D.27: SUMMARY OF PRI RESULTS FOR JONES COUNTY

Hazard	Category/Degree of Risk					
	Probability	Impact	Spatial Extent	Warning Time	Duration	PRI Score
Flood-related Hazards						
Flood	Highly Likely	Limited	Moderate	6 to 12 hours	Less than 24 hours	2.9
Erosion	Possible	Minor	Small	More than 24 hours	More than 1 week	1.8
Dam Failure	Unlikely	Critical	Moderate	More than 24 hours	Less than 6 hours	2.0
Winter Storm and Freeze	Possible	Limited	Large	More than 24 hours	Less than 24 hours	2.3
Fire-related Hazards						
Drought / Heat Wave	Highly Likely	Minor	Large	More than 24 hours	More than 1 week	2.8
Wildfire	Likely	Minor	Small	Less than 6 hours	Less than 1 week	2.1
Geologic Hazards						
Earthquake	Unlikely	Minor	Moderate	Less than 6 hours	Less than 6 hours	1.7
Landslide	Unlikely	Minor	Small	Less than 6 hours	Less than 6 hours	1.5
Expansive	Possible	Minor	Small	Less than 6 hours	Less than 6 hours	1.8
Wind-related Hazards						
Hurricane and Tropical Storm	Likely	Catastrophic	Large	More than 24 hours	Less than 24 hours	3.2
Thunderstorm Wind / High Wind	Highly Likely	Limited	Moderate	Less than 6 hours	Less than 6 hours	2.9
Hailstorm	Likely	Minor	Small	Less than 6 hours	Less than 6 hours	2.1
Lighting	Highly Likely	Limited	Negligible	Less than 6 hours	Less than 6 hours	2.5
Tornado	Likely	Critical	Small	Less than 6 hours	Less than 6 hours	2.7
Other Hazards						
Hazardous Materials Incident	Unlikely	Limited	Small	Less than 6 hours	Less than 24 hours	1.9
Pipeline Incident	Possible	Limited	Small	Less than 6 hours	Less than 24 hours	2.2
Meth Lab Incident	Possible	Minor	Small	Less than 6 hours	Less than 6 hours	1.8
Cyber Attack	Unlikely					

D.2.16 Final Determinations on Hazard Risk

The conclusions drawn from the hazard profiling process for Jones County, including the PRI results and input from the Regional Hazard Mitigation Council, resulted in the classification of risk for each identified hazard according to three categories: High Risk, Moderate Risk, and Low Risk (**Table D.28**). For purposes of these classifications, risk is expressed in relative terms according to the estimated impact that a hazard will have on human life and property throughout all of Jones County. A more quantitative analysis to estimate potential dollar losses for each hazard has been performed separately and is described in Section 6: *Vulnerability Assessment* and below in Section D.3. It should be noted that although some hazards are classified below as posing low risk, their occurrence of varying or unprecedented magnitudes is still possible in some cases and their assigned classification will continue to be evaluated during future plan updates.

TABLE D.28: CONCLUSIONS ON HAZARD RISK FOR JONES COUNTY

HIGH RISK	Hurricane and Tropical Storm Thunderstorm Wind / High Wind Flood Tornado
MODERATE RISK	Drought / Heat Wave Dam Failure Lightning Hailstorm Pipeline Incident Hazardous Material Incident Wildfire
LOW RISK	Winter Storm and Freeze Expansive Soils Erosion Earthquake Landslide Meth Lab Incident Cyber-Attack

D.3 JONES COUNTY VULNERABILITY ASSESSMENT

This subsection identifies and quantifies the vulnerability of Jones County to the significant hazards previously identified. This includes identifying and characterizing an inventory of assets in the county and assessing the potential impact and expected amount of damages caused to these assets by each identified hazard event. More information on the methodology and data sources used to conduct this assessment can be found in Section 6: *Vulnerability Assessment*.

D.3.1 Asset Inventory

Table D.29 lists the number of parcels and the total assessed value of improvements for Jones County and its participating jurisdictions (study area of vulnerability assessment).¹⁷

¹⁷ Total assessed values for improvements is based on tax assessor records as joined to digital parcel data. This data does not include dollar figures for tax-exempt improvements such as publicly-owned buildings and facilities. It should also be noted that, due to record keeping, some duplication is possible thus potentially resulting in an inflated value exposure for an area.

TABLE D.29: IMPROVED PROPERTY IN JONES COUNTY

Location	Number of Parcels	Total Assessed Value of Improvements
Jones County	29,059	\$5,912,251,000

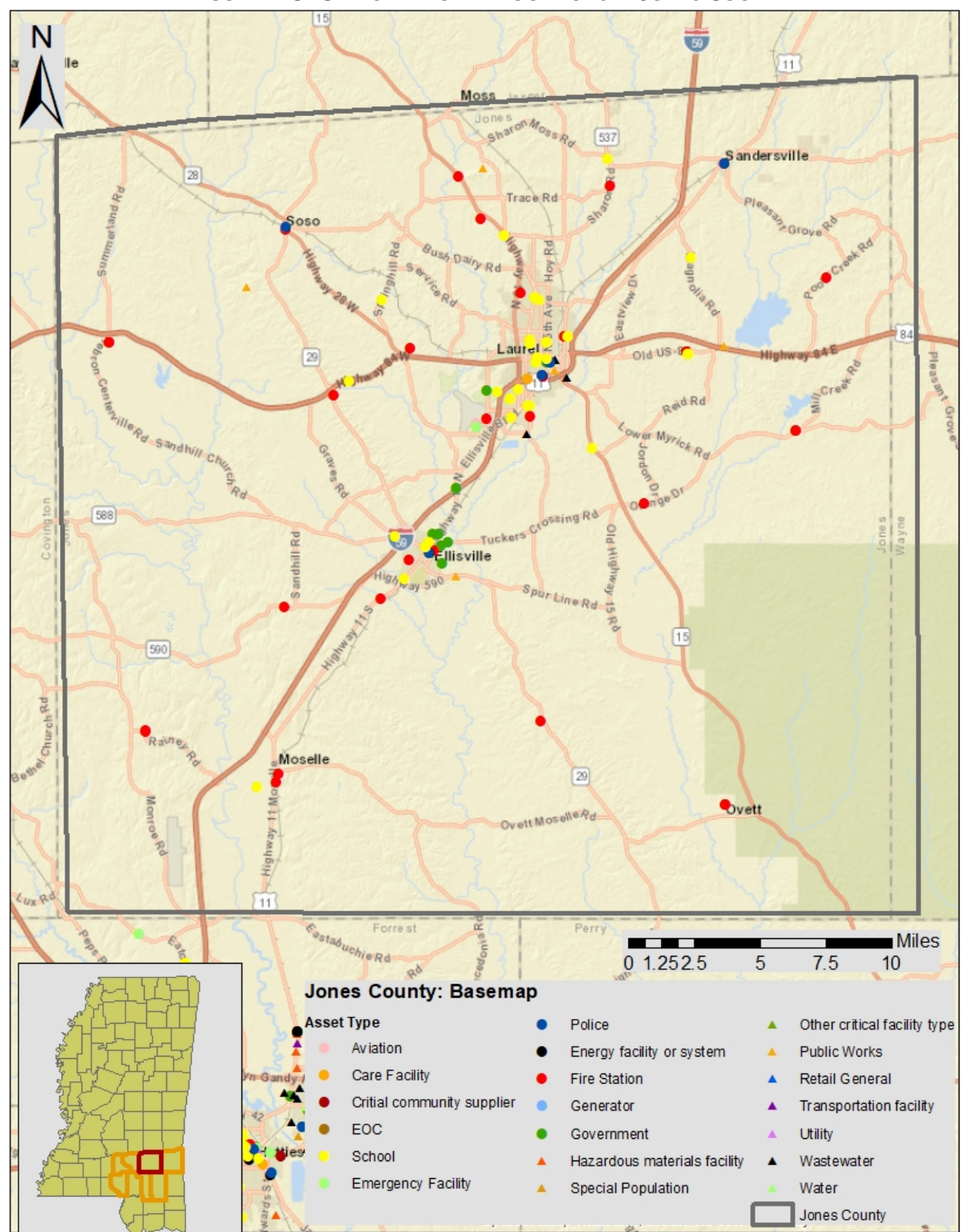
Table D.30 lists the fire stations, police stations, emergency operations centers (EOCs), medical care facilities, and schools and other critical facilities located in Jones County. HAZUS-MH 4.2 was used to obtain the critical facilities for the county and this data was modified to reflect recent changes. In addition, **Figure D.15** shows the locations of essential facilities in Jones County. **Table D.32**, near the end of this section, shows a complete list of the critical facilities by name, as well as the hazards that affect each facility. As noted previously, this list is not all-inclusive and only includes information provided by the county.

TABLE D.30: CRITICAL FACILITY INVENTORY IN JONES COUNTY

Location	Fire Stations	Police Stations	Medical Care Facilities	EOC	Schools
Jones County	2	3	1	1	22
Ellisville	0	0	0	0	3
Laurel	1	2	1	1	18
Sandersville	0	1	0	0	0
Soso	1	0	0	0	0
Unincorporated Area	0	0	0	0	1

Source: HAZUS-MH 4.2

FIGURE D.5: CRITICAL FACILITY LOCATIONS IN JONES COUNTY



Source: HAZUS-MH 4.2

D.3.2 Social Vulnerability

In addition to identifying those assets potentially at risk to identified hazards, it is important to identify and assess those particular segments of the resident population in Jones County that are potentially at risk to these hazards.

Table D.31 lists the population by jurisdiction according to U.S. Census 2010 population estimates. This information is provided at the county and municipal level. The total population in Jones County according to Census data is 67,761 persons. Additional population estimates are presented above in Section D.1.

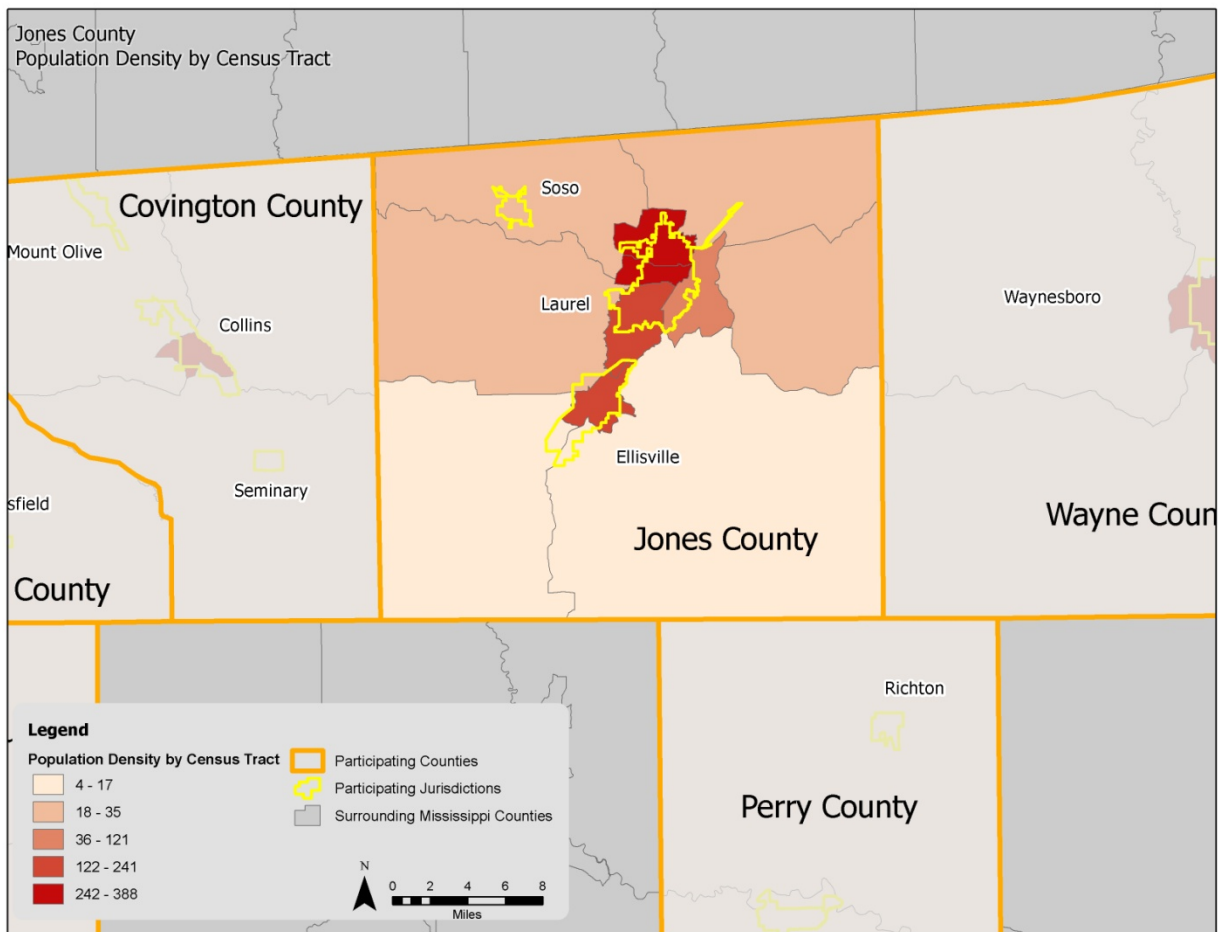
TABLE D.31: TOTAL POPULATION IN JONES COUNTY

Location	Total 2010 Population
Ellisville	4,448
Laurel	18,540
Sandersville	731
Soso	408
Unincorporated Area	43,634
JONES COUNTY TOTAL	67,761

Source: U.S. Census 2010

In addition, **Figure D.16** illustrates the population density by census tract as it was reported by the U.S. Census Bureau in 2010.¹⁸ This information has not changed since the last plan update.

¹⁸ Population by census block was not available at the time this plan was completed.

FIGURE D.6: POPULATION DENSITY IN JONES COUNTY

Source: U.S. Census Bureau, 2010

D.3.3 Vulnerability Assessment Results

As noted in Section 6: *Vulnerability Assessment*, only hazards with a specific geographic boundary, available modeling tool, or sufficient historical data allow for further analysis. Those results, specific to Jones County, are presented here. All other hazards are assumed to impact the entire planning region (drought, hailstorm, lightning, thunderstorm wind, tornado, and winter storm and freeze) or, due to lack of data, analysis would not lead to credible results (dam and levee failure, erosion, expansive soils, and landslide). The total county exposure, and thus risk, was presented in **Table D.29**.

The hazards to be further analyzed in this section include: flood, wildfire, earthquake, hurricane and tropical storm winds, and hazardous materials incident.

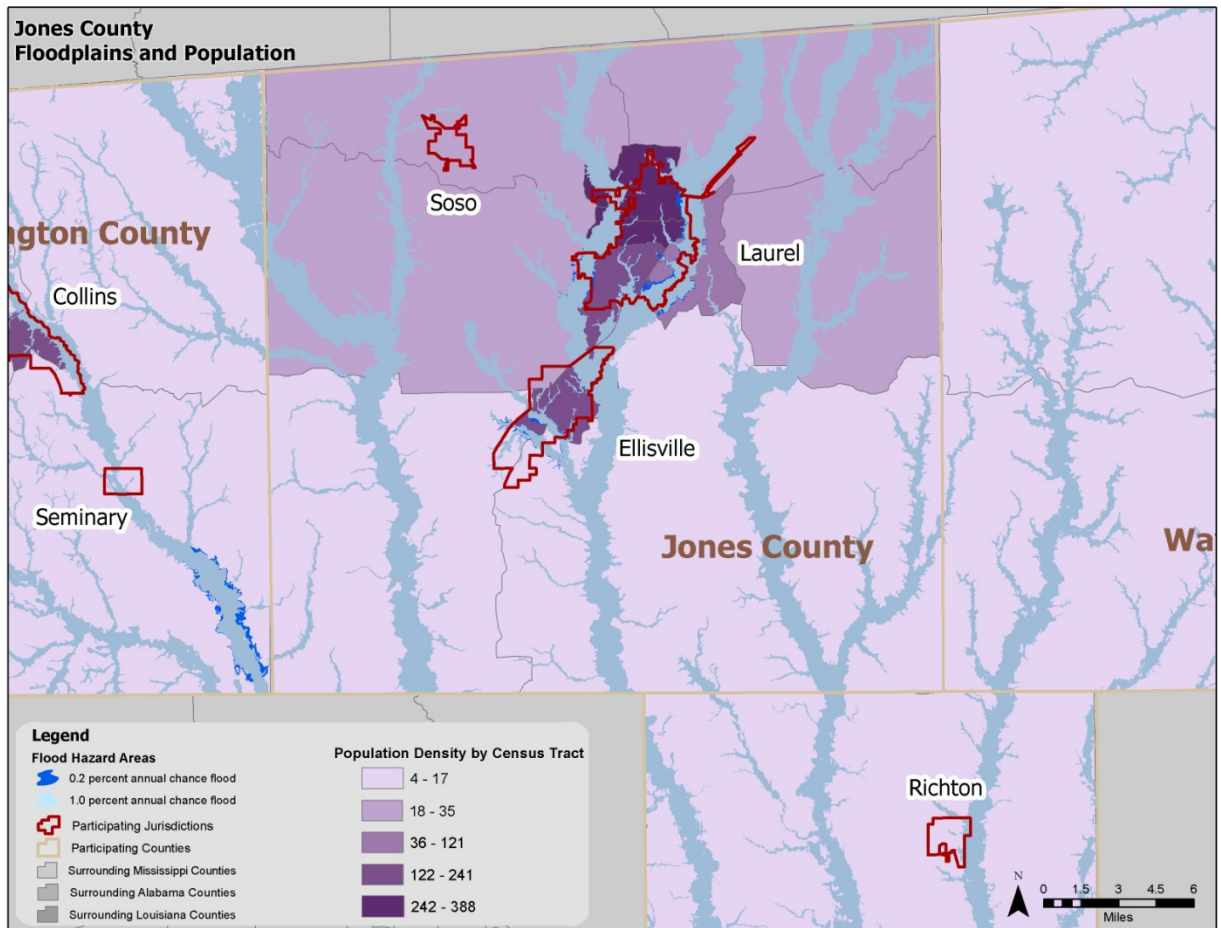
FLOOD

Historical evidence indicates that Jones County is susceptible to flood events. A total of 74 flood events have been reported by the National Centers for Environmental Information resulting in \$11 million in damages.

Social Vulnerability

Since 2010 population was available at the tract level, it was difficult to determine a reliable figure on population at-risk to flood due to tract level population data. **Figure D.17** is presented to gain a better understanding of at-risk population.

FIGURE D.7 : POPULATION DENSITY NEAR FLOODPLAINS



Source: FEMA DFIRM, U.S. Census 2010

Critical Facilities

The critical facility analysis revealed that there are eight critical facilities located in the Jones County 1.0-percent annual chance floodplain valued at slightly over \$6M. There are eight critical facilities in the 0.2-percent annual chance floodplain, based on FEMA DFIRM boundaries and GIS analysis, valued at approximately \$1.1M. A list of specific critical facilities and their associated risk can be found in **Table D.32** at the end of this section.

In conclusion, a flood has the potential to impact many existing and future buildings and populations in Jones County, though some areas are at a higher risk than others. All types of structures in a floodplain are at-risk, though elevated structures will have a reduced risk. As noted, the floodplains used in this analysis include the 100-year and 500-year FEMA regulated floodplain boundaries. It is certainly possible that more severe events could occur beyond these boundaries or urban (flash) flooding could impact additional structures. Such site-specific vulnerability determinations are outside the scope of this

assessment but will be considered during future plan updates. Furthermore, areas subject to repetitive flooding should be analyzed for potential mitigation actions.

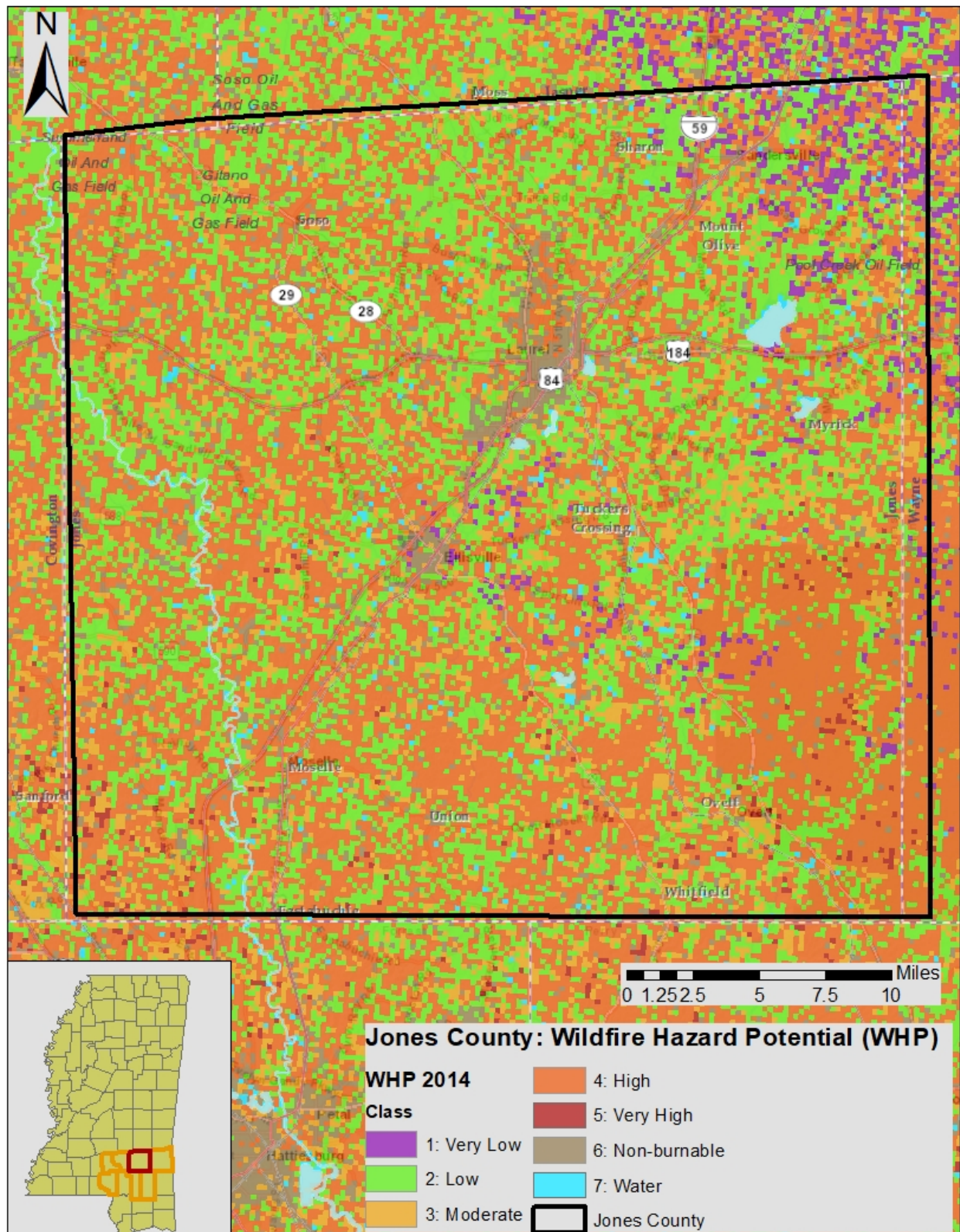
WILDFIRE

Although historical evidence indicates that Jones County is susceptible to wildfire events, there are few reports of damage.

To estimate exposure to wildfire, the wildfire hazard potential (WHP 2014) data provided via the US Forest Service was utilized. A GIS analysis was performed with the WHP dataset and identified critical facilities throughout MEMA District 8 in order to show the level of vulnerability.

Figure A.18 shows the wildfire hazard potential for Jones County. Most of the planning areas falls within the low to moderate category.

FIGURE D.8: WILDFIRE RISK AREAS IN JONES COUNTY



Source: U.S. Forreest Service

Social Vulnerability

Although not all areas have equal vulnerability, there is some susceptibility across the entire county. It is assumed that the total population is at risk to the wildfire hazard. Determining the exact number of people in certain wildfire zones is difficult with existing data and could be misleading.

Critical Facilities

The critical facility analysis revealed that there are 16 critical facilities located in an area considered low or very low risk valued at over \$25M. There are seven critical facilities located in an area considered moderate risk valued at approximately \$29M, and there is an additional 14 structures located in an area considered high risk valued at nearly \$40M. It should be noted, however, that several factors could impact the spread of a wildfire putting all facilities at risk. A list of specific critical facilities and their associated risk can be found in **Table A.32** at the end of this section.

In conclusion, a wildfire event has the potential to impact many existing and future buildings, critical facilities, and populations in Jones County.

EARTHQUAKE

The HAZUS-MH earthquake scenario was generated for the region only and not on an individual county basis. The HAZUS-MH model and historical occurrences confirm, any earthquake activity in the area is likely to inflict minor damage to the county. HAZUS-MH 4.2 estimates a total exposure of approximately \$20,561,000 which includes buildings, inventory, and contents throughout the region. While this number is not an exact representation of assessed tax value, it is helpful in assessing the results of the HAZUS-MH scenario.

For the earthquake hazard vulnerability assessment, an arbitrary scenario was created to estimate damages to the planning area. HAZUS-MH estimates that no buildings would be moderately damaged.

Social Vulnerability

It can be assumed that all existing future populations are at risk to the earthquake hazard. No fatalities or injuries were reported in the above HAZUS-MH arbitrary scenario.

Critical Facilities

There are 88 critical facilities identified for Jones County, valued at \$227,178,957. All are vulnerable to the earthquake hazard.

In conclusion, an earthquake has the potential to impact all existing and future buildings, facilities, and populations in Jones County. The HAZUS-MH scenario indicates that minimal damage is expected from an earthquake occurrence. While Jones County may not experience a large earthquake (there are none on record), localized damage is possible with an occurrence. A list of specific critical facilities and their associated risk can be found in **Table D.32** at the end of this section.

HURRICANE AND TROPICAL STORM

Historical evidence indicates that Jones County has an elevated risk to the hurricane and tropical storm hazard. Several tracks have come near or traversed through the county, as shown and discussed in Section D.2.10.

Hurricanes and tropical storms can cause damage through numerous additional hazards such as flooding, erosion, tornadoes, and high winds, thus it is difficult to estimate total potential losses from these cumulative effects. The current HAZUS-MH hurricane model only analyzes hurricane winds and is not capable of modeling and estimating cumulative losses from all hazards associated with hurricanes; therefore only hurricane winds are analyzed in this section. It can be assumed that all existing and future buildings and populations are at risk to the hurricane and tropical storm hazard. HAZUS-MH 4.2 was used to determine vulnerability to the hazard for a 100-Year event. There are an estimated 100,000 buildings in the region with a total building replacement value of \$20,562,000. A 100-year probabilistic scenario was created and modeled. HAZUS-MH estimated that approximately 1,892 buildings would be at least moderately damaged by the event; this is over two percent of the buildings in the Region. There is an estimated 69 buildings that would be damaged beyond repair.

Economic Losses

HAZUS-MH estimated economic losses for the scenario event. HAZUS-MH estimated losses at \$349.5M, which represents 1.7 percent of the total replacement value of the region's buildings. Nine percent of the losses were related to business interruption in the scenario region. 88 percent of the losses were sustained by residential structures.

Debris Generation

As part of the scenario, HAZUS-MH estimated the amount of debris that would be generated by the event. The types of debris considered were brick/wood, reinforced concrete/steel, eligible tree debris, and other tree debris. HAZUS-MH estimated that a total of 2,165,680 tons of debris would be generated by the event. Of that amount, 93 percent would be other tree debris, approximately 1.5 percent would be brick/wood, and the rest would comprise of would be eligible tree debris and brick/wood. Assuming a load of 25 tons per truck, this would equate to 1,190 truckloads of debris from this scenario.

Social Vulnerability

Given equal susceptibility across the county, it is assumed that the total population is at risk to the hurricane and tropical storm hazard.

Critical Facilities

Given equal vulnerability across Jones County, all critical facilities are considered to be at risk. Some buildings may perform better than others in the face of such an event due to construction and age, among other factors. There are 88 critical facilities identified for Jones County, valued at \$227,178,957. Some buildings may perform better than others in the face of such an event due to construction and age, among other factors. Determining individual building response is beyond the scope of this plan. However, this plan will consider mitigation action for especially vulnerable and/or critical facilities to mitigation against the effects of the hurricane hazard. A list of specific critical facilities can be found in **Table A.32** at the end of this section.

In conclusion, a hurricane event has the potential to impact many existing and future buildings, critical facilities, and populations in Jones County. Hurricane events can cause substantial damage in their wake including fatalities, extensive debris clean-up, and extended power outages.

HAZARDOUS MATERIALS INCIDENT

Although historical evidence and existing Toxic Release Inventory sites indicate that Jones County is susceptible to hazardous materials events, there are few reports of damage.

Most hazardous materials incidents that occur are contained and suppressed before destroying any property or threatening lives. However, they can have a significant negative impact. Such events can cause multiple deaths, completely shut down facilities for 30 days or more, and cause more than 50 percent of affected properties to be destroyed or suffer major damage. In a hazardous materials incident, solid, liquid, and/or gaseous contaminants may be released from fixed or mobile containers. Weather conditions will directly affect how the hazard develops. Certain chemicals may travel through the air or water, affecting a much larger area than the point of the incidence itself. Non-compliance with fire and building codes, as well as failure to maintain existing fire and containment features, can substantially increase the damage from a hazardous materials release. The duration of a hazardous materials incident can range from hours to days. Warning time is minimal to none.

In order to conduct the vulnerability assessment for this hazard, GIS intersection analysis was used for fixed and mobile areas and parcels.¹⁹ In both scenarios, two sizes of buffers—500 and 2,500 meters—were used. These areas are assumed to respect the different levels of effect: immediate (primary) and secondary. Primary and secondary impact sites were selected based on guidance from FEMA 426, Reference Manual to Mitigate Potential Terrorist Attacks against Buildings and engineering judgment. For the fixed site analysis, geo-referenced TRI listed toxic sites in Jones County, along with buffers, were used for analysis as shown in **Figure D.19**. For the mobile analysis, the major roads (Interstate highway, U.S. highway, and State highway) and railroads, where hazardous materials are primarily transported that could adversely impact people and buildings, were used for the GIS buffer analysis. **Figure D.20** shows the areas used for mobile toxic release buffer analysis. The mobile toxic release buffer data did not change since the last plan update.

¹⁹ This type of analysis will likely yield conservative results (generally higher than what is actually reported after an event).

FIGURE D.9 : TRI SITES WITH BUFFERS IN JONES COUNTY

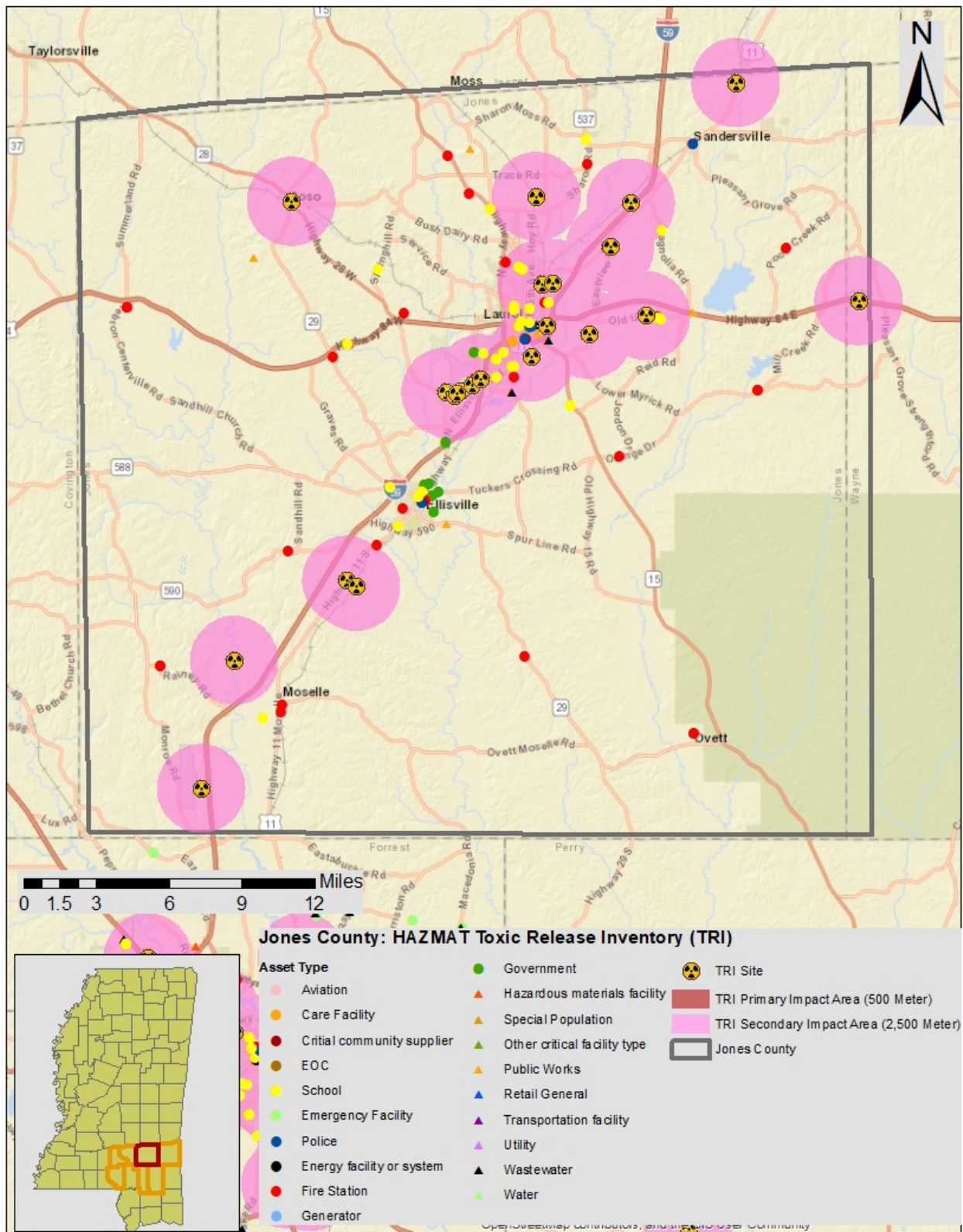
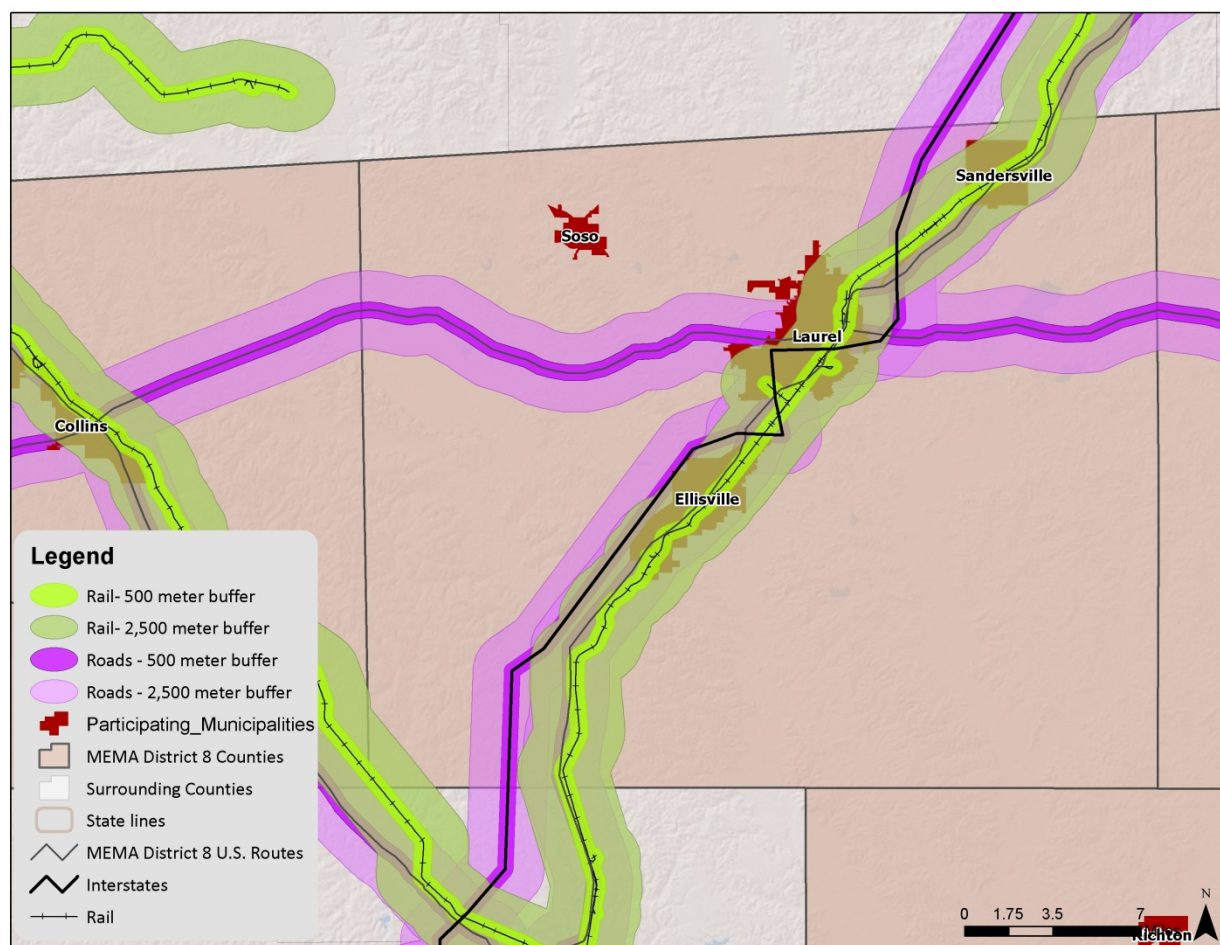


FIGURE D.10 : MOBILE HAZMAT BUFFERS IN JONES COUNTY

Social Vulnerability

Given high susceptibility across the entire county, it is assumed that the total population is at risk to a hazardous materials incident. It should be noted that areas of population concentration may be at an elevated risk due to a greater burden to evacuate population quickly.

Critical Facilities

Fixed Site Analysis:

The critical facility analysis for fixed TRI sites revealed that there are five critical facility that would be impacted by only the 500M HAZMAT risk zone, which are valued at over \$2M. There are 45 critical facilities that would be impacted by the 2500M HAZMAT risk zone, valued at over \$141M. A list of specific critical facilities and their associated risk can be found in **Table A.32** at the end of this section.

Mobile Analysis:

The critical facility analysis for transportation corridors in Jones County revealed that there are 55 critical facilities located in the 500M Highway mobile HAZMAT buffer areas valued at over \$157M, and there are 44 critical facilities located in the 500M Railway mobile HAZMAT buffer areas valued at approximately \$60.3M.

Expanding to a 2500M HAZMAT risk zone reveals that 71 critical facilities located in the highway mobile HAZMAT buffer areas are vulnerable, valued at over \$186M. There are 67 critical facilities located in the railway mobile HAZMAT buffer area that are vulnerable, valued at over \$172M. A list of specific critical facilities and their associated risk can be found in **Table A.32** at the end of this section.

In conclusion, a hazardous material incident has the potential to impact many existing and future buildings, critical facilities, and populations in Jones County. Those areas in a primary buffer are at the highest risk, though all areas carry some vulnerability due to variations in conditions that could alter the impact area (i.e., direction and speed of wind, volume of release, etc). Further, incidents from neighboring counties could also impact the county and participating jurisdictions.

CONCLUSIONS ON HAZARD VULNERABILITY

Table D.32 shows the critical facilities vulnerable to additional hazards analyzed in this section. The table lists those assets that are determined to be exposed to each of the identified hazards (marked with an “X”).

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TABLE D.32: AT-RISK CRITICAL FACILITIES IN JONES COUNTY

FACILITY NAME	FACILITY TYPE	ATMOSPHERIC							GEOLOGIC			HYDROLOGIC			OTHER						
		Drought	Hailstorm	Hurricane and Tropical Storm	Lightning	Thunderstorm	Tornado	Winter Storm and Ice Storm	Earthquake	Landslide – Mod	Landslide- High	Dam and Levee Failure ²⁰	Flood – 100 yr	Flood – 500 yr	Fixed HAZMAT 500m	Fixed HAZMAT 2,500 meter	Mobile HZMT Roads 500 METER	Mobile HZMT Roads 2,500 meter	Mobile HZMT Rails 500 METER	Mobile HZMT Rails 2,500 meter	Wildfire
Jones County																					
Adult Detention Facility	Special Population	X	X	X	X	X	X	X	X								X	X		X	Non-burnable
Beat 4 Barn	Public Works	X	X	X	X	X		X	X									X		X	Low
City Hall	Government offices	X	X	X	X	X		X	X								X	X	X	X	Non-burnable
Court House District 1	Government offices	X	X	X	X	X		X	X								X	X	X	X	Non-burnable
Ellisville Fire Department	Fire Department	X	X	X	X	X		X	X								X	X	X	X	Non-burnable
ELLISVILLE LOWER ELEMENTARY SCHOOL	School	X	X	X	X	X	X	X	X								X	X	X	X	Non-burnable
Ellisville Police Dept	Police Station	X	X	X	X	X		X	X								X	X	X	X	Non-burnable
ELLISVILLE STATE SCHOOL	School	X	X	X	X	X	X	X	X				X				X	X	X	X	Non-burnable
Fire Station #1	Fire Station	X	X	X	X	X		X	X								X	X	X	X	Non-burnable
Fire Station #2	Fire Station	X	X	X	X	X	X	X	X				X				X	X		X	Non-burnable
Fire Station #3	Fire Station	X	X	X	X	X	X	X	X								X	X	X	X	High
Johnson VFD	Fire Station	X	X	X	X	X		X	X												Low

²⁰ As noted previously, these facilities could be at risk to dam failure if located in an inundation area. Data was not available to conduct such an analysis. There was no local knowledge of these facilities being at risk to dam failure. As additional data becomes available, more in-depth analysis will be conducted.

FACILITY NAME	FACILITY TYPE	ATMOSPHERIC							GEOLOGIC			HYDROLOGIC			OTHER						
		Drought	Hailstorm	Hurricane and Tropical Storm	Lightning	Thunderstorm	Tornado	Winter Storm and Ice Storm	Earthquake	Landslide – Mod	Landslide- High	Dam and Levee Failure ²⁰	Flood – 100 yr	Flood – 500 yr	Fixed HAZMAT 500m	Fixed HAZMAT 2,500 meter	Mobile HZMT Roads 500 METER	Mobile HZMT Roads 2,500 meter	Mobile HZMT Rails 500 METER	Mobile HZMT Rails 2,500 meter	Wildfire
Juvenile Detention Facility	Special Population	X	X	X	X	X	X	X	X								X	X		X	Non-burnable
Maintenance Building (county wide)	Government offices	X	X	X	X	X	X	X	X								X	X		X	Non-burnable
Police Department	Police/Government Offices	X	X	X	X	X		X	X								X	X	X	X	Non-burnable
Public Works	Government offices	X	X	X	X	X		X	X				X				X	X	X	X	High
Public Works	Government offices	X	X	X	X	X	X	X	X								X	X	X	X	Low
Public Works	Government offices	X	X	X	X	X	X	X	X								X	X	X	X	Moderate
Public Works	Government offices	X	X	X	X	X		X	X									X		X	Non-burnable
Public Works	Government offices	X	X	X	X	X		X	X									X		X	Very Low
SOUTH JONES ELEMENTARY SCHOOL	School	X	X	X	X	X		X	X				X				X	X		X	Low
SOUTH JONES HIGH SCHOOL	School	X	X	X	X	X	X	X	X								X	X	X	X	Non-burnable
South Jones VFD	Fire Station	X	X	X	X	X		X	X												Low
Southwest Jones VFD	Fire Station	X	X	X	X	X		X	X												Low
A P FATHEREE VOC TECH SCHOOL	School	X	X	X	X	X		X	X							X	X	X		X	Moderate
Beat 1 Barn	Public Works	X	X	X	X	X		X	X												High
Beat 3 Barn	Public Works	X	X	X	X	X		X	X								X	X			Non-burnable

FACILITY NAME	FACILITY TYPE	ATMOSPHERIC							GEOLOGIC			HYDROLOGIC			OTHER						
		Drought	Hailstorm	Hurricane and Tornado	Lightning	Thunderstorm	Tornado	Winter Storm and Ice Storm	Earthquake	Landslide – Mod	Landslide- High	Dam and Levee Failure ²⁰	Flood – 100 yr	Flood – 500 yr	Fixed HAZMAT 500m	Fixed HAZMAT 2,500 meter	Mobile HZMT Roads 500 METER	Mobile HZMT Roads 2,500 meter	Mobile HZMT Rails 500 METER	Mobile HZMT Rails 2,500 meter	Wildfire
Beat 5 Barn	Public Works	X	X	X	X	X	X	X	X							X	X	X	X	X	Non-burnable
Calhoun VFD	Fire Station	X	X	X	X	X		X	X								X	X		X	Non-burnable
Court House District 2	Government offices	X	X	X	X	X	X	X	X							X	X	X	X	X	Non-burnable
EAST JONES ELEMENTARY SCHOOL	School	X	X	X	X	X		X	X							X	X	X			High
Emergency Operations Center	EOC	X	X	X	X	X	X	X	X					X		X	X	X	X	X	Non-burnable
Fire Dept Central Station #1	Fire Station	X	X	X	X	X	X	X	X					X		X	X	X	X	X	Non-burnable
Fire Dept Station #2	Fire Station	X	X	X	X	X		X	X							X	X	X	X	X	High
Fire Dept Station #4	Fire Station	X	X	X	X	X		X	X				X			X		X	X	X	Non-burnable
Fire Dept Station #5	Fire Station	X	X	X	X	X		X	X							X		X		X	Non-burnable
Fire Dept Station #6	Fire Station	X	X	X	X	X		X	X						X	X		X	X	X	Low
General Aviation (Hesler-Noble Field)	Aviation	X	X	X	X	X		X	X						X	X		X	X	X	Low
GLADE ELEMENTARY SCHOOL	School	X	X	X	X	X		X	X												Low
Glade VFD	Fire Station	X	X	X	X	X		X	X												Moderate
IMMACULATE CONCEPTION SCHOOL	School	X	X	X	X	X		X	X							X	X	X		X	Non-burnable
Jones Cnty Sheriff-Processing	Police Station	X	X	X	X	X	X	X	X							X	X	X	X	X	Non-burnable

FACILITY NAME	FACILITY TYPE	ATMOSPHERIC							GEOLOGIC			HYDROLOGIC			OTHER						
		Drought	Hailstorm	Hurricane and Tropical Storm	Lightning	Thunderstorm	Tornado	Winter Storm and Ice Storm	Earthquake	Landslide – Mod	Landslide- High	Dam and Levee Failure ²⁰	Flood – 100 yr	Flood – 500 yr	Fixed HAZMAT 500m	Fixed HAZMAT 2,500 meter	Mobile HZMT Roads 500 METER	Mobile HZMT Roads 2,500 meter	Mobile HZMT Rails 500 METER	Mobile HZMT Rails 2,500 meter	Wildfire
Jones County Civil Defense	Emergency Facility	X	X	X	X	X		X	X						X	X		X	X	X	Non-burnable
Jones County Sheriff-Records	Police Station	X	X	X	X	X	X	X	X							X	X	X	X	X	Non-burnable
LAUREL CHRISTIAN SCHOOL	School	X	X	X	X	X		X	X							X	X	X		X	High
Laurel City Hall	Government offices	X	X	X	X	X	X	X	X							X	X	X	X	X	Non-burnable
Laurel City Police Dept	Police Station	X	X	X	X	X	X	X	X					X		X	X	X	X	X	Non-burnable
LAUREL EDUCATION CENTER	School	X	X	X	X	X		X	X							X	X	X		X	Low
Laurel Fire Department	Fire Department	X	X	X	X	X	X	X	X					X		X	X	X	X	X	Non-burnable
LAUREL HIGH SCHOOL	School	X	X	X	X	X		X	X							X		X	X	X	Non-burnable
LAUREL HIGH SCHOOL VOC COMPLEX	School	X	X	X	X	X		X	X							X		X	X	X	Non-burnable
M & M Volunteer Fire Department	Fire Department	X	X	X	X	X		X	X												Non-burnable
MASON ELEMENTARY SCHOOL	School	X	X	X	X	X		X	X							X		X		X	Low
NORA DAVIS MAGNET SCHOOL	School	X	X	X	X	X	X	X	X							X	X	X	X	X	Non-burnable
NORTHEAST JONES HIGH SCHOOL	School	X	X	X	X	X		X	X							X	X	X			High
OAK PARK ELEMENTARY SCHOOL	School	X	X	X	X	X	X	X	X							X	X	X	X	X	Non-burnable
PINE BELT EDUCATIONAL CENTER	School	X	X	X	X	X		X	X							X	X	X		X	Non-burnable

FACILITY NAME	FACILITY TYPE	ATMOSPHERIC							GEOLOGIC			HYDROLOGIC			OTHER						
		Drought	Hailstorm	Hurricane and Tropical Storm	Lightning	Thunderstorm	Tornado	Winter Storm and Ice Storm	Earthquake	Landslide – Mod	Landslide- High	Dam and Levee Failure ²⁰	Flood – 100 yr	Flood – 500 yr	Fixed HAZMAT 500m	Fixed HAZMAT 2,500 meter	Mobile HZMT Roads 500 METER	Mobile HZMT Roads 2,500 meter	Mobile HZMT Rails 500 METER	Mobile HZMT Rails 2,500 meter	Wildfire
Pleasant Ridge VFD	Fire Station	X	X	X	X	X		X	X								X	X			High
Police Dept	Police/Govern ment Offices	X	X	X	X	X	X	X	X					X		X	X	X	X	X	Non- burnable
Powers Volunteer Fire Department	Fire Department	X	X	X	X	X		X	X							X	X	X			Non- burnable
Public Works Facility	Government offices	X	X	X	X	X		X	X							X		X		X	Low
R H Watkins High School	School Safe Room	X	X	X	X	X		X	X							X		X	X	X	Non- burnable
Rushton VFD	Fire Station	X	X	X	X	X		X	X												High
Safe Room / Shelter	School Safe Room	X	X	X	X	X	X	X	X							X	X	X	X	X	Moderate
Sewer Department	Wastewater	X	X	X	X	X		X	X				X			X	X	X		X	Moderate
Sewer Department	Wastewater	X	X	X	X	X		X	X				X			X		X		X	Moderate
SHADY GROVE ELEMENTARY SCHOOL	School	X	X	X	X	X		X	X											X	High
Shady Grove VFD	Fire Station	X	X	X	X	X		X	X												High
Shady Grove VFD	Fire Department	X	X	X	X	X		X	X												High
SHARON ELEMENTARY SCHOOL	School	X	X	X	X	X		X	X												Non- burnable
Sharon VFD	Fire Station	X	X	X	X	X		X	X												High
Sheriff's Department	Police/Govern ment Offices	X	X	X	X	X	X	X	X							X	X	X	X	X	Non- burnable

FACILITY NAME	FACILITY TYPE	ATMOSPHERIC							GEOLOGIC			HYDROLOGIC			OTHER						
		Drought	Hailstorm	Hurricane and Tornado	Lightning	Thunderstorm	Tornado	Winter Storm and Ice Storm	Earthquake	Landslide – Mod	Landslide- High	Dam and Levee Failure ²⁰	Flood – 100 yr	Flood – 500 yr	Fixed HAZMAT 500m	Fixed HAZMAT 2,500 meter	Mobile HZMT Roads 500 METER	Mobile HZMT Roads 2,500 meter	Mobile HZMT Rails 500 METER	Mobile HZMT Rails 2,500 meter	Wildfire
SOUTH CENTRAL REGIONAL MED CTR	Care Facility	X	X	X	X	X		X	X							X	X	X		X	Non-burnable
ST JOHNS DAY SCHOOL	School	X	X	X	X	X		X	X							X	X	X	X	X	Non-burnable
STANTON ELEMENTARY SCHOOL	School	X	X	X	X	X		X	X							X		X		X	Non-burnable
Stewart Jones Middle School	School Safe Room	X	X	X	X	X		X	X				X			X	X	X	X	X	Non-burnable
THE STAR REACH CENTER	School	X	X	X	X	X		X	X							X		X			Low
Water Department	Wastewater	X	X	X	X	X	X	X	X					X		X	X	X	X	X	Non-burnable
Water Department	Wastewater	X	X	X	X	X	X	X	X					X		X	X	X	X	X	Non-burnable
Water Department	Wastewater	X	X	X	X	X	X	X	X					X		X	X	X	X	X	Non-burnable
WEST JONES ELEMENTARY SCHOOL	School	X	X	X	X	X		X	X								X	X			Low
WEST JONES HIGH SCHOOL	School	X	X	X	X	X		X	X											X	Moderate
MOSELLE ELEMENTARY SCHOOL	School	X	X	X	X	X		X	X									X		X	High
Moselle VFD	Fire Station	X	X	X	X	X		X	X								X	X	X	X	High
Southwest Jones Volunteer Fire Departmen	Fire Department	X	X	X	X	X		X	X												High
Union VFD	Fire Station	X	X	X	X	X		X	X								X	X	X	X	High
Ovett Volunteer Fire Department	Fire Department	X	X	X	X	X		X	X												Moderate

FACILITY NAME	FACILITY TYPE	ATMOSPHERIC							GEOLOGIC			HYDROLOGIC			OTHER						
		Drought	Hailstorm	Hurricane and Tropical Storm	Lightning	Thunderstorm	Tornado	Winter Storm and Ice Storm	Earthquake	Landslide – Mod	Landslide- High	Dam and Levee Failure ²⁰	Flood – 100 yr	Flood – 500 yr	Fixed HAZMAT 500m	Fixed HAZMAT 2,500 meter	Mobile HZMT Roads 500 METER	Mobile HZMT Roads 2,500 meter	Mobile HZMT Rails 500 METER	Mobile HZMT Rails 2,500 meter	Wildfire
Police Dept	Police Station	X	X	X	X	X		X	X								X	X	X	X	Non- burnable
Sandersville VFD	Fire Station	X	X	X	X	X		X	X								X	X	X	X	Non- burnable
Beat 2 Barn	Public Works	X	X	X	X	X		X	X												High
Hebron Volunteer Fire Department	Fire Department	X	X	X	X	X		X	X								X	X			Low
Soso Police Dept	Police Station	X	X	X	X	X		X	X						X	X			X	X	Non- burnable
Soso VFD	Fire Station	X	X	X	X	X	X	X	X						X	X			X	X	Non- burnable

D.4 JONES COUNTY CAPABILITY ASSESSMENT

This subsection discusses the capability of Jones County to implement hazard mitigation activities. More information on the purpose and methodology used to conduct the assessment can be found in Section 7: *Capability Assessment*.

D.4.1 Planning and Regulatory Capability

Table D.32 provides a summary of the relevant local plans, ordinances, and programs already in place or under development for Jones County. A checkmark (✓) indicates that the given item is currently in place and being implemented. An asterisk (*) indicates that the given item is currently being developed for future implementation. Each of these local plans, ordinances, and programs should be considered available mechanisms for incorporating the requirements of the MEMA District 8 Regional Hazard Mitigation Plan.

TABLE D.32: RELEVANT PLANS, ORDINANCES, AND PROGRAMS

Planning Tool/Regulatory Tool	Hazard Mitigation Plan	Comprehensive Land Use Plan	Floodplain Management Plan	Open Space Management Plan (Parks & Rec/Greenway Plan)	Stormwater Management Plan/Ordinance	Natural Resource Protection Plan	Flood Response Plan	Emergency Operations Plan	Continuity of Operations Plan	Evacuation Plan	Disaster Recovery Plan	Capital Improvements Plan	Economic Development Plan	Historic Preservation Plan	Flood Damage Prevention Ordinance	Zoning Ordinance	Subdivision Ordinance	Unified Development Ordinance	Post-Disaster Redevelopment Ordinance	Building Code	Fire Code	National Flood Insurance Program (NFIP)	NFIP Community Rating System
JONES COUNTY	✓			✓			✓	✓				✓		✓		✓						✓	
Ellisville	✓	✓		✓			✓	✓				✓		✓	✓	✓				✓		✓	
Laurel	✓	✓		✓	✓		✓	✓			✓	✓		✓	✓	✓				✓	✓	✓	
Sandersville	✓			✓			✓	✓				✓											
Soso	✓			✓			✓	✓				✓											

A more detailed discussion on the county's planning and regulatory capabilities follows.

EMERGENCY MANAGEMENT

Hazard Mitigation Plan

Jones County has previously adopted a hazard mitigation plan. The City of Ellisville, the City of Laurel, the Town of Sandersville, and the Town of Soso were also included in this plan.

Emergency Operations Plan

Jones County maintains an emergency operations plan through its Emergency Management Agency. The City of Ellisville, the City of Laurel, the Town of Sandersville, and the Town of Soso are each covered by this plan.

GENERAL PLANNING

Comprehensive Land Use Plan

Jones County has not adopted a county comprehensive land use plan. However, the City of Ellisville and the City of Laurel each adopted a city comprehensive plan in 1971 and 1970, respectively.

Capital Improvements Plan

Jones County has not adopted a capital improvements plan. However, the City of Laurel has a capital improvement plan in place.

Zoning Ordinance

Jones County does not have a zoning ordinance in place. However, the City of Ellisville and the City of Laurel have zoning ordinances that were adopted in 1971 and 1985, respectively.

Subdivision Ordinance

Jones County has previously adopted subdivision regulations. The City of Ellisville and the City of Laurel also adopted subdivision regulations in 1971 and 1985, respectively.

Building Codes, Permitting, and Inspections

Jones County, the City of Ellisville, and the City of Laurel have each adopted a building code.

FLOODPLAIN MANAGEMENT

Table D.33 provides NFIP policy and claim information for each participating jurisdiction in Jones County.

TABLE D.33: NFIP POLICY AND CLAIM INFORMATION

Jurisdiction	Date Joined NFIP	Current Effective Map Date	NFIP Policies in Force	Insurance in Force	Closed Claims	Total Payments to Date
JONES COUNTY†	2/16/90	9/29/10	133	\$17,174,300	28	\$237,123
Ellisville	12/16/88	9/29/10	24	\$2,281,200	5	\$46,027
Laurel	9/15/77	9/29/10	254	\$30,415,800	75	\$398,815
Sandersville*	--	--	--	--	--	--
Soso*	--	--	--	--	--	--

†Includes unincorporated areas of county only

*Community does not participate in the NFIP

Source: NFIP Community Status information as of 3/31/13; NFIP claims and policy information as of 5/15/13

Flood Damage Prevention Ordinance

All communities participating in the NFIP are required to adopt a local flood damage prevention ordinance. Jones County, the City of Ellisville, and the City of Laurel all participate in the NFIP and have adopted flood damage prevention ordinances.

Open Space Management Plan

Jones County, the City of Ellisville, the City of Laurel, the Town of Sandersville, and the Town of Soso are all included in the Southern Mississippi Planning and Development District (SMPDD) Regional Open Space Plan that was written in 1973.

Stormwater Management Plan

Jones County has not adopted a stormwater management plan or ordinance. However, the City of Laurel adopted a stormwater detention requirements ordinance in 2000.

D.4.2 Administrative and Technical Capability

Table D.34 provides a summary of the capability assessment results for Jones County with regard to relevant staff and personnel resources. A checkmark (✓) indicates the presence of a staff member(s) in that jurisdiction with the specified knowledge or skill.

TABLE D.34: RELEVANT STAFF / PERSONNEL RESOURCES

Staff / Personnel Resource	Planners with knowledge of land development/land management practices	Engineers or professionals trained in construction practices related to buildings and/or infrastructure	Planners or engineers with an understanding of natural and/or human-caused hazards	Emergency Manager	Floodplain Manager	Land Surveyors	Scientists familiar with the hazards of the community	Staff with education or expertise to assess the community's vulnerability to hazards	Personnel skilled in GIS and/or Hazus	Resource development staff or grant writers
JONES COUNTY	✓	✓	✓	✓	✓		✓	✓	✓	✓
Ellisville		✓	✓	✓	✓		✓	✓	✓	
Laurel	✓	✓	✓	✓	✓		✓	✓	✓	
Sandersville		✓	✓	✓			✓	✓	✓	
Soso		✓	✓	✓			✓	✓	✓	

Credit for having a floodplain manager was given to those jurisdictions that have a flood damage prevention ordinance, and therefore an appointed floodplain administrator, regardless of whether the appointee was dedicated solely to floodplain management. Credit was given for having a scientist familiar with the hazards of the community if a jurisdiction has a Cooperative Extension Service or Soil and Water Conservation Department. Credit was also given for having staff with education or expertise to assess the community's vulnerability to hazards if a staff member from the jurisdiction was a participant on the existing hazard mitigation plan's planning committee.

D.4.3 Fiscal Capability

Table D.35 provides a summary of the results for Jones County with regard to relevant fiscal resources. A checkmark (✓) indicates that the given fiscal resource is locally available for hazard mitigation purposes (including match funds for state and federal mitigation grant funds) according to the previous county hazard mitigation plan.

TABLE D.35: RELEVANT FISCAL RESOURCES

Fiscal Tool / Resource	Capital Improvement Programming	Community Development Block Grants (CDBG)	Special Purpose Taxes (or taxing districts)	Gas/Electric Utility Fees	Water/Sewer Fees	Stormwater Utility Fees	Development Impact Fees	General Obligation, Revenue, and/or Special Tax Bonds	Partnering Arrangements or Intergovernmental Agreements
JONES COUNTY	✓	✓							✓
Ellisville	✓	✓							✓
Laurel	✓	✓							✓
Sandersville		✓							✓
Soso									✓

D.4.4 Political Capability

During the months immediately following a disaster, local public opinion in Jones County is more likely to shift in support of hazard mitigation efforts.

D.5 JONES COUNTY MITIGATION STRATEGY

This subsection provides the blueprint for Jones County to follow in order to become less vulnerable to its identified hazards. It is based on general consensus of the Regional Hazard Mitigation Council and the findings and conclusions of the capability assessment and risk assessment. Additional Information can be found in Section 8: *Mitigation Strategy* and Section 9: *Mitigation Action Plan*.

D.5.1 Mitigation Goals

Jones County developed five mitigation goals in coordination with the other participating MEMA District 8 Region jurisdictions. The regional mitigation goals are presented in **Table D.36**.

TABLE D.36: MEMA DISTRICT 8 REGIONAL MITIGATION GOALS

	Goal
Goal #1	Develop a sustainable, comprehensive mitigation program to ensure safer communities.
Goal #2	Reduce or avoid loss of life, injury, and damage to property, the economy, and the environment.
Goal #3	Enhance preparedness and effective response to hazards.
Goal #4	Strengthen and improve local mitigation capabilities.
Goal #5	Increase public awareness of hazard mitigation, hazard risk, and protective measures that can be taken to minimize potential loss and damage.

D.5.2 Mitigation Action Plan

The mitigation actions proposed by Jones County, the City of Ellisville, the City of Laurel, the Town of Sandersville, and the Town of Soso are listed in the following individual Mitigation Action Plans.

Jones County Mitigation Action Plan

Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2019 Action Implementation Status
Prevention								
P-1	Explore solutions to reduce or eliminate sources of stagnant water and address methods to eradicate insects, birds, etc that may carry diseases.	FL	Low	To be determined	To be determined	To be determined	2014	Completed
P-2	Coordinate a floodplain management council with representatives from each of the participating jurisdictions. Conduct meetings to educate and develop a floodplain management program that will address future development and administration of a floodplain program.	FL	High	Local Budget and FMA	To be determined	Jones County	To be determined	Completed
P-3	Evaluate existing land-use studies and determine if any changes need to be made to address land-use in the new designated floodplain areas.	FL	Moderate	To be determined	To be determined	Jones County	2024	Ongoing
P-4	Assign data collection of each disaster/weather event countywide. This process will aid community leaders in assessing needs as an ongoing process.	Multi	High	To be determined	To be determined	Jones County Emergency Management Agency	Annual	Completed/Ongoing
P-5	Conduct a study throughout the county identifying storm water issues and determine areas that need improvement. Issues include physical and regulatory interventions.	Multi	Moderate	CDBD, Federal, State and Local	\$150,000	Jones County Board of Supervisors	3-5 years	Ongoing

Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2019 Action Implementation Status
P-6	Continue to enforce building codes and exceed the standards when proven cost-effective to withstand higher wind forces that could be delivered by a natural disaster. Develop and training program for city employees	Multi	Moderate	Local Funds	\$20,000	Municipalities	Ongoing	Ongoing
Property Protection								
PP-1	Upon receipt of the new floodplain maps, review repetitive loss structures and implement a plan to complete the acquisition process.	FL	Moderate	FMA	To be determined	Jones County	2024	Ongoing
Natural Resource Protection								
NRP-1	Evaluate streams and identify potential projects to mitigate stream bank restoration.	FL	Moderate	To be determined	To be determined	Jones County	Ongoing as projects are identified	Completed/Ongoing
Emergency Services								
ES-1	Develop a drought council to implement an emergency response plan for the County	DR	Moderate	To be determined	To be determined	Jones County Emergency Management Agency	N/A	Deferred—No drought council
ES-2	Jones County proposes to build a FEMA 361 Shelter to be located at the South Mississippi State Fairgrounds in Laurel, MS. This site will give easy access to I-59, highway 84 and highway 11.	HU	High	HMGP and State Global Match	\$3,250,000	Jones County	2011	Delete

Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2019 Action Implementation Status
ES-3	Install generators at the following critical facilities: Jones County Courthouse – Laurel – 150 KW- \$49,000 Jones County Courthouse – Ellisville – 150 KW - \$49,000 Jones County Annex Building – 150 KW - \$49,000 Jones County Maintenance Facility - \$25 KW - \$35,000	Multi	High	HMGP	\$182,000	Jones County Board of Supervisors	2009	Delete
ES-4	Install emergency notification warning systems at the following facilities: Pleasant Ridge VFD West Jones High/Middle School City of Soso City of Sandersville Moselle VFD North Jones Elementary Glade Elementary School Northeast Jones School	Multi	High	HMGP	\$155,556	Jones County Board of Supervisors	2010	Delete
ES-5	Identify and implement automated mass notification/warning system County wide	All Hazards	High	TBD	\$15,000-\$20,000 Annually	Jones County and Municipalities	2024	New
Structural Projects								
SP-1	Develop a floodplain council with representatives from each jurisdiction to develop and monitor development within the floodplain.	FL	Moderate	To be determined	To be determined	Jones County	2014	Completed. Delete
SP-2	Flood Elevations of structures/properties identified as repetitive or severe repetitive loss	FL	Medium	FEMA	N/A	Jones County	2024	New

ANNEX D: JONES COUNTY

Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2019 Action Implementation Status
Public Education and Awareness								
PEA-1	Partner with various stakeholder groups to develop an all hazard public outreach and education program.	Multi	High	To be determined	To be determined	Jones County	Ongoing	Completed/Ongoing
PEA-2	Become a Firewise Community	WUF	High	To be determined	To be determined	Jones County		Delete
DR = Drought FL = Flood HU = Hurricane WUF = Wild/Urban Fire								

City of Ellisville Mitigation Action Plan

Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2013 Action Implementation Status
Prevention								
P-1	Explore solutions to reduce or eliminate sources of stagnant water and address methods to eradicate insects, birds, etc that may carry diseases.	FL	Low	To be determined	To be determined	To be determined	2014	Completed
P-2	Coordinate a floodplain management council with representatives from each of the participating jurisdictions. Conduct meetings to educate and develop a floodplain management program that will address future development and administration of a floodplain program.	FL	High	Local Budget and FMA	To be determined	Jones County	To be determined	Completed
P-3	Evaluate existing land-use studies and determine if any changes need to be made to address land-use in the new designated floodplain areas.	FL	Moderate	To be determined	To be determined	Jones County	2024	Ongoing
P-4	Assign data collection of each disaster/weather event countywide. This process will aid community leaders in assessing needs as an ongoing process.	Multi	High	To be determined	To be determined	Jones County Emergency Management Agency	Annual	Completed/Ongoing
P-5	Conduct a study throughout the county identifying storm water issues and determine areas that need improvement. Issues include physical and regulatory interventions.	Multi	Moderate	CDBD, Federal, State and Local	\$150,000	Jones County Board of Supervisors	3-5 years	Ongoing

Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2013 Action Implementation Status
P-6	Continue to enforce building codes and exceed the standards when proven cost-effective to withstand higher wind forces that could be delivered by a natural disaster. Develop and training program for city employees	Multi	Moderate	Local Funds	\$20,000	Jones County Board of Supervisors	Ongoing	Ongoing
Property Protection								
PP-1	Upon receipt of the new floodplain maps, review repetitive loss structures and implement a plan to complete the acquisition process.	FL	Moderate	FMA	To be determined	Jones County	2024	Ongoing
Natural Resource Protection								
NRP-1	Evaluate streams and identify potential projects to mitigate stream bank restoration.	FL	Moderate	To be determined	To be determined	Jones County	Ongoing as projects are identified	Completed/Ongoing
Emergency Services								
ES-1	Develop a drought council to implement an emergency response plan for the County	DR	Moderate	To be determined	To be determined	Jones County Emergency Management Agency	N/A	Deferred—No drought council
ES-2	Jones County proposes to build a FEMA 361 Shelter to be located at the South Mississippi State Fairgrounds in Laurel, MS. This site will give easy access to I-59, highway 84 and highway 11.	HU	High	HMGP and State Global Match	\$3,250,000	Jones County	2011	Delete
ES-3	Install a 35-KW generator to support the Ellisville City Hall during a hazard event.	Multi	High	HMGP	\$31,000	Emergency Services	2009	Delete
ES-4	Identify and implement automated mass notification/warning system County wide	All Hazards	High	TBD	\$15,000-\$20,000 Annually	Jones County and Municipalities	2024	New

ANNEX D: JONES COUNTY

Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2013 Action Implementation Status
Structural Projects								
SP-1	Develop a floodplain council with representatives from each jurisdiction to develop and monitor development within the floodplain.	FL	Moderate	To be determined	To be determined	Jones County	2014	Completed. Delete
SP-2	Flood Elevations	FL	Medium	FEMA	N/A	Jones County	2024	New
Public Education and Awareness								
PEA-1	Partner with various stakeholder groups to develop an all hazard public outreach and education program.	Multi	High	To be determined	To be determined	Jones County	Ongoing	Completed/Ongoing
PEA-2	Become a Firewise Community	WUF	High	To be determined	To be determined	Jones County		Delete
DR = Drought FL = Flood HU = Hurricane WUF = Wild/Urban Fire								

City of Laurel Mitigation Action Plan

Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2013 Action Implementation Status
Prevention								
P-1	Explore solutions to reduce or eliminate sources of stagnant water and address methods to eradicate insects, birds, etc that may carry diseases.	FL	Low	To be determined	To be determined	To be determined	2014	Completed
P-2	Coordinate a floodplain management council with representatives from each of the participating jurisdictions. Conduct meetings to educate and develop a floodplain management program that will address future development and administration of a floodplain program.	FL	High	Local Budget and FMA	To be determined	Jones County	To be determined	Completed
P-3	Evaluate existing land-use studies and determine if any changes need to be made to address land-use in the new designated floodplain areas.	FL	Moderate	To be determined	To be determined	Jones County	2024	Ongoing
P-4	Assign data collection of each disaster/weather event countywide. This process will aid community leaders in assessing needs as an ongoing process.	Multi	High	To be determined	To be determined	Jones County Emergency Management Agency	Annual	Completed/Ongoing
P-5	Conduct a study throughout the county identifying storm water issues and determine areas that need improvement. Issues include physical and regulatory interventions.	Multi	Moderate	CDBD, Federal, State and Local	\$150,000	Jones County Board of Supervisors	3-5 years	Ongoing

Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2013 Action Implementation Status
P-6	Continue to enforce building codes and exceed the standards when proven cost-effective to withstand higher wind forces that could be delivered by a natural disaster. Develop and training program for city employees	Multi	Moderate	Local Funds	\$20,000	Jones County Board of Supervisors	Ongoing	Ongoing
Property Protection								
PP-1	Upon receipt of the new floodplain maps, review repetitive loss structures and implement a plan to complete the acquisition process.	FL	Moderate	FMA	To be determined	Jones County	2024	Ongoing
Natural Resource Protection								
NRP-1	Evaluate streams and identify potential projects to mitigate stream bank restoration.	FL	Moderate	To be determined	To be determined	Jones County	Ongoing as projects are identified	Completed/Ongoing
Emergency Services								
ES-1	Develop a drought council to implement an emergency response plan for the County	DR	Moderate	To be determined	To be determined	Jones County Emergency Management Agency	N/A	Deferred—No drought council
ES-2	Jones County proposes to build a FEMA 361 Shelter to be located at the South Mississippi State Fairgrounds in Laurel, MS. This site will give easy access to I-59, highway 84 and highway 11.	HU	High	HMGP and State Global Match	\$3,250,000	Jones County	2011	Delete

ANNEX D: JONES COUNTY

Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2013 Action Implementation Status
ES-3	Install generators at the following critical facilities: Laurel City Hall -150KW - \$49,000 LT Ellis Center – Special needs shelter – 45 KW - \$49,000 Laurel Fire Department Station 2 – 16KW- \$12,000 Laurel Fire Department Station 6 – 16KW- \$12,000	Multi	High	HMGP	\$122,000	City of Laurel	2009	Delete
ES-4	Identify and implement automated mass notification/warning system County wide	All Hazards	High	TBD	\$15,000-\$20,000 Annually	Jones County and Municipalities	2024	New
Structural Projects								
SP-1	Develop a floodplain council with representatives from each jurisdiction to develop and monitor development within the floodplain.	FL	Moderate	To be determined	To be determined	Jones County	2014	Completed. Delete
SP-2	Flood Elevations	FL	Medium	FEMA	N/A	Jones County	2024	New
Public Education and Awareness								
PEA-1	Partner with various stakeholder groups to develop an all hazard public outreach and education program.	Multi	High	To be determined	To be determined	Jones County	Ongoing	Completed/Ongoing
PEA-2	Become a Firewise Community	WUF	High	To be determined	To be determined	Jones County		Delete
DR = Drought FL = Flood HU = Hurricane WUF = Wild/Urban Fire								

Town of Sandersville Mitigation Action Plan

Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2013 Action Implementation Status
Prevention								
P-1	Explore solutions to reduce or eliminate sources of stagnant water and address methods to eradicate insects, birds, etc that may carry diseases.	FL	Low	To be determined	To be determined	To be determined	2014	Completed
P-2	Coordinate a floodplain management council with representatives from each of the participating jurisdictions. Conduct meetings to educate and develop a floodplain management program that will address future development and administration of a floodplain program.	FL	High	Local Budget and FMA	To be determined	Jones County	To be determined	Completed
P-3	Evaluate existing land-use studies and determine if any changes need to be made to address land-use in the new designated floodplain areas.	FL	Moderate	To be determined	To be determined	Jones County	2024	Ongoing
P-4	Assign data collection of each disaster/weather event countywide. This process will aid community leaders in assessing needs as an ongoing process.	Multi	High	To be determined	To be determined	Jones County Emergency Management Agency	Annual	Completed/Ongoing
P-5	Conduct a study throughout the county identifying storm water issues and determine areas that need improvement. Issues include physical and regulatory interventions.	Multi	Moderate	CDBD, Federal, State and Local	\$150,000	Jones County Board of Supervisors	3-5 years	Ongoing

Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2013 Action Implementation Status
P-6	Continue to enforce building codes and exceed the standards when proven cost-effective to withstand higher wind forces that could be delivered by a natural disaster. Develop and training program for city employees	Multi	Moderate	Local Funds	\$20,000	Jones County Board of Supervisors	Ongoing	Ongoing
Property Protection								
PP-1	Upon receipt of the new floodplain maps, review repetitive loss structures and implement a plan to complete the acquisition process.	FL	Moderate	FMA	To be determined	Jones County	2024	Ongoing
Natural Resource Protection								
NRP-1	Evaluate streams and identify potential projects to mitigate stream bank restoration.	FL	Moderate	To be determined	To be determined	Jones County	Ongoing as projects are identified	Completed/Ongoing
Emergency Services								
ES-1	Develop a drought council to implement an emergency response plan for the County	DR	Moderate	To be determined	To be determined	Jones County Emergency Management Agency	N/A	Deferred—No drought council
ES-2	Jones County proposes to build a FEMA 361 Shelter to be located at the South Mississippi State Fairgrounds in Laurel, MS. This site will give easy access to I-59, highway 84 and highway 11.	HU	High	HMGP and State Global Match	\$3,250,000	Jones County	2011	Delete
ES-3	Install emergency notification warning systems at the Town of Sandersville	Multi	High	HMGP	\$155,556	Jones County Board of Supervisors	2009	Delete
ES-4	Identify and implement automated mass notification/warning system County wide	All Hazards	High	TBD	\$15,000-\$20,000 Annually	Jones County and Municipalities	2024	New

ANNEX D: JONES COUNTY

Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2013 Action Implementation Status
Structural Projects								
SP-1	Develop a floodplain council with representatives from each jurisdiction to develop and monitor development within the floodplain.	FL	Moderate	To be determined	To be determined	Jones County	2014	Completed. Delete
SP-2	Flood Elevations	FL	Medium	FEMA	N/A	Jones County	2024	New
Public Education and Awareness								
PEA-1	Partner with various stakeholder groups to develop an all hazard public outreach and education program.	Multi	High	To be determined	To be determined	Jones County	Ongoing	Completed/Ongoing
PEA-2	Become a Firewise Community	WUF	High	To be determined	To be determined	Jones County		Delete
DR = Drought FL = Flood HU = Hurricane WUF = Wild/Urban Fire								

Town of Soso Mitigation Action Plan

Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2013 Action Implementation Status
Prevention								
P-1	Explore solutions to reduce or eliminate sources of stagnant water and address methods to eradicate insects, birds, etc that may carry diseases.	FL	Low	To be determined	To be determined	To be determined	2014	Completed
P-2	Coordinate a floodplain management council with representatives from each of the participating jurisdictions. Conduct meetings to educate and develop a floodplain management program that will address future development and administration of a floodplain program.	FL	High	Local Budget and FMA	To be determined	Jones County	To be determined	Completed
P-3	Evaluate existing land-use studies and determine if any changes need to be made to address land-use in the new designated floodplain areas.	FL	Moderate	To be determined	To be determined	Jones County	2024	Ongoing
P-4	Assign data collection of each disaster/weather event countywide. This process will aid community leaders in assessing needs as an ongoing process.	Multi	High	To be determined	To be determined	Jones County Emergency Management Agency	Annual	Completed/Ongoing
P-5	Conduct a study throughout the county identifying storm water issues and determine areas that need improvement. Issues include physical and regulatory interventions.	Multi	Moderate	CDBD, Federal, State and Local	\$150,000	Jones County Board of Supervisors	3-5 years	Ongoing

ANNEX D: JONES COUNTY

Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2013 Action Implementation Status
P-6	Continue to enforce building codes and exceed the standards when proven cost-effective to withstand higher wind forces that could be delivered by a natural disaster. Develop and training program for city employees	Multi	Moderate	Local Funds	\$20,000	Jones County Board of Supervisors	Ongoing	Ongoing
Property Protection								
PP-1	Upon receipt of the new floodplain maps, review repetitive loss structures and implement a plan to complete the acquisition process.	FL	Moderate	FMA	To be determined	Jones County	2024	Ongoing
Natural Resource Protection								
NRP-1	Evaluate streams and identify potential projects to mitigate stream bank restoration.	FL	Moderate	To be determined	To be determined	Jones County	Ongoing as projects are identified	Completed/Ongoing
Emergency Services								
ES-1	Develop a drought council to implement an emergency response plan for the County	DR	Moderate	To be determined	To be determined	Jones County Emergency Management Agency	N/A	Deferred—No drought council
ES-2	Jones County proposes to build a FEMA 361 Shelter to be located at the South Mississippi State Fairgrounds in Laurel, MS. This site will give easy access to I-59, highway 84 and highway 11.	HU	High	HMGP and State Global Match	\$3,250,000	Jones County	2011	Delete
ES-3	Install emergency notification warning systems at the Town of Soso	Multi	High	HMGP	\$155,556	Jones County Board of Supervisors	2009	Delete
ES-4	Identify and implement automated mass notification/warning system County wide	All Hazards	High	TBD	\$15,000-\$20,000 Annually	Jones County and Municipalities	2024	New

ANNEX D: JONES COUNTY

Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2013 Action Implementation Status
Structural Projects								
SP-1	Develop a floodplain council with representatives from each jurisdiction to develop and monitor development within the floodplain.	FL	Moderate	To be determined	To be determined	Jones County	2014	Completed. Delete
SP-2	Flood Elevations	FL	Medium	FEMA	N/A	Jones County	2024	New
Public Education and Awareness								
PEA-1	Partner with various stakeholder groups to develop an all hazard public outreach and education program.	Multi	High	To be determined	To be determined	Jones County	Ongoing	Completed/Ongoing
PEA-2	Become a Firewise Community	WUF	High	To be determined	To be determined	Jones County		Delete
DR = Drought FL = Flood HU = Hurricane WUF = Wild/Urban Fire								

ⁱ USGS. Landslide Hazard, Retrieved August 2019 from, <https://www.usgs.gov/natural-hazards/landslide-hazards/science/rainfall-induced-landslides>

Annex E

Marion County

This annex includes jurisdiction-specific information for Marion County and its participating municipalities. It consists of the following five subsections:

- ❖ E.1 Marion County Community Profile
 - ❖ E.2 Marion County Risk Assessment
 - ❖ E.3 Marion County Vulnerability Assessment
 - ❖ E.4 Marion County Capability Assessment
 - ❖ E.5 Marion County Mitigation Strategy
-

E.1 MARION COUNTY COMMUNITY PROFILE

E.1.1 Geography and the Environment

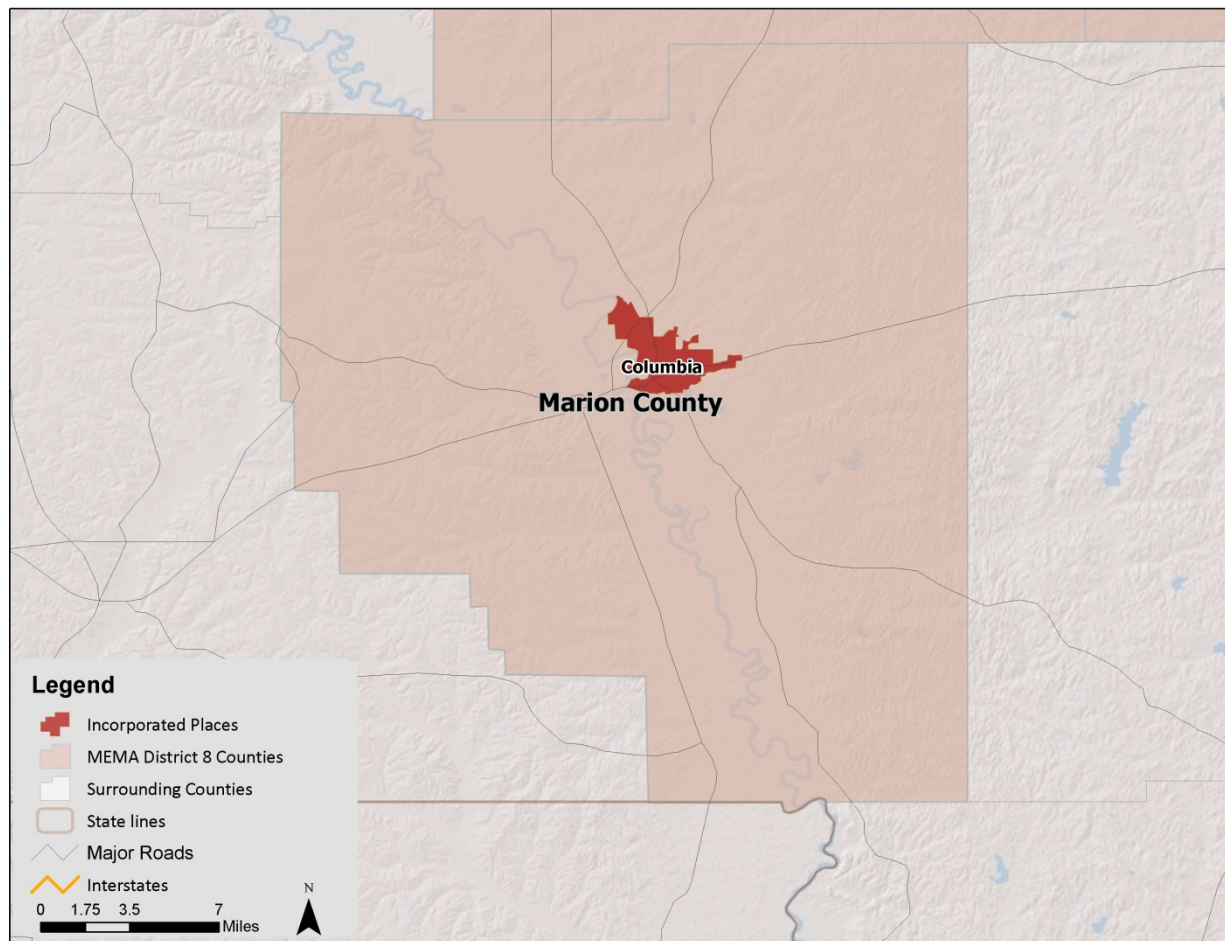
Marion County is located in south central Mississippi. It comprises one city, the City of Columbia, as well as many small unincorporated communities. An orientation map is provided as **Figure E.1**.

The county is rural in nature and consists of dense pine, clay canyons, and cypress swamps. The total area of the county is 549 square miles, 6 square miles of which is water area.

In Marion County, the summers are long, hot, and oppressive; the winters are short and cold; and it is wet and partly cloudy year-round. Over the course of the year, the temperature typically varies from 41°F to 92°F and is rarely below 27°F or above 97°F.

The hot season lasts for 4.2 months, from May 20 to September 25, with an average daily high temperature above 85°F. The hottest day of the year is August 9, with an average high of 92°F and low of 73°F. The cool season lasts for 2.8 months, from November 30 to February 22, with an average daily high temperature below 67°F. The coldest day of the year is January 17, with an average low of 41°F and high of 61°F.

Rain falls throughout the year in Marion County. The most rain falls during the 31 days centered around February 14, with an average total accumulation of 5.7 inches. The least rain falls around October 4, with an average total accumulation of 3.1 inches.

FIGURE E.1: MARION COUNTY ORIENTATION MAP

E.1.2 Population and Demographics

According to the 2010 Census, Marion County has a population of 27,088 people. The county has seen almost 6% growth between 2000 and 2010, and the population density is 60 people per square mile. The decline continues. Per the Census Reports, in 2017, Marion County had a population of 25,069, which is a 7.4 percent decline. The household income is \$30,998, which grew .272 percent. Population counts from the US Census Bureau for 1990, 2000, and 2010 for the county and both of the participating jurisdictions are presented in **Table E.1**. Estimates for 2017 are also included.

TABLE E.1: POPULATION COUNTS FOR MARION COUNTY

Jurisdiction	1990 Census Population	2000 Census Population	2010 Census Population	% Change 2000-2010	Estimated 2017 Census Population
Marion County	25,544	25,595	27,088	5.8%	25,069
Columbia	6,815	6,603	6,582	-0.3%	6,037

Source: US Census Bureau

Based on the 2010 Census, the median age of residents of Marion County is 37.7 years, which by Census estimates rose to 39.9 years. The racial characteristics of the county are presented in **Table E.2** and will remain the same as the census data has not been officially updated. Due to the population decrease, the racial characteristics differ slightly. The population is 32.1 percent for black or African American persons and 1.49 percent Hispanic and Latino. Whites make up the majority of the population in the county, accounting for 65 percent of the population.

TABLE E.2: DEMOGRAPHICS OF MARION COUNTY

Jurisdiction	White Persons, Percent (2010)	Black Persons, Percent (2010)	American Indian or Alaska Native, Percent (2010)	Other Race, Percent (2010)	Persons of Hispanic Origin, Percent (2010) *
Marion County	65.8%	32.3%	0.2%	1.7%	1.2%
Columbia	56.1%	40.5%	0.2%	3.2%	2.1%

*Hispanics may be of any race, so also are included in applicable race categories

Source: US Census Bureau

E.1.3 Housing

According to the 2010 US Census, there are 11,838 housing units in Marion County, the majority of which are single family homes or mobile homes. Per 2018 estimates, the total number of housing units has not changed. The median home value is \$78,500, which also increased by at least 2.75 percent. Housing information for the county and town is presented in **Table E.3**. As shown in the table, the incorporated town has a significantly lower percentage of seasonal housing units compared to the unincorporated county.

TABLE E.3: HOUSING CHARACTERISTICS OF MARION COUNTY

Jurisdiction	Housing Units (2000)	Housing Units (2010)	Seasonal Units, Percent (2010)	Median Home Value (2006-2010)	Housing Units (2018)	Median Home Value (2018)
Marion County	10,395	11,838	3.8%	\$82,800	11,838	\$78,500
Columbia	2,821	2,815	0.8%	\$88,300	2,743	\$80,500

Source: US Census Bureau

E.1.4 Infrastructure

TRANSPORTATION

Traveling through the City of Columbia in Marion County, the primary transportation route is US Highway 98. The highway provides direct access to the city of Hattiesburg to the east and the City of McComb to the west. State Highways 13, 35, and 43 provide the county with adequate access to the north and south.

Commercial air transportation is available at the Hattiesburg-Laurel Regional Airport, less than 40 miles from Columbia. International airports in Jackson, Gulfport, and New Orleans are all within a 100-mile radius of Columbia.

Marion County is also served by the Canadian National Railroad, but there is no passenger service offered at this time.

UTILITIES

Electrical power in Marion County is provided by several sources, including Mississippi Power Company.

Water and sewer service is provided to residents of Columbia with 3 water storage tanks, 16 lift stations, and treatment lagoons. There is an additional water storage tank and four lift stations serving the unincorporated community of Foxworth and funding from Rural Development was used to install a sewer system in Lampton, another unincorporated community south of Columbia. The water system in Marion County consists of 17 storage tanks. However, there is no centralized sewage treatment in the county and septic tanks are the most common type of sewer system.

COMMUNITY FACILITIES

There are a number of buildings and community facilities located throughout Marion County. According to the data collected for the vulnerability assessment (Section 6.4.1), there are 3 fire stations, 2 police stations, and 11 public schools located within the county.

There is one hospital located in Marion County. Marion General Hospital is a 49-bed medical-surgical hospital located in the City of Collins.

Marion County offers a variety of recreational activities, most of which can be enjoyed nearly year-round. In addition to area lakes, campgrounds, hunting sites, playgrounds, sports fields, and picnic areas, the county features several family friendly recreation sites including Columbia Water Park, Columbia City Park, and the Columbia Exposition Center.

E.1.5 Land Use

Many areas of Marion County are undeveloped or sparsely developed due to the county's location just off the Gulf Coast and the conservation of land in state and national parks. There are a few incorporated municipalities located throughout the region, and these areas are where the region's population is generally concentrated. The incorporated areas are also where many businesses, commercial uses, and institutional uses are located. Land uses in the balance of the county generally consist of rural residential development, agricultural uses, and recreational areas.

E.1.6 Employment and Industry

According to the Mississippi Employment Security Commission, in 2018, Marion County had an average annual employment of 8,220 workers and an average unemployment rate of 5.1 percent. In 2018, according to the MESCC, Government Agencies employed 15.7 percent of the workforce. Retail Trade was the second largest industry, employing (14%) of workers, and Health Care and Social Assistance followed closely behind (13.4%). The average annual wage in Marion County was \$30,998.

E.2 MARION COUNTY RISK ASSESSMENT

This subsection includes hazard profiles for each of the significant hazards identified in Section 4: *Hazard Identification* as they pertain to Marion County. Each hazard profile includes a description of the hazard's location and extent, notable historical occurrences, and the probability of future occurrences. Additional information can be found in Section 5: *Hazard Profiles*.

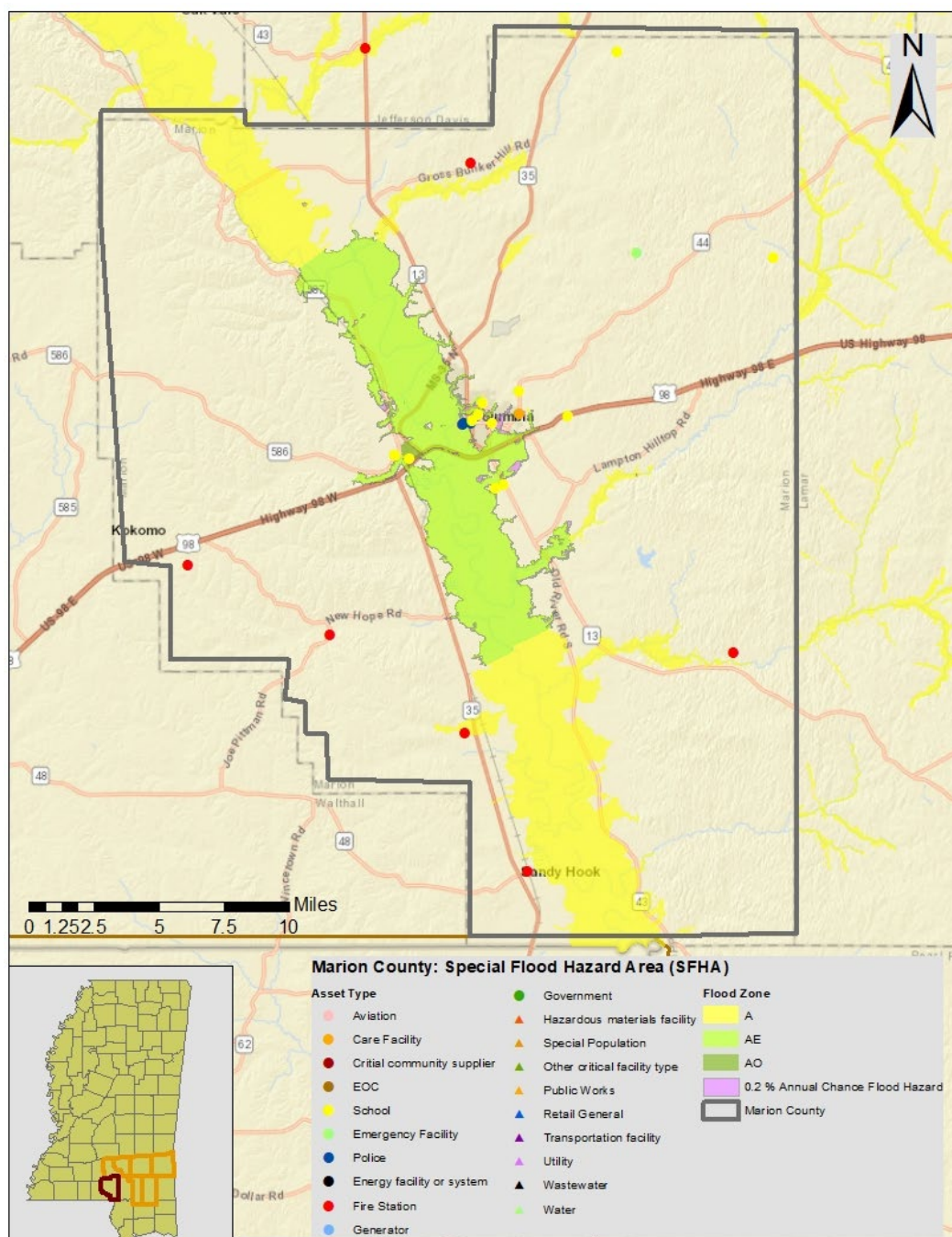
E.2.1 Flood

LOCATION AND SPATIAL EXTENT

There are areas in Marion County that are susceptible to flood events. Special flood hazard areas in the county were mapped using Geographic Information System (GIS) and FEMA Digital Flood Insurance Rate Maps (DFIRM).¹ This includes Zone A (1-percent annual chance floodplain), Zone AE (1-percent annual chance floodplain with elevation), and the 0.2-percent annual chance floodplain). According to GIS analysis, of the 551 square miles that make up Marion County, there are 83 square miles of land in zones A and AE (1-percent annual chance floodplain/100-year floodplain) and 2 square miles of land in the 0.2-percent annual chance floodplain (500-year floodplain).

These flood zone values account for 15.4 percent of the total land area in Marion County. It is important to note that while FEMA digital flood data is recognized as best available data for planning purposes, it does not always reflect the most accurate and up-to-date flood risk. Flooding and flood-related losses often do occur outside of delineated special flood hazard areas.

¹ The county-level DFIRM data used for Marion County were updated in 2011.

FIGURE E.2: SPECIAL FLOOD HAZARD AREAS IN MARION COUNTY

Source: Federal Emergency Management Agency

HISTORICAL OCCURRENCES

Floods resulted in nine disaster declarations in Marion County in 1972, 1973, 1974, 1979, 1980, 1983, 1990, 2003, and 2013.² Information from the National Centers for Environmental Information was used

²A complete listing of historical disaster declarations can be found in Section 4: Hazard Identification.

to ascertain historical flood events. The National Centers for Environmental Information reported a total of 68 events in Marion County since 1994.³ A summary of these events is presented in **Table E.4**. These events accounted for almost \$36 million in property damage in the county. Specific information on flood events, including date, type of flooding, and deaths and injuries, can be found in **Table E.5**.

TABLE E.4: SUMMARY OF FLOOD OCCURRENCES IN MARION COUNTY

Location	Number of Occurrences	Deaths / Injuries	Property Damage (2013)
Columbia	25	0/0	\$24,924,081
Unincorporated Area	43	0/0	\$11,744,615
MARION COUNTY TOTAL	68	0/0	\$36,668,695

Source: National Centers for Environmental Information

TABLE E.5: HISTORICAL FLOOD EVENTS IN MARION COUNTY

Location	Date	Type	Deaths / Injuries	Property Damage*
Columbia				
Columbia	27-APR-97	FLOOD	0/0	\$0
Columbia	18-JUN-97	FLASH FLOOD	0/0	\$23,595,269
Columbia	25-JUN-97	FLASH FLOOD	0/0	\$0
Columbia	12-AUG-01	FLASH FLOOD	0/0	\$28,515
Columbia	26-SEP-02	FLASH FLOOD	0/0	\$2,768
Columbia	23-FEB-04	FLASH FLOOD	0/0	\$13,048
Columbia	17-OCT-06	FLASH FLOOD	0/0	\$368,962
Columbia	25-AUG-07	FLASH FLOOD	0/0	\$59,703
Columbia	14-DEC-09	FLASH FLOOD	0/0	\$67,531
Columbia	25-JUL-10	FLASH FLOOD	0/0	\$2,185
Columbia	08-MAR-11	FLASH FLOOD	0/0	\$26,523
Columbia	16-JUL-11	FLASH FLOOD	0/0	\$106,090
Columbia	04-SEP-11	FLASH FLOOD	0/0	\$3,183
Columbia	05-SEP-11	FLASH FLOOD	0/0	\$5,305
Columbia	29-AUG-12	FLASH FLOOD	0/0	\$0
Columbia	03-JAN-15	FLASH FLOOD	0/0	\$5,000
Columbia	01-JUL-15	FLASH FLOOD	0/0	\$1,000
Columbia	10-MAR-16	FLASH FLOOD	0/0	\$5,000
Columbia	10-MAR-16	FLASH FLOOD	0/0	\$50,000
Columbia	11-MAR-16	FLASH FLOOD	0/0	\$15,000
Columbia	03-APR-17	FLASH FLOOD	0/0	\$10,000
Columbia	23-AUG-17	FLASH FLOOD	0/0	\$7,000
Columbia	07-JUL-18	FLASH FLOOD	0/0	\$45,000
Columbia	27-DEC-18	FLASH FLOOD	0/0	\$7,000
Columbia	27-DEC-18	FLASH FLOOD	0/0	\$500,000
Unincorporated Area				
Foxworth	27-JAN-94	FLASH FLOOD	0/0	\$0
MARION COUNTY	27-JAN-94	FLASH FLOOD	0/0	\$852,283

³ These events are only inclusive of those reported by NCEI. It is likely that additional occurrences have occurred and have gone unreported.

Location	Date	Type	Deaths / Injuries	Property Damage*
Countywide	29-JAN-99	FLOOD	0/0	\$75,629
Countywide	13-MAR-99	FLASH FLOOD	0/0	\$0
Countywide	09-NOV-00	FLASH FLOOD	0/0	\$7,343
Countywide	02-MAR-01	FLASH FLOOD	0/0	\$0
Countywide	03-MAR-01	FLASH FLOOD	0/0	\$0
Countywide	03-MAR-01	FLASH FLOOD	0/0	\$0
Countywide	03-MAR-01	FLASH FLOOD	0/0	\$0
Countywide	03-MAR-01	FLASH FLOOD	0/0	\$0
Countywide	06-JUN-01	FLASH FLOOD	0/0	\$7,129
North Portion	08-JUN-01	FLASH FLOOD	0/0	\$0
Countywide	05-AUG-02	FLASH FLOOD	0/0	\$9,690
Countywide	21-FEB-03	FLASH FLOOD	0/0	\$2,688
Countywide	30-JUN-03	FLASH FLOOD	0/0	\$2,688
KOKOMO	02-JUL-03	FLASH FLOOD	0/0	\$67,196
East Portion	25-FEB-04	FLASH FLOOD	0/0	\$13,048
PINEBUR	12-MAR-04	FLASH FLOOD	0/0	\$3,261,933
North Portion	31-MAR-05	FLASH FLOOD	0/0	\$190,016
Countywide	01-APR-05	FLASH FLOOD	0/0	\$126,677
East Portion	29-AUG-05	FLASH FLOOD	0/0	\$126,677
FORTENBERRY	26-MAY-08	FLASH FLOOD	0/0	\$5,796,370
COLUMBIA MARION ARPT	27-MAR-09	FLASH FLOOD	0/0	\$337,653
KOKOMO	12-APR-09	FLASH FLOOD	0/0	\$28,138
Goss	15-OCT-09	FLASH FLOOD	0/0	\$5,628
FORTENBERRY	15-AUG-10	FLASH FLOOD	0/0	\$5,464
MORGANTOWN	26-DEC-11	FLASH FLOOD	0/0	\$3,183
Morgantown	18-FEB-12	FLOOD	0/0	\$0
KOKOMO	18-FEB-12	FLASH FLOOD	0/0	\$515,000
Hub	21-MAR-12	FLASH FLOOD	0/0	\$0
Hub	21-MAR-12	FLASH FLOOD	0/0	\$0
Hub	21-MAR-12	FLASH FLOOD	0/0	\$0
FORTENBERRY	29-AUG-12	FLASH FLOOD	0/0	\$36,050
Hub	29-AUG-12	FLASH FLOOD	0/0	\$159,135
Cheraw	20-FEB-14	FLASH FLOOD	0/0	\$15,000
Fortenberry	10-MAR-16	FLASH FLOOD	0/0	\$10,000
Pinebur	11-MAR-16	FLASH FLOOD	0/0	\$20,000
Lovelace	11-MAR-16	FLASH FLOOD	0/0	\$50,000
Hub	21-JAN-17	FLASH FLOOD	0/0	\$3,000
Foxworth	27-DEC-18	FLASH FLOOD	0/0	\$8,000
Sandy Hook	27-DEC-18	FLASH FLOOD	0/0	\$2,000
Saxon	27-DEC-18	FLASH FLOOD	0/0	\$2,000
Pinebur	28-DEC-18	FLOOD	0/0	\$5,000

Source: National Centers for Environmental Information

HISTORICAL SUMMARY OF INSURED FLOOD LOSSES

Recently, FEMA issued a directive that prevents states or local governments from sharing NFIP information such as rep loss or severe rep loss data with third parties. Third parties are considered as consultants, contractors, etc. As a result, for continuity of information so that the reader will have an

idea of the historical occurrences along with the corresponding damage amounts, the decision was made to leave the existing information in the plan.

According to FEMA flood insurance policy records as of March 2013, there have been 551 flood losses reported in Marion County through the National Flood Insurance Program (NFIP) since 1978, totaling nearly \$6 million in claims payments. A summary of these figures for the county is provided in **Table E.6**. It should be emphasized that these numbers include only those losses to structures that were insured through the NFIP policies, and for losses in which claims were sought and received. It is likely that many additional instances of flood loss in Marion County were either uninsured, denied claims payment, or not reported.

TABLE E.6: SUMMARY OF INSURED FLOOD LOSSES IN MARION COUNTY

Location	Flood Losses	Claims Payments
Columbia	303	\$3,612,752
Unincorporated Area	248	\$2,337,509
MARION COUNTY TOTAL	551	\$5,950,261

Source: FEMA, NFIP

REPETITIVE LOSS PROPERTIES

No updates to this section can be provided at this time. Information normally used to update this section is not currently accessible. As a result, this information will remain the same for historical purposes.

As of May 2013, there are 91 non-mitigated repetitive loss properties located in Marion County, which accounted for 282 losses and more than \$3.5 million in claims payments under the NFIP. The average claim amount for these properties is \$12,638. Of the 91 properties, 25 are single family residential, 6 are assumed condominium, and 16 are non-residential. Without mitigation these properties will likely continue to experience flood losses. **Table E.7** presents detailed information on repetitive loss properties and NFIP claims and policies for Marion County.

TABLE E.7: REPETITIVE LOSS PROPERTIES IN MARION COUNTY

Location	Number of Properties	Types of Properties	Number of Losses	Building Payments	Content Payments	Total Payments	Average Payment
Columbia	47	25 single family, 6 assume condo, 16 non-residential	139	\$937,119	\$1,090,739	\$2,027,858	\$14,589
Unincorporated Area	44	35 single family, 1 assumed condo, 8 non-residential	143	\$1,223,603	\$312,489	\$1,536,092	\$10,742
MARION COUNTY TOTAL	91		282	\$2,160,721	\$1,403,228	\$3,563,949	\$12,638

Source: National Flood Insurance Program

PROBABILITY OF FUTURE OCCURRENCES

Due to the unpredictable nature of this hazard, flood events will remain a threat in Marion County, and the probability of future occurrences will remain highly likely (100 percent annual probability). The participating jurisdictions and unincorporated areas have risk to flooding, though not all areas will experience flood. The probability of future flood events based on magnitude and according to best available data is illustrated in the figures above, which indicates those areas susceptible to the 1-percent annual chance flood (100-year floodplain) and the 0.2-percent annual chance flood (500-year floodplain).

It can be inferred from the floodplain location maps, previous occurrences, and repetitive loss properties that risk varies throughout the county. For example, the central portion of the county has more floodplain and thus a higher risk of flood than the eastern and western portions of the county. Flood is not the greatest hazard of concern but will continue to occur and cause damage. Therefore, mitigation actions may be warranted, particularly for repetitive loss properties.

E.2.2 Erosion

LOCATION AND SPATIAL EXTENT

Erosion in Marion County is typically caused by flash flooding events. Unlike coastal areas, areas of concern for erosion in Marion County are primarily rivers and streams. Generally, vegetation helps to prevent erosion in the area, and it is not an extreme threat to any of the participating counties and jurisdictions. No areas of concern were reported by the planning committee.

HISTORICAL OCCURRENCES

Several sources were vetted to identify areas of erosion in Marion County. This includes searching local newspapers, interviewing local officials, and reviewing previous hazard mitigation plans. No historical erosion occurrences were found in these sources.

Marion County has a flood damage prevention ordinance that includes measures to limit erosion, such as restricting uses that result in damaging erosion. Such actions will continue to be implemented as necessary throughout the county.

PROBABILITY OF FUTURE OCCURRENCES

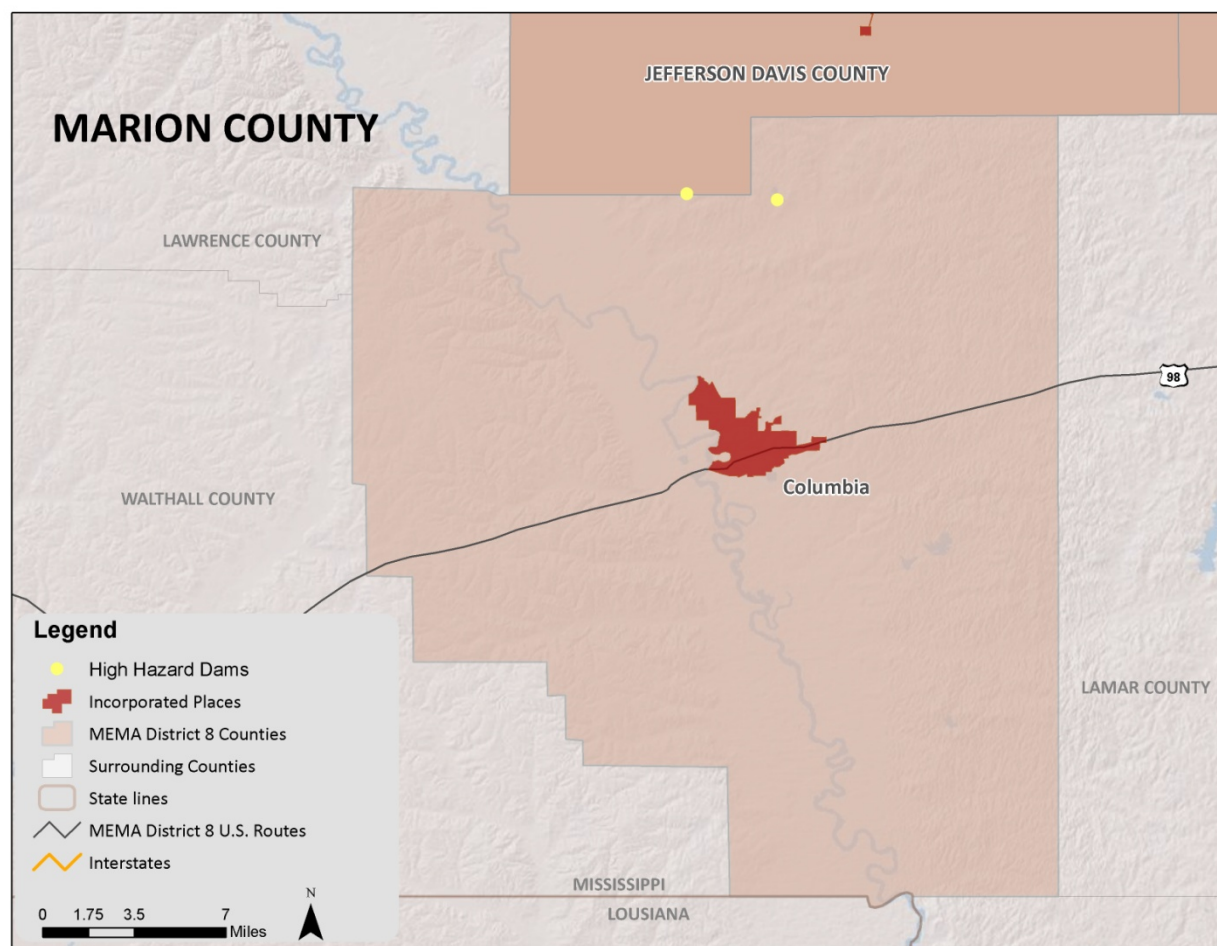
Erosion remains a natural, dynamic, and continuous process for Marion County, and it will continue to occur. The annual probability level assigned for erosion is possible (between 1 and 10 percent annually).

E.2.3 Dam Failure

LOCATION AND SPATIAL EXTENT

According to the Mississippi Division of Environmental Quality, there are two high hazard dams in Marion County.⁴ **Figure E.2** shows the location of each of these high hazard dams and **Table E.8** lists them by name. The status of dams for this section remains the same. According to a consensus of local government officials and the Regional Hazard Mitigation Council, a majority of these dams would not pose a major threat in a breach or failure occurrence.

FIGURE E.3: MARION COUNTY HIGH HAZARD DAM LOCATIONS



Source: Mississippi Division of Environmental Quality

⁴ The list of high hazard dams obtained from the Mississippi Division of Environmental Quality was reviewed and amended by local officials to the best of their knowledge.

TABLE E.8: MARION COUNTY HIGH HAZARD DAMS

Dam Name	Hazard Potential
Marion County	
HOLIDAY CREEK WS STR 4 DAM	High
HOLIDAY CREEK WS STR 3 DAM	High

Source: Mississippi Division of Environmental Quality

HISTORICAL OCCURRENCES

There is no record of dam breaches in Marion County. However, Big Bay Dam in Lamar County breached in 2004 and resulted in damages in Marion County. Damages in Marion County included destruction of 1 mobile home; major damage to 14 homes, 2 mobile homes, Pine Burr Church, and Pine Burr Volunteer Fire Department; and minor damage to 10 homes, 3 mobile homes, and Hub Chapel Church. Further, several breach scenarios in the county could be catastrophic.

PROBABILITY OF FUTURE OCCURRENCES

Given the current dam inventory and historic data, a dam breach is unlikely (less than 1 percent annual probability) in the future. However, as has been demonstrated in the past, regular monitoring is necessary to prevent these events.

E.2.4 Winter Storm and Freeze

LOCATION AND SPATIAL EXTENT

Nearly the entire continental United States is susceptible to winter storm and freeze events. Some ice and winter storms may be large enough to affect several states, while others might affect limited, localized areas. The degree of exposure typically depends on the normal expected severity of local winter weather. Marion County is not typically affected by major severe winter weather conditions and seldom receives extremely devastating winter weather, even during the winter months. Given the atmospheric nature of the hazard the entire county has uniform exposure to a winter storm.

HISTORICAL OCCURRENCES

According to the National Centers for Environmental Information, there have been a total of six recorded winter storm events in Marion County since 2002 (**Table E.9**).⁵ These events resulted in over \$674,000 in damages. Detailed information on the recorded winter storm events can be found in **Table E.10**.⁶

⁵ These ice and winter storm events are only inclusive of those reported by the National Centers for Environmental Information (NCEI). It is certain that additional winter storm conditions have affected Marion County.

⁶ The dollar amount of damages provided by NCEI is divided by the number of affected counties to reflect a damage estimate for the county.

TABLE E.9: SUMMARY OF WINTER STORM EVENTS IN MARION COUNTY

Location	Number of Occurrences	Deaths / Injuries	Property Damage (2013)
Marion County	6	0/0	\$674,558

Source: National Centers for Environmental Information

TABLE E.10: HISTORICAL WINTER STORM IMPACTS IN MARION COUNTY

Location	Date	Type	Deaths / Injuries	Property Damage*
Collins				
None Reported	--	--	--	--
Mount Olive				
None Reported	--	--	--	--
Seminary				
None Reported	--	--	--	--
Unincorporated Area				
MARION COUNTY	01-JAN-02	HEAVY SNOW	0/0	\$6,921
MARION COUNTY	19-JAN-08	HEAVY SNOW	0/0	\$289,819
MARION COUNTY	11-DEC-08	HEAVY SNOW	0/0	\$0
MARION COUNTY	11-FEB-10	HEAVY SNOW	0/0	\$327,818
MARION COUNTY	08-DEC-17	HEAVY SNOW	0/0	\$50,000
MARION COUNTY	16-JAN-18	WINTER WEATHER	0/0	\$0

Source: National Centers for Environmental Information

There have been several severe winter weather events in Marion County. The text below describes two of the major events and associated impacts on the county. Similar impacts can be expected with severe winter weather.

January 2002 Winter Storm

A winter storm produced heavy snow across portions of southeast Mississippi. The heaviest snow recorded during the storm was four to four- and one-half inches. Icy bridges made traveling across the region very treacherous. As a result, several accidents occurred with two fatalities in Jones County.

January 2008 Winter Storm

This storm produced heavy snow across the region, with an average of three to four inches of snow. Some heavier amounts, between four to five inches, also fell in isolated areas. At the height of the snow, temperatures fell to near freezing, and accumulations occurred on roadways resulting in a number of traffic accidents. Additionally, some power outages occurred in the heaviest snow band due to the weight of wet snow on limbs and lines. The heaviest snow fell in the areas around Covington, Jefferson Davis, and Jones Counties.

Winter storms throughout the county have several negative externalities including hypothermia, cost of snow and debris cleanup, business and government service interruption, traffic accidents, and power outages. Furthermore, citizens may resort to using inappropriate heating devices that could to fire or an accumulation of toxic fumes.

December 2017 Winter Storm

An early season winter storm brought heavy snow to much of Mississippi between the evening of the 7th and into the afternoon of the 8th. The greatest amounts fell mainly south and east of the Natchez Trace corridor. Amounts of up to 7 to 8 inches were measured in the Pine Belt. Heavier snow accumulations resulted in downed limbs and trees, power outages, and traffic accidents across the state.

An average of 5 to 6 inches of heavy snow fell across Marion County. The snow resulted in power outages and a few traffic accidents across the county.

PROBABILITY OF FUTURE OCCURRENCES

Winter storm events will continue to occur in Marion County. According to historical information, the annual probability is possible (between 1 and 10 percent).

FIRE-RELATED HAZARDS

E.2.5 Drought

LOCATION AND SPATIAL EXTENT

Drought and heat waves typically cover a large area and cannot be confined to any geographic or political boundaries. Furthermore, it is assumed that Marion County would be uniformly exposed to drought and heat waves, making the spatial extent potentially widespread. It is also notable that drought and extreme heat conditions typically do not cause significant damage to the built environment but may exacerbate wildfire conditions.

HISTORICAL OCCURRENCES

Drought

According to the U.S. Drought Monitor, Marion County had drought levels (including abnormally dry) in all of the last eighteen years (2000-2018). **Table E.11** shows the most severe drought classification for each year, according to U.S. Drought Monitor classifications. It should be noted that the U.S. Drought Monitor also estimates what percentage of the county is in each classification of drought severity. For example, the most severe classification reported may be exceptional, but a majority of the county may actually be in a less severe condition.

TABLE E. 11: HISTORICAL DROUGHT OCCURRENCES IN MARION COUNTY				
Abnormally Dry	Moderate Drought	Severe Drought	Extreme Drought	Exceptional Drought
				
		Marion County		
2000		EXCEPTIONAL		
2001		MODERATE		
2002		MODERATE		
2003		ABNORMAL		
2004		ABNORMAL		

2005	ABNORMAL
2006	EXTREME
2007	SEVERE
2008	MODERATE
2009	MODERATE
2010	SEVERE
2011	EXCEPTIONAL
2012	MODERATE
2013	ABNORMAL
2014	MODERATE
2015	EXTREME
2016	SEVERE
2017	ABNORMAL
2018	ABNORMAL
2019	ABNORMAL

Source: U.S. Drought Monitor

There were two reported drought events for Marion County according to the National Centers for Environmental Information. Those two events generated approximately \$51,000 in crop damages.

Heat Wave

The National Centers for Environmental Information was used to determine historical heat wave occurrences in the county.

July 2005 – A five-day heat wave covered the area. Temperatures were consistently above 95 degrees. The agricultural industry was hit particularly hard in the cattle and catfish sectors. Water supply issues were encountered by cities and a burn ban was implemented due to the high fire risk.

August 2005 - A heat wave covering the south began in mid-August and lasted about 10 days. High temperatures were consistently over 95 degrees and surpassed 100 degrees on some days. It was the first time since August 2000 that 100-degree temperatures reached the area.

July 2006 – A short heat wave impacted most of the area temperatures in the 90s to around 100 for five straight days.

August 2007 – A heat wave gripped most of the area with the warmest temperatures since 2000. It lasted from August 5th to the 16th.

PROBABILITY OF FUTURE OCCURRENCES

Drought

Based on historical occurrence information, it is assumed that all of Marion County has a probability level of highly likely (100 percent annual probability) for future drought events. However, the extent (or magnitude) of drought and the amount of geographic area covered by drought, varies with each year. Historic information indicates that there is a much lower probability for extreme, long-lasting drought conditions.

Heat Wave

Based on historical occurrence information, it is assumed that all of Marion County has a probability level of highly likely (100 percent annual probability) for future heat wave events.

E.2.6 Wildfire

LOCATION AND SPATIAL EXTENT

The entire county is at risk to a wildfire occurrence. However, several factors such as drought conditions or high levels of fuel on the forest floor, may make a wildfire more likely. Furthermore, areas in the urban-wildland interface are particularly susceptible to fire hazard as populations abut formerly undeveloped areas. The Fire Occurrence Areas in the figure below give an indication of historic location.

HISTORICAL OCCURRENCES

Based on data from the Mississippi Forestry Commission from 2008 to 2018, Marion County experiences an average of 53.4 wildfires annually which burn an average of 507.7 acres per year. The data indicates that most of these fires are small, averaging 10 acres per fire. **Table E.12** provides a summary of wildfire occurrences in Marion County and **Table E.13** lists the number of reported wildfire occurrences in the county between the years 2008 and 2018.

TABLE E.12: SUMMARY TABLE OF ANNUAL WILDFIRE OCCURRENCES (2008 -2018) *

	Marion County
Average Number of Fires per year	53.4
Average Number of Acres Burned per year	507.7
Average Number of Acres Burned per fire	9.5

*These values reflect averages over a 10 year period.

Source: Mississippi Forestry Commission

TABLE E.13: HISTORICAL WILDFIRE OCCURRENCES IN MARION COUNTY

Year	2008	2010	2011	2012	2013	2014	2015	2016	2017	2018
Marion County										
Number of Fires	79	46	128	39	38	83	28	32	30	31
Number of Acres Burned	469	265	895	198	402	638	171	1,200	475	364

*No data reported for 2009

Source: Mississippi Forestry Commission

PROBABILITY OF FUTURE OCCURRENCES

Wildfire events will be an ongoing occurrence in Marion County. The likelihood of wildfires increases during drought cycles and abnormally dry conditions. Fires are likely to stay small in size but could

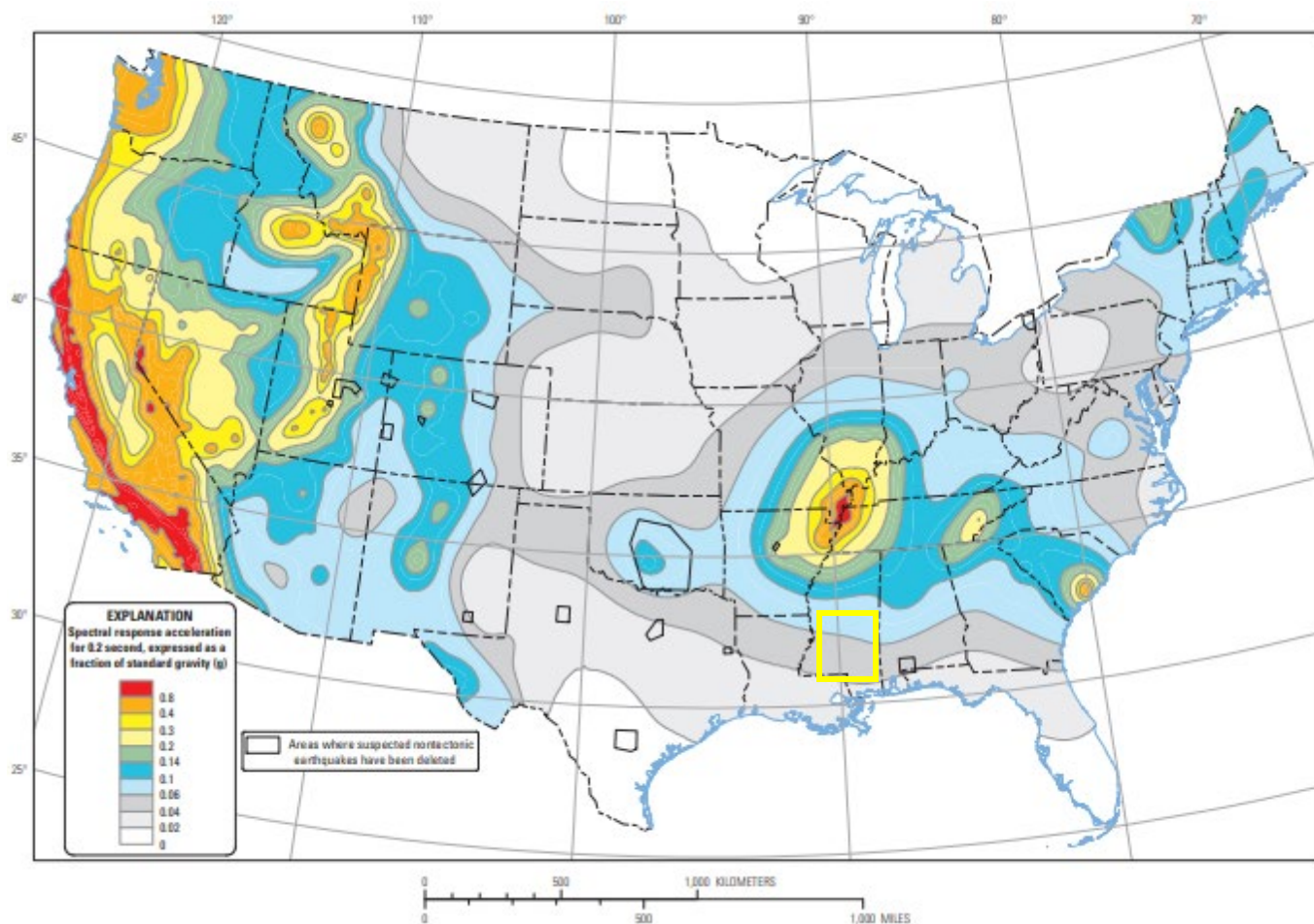
increase due local climate and ground conditions. Dry, windy conditions with an accumulation of forest floor fuel (potentially due to ice storms or lack of fire) could create conditions for a large fire that spreads quickly. It should also be noted that some areas do vary somewhat in risk. For example, highly developed areas are less susceptible unless they are located near the urban-wildland boundary. The risk will also vary due to assets. Areas in the urban-wildland interface will have much more property at risk, resulting in increased vulnerability and need to mitigate compared to rural, mainly forested areas. In this case, the participating jurisdictions appear to have a similar risk to the surrounding areas. The probability assigned to Marion County for future wildfire events is likely (a 10 and 100 percent annual probability).

GEOLOGIC HAZARDS

E.2.7 Earthquake

LOCATION AND SPATIAL EXTENT

Figure E.3 shows the intensity level associated with Marion County, based on the national USGS map of peak acceleration with 10 percent probability of exceedance in 50 years. It is the probability that ground motion will reach a certain level during an earthquake. The data show peak horizontal ground acceleration (the fastest measured change in speed, for a particle at ground level that is moving horizontally due to an earthquake) with a 10 percent probability of exceedance in 50 years. The map was compiled by the U.S. Geological Survey (USGS) Geologic Hazards Team, which conducts global investigations of earthquake, geomagnetic, and landslide hazards. According to this map, Marion County lies within an approximate zone of level “2” to “3” ground acceleration. This indicates that the county exists within an area of moderate seismic risk.

FIGURE E.4: PEAK ACCELERATION WITH 10 PERCENT PROBABILITY OF EXCEEDANCE IN 50 YEARS

Source: USGS, 2018

HISTORICAL OCCURRENCES

No earthquakes are known to have affected Marion County since 1638. **Table E.14** provides a summary of earthquake events reported by the National Geophysical Data Center between 1638 and 1985.⁷

TABLE E.14: SUMMARY OF SEISMIC ACTIVITY IN MARION COUNTY

Location	Number of Occurrences	Greatest MMI Reported	Richter Scale Equivalent
Columbia	0	--	--
Unincorporated Area	0	--	--
MARION COUNTY TOTAL	0	--	--

Source: National Geophysical Data Center

⁷ Due to reporting mechanisms, not all earthquake events were recorded during this time.

PROBABILITY OF FUTURE OCCURRENCES

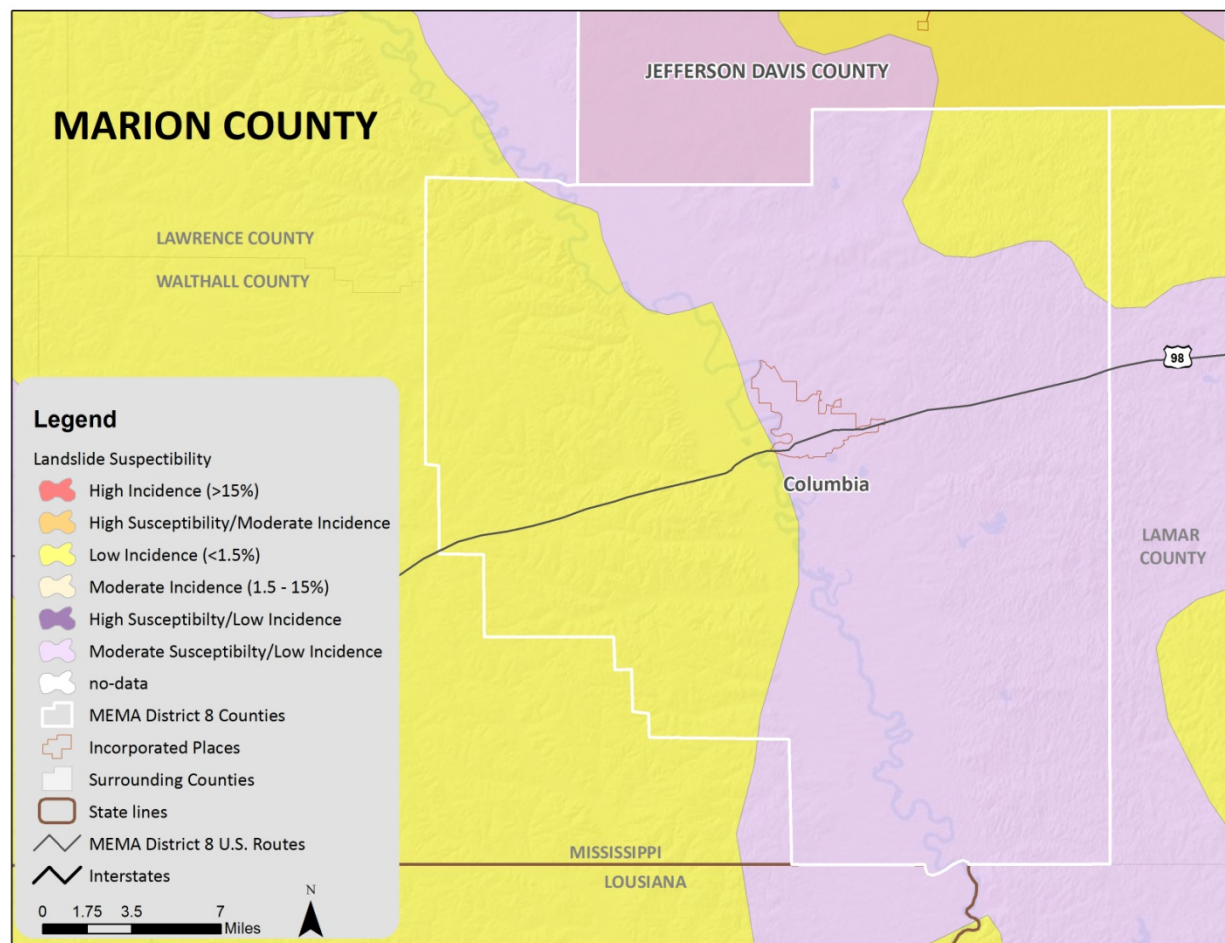
The probability of significant, damaging earthquake events affecting Marion County is unlikely. However, it is possible that future earthquakes resulting in light to moderate perceived shaking and damages ranging from none to very light will affect the county. The annual probability level for the region is estimated to be less than 1 percent (unlikely).

E.2.8 Landslide

LOCATION AND SPATIAL EXTENT

Landslides occur along steep slopes when the pull of gravity can no longer be resisted (often due to heavy rain). Human development can also exacerbate risk by building on previously undevelopable steep slopes. The most frequent and widespread damaging landslides in the U.S. are induced by prolonged or heavy rainfall. The majority of rainfall-induced landslides are shallow, small, and move quickly.¹ Landslides are possible throughout Marion County.

According to **Figure E.4** below, the entire county falls under a low incidence area (yellow and light purple). This indicates that less than 1.5 percent of the area is involved in landsliding. The areas in yellow are defined as low incidence and low susceptibility. The areas in light purple, however, indicate that a moderate susceptibility to landsliding activity is present. There are no changes with susceptibility to the landslide hazard since the last plan update.

FIGURE E.5: LANDSLIDE SUSCEPTIBILITY AND INCIDENCE MAP OF MARION COUNTY

Source: USGS

HISTORICAL OCCURRENCES

There is no extensive history of landslides in Marion County. Landslide events typically occur in isolated areas.

PROBABILITY OF FUTURE OCCURRENCES

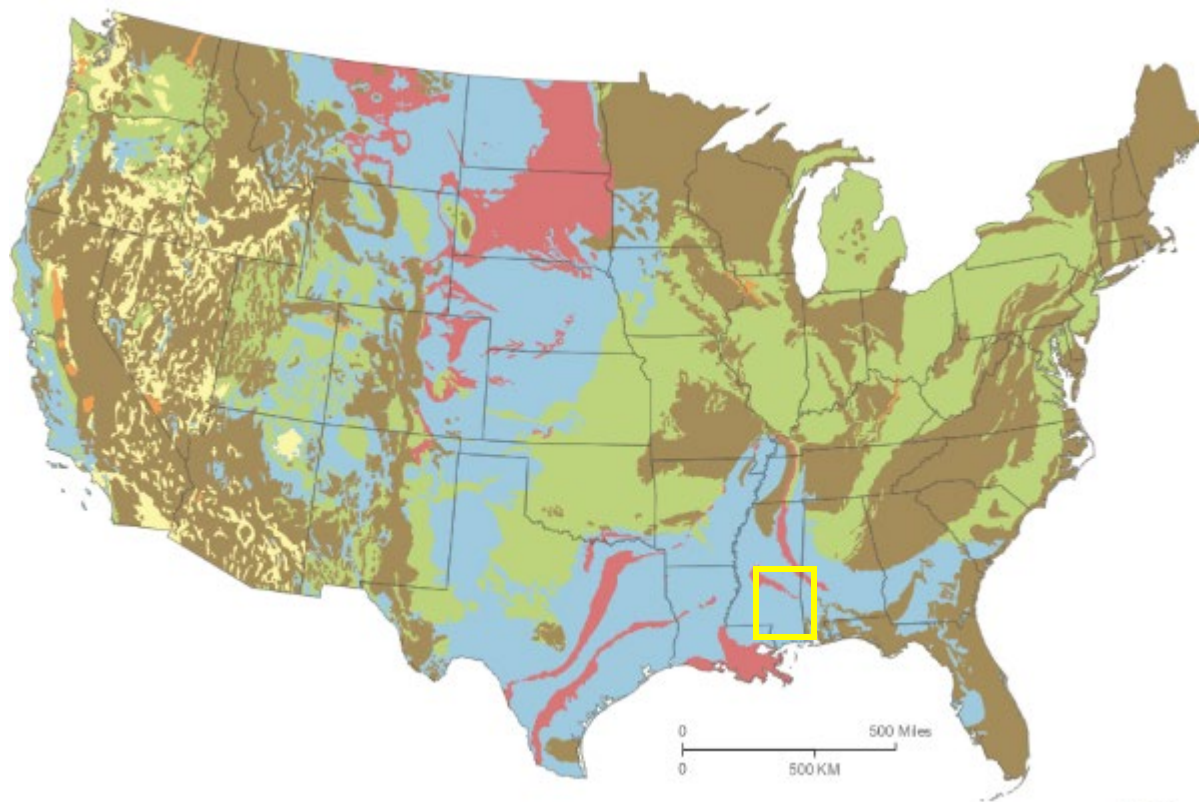
Based on historical information and the USGS susceptibility index, the probability of future landslide events is unlikely (less than 1 percent probability). The USGS data indicates that the all areas in Marion County have a low landslide incidence rate. However, some areas are reported as having moderate susceptibility to landsliding activity. Local conditions may become more favorable for landslides due to heavy rain, for example. This would increase the likelihood of occurrence. It should also be noted that some areas in Marion County have greater risk than others given factors such as steepness on slope and modification of slopes.

E.2.9 Expansive Soils

LOCATION AND SPATIAL EXTENT

Due to the amount of clay minerals present in Marion County, expansive soils present a threat to the county. Areas underlain by soils with swelling potential are shown in **Figure E.5**. The areas in blue are underlain with generally less than 50 percent clay having high swelling potential.

FIGURE E.6: SWELLING CLAYS IN MISSISSIPPI



Source: USGS

HISTORICAL OCCURRENCES

There is no historical record of significant expansive soil events in Marion County. However, expansive soils can cause considerable damage to structural foundations in the county, although they do not pose a significant threat to human life.

PROBABILITY OF FUTURE OCCURRENCES

Based on historical information, the probability of future expansive soil events is possible (between 1 and 100 percent annually).

WIND-RELATED HAZARDS

E.2.10 Hurricane and Tropical Storm

LOCATION AND SPATIAL EXTENT

Hurricanes and tropical storms threaten the entire Atlantic and Gulf seaboard of the United States. While coastal areas are most directly exposed to the brunt of landfalling storms, their impact is often felt hundreds of miles inland and major hurricanes (category 3 or higher) may impact Marion County. All areas in Marion County are equally susceptible to hurricane and tropical storms.

Fortunately, no hurricanes or tropical storms have impacted the area since 2008.

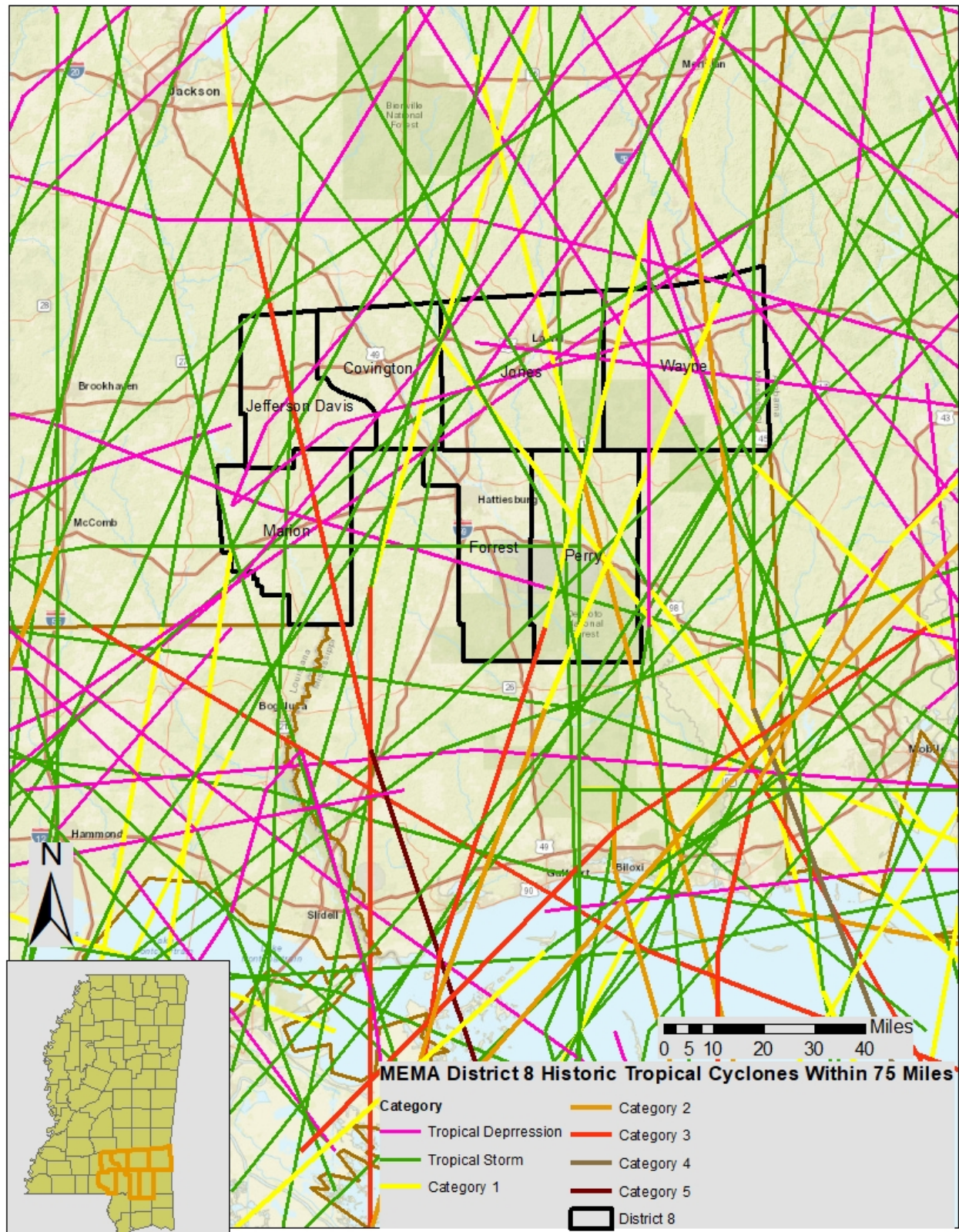
HISTORICAL OCCURRENCES

According to the National Hurricane Center's historical storm track records, a total of 65 hurricanes have passed within 75 miles of the county since 1851. This includes 1 category 5 storm, 0 category 4 storms, 6 category 3 storms, 7 category 2 storms, 8 category 1 storms, and 43 tropical storms as shown in **Figure E.6**.⁸

Of the recorded storm events, a total of eight tracks passed directly through the county including Hurricanes Camille (1969), Isidore (2002), and Bill (2003). All storms were tropical storms when they traversed the county except for two: 1915 Category 1 Unnamed Storm and 1969 Category 3 Hurricane Camille. **Table E.15** provides the detail for each storm that passed through the county including date of occurrence, name (if applicable), maximum wind speed (as recorded when traversing the county) and category of the storm based on the Saffir-Simpson Scale.

FIGURE E.7: HISTORICAL HURRICANE STORM TRACKS WITHIN 75 MILES OF MARION COUNTY

⁸ These storm track statistics do not include extra-tropical storms. Though these related hazard events are less severe in intensity, they may cause significant local impact in terms of rainfall and high winds.



Source: National Oceanic and Atmospheric Administration; National Hurricane Center

**TABLE E.15: HISTORICAL STORM TRACKS WITHIN 75 MILES OF MARION COUNTY
(1850–2019)**

Date of Occurrence	Storm Name	Maximum Wind Speed (miles per hour)	Storm Category
10/7/1879	UNNAMED	57	Tropical Storm
6/15/1886	UNNAMED	40	Tropical Storm
9/8/1893	UNNAMED	63	Tropical Storm
6/13/1912	UNNAMED	57	Tropical Storm
9/30/1915	UNNAMED	81	Category 1
8/18/1969	CAMILLE	69	Category 3
9/26/2002	ISIDORE	63	Tropical Storm
7/1/2003	BILL	52	Tropical Storm

Source: National Hurricane Center

Federal records indicate that disaster declarations were made in 1969 (Hurricane Camille), 1998 (Hurricane Georges), 2004 (Hurricane Ivan), 2005 (Hurricane Katrina), 2008 (Hurricane Gustav), and 2012 (Hurricane Isaac).⁹ Hurricane and tropical storm events can cause substantial damage in the area due to high winds and flooding.

Flooding and high winds from hurricanes and tropical storms can cause damage throughout the county. Anecdotes are available from NCEI for the major storms that have impacted the county as found below:

Tropical Storm Isidore – September 26, 2002

Tropical Storm Isidore moved onshore along the Louisiana coast early in the morning of September 26. The weakening storm then moved northeast across eastern Mississippi during the day. The heavy rainfall associated with the storm resulted in significant river and flash flooding across much of Mississippi. Twenty-four hour rainfall totals between 5 and 10 inches were common over much of Mississippi, especially in the southern part of the state, where twenty-four hour amounts exceeded 9 inches near Hattiesburg. Gradient wind gusts between 35 and 45 miles per hour combined with the saturated ground to lead to numerous downed trees and powerlines over the state. Most of the damage was seen along and east of the Natchez Trace, near the path of the storm's diffuse center. One indirect fatality was reported just east of the Kalem community in Scott County. Here, a falling tree struck a truck driven by a 31 year-old male. Damage from Isidore was an estimated \$500,000.

Tropical Storm Bill – June 30, 2003

Tropical Storm Bill tracked along Interstate 59. Heavy rainfall caused flash flooding. Forty-eight hour rainfall totals ranged between 3-7 inches, mainly across SE Mississippi. Gradient wind gusts between 30 and 40 mph combined with saturated soils downed numerous trees very close to center's track. Damage from Bill was an estimated \$100,000.

Hurricane Ivan – September 16, 2004

Thousands of trees were blown down across Eastern Mississippi during the event as well as hundreds of power lines. The strong wind itself did not cause much structural damage, however the fallen trees did. These downed trees accounted for several hundred homes, mobile homes and businesses to be damaged or destroyed. Most locations across Eastern Mississippi reported sustained winds between 30

⁹ A complete listing of historical disaster declarations can be found in Section 4: Hazard Identification.

and 40 mph with Tropical Storm force gusts between 48 and 54 mph. The strongest reported winds occurred in Newton, Lauderdale and Oktibbeha Counties.

Overall, rainfall totals were held in check as Ivan steadily moved north. The heaviest rains were confined to far Eastern Mississippi where 3 to 4 inches fell over a 15 hour period. Due to the duration of the rain no flooding was reported. Across Eastern Mississippi, Hurricane Ivan was responsible for one fatality. This fatality occurred in Brooksville (Noxubee County) when a tree fell on a man. Damage from Ivan was estimated at \$200 million.

Hurricane Katrina – August 25, 2005

Hurricane Katrina will likely go down as the worst and costliest natural disaster in United States history. The amount of destruction, the cost of damaged property/agriculture and the large loss of life across the affected region has been overwhelming. Catastrophic damage was widespread across a large portion of the Gulf Coast region. The devastation was not only confined to the coastal region, widespread and significant damage occurred well inland up to the Hattiesburg area and northward past Interstate 20.

Devastation from Hurricane Katrina was widespread across the region. Hurricane force winds were common across the area. The region received sustained winds of 60-80 mph with gusts ranging from 80-120 mph. There was widespread damage to trees and power lines. Wind damage to structures was also widespread, with roofs blown off or partially peeled. Hundreds of signs were shredded or blown down. Businesses sustained structural damage. Power outages lasted from a few days to as long as four weeks. Agriculture and timber industries were severely impacted. Row crops, including cotton, rice, corn, and soybeans, took a hard hit. Other impacted industries were the catfish industry, dairy and cattle industry, and nursery businesses.

Hurricane Rita – September 5, 2005

Hurricane Rita brought heavy rainfall, tropical storm force winds, and tornados to the region. Rainfall amounts ranged from 4-7 inches, which resulted in flooding. Winds between 25-35 mph, with gusts up to 40-50 mph, downed trees and power lines.

PROBABILITY OF FUTURE OCCURRENCES

Based on historical evidence, the probability level of future occurrence is likely (annual probability between 10 and 100 percent). Given the regional nature of the hazard, all areas in the county are equally exposed to this hazard. However, when the county is impacted, the damage could be catastrophic, threatening lives and property throughout the planning area.

E.2.11 Thunderstorm

LOCATION AND SPATIAL EXTENT

Thunderstorm / High Wind

A thunderstorm event is an atmospheric hazard, and thus has no geographic boundaries. It is typically a widespread event that can occur in all regions of the United States. However, thunderstorms are most common in the central and southern states because atmospheric conditions in those regions are favorable for generating these powerful storms. Also, Marion County typically experiences several straight-line wind events each year. These wind events can and have caused significant damage. It is

assumed that Marion County has uniform exposure to an event and the spatial extent of an impact could be large.

Hailstorm

Hailstorms frequently accompany thunderstorms, so their locations and spatial extents coincide. It is assumed that Marion County is uniformly exposed to severe thunderstorms; therefore, all areas of the county are equally exposed to hail which may be produced by such storms.

Lightning

Lightning occurs randomly, therefore it is impossible to predict where and with what frequency it will strike. It is assumed that all of Marion County is uniformly exposed to lightning.

HISTORICAL OCCURRENCES

Thunderstorm / High Wind

Severe storms resulted in seven disaster declarations in Marion County in 1979, 1980, 1983, 1990, 2001, 2003, and 2013.¹⁰ According to NCEI, there have been 176 reported thunderstorm and high wind events since 1970 in Marion County.¹¹ These events caused over \$2.5 million in damages and one reported injury. **Table E.16** summarizes this information. **Table E.17** presents detailed thunderstorm and high wind event reports including date, magnitude, and associated damages for each event.¹²

TABLE E.16: SUMMARY OF THUNDERSTORM / HIGH WIND OCCURRENCES IN MARION COUNTY

Location	Number of Occurrences	Deaths / Injuries	Property Damage (2013)
Columbia	68	0/0	\$1,360,465
Unincorporated Area	108	0/1	\$1,677,594
MARION COUNTY TOTAL	176	0/1	\$3,005,059

Source: National Centers for Environmental Information

TABLE E.17: HISTORICAL THUNDERSTORM / HIGH WIND OCCURRENCES IN MARION COUNTY

Location	Date	Type	Magnitude	Deaths / Injuries	Property Damage*
Columbia					
Columbia	15-APR-93	HIGH WIND	0 kts.	0/0	\$87,452
Columbia	09-JUN-94	THUNDERSTORM WINDS	0 kts.	0/0	\$85,228
Columbia	09-JUN-94	THUNDERSTORM WINDS	0 kts.	0/0	\$852
Columbia	18-JAN-96	TSTM WIND/HAIL	40 kts.	0/0	\$16,091
Columbia	18-MAR-96	TSTM WIND	0 kts.	0/0	\$32,182
Columbia	15-JAN-97	TSTM WIND	0 kts.	0/0	\$1,573
Columbia	21-FEB-97	TSTM WIND	0 kts.	0/0	\$15,730

¹⁰ A complete listing of historical disaster declarations can be found in Section 4: Hazard Identification.

¹¹ These thunderstorm events are only inclusive of those reported by the National Centers for Environmental Information (NCEI). It is likely that additional thunderstorm events have occurred in Marion County. As additional local data becomes available, this hazard profile will be amended.

¹² The dollar amount of damages provided by NCEI is divided by the number of affected counties to reflect a damage estimate for the county.

ANNEX E: MARION COUNTY

Location	Date	Type	Magnitude	Deaths / Injuries	Property Damage*
Columbia	21-FEB-97	TSTM WIND	0 kts.	0/0	\$7,865
Columbia	05-APR-97	TSTM WIND/HAIL	0 kts.	0/0	\$4,719
Columbia	17-APR-98	TSTM WIND	0 kts.	0/0	\$77,445
Columbia	17-APR-98	TSTM WIND	0 kts.	0/0	\$7,744
Columbia	05-JUN-98	TSTM WIND	61 kts.	0/0	\$0
Columbia	22-JAN-99	TSTM WIND	62 kts.	0/0	\$7,563
Columbia	09-MAR-99	TSTM WIND	0 kts.	0/0	\$3,025
Columbia	13-MAR-99	TSTM WIND	0 kts.	0/0	\$7,563
Columbia	26-JUL-99	TSTM WIND	0 kts.	0/0	\$3,025
Columbia	16-JUL-00	TSTM WIND	0 kts.	0/0	\$4,406
Columbia	17-JUL-00	TSTM WIND	0 kts.	0/0	\$2,937
Columbia	19-JUL-00	TSTM WIND	0 kts.	0/0	\$2,937
Columbia	02-MAR-01	TSTM WIND	0 kts.	0/0	\$1,426
Columbia	04-JUN-01	TSTM WIND	0 kts.	0/0	\$11,406
Columbia	19-JUN-01	TSTM WIND	0 kts.	0/0	\$1,426
Columbia	15-MAR-02	TSTM WIND	0 kts.	0/0	\$34,606
Columbia	26-MAR-02	TSTM WIND	0 kts.	0/0	\$1,384
Columbia	08-APR-02	TSTM WIND	0 kts.	0/0	\$1,384
Columbia	19-JUN-02	TSTM WIND	0 kts.	0/0	\$1,384
Columbia	07-JUL-02	TSTM WIND	60 kts.	0/0	\$8,305
Columbia	12-JUL-02	TSTM WIND	0 kts.	0/0	\$1,384
Columbia	24-DEC-02	TSTM WIND	60 kts.	0/0	\$6,921
Columbia	31-DEC-02	TSTM WIND	60 kts.	0/0	\$2,768
Columbia	14-MAY-03	TSTM WIND	50 kts.	0/0	\$13,439
Columbia	03-JUN-03	TSTM WIND	50 kts.	0/0	\$13,439
Columbia	27-NOV-03	TSTM WIND	55 kts.	0/0	\$2,688
Columbia	27-JUN-04	TSTM WIND	50 kts.	0/0	\$0
Columbia	12-AUG-05	TSTM WIND	60 kts.	0/0	\$316,693
Columbia	20-MAR-06	TSTM WIND	50 kts.	0/0	\$12,668
Columbia	23-JUN-06	TSTM WIND	50 kts.	0/0	\$0
Columbia	19-JUL-06	TSTM WIND	58 kts.	0/0	\$31,669
COLUMBIA	17-OCT-06	THUNDERSTORM WIND	54 kts.	0/0	\$2,460
COLUMBIA	15-NOV-06	THUNDERSTORM WIND	53 kts.	0/0	\$0
COLUMBIA	18-JUN-07	THUNDERSTORM WIND	53 kts.	0/0	\$29,851
COLUMBIA	03-MAR-08	THUNDERSTORM WIND	55 kts.	0/0	\$0
COLUMBIA	05-MAY-09	THUNDERSTORM WIND	50 kts.	0/0	\$0
COLUMBIA	04-JUL-09	THUNDERSTORM WIND	50 kts.	0/0	\$5,628
COLUMBIA	30-JUL-09	THUNDERSTORM WIND	50 kts.	0/0	\$3,377
COLUMBIA	24-APR-10	THUNDERSTORM WIND	50 kts.	0/0	\$54,636
COLUMBIA	15-AUG-10	THUNDERSTORM WIND	55 kts.	0/0	\$13,113
COLUMBIA	30-NOV-10	THUNDERSTORM WIND	53 kts.	0/0	\$16,391
COLUMBIA	28-SEP-11	THUNDERSTORM WIND	49 kts.	0/0	\$530
COLUMBIA	28-SEP-11	THUNDERSTORM WIND	50 kts.	0/0	\$5,305
COLUMBIA	03-APR-12	THUNDERSTORM WIND	50 kts.	0/0	\$5,305
COLUMBIA	31-MAY-12	THUNDERSTORM WIND	40 kts.	0/0	\$15,450
COLUMBIA	28-AUG-12	THUNDERSTORM WIND	50 kts.	0/0	\$2,060
COLUMBIA	20-DEC-12	THUNDERSTORM WIND	50 kts.	0/0	\$1,030

ANNEX E: MARION COUNTY

Location	Date	Type	Magnitude	Deaths / Injuries	Property Damage*
COLUMBIA	08-APR-14	THUNDERSTORM WIND	65 kts.	0/0	\$50,000
COLUMBIA	13-OCT-14	THUNDERSTORM WIND	52 kts.	0/0	\$0
COLUMBIA	27-JUN-15	THUNDERSTORM WIND	39 kts.	0/0	\$3,000
COLUMBIA	01-JUL-15	THUNDERSTORM WIND	50 kts.	0/0	\$3,000
COLUMBIA	17-MAR-16	THUNDERSTORM WIND	50 kts.	0/0	\$6,000
COLUMBIA	17-MAR-16	THUNDERSTORM WIND	50 kts.	0/0	\$1,000
COLUMBIA	05-AUG-16	THUNDERSTORM WIND	52 kts.	0/0	\$8,000
COLUMBIA	05-AUG-16	THUNDERSTORM WIND	57 kts.	0/0	\$250,000
COLUMBIA	03-APR-17	THUNDERSTORM WIND	50 kts.	0/0	\$2,000
COLUMBIA	16-JUN-17	THUNDERSTORM WIND	55 kts.	0/0	\$30,000
COLUMBIA	07-JUL-18	THUNDERSTORM WIND	50 kts.	0/0	\$4,000
COLUMBIA	07-JUL-18	THUNDERSTORM WIND	43 kts.	0/0	\$5,000
COLUMBIA	07-AUG-18	THUNDERSTORM WIND	43 kts.	0/0	\$2,000
COLUMBIA	01-NOV-18	THUNDERSTORM WIND	50 kts.	0/0	\$10,000
Unincorporated Area					
MARION COUNTY	01-FEB-70	TSTM WIND	62 kts.	0/0	\$0
MARION COUNTY	04-JUL-70	TSTM WIND	0 kts.	0/0	\$0
MARION COUNTY	02-MAR-72	TSTM WIND	60 kts.	0/0	\$0
MARION COUNTY	26-APR-73	TSTM WIND	51 kts.	0/0	\$0
MARION COUNTY	10-JAN-75	TSTM WIND	56 kts.	0/0	\$0
MARION COUNTY	30-JUN-76	TSTM WIND	0 kts.	0/0	\$0
MARION COUNTY	08-JUL-77	TSTM WIND	0 kts.	0/0	\$0
MARION COUNTY	13-AUG-78	TSTM WIND	0 kts.	0/0	\$0
MARION COUNTY	04-MAY-79	TSTM WIND	0 kts.	0/0	\$0
MARION COUNTY	30-MAR-81	TSTM WIND	0 kts.	0/0	\$0
MARION COUNTY	05-JUL-81	TSTM WIND	55 kts.	0/0	\$0
MARION COUNTY	07-MAY-82	TSTM WIND	0 kts.	0/0	\$0
MARION COUNTY	07-DEC-82	TSTM WIND	0 kts.	0/0	\$0
MARION COUNTY	14-APR-84	TSTM WIND	0 kts.	0/0	\$0
MARION COUNTY	21-MAY-85	TSTM WIND	0 kts.	0/0	\$0
MARION COUNTY	25-JUL-87	TSTM WIND	0 kts.	0/0	\$0
MARION COUNTY	18-JUN-88	TSTM WIND	0 kts.	0/1	\$0

ANNEX E: MARION COUNTY

Location	Date	Type	Magnitude	Deaths / Injuries	Property Damage*
MARION COUNTY	04-MAY-89	TSTM WIND	0 kts.	0/0	\$0
MARION COUNTY	20-MAY-89	TSTM WIND	0 kts.	0/0	\$0
MARION COUNTY	03-FEB-90	TSTM WIND	0 kts.	0/0	\$0
MARION COUNTY	16-FEB-90	TSTM WIND	0 kts.	0/0	\$0
MARION COUNTY	12-MAY-90	TSTM WIND	0 kts.	0/0	\$0
MARION COUNTY	22-AUG-90	TSTM WIND	0 kts.	0/0	\$0
MARION COUNTY	14-APR-91	TSTM WIND	0 kts.	0/0	\$0
MARION COUNTY	14-APR-91	TSTM WIND	0 kts.	0/0	\$0
MARION COUNTY	14-APR-91	TSTM WIND	0 kts.	0/0	\$0
MARION COUNTY	19-APR-91	TSTM WIND	52 kts.	0/0	\$0
MARION COUNTY	20-APR-92	TSTM WIND	0 kts.	0/0	\$0
MARION COUNTY	29-JUN-92	TSTM WIND	0 kts.	0/0	\$0
Goss	27-JAN-94	THUNDERSTORM WINDS	0 kts.	0/0	\$852,283
Sandy Hook	09-MAR-94	THUNDERSTORM WINDS	0 kts.	0/0	\$852
Foxworth	15-APR-94	THUNDERSTORM WINDS	0 kts.	0/0	\$852
Spring Cottage	05-NOV-94	THUNDERSTORM WIND	0 kts.	0/0	\$1,705
COLUMBIA MARION ARPT	26-JAN-96	TSTM WIND	50 kts.	0/0	\$1,609
Morgantown	05-MAR-96	TSTM WIND	0 kts.	0/0	\$40,228
Goss	07-JUN-96	TSTM WIND	0 kts.	0/0	\$3,218
Goss	30-MAR-97	TSTM WIND	0 kts.	0/0	\$1,573
KOKOMO	11-APR-97	TSTM WIND	0 kts.	0/0	\$1,573
Sandy Hook	17-APR-98	TSTM WIND	0 kts.	0/0	\$30,978
Countywide	05-JUN-98	TSTM WIND	0 kts.	0/0	\$46,467
Countywide	14-APR-99	TSTM WIND	0 kts.	0/0	\$7,744
Sandy Hook	07-JUL-99	TSTM WIND	0 kts.	0/0	\$3,025
Foxworth	09-JAN-00	TSTM WIND	0 kts.	0/0	\$7,343
Sandy Hook	25-JUN-00	TSTM WIND	0 kts.	0/0	\$2,937
Sandy Hook	30-AUG-00	TSTM WIND	0 kts.	0/0	\$1,469
Goss	13-DEC-00	TSTM WIND	56 kts.	0/0	\$2,937
Countywide	29-JAN-01	TSTM WIND	0 kts.	0/0	\$11,406
KOKOMO	12-MAR-01	TSTM WIND	0 kts.	0/0	\$7,129
KOKOMO	13-OCT-01	TSTM WIND	0 kts.	0/0	\$1,426
Countywide	17-MAY-02	TSTM WIND	0 kts.	0/0	\$1,384
Foxworth	17-MAY-02	TSTM WIND	0 kts.	0/0	\$1,384
Morgantown	07-JUL-02	TSTM WIND	55 kts.	0/0	\$1,384
Morgantown	12-JUL-02	TSTM WIND	0 kts.	0/0	\$1,384

ANNEX E: MARION COUNTY

Location	Date	Type	Magnitude	Deaths / Injuries	Property Damage*
Morgantown	29-OCT-02	TSTM WIND	0 kts.	0/0	\$13,842
White Bluff	24-APR-03	TSTM WIND	50 kts.	0/0	\$13,439
Countywide	14-MAY-03	TSTM WIND	55 kts.	0/0	\$26,878
Sandy Hook	12-JUN-03	TSTM WIND	50 kts.	0/0	\$20,159
Countywide	22-JUL-03	TSTM WIND	50 kts.	0/0	\$6,720
Goss	24-NOV-04	TSTM WIND	50 kts.	0/0	\$0
Sandy Hook	27-NOV-04	TSTM WIND	60 kts.	0/0	\$6,524
Foxworth	06-APR-05	TSTM WIND	70 kts.	0/0	\$101,342
Hub	30-APR-05	TSTM WIND	55 kts.	0/0	\$12,668
KOKOMO	21-AUG-05	TSTM WIND	55 kts.	0/0	\$38,003
Sandy Hook	04-DEC-05	TSTM WIND	55 kts.	0/0	\$25,335
KOKOMO	04-JAN-07	THUNDERSTORM WIND	55 kts.	0/0	\$5,970
NEB	14-APR-07	THUNDERSTORM WIND	54 kts.	0/0	\$11,941
MILDRED	14-APR-07	THUNDERSTORM WIND	50 kts.	0/0	\$5,970
MORGANTOWN	03-MAY-07	THUNDERSTORM WIND	53 kts.	0/0	\$0
COLUMBIA MARION ARPT	09-JUN-07	THUNDERSTORM WIND	50 kts.	0/0	\$4,776
COLUMBIA MARION ARPT	19-JUN-07	THUNDERSTORM WIND	50 kts.	0/0	\$0
SANDY HOOK	19-JUN-07	THUNDERSTORM WIND	50 kts.	0/0	\$0
NEB	12-JUL-07	THUNDERSTORM WIND	50 kts.	0/0	\$23,881
COLUMBIA MARION ARPT	01-AUG-07	THUNDERSTORM WIND	50 kts.	0/0	\$0
TWIN	12-FEB-08	THUNDERSTORM WIND	70 kts.	0/0	\$57,964
SUMBAX	17-FEB-08	THUNDERSTORM WIND	50 kts.	0/0	\$9,274
COLUMBIA MARION ARPT	17-FEB-08	THUNDERSTORM WIND	50 kts.	0/0	\$9,274
SANDY HOOK	17-FEB-08	THUNDERSTORM WIND	53 kts.	0/0	\$0
KOKOMO	03-MAR-08	THUNDERSTORM WIND	55 kts.	0/0	\$0
CHERAW	15-MAY-08	THUNDERSTORM WIND	50 kts.	0/0	\$0
KOKOMO	26-MAY-08	THUNDERSTORM WIND	50 kts.	0/0	\$0
MORGANTOWN	25-JUN-08	THUNDERSTORM WIND	53 kts.	0/0	\$0
TWIN	25-JUN-08	THUNDERSTORM WIND	60 kts.	0/0	\$12,752
COLUMBIA MARION ARPT	27-JUN-08	THUNDERSTORM WIND	55 kts.	0/0	\$11,593
PINEBUR	02-AUG-08	THUNDERSTORM WIND	54 kts.	0/0	\$17,389
COLUMBIA MARION ARPT	12-AUG-08	THUNDERSTORM WIND	50 kts.	0/0	\$0
SUMBAX	02-APR-09	THUNDERSTORM WIND	50 kts.	0/0	\$4,502
KOKOMO	15-OCT-09	THUNDERSTORM WIND	50 kts.	0/0	\$1,126
CHERAW	15-AUG-10	THUNDERSTORM WIND	50 kts.	0/0	\$0
LOVELACE	04-APR-11	THUNDERSTORM WIND	60 kts.	0/0	\$42,436
SANDY HOOK	04-APR-11	THUNDERSTORM WIND	56 kts.	0/0	\$3,183
COLUMBIA MARION ARPT	15-APR-11	THUNDERSTORM WIND	50 kts.	0/0	\$4,244
CHERAW	10-JUN-11	THUNDERSTORM WIND	50 kts.	0/0	\$31,827
NEB	21-JUN-11	THUNDERSTORM WIND	50 kts.	0/0	\$21,218

Location	Date	Type	Magnitude	Deaths / Injuries	Property Damage*
COLUMBIA MARION ARPT	12-JUL-11	THUNDERSTORM WIND	50 kts.	0/0	\$3,183
COLUMBIA MARION ARPT	18-AUG-11	THUNDERSTORM WIND	50 kts.	0/0	\$5,305
KOKOMO	18-AUG-11	THUNDERSTORM WIND	50 kts.	0/0	\$3,183
LOVELACE	11-JUN-12	THUNDERSTORM WIND	53 kts.	0/0	\$10,300
COLUMBIA MARION ARPT	20-JUL-12	THUNDERSTORM WIND	43 kts.	0/0	\$103
KOKOMO	28-DEC-15	THUNDERSTORM WIND	50 kts.	0/0	\$3,000
SUBMAX	28-DEC-15	THUNDERSTORM WIND	50 kts	0/0	\$3,000
JAMESTOWN	02-JAN-17	THUNDERSTORM WIND	50 kts	0/0	\$12,000
HUB	02-JAN-17	THUNDERSTORM WIND	55 kts	0/0	\$15,000
TWIN	21-JAN-17	THUNDERSTORM WIND	50 kts	0/0	\$5,000
KOKOMO	30-APR-17	THUNDERSTORM WIND	55 kts	0/0	\$7,000
GOSS	16-JUN-17	THUNDERSTORM WIND	55 kts	0/0	\$20,000
SANDY HOOK	14-APR-18	THUNDERSTORM WIND	52 kts	0/0	\$10,000
TWIN	14-APR-18	THUNDERSTORM WIND	52 kts	0/0	\$1,000
PINEBUR	14-APR-18	THUNDERSTORM WIND	50 kts	0/0	\$3,000

* All damage may not have been reported.

Source: National Centers for Environmental Information

Hailstorm

According to the National Centers for Environmental Information, 124 recorded hailstorm events have affected Marion County since 1968.¹³ **Table E.18** is a summary of the hail events in Marion County. **Table E.19** provides detailed information about each event that occurred in the county. In all, hail occurrences resulted in over \$1.4 million in property damages. Hail ranged in diameter from 0.75 inches to 4.0 inches. It should be noted that hail is notorious for causing substantial damage to cars, roofs, and other areas of the built environment that may not be reported to the National Centers for Environmental Information. Therefore, it is likely that damages are greater than the reported value.

TABLE E.18: SUMMARY OF HAIL OCCURRENCES IN MARION COUNTY

Location	Number of Occurrences	Deaths / Injuries	Property Damage (2013)
Columbia	39	0/0	\$506,316
Unincorporated Area	85	0/0	\$961,227
MARION COUNTY TOTAL	124	0/0	\$1,467,543

Source: National Centers for Environmental Information

TABLE E.19: HISTORICAL HAIL OCCURRENCES IN MARION COUNTY

Location	Date	Magnitude	Deaths / Injuries	Property Damage*
Columbia				
Columbia	11-JAN-93	1.75 in.	0/0	\$0
Columbia	30-MAR-93	0.88 in.	0/0	\$0

¹³ These hail events are only inclusive of those reported by the National Centers for Environmental Information (NCEI). It is likely that additional hail events have affected Marion County. As additional local data becomes available, this hazard profile will be amended.

ANNEX E: MARION COUNTY

Location	Date	Magnitude	Deaths / Injuries	Property Damage*
Columbia	15-APR-94	0.75 in.	0/0	\$0
Columbia	09-JUL-95	1.75 in.	0/0	\$0
COLUMBIA	18-MAR-96	1.75 in.	0/0	\$402,278
COLUMBIA	18-MAR-96	1.75 in.	0/0	\$1,609
COLUMBIA	29-MAR-97	1.00 in.	0/0	\$0
COLUMBIA	29-MAR-97	1.75 in.	0/0	\$0
COLUMBIA	30-MAR-97	1.75 in.	0/0	\$0
COLUMBIA	22-APR-97	0.75 in.	0/0	\$0
COLUMBIA	07-JUL-97	0.88 in.	0/0	\$0
COLUMBIA	10-FEB-98	0.75 in.	0/0	\$0
COLUMBIA	26-FEB-98	0.88 in.	0/0	\$0
COLUMBIA	17-APR-98	1.75 in.	0/0	\$0
COLUMBIA	17-APR-98	1.75 in.	0/0	\$0
COLUMBIA	04-MAY-99	0.88 in.	0/0	\$0
COLUMBIA	05-MAY-00	0.75 in.	0/0	\$0
COLUMBIA	10-AUG-00	0.75 in.	0/0	\$22,028
COLUMBIA	01-MAR-01	1.75 in.	0/0	\$17,109
COLUMBIA	01-MAR-01	0.88 in.	0/0	\$0
COLUMBIA	12-MAR-02	0.75 in.	0/0	\$0
COLUMBIA	07-JUL-02	1.75 in.	0/0	\$0
COLUMBIA	07-JUL-02	1.75 in.	0/0	\$1,384
COLUMBIA	21-JUL-02	1.75 in.	0/0	\$0
COLUMBIA	07-APR-03	0.75 in.	0/0	\$1,344
COLUMBIA	07-APR-03	1.75 in.	0/0	\$26,878
COLUMBIA	03-MAY-03	0.75 in.	0/0	\$1,344
COLUMBIA	03-MAY-03	1.75 in.	0/0	\$26,878
COLUMBIA	03-MAY-03	1.00 in.	0/0	\$1,344
COLUMBIA	31-MAR-05	0.88 in.	0/0	\$0
COLUMBIA	12-AUG-05	0.75 in.	0/0	\$0
COLUMBIA	28-DEC-07	1.00 in.	0/0	\$0
COLUMBIA	12-APR-09	0.75 in.	0/0	\$0
COLUMBIA	21-AUG-09	0.75 in.	0/0	\$0
COLUMBIA	21-FEB-10	1.00 in.	0/0	\$0
COLUMBIA	28-SEP-11	1.00 in.	0/0	\$0
COLUMBIA	04-SEP-12	1.00 in.	0/0	\$4,120
COLUMBIA	21-JAN-16	1.25 in.	0/0	\$0
COLUMBIA	26-MAY-18	1.00 in.	0/0	\$0
Unincorporated Area				
MARION COUNTY	27-MAY-68	1.75 in.	0/0	\$0
MARION COUNTY	24-MAR-75	1.75 in.	0/0	\$0
MARION COUNTY	07-MAY-75	1.75 in.	0/0	\$0
MARION COUNTY	07-MAY-75	1.75 in.	0/0	\$0
MARION COUNTY	30-MAR-76	1.75 in.	0/0	\$0
MARION COUNTY	12-MAY-76	0.75 in.	0/0	\$0
MARION COUNTY	14-MAY-76	0.75 in.	0/0	\$0
MARION COUNTY	30-JUN-76	1.75 in.	0/0	\$0
MARION COUNTY	22-MAR-81	1.75 in.	0/0	\$0

ANNEX E: MARION COUNTY

Location	Date	Magnitude	Deaths / Injuries	Property Damage*
MARION COUNTY	23-JUN-81	1.75 in.	0/0	\$0
MARION COUNTY	20-APR-82	2.75 in.	0/0	\$0
MARION COUNTY	20-APR-82	4.00 in.	0/0	\$0
MARION COUNTY	25-APR-82	1.50 in.	0/0	\$0
MARION COUNTY	21-MAY-83	1.75 in.	0/0	\$0
MARION COUNTY	21-MAY-83	1.75 in.	0/0	\$0
MARION COUNTY	14-APR-84	1.75 in.	0/0	\$0
MARION COUNTY	03-MAY-84	0.75 in.	0/0	\$0
MARION COUNTY	30-APR-85	1.75 in.	0/0	\$0
MARION COUNTY	08-MAY-85	1.75 in.	0/0	\$0
MARION COUNTY	12-APR-86	1.75 in.	0/0	\$0
MARION COUNTY	12-APR-86	1.75 in.	0/0	\$0
MARION COUNTY	03-MAY-87	0.75 in.	0/0	\$0
MARION COUNTY	10-MAY-88	1.00 in.	0/0	\$0
MARION COUNTY	24-MAY-88	0.75 in.	0/0	\$0
MARION COUNTY	05-MAR-89	1.75 in.	0/0	\$0
MARION COUNTY	15-NOV-89	1.50 in.	0/0	\$0
MARION COUNTY	15-APR-94	0.88 in.	0/0	\$0
Improve	15-MAR-95	1.00 in.	0/0	\$0
Foxworth	20-APR-95	0.75 in.	0/0	\$0
SANDY HOOK	26-JAN-96	1.75 in.	0/0	\$0
GOSS	27-JAN-97	0.88 in.	0/0	\$0
SANDY HOOK	29-MAR-97	0.75 in.	0/0	\$0
GOSS	30-MAR-97	1.75 in.	0/0	\$0
SANDY HOOK	19-JUN-97	0.75 in.	0/0	\$0
GOSS	06-MAY-98	0.75 in.	0/0	\$0
FOXWORTH	23-APR-00	0.75 in.	0/0	\$0
COUNTYWIDE	24-APR-00	0.75 in.	0/0	\$0
FOXWORTH	12-MAR-01	1.00 in.	0/0	\$11,406
SANDY HOOK	06-MAR-03	0.88 in.	0/0	\$1,344
KOKOMO	07-APR-03	1.50 in.	0/0	\$13,439
KOKOMO	07-APR-03	4.00 in.	0/0	\$671,598
GOSS	24-APR-03	0.88 in.	0/0	\$1,344
GOSS	25-APR-03	0.88 in.	0/0	\$1,344
GOSS	25-APR-03	1.00 in.	0/0	\$1,344
MORGANTOWN	14-MAY-03	1.75 in.	0/0	\$13,439
KOKOMO	29-APR-04	0.88 in.	0/0	\$0
FOXWORTH	22-MAR-05	1.00 in.	0/0	\$0
KOKOMO	30-MAR-05	1.00 in.	0/0	\$0
KOKOMO	31-MAR-05	1.75 in.	0/0	\$19,002
KOKOMO	06-APR-05	1.75 in.	0/0	\$0
WHITE BLUFF	06-APR-05	1.75 in.	0/0	\$0
GOSS	22-APR-05	0.75 in.	0/0	\$0
GOSS	09-AUG-06	0.88 in.	0/0	\$0
SANDY HOOK	13-FEB-07	1.00 in.	0/0	\$0
KOKOMO	03-APR-07	1.75 in.	0/0	\$47,762
WHITE BLUFF	28-DEC-07	1.25 in.	0/0	\$0

Location	Date	Magnitude	Deaths / Injuries	Property Damage*
KOKOMO	10-JAN-08	2.75 in.	0/0	\$115,927
SUMBAX	12-FEB-08	0.75 in.	0/0	\$0
LOVELACE	03-MAR-08	0.75 in.	0/0	\$0
COLUMBIA MARION ARPT	10-JUN-08	0.75 in.	0/0	\$0
SANDY HOOK	20-JUN-08	0.75 in.	0/0	\$0
PINEBUR	25-JUN-08	1.00 in.	0/0	\$0
SAXON	25-JUN-08	0.75 in.	0/0	\$0
TWIN	25-JUN-08	0.75 in.	0/0	\$0
COLUMBIA MARION ARPT	29-JUL-08	0.75 in.	0/0	\$0
SANDY HOOK	20-SEP-08	0.88 in.	0/0	\$0
HUB	27-MAR-09	1.00 in.	0/0	\$0
ST PAUL	27-MAR-09	1.75 in.	0/0	\$0
WHITE BLUFF	27-MAR-09	1.00 in.	0/0	\$0
COLUMBIA MARION ARPT	27-MAR-09	0.75 in.	0/0	\$0
SANDY HOOK	13-APR-09	1.00 in.	0/0	\$0
COLUMBIA MARION ARPT	13-APR-09	0.75 in.	0/0	\$0
PICKWICK	05-MAY-09	0.88 in.	0/0	\$0
WHITE BLUFF	12-MAY-09	0.75 in.	0/0	\$0
COLUMBIA MARION ARPT	01-JUN-09	0.75 in.	0/0	\$0
MORGANTOWN	21-FEB-10	1.75 in.	0/0	\$3,278
COLUMBIA MARION ARPT	24-APR-10	1.00 in.	0/0	\$0
COLUMBIA MARION ARPT	15-APR-11	1.50 in.	0/0	\$0
WEST COLUMBIA	28-SEP-11	0.75 in.	0/0	\$0
KOKOMO	12-DEC-15	0.75 in.	0/0	\$0
FOXWORTH	12-DEC-15	0.75 in.	0/0	\$0
MORGANTOWN	02-JAN-17	2.50 in.	0/0	\$50,000
PINEBUR	02-JAN-17	1.75 in.	0/0	\$10,000
GOSS	21-JAN-17	0.75 in.	0/0	\$0
PINEBUR	17-MAR-18	1.00 in.	0/0	\$0

All damage may not have been reported.

Source: National Centers for Environmental Information

Lightning

According to the National Centers for Environmental Information, there has been one recorded lightning event in Marion County since 1950, as listed in summary **Table E.20**.¹⁴ It caused approximately \$200,000 in damages. It is likely that other lightning events have impacted the county. Many of the reported events are those that caused damage, and it should be expected that damages are likely much higher for this hazard than what is reported.

¹⁴ These lightning events are only inclusive of those reported by the National Centers for Environmental Information (NCEI). It is likely that additional lightning events have occurred in Marion County. As additional local data becomes available, this hazard profile will be amended.

TABLE E.20: SUMMARY OF LIGHTNING OCCURRENCES IN MARION COUNTY

Location	Number of Occurrences	Deaths / Injuries	Property Damage (2013)
Columbia	1	0/0	\$200,000
Unincorporated Area	0	0/0	\$0
MARION COUNTY TOTAL	0	0/0	\$0

Source: National Centers for Environmental Information

PROBABILITY OF FUTURE OCCURRENCES

Thunderstorm / High Wind

Given the high number of previous events, it is certain that wind events, including straight-line wind and thunderstorm wind, will occur in the future. This results in a probability level of highly likely (100 percent annual probability) for future wind events for the entire county.

Hailstorm

Based on historical occurrence information, it is assumed that the probability of future hail occurrences is likely (10 – 100 percent annual probability). Since hail is an atmospheric hazard (coinciding with thunderstorms), it is assumed that Marion County has equal exposure to this hazard. It can be expected that future hail events will continue to cause minor damage to property and vehicles throughout the county.

Lightning

Although there were no historical lightning events reported in Marion County via NCEI data, it is a regular occurrence accompanied by thunderstorms. In fact, lightning events will assuredly happen on an annual basis, though not all events will cause damage. According to Vaisala's U.S. National Lightning Detection Network (NLDN®), Marion County is located in an area of the country that experienced an average of 6 to 8 lightning flashes per square kilometer per year between 1997 and 2010. Therefore, the probability of future events is highly likely (100 percent annual probability). It can be expected that future lightning events will continue to threaten life and cause minor property damages throughout the county.

E.2.12 Tornado

LOCATION AND SPATIAL EXTENT

Tornadoes occur throughout the state of Mississippi, and thus in Marion County. Tornadoes typically impact a relatively small area, but damage may be extensive. Event locations are completely random, and it is not possible to predict specific areas that are more susceptible to tornado strikes over time. Therefore, it is assumed that Marion County is uniformly exposed to this hazard.

HISTORICAL OCCURRENCES

Tornadoes resulted in eight disaster declarations in Marion County in 1973, 1979, 1980, 1983, 1990, 2001, 2003, 2013 and 2014.¹⁵ According to the National Centers for Environmental Information, there have been a total of 30 recorded tornado events in Marion County since 1950 (**Table E.21**), resulting in over \$9.5 million in property damages.¹⁶ In addition, 13 injuries were reported. The magnitude of these tornadoes ranges from F0 to F3 in intensity, although an F5 event is possible. Detailed information on historic tornado events can be found in **Table E.22**.

TABLE E.21: SUMMARY OF TORNADO OCCURRENCES IN MARION COUNTY

Location	Number of Occurrences	Deaths / Injuries	Property Damage (2013)
Columbia	9	3/50	\$26,179,455
Unincorporated Area	26	0/13	\$8,485,151
MARION COUNTY TOTAL	35	3/63	\$34,664,606

Source: National Centers for Environmental Information

TABLE E.22: HISTORICAL TORNADO IMPACTS IN MARION COUNTY

Location	Date	Magnitude	Deaths/Injuries	Property Damage*	Details
Columbia					
Columbia	11-APR-95	F2	0/0	\$33,143	The discontinuous tornado path extended from 10 miles south-southeast of Tyler town to nine miles east of Columbia. The tornado moved south of Walthall County into Marion County at 0455 CST, seven miles southeast of Kokomo. Numerous trees were blown down. Several houses sustained roof damage. Some had their roofs removed and others were damaged by fallen trees. Downed trees blocked roadways.
Columbia	16-FEB-01	F0	0/0	\$1,426	
Columbia	12-MAR-01	F1	0/0	\$142,576	Numerous trees were blown down, and several buildings sustained damage as this F1 tornado moved northeast from the northern edge of Columbia to about nine miles northeast of Columbia.
Columbia	12-MAR-01	F1	0/0	\$998,033	
Columbia	12-MAR-01	F1	0/0	\$2,852	
Columbia	13-OCT-01	F0	0/0	\$1,426	Several trees were blown down as a weak tornado briefly touched down.
Columbia	20-FEB-14	F0	0/0	\$15,000	Multiple trees were downed or snapped along Highway 98 at Friendship Church Road in a manner consistent with tornadic damage. Maximum wind speeds were estimated at 75 mph.

¹⁵ A complete listing of historical disaster declarations can be found in Section 4: Hazard Identification.

¹⁶ These tornado events are only inclusive of those reported by the National Centers for Environmental Information (NCEI). It is likely that additional tornadoes have occurred in Marion County. As additional local data becomes available, this hazard profile will be amended.

Location	Date	Magnitude	Deaths/ Injuries	Property Damage*	Details
Columbia	23-DEC-14	F3	3/50	\$25,000,000	During the afternoon of Dec 23, just enough ingredients came together to support numerous severe storms ahead of a cold front. Across the Lower Mississippi River Valley, peak heating contributed to decent instability in the developing warm sector in advance of the front. This helped to support organized thunderstorm activity along with quite a few supercell storms. A long lived, persistent, storm tracked across the southeastern counties (near Columbia, Mississippi to Sumrall and Laurel to Heidelberg, Mississippi line) and produced multiple tornadoes. Widespread damage occurred in southern Columbia and near Laurel. Additional damage occurred across Marion, Jones and Clarke counties. Sadly, five confirmed fatalities occurred, with three near Columbia in Marion County. This tornado first touched down just east of the Pearl River just south of Columbia. It quickly became strong and moved northeast impacting the southeast side of Columbia. The tornado remained on the ground through Marion County before lifting as it approached the Lamar County line. Numerous businesses, homes, mobile homes, a National Guard building and power poles and lines were heavily damaged or destroyed by the tornado. Extensive tree damage also occurred along the path of the storm. Maximum wind speed of this tornado was 165mph.
Columbia	31-OCT-15	F0	0/0	\$5,000	This weak tornado touched down along Lampton Hill Top Road and moved east-northeast to Enon Road. A few trees were blown down and limbs snapped along a narrow path. Maximum winds were 75 mph.
Unincorporated Area					
MARION COUNTY	29-APR-50	F2	0/0	\$2,612,192	
MARION COUNTY	18-NOV-57	F2	0/2	\$224,736	
MARION COUNTY	21-JAN-59		0/0	\$217,447	
MARION COUNTY	11-JUN-59	F1	0/0	\$21,745	
MARION COUNTY	20-FEB-61	F2	0/4	\$211,725	
MARION COUNTY	06-JUL-65	F2	0/0	\$0	
MARION COUNTY	05-MAY-71	F1	0/0	\$15,592	
MARION COUNTY	04-JUN-71	F2	0/0	\$1,559,215	

ANNEX E: MARION COUNTY

Location	Date	Magnitude	Deaths/ Injuries	Property Damage*	Details
MARION COUNTY	10-DEC-71	F3	0/5	\$155,922	
MARION COUNTY	30-NOV-82	F2	0/0	\$654,110	
MARION COUNTY	10-AUG-86	F0	0/0	\$576,329	
MARION COUNTY	15-FEB-87	F1	0/0	\$55,563	
MARION COUNTY	04-NOV-88	F1	0/0	\$53,352	
KOKOMO	12-MAR-01	F1	0/0	\$14,258	
Sandy Hook	11-NOV-02	F1	0/0	\$103,818	This tornado initially developed 3 miles north of Sandy Hook and moved northeast before dissipating around 1:00 AM. One unoccupied mobile home was destroyed, with another mobile home receiving major damage from a fallen tree. One house had chimney damage from a fallen tree, with many other trees blown down.
Hub	30-APR-05	F0	0/0	\$12,668	This weak tornado touched down in the Hub Community and tracked east for 4 miles before dissipating near the Lamar county line. Several trees and many large limbs were blown down or twisted off along the path.
KOKOMO	01-JAN-06	F1	0/0	\$122,987	This weak tornado briefly touched down just northeast of Sandy Hook on Will Alexander Road and damaged one home taking a small portion of the roof off and downing several trees. An eye witness saw the funnel just above the tree tops, then shortly after it crossed Highway 43 debris began flying in the air. That was the time the funnel became a tornado and when damage occurred on Will Alexander Road.
Sandy Hook	27-OCT-06	F1	0/0	\$860,912	This F1 tornado touched down just to the southeast of Kokomo and tracked east northeast for about five miles. The most intense damage was near and just south of where the tornado crossed Highway 98. A service station was damaged, a cluster of several dozen trees were snapped near the base and two homes suffered moderate damage. An 18-wheel semi truck was also flipped over on Highway 98. Numerous trees were snapped and damaged over the first half of the track, then the damaged tapered to F0 damage where a few trees and limbs were blown down.

Location	Date	Magnitude	Deaths/ Injuries	Property Damage*	Details
Sandy Hook	15-NOV-06	F1	0/0	\$110,689	This tornado moved into Marion County from Walthall County. The tornado continued to track east northeast for 6 miles before dissipating. The tornado cross Highway 35 just north of Sandy Hook and downed many trees and several power lines. The tornado continued across the Pearl River and crossed Highway 43 where more trees were downed. Just before the tornado dissipated, a mobile home was damaged and tree limbs were broken off in the Spring Cottage Community. This tornado began about 2 miles north of the Thomas Community in northern Washington Parish and tracked east northeast across southeast Walthall County and then dissipated in southern Marion County. The total path length was 18 miles with the highest rating occurring in Walthall County which was F2.
Pinebur	14-APR-07	F0	0/0	\$1,194	This weak tornado briefly touched down in the Pinebur Community off County Line Road just on the Marion County side. Damaged consisted of some trees snapped and many large limbs blown down.
Jamestown	03-MAR-08	F1	0/0	\$289,819	This tornado touched down about 5 miles southwest of the Foxworth Community. A livestock barn was seriously damaged and numerous hardwood trees were snapped or uprooted. A roof was blown off an outbuilding and a trampoline was thrown into a pond. One cow was killed. Maximum winds were 100 mph.

Location	Date	Magnitude	Deaths/ Injuries	Property Damage*	Details
Goss	16-NOV-11	F1	0/0	\$212,180	The tornado started in Marion County on Goss Bunker Hill Road with mostly minor tree damage. As it moved northeast, crossing Stuckey Road, more minor tree damage occurred along with home TV and radio antennas being blown down. As it moved along E. Reservoir Road, more substantial tree damage occurred along with roof damage to a few homes and mobile homes. As it continued northeast, more major tree damage occurred along with snapped power poles on Bufkin and Grice Roads. The most significant damage occurred along Bunker Hill Road where roof damage occurred to a home along with many trees snapped and uprooted. Several metal sheds were either severely damaged or destroyed. A cattle trailer was picked up and thrown approximately 200 yards. As it crossed Hwy 35, major tree damage continued where pines and hardwood trees were either snapped or uprooted. A carport was collapsed at a residence near Bryant Road. The tornado continued northeast crossing Robbins and F. Mcneese Road where mainly tree damage occurred. As the tornado crossed S Williamsburg Road, the roof of a newly built barn was torn off along with major tree damage. As it continued northeast from there, mostly tree damage occurred until it ended near Gates Road, just south of Hwy 42 in Jefferson Davis County. Maximum wind speeds were estimated at 100 mph.
Pinebur	17-JAN-12	F2	0/2	\$257,500	The tornado first touched down along Mail Route Road and tracked across a farm, uprooting and snapping trees and causing minor damage to sheds and fences. The tornado then crossed Clear Creek Church Road where it reached its maximum intensity. A well anchored single wide trailer was destroyed with the contents tossed into the nearby woods. A well built shed was also destroyed with the contents deposited into the woods. A wood frame home received damage to one wall and had numerous shingles torn off. Two power poles were snapped off, and an impressive number of hard wood trees were snapped in this location as well. The tornado continued moving northeast producing low end EF-1 tree damage, while crossing several dirt roads before dissipating. Maximum wind speeds were estimated at 115mph.

Location	Date	Magnitude	Deaths/ Injuries	Property Damage*	Details
Pickwick	10-DEC-12	F1	0/0	\$41,200	Numerous trees were snapped and uprooted along the path. A couple of sheds and a gazebo were destroyed. Shingle damage occurred to a couple of homes. A metal carport was blown onto a house. In addition, an antenna atop a house was snapped. This was a continuation of a tornado that came out of Walthall County. Maximum wind speeds were estimated at 100 mph.
Pickwick	31-OCT-15	F1	0/0	\$75,000	This brief tornado developed along Lowery Loop, crossing New Hope Road, and ending along Pounds Road. It caused damage to the roofs of several homes and destroyed several sheds. Numerous trees were snapped and uprooted. Estimated maximum winds were 95 MPH.
Twin	23-FEB-16	F1	0/0	\$25,000	This tornado started in Pearl River County and crossed into southwest Marion County where it snapped numerous softwood and hardwood trees. The tornado also caused roof damage to a hunting lodge just across the county line. The tornado continued north-northeast and ended just south of Pearl Bluff Circle, snapping a few more trees along the way. Maximum estimated winds were 105 mph, which occurred in Marion County. Total path length was 5.2 miles.

Source: National Centers for Environmental Information

Marion County- On December 23, 2014, a tornado first touched down just east of Pearl River just south of Columbia. It quickly became strong and moved northeast impacting the southeast side of Columbia. The tornado remained on the ground through Marion County before lifting as it approached the Lamar County line. Numerous business, homes, mobile homes, a Nation Guard building, and power poles / lines were heavily damaged or destroyed. There were three deaths as a direct result of the tornado.

PROBABILITY OF FUTURE OCCURRENCES

According to historical information, tornado events pose a significant threat to Marion County. The probability of future tornado occurrences affecting Marion County is likely (10 – 100 percent annual probability).

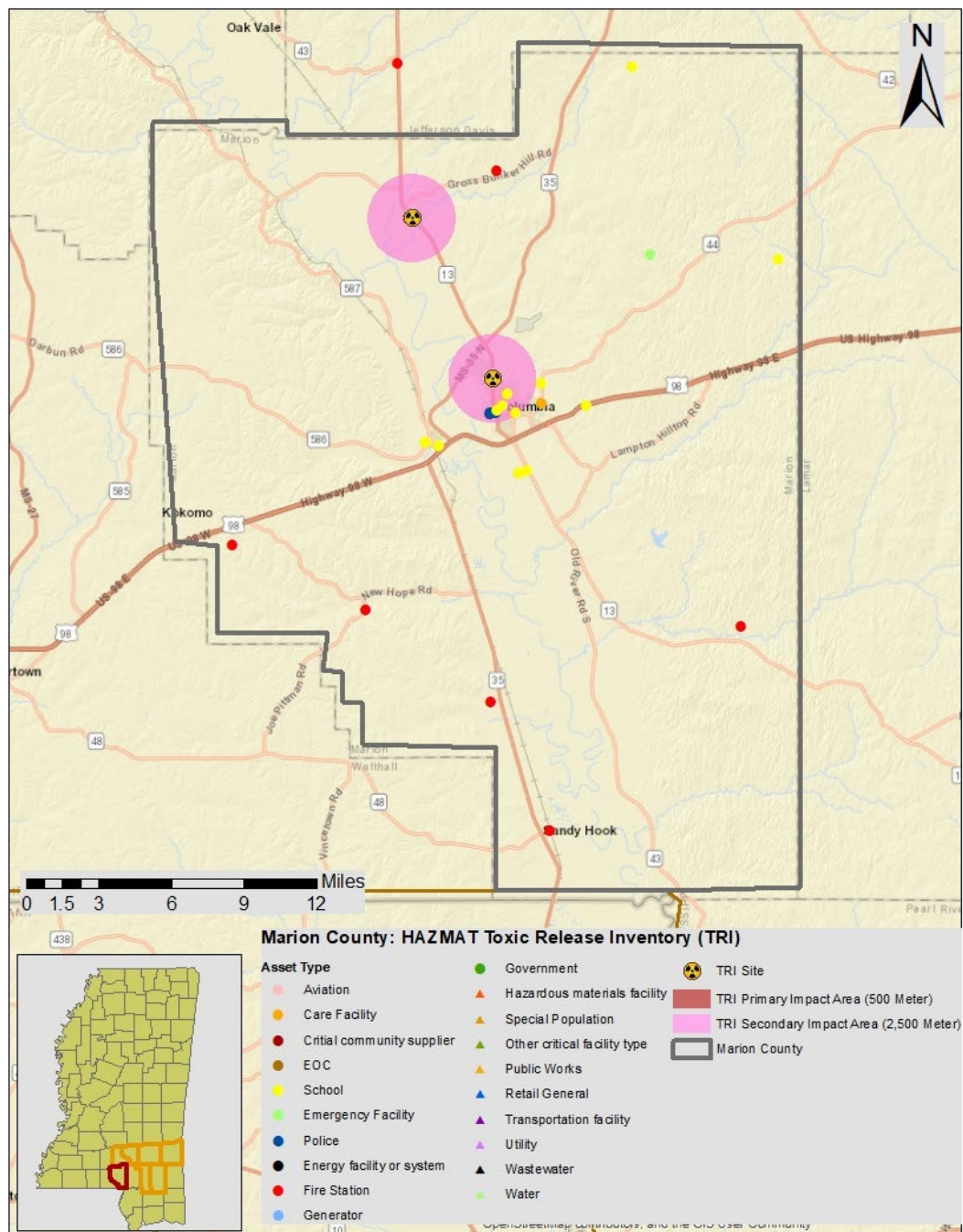
E.2.13 Hazardous Materials Incidents

LOCATION AND SPATIAL EXTENT

Hazardous Materials

Marion County has no TRI sites as shown in **Figure E.7**.

FIGURE E.8: TOXIC RELEASE INVENTORY (TRI) SITES IN MARION COUNTY



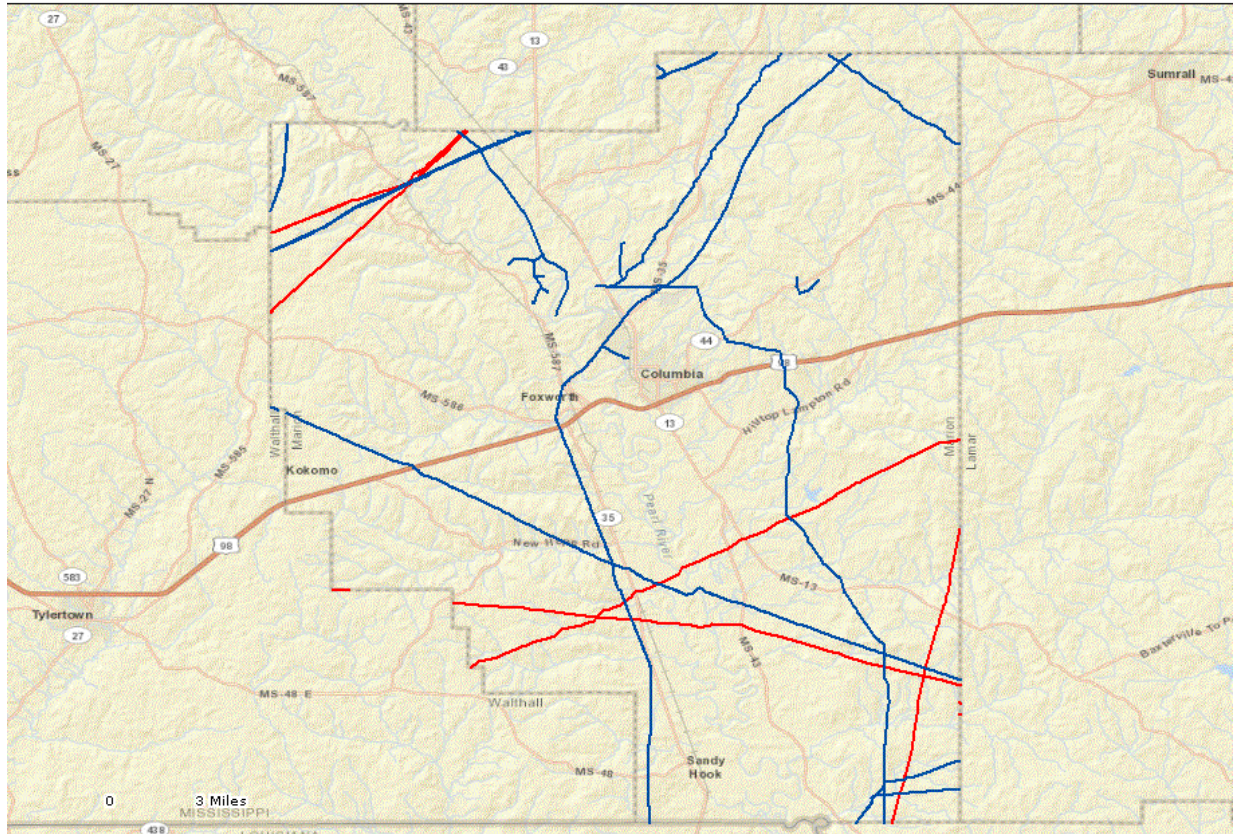
Source: EPA

In addition to “fixed” hazardous materials locations, hazardous materials may also impact the county via roadways and rail. Many roads in the county are narrow, making hazardous material transport in the area especially treacherous. All roads that permit hazardous material transport are considered potentially at risk to an incident.

Pipelines

There are two distinct types of pipelines that are used in the transport of potentially hazardous materials, gas lines and hazardous liquid lines. **Figure A.12** shows the trunk lines for each of these material types but does not show the gathering or distribution pipelines. Gas lines are in blue and hazardous liquid lines are in red. This data has not changed since the last plan update.

FIGURE E.9: PIPELINES IN MARION COUNTY



Source: Pipeline and Hazardous Materials Safety Administration

Meth Labs

One of the greatest concerns about meth labs is that they are clandestine in nature. Additionally, once a meth lab has been identified, police authorities generally attempt to eliminate the site as quickly as possible. Therefore, it is nearly impossible to identify specific locations for meth labs and instead, the entire planning area is considered to be at risk to this hazard.

HISTORICAL OCCURRENCES

Hazardous Materials

There has been a total of five recorded HAZMAT incidents in Marion County since 1978 (**Table E.23**), resulting in nearly \$318,000 in property damages. In addition, one injury was reported. **Table E.24** presents detailed information on historic HAZMAT incidents in Marion County as reported by the U.S. Department of Transportation Pipeline and Hazardous Materials Safety Administration (PHMSA).

TABLE E.23: SUMMARY OF HAZMAT INCIDENTS IN MARION COUNTY

Location	Number of Occurrences	Deaths / Injuries	Property Damage
Columbia	4	0/0	\$340
Unincorporated Area	1	0/1	\$317,659
MARION COUNTY TOTAL	5	0/1	\$317,999

Source: USDOT PHMSA

TABLE E.24: HAZMAT INCIDENTS IN MARION COUNTY

Report Number	Date	City	Mode	Serious Incident?	Fatalities/ Injuries	Damages (\$)	Quantity Released
Columbia							
I-2003091346	9/18/2003	COLUMBIA	Highway	Yes	0/1	\$280	700 LGA
I-1980091215	9/3/1980	COLUMBIA	Highway	Yes	0/0	\$0	7,808 LGA
I-1979010516	12/31/1978	COLUMBIA	Highway	No	0/0	\$0	0
I-2000100690	9/11/2000	COLUMBIA	Highway	No	0/0	\$60	0.5 LGA
Unincorporated Area							
I-1996100679	9/4/1996	FOXWORTH	Highway	Yes	0/1	\$317,659	3,977 LGA

Source: USDOT PHMSA

Pipelines

Between 2002 and 2013, there have been 2 pipeline incidents in Marion County. They occurred in 2004 and 2009 and there were no deaths or injuries. The property damage was estimated at a total of \$210,502.

Meth Labs

Meth lab incidents have occurred at various times throughout Marion County. Although there is not an extensive documented record of these events, they have occurred in the past and are generally confined to single sites, often in residential areas.

PROBABILITY OF FUTURE OCCURRENCES

Hazardous Materials

Given that there are no toxic release inventory sites in Marion County and only a few roadway and rail incidents, it is possible that a hazardous material incident may occur in the county (between one percent and ten percent annual probability). County and town officials are mindful of this possibility and take precautions to prevent such an event from occurring. Furthermore, there are detailed plans in place to respond to an occurrence.

Although there are no TRI sites and a limited record of previous events in the county, hazardous materials incidents will continue to be a threat. The county may also be impacted by neighboring counties which also face risk due to TRI sites and curvy, mountain roadways.

Pipelines

Since there have been 2 major pipeline incidents and there are 285 miles of gas and hazardous liquid lines in the region, it is anticipated that there will be future pipeline incidents in Marion County. These events are considered possible

Meth Labs

Meth lab incidents will likely continue to occur throughout Marion County. Although it is difficult to predict where exactly these incidents would occur, the probability that they will is possible.

E.2.14 Cyber Terrorism

A cyber-attack is a malicious, intentional attempt to breach the information technology (IT) infrastructure of an individual or organization. The State of Mississippi defines a cyberterrorism incident as any adverse premeditated, politically, financially or maliciously motivated attack against informational systems. A cyberterrorism event can impact one or more of Marion County's and its, corresponding departments' and divisions' information assets by the following ways, which includes, but are not limited to, the following:

- Unauthorized use
- Denial of Service
- Malicious code
- Network system failures
- Application system failures
- Unauthorized disclosure or loss of information
- Information security breach
- Structured Query Language (SQL) Injection

LOCATION AND HAZARD EXTENT

The cyberterrorism hazard is not geographically based. Attacks can originate from any computer to affect any other computer in the world. If a system is connected to the Internet or operating on a wireless frequency, it is susceptible to exploitation. Targets of cyberterrorism can be individual computers, networks, organizations, business sectors, or governments. Financial institutions and retailers are often targeted to extract personal and financial data that can be used to steal money from individuals and banks.

HISTORICAL OCCURRENCES

There have been no known historical occurrences to have occurred in Marion County to date.

PROBABILITY OF FUTURE OCCURRENCES

As is the case for any governmental organization, there will always be the potential for impact for Marion County. As such, the county will continue to be compelled to respond to cyberterrorisms in the future. The nature of these attacks is projected to evolve in sophistication over time. Marion County will take a proactive position in its cyber security efforts and is expected to remain vigilant in its efforts to prevent attacks from occurring and/or disrupting business operations.

The reality remains that many computers and networks in organizations of all sizes and industries around the United States will continue to suffer intrusion attempts on a daily basis from viruses and malware that are passed through web sites and emails. Again, the potential for harm via this hazard is always present.

E.2.15 Conclusions on Hazard Risk

The hazard profiles presented above were developed using best available data and result in what may be considered principally a qualitative assessment as recommended by FEMA in its “How-to” guidance document titled *Understanding Your Risks: Identifying Hazards and Estimating Losses* (FEMA Publication 386-2). It relies heavily on historical and anecdotal data, stakeholder input, and professional and experienced judgment regarding observed and/or anticipated hazard impacts. It also carefully considers the findings in other relevant plans, studies, and technical reports.

HAZARD EXTENT

Table E.25 describes the extent of each natural hazard identified for Marion County. The extent of a hazard is defined as its severity or magnitude, as it relates to the planning area.

TABLE E.25: EXTENT OF MARION COUNTY HAZARDS

Flood-related Hazards	
Flood	Flood extent can be measured by the amount of land and property in the floodplain as well as flood height and velocity. The amount of land in the floodplain accounts for 15.4 percent of the total land area in Marion County. Flood depth and velocity are recorded via United States Geological Survey stream gages throughout the region. While a gage does not exist for each participating jurisdiction, there is one at or near many areas. The greatest peak discharge recorded for the county was at the Pearl River near Columbia in 1874. Water reached a discharge of 165,000 cubic feet per second and the stream gage height was recorded at 31.00 feet.
Erosion	The extent of erosion can be defined by the measurable rate of erosion that occurs. There are no erosion rate records located in Marion County.
Dam Failure	Dam Failure extent is defined using the Mississippi Division of Environmental Quality criteria. Two dams are classified as high-hazard in the region.
Winter Storm and Freeze	The extent of winter storms can be measured by the amount of snowfall received (in inches). Official long-term snow records are not kept for any areas in Marion County. However, the greatest snowfall reported in Jackson (north of the county) was 11.7 inches in 1904 and in Meridian (northeast of the county) was 14.0 inches in 1963.
Fire-related Hazards	

Drought / Heat Wave	Drought extent is defined by the U.S. Drought Monitor Classifications which include Abnormally Dry, Moderate Drought, Severe Drought, Extreme Drought, and Exceptional Drought. According to the U.S. Drought Monitor Classifications, the most severe drought condition is Exceptional. Marion County has received this ranking twice over the eighteen-year reporting period. The extent of extreme heat can be measures by the record high temperature recorded. Official long-term temperature records are not kept for any areas in Marion County. However, the highest recorded temperature in Hattiesburg (east of the county) was 106°F in 1989.
Wildfire	Wildfire data was provided by the Mississippi Forestry Commission and is reported annually by county from 2008-2018. The greatest number of fires to occur in Marion County in any year was 128 in 2011. The greatest number of acres to burn in the county in a single year occurred in 2016 when 1,200 acres were burned. Although this data lists the extent that has occurred, larger and more frequent wildfires are possible throughout the county.
Geologic Hazards	
Earthquake	Earthquake extent can be measured by the Richter Scale and the Modified Mercalli Intensity (MMI) scale and the distance of the epicenter from Marion County. According to data provided by the National Geophysical Data Center, no recorded earthquakes have been located in the county. However, the greatest MMI to impact Marion County was reported with an MMI of IV (moderate) with a correlating Richter Scale measurement of less than 4.8. Additionally, USGS data shows Marion County lies within an approximate zone of level .04 ground acceleration. This indicates that the county exists within an area of moderate seismic risk.
Landslide	As noted above in the landslide profile, there is no extensive history of landslides in Marion County and landslide events typically occur in isolated areas. This provides a challenge when trying to determine an accurate extent for the landslide hazard. However, when using USGS landslide susceptibility index, extent can be measured with incidence, which is low throughout the county. There is also susceptibility throughout the county.
Expansive Soils	As noted above in the expansive soils profile, there is no historical record of significant expansive soil events in Marion County. Again, this provides a challenge when trying to determine an accurate extent for the expansive soils hazard. However, when using USGS data on soils with clay swelling potential, extent can be measured with swelling potential, which is high in less than 50 percent of the soils Marion County.
Wind-related Hazards	
Hurricane and Tropical Storm	Hurricane extent is defined by the Saffir-Simpson Scale which classifies hurricanes into Category 1 through Category 5. The greatest classification of hurricane to traverse directly through Marion County was a Category 3 storm (Hurricane Camille in 1969) which carried tropical force winds of 69 miles per hour upon arrival in the county.

Thunderstorm / Hail / Lightning	Thunderstorm extent is defined by the number of thunder events and wind speeds reported. According to a 63-year history from the National Centers for Environmental Information, the strongest recorded wind event in Marion County was last reported on February 12, 2008 at 70 knots (approximately 81 mph). It should be noted that future events may exceed these historical occurrences. Hail extent can be defined by the size of the hail stone. The largest hail stone reported in Marion County was 4.0 inches (last reported on April 7, 2003). It should be noted that future events may exceed this. According to the Vaisala's flash density map (Figure 5.16), Marion County is located in an area that experiences 6 to 8 lightning flashes per square kilometer per year. It should be noted that future lightning occurrences may exceed these figures.
Tornado	Tornado hazard extent is measured by tornado occurrences in the US provided by FEMA as well as the Fujita/Enhanced Fujita Scale. The greatest magnitude reported in Marion County was an F3 (reported on December 10, 1971).
Other Hazards	
Hazardous Materials Incident	According to USDOT PHMSA, the largest hazardous materials incident reported in the county is 7,808 LGA released on the highway in Columbia. It should be noted that larger events are possible. A pipeline incident could have a potentially large impact in terms of extent. Based on recent history, the largest spill in the last 10 years in Mississippi caused over 10,000 barrels of hazardous liquid to be spilled. Because of the generally small-scale nature of most meth labs, the extent of a fire or explosion that was caused by a meth lab incident would likely not be larger than a few acres.
Cyber Attack	The extent of cyberterrorism is difficult to estimate. Attacks can originate from any computer to affect any other computer in the world. The resulting damages depends on the demands of the cyberterrorist.

PRIORITY RISK INDEX RESULTS

In order to draw some meaningful planning conclusions on hazard risk for Marion County, the results of the hazard profiling process were used to generate countywide hazard classifications according to a "Priority Risk Index" (PRI). More information on the PRI and how it was calculated can be found in Section 5.16.2.

Table E.26 summarizes the degree of risk assigned to each category for all initially identified hazards based on the application of the PRI. Assigned risk levels were based on the detailed hazard profiles developed for this section, as well as input from the Regional Hazard Mitigation Council. The results were then used in calculating PRI values and making final determinations for the risk assessment.

TABLE E.26: SUMMARY OF PRI RESULTS FOR MARION COUNTY

Hazard	Category/Degree of Risk					
	Probability	Impact	Spatial Extent	Warning Time	Duration	PRI Score

Flood-related Hazards						
Flood	Highly Likely	Critical	Small	6 to 12 hours	Less than 24 hours	3.0
Erosion	Possible	Minor	Small	More than 24 hours	More than 1 week	1.8
Dam Failure	Unlikely	Critical	Moderate	More than 24 hours	Less than 6 hours	2.0
Winter Storm and Freeze	Possible	Limited	Large	More than 24 hours	Less than 24 hours	2.3
Fire-related Hazards						
Drought / Heat Wave	Highly Likely	Minor	Large	More than 24 hours	More than 1 week	2.8
Wildfire	Likely	Minor	Small	Less than 6 hours	Less than 1 week	2.1
Geologic Hazards						
Earthquake	Unlikely	Minor	Moderate	Less than 6 hours	Less than 6 hours	1.7
Landslide	Unlikely	Minor	Small	Less than 6 hours	Less than 6 hours	1.5
Expansive Soils	Possible	Minor	Small	Less than 6 hours	Less than 6 hours	1.8
Wind-related Hazards						
Hurricane and Tropical Storm	Likely	Catastrophic	Large	More than 24 hours	Less than 24 hours	3.2
Thunderstorm Wind / High Wind	Highly Likely	Limited	Moderate	Less than 6 hours	Less than 6 hours	2.9
Hailstorm	Likely	Minor	Small	Less than 6 hours	Less than 6 hours	2.1
Lighting	Highly Likely	Limited	Negligible	Less than 6 hours	Less than 6 hours	2.5
Tornado	Likely	Critical	Small	Less than 6 hours	Less than 6 hours	2.7
Other Hazards						
Hazardous Materials Incident	Unlikely	Limited	Small	Less than 6 hours	Less than 24 hours	1.9
Pipeline Incident	Possible	Limited	Small	Less than 6 hours	Less than 24 hours	2.2
Meth Lab Incident	Possible	Minor	Small	Less than 6 hours	Less than 6 hours	1.8
Cyber Attack	Unlikely					

E.2.16 Final Determinations on Hazard Risk

The conclusions drawn from the hazard profiling process for Marion County, including the PRI results and input from the Regional Hazard Mitigation Council, resulted in the classification of risk for each identified hazard according to three categories: High Risk, Moderate Risk, and Low Risk (**Table E.27**). For purposes of these classifications, risk is expressed in relative terms according to the estimated impact that a hazard will have on human life and property throughout all of Marion County. A more quantitative analysis to estimate potential dollar losses for each hazard has been performed separately and is described in Section 6: *Vulnerability Assessment* and below in Section E.3. It should be noted that although some hazards are classified below as posing low risk, their occurrence of varying or unprecedented magnitudes is still possible in some cases and their assigned classification will continue to be evaluated during future plan updates.

TABLE E.27: CONCLUSIONS ON HAZARD RISK FOR MARION COUNTY

HIGH RISK	Hurricane and Tropical Storm Flood Thunderstorm Wind / High Wind Drought / Heat Wave Tornado
MODERATE RISK	Drought / Heat Wave Dam Failure Lightning Hailstorm Pipeline Incident Hazardous Material Incident Wildfire
LOW RISK	Winter Storm and Freeze Expansive Soils Erosion Earthquake Landslide Meth Lab Incident Cyber Attack

E.3 MARION COUNTY VULNERABILITY ASSESSMENT

This subsection identifies and quantifies the vulnerability of Marion County to the significant hazards previously identified. This includes identifying and characterizing an inventory of assets in the county and assessing the potential impact and expected amount of damages caused to these assets by each identified hazard event. More information on the methodology and data sources used to conduct this assessment can be found in Section 6: *Vulnerability Assessment*.

E.3.1 Asset Inventory

Table E.28 lists the estimated number of improved properties and the total value of improvements for Marion County and its participating jurisdictions (study area of vulnerability assessment). This data was obtained from HAZUS-MH 4.2.

TABLE E.28: IMPROVED PROPERTY IN MARION COUNTY

Location	Number of Parcels	Total Assessed Value of Improvements
Marion County	12,536	\$2,186,833,000

*Improvement values for these communities were obtained from HAZUS-MH

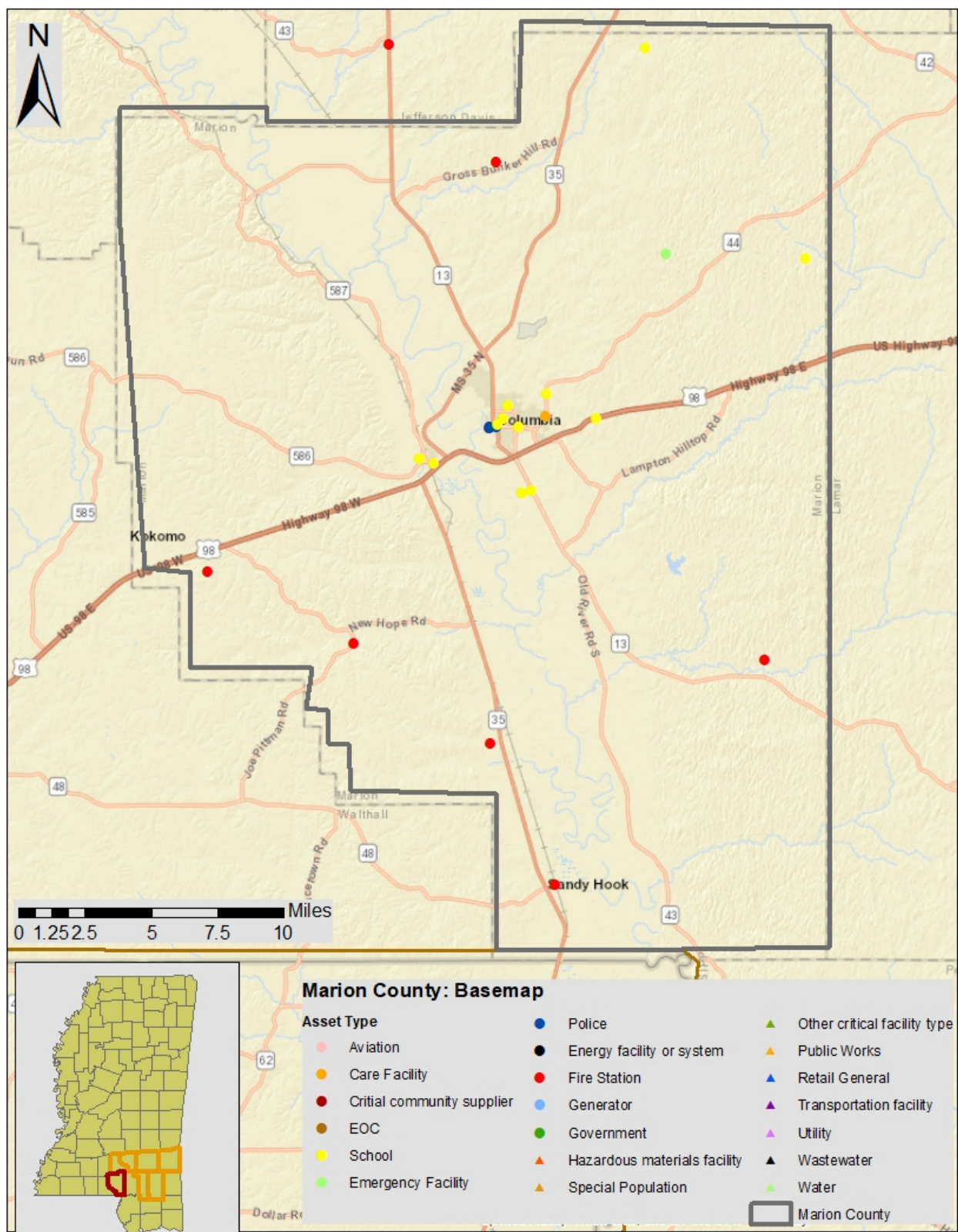
Table E.29 lists the fire stations, police stations, emergency operations centers (EOCs), medical care facilities, and schools and other critical facilities located in Marion County. HAZUS-MH 4.2 was used to obtain the critical facilities for the county and this data was updated to reflect recent changes. In addition, **Figure E.8** shows the locations of essential facilities in Marion County. **Table E.32**, near the end of this section, shows a complete list of the critical facilities by name, as well as the hazards that affect each facility. As noted previously, this list is not all-inclusive and only includes information provided by the county.

TABLE E.29: CRITICAL FACILITY INVENTORY IN MARION COUNTY

Location	Fire Stations	Police Stations	Medical Care Facilities	EOC	Schools
Marion County	3	2	1	1	11
Columbia	2	2	1	1	8
Unincorporated Area	1	0	0	0	3

Source: HAZUS-MH 4.2

FIGURE E.11: CRITICAL FACILITY LOCATIONS IN MARION COUNTY



Source: HAZUS-MH 4.2

E.3.2 Social Vulnerability

In addition to identifying those assets potentially at risk to identified hazards, it is important to identify and assess those particular segments of the resident population in Marion County that are potentially at risk to these hazards.

Table E.30 lists the population by jurisdiction according to U.S. Census 2010 population estimates. Unfortunately, estimates were not available at the census block level, limited the results to county-wide estimates. The total population in Marion County according to Census data is 27,088 persons. Additional population estimates are presented above in Section E.1.

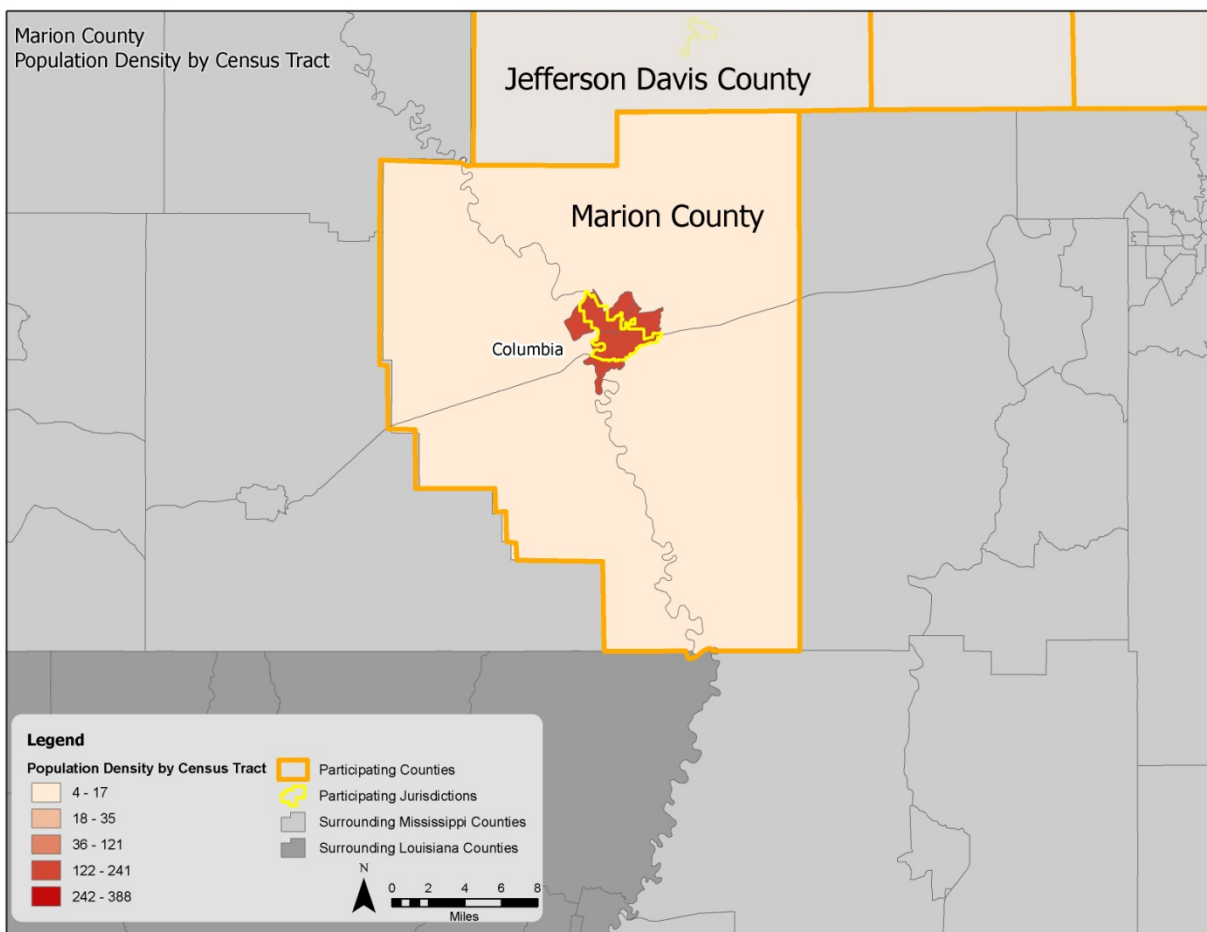
TABLE E.30: TOTAL POPULATION IN MARION COUNTY

Location	Total 2010 Population
Columbia	6,582
Unincorporated Area	20,506
MARION COUNTY TOTAL	27,088

Source: U.S. Census 2010

In addition, **Figure E.12** illustrates the population density by census tract as it was reported by the U.S. Census Bureau in 2010.¹⁷ This information has not changed since the last plan update.

¹⁷ Population by census block was not available at the time this plan was complete.

FIGURE E.12: POPULATION DENSITY IN MARION COUNTY

Source: U.S. Census Bureau, 2010

E.3.3 Vulnerability Assessment Results

As noted in Section 6: *Vulnerability Assessment*, only hazards with a specific geographic boundary, available modeling tool, or sufficient historical data allow for further analysis. Those results, specific to Marion County, are presented here. All other hazards are assumed to impact the entire planning region (drought, hailstorm, lightning, thunderstorm wind, tornado, and winter storm and freeze) or, due to lack of data, analysis would not lead to credible results (dam and levee failure, erosion, expansive soils, and landslide). The total county exposure, and thus risk, was presented in **Table E.28**.

The hazards to be further analyzed in this section include: flood, wildfire, earthquake, hurricane and tropical storm winds, and hazardous materials incident.

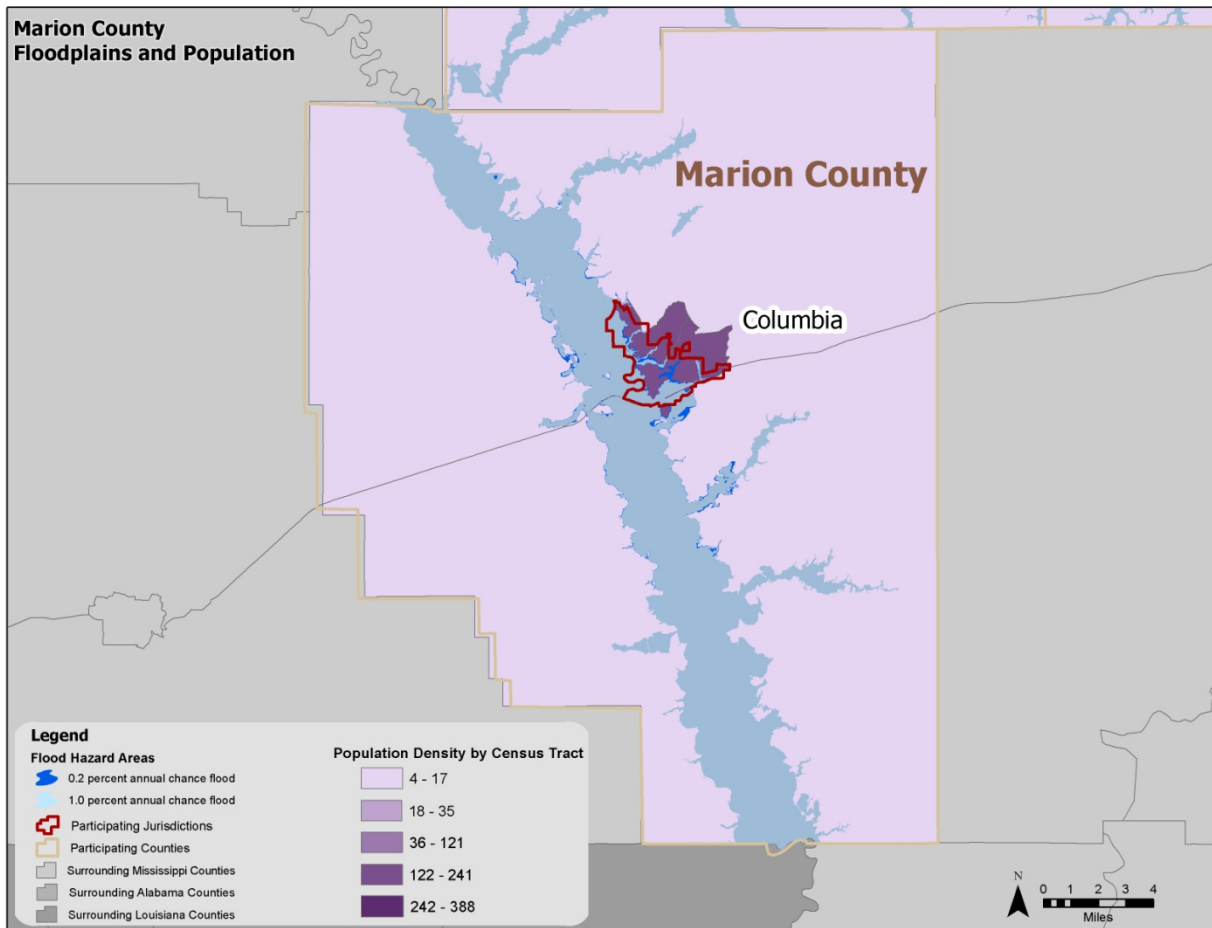
FLOOD

Historical evidence indicates that Marion County is susceptible to flood events. A total of 53 flood events have been reported by the National Centers for Environmental Information resulting in \$25.3 million in damages.

Social Vulnerability

Since 2010 population was available at the tract level, it was difficult to determine a reliable figure on population at-risk to flood due to tract level population data. **Figure E.9** is presented to gain a better understanding of at-risk population.

FIGURE E.13: POPULATION DENSITY NEAR FLOODPLAINS



Source: FEMA DFIRM, U.S. Census 2010

Critical Facilities

The critical facility analysis revealed that there are two critical facilities located in the Marion County 1.0-percent annual chance floodplain, valued at over 2.3M. There is one facility located in the 0.2-percent annual chance floodplain, based on FEMA DFIRM boundaries and GIS analysis, valued at over \$6.3M. A list of specific critical facilities and their associated risk can be found in **Table E.31** at the end of this section.

In conclusion, a flood has the potential to impact many existing and future buildings and populations in Marion County, though some areas are at a higher risk than others. All types of structures in a floodplain are at-risk, though elevated structures will have a reduced risk. As noted, the floodplains used in this analysis include the 100-year and 500-year FEMA regulated floodplain boundaries. It is certainly possible that more severe events could occur beyond these boundaries or urban (flash)

flooding could impact additional structures. Such site-specific vulnerability determinations are outside the scope of this assessment but will be considered during future plan updates. Furthermore, areas subject to repetitive flooding should be analyzed for potential mitigation actions.

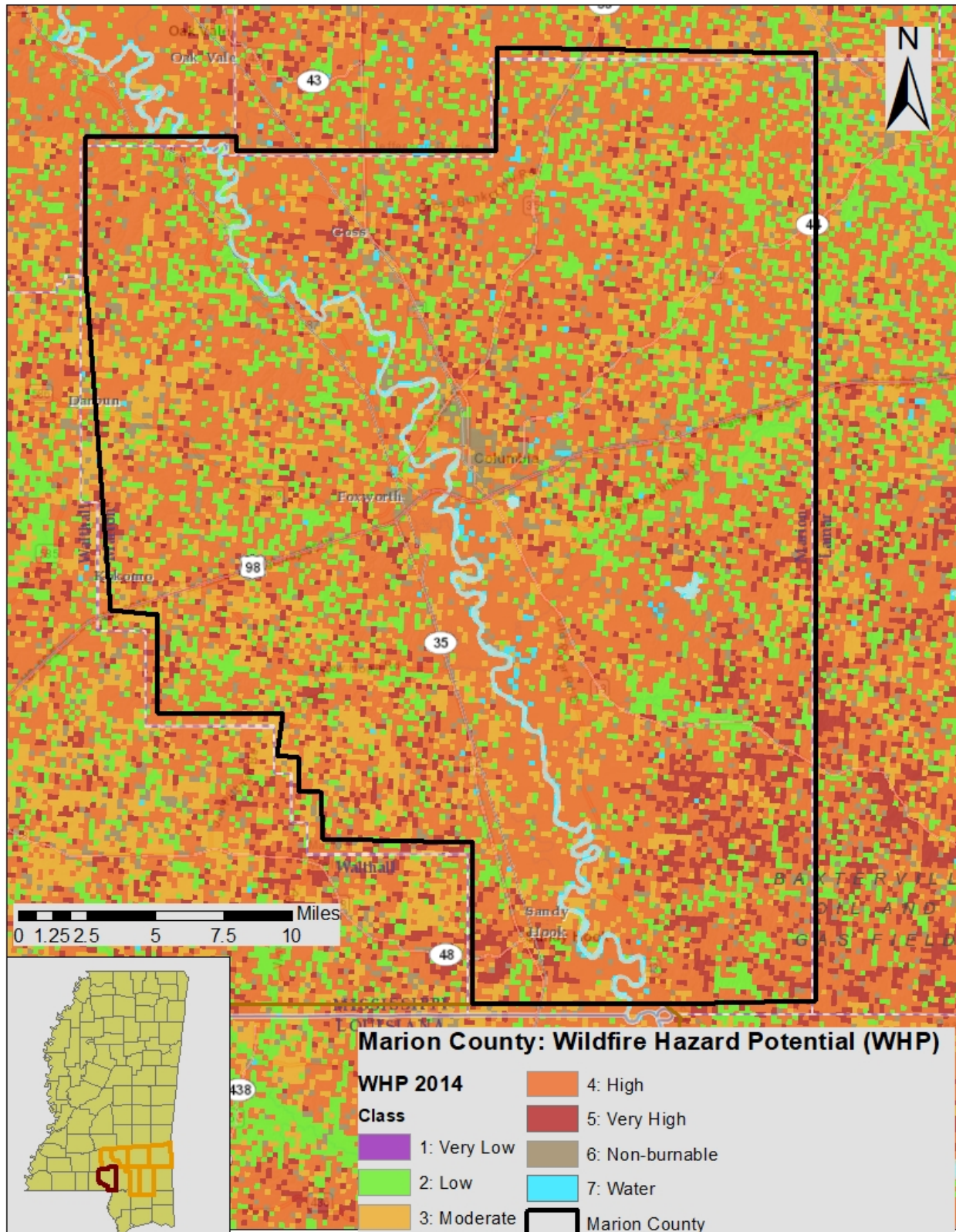
WILDFIRE

Although historical evidence indicates that Marion County is susceptible to wildfire events, there are few reports of damage.

To estimate exposure to wildfire, the wildfire hazard potential (WHP 2014) data provided via the US Forest Service was utilized. A GIS analysis was performed with the WHP dataset and identified critical facilities throughout MEMA District 8 in order to show the level of vulnerability.

Figure A.14 shows the wildfire hazard potential for Marion County. Most of the planning areas falls within the low to high category.

FIGURE E.14: WILDFIRE RISK AREAS IN MARION COUNTY



Source: Southern Wildfire Risk Assessment Data

Social Vulnerability

Although not all areas have equal vulnerability, there is some susceptibility across the entire county. It is assumed that the total population is at risk to the wildfire hazard. Determining the exact number of people in certain wildfire zones is difficult with existing data and could be misleading.

Critical Facilities

The critical facility analysis revealed that there are five critical facilities located in an area considered moderate risk valued at nearly \$13.4M. There are two critical facilities located in an area considered high risk valued at \$850,000, and there is an additional structure located in an area considered very high risk. It should be noted, however, that several factors could impact the spread of a wildfire putting all facilities at risk. A list of specific critical facilities and their associated risk can be found in **Table A.31** at the end of this section.

In conclusion, a wildfire event has the potential to impact many existing and future buildings, critical facilities, and populations in Marion County.

EARTHQUAKE

The HAZUS-MH earthquake scenario was generated for the region only and not on an individual county basis. The HAZUS-MH model and historical occurrences confirm, any earthquake activity in the area is likely to inflict minor damage to the county. HAZUS-MH 4.2 estimates a total exposure of approximately \$20,561,000 which includes buildings, inventory, and contents throughout the region. While this number is not an exact representation of assessed tax value, it is helpful in assessing the results of the HAZUS-MH scenario.

For the earthquake hazard vulnerability assessment, an arbitrary scenario was created to estimate damages to the planning area. HAZUS-MH estimates that no buildings would be moderately damaged.

Social Vulnerability

It can be assumed that all existing future populations are at risk to the earthquake hazard. No fatalities or injuries were reported in the above HAZUS-MH arbitrary scenario.

Critical Facilities

There are 18 critical facilities identified for Covington County, valued at \$65,177,400. All are vulnerable to the earthquake hazard.

An earthquake has the potential to impact all existing and future buildings, facilities, and populations in Marion County. While Marion County may not experience a large earthquake, localized damage is possible with an occurrence. A list of specific critical facilities and their associated risk can be found in **Table A.31** at the end of this section

HURRICANE AND TROPICAL STORM

Historical evidence indicates that Marion County has an elevated risk to the hurricane and tropical storm hazard. Several tracks have come near or traversed through the county, as shown and discussed in Section E.2.10.

Hurricanes and tropical storms can cause damage through numerous additional hazards such as flooding, erosion, tornadoes, and high winds, thus it is difficult to estimate total potential losses from these cumulative effects. The current HAZUS-MH hurricane model only analyzes hurricane winds and is not capable of modeling and estimating cumulative losses from all hazards associated with hurricanes; therefore, only hurricane winds are analyzed in this section. It can be assumed that all existing and future buildings and populations are at risk to the hurricane and tropical storm hazard. HAZUS-MH 4.2 was used to determine vulnerability to the hazard for a 100-Year event. There are an estimated 100,000 buildings in the region with a total building replacement value of \$20,562,000. A 100-year probabilistic scenario was created and modeled. HAZUS-MH estimated that approximately 1,892 buildings would be at least moderately damaged by the event; this is over two percent of the buildings in the Region. There is an estimated 69 buildings that would be damaged beyond repair.

Economic Losses

HAZUS-MH estimated economic losses for the scenario event. HAZUS-MH estimated losses at \$349.5M, which represents 1.7 percent of the total replacement value of the region's buildings. Nine percent of the losses were related to business interruption in the scenario region. 88 percent of the losses were sustained by residential structures.

Debris Generation

As part of the scenario, HAZUS-MH estimated the amount of debris that would be generated by the event. The types of debris considered were brick/wood, reinforced concrete/steel, eligible tree debris, and other tree debris. HAZUS-MH estimated that a total of 2,165,680 tons of debris would be generated by the event. Of that amount, 93 percent would be other tree debris, approximately 1.5 percent would be brick/wood, and the rest would comprise of would be eligible tree debris and brick/wood. Assuming a load of 25 tons per truck, this would equate to 1,190 truckloads of debris from this scenario.

Social Vulnerability

Given equal susceptibility across the county, it is assumed that the total population is at risk to the hurricane and tropical storm hazard.

Critical Facilities

Given equal vulnerability across Marion County, all critical facilities are considered to be at risk. Some buildings may perform better than others in the face of such an event due to construction and age, among other factors. There are 18 critical facilities identified for Covington County, valued at \$65,177,400. Some buildings may perform better than others in the face of such an event due to construction and age, among other factors. Determining individual building response is beyond the scope of this plan. However, this plan will consider mitigation action for especially vulnerable and/or critical facilities to mitigation against the effects of the hurricane hazard. A list of specific critical facilities can be found in **Table A.31** at the end of this section.

HAZARDOUS MATERIALS INCIDENT

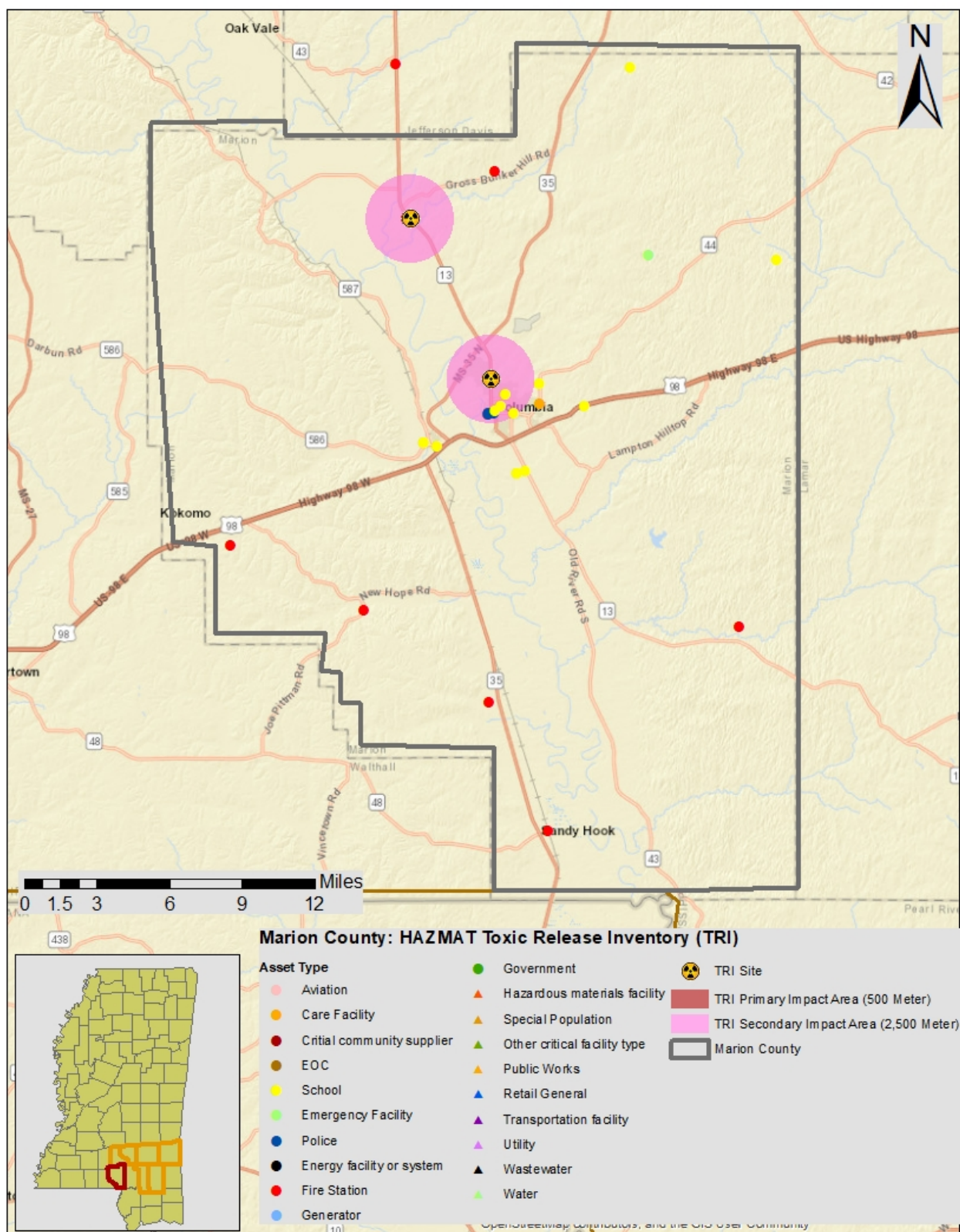
Although historical evidence and existing Toxic Release Inventory sites indicate that Marion County is susceptible to hazardous materials events, there are few reports of damage.

Most hazardous materials incidents that occur are contained and suppressed before destroying any property or threatening lives. However, they can have a significant negative impact. Such events can

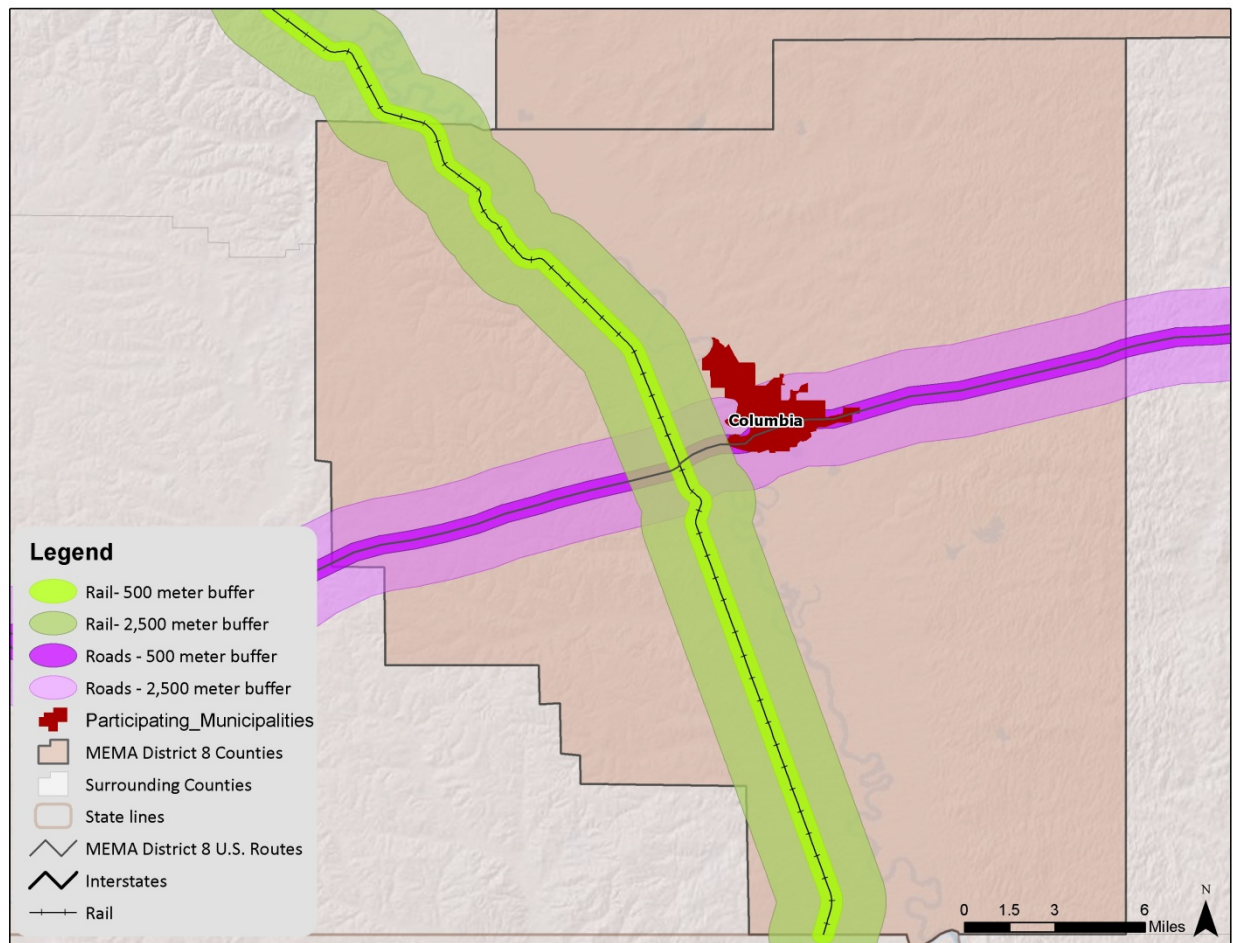
cause multiple deaths, completely shut down facilities for 30 days or more, and cause more than 50 percent of affected properties to be destroyed or suffer major damage. In a hazardous materials incident, solid, liquid, and/or gaseous contaminants may be released from fixed or mobile containers. Weather conditions will directly affect how the hazard develops. Certain chemicals may travel through the air or water, affecting a much larger area than the point of the incidence itself. Non-compliance with fire and building codes, as well as failure to maintain existing fire and containment features, can substantially increase the damage from a hazardous materials release. The duration of a hazardous materials incident can range from hours to days. Warning time is minimal to none.

In order to conduct the vulnerability assessment for this hazard, GIS analysis was used for fixed and mobile areas. In both scenarios, two sizes of buffers—500 and 2,500 meters—were used. These areas are assumed to respect the different levels of effect: immediate (primary) and secondary. Primary and secondary impact sites were selected based on guidance from FEMA 426, Reference Manual to Mitigate Potential Terrorist Attacks Against Buildings and engineering judgment. For the fixed site analysis, geo-referenced TRI listed toxic sites in Marion County, along with buffers. The analysis revealed that there are two TRI sites located in Marion County. For the mobile analysis, the major roads (Interstate highway, U.S. highway, and State highway) and railroads, where hazardous materials are primarily transported that could adversely impact people and buildings, were used for the GIS buffer analysis. The mobile toxic release buffer data did not change since the last plan update.

FIGURE A.15: TRI SITES WITH BUFFERS IN MARION COUNTY



*Source: EPA

FIGURE E.10: MOBILE HAZMAT BUFFERS IN MARION COUNTY

Social Vulnerability

Given high susceptibility across the entire county, it is assumed that the total population is at risk to a hazardous materials incident. It should be noted that areas of population concentration may be at an elevated risk due to a greater burden to evacuate population quickly.

Critical Facilities

Fixed Site Analysis:

The critical facility analysis for fixed TRI sites revealed that there were no critical facilities that would be impacted by only the 500M HAZMAT risk zone. There are 8 critical facilities that would be impacted by the 2500M HAZMAT risk zone, valued at over \$26.8M. A list of specific critical facilities and their associated risk can be found in **Table A.31** at the end of this section.

Mobile Analysis:

The critical facility analysis for transportation corridors in Marion County revealed that there is one critical facility located in the 500M Highway mobile HAZMAT buffer areas valued at over \$5.2M, and there are 5 critical facilities located in the 500M Railway mobile HAZMAT buffer areas valued at approximately \$6.5M.

Expanding to a 2500M HAZMAT risk zone reveals that there are 14 critical facilities located in the highway mobile HAZMAT buffer areas are vulnerable, valued at nearly \$60M. There are 9 critical facilities located in the railway mobile HAZMAT buffer area that are vulnerable, valued at approximately \$40M. A list of specific critical facilities and their associated risk can be found in **Table A.31** at the end of this section.

In conclusion, a hazardous material incident has the potential to impact many existing and future buildings, critical facilities, and populations in Marion County. Those areas in a primary buffer are at the highest risk, though all areas carry some vulnerability due to variations in conditions that could alter the impact area (i.e., direction and speed of wind, volume of release, etc). Further, incidents from neighboring counties could also impact the county and participating jurisdictions.

CONCLUSIONS ON HAZARD VULNERABILITY

Table E.31 shows the critical facilities vulnerable to additional hazards analyzed in this section. The table lists those assets that are determined to be exposed to each of the identified hazards (marked with an “X”).

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TABLE E.31: AT-RISK CRITICAL FACILITIES IN MARION COUNTY

FACILITY NAME	FACILITY TYPE	ATMOSPHERIC							GEOLOGIC			HYDROLOGIC			OTHER						
		Drought	Hailstorm	Hurricane and Tropical Storm	Lightning	Thunderstorm	Tornado	Winter Storm and Freeze	Earthquake	Landslide – Mod	Landslide- High	Dam and Levee Failure ¹⁸	Flood – 100 yr	Flood – 500 yr	Fixed HAZMAT 500m	Fixed HAZMAT 2,500 meter	Mobile HZMT Roads 500 METER	Mobile HZMT Roads 2,500 meter	Mobile HZMT Rails 500 METER	Mobile HZMT Rails 2,500 meter	Wildfire
Marion County																					
COLUMBIA ACADEMY	School	X	X	X	X	X		X	X								X	X			Non-burnable
COLUMBIA ELEMENTARY SCHOOL	School	X	X	X	X	X	X	X	X							X		X	X	X	Non-burnable
Columbia Fire Department	Fire Department	X	X	X	X	X		X	X				X			X		X	X	X	Moderate
COLUMBIA HIGH SCHOOL	School	X	X	X	X	X		X	X					X		X		X		X	Non-burnable
Columbia Police Dept	Police Station	X	X	X	X	X		X	X				X			X		X	X	X	Non-burnable
Columbia Police Investigator	Police Station	X	X	X	X	X		X	X				X			X		X	X	X	Moderate
COLUMBIA PRIMARY SCHOOL	School	X	X	X	X	X	X	X	X							X		X		X	Non-burnable
EAST COLUMBIA HIGH SCHOOL	School	X	X	X	X	X		X	X									X			Non-burnable
EAST MARION ELEMENTARY SCHOOL	School	X	X	X	X	X		X	X									X			Moderate
EAST MARION HIGH SCHOOL	School	X	X	X	X	X		X	X									X			Moderate
EAST MARION PRIMARY SCHOOL	School	X	X	X	X	X		X	X									X			Moderate
JEFFERSON MIDDLE SCHOOL	School	X	X	X	X	X	X	X	X							X				X	Non-burnable
MARION CO VOC COMPLEX	School	X	X	X	X	X		X	X									X			Non-

¹⁸ As noted previously, these facilities could be at risk to dam failure if located in an inundation area. Data was not available to conduct such an analysis. There was no local knowledge of these facilities being at risk to dam failure. As additional data becomes available, more in-depth analysis will be conducted.

		ATMOSPHERIC							GEOLOGIC			HYDROLOGIC			OTHER						
FACILITY NAME	FACILITY TYPE	Drought	Hailstorm	Hurricane and Tropical Storm	Lightning	Thunderstorm	Tornado	Winter Storm and Freeze	Earthquake	Landslide – Mod	Landslide- High	Dam and Levee Failure ¹⁸	Flood – 100 yr	Flood – 500 yr	Fixed HAZMAT 500m	Fixed HAZMAT 2,500 meter	Mobile HZMT Roads 500 METER	Mobile HZMT Roads 2,500 meter	Mobile HZMT Rails 500 METER	Mobile HZMT Rails 2,500 meter	Wildfire
																					burnable
Marion County Civil Defense	Emergency Facility	X	X	X	X	X		X	X												High
Marion County Sheriff Dept	Police Station	X	X	X	X	X	X	X	X							X		X	X	X	Non- burnable
MARION GENERAL HOSPITAL	Care Facility	X	X	X	X	X		X	X									X		X	Non- burnable
Pine Burr Volunteer Fire Department	Fire Department	X	X	X	X	X		X	X												Very High
Tri-Community Volunteer Fire Department	Fire Department	X	X	X	X	X		X	X												High
Southwest Marion Volunteer Fire Department	Fire Department	X	X	X	X	X		X	X												Low
Southwest Marion Volunteer Fire Department	Fire Department	X	X	X	X	X		X	X									X			Non- burnable
WEST MARION ELEMENTARY	School	X	X	X	X	X		X	X									X	X	X	Non- burnable
WEST MARION HIGH SCHOOL	School	X	X	X	X	X		X	X									X	X	X	Non- burnable
WEST MARION JUNIOR HIGH SCHOOL	School	X	X	X	X	X		X	X									X	X	X	Non- burnable
WEST MARION PRIMARY SCHOOL	School	X	X	X	X	X		X	X				X				X	X	X	X	Non- burnable
Southwest Marion Volunteer Fire Department	Fire Department	X	X	X	X	X		X	X										X	X	Non- burnable
Southwest Marion Volunteer Fire Department	Fire Department	X	X	X	X	X		X	X												Very High

E.4 MARION COUNTY CAPABILITY ASSESSMENT

This subsection discusses the capability of Marion County to implement hazard mitigation activities. More information on the purpose and methodology used to conduct the assessment can be found in Section 7: *Capability Assessment*.

E.4.1 Planning and Regulatory Capability

Table E.31 provides a summary of the relevant local plans, ordinances, and programs already in place or under development for Marion County. A checkmark (✓) indicates that the given item is currently in place and being implemented. An asterisk (*) indicates that the given item is currently being developed for future implementation. Each of these local plans, ordinances, and programs should be considered available mechanisms for incorporating the requirements of the MEMA District 8 Regional Hazard Mitigation Plan.

TABLE E.31: RELEVANT PLANS, ORDINANCES, AND PROGRAMS

Planning Tool/Regulatory Tool	Hazard Mitigation Plan	Comprehensive Land Use Plan	Floodplain Management Plan	Open Space Management Plan (Parks & Rec/Greenway Plan	Stormwater Management Plan/Ordinance	Natural Resource Protection Plan	Flood Response Plan	Emergency Operations Plan	Continuity of Operations Plan	Evacuation Plan	Disaster Recovery Plan	Capital Improvements Plan	Economic Development Plan	Historic Preservation Plan	Flood Damage Prevention Ordinance	Zoning Ordinance	Subdivision Ordinance	Unified Development Ordinance	Post-Disaster Redevelopment Ordinance	Building Code	Fire Code	National Flood Insurance Program (NFIP)	NFIP Community Rating System
MARION COUNTY	✓			✓				✓	✓				✓		✓		✓					✓	
Columbia	✓	✓		✓				✓					✓		✓	✓	✓			✓		✓	

A more detailed discussion on the county's planning and regulatory capabilities follows.

EMERGENCY MANAGEMENT

Hazard Mitigation Plan

Marion County has previously adopted a hazard mitigation plan. The City of Columbia was also included in this plan.

Emergency Operations Plan

Marion County maintains an emergency operations plan through its Emergency Management Agency. The City of Columbia is also covered by this plan.

GENERAL PLANNING

Comprehensive Land Use Plan

Marion County has not adopted a county comprehensive land use plan. However, the City of Columbia adopted a city comprehensive plan in 1970.

Zoning Ordinance

Marion County does not have a zoning ordinance in place. However, the City of Columbia has a zoning ordinance that was adopted in 1970.

Subdivision Ordinance

Marion County adopted rather extensive subdivision regulations in 2005. The City of Columbia also adopted subdivision regulations in 1969 and amended the ordinance in 1980.

Building Codes, Permitting, and Inspections

Marion County has not adopted a building code. However, the City of Columbia has adopted a building code.

FLOODPLAIN MANAGEMENT

Table E.32 provides NFIP policy and claim information for each participating jurisdiction in Marion County.

TABLE E.32: NFIP POLICY AND CLAIM INFORMATION

Jurisdiction	Date Joined NFIP	Current Effective Map Date	NFIP Policies in Force	Insurance in Force	Closed Claims	Total Payments to Date
MARION COUNTY†	9/28/79	7/18/11	189	\$29,435,100	248	\$2,337,509
Columbia	9/28/79	7/18/11	197	\$27,315,800	303	\$3,612,752

†Includes unincorporated areas of county only

Source: NFIP Community Status information as of 3/31/13; NFIP claims and policy information as of 5/15/13

Flood Damage Prevention Ordinance

All communities participating in the NFIP are required to adopt a local flood damage prevention ordinance. Marion County and the City of Columbia both participate in the NFIP and have adopted flood damage prevention ordinances.

Open Space Management Plan

Marion County and the City of Columbia are both included in the Southern Mississippi Planning and Development District (SMPDD) Regional Open Space Plan that was written in 1973.

E.4.2 Administrative and Technical Capability

Table E.33 provides a summary of the capability assessment results for Marion County with regard to relevant staff and personnel resources. A checkmark (✓) indicates the presence of a staff member(s) in that jurisdiction with the specified knowledge or skill.

TABLE E.33: RELEVANT STAFF / PERSONNEL RESOURCES

Staff / Personnel Resource	Planners with knowledge of land development/land management practices	Engineers or professionals trained in construction practices related to buildings and/or infrastructure	Planners or engineers with an understanding of natural and/or human-caused hazards	Emergency Manager	Floodplain Manager	Land Surveyors	Scientists familiar with the hazards of the community	Staff with education or expertise to assess the community's vulnerability to hazards	Personnel skilled in GIS and/or Hazus	Resource development staff or grant writers
MARION COUNTY		✓		✓	✓		✓	✓	✓	
Columbia		✓		✓	✓		✓	✓	✓	

Credit for having a floodplain manager was given to those jurisdictions that have a flood damage prevention ordinance, and therefore an appointed floodplain administrator, regardless of whether the appointee was dedicated solely to floodplain management. Credit was given for having a scientist familiar with the hazards of the community if a jurisdiction has a Cooperative Extension Service or Soil and Water Conservation Department. Credit was also given for having staff with education or expertise to assess the community's vulnerability to hazards if a staff member from the jurisdiction was a participant on the existing hazard mitigation plan's planning committee.

E.4.3 Fiscal Capability

Table E.34 provides a summary of the results for Marion County with regard to relevant fiscal resources. A checkmark (✓) indicates that the given fiscal resource is locally available for hazard mitigation purposes (including match funds for state and federal mitigation grant funds) according to the previous county hazard mitigation plan.

TABLE E.34: RELEVANT FISCAL RESOURCES

Fiscal Tool / Resource	Capital Improvement Programming	Community Development Block Grants (CDBG)	Special Purpose Taxes (or taxing districts)	Gas/Electric Utility Fees	Water/Sewer Fees	Stormwater Utility Fees	Development Impact Fees	General Obligation, Revenue, and/or Special Tax Bonds	Partnering Arrangements or Intergovernmental Agreements
MARION COUNTY	✓	✓							✓
Columbia	✓	✓							✓

E.4.4 Political Capability

During the months immediately following a disaster, local public opinion in Marion County is more likely to shift in support of hazard mitigation efforts.

E.5 MARION COUNTY MITIGATION STRATEGY

This subsection provides the blueprint for Marion County to follow in order to become less vulnerable to its identified hazards. It is based on general consensus of the Regional Hazard Mitigation Council and the findings and conclusions of the capability assessment and risk assessment. Additional Information can be found in Section 8: *Mitigation Strategy* and Section 9: *Mitigation Action Plan*.

E.5.1 Mitigation Goals

Marion County developed five mitigation goals in coordination with the other participating MEMA District 8 Region jurisdictions. The regional mitigation goals are presented in **Table E.35**.

TABLE E.35: MEMA DISTRICT 8 REGIONAL MITIGATION GOALS

	Goal
Goal #1	Develop a sustainable, comprehensive mitigation program to ensure safer communities.
Goal #2	Reduce or avoid loss of life, injury, and damage to property, the economy, and the environment.
Goal #3	Enhance preparedness and effective response to hazards.
Goal #4	Strengthen and improve local mitigation capabilities.

	Goal
Goal #5	Increase public awareness of hazard mitigation, hazard risk, and protective measures that can be taken to minimize potential loss and damage.

E.5.2 Mitigation Action Plan

The mitigation actions proposed by Marion County and the City of Columbia are listed in the following individual Mitigation Action Plans.

Marion County Mitigation Action Plan

Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2019 Action Implementation Status
Prevention								
P-1	Identify high risk areas where hazards are most likely to occur.	All	High	N/A	No additional cost	County	Annual review	Complete. High risk areas are identified in the hazard mitigation plan. Ongoing
P-2	Site-locate vulnerable population on a County-wide map.	Multiple	High	Area Agency on Aging, USDA Rural Dev., COPS, FIRE	TBD	MCEMA, County	Within 1 year; Upon request	Ongoing – the County is currently working to develop a GIS shapefile that identifies the vulnerable populations in the County.
P-3	Strictly enforce the flood damage prevention ordinance.	FL	High	CDBG, HMGP, PDM, USDA Rural Dev , Self-funding	TBD	County Floodplain Administrator	Ongoing	Ongoing
P-4	Strictly enforce subdivision regulations concerning developments in flood hazard areas.	FL	High	CDBG, HMGP, PDM, USDA Rural Dev , Self-funding	TBD	County BOS	Ongoing	Ongoing
P-5	Continue to maintain and upgrade drainage facilities.	HI, TS, FL, BH	High	CDBG, HMGP, PDM, USDA Rural Dev , Self-funding	Unknown	County BOS, County Road Crews	Annual review	Ongoing as funding becomes available

Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2019 Action Implementation Status
P-6	Consider adoption of a comprehensive drainage plan.	FL, TS, HU	Medium	CDBG, Small Muni. Grant, MSDA, USDA Rural Dev.	Unknown	County	Within 5 years	Ongoing/Pending staff availability and funding
P-7	Map the easements and rights-of-way of roadways and drainage ways.	All	Low to Medium	CDBG, Small Muni. Grant, MSDA, USDA Rural Dev.	Unknown	County	Within 5 years	Ongoing /Pending staff availability and funding
P-8	Support the development of a shared geographic data system for land use and site planning.	All	Medium to High	CDBG, HMGP, PDM, USDA Rural Dev , Self-funding	No additional cost	County	2024	Ongoing/Pending staff availability and funding
P-9	Develop a comprehensive development plan.	All	High	CDBG, MSDA	Unknown	County	Within 2 years	Ongoing/Pending staff availability and funding
P-10	Incorporate the hazard mitigation plan into the comprehensive plan.	All	Medium	N/A	No additional cost	County	Concurrent with prep. of Comp Plan	Ongoing/Pending staff availability and funding
Property Protection								
PP-1	Promote alternative construction techniques such as the building of “safe rooms” in new construction and when remodeling existing structures.	HU, TS, TO, TH	Medium	Self-funded	No additional cost	County	Within 5 years	Pending staff availability and funding

Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2019 Action Implementation Status
PP-2	Ensure that structures in floodplain areas are elevated.	FL	High	Self-funded	TBD	County	Within 3 years	The flood damage prevention ordinance ensures that new construction in the floodplain is elevated. Existing floodprone structures are evaluated on a case by case basis pending funding and willingness of property owner.
PP-3	Ensure that new public buildings are designed and built to hurricane resistant buildings codes.	HU, TS, TO, HW	High	Self-funded	No additional cost	County	Within 2 years	Ongoing
PP-4	Continue to retrofit public buildings and other critical facilities to withstand natural hazards.	All	High	CDBG, HMGP, PDM, USDA Rural Dev ,	Unknown	County	Within 2 years; Next round of HMGP funding	Ongoing pending funding availability
PP-5	Ensure secure operation of water wells and wastewater treatment facilities.	All	High	HMGP, USDA Rural Dev., CDBG, Small Muni. Grant	Unknown	County	Within 5 years; Next round of HMGP funding	Ongoing
Natural Resource Protection								
NRP-1	Preserve natural wetlands and riparian areas through acquisition of conservation easements.	HU, TS, FL	Low to Medium	Donation	TBD	MS Land Trust, Land Trust for MS Coastal Plain, County	Within 5 years	Ongoing pending funding availability

Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2019 Action Implementation Status
Emergency Services								
ES-1	Encourage participation by staff and elected officials in voluntary or extracurricular activities related to emergency management, disaster preparedness, civil defense, or other hazard mitigation activities.	All	Medium	Self-funded, MEMA	Low or no cost	MCCEMA	Within 2 years	Ongoing pending staff availability and funding
ES-2	Establish a notification procedure for populations in high risk areas.	All	Medium	Self-funded	TBD	MCCEMA, County	Ongoing/Within 2 years	Ongoing/Pending staff availability and funding
ES-3	Survey the existing emergency shelters and study the feasibility of expanding the capacity of shelters.	All	High	HMGP	TBD	MCCEMA, County	Within 2 years	Ongoing/Pending staff availability and funding
ES-4	Explore potential sites for a new special needs shelter.	TO, HU, TS, FL	High	HMGP	TBD	MCCEMA, County	2024	Ongoing/Pending staff availability and funding
ES-5	Improve disaster communication systems within the county.	All	High	CDBG, HMGP, PDM, USDA Rural Dev , Self-funding	TBD	MCCEMA	Ongoing	Ongoing/Pending staff availability and funding
ES-6	Consider generators for local radio station service areas.	TO, HU, TS	High	HMGP	TBD	MCCEMA	Contingent upon funding	Pending funding
ES-7	Install warning sirens.	TO, HU, TS	High	HMGP	\$350,000-\$400,000	MCCEMA	Contingent upon funding	Pending funding
ES-8	Enhance Central Dispatch.	All	Medium	HMGP	Unknown	MCCEMA, County	Ongoing	Initial upgrades completed in 2018/Ongoing
ES-9	Explore potential to install Reverse 911 system.	All	Low to Medium	HMGP	Unknown	MCCEMA, County	Within 2 years; Contingent upon funding	Ongoing/Pending funding

Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2019 Action Implementation Status
ES-10	Coordinate with neighboring jurisdictions to ensure consistency of evacuation plans.	FL, HU, TS, Others	Medium	Self-funded	TBD	County BOS, MCEMA	Annual Review	Ongoing
ES-11	Enhance identification of evacuation routes through the distribution of MDOT maps.	FL, HU, TS, Others	High	Self-funded	No additional cost	MCEMA	Ongoing	Ongoing
ES-12	Ensure continuity of utility services for public buildings and other critical facilities.	All	High	HMGP	Unknown	County	Within 2 years; Next round of HMGP funding	Ongoing pending funding availability
ES-13	Develop a government services continuity plan.	All	Medium	USDA Rural Dev., CDBG, Small Muni. Grant	Unknown	County	Annual review	Completed/Ongoing
ES-14	Host a meeting to review Marion County Comprehensive Emergency Management Plan.	TT	Medium	Self-funded	No additional cost	County	Annual Review	Ongoing
ES-15	Actively search for and identify funding sources for the enhancement of emergency response abilities of Fire and Sheriff's Departments.	TT	Medium to High	DHS, SAFER, COPS, FIRE, Others	Unknown	County	Ongoing	Ongoing/Pending staff availability and funding
Structural Projects								
SP-1	Address cross-jurisdictional issues related to response, recovery and mitigation on key projects with overlapping boundaries.	HU, TS, FL, RH	Low to Medium	Self-funded	No additional cost	County	Ongoing	Ongoing

ANNEX E: MARION COUNTY

Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2019 Action Implementation Status
SP-2	Generators for all existing and future fire stations and 911 critical facilities including comm tower sites	All	High	CDBG, HMGP, PDM, USDA Rural Dev , Self-funding	TBD	MCEMA, County	2024	New
SP-3	Elevation/Acquisition Rep Loss properties	FL	Medium/High	HMGP, PDM	TBD	MCEMA, County	2024	New
SP-4	Harden existing structures to serve as safe rooms (schools, emergency shelters).	All	High	CDBG, HMGP, PDM, USDA Rural Dev , Self-funding	TBD	MCEMA, County	2024	New
SP-5	Construct community multipurpose facilities/saferooms in vulnerable communities throughout the county.	All	High	CDBG, HMGP, PDM, USDA Rural Dev , Self-funding	TBD	MCEMA, County	2024	New
Public Education and Awareness								
PEA-1	Explore continuing education programs/ opportunities for staff and elected officials.	FL, TH, HU, TS	Medium	Self-funded, MEMA	Low cost	County	Ongoing	Ongoing pending funding

ANNEX E: MARION COUNTY

Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2019 Action Implementation Status
PEA-2	Provide education and outreach materials to citizens and visitors.	All	High	Self-funded	TBD	MCEMA	Annual Review	Ongoing
PEA-3	Encourage the development of Family Disaster Plans.	All	High	Self-funded, COPS, FIRE	Low or no cost	MCEMA	Annual presentations	Ongoing
PEA-4	Expand outreach information to property owners regarding retrofitting and flood-proofing techniques through community workshops, brochures, and newspaper articles.	FL, Multiple	High	Self-funded	TBD	MCEMA, County	Upon request	Ongoing
PEA-5	Encourage businesses to develop business continuity or contingency operating plans.	CH	High	DHS, SAFER, COPS, FIRE, Others	TBD	County	Annual Review	Ongoing
FL = Flood TH = Thunderstorm HU = Hurricane TS = Tropical Storm TO = Tornado BH = Biological Hazards HW = High Winds TT = Transportation and Technological Hazards RH = Roadway Hazards CH = Civil Hazards MCEMA = Marion County Emergency Management Agency County BOS = Marion County Board of Supervisors								

City of Columbia Mitigation Action Plan

Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2019 Action Implementation Status
Prevention								
P-1	Identify high risk areas where hazards are most likely to occur.	All	High	N/A	No additional cost	City	Annual review	Complete. High risk areas are identified in the hazard mitigation plan. Ongoing
P-2	Site-locate vulnerable population on a County-wide map.	Multiple	High	Area Agency on Aging, USDA Rural Dev., COPS, FIRE	Unknown	MCEMA, City	Within 1 year; Upon request	Ongoing – the County is currently working to develop a GIS shapefile that identifies the vulnerable populations in the County.
P-3	Strictly enforce the flood damage prevention ordinance.	FL	High	Self-funded	No additional cost	City Floodplain Administrator	Ongoing	Ongoing
P-4	Strictly enforce subdivision regulations concerning developments in flood hazard areas.	FL	High	Self-funded	No additional cost	County BOS, City	Ongoing	Ongoing
P-5	Continue to maintain and upgrade drainage facilities.	HI, TS, FL, BH	High	Self-funded	Unknown	County BOS, County Road Crews, City	Annual review	Ongoing as funding becomes available
P-6	Consider adoption of a comprehensive drainage plan.	FL, TS, HU	Medium	CDBG, Small Muni. Grant, MSDA, USDA Rural Dev.	Unknown	County, City	Within 5 years	Ongoing/Pending staff availability and funding

Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2019 Action Implementation Status
P-7	Map the easements and rights-of-way of roadways and drainage ways.	All	Low to Medium	CDBG, Small Muni. Grant, MSDA, USDA Rural Dev.	Unknown	City	Within 5 years	Ongoing /Pending staff availability and funding
P-8	Support the development of a shared geographic data system for land use and site planning.	All	Medium to High	Self-funded	No additional cost	County, City	2024	Ongoing/Pending staff availability and funding
P-9	Develop a comprehensive development plan.	All	High	CDBG, MSDA	Unknown	County, City	Within 2 years	Ongoing/Pending staff availability and funding
P-10	Incorporate the hazard mitigation plan into the comprehensive plan.	All	Medium	N/A	No additional cost	County, City	Concurrent with prep. of Comp Plan	Ongoing/Pending staff availability and funding
Property Protection								
PP-1	Promote alternative construction techniques such as the building of “safe rooms” in new construction and when remodeling existing structures.	HU, TS, TO, TH	Medium	Self-funded	No additional cost	City	Within 5 years	Pending staff availability and funding
PP-2	Ensure that structures in floodplain areas are elevated.	FL	High	Self-funded	No additional cost	County, City	Within 3 years	The flood damage prevention ordinance ensures that new construction in the floodplain is elevate. Existing floodprone structures are evaluated on a case by case basis pending funding and willingness of property owner.

Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2019 Action Implementation Status
PP-3	Ensure that new public buildings are designed and built to hurricane resistant buildings codes.	HU, TS, TO, HW	High	Self-funded	No additional cost	City	Within 2 years	Ongoing
PP-4	Continue to retrofit public buildings and other critical facilities to withstand natural hazards.	All	High	HMGP	Unknown	City	Within 2 years; Next round of HMGP funding	Ongoing pending funding availability
PP-5	Ensure secure operation of water wells and wastewater treatment facilities.	All	High	HMGP, USDA Rural Dev., CDBG, Small Muni. Grant	Unknown	City	Within 5 years; Next round of HMGP funding	Ongoing
Natural Resource Protection								
NRP-1	Preserve natural wetlands and riparian areas through acquisition of conservation easements.	HU, TS, FL	Low to Medium	Donation	Low or no cost	MS Land Trust, Land Trust for MS Coastal Plain, County	Within 5 years	Ongoing pending funding availability
Emergency Services								
ES-1	Encourage participation by staff and elected officials in voluntary or extracurricular activities related to emergency management, disaster preparedness, civil defense, or other hazard mitigation activities.	All	Medium	Self-funded, MEMA	Low or no cost	MCEMA	Within 2 years	Ongoing pending staff availability and funding
ES-2	Establish a notification procedure for populations in high risk areas.	All	Medium	Self-funded	No additional cost	MCEMA, City	Ongoing/Within 2 years	Ongoing/Pending staff availability and funding
ES-3	Survey the existing emergency shelters and study the feasibility of expanding the capacity of shelters.	All	High	HMGP	Unknown	MCEMA, City	Within 2 years	Ongoing/Pending staff availability and funding

ANNEX E: MARION COUNTY

Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2019 Action Implementation Status
ES-4	Explore potential sites for a new special needs shelter.	TO, HU, TS, FL	High	HMGP	Unknown	MCEMA, City	2024	Ongoing/Pending staff availability and funding
ES-5	Improve disaster communication systems within the county.	All	High	Unknown	Unknown	MCEMA	Ongoing	Ongoing/Pending staff availability and funding
ES-6	Consider generators for local radio station service areas.	TO, HU, TS	High	HMGP	Unknown	MCEMA	Contingent upon funding	Pending funding
ES-7	Install warning sirens.	TO, HU	High	HMGP	Unknown	MCEMA	Contingent upon funding	Pending funding
ES-8	Enhance Central Dispatch.	All	Medium	HMGP	Unknown	MCEMA, City	Ongoing	Initial upgrades completed in 2018/Ongoing
ES-9	Explore potential to install Reverse 911 system.	All	Low to Medium	HMGP	Unknown	MCEMA, City	Within 2 years; Contingent upon funding	Ongoing/Pending funding
ES-10	Coordinate with neighboring jurisdictions to ensure consistency of evacuation plans.	FL, HU, TS, Others	Medium	Self-funded	No additional cost	County BOS, MCEMA, City	Annual Review	Ongoing
ES-11	Enhance identification of evacuation routes through the distribution of MDOT maps.	FL, HU, TS, Others	High	Self-funded	No additional cost	MCEMA	Ongoing	Ongoing
ES-12	Ensure continuity of utility services for public buildings and other critical facilities.	All	High	HMGP	Unknown	City	Within 2 years; Next round of HMGP funding	Ongoing pending funding availability
ES-13	Develop a government services continuity plan.	All	Medium	USDA Rural Dev., CDBG, Small Muni. Grant	Unknown	City	Annual review	Completed/Ongoing
ES-14	Host a meeting to review Marion County Comprehensive Emergency Management Plan.	TT	Medium	Self-funded	No additional cost	City	Annual Review	Ongoing

ANNEX E: MARION COUNTY

Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2019 Action Implementation Status
ES-15	Actively search for and identify funding sources for the enhancement of emergency response abilities of Fire and Sheriff's Departments.	TT	Medium to High	DHS, SAFER, COPS, FIRE, Others	Unknown	County, City	Ongoing	Ongoing/Pending staff availability and funding
Structural Projects								
SP-1	Address cross-jurisdictional issues related to response, recovery and mitigation on key projects with overlapping boundaries.	HU, TS, FL, RH	Low to Medium	Self-funded	No additional cost	City	Ongoing	Ongoing
SP-2	Generators for all existing and future fire stations and 911 critical facilities including comm tower sites	All	High	CDBG, HMGP, PDM, USDA Rural Dev , Self-funding	TBD	MCEMA, County	2024	New
SP-3	Elevation/Acquisition Rep Loss properties	FL	Medium/High	HMGP, PDM	TBD	MCEMA, County	2024	New
SP-4	Harden existing structures to serve as safe rooms (schools, emergency shelters).	All	High	CDBG, HMGP, PDM, USDA Rural Dev , Self-funding	TBD	MCEMA, County	2024	New
SP-5	Construct community multipurpose facilities/saferooms in vulnerable communities throughout the county.	All	High	CDBG, HMGP, PDM, USDA Rural Dev , Self-funding	TBD	MCEMA, County	2024	New
Public Education and Awareness								
PEA-1	Explore continuing education programs/ opportunities for staff and elected officials.	FL, TH, HU, TS	Medium	Self-funded, MEMA	Low cost	City	Ongoing	Ongoing pending funding

ANNEX E: MARION COUNTY

Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2019 Action Implementation Status
PEA-2	Provide education and outreach materials to citizens and visitors.	All	High	Self-funded	No cost	MCEMA	Annual Review	Ongoing
PEA-3	Encourage the development of Family Disaster Plans.	All	High	Self-funded, COPS, FIRE	Low or no cost	MCEMA	Annual presentations	Ongoing
PEA-4	Explore continuing education programs/ opportunities for staff and elected officials.	FL, TH, HU, TS	High	Self-funded	No additional cost	MCEMA, City	Upon request	Ongoing
PEA-5	Provide education and outreach materials to citizens and visitors.	All	High	DHS, SAFER, COPS, FIRE, Others	Unknown	City	Annual Review	Ongoing
FL = Flood TH = Thunderstorm HU = Hurricane TS = Tropical Storm TO = Tornado BH = Biological Hazards HW = High Winds TT = Transportation and Technological Hazards RH = Roadway Hazards CH = Civil Hazards MCEMA = Marion County Emergency Management Agency County BOS = Marion County Board of Supervisors								

ⁱ USGS. Landslide Hazard, Retrieved August 2019 from, <https://www.usgs.gov/natural-hazards/landslide-hazards/science/rainfall-induced-landslides>

Annex F

Perry County

This annex includes jurisdiction-specific information for Perry County and its participating municipalities. It consists of the following five subsections:

- ❖ F.1 Perry County Community Profile
- ❖ F.2 Perry County Risk Assessment
- ❖ F.3 Perry County Vulnerability Assessment
- ❖ F.4 Perry County Capability Assessment
- ❖ F.5 Perry County Mitigation Strategy

F.1 PERRY COUNTY COMMUNITY PROFILE

F.1.1 Geography and the Environment

Perry County is located in southeastern Mississippi. It comprises three towns, the Town of Beaumont, the Town of New Augusta, and the Town of Richton, as well as several small unincorporated communities. An orientation map is provided as **Figure F.1**.

The county is located in the long-leaf pine belt and is rural in nature with commercial forests covering 84 percent of the land area. The principal streams are the Leaf River, Black Creek, and both their numerous tributaries. The prevailing timber found in Perry County is the long leaf pine, but on the rivers and creeks, oaks, hickory, poplar, magnolia, gums, and cypress are found. The total area of the county is 650 square miles, 3 square miles of which is water area.

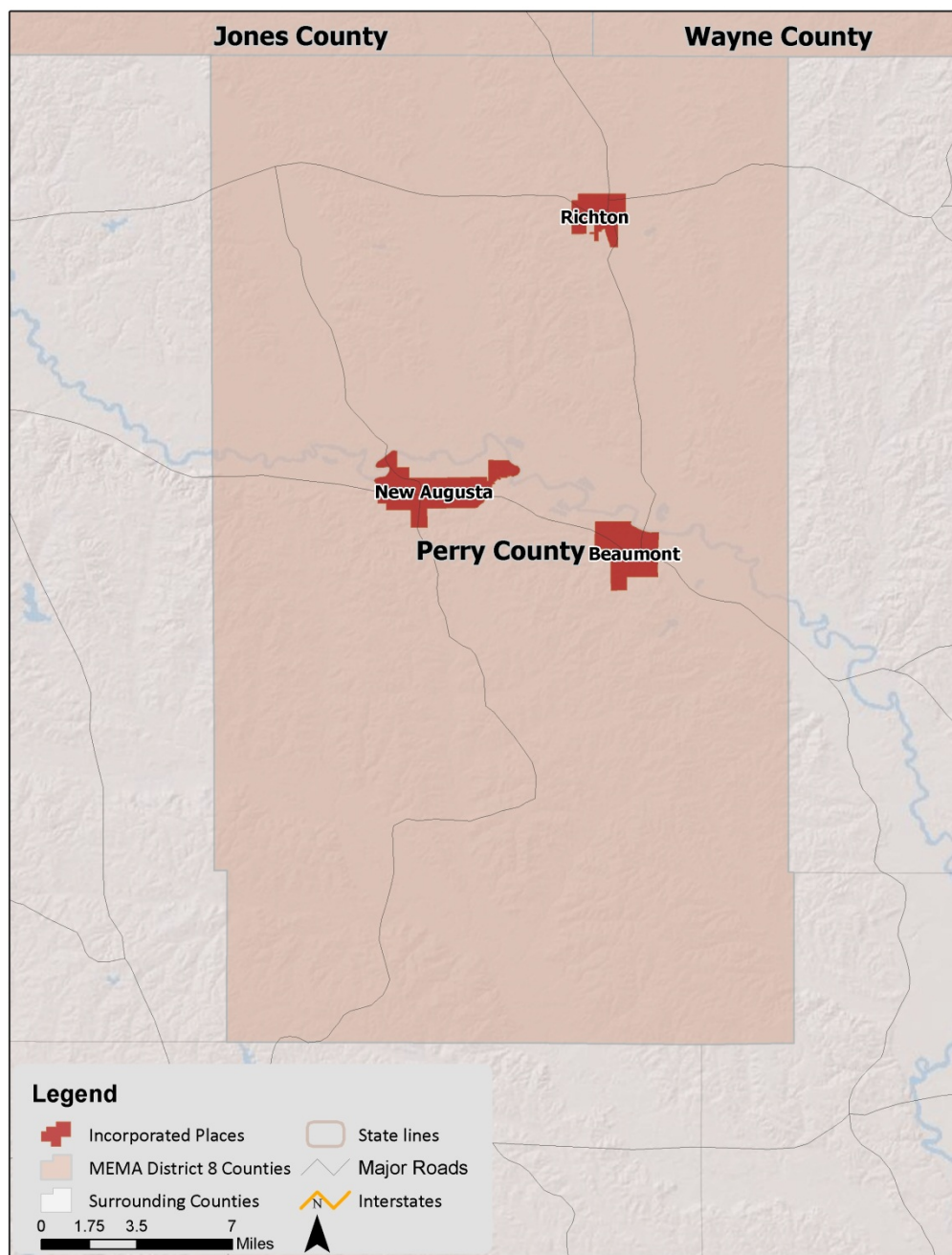
In Perry County, the summers are long, hot, and oppressive; the winters are short and cold; and it is wet and partly cloudy year-round. Over the course of the year, the temperature typically varies from 40°F to 92°F and is rarely below 25°F or above 97°F.

The hot season lasts for 4.2 months, from May 20 to September 26, with an average daily high temperature above 85°F. The hottest day of the year is August 10, with an average high of 92°F and low of 72°F. The cool season lasts for 2.8 months, from December 1 to February 23, with an average daily high temperature below 66°F. The coldest day of the year is January 17, with an average low of 40°F and high of 60°F.

A wet day is one with at least 0.04 inches of liquid or liquid-equivalent precipitation. The chance of wet days in New Augusta varies significantly throughout the year. The wetter season lasts 3.0 months, from May 30 to August 29, with a greater than 38% chance of a given day being a wet day. The chance of a wet day peaks at 56% on July 26. The drier season lasts 9.0 months, from August 29 to May 30. The smallest chance of a wet day is 20% on October 9. Among wet days, we distinguish between those that experience rain alone, snow alone, or a mixture of the two. Based on this categorization, the most common form of precipitation throughout the year is rain alone, with a peak probability of 56% on July 26.

Rain falls throughout the year in New Augusta. The most rain falls during the 31 days centered around February 15, with an average total accumulation of 5.4 inches. The least rain falls around October 6, with an average total accumulation of 3.1 inches.

FIGURE F.1: PERRY COUNTY ORIENTATION MAP



F.1.2 Population and Demographics

According to the 2010 Census, Perry County has a population of 12,250 people. The county has seen a slight growth in population between 2000 and 2010, and the population density is 19 people per square mile. However, between the last official Census and the proposed estimates, there has been a decline. Per the Census Reports, in 2017, Perry County had a population of 12,032 which is a 1.04 percent decline. However, it is interesting that two of the municipalities have gained population since the last Census. Beaumont and New Augusta have both seen increases in population. The household income is \$35,374, which grew 1.73 percent. Population counts from the US Census Bureau for 1990, 2000, and 2010 for the county and both of the participating jurisdictions are presented in **Table F.1**. Estimates for 2017 are also included.

TABLE F.1: POPULATION COUNTS FOR PERRY COUNTY

Jurisdiction	1990 Census Population	2000 Census Population	2010 Census Population	% Change 2000-2010	Estimated 2017 Census Population
Perry County	10,865	12,138	12,250	0.9%	12,032
Beaumont	1,054	977	951	-2.7%	1,034
New Augusta	668	715	644	-9.9%	695
Richton	1,034	1,038	1,068	2.9%	952

Source: US Census Bureau

Based on the 2010 Census, the median age of residents of Perry County rose from 38.7 years to 40.7 years. The racial characteristics of the county are presented in **Table F.2** and will remain the same as the census data has not been officially updated. Due to the population decrease, the racial characteristics differ slightly. The population is 19.8 percent for black or African American persons, 1.43 percent Hispanic or Latino. Whites make up the majority of the population in the county, accounting for 77.4 percent of the population.

TABLE F.2: DEMOGRAPHICS OF PERRY COUNTY

Jurisdiction	White Persons, Percent (2010)	Black Persons, Percent (2010)	American Indian or Alaska Native, Percent (2010)	Other Race, Percent (2010)	Persons of Hispanic Origin, Percent (2010) *
Perry County	78.2%	20.0%	0.3%	1.5%	1.0%
Beaumont	51.5%	47.0%	0.5%	0.9%	0.1%
New Augusta	55.7%	42.7%	0.3%	1.2%	0.9%
Richton	67.0%	31.0%	0.2%	1.8%	1.0%

*Hispanics may be of any race, so also are included in applicable race categories

Source: US Census Bureau

F.1.3 Housing

According to the 2010 US Census, there are 5,519 housing units in Perry County, the majority of which are single family homes or mobile homes. Per 2018 estimates, the total number of housing units increased

to 5,653 units. The median home value is \$81,100, which also increased by at least 4.74 percent. Housing information for the county and three towns is presented in **Table F.3**. As shown in the table, Richton has a significantly lower percentage of seasonal housing units compared to the other two towns and unincorporated county.

TABLE F.3: HOUSING CHARACTERISTICS OF PERRY COUNTY

Jurisdiction	Housing Units (2000)	Housing Units (2010)	Seasonal Units, Percent (2010)	Median Home Value (2006-2010)	Housing Units (2018)	Median Home Value (2018)
Perry County	5,107	5,519	5.0%	\$82,200	5,653	\$81,100
Beaumont	448	461	4.3%	\$53,100	461	\$56,122
New Augusta	292	319	7.5%	\$69,200	337	\$82,197
Richton	497	463	0.9%	\$67,800	463	\$80,357

Source: US Census Bureau

F.1.4 Infrastructure

TRANSPORTATION

Major highways in the county are US Highway 98, running east and west, and State Highways 15, 29, and 42. These major arteries provide adequate access to regional urban centers, including Hattiesburg to the West and Mobile, Alabama to the southeast.

The Richton/Perry County Airport provides limited local service and regional air travel connections are available through Pine Belt Regional Airport in the Laurel/Hattiesburg area.

Rail service to the area is provided by Canadian, National/Illinois, and Central Railroads, but there is no passenger service offered at this time.

UTILITIES

Electrical power in Perry County is provided by several sources, primarily Dixie Electric Power Association (EPA), Singing River EPA, Mississippi Power Company, Pearly River Valley EPA, and South Mississippi EPA.

The unincorporated areas of the county are not served by centralized water or wastewater systems. Each site and/or structure must provide its own septic system. Large portions of the county are served by various rural water associates, but some areas not served by any water systems. In these areas, residences, businesses, and school area served by private wells. Water and sewer services are provided to residents of the Towns of Beaumont and Richton by a system of water wells and wastewater lagoons.

COMMUNITY FACILITIES

There are a number of buildings and community facilities located throughout Perry County. According to the data collected for the vulnerability assessment (Section 6.4.1), there are 1 fire station, 2 police stations, and 6 public schools located within the county.

There is one hospital located in Perry County. Perry County General Hospital is a 22-bed medical-surgical hospital located in the Town of Richton.

Recreational opportunities in Perry County are enhanced by the proximity of the De Soto National Forest, Lake Perry, Leaf River Game Management Area, Moody's Landing, Janice Landing, Fairley Bridge Landing, Cypress Creek Landing, and Sportsman's Lake. The county also has ball fields, camping, fishing, hunting, swimming, tennis, water sports, and a State Park. Golf, tennis, and ball fields are available in the Town of Richton, and Beaumont and New Augusta both have ball fields and tennis courts as well.

F.1.5 Land Use

Many areas of Perry County are undeveloped or sparsely developed due to the county's location just off the Gulf Coast and the conservation of land in state and national parks. There are a few incorporated municipalities located throughout the region, and these areas are where the region's population is generally concentrated. The incorporated areas are also where many businesses, commercial uses, and

institutional uses are located. Land uses in the balance of the county generally consist of rural residential development, agricultural uses, and recreational areas.

F.1.6 Employment and Industry

According to the Mississippi Employment Security Commission, in 2018, Perry County had an average annual employment of 2,220 workers and an average unemployment rate of 6.0 percent. According to the MESC, in 2018, Government Agencies employed 26.6 percent of the workforce followed by Manufacturing (25.7 %) and Health Care and Social Assistance (14.9%). The average annual wage in Perry County was \$35,374.

F.2 PERRY COUNTY RISK ASSESSMENT

This subsection includes hazard profiles for each of the significant hazards identified in Section 4: *Hazard Identification* as they pertain to Perry County. Each hazard profile includes a description of the hazard's location and extent, notable historical occurrences, and the probability of future occurrences. Additional information can be found in Section 5: *Hazard Profiles*.

F.2.1 Flood

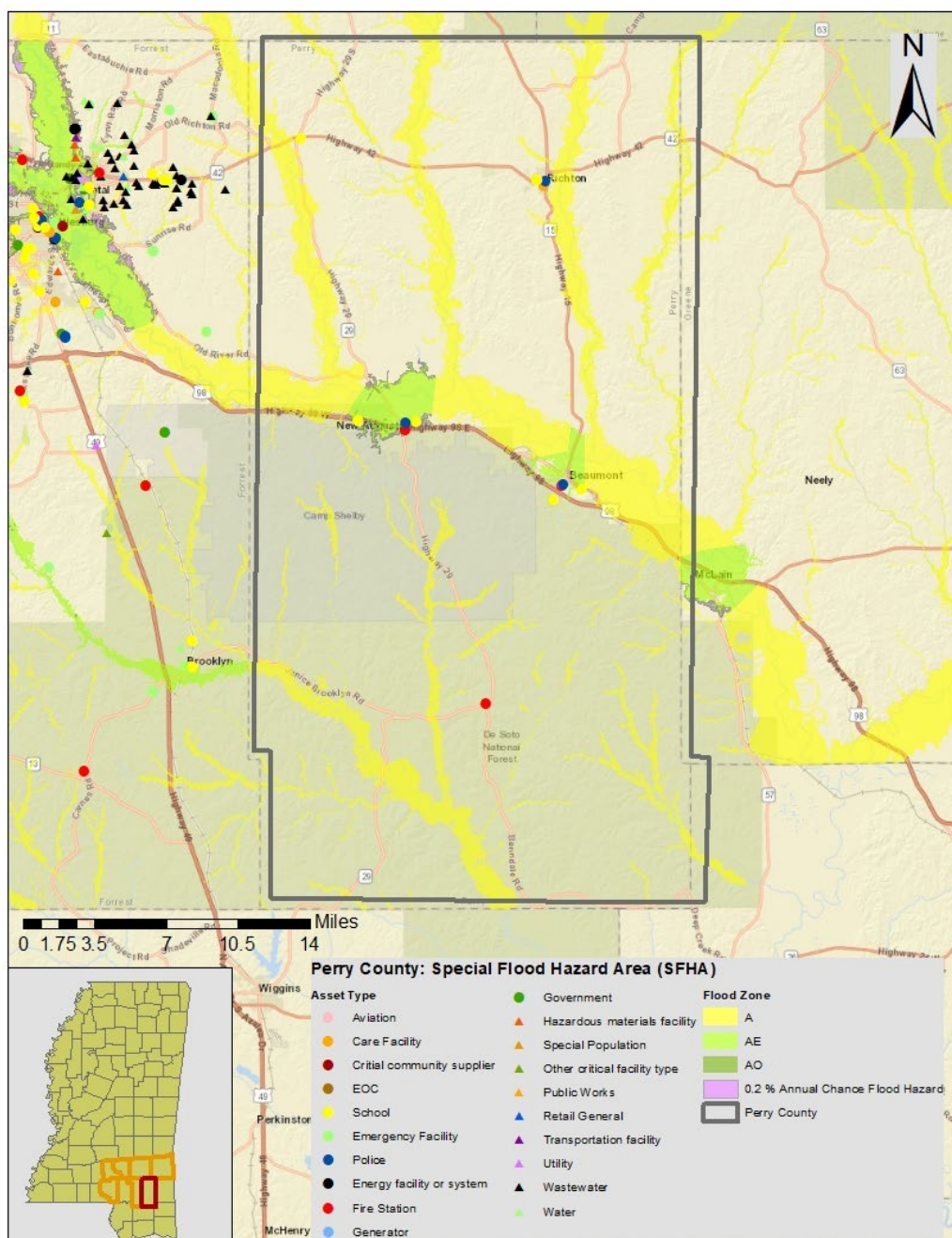
LOCATION AND SPATIAL EXTENT

There are areas in Perry County that are susceptible to flood events. Special flood hazard areas in the county were mapped using Geographic Information System (GIS) and FEMA Digital Flood Insurance Rate Maps (DFIRM).¹ This includes Zone A (1-percent annual chance floodplain), Zone AE (1-percent annual chance floodplain with elevation), and the 0.2-percent annual chance floodplain). According to GIS analysis, of the 652 square miles that make up Perry County, there are 115 square miles of land in zones A and AE (1-percent annual chance floodplain/100-year floodplain) and 1 square mile of land in the 0.2-percent annual chance floodplain (500-year floodplain).

These flood zone values account for 17.8 percent of the total land area in Perry County. It is important to note that while FEMA digital flood data is recognized as best available data for planning purposes, it does not always reflect the most accurate and up-to-date flood risk. Flooding and flood-related losses often do occur outside of delineated special flood hazard areas.

¹ The county-level DFIRM data used for Perry County were updated in 2011.

FIGURE F.2: SPECIAL FLOOD HAZARD AREAS IN PERRY COUNTY



Source: Federal Emergency Management Agency

HISTORICAL OCCURRENCES

Floods resulted in three disaster declarations in Perry County in 1974, 1983, and 1990.² Information from the National Centers for Environmental Information was used to ascertain historical flood events. The

²A complete listing of historical disaster declarations can be found in Section 4: Hazard Identification.

National Centers for Environmental Information reported a total of 39 events in Perry County since 1995.³ A summary of these events is presented in **Table F.4**. These events accounted for almost \$118,000 in property damage in the county. Specific information on flood events, including date, type of flooding, and deaths and injuries, can be found in **Table F.5**.

TABLE F.4: SUMMARY OF FLOOD OCCURRENCES IN PERRY COUNTY

Location	Number of Occurrences	Deaths / Injuries	Property Damage (2013)
Beaumont	1	0/0	\$0
New Augusta	2	0/0	\$50,000
Richton	5	0/0	\$16,883
Unincorporated Area	21	0/0	\$1,950,914
PERRY COUNTY TOTAL	31	0/0	\$2,017,797

Source: National Centers for Environmental Information

TABLE F.5: HISTORICAL FLOOD EVENTS IN PERRY COUNTY

Location	Date	Type	Deaths / Injuries	Property Damage*
Beaumont				
Beaumont	22-OCT-07	FLASH FLOOD	0/0	\$0
New Augusta				
New Augusta	11-MAR-16	FLASH FLOOD	0/0	\$50,000
New Augusta	09-AUG-17	FLASH FLOOD	0/0	\$0
Richton				
Richton	28-JUN-00	FLASH FLOOD	0/0	\$0
Richton	13-APR-09	FLASH FLOOD	0/0	\$16,883
Richton	04-FEB-10	FLASH FLOOD	0/0	\$0
Richton	09-MAR-11	FLASH FLOOD	0/0	\$0
Richton	09-MAR-11	FLASH FLOOD	0/0	\$0
Unincorporated Area				
Southeast Section	18-DEC-95	FLASH FLOOD	0/0	\$1,657
Southwest portion	26-JAN-98	FLASH FLOOD	0/0	\$1,549
Countywide	28-APR-98	FLASH FLOOD	0/0	\$46,467
Countywide	03-MAR-01	FLASH FLOOD	0/0	\$42,773
South Portion	28-OCT-02	FLASH FLOOD	0/0	\$0
Countywide	30-JUN-03	FLASH FLOOD	0/0	\$0
Janice	12-MAY-04	FLASH FLOOD	0/0	\$0
Countywide	29-AUG-05	FLASH FLOOD	0/0	\$0
Janice	21-DEC-06	FLASH FLOOD	0/0	\$6,149
RUNNELSTOWN	05-APR-08	FLASH FLOOD	0/0	\$0
Janice	01-SEP-08	FLASH FLOOD	0/0	\$2,319
MAHNED	14-DEC-09	FLASH FLOOD	0/0	\$0
RUNNELSTOWN	09-MAR-11	FLASH FLOOD	0/0	\$0
Janice	22-MAR-12	FLASH FLOOD	0/0	\$0
Janice	22-MAR-12	FLASH FLOOD	0/0	\$0

³ These events are only inclusive of those reported by NCEI. It is likely that additional occurrences have occurred and have gone unreported.

Location	Date	Type	Deaths / Injuries	Property Damage*
Janice	22-MAR-12	FLASH FLOOD	0/0	\$0
Tallahala	11-MAR-16	FLASH FLOOD	0/0	\$50,000
Tallahala	14-APR-16	FLASH FLOOD	0/0	\$0
RUNNELSTOWN	14-APR-16	FLASH FLOOD	0/0	\$0
Hintonville	27-DEC-18	FLASH FLOOD	0/0	\$1,800,000

Source: National Centers for Environmental Information

HISTORICAL SUMMARY OF INSURED FLOOD LOSSES

Recently, FEMA issued a directive that prevents states or local governments from sharing NFIP information such as rep loss or severe rep loss data with third parties. Third parties are considered as consultants, contractors, etc. As a result, for continuity of information so that the reader will have an idea of the historical occurrences along with the corresponding damage amounts, the decision was made to leave the existing information in the plan.

According to FEMA flood insurance policy records as of March 2013, there have been 67 flood losses reported in Perry County through the National Flood Insurance Program (NFIP) since 1978, totaling nearly \$259,000 in claims payments. Currently, this remains the best available data. A summary of these figures for the county is provided in **Table F.6**. It should be emphasized that these numbers include only those losses to structures that were insured through the NFIP policies, and for losses in which claims were sought and received. It is likely that many additional instances of flood loss in Perry County were either uninsured, denied claims payment, or not reported.

TABLE F.6: SUMMARY OF INSURED FLOOD LOSSES IN PERRY COUNTY

Location	Flood Losses	Claims Payments
Beaumont	16	\$32,703
New Augusta	12	\$51,683
Richton	1	\$42,415
Unincorporated Area	38	\$131,996
PERRY COUNTY TOTAL	67	\$258,797

Source: FEMA, NFIP

REPETITIVE LOSS PROPERTIES

No updates to this section can be provided at this time. Information normally used to update this section is not currently accessible. As a result, this information will remain the same for historical purposes.

As of May 2013, there are 11 non-mitigated repetitive loss properties located in Perry County, which accounted for 26 losses and just over \$116,000 in claims payments under the NFIP. The average claim amount for these properties is \$4,462. All 11 of the properties are single family residential. Without mitigation these properties will likely continue to experience flood losses. **Table F.7** presents detailed information on repetitive loss properties and NFIP claims and policies for Perry County. Currently, this remains the best available data.

TABLE F.7: REPETITIVE LOSS PROPERTIES IN PERRY COUNTY

Location	Number of Properties	Types of Properties	Number of Losses	Building Payments	Content Payments	Total Payments	Average Payment
Beaumont	2	2 single family	4	\$10,038	\$650	\$10,688	\$2,672
New Augusta	3	3 single family	6	\$33,073	\$186	\$33,259	\$5,543
Richton	0	--	0	\$0	\$0	\$0	\$0
Unincorporated Area	6	6 single family	16	\$65,023	\$7,031	\$72,053	\$4,503
PERRY COUNTY TOTAL	11		26	\$108,134	\$7,867	\$116,001	\$4,462

Source: National Flood Insurance Program

PROBABILITY OF FUTURE OCCURRENCES

Due to the unpredictable nature of this hazard, flood events will remain a threat in Perry County, and the probability of future occurrences will remain likely (between 10 and 100 percent annual probability). The participating jurisdictions and unincorporated areas have risk to flooding, though not all areas will experience flood. The probability of future flood events based on magnitude and according to best available data is illustrated in the figures above, which indicates those areas susceptible to the 1-percent annual chance flood (100-year floodplain) and the 0.2-percent annual chance flood (500-year floodplain).

It can be inferred from the floodplain location maps, previous occurrences, and repetitive loss properties that risk varies throughout the county. For example, the northern half of the county has more floodplain and thus a higher risk of flood than the southern half of the county. Flood is not the greatest hazard of concern but will continue to occur and cause damage. Therefore, mitigation actions may be warranted, particularly for repetitive loss properties.

F.2.2 Erosion

LOCATION AND SPATIAL EXTENT

Erosion in Perry County is typically caused by flash flooding events. Unlike coastal areas, areas of concern for erosion in Perry County are primarily rivers and streams. Generally, vegetation helps to prevent erosion in the area, and it is not an extreme threat to any of the participating counties and jurisdictions. No areas of concern were reported by the planning committee.

HISTORICAL OCCURRENCES

Several sources were vetted to identify areas of erosion in Perry County. This includes searching local newspapers, interviewing local officials, and reviewing previous hazard mitigation plans. No historical erosion occurrences were found in these sources.

PROBABILITY OF FUTURE OCCURRENCES

Erosion remains a natural, dynamic, and continuous process for Perry County, and it will continue to occur. The annual probability level assigned for erosion is possible (between 1 and 10 percent annually).

F.2.3 Dam Failure

LOCATION AND SPATIAL EXTENT

According to the Mississippi Division of Environmental Quality, one dam’s status was elevated to a high hazard dam. The high hazard dam is listed by name in **Table F.8**. According to a consensus of local government officials and the Regional Hazard Mitigation Council, a majority of these dams would not pose a major threat in a breach or failure occurrence⁴.

TABLE F.8: PERRY COUNTY HIGH HAZARD DAMS

Dam Name	Hazard Potential
Perry County	
DRY CREEK WATERSHED STRUCTURE 3 DAM	High

Source: Mississippi Division of Environmental Quality

HISTORICAL OCCURRENCES

There is no record of dam breaches in Perry County. However, several breach scenarios in the county could be catastrophic.

PROBABILITY OF FUTURE OCCURRENCES

Given the current dam inventory and historic data, a dam breach is unlikely (less than 1 percent annual probability) in the future. However, as has been demonstrated in the past, regular monitoring is necessary to prevent these events.

F.2.4 Winter Storm and Freeze

LOCATION AND SPATIAL EXTENT

Nearly the entire continental United States is susceptible to winter storm and freeze events. Some ice and winter storms may be large enough to affect several states, while others might affect limited, localized areas. The degree of exposure typically depends on the normal expected severity of local winter weather. Perry County is not typically affected by major severe winter weather conditions and seldom receives extremely devastating winter weather, even during the winter months. Given the atmospheric nature of the hazard the entire county has uniform exposure to a winter storm.

⁴ The list of high hazard dams obtained from the Mississippi Division of Environmental Quality was reviewed and amended by local officials to the best of their knowledge.

HISTORICAL OCCURRENCES

According to the National Centers for Environmental Information, there have been a total of seven recorded winter storm events in Perry County since 2000 (**Table F.9**).⁵ These events were reported to cause no damages. Detailed information on the recorded winter storm events can be found in **Table F.10**.⁶

TABLE F.9: SUMMARY OF WINTER STORM EVENTS IN PERRY COUNTY

Location	Number of Occurrences	Deaths / Injuries	Property Damage
Perry County	7	0/0	\$0

Source: National Centers for Environmental Information

TABLE F.10: HISTORICAL WINTER STORM IMPACTS IN PERRY COUNTY

Location	Date	Type	Deaths / Injuries	Property Damage*
Beaumont				
None Reported	--	--	--	--
New Augusta				
None Reported	--	--	--	--
Richton				
None Reported	--	--	--	--
Unincorporated Area				
PERRY COUNTY	27-JAN-00	SLEET	0/0	\$0
PERRY COUNTY	01-JAN-01	WINTER STORM	0/0	\$0
PERRY COUNTY	01-JAN-02	WINTER STORM	0/0	\$0
PERRY COUNTY	11-DEC-08	WINTER WEATHER	0/0	\$0
PERRY COUNTY	12-FEB-10	WINTER STORM	0/0	\$0
PERRY COUNTY	08-DEC-17	HEAVY SNOW	0/0	\$0
PERRY COUNTY	16-JAN-18	WINTER STORM	0/0	\$0

Source: National Centers for Environmental Information

There have been several severe winter weather events in Perry County. The text below describes one of the major events and associated impacts on the county. Similar impacts can be expected with severe winter weather.

January 2002 Winter Storm

A winter storm produced heavy snow across portions of southeast Mississippi. The heaviest snow recorded during the storm was four to four- and one-half inches. Icy bridges made traveling across the region very treacherous. As a result, several accidents occurred with two fatalities in Jones County.

Winter storms throughout the county have several negative externalities including hypothermia, cost of snow and debris cleanup, business and government service interruption, traffic accidents, and power

⁵ These ice and winter storm events are only inclusive of those reported by the National Centers for Environmental Information (NCEI). It is certain that additional winter storm conditions have affected Perry County.

⁶ The dollar amount of damages provided by NCEI is divided by the number of affected counties to reflect a damage estimate for the county.

outages. Furthermore, citizens may resort to using inappropriate heating devices that could to fire or an accumulation of toxic fumes.

December 2017 Winter Storm

An extremely rare early season snow event occurred across the central Gulf coast late in the day on the 8th into the morning of the 9th. An area of low pressure moved northeast off the Gulf and as the low moved east and pulled a cold air mass into the area, rain changed to a mix and eventually all snow. It was the earliest snow event ever recorded in the area. Storm total snow amounts of 3 to 4 inches in Richton, 2 inches in Beaumont and 2 inches in New Augusta.

PROBABILITY OF FUTURE OCCURRENCES

Winter storm events will continue to occur in Perry County. According to historical information, the annual probability is possible (between 1 and 10 percent).

FIRE-RELATED HAZARDS

F.2.5 Drought

LOCATION AND SPATIAL EXTENT

Drought and heat waves typically cover a large area and cannot be confined to any geographic or political boundaries. Furthermore, it is assumed that Perry County would be uniformly exposed to drought and heat waves, making the spatial extent potentially widespread. It is also notable that drought and extreme heat conditions typically do not cause significant damage to the built environment but may exacerbate wildfire conditions.

HISTORICAL OCCURRENCES

Drought

According to the U.S. Drought Monitor, Perry County had drought levels (including abnormally dry) in all of the last eighteen years (2000-2018). **Table F.11** shows the most severe drought classification for each year, according to U.S. Drought Monitor classifications. It should be noted that the U.S. Drought Monitor also estimates what percentage of the county is in each classification of drought severity. For example, the most severe classification reported may be exceptional, but a majority of the county may actually be in a less severe condition.

TABLE F. 11: HISTORICAL DROUGHT OCCURRENCES IN PERRY COUNTY

Abnormally Dry	Moderate Drought	Severe Drought	Extreme Drought	Exceptional Drought
				
	Perry County			
2000	EXCEPTIONAL			
2001	MODERATE			
2002	SEVERE			
2003	ABNORMAL			
2004	ABNORMAL			
2005	ABNORMAL			
2006	EXTREME			
2007	SEVERE			
2008	MODERATE			
2009	MODERATE			
2010	SEVERE			
2011	EXCEPTIONAL			
2012	MODERATE			
2013	ABNORMAL			
2014	SEVERE			
2015	MODERATE			
2016	EXTREME			
2017	ABNORMAL			
2018	ABNORMAL			
2019	ABNORMAL			

Source: U.S. Drought Monitor

There were at least two reported drought events for Perry County according to the National Centers for Environmental Information. However, neither event was significant enough to cause any crop damages.

Heat Wave

The National Centers for Environmental Information was used to determine historical heat wave occurrences in the county.

Summer of 2000 – Hot temperatures persisted from July to September across the South and Plains. Known as the Summer of 2000 Heat Wave, high temperatures commonly peaked over 100 degrees. As shown in **Figure 5.2** below, there were several days over 90 degree than the typical average. This was the fourth warmest July-August on record. In Beaumont, the temperature was 100 degrees or higher eleven days during the month with the hottest being 105 degrees. In Richton the temperature was 100 degrees or higher three days during the month with the hottest being 102 degrees.

August 2007 – A heat wave gripped most of the area with the warmest temperatures since 2000. It lasted from August 5th to the 16th.

PROBABILITY OF FUTURE OCCURRENCES

Drought

Based on historical occurrence information, it is assumed that all of Perry County has a probability level of highly likely (100 percent annual probability) for future drought events. However, the extent (or magnitude) of drought and the amount of geographic area covered by drought, varies with each year. Historic information indicates that there is a much lower probability for extreme, long-lasting drought conditions.

Heat Wave

Based on historical occurrence information, it is assumed that all of Perry County has a probability level of highly likely (100 percent annual probability) for future heat wave events.

F.2.6 Wildfire

LOCATION AND SPATIAL EXTENT

The entire county is at risk to a wildfire occurrence. However, several factors such as drought conditions or high levels of fuel on the forest floor, may make a wildfire more likely. Furthermore, areas in the urban-wildland interface are particularly susceptible to fire hazard as populations abut formerly undeveloped areas. The Fire Occurrence Areas in the figure below give an indication of historic location.

HISTORICAL OCCURRENCES

Based on data from the Mississippi Forestry Commission from 2008 to 2018, Perry County experiences an average of 25.4 wildfires annually which burn an average of 348.7 acres per year. The data indicates that most of these fires are small, averaging twelve acres per fire. **Table F.12** provides a summary of wildfire occurrences in Perry County and **Table F.13** lists the number of reported wildfire occurrences in the county between the years 2008 and 2018.

TABLE F.12: SUMMARY TABLE OF ANNUAL WILDFIRE OCCURRENCES (2008 -2018) *

	Perry County
Average Number of Fires per year	25.4
Average Number of Acres Burned per year	348.7
Average Number of Acres Burned per fire	13.7

*These values reflect averages over a 10 year period.

Source: Mississippi Forestry Commission

TABLE F.13: HISTORICAL WILDFIRE OCCURRENCES IN PERRY COUNTY

Year	2008	2010	2011	2012	2013	2014	2015	2016	2017	2018
Perry County										
Number of Fires	28	39	48	8	22	42	11	26	21	9

Number of Acres Burned	451	379	483	13	181	634	47	544	540	215
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Source: Mississippi Forestry Commission

PROBABILITY OF FUTURE OCCURRENCES

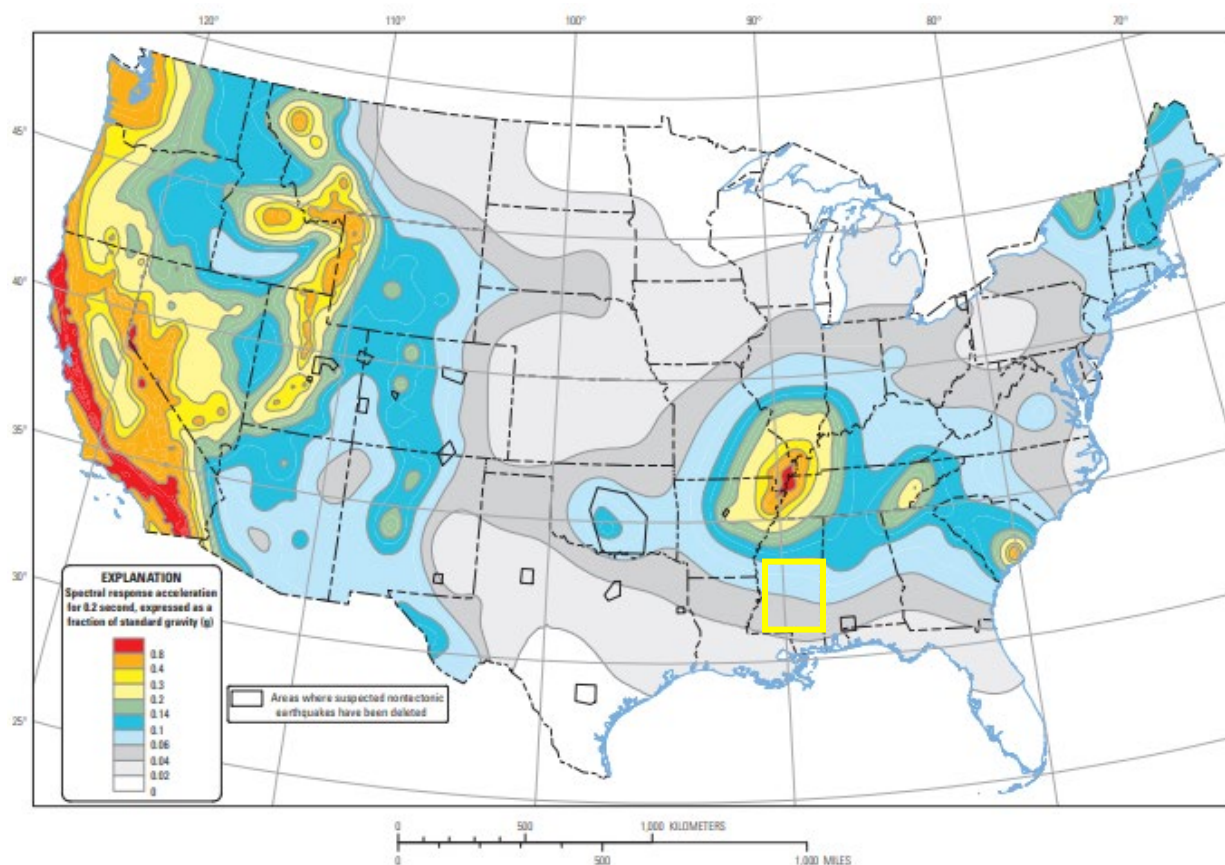
Wildfire events will be an ongoing occurrence in Perry County. The likelihood of wildfires increases during drought cycles and abnormally dry conditions. Fires are likely to stay small in size but could increase due to local climate and ground conditions. Dry, windy conditions with an accumulation of forest floor fuel (potentially due to ice storms or lack of fire) could create conditions for a large fire that spreads quickly. It should also be noted that some areas do vary somewhat in risk. For example, highly developed areas are less susceptible unless they are located near the urban-wildland boundary. The risk will also vary due to assets. Areas in the urban-wildland interface will have much more property at risk, resulting in increased vulnerability and need to mitigate compared to rural, mainly forested areas. In this case, the participating jurisdictions appear to have a similar risk to the surrounding areas. The probability assigned to Perry County for future wildfire events is likely (a 10 and 100 percent annual probability).

GEOLOGIC HAZARDS

F.2.7 Earthquake

LOCATION AND SPATIAL EXTENT

Figure F.4 shows the intensity level associated with Perry County, based on the national USGS map of peak acceleration with 10 percent probability of exceedance in 50 years. It is the probability that ground motion will reach a certain level during an earthquake. The data show peak horizontal ground acceleration (the fastest measured change in speed, for a particle at ground level that is moving horizontally due to an earthquake) with a 10 percent probability of exceedance in 50 years. The map was compiled by the U.S. Geological Survey (USGS) Geologic Hazards Team, which conducts global investigations of earthquake, geomagnetic, and landslide hazards. According to this map, Perry County lies within an approximate zone of level .04 ground acceleration. This indicates that the county exists within an area of moderate seismic risk.

FIGURE F.4: PEAK ACCELERATION WITH 10 PERCENT PROBABILITY OF EXCEEDANCE IN 50 YEARS

Source: USGS, 2018

HISTORICAL OCCURRENCES

No earthquakes are known to have affected Perry County since 1638. **Table F.14** provides a summary of earthquake events reported by the National Geophysical Data Center between 1638 and 1985.⁷

TABLE F.14: SUMMARY OF SEISMIC ACTIVITY IN PERRY COUNTY

Location	Number of Occurrences	Greatest MMI Reported	Richter Scale Equivalent
Beaumont	0	--	--
New Augusta	0	--	--
Richton	0	--	--
Unincorporated Area	0	--	--
PERRY COUNTY TOTAL	0	--	--

Source: National Geophysical Data Center

⁷ Due to reporting mechanisms, not all earthquakes events were recorded during this time.

PROBABILITY OF FUTURE OCCURRENCES

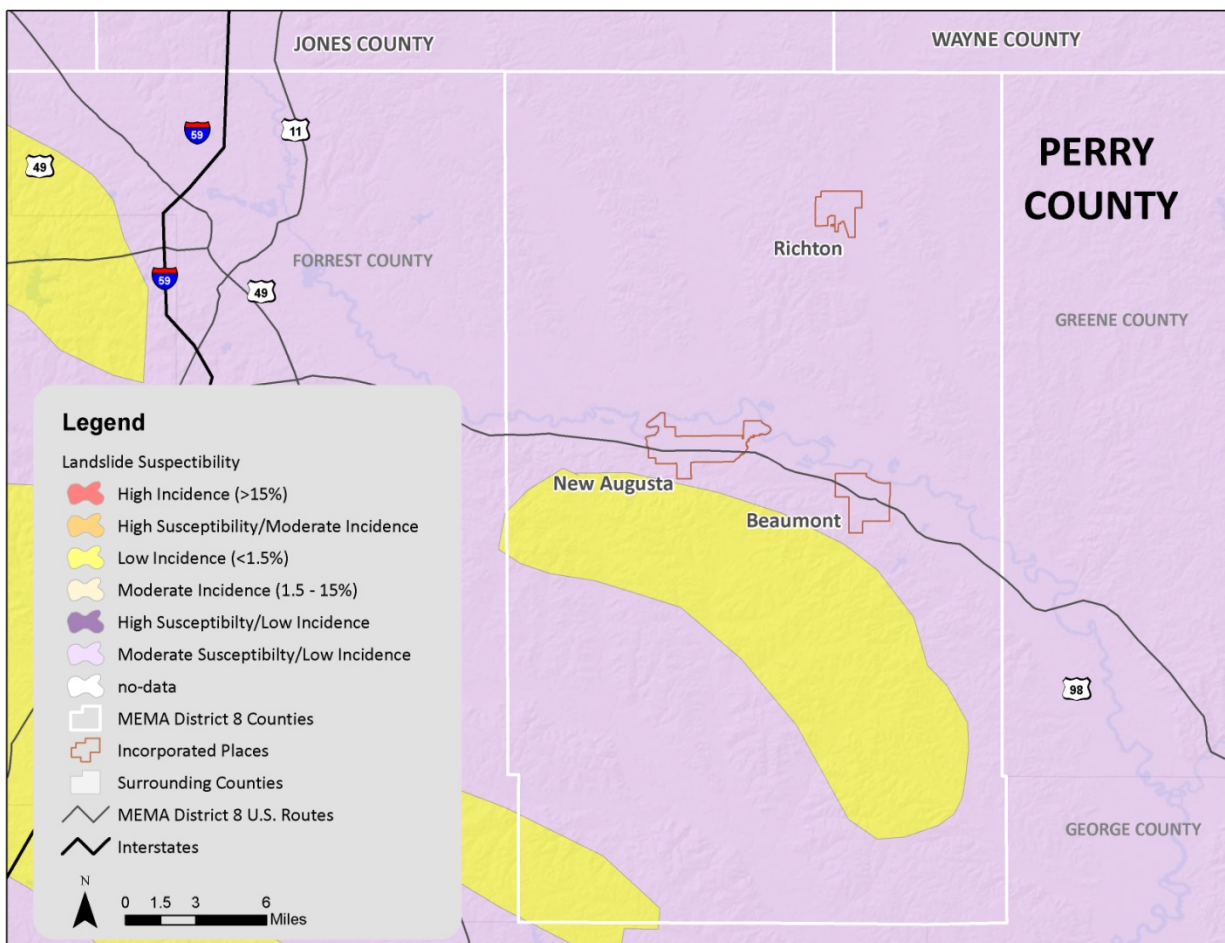
The probability of significant, damaging earthquake events affecting Perry County is unlikely. However, it is possible that future earthquakes resulting in light to moderate perceived shaking and damages ranging from none to very light will affect the county. The annual probability level for the region is estimated to be less than 1 percent (unlikely).

F.2.8 Landslide

LOCATION AND SPATIAL EXTENT

Landslides occur along steep slopes when the pull of gravity can no longer be resisted (often due to heavy rain). Human development can also exacerbate risk by building on previously undevelopable steep slopes. Landslides are possible throughout Perry County.

According to **Figure F.5** below, the entire county falls under a low incidence area (yellow and light purple). This indicates that less than 1.5 percent of the area is involved in landsliding. The areas in yellow are defined as low incidence and low susceptibility. The areas in light purple, however, indicate that a moderate susceptibility to landsliding activity is present. There are no changes with susceptibility to the landslide hazard since the last plan update.

FIGURE F.5: LANDSLIDE SUSCEPTIBILITY AND INCIDENCE MAP OF PERRY COUNTY

Source: USGS

HISTORICAL OCCURRENCES

There is no extensive history of landslides in Perry County. Landslide events typically occur in isolated areas.

PROBABILITY OF FUTURE OCCURRENCES

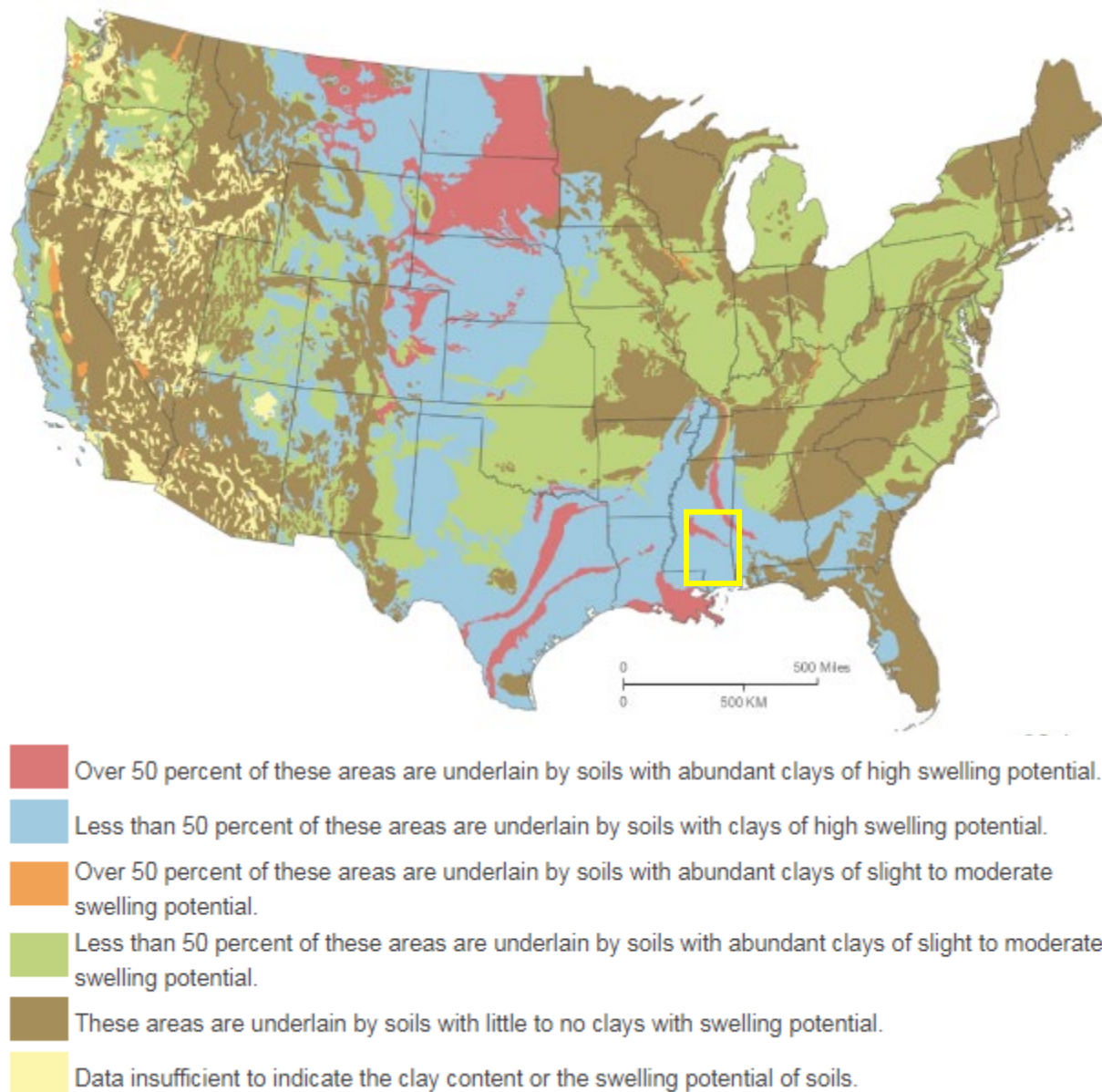
Based on historical information and the USGS susceptibility index, the probability of future landslide events is unlikely (less than 1 percent probability). The USGS data indicates that the all areas in Perry County have a low landslide incidence rate. However, some areas are reported as having moderate susceptibility to landsliding activity. Local conditions may become more favorable for landslides due to heavy rain, for example. This would increase the likelihood of occurrence. It should also be noted that some areas in Perry County have greater risk than others given factors such as steepness on slope and modification of slopes.

F.2.9 Expansive Soils

LOCATION AND SPATIAL EXTENT

Due to the amount of clay minerals present in Perry County, expansive soils present a threat to the county. Areas underlain by soils with swelling potential are shown in **Figure F.6**. The areas in blue are underlain with generally less than 50 percent clay having high swelling potential.

FIGURE F.6: SWELLING CLAYS IN MISSISSIPPI



Source: USGS

HISTORICAL OCCURRENCES

There is no historical record of significant expansive soil events in Perry County. However, expansive soils can cause considerable damage to structural foundations in the county, although they do not pose a significant threat to human life.

PROBABILITY OF FUTURE OCCURRENCES

Based on historical information, the probability of future expansive soil events is possible (between 1 and 100 percent annually).

WIND-RELATED HAZARDS

F.2.10 Hurricane and Tropical Storm

LOCATION AND SPATIAL EXTENT

Hurricanes and tropical storms threaten the entire Atlantic and Gulf seaboard of the United States. While coastal areas are most directly exposed to the brunt of landfalling storms, their impact is often felt hundreds of miles inland and major hurricanes (category 3 or higher) may impact Perry County. All areas in Perry County are equally susceptible to hurricane and tropical storms. However, no hurricanes or tropical depressions have impacted the area during this planning period.

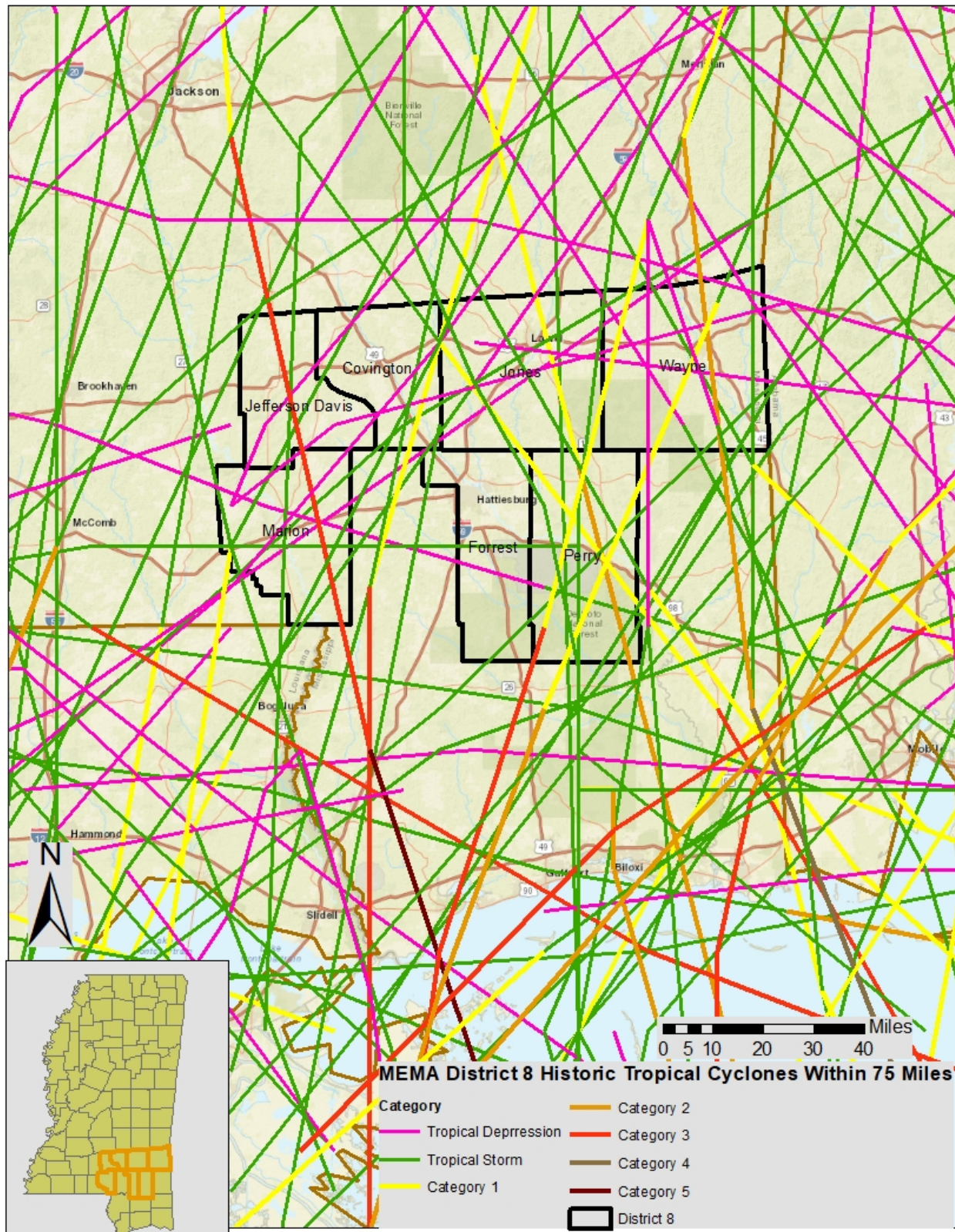
HISTORICAL OCCURRENCES

According to the National Hurricane Center's historical storm track records, a total of 63 hurricanes have passed within 75 miles of the county since 1851. This includes 1 category 5 storm, 2 category 4 storms, 7 category 3 storms, 3 category 2 storms, 15 category 1 storms, and 35 tropical storms as shown in **Figure F.7**.⁸

Of the recorded storm events, a total of thirteen tracks passed directly through the county including Hurricanes Ethel (1960), Unnamed (1855), Unnamed (1906), and Unnamed (1916). These hurricanes were category 1 strength when they traversed the county with two exceptions: Unnamed Storm of 1855, which passed through the county as category 3 hurricane, and Unnamed Storm of 1906, which passed through the county as a category 2 hurricane. **Table F.15** provides the detail for each storm that passed through the county including date of occurrence, name (if applicable), maximum wind speed (as recorded when traversing the county) and category of the storm based on the Saffir-Simpson Scale.

FIGURE F.7: HISTORICAL HURRICANE STORM TRACKS WITHIN 75 MILES OF PERRY COUNTY

⁸ These storm track statistics do not include extra-tropical storms. Though these related hazard events are less severe in intensity, they may cause significant local impact in terms of rainfall and high winds.



Source: National Oceanic and Atmospheric Administration; National Hurricane Center

**TABLE F.15: HISTORICAL STORM TRACKS WITHIN 75 MILES OF PERRY COUNTY
(1850–2018)**

Date of Occurrence	Storm Name	Maximum Wind Speed (miles per hour)	Storm Category
9/16/1855	Unnamed	115	Category 3
9/15/1860	Unnamed	81	Category 1
7/12/1872	Unnamed	46	Tropical Storm
6/15/1886	Unnamed	40	Tropical Storm
9/12/1892	Unnamed	46	Tropical Storm
8/8/1894	Unnamed	40	Tropical Storm
9/27/1906	Unnamed	109	Category 2
7/6/1916	Unnamed	92	Category 1
10/18/1923	Unnamed	57	Tropical Storm
9/1/1932	Unnamed	69	Tropical Storm
10/16/1932	Unnamed	46	Tropical Storm
9/10/1944	Unnamed	40	Tropical Storm
9/16/1960	Ethel	52	Tropical Storm

Source: National Hurricane Center

Federal records indicate that disaster declarations were made in 1969 (Hurricane Camille), 1979 (Hurricane Frederic), 1998 (Hurricane Georges), 2004 (Hurricane Ivan), 2005 (Hurricane Dennis), 2005 (Hurricane Katrina), and 2012 (Hurricane Isaac).⁹ Hurricane and tropical storm events can cause substantial damage in the area due to high winds and flooding.

Flooding and high winds from hurricanes and tropical storms can cause damage throughout the county. Anecdotes are available from NCEI for the major storms that have impacted the county as found below:

Hurricane Erin – August 20, 1995

Hurricane Erin moved out of Washington County, Alabama into Greene and Wayne Counties in Mississippi. The storm moved generally along Highway 45 passing just south of Waynesboro. Trees and power lines were blown down across Northern Greene, Northern Perry and most of Wayne Counties as Erin moved northwest. Some homes were damaged along Highway 45 and in the cities of Buckatunna and Waynesboro. Most of the damage was from trees falling on homes or shingles being blown from roofs. Wind speeds of 50 to 60 mph were estimated in Waynesboro. Preliminary damage estimates in these three counties was around \$100 thousand.

Hurricane Georges – September 25, 1998

Hurricane Georges, a strong Category 2 hurricane moved slowly northwest across the Gulf of Mexico toward southeast Louisiana and coastal Mississippi on the September 25 and September 26. As the hurricane approached the mouth of the Mississippi River on September 27, it slowly turned toward the north making landfall along the Mississippi Coast just to the east of Biloxi, MS on September 28. Hurricane Georges resulted in damage from heavy rains and persistent winds. Trees and power lines were blown down. Cotton, soybean, and pecan crops were almost totally destroyed.

⁹ A complete listing of historical disaster declarations can be found in Section 4: Hazard Identification.

Hurricane Ivan – September 16, 2004

Thousands of trees were blown down across Eastern Mississippi during the event as well as hundreds of power lines. The strong wind itself did not cause much structural damage, however the fallen trees did. These downed trees accounted for several hundred homes, mobile homes and businesses to be damaged or destroyed. Most locations across Eastern Mississippi reported sustained winds between 30 and 40 mph with Tropical Storm force gusts between 48 and 54 mph. The strongest reported winds occurred in Newton, Lauderdale and Oktibbeha Counties.

Overall, rainfall totals were held in check as Ivan steadily moved north. The heaviest rains were confined to far Eastern Mississippi where 3 to 4 inches fell over a 15-hour period. Due to the duration of the rain no flooding was reported. Across Eastern Mississippi, Hurricane Ivan was responsible for one fatality. This fatality occurred in Brooksville (Noxubee County) when a tree fell on a man. Damage from Ivan was estimated at \$200 million.

Hurricane Katrina – August 25, 2005

Hurricane Katrina will likely go down as the worst and costliest natural disaster in United States history. The amount of destruction, the cost of damaged property/agriculture and the large loss of life across the affected region has been overwhelming. Catastrophic damage was widespread across a large portion of the Gulf Coast region. The devastation was not only confined to the coastal region, widespread and significant damage occurred well inland up to the Hattiesburg area and northward past Interstate 20.

Devastation from Hurricane Katrina was widespread across the region. Hurricane force winds were common across the area. The region received sustained winds of 60-80 mph with gusts ranging from 80-120 mph. There was widespread damage to trees and power lines. Wind damage to structures was also widespread, with roofs blown off or partially peeled. Hundreds of signs were shredded or blown down. Businesses sustained structural damage. Power outages lasted from a few days to as long as four weeks. Agriculture and timber industries were severely impacted. Row crops, including cotton, rice, corn, and soybeans, took a hard hit. Other impacted industries were the catfish industry, dairy and cattle industry, and nursery businesses.

Hurricane Gustav – September 1, 2008

As hurricane Gustav moved south of the area, tropical depression conditions spread into southeast Mississippi. The winds increased during the early morning of September 1 and ended during the early afternoon as Gustav moved farther away. No damage was reported from the winds. Several mesonet sites had sustained winds of 20-30 mph with higher gusts. Rainfall estimates across the area were 3-5 inches which resulted in some minor street flooding. Parts of southeast Mississippi were put under a tropical storm wind warning in the early morning hours of August 31 and the warning continued in effect until the late evening of September 1.

PROBABILITY OF FUTURE OCCURRENCES

Based on historical evidence, the probability level of future occurrence is likely (annual probability between 10 and 100 percent). Given the regional nature of the hazard, all areas in the county are equally exposed to this hazard. However, when the county is impacted, the damage could be catastrophic, threatening lives and property throughout the planning area.

F.2.11 Thunderstorm

LOCATION AND SPATIAL EXTENT

Thunderstorm / High Wind

A thunderstorm event is an atmospheric hazard, and thus has no geographic boundaries. It is typically a widespread event that can occur in all regions of the United States. However, thunderstorms are most common in the central and southern states because atmospheric conditions in those regions are favorable for generating these powerful storms. Also, Perry County typically experiences several straight-line wind events each year. These wind events can and have caused significant damage. It is assumed that Perry County has uniform exposure to an event and the spatial extent of an impact could be large.

Hailstorm

Hailstorms frequently accompany thunderstorms, so their locations and spatial extents coincide. It is assumed that Perry County is uniformly exposed to severe thunderstorms; therefore, all areas of the county are equally exposed to hail which may be produced by such storms.

Lightning

Lightning occurs randomly, therefore it is impossible to predict where and with what frequency it will strike. It is assumed that all of Perry County is uniformly exposed to lightning.

HISTORICAL OCCURRENCES

Thunderstorm / High Wind

Severe storms resulted in four disaster declarations in Perry County in 1971, 1983, 1990, and 2001.¹⁰ According to NCEI, there have been 87 reported thunderstorm and high wind events since 1971 in Perry County.¹¹ These events caused over \$2.1 million in damages. **Table F.16** summarizes this information. **Table F.17** presents detailed thunderstorm and high wind event reports including date, magnitude, and associated damages for each event.¹²

TABLE F.16: SUMMARY OF THUNDERSTORM / HIGH WIND OCCURRENCES IN PERRY COUNTY

Location	Number of Occurrences	Deaths / Injuries	Property Damage (2013)
Beaumont	10	0/0	\$69,388
New Augusta	18	0/0	\$197,899
Richton	18	0/0	\$203,767
Unincorporated Area	41	0/0	\$1,653,991
PERRY COUNTY TOTAL	87	0/0	\$2,125,045

Source: National Centers for Environmental Information

¹⁰ A complete listing of historical disaster declarations can be found in Section 4: Hazard Identification.

¹¹ These thunderstorm events are only inclusive of those reported by the National Centers for Environmental Information (NCEI). It is likely that additional thunderstorm events have occurred in Perry County. As additional local data becomes available, this hazard profile will be amended.

¹² The dollar amount of damages provided by NCEI is divided by the number of affected counties to reflect a damage estimate for the county.

TABLE F.17: HISTORICAL THUNDERSTORM / HIGH WIND OCCURRENCES IN PERRY COUNTY

Location	Date	Type	Magnitude	Deaths / Injuries	Property Damage*
Beaumont					
Beaumont	09-JUN-94	THUNDERSTORM WINDS	0 kts.	0/0	\$8,523
Beaumont	18-DEC-95	THUNDERSTORM WINDS	0 kts.	0/0	\$3,314
Beaumont	21-FEB-97	TSTM WIND	50 kts.	0/0	\$3,146
Beaumont	01-NOV-97	TSTM WIND	50 kts.	0/0	\$3,933
Beaumont	19-JAN-01	TSTM WIND	55 kts.	0/0	\$2,852
Beaumont	21-JUL-02	TSTM WIND	50 kts.	0/0	\$13,842
Beaumont	27-OCT-06	THUNDERSTORM WIND	50 kts.	0/0	\$12,299
Beaumont	19-JUN-07	THUNDERSTORM WIND	50 kts.	0/0	\$14,329
Beaumont	04-SEP-12	THUNDERSTORM WIND	52 kts.	0/0	\$5,150
Beaumont	30-JUN-18	THUNDERSTORM WIND	52 kts.	0/0	\$2,000
New Augusta					
New Augusta	21-APR-95	THUNDERSTORM WINDS	0 kts.	0/0	\$1,657
New Augusta	26-JAN-96	TSTM WIND	50 kts.	0/0	\$3,218
New Augusta	18-JUN-97	TSTM WIND	50 kts.	0/0	\$3,146
New Augusta	10-FEB-98	TSTM WIND	50 kts.	0/0	\$5,421
New Augusta	26-FEB-98	TSTM WIND	50 kts.	0/0	\$4,647
New Augusta	20-AUG-99	TSTM WIND	50 kts.	0/0	\$4,538
New Augusta	22-JUL-00	TSTM WIND	70 kts.	0/0	\$36,713
New Augusta	13-OCT-01	TSTM WIND	50 kts.	0/0	\$14,258
New Augusta	08-APR-02	TSTM WIND	55 kts.	0/0	\$13,842
New Augusta	30-JUL-05	TSTM WIND	50 kts.	0/0	\$15,201
New Augusta	19-JUN-07	THUNDERSTORM WIND	50 kts.	0/0	\$29,851
New Augusta	10-JAN-08	THUNDERSTORM WIND	50 kts.	0/0	\$9,274
New Augusta	12-FEB-08	THUNDERSTORM WIND	50 kts.	0/0	\$13,911
New Augusta	03-MAY-08	THUNDERSTORM WIND	50 kts.	0/0	\$11,593
New Augusta	15-MAY-08	THUNDERSTORM WIND	50 kts.	0/0	\$17,389
New Augusta	03-APR-12	THUNDERSTORM WIND	52 kts.	0/0	\$5,150
New Augusta	20-DEC-12	THUNDERSTORM WIND	52 kts.	0/0	\$3,090
New Augusta	31-MAR-16	THUNDERSTORM WIND	61 kts.	0/0	\$5,000
Richton					
Richton	21-APR-95	THUNDERSTORM WINDS	0 kts.	0/0	\$1,657
Richton	22-APR-97	TSTM WIND	50 kts.	0/0	\$2,360
Richton	26-APR-97	TSTM WIND	50 kts.	0/0	\$3,146
Richton	28-MAY-97	TSTM WIND	50 kts.	0/0	\$2,360
Richton	03-APR-00	TSTM WIND	60 kts.	0/0	\$7,343
Richton	02-MAR-01	TSTM WIND	65 kts.	0/0	\$14,258
Richton	12-MAR-01	TSTM WIND	70 kts.	0/0	\$71,288
Richton	13-DEC-01	TSTM WIND	55 kts.	0/0	\$14,258
Richton	06-JUL-04	TSTM WIND	50 kts.	0/0	\$10,438
Richton	13-FEB-07	THUNDERSTORM WIND	50 kts.	0/0	\$35,822
Richton	07-AUG-08	THUNDERSTORM WIND	50 kts.	0/0	\$11,593
Richton	09-MAR-11	THUNDERSTORM WIND	52 kts.	0/0	\$2,122
Richton	04-APR-11	THUNDERSTORM WIND	50 kts.	0/0	\$0
Richton	04-APR-11	THUNDERSTORM WIND	50 kts.	0/0	\$0

ANNEX F: PERRY COUNTY

Location	Date	Type	Magnitude	Deaths / Injuries	Property Damage*
Richton	07-JUN-11	THUNDERSTORM WIND	52 kts.	0/0	\$2,122
Richton	20-MAY-18	THUNDERSTORM WIND	52 kts.	0/0	\$10,000
Richton	20-MAY-18	THUNDERSTORM WIND	52 kts.	0/0	\$10,000
Richton	31-JUL-18	THUNDERSTORM WIND	50 kts.	0/0	\$5,000
Unincorporated Area					
PERRY COUNTY	26-FEB-71	TSTM WIND	0 kts.	0/0	\$0
PERRY COUNTY	23-FEB-75	TSTM WIND	0 kts.	0/0	\$0
PERRY COUNTY	07-MAY-75	TSTM WIND	0 kts.	0/0	\$0
PERRY COUNTY	18-APR-78	TSTM WIND	0 kts.	0/0	\$0
PERRY COUNTY	29-JUL-81	TSTM WIND	0 kts.	0/0	\$0
PERRY COUNTY	24-MAR-84	TSTM WIND	0 kts.	0/0	\$0
PERRY COUNTY	10-FEB-90	TSTM WIND	0 kts.	0/0	\$0
PERRY COUNTY	03-DEC-90	TSTM WIND	0 kts.	0/0	\$0
PERRY COUNTY	09-APR-91	TSTM WIND	0 kts.	0/0	\$0
PERRY COUNTY	05-JUN-91	TSTM WIND	0 kts.	0/0	\$0
Janice	25-MAR-94	THUNDERSTORM WINDS	0 kts.	0/0	\$852
Runnelstown	07-MAR-95	THUNDERSTORM WINDS	0 kts.	0/0	\$6,629
Thompson Hill	07-MAR-95	THUNDERSTORM WINDS	0 kts.	0/0	\$3,314
Perryville	07-JUN-95	THUNDERSTORM WINDS	0 kts.	0/0	\$331
Oak Grove	24-JAN-97	TSTM WIND	50 kts.	0/0	\$2,360
KITTRELL	05-APR-97	TSTM WIND	50 kts.	0/0	\$2,360
Janice	24-OCT-97	TSTM WIND	50 kts.	0/0	\$3,933
Janice	25-OCT-97	TSTM WIND	50 kts.	0/0	\$3,146
Janice	26-OCT-97	TSTM WIND	50 kts.	0/0	\$3,146
Janice	12-JAN-98	TSTM WIND	50 kts.	0/0	\$4,647
Janice	17-APR-98	TSTM WIND	60 kts.	0/0	\$23,233
Countywide	05-JUN-98	TSTM WIND	80 kts.	0/0	\$774,446
Belleville	19-JUL-02	TSTM WIND	50 kts.	0/0	\$13,842
Janice	27-JUN-04	TSTM WIND	50 kts.	0/0	\$6,524
Runnelstown	15-AUG-06	TSTM WIND	50 kts.	0/0	\$9,839
KITTRELL	14-APR-07	THUNDERSTORM WIND	55 kts.	0/0	\$238,810
Runnelstown	31-JAN-08	THUNDERSTORM WIND	50 kts.	0/0	\$9,274
Runnelstown	31-JAN-08	THUNDERSTORM WIND	50 kts.	0/0	\$23,185
Belleville	24-DEC-09	THUNDERSTORM WIND	50 kts.	0/0	\$0
MAHNED	04-APR-11	THUNDERSTORM WIND	50 kts.	0/0	\$0
Janice	22-MAR-12	THUNDERSTORM WIND	52 kts.	0/0	\$4,120
Richton	15-FEB-16	THUNDERSTORM WIND	52 kts.	0/0	\$5,000
Belleville	02-JAN-17	THUNDERSTORM WIND	52 kts.	0/0	\$5,000
Janice	03-APR-17	THUNDERSTORM WIND	61 kts.	0/0	\$8,000

Location	Date	Type	Magnitude	Deaths / Injuries	Property Damage*
KITTRELL	30-JUN-18	THUNDERSTORM WIND	52 kts.	0/0	\$2,000
Hintonville	03-JUL-18	THUNDERSTORM WIND	50 kts.	0/0	\$5,000
Belleville	03-JUL-18	THUNDERSTORM WIND	50 kts.	0/0	\$5,000
Good Hope	03-JUL-18	THUNDERSTORM WIND	50 kts.	0/0	\$5,000
Runnelstown	01-NOV-18	THUNDERSTORM WIND	52 kts.	0/0	\$10,000
Janice	01-NOV-18	THUNDERSTORM WIND	52 kts.	0/0	\$2,000
MAHNED	23-NOV-18	THUNDERSTORM WIND	52 kts.	0/0	\$5,000

All damage may not have been reported.

Source: National Centers for Environmental Information

Hailstorm

According to the National Centers for Environmental Information, 41 recorded hailstorm events have affected Perry County since 1975.¹³ **Table F.18** is a summary of the hail events in Perry County. **Table F.19** provides detailed information about each event that occurred in the county. In all, hail occurrences resulted in over \$24,000 in property damages. Hail ranged in diameter from 0.5 inches to 2.75 inches. It should be noted that hail is notorious for causing substantial damage to cars, roofs, and other areas of the built environment that may not be reported to the National Centers for Environmental Information. Therefore, it is likely that damages are greater than the reported value.

TABLE F.18: SUMMARY OF HAIL OCCURRENCES IN PERRY COUNTY

Location	Number of Occurrences	Deaths / Injuries	Property Damage
Beaumont	7	0/0	\$3,800
New Augusta	6	0/0	\$15,489
Richton	11	0/0	\$5,067
Unincorporated Area	17	0/0	\$0
PERRY COUNTY TOTAL	41	0/0	\$24,356

Source: National Centers for Environmental Information

TABLE F.19: HISTORICAL HAIL OCCURRENCES IN PERRY COUNTY

Location	Date	Magnitude	Deaths / Injuries	Property Damage*
Beaumont				
Beaumont	22-APR-97	0.75 in.	0/0	\$0
Beaumont	09-MAR-03	0.75 in.	0/0	\$0
Beaumont	25-APR-03	0.75 in.	0/0	\$0
Beaumont	18-MAY-03	0.75 in.	0/0	\$0
Beaumont	30-MAR-05	1.75 in.	0/0	\$3,800
Beaumont	09-MAR-11	1.00 in.	0/0	\$0
Beaumont	27-JUN-15	1.00 in.	0/0	\$0
New Augusta				
New Augusta	15-MAR-95	0.75 in.	0/0	\$0
New Augusta	15-MAR-95	0.50 in.	0/0	\$0

¹³ These hail events are only inclusive of those reported by the National Centers for Environmental Information (NCEI). It is likely that additional hail events have affected Perry County. As additional local data becomes available, this hazard profile will be amended.

Location	Date	Magnitude	Deaths / Injuries	Property Damage*
New Augusta	17-APR-98	2.75 in.	0/0	\$15,489
New Augusta	17-JUL-06	0.88 in.	0/0	\$0
New Augusta	08-MAR-11	1.00 in.	0/0	\$0
New Augusta	24-FEB-12	1.75 in.	0/0	\$0
Richton				
Richton	09-MAR-99	1.75 in.	0/0	\$0
Richton	25-AUG-99	1.50 in.	0/0	\$0
Richton	12-MAR-02	0.75 in.	0/0	\$0
Richton	13-MAR-03	0.75 in.	0/0	\$0
Richton	25-APR-03	0.75 in.	0/0	\$0
Richton	03-MAY-03	0.88 in.	0/0	\$0
Richton	23-FEB-04	1.00 in.	0/0	\$0
Richton	22-MAR-05	0.75 in.	0/0	\$0
Richton	11-APR-05	0.75 in.	0/0	\$0
Richton	22-APR-05	1.75 in.	0/0	\$5,067
Richton	04-APR-08	1.00 in.	0/0	\$0
Unincorporated Area				
PERRY COUNTY	07-MAY-75	1.75 in.	0/0	\$0
PERRY COUNTY	26-APR-84	0.75 in.	0/0	\$0
PERRY COUNTY	10-FEB-86	0.75 in.	0/0	\$0
PERRY COUNTY	20-MAR-89	1.00 in.	0/0	\$0
PERRY COUNTY	04-JUN-91	1.00 in.	0/0	\$0
Lizana	15-MAR-95	1.00 in.	0/0	\$0
Perryville	28-JUN-95	0.75 in.	0/0	\$0
Perryville	28-JUN-95	0.75 in.	0/0	\$0
Ethel	20-AUG-95	0.75 in.	0/0	\$0
Janice	23-MAY-97	0.75 in.	0/0	\$0
KITTRELL	05-MAR-98	0.75 in.	0/0	\$0
MAHNED	25-APR-03	0.75 in.	0/0	\$0
Ferguson	25-APR-03	0.75 in.	0/0	\$0
Runnelstown	11-APR-05	0.75 in.	0/0	\$0
Janice	23-JUN-06	1.75 in.	0/0	\$0
MAHNED	24-APR-10	1.00 in.	0/0	\$0
Ferguson	21-JAN-17	1.00 in.	0/0	\$0

All damage may not have been reported.

Source: National Centers for Environmental Information

Lightning

According to the National Centers for Environmental Information, there has been one recorded lightning events in Perry County since 1950, as listed in summary **Table F.20**.¹⁴ This event caused \$60,000 in damages. However, it is likely that lightning events have in fact impacted the county. Many of the reported events are those that caused damage, and it should be expected that damages are likely much higher for this hazard than what is reported.

¹⁴ These lightning events are only inclusive of those reported by the National Centers for Environmental Information (NCEI). It is likely that additional lightning events have occurred in Perry County. As additional local data becomes available, this hazard profile will be amended.

TABLE F.20: SUMMARY OF LIGHTNING OCCURRENCES IN PERRY COUNTY

Location	Number of Occurrences	Deaths / Injuries	Property Damage (2013)
Beaumont	0	0/0	\$0
New Augusta	0	0/0	\$0
Richton	1	0/0	\$60,000
Unincorporated Area	0	0/0	\$0
PERRY COUNTY TOTAL	0	0/0	\$60,000

Source: National Centers for Environmental Information

PROBABILITY OF FUTURE OCCURRENCES

Thunderstorm / High Wind

Given the high number of previous events, it is certain that wind events, including straight-line wind and thunderstorm wind, will occur in the future. This results in a probability level of highly likely (100 percent annual probability) for future wind events for the entire county.

Hailstorm

Based on historical occurrence information, it is assumed that the probability of future hail occurrences is likely (10 – 100 percent annual probability). Since hail is an atmospheric hazard (coinciding with thunderstorms), it is assumed that Perry County has equal exposure to this hazard. It can be expected that future hail events will continue to cause minor damage to property and vehicles throughout the county.

Lightning

Although there were no historical lightning events reported in Perry County via NCEI data, it is a regular occurrence accompanied by thunderstorms. In fact, lightning events will assuredly happen on an annual basis, though not all events will cause damage. According to Vaisala's U.S. National Lightning Detection Network (NLDN®), Perry County is located in an area of the country that experienced an average of 6 to 8 lightning flashes per square kilometer per year between 1997 and 2010. Therefore, the probability of future events is highly likely (100 percent annual probability). It can be expected that future lightning events will continue to threaten life and cause minor property damages throughout the county.

F.2.12 Tornado

LOCATION AND SPATIAL EXTENT

Tornadoes occur throughout the state of Mississippi, and thus in Perry County. Tornadoes typically impact a relatively small area, but damage may be extensive. Event locations are completely random, and it is not possible to predict specific areas that are more susceptible to tornado strikes over time. Therefore, it is assumed that Perry County is uniformly exposed to this hazard.

HISTORICAL OCCURRENCES

Tornadoes resulted in four disaster declarations in Perry County in 1971, 1983, 1990, and 2001.¹⁵ According to the National Centers for Environmental Information, there have been a total of 17 recorded tornado events in Perry County since 1958 (**Table F.21**), resulting in over \$4.3 million in property damages.¹⁶ In addition, 2 fatalities and 24 injuries were reported. The magnitude of these tornadoes ranges from F0 to F3 in intensity, although an F5 event is possible. Detailed information on historic tornado events can be found in **Table F.22**.

TABLE F.21: SUMMARY OF TORNADO OCCURRENCES IN PERRY COUNTY

Location	Number of Occurrences	Deaths / Injuries	Property Damage (2013)
Beaumont	1	0/0	\$11,074
New Augusta	2	0/0	\$80,456
Richton	0	0/0	\$0
Unincorporated Area	14	2/23	\$4,400,838
PERRY COUNTY TOTAL	17	2/24	\$4,492,368

Source: National Centers for Environmental Information

TABLE F.22: HISTORICAL TORNADO IMPACTS IN PERRY COUNTY

Location	Date	Magnitude	Deaths / Injuries	Property Damage*	Details
Beaumont					
Beaumont	23-DEC-02	F0	0/0	\$11,074	A weak tornado briefly touched down near Red Hill. Several trees were blown down and residents heard a loud roar.
New Augusta					

¹⁵ A complete listing of historical disaster declarations can be found in Section 4: Hazard Identification.

¹⁶ These tornado events are only inclusive of those reported by the National Centers for Environmental Information (NCEI). It is likely that additional tornadoes have occurred in Perry County. As additional local data becomes available, this hazard profile will be amended.

Location	Date	Magnitude	Deaths / Injuries	Property Damage*	Details
New Augusta	19-FEB-96	F1	0/0	\$80,456	A TORNADO FIRST TOUCHED DOWN IN PERRY COUNTY NEAR REDHILL WHICH IS ABOUT 6 MILES SOUTH OF NEW AUGUSTA AT ABOUT 235 PM CDT. THE TORNADO THEN MOVED NORTHEAST ACROSS MS HWY 29 KNOCKING DOWN SEVERAL TREES IN ITS PATH. THE TORNADO CONTINUED SKIPPING ALONG THE GROUND CROSSING US HWY 98 JUST WEST OF BEAUMONT. THE TORNADO DAMAGED ROOFS ON THREE HOMES JUST SOUTH OF KITTRELL AND WEST OF MS HWY 15. THE TORNADO CROSSED MS HWY 15 NEAR KITTRELL AND DAMAGED SIDING AND SHINGLES FROM SEVERAL HOMES HERF. THE TORNADO THEN CONTINUED NORTHEAST ACROSS OPEN PASTURE KNOCKING DOWN TREES. THE TORNADO SKIPPED ALONG THE GROUND FOR ABOUT 13 MILES IN PERRY COUNTY BEFORE MOVING INTO GREENE COUNTY, 3 MILES WEST OF PLEASANT HILL. NO INJURIES WERE REPORTED.
New Augusta	23-FEB-16	Funnel Cloud	0/0	\$0	A strong storm system brought produced numerous thunderstorms across southeast Mississippi. Damaging winds and tornadoes were observed along with very heavy rain. A spotter reported a Funnel Cloud crossing Hwy 98 east of New Augusta. Could not confirm if it was on the ground or not.
Richton					
None Reported	--	--	--	--	--
Unincorporated Area					
PERRY COUNTY	26-FEB-58	F3	2/20	\$2,186,291	
PERRY COUNTY	07-MAY-75	F1	0/1	\$1,172,821	
PERRY COUNTY	01-JUN-76	F1	0/2	\$111,126	
PERRY COUNTY	06-FEB-74	F1	0/0	\$12,811	
PERRY COUNTY	05-JUN-89	F1	0/0	\$5,092	
PERRY COUNTY	07-MAY-82	F3	0/0	\$654,110	

Location	Date	Magnitude	Deaths / Injuries	Property Damage*	Details
RUNNELSTOWN	18-MAR-96	F1	0/0	\$40,228	A TORNADO TOUCHED DOWN JUST NORTHWEST OF RUNNELSTOWN THEN MOVED ACROSS STATE HWY 29 NORTHEAST OF RUNNELSTOWN. THE TORNADO CONTINUED SKIPPING ALONG THE GROUND AND MOVED EAST NORTHEAST AND CROSSED STATE HWY 15 JUST NORTH OF GOOD HOPF. THE TORNADO THEN MOVED OUT OF PERRY COUNTY INTO WAYNE COUNTY. THE TORNADO SKIPPED ALONG THE GROUND FOR ABOUT TWELVE MILES IN PERRY COUNTY. MOST OF THE DAMAGE WAS TO TREES AND POWER LINES AS VERY FEW RESIDENCES ARE LOCATED WHERE THE TORNADO MOVED.
Good Hope	18-MAR-96	F1	0/0	\$24,137	ANOTHER STORM SYSTEM DEVELOPED IN PERRY COUNTY AND MOVED ALMOST ALONG THE SAME TRACK AS THE EARLIER STORM THAT SPAWNED SEVERAL TORNADOES. THIS STORM DROPPED A TORNADO FOUR MILES SOUTHWEST OF GOOD HOPF. THE STORM MOVED EAST NORTHEAST AND CROSSED STATE HWY 15 NEAR GOOD HOPE AND THEN MOVED INTO WAYNE COUNTY ABOUT FOUR MILES NORTHEAST OF GOOD HOPF. THE TORNADO WAS ON THE GROUND FOR ABOUT EIGHT MILES AND DAMAGE WAS CONFINED TO TREES AND POWER LINES BEING BLOWN DOWN.
Hintonville	13-DEC-01	F0	0/0	\$14,258	A weak tornado briefly touched down along State Road 15 near Hintonville. The tornado did damage primarily to trees in a wooded area. No structures in the area were damaged.
Janice	24-APR-03	F0	0/0	\$6,720	A weak tornado briefly touched down just west of Janice. A few trees were blown down and an outbuilding was damaged.
Hintonville	24-APR-03	F0	0/0	\$6,720	A weak tornado briefly touched down just south of Hintonville. Several trees were blown down.
Janice	24-NOV-04	F0	0/0	\$6,524	A weak tornado downed trees to the north of Janice.
Janice	25-DEC-12	F2	0/0	\$0	The tornado entered Perry County crossing the Desoto National Forest as an EF-1 tornado approximately 100 yards wide. The tornado increased in strength briefly to EF-2 as it moved across Highway 29 knocking down electrical transmission lines. The tornado crossed Lula Cooley road where it destroyed a manufactured home and hunting camp off Snider Road. The tornado continued northeast as an EF-1 producing damage to a few homes and widespread damage to trees. The tornado left Perry County near Mclain. This tornado segment in Perry County is part of a 61 mile long track tornado that went from central Pearl River County to western Greene County Mississippi.

Location	Date	Magnitude	Deaths / Injuries	Property Damage*	Details
Tallahal	21-JAN-16				The tornado entered extreme NW Perry County, MS from NE Forrest County 2 miles WNW of Runnelstown, MS and continued to move NE at 45 to 50 MPH before lifting 5.5 miles NE of Runnelstown. Two main areas along the path had significant damage, with EF-2 category winds between 111 to 125 mph. One was located on Pumping Station Road 1.3 miles NW of Runnelstown, and the other 2.7 miles NE of Runnelstown along Cole Drive. Significant tree damage and sporadic power lines were downed along the track of the tornado. Damage estimates from property were around \$105,000 with tree damage estimated at \$55,000.

Source: National Centers for Environmental Information

PROBABILITY OF FUTURE OCCURRENCES

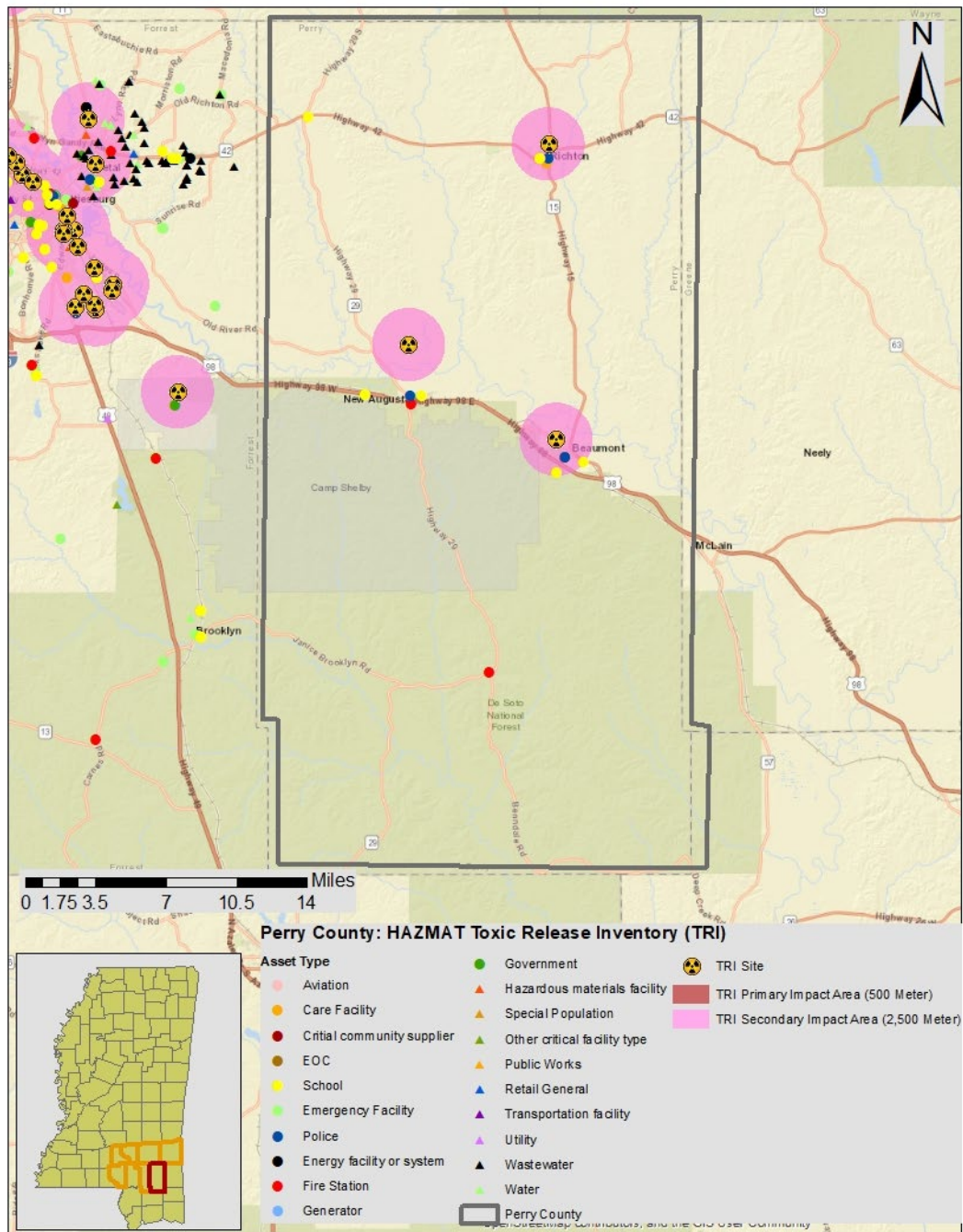
According to historical information, tornado events pose a significant threat to Perry County. The probability of future tornado occurrences affecting Perry County is likely (10 – 100 percent annual probability).

F.2.13 Hazardous Materials Incidents

LOCATION AND SPATIAL EXTENT

Hazardous Materials

Perry County has three TRI sites. These sites are shown in **Figure F.8**.

FIGURE F.3: TOXIC RELEASE INVENTORY (TRI) SITES IN PERRY COUNTY

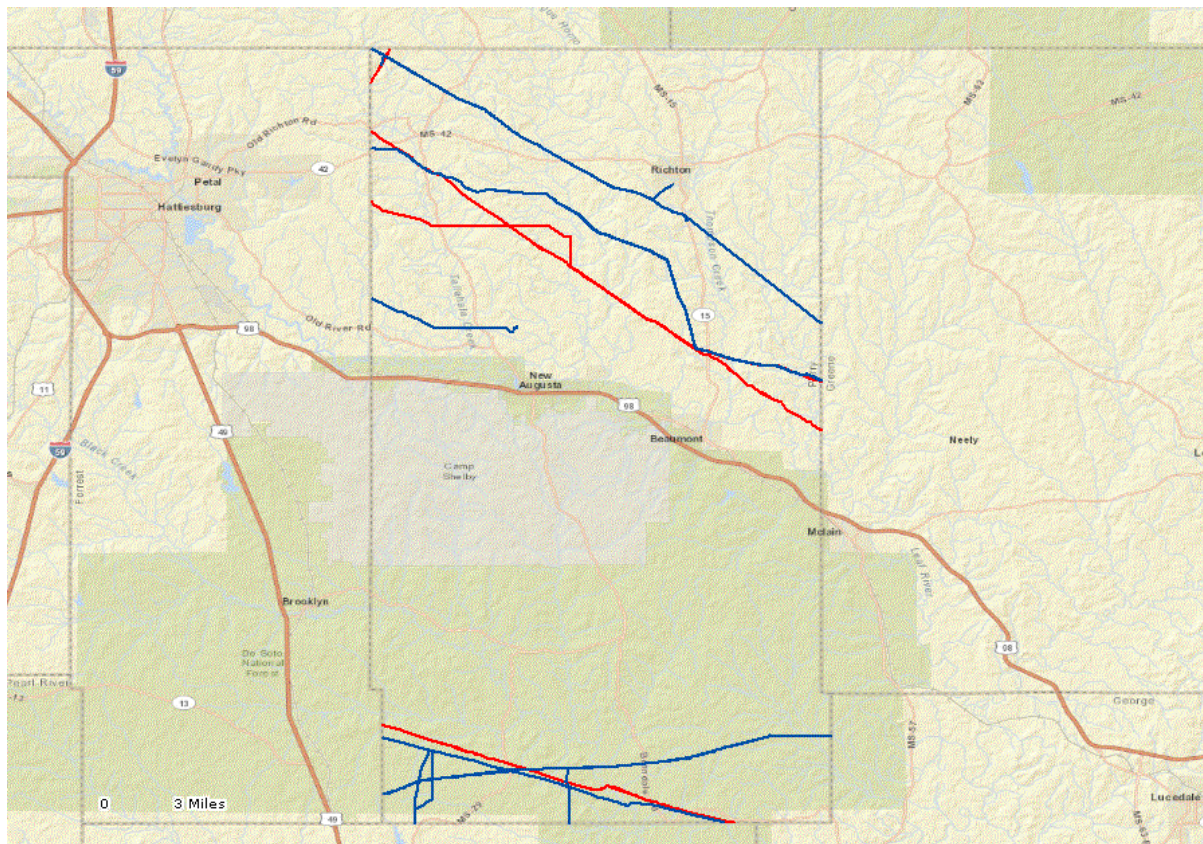
Source: EPA

In addition to “fixed” hazardous materials locations, hazardous materials may also impact the county via roadways and rail. Many roads in the county are narrow, making hazardous material transport in the area especially treacherous. All roads that permit hazardous material transport are considered potentially at risk to an incident.

Pipelines

There are two distinct types of pipelines that are used in the transport of potentially hazardous materials, gas lines and hazardous liquid lines. **Figure F.12** shows the trunk lines for each of these material types but does not show the gathering or distribution pipelines. Gas lines are in blue and hazardous liquid lines are in red. This data has not changed since the last plan update.

FIGURE F.4: PIPELINES IN PERRY COUNTY



Source: Pipeline and Hazardous Materials Safety Administration

Meth Labs

One of the greatest concerns about meth labs is that they are clandestine in nature. Additionally, once a meth lab has been identified, police authorities generally attempt to eliminate the site as quickly as possible. Therefore, it is nearly impossible to identify specific locations for meth labs and instead, the entire planning area is considered to be at risk to this hazard.

HISTORICAL OCCURRENCES

Hazardous Materials

There has been a total of seven recorded HAZMAT incidents in Perry County since 1973 (**Table F.23**). **Table F.9** presents detailed information on historic HAZMAT incidents in Perry County as reported by the U.S. Department of Transportation Pipeline and Hazardous Materials Safety Administration (PHMSA).

TABLE F.9: SUMMARY OF HAZMAT INCIDENTS IN PERRY COUNTY

Location	Number of Occurrences	Deaths / Injuries	Property Damage
Beaumont	0	0/0	\$0
New Augusta	5	0/0	\$0
Richton	2	0/0	\$0
Unincorporated Area	0	0/0	\$0
PERRY COUNTY TOTAL	7	0/0	\$0

Source: USDOT PHMSA

TABLE F.10: HAZMAT INCIDENTS IN PERRY COUNTY

Report Number	Date	City	Mode	Serious Incident?	Fatalities/ Injuries	Damages (\$)	Quantity Released
Beaumont							
None Reported	--	--	--	--	--	--	--
New Augusta							
I-1973040166	4/3/1973	NEW AUGUSTA	Highway	No	0/0	\$0	0
I-1984120013	11/12/1984	NEW AUGUSTA	Highway	No	0/0	\$0	25 LGA
I-1979031112	3/6/1979	NEW AUGUSTA	Highway	Yes	0/0	\$0	4,000 LGA
I-2012020040	1/18/2012	NEW AUGUSTA	Highway	No	0/0	\$0	3.5 LGA
I-1987010388	1/18/1987	NEW AUGUSTA	Highway	Yes	0/0	\$0	629 LGA
Richton							
I-1976070629	7/9/1976	RICHTON	Highway	No	0/0	\$0	5 LGA
I-1992030246	2/13/1992	RICHTON	Highway	No	0/0	\$0	10 LGA
Unincorporated Area							
None Reported	--	--	--	--	--	--	--

Source: USDOT PHMSA

Pipelines

Between 2002 and 2018, there have been no pipeline incidents in Perry County.

Meth Labs

Meth lab incidents have occurred at various times throughout Perry County. Although there is not an extensive documented record of these events, they have occurred in the past and are generally confined to single sites, often in residential areas.

PROBABILITY OF FUTURE OCCURRENCES

Hazardous Materials

Given the location of three toxic release inventory sites in Perry County and several roadway and rail incidents, it is possible that a hazardous material incident may occur in the county (between one percent and ten percent annual probability). County and town officials are mindful of this possibility and take precautions to prevent such an event from occurring. Furthermore, there are detailed plans in place to respond to an occurrence.

Although there are just three TRI sites and a limited record of previous events in the county, hazardous materials incidents will continue to be a threat. The county may also be impacted by neighboring counties which also face risk due to TRI sites and narrow roadways.

Pipelines

Although there have been no major pipeline incidents, there are 242 miles of gas and hazardous liquid lines in the region. Therefore, it is anticipated that there will be future pipeline incidents in Perry County. These are considered possible.

Meth Labs

Meth lab incidents will likely continue to occur throughout Perry County. Although it is difficult to predict where exactly these incidents would occur, the probability that they will is possible.

F.2.14 Cyber Attack

A cyber-attack is a malicious, intentional attempt to breach the information technology (IT) infrastructure of an individual or organization. The State of Mississippi defines a cyberterrorism incident as any adverse premeditated, politically, financially or maliciously motivated attack against informational systems. A cyberterrorism event can impact one or more of Perry County's and its, corresponding departments' and divisions' information assets by the following ways, which includes, but are not limited to, the following:

- Unauthorized use
- Denial of Service
- Malicious code
- Network system failures
- Application system failures
- Unauthorized disclosure or loss of information
- Information security breach
- Structured Query Language (SQL) Injection

LOCATION AND HAZARD EXTENT

The cyberterrorism hazard is not geographically based. Attacks can originate from any computer to affect any other computer in the world. If a system is connected to the Internet or operating on a wireless frequency, it is susceptible to exploitation. Targets of cyberterrorism can be individual

computers, networks, organizations, business sectors, or governments. Financial institutions and retailers are often targeted to extract personal and financial data that can be used to steal money from individuals and banks.

HISTORICAL OCCURRENCES

There have been no known historical occurrences to have occurred in in Perry County to date.

PROBABILITY OF FUTURE OCCURRENCES

As is the case for any governmental organization, there will always be the potential for impact for Perry County. As such, the county will continue to be compelled to respond to cyberterrorisms in the future. The nature of these attacks is projected to evolve in sophistication over time. Perry County will take a proactive position in its cyber security efforts and is expected to remain vigilant in its efforts to prevent attacks from occurring and/or disrupting business operations.

The reality remains that many computers and networks in organizations of all sizes and industries around the United States will continue to suffer intrusion attempts on a daily basis from viruses and malware that are passed through web sites and emails. Again, the potential for harm via this hazard is always present.

F.2.15 Conclusions on Hazard Risk

The hazard profiles presented above were developed using best available data and result in what may be considered principally a qualitative assessment as recommended by FEMA in its “How-to” guidance document titled *Understanding Your Risks: Identifying Hazards and Estimating Losses* (FEMA Publication 386-2). It relies heavily on historical and anecdotal data, stakeholder input, and professional and experienced judgment regarding observed and/or anticipated hazard impacts. It also carefully considers the findings in other relevant plans, studies, and technical reports.

HAZARD EXTENT

Table F.10 describes the extent of each natural hazard identified for Perry County. The extent of a hazard is defined as its severity or magnitude, as it relates to the planning area.

TABLE F.11: EXTENT OF PERRY COUNTY HAZARDS

Flood-related Hazards	
Flood	Flood extent can be measured by the amount of land and property in the floodplain as well as flood height and velocity. The amount of land in the floodplain accounts for 17.8 percent of the total land area in Perry County. Flood depth and velocity are recorded via United States Geological Survey stream gages throughout the region. While a gage does not exist for each participating jurisdiction, there is one at or near many areas. The greatest peak discharge recorded for the county was at the Leaf River at Beaumont in 1900. Water reached a discharge of 150,000 cubic feet per second and the stream gage height was recorded at 34.00 feet.
Erosion	The extent of erosion can be defined by the measurable rate of erosion that occurs. There are no erosion rate records located in Perry County.
Dam Failure	Dam failure extent is defined using Mississippi Division of Environmental Quality criteria. There is one dam classified as high-hazard in the county.
Winter Storm and Freeze	The extent of winter storms can be measured by the amount of snowfall received (in inches). Official long-term snow records are not kept for Perry County. However, the greatest snowfall reported in Jackson (northwest of the county) was 11.7 inches in 1904 and in Meridian (north of the county) was 14.0 inches in 1963.
Fire-related Hazards	
Drought / Heat Wave	Drought extent is defined by the U.S. Drought Monitor Classifications which include Abnormally Dry, Moderate Drought, Severe Drought, Extreme Drought, and Exceptional Drought. According to the U.S. Drought Monitor Classifications, the most severe drought condition is Exceptional. Perry County has received this ranking twice over the eighteen-year reporting period. The extent of extreme heat can be measures by the record high temperature recorded. Official long-term temperature records are not kept for any areas in Perry County. However, the highest recorded temperature in Hattiesburg (west of the county) was 106°F in 1989.
Wildfire	Wildfire data was provided by the Mississippi Forestry Commission and is reported annually by county from 2008-2018. The greatest number of fires to occur in Perry County in any year was 48 in 2011. The greatest number of acres to burn in the county in a single year occurred in 2014 when 634 acres were burned. Although this data lists the extent that has occurred, larger and more frequent wildfires are possible throughout the county.
Geologic Hazards	
Earthquake	Earthquake extent can be measured by the Richter Scale and the Modified Mercalli Intensity (MMI) scale and the distance of the epicenter from Perry County. According to data provided by the National Geophysical Data Center, no recorded earthquakes have been located in the county. However, USGS data shows Perry County lies within an approximate zone of level .04 ground acceleration. This indicates that the county exists within an area of moderate seismic risk.

Landslide	As noted above in the landslide profile, there is no extensive history of landslides in Perry County and landslide events typically occur in isolated areas. This provides a challenge when trying to determine an accurate extent for the landslide hazard. However, when using USGS landslide susceptibility index, extent can be measured with incidence, which is low throughout the county. There is also susceptibility throughout the county.
Expansive Soils	As noted above in the expansive soils profile, there is no historical record of significant expansive soil events in Perry County. Again, this provides a challenge when trying to determine an accurate extent for the expansive soils hazard. However, when using USGS data on soils with clay swelling potential, extent can be measured with swelling potential, which is high in less than 50 percent of the soils Perry County.
Wind-related Hazards	
Hurricane and Tropical Storm	Hurricane extent is defined by the Saffir-Simpson Scale which classifies hurricanes into Category 1 through Category 5. The greatest classification of hurricane to traverse directly through Perry County was a Category 3 storm (an unnamed storm in 1855) which carried tropical force winds of 115 miles per hour upon arrival in the county.
Thunderstorm / Hail / Lightning	Thunderstorm extent is defined by the number of thunder events and wind speeds reported. According to a 63-year history from the National Centers for Environmental Information, the strongest recorded wind event in Perry County was reported on June 5, 1998 at 80 knots (approximately 92 mph). It should be noted that future events may exceed these historical occurrences. Hail extent can be defined by the size of the hail stone. The largest hail stone reported in Perry County was 2.75 inches (on April 17, 1998). It should be noted that future events may exceed this. According to the Vaisala's flash density map (Figure 5.16), Perry County is located in an area that experiences 6 to 8 lightning flashes per square kilometer per year. It should be noted that future lightning occurrences may exceed these figures.
Tornado	Tornado hazard extent is measured by tornado occurrences in the US provided by FEMA (Figure 5.17) as well as the Fujita/Enhanced Fujita Scale (Tables 5.26 and 5.27). The greatest magnitude reported in Perry County was an F3 (last reported on May 7, 1982).
Other Hazards	
Hazardous Materials Incident	According to USDOT PHMSA, the largest hazardous materials incident reported in the county is 4,000 LGA released on the highway in New Augusta. It should be noted that larger events are possible. A pipeline incident could have a potentially large impact in terms of extent. Based on recent history, the largest spill in the last 10 years in Mississippi caused over 10,000 barrels of hazardous liquid to be spilled. Because of the generally small-scale nature of most meth labs, the extent of a fire or explosion that was caused by a meth lab incident would likely not be larger than a few acres.
Cyber Attack	The extent of cyberterrorism is difficult to estimate. Attacks can originate from any computer to affect any other computer in the world. The resulting damages depends on the demands of the cyberterrorist.

PRIORITY RISK INDEX RESULTS

In order to draw some meaningful planning conclusions on hazard risk for Perry County, the results of the hazard profiling process were used to generate countywide hazard classifications according to a “Priority Risk Index” (PRI). More information on the PRI and how it was calculated can be found in Section 5.16.2.

Table F.11 summarizes the degree of risk assigned to each category for all initially identified hazards based on the application of the PRI. Assigned risk levels were based on the detailed hazard profiles developed for this section, as well as input from the Regional Hazard Mitigation Council. The results were then used in calculating PRI values and making final determinations for the risk assessment.

TABLE F.12: SUMMARY OF PRI RESULTS FOR PERRY COUNTY

Hazard	Category/Degree of Risk					
	Probability	Impact	Spatial Extent	Warning Time	Duration	PRI Score
Flood-related Hazards						
Flood	Likely	Limited	Small	6 to 12 hours	Less than 24 hours	2.4
Erosion	Possible	Minor	Small	More than 24 hours	More than 1 week	1.8
Dam Failure	Unlikely	Critical	Moderate	More than 24 hours	Less than 6 hours	2.0
Winter Storm and Freeze	Possible	Limited	Large	More than 24 hours	Less than 24 hours	2.3
Fire-related Hazards						
Drought / Heat Wave	Highly Likely	Minor	Large	More than 24 hours	More than 1 week	2.8
Wildfire	Likely	Minor	Small	Less than 6 hours	Less than 1 week	2.1
Geologic Hazards						
Earthquake	Unlikely	Minor	Moderate	Less than 6 hours	Less than 6 hours	1.7
Landslide	Unlikely	Minor	Small	Less than 6 hours	Less than 6 hours	1.5
Expansive Soils	Possible	Minor	Small	Less than 6 hours	Less than 6 hours	1.8
Wind-related Hazards						
Hurricane and Tropical Storm	Likely	Catastrophic	Large	More than 24 hours	Less than 24 hours	3.2
Thunderstorm Wind / High Wind	Highly Likely	Limited	Moderate	Less than 6 hours	Less than 6 hours	2.9
Hailstorm	Likely	Minor	Small	Less than 6 hours	Less than 6 hours	2.1
Lightning	Highly Likely	Limited	Negligible	Less than 6 hours	Less than 6 hours	2.5
Tornado	Likely	Critical	Small	Less than 6 hours	Less than 6 hours	2.7
Other Hazards						
Hazardous Materials Incident	Unlikely	Limited	Small	Less than 6 hours	Less than 24 hours	1.9
Pipeline Incident	Possible	Limited	Small	Less than 6 hours	Less than 24 hours	2.2
Meth Lab Incident	Possible	Minor	Small	Less than 6 hours	Less than 6 hours	1.8
Cyber Attack	Unlikely					

F.2.16 Final Determinations on Hazard Risk

The conclusions drawn from the hazard profiling process for Perry County, including the PRI results and input from the Regional Hazard Mitigation Council, resulted in the classification of risk for each identified hazard according to three categories: High Risk, Moderate Risk, and Low Risk (**Table F.12**). For purposes of these classifications, risk is expressed in relative terms according to the estimated impact that a hazard will have on human life and property throughout all of Perry County. A more quantitative analysis to estimate potential dollar losses for each hazard has been performed separately and is described in Section 6: *Vulnerability Assessment* and below in Section F.3. It should be noted that although some hazards are classified below as posing low risk, their occurrence of varying or unprecedented magnitudes is still possible in some cases and their assigned classification will continue to be evaluated during future plan updates.

TABLE F.13: CONCLUSIONS ON HAZARD RISK FOR PERRY COUNTY

HIGH RISK	Hurricane and Tropical Storm Thunderstorm Wind / High Wind Tornado Flood
MODERATE RISK	Drought / Heat Wave Dam Failure Lightning Hailstorm Pipeline Incident Hazardous Material Incident Wildfire
LOW RISK	Winter Storm and Freeze Expansive Soils Erosion Earthquake Landslide Meth Lab Incident Cyber Attack

F.3 PERRY COUNTY VULNERABILITY ASSESSMENT

This subsection identifies and quantifies the vulnerability of Perry County to the significant hazards previously identified. This includes identifying and characterizing an inventory of assets in the county and assessing the potential impact and expected amount of damages caused to these assets by each identified hazard event. More information on the methodology and data sources used to conduct this assessment can be found in Section 6: *Vulnerability Assessment*.

F.3.1 Asset Inventory

Table F.13 lists the number of parcels and the total assessed value of improvements for Perry County and its participating jurisdictions (study area of vulnerability assessment).¹⁷

TABLE F.14: IMPROVED PROPERTY IN PERRY COUNTY

Location	Number of Parcels	Total Assessed Value of Improvements
Perry County	5,608	\$874,179,000

Table F.14 lists the fire stations, police stations, emergency operations centers (EOCs), medical care facilities, and schools and other critical facilities located in Perry County. HAZUS-MH 4.2 was used to obtain the critical facilities for the county and this data was updated to reflect recent changes. In addition, **Figure F.12** shows the locations of essential facilities in Perry County. **Table F.31** near the end of this section, shows a complete list of the critical facilities by name, as well as the hazards that affect each facility. As noted previously, this list is not all-inclusive and only includes information provided by the county.

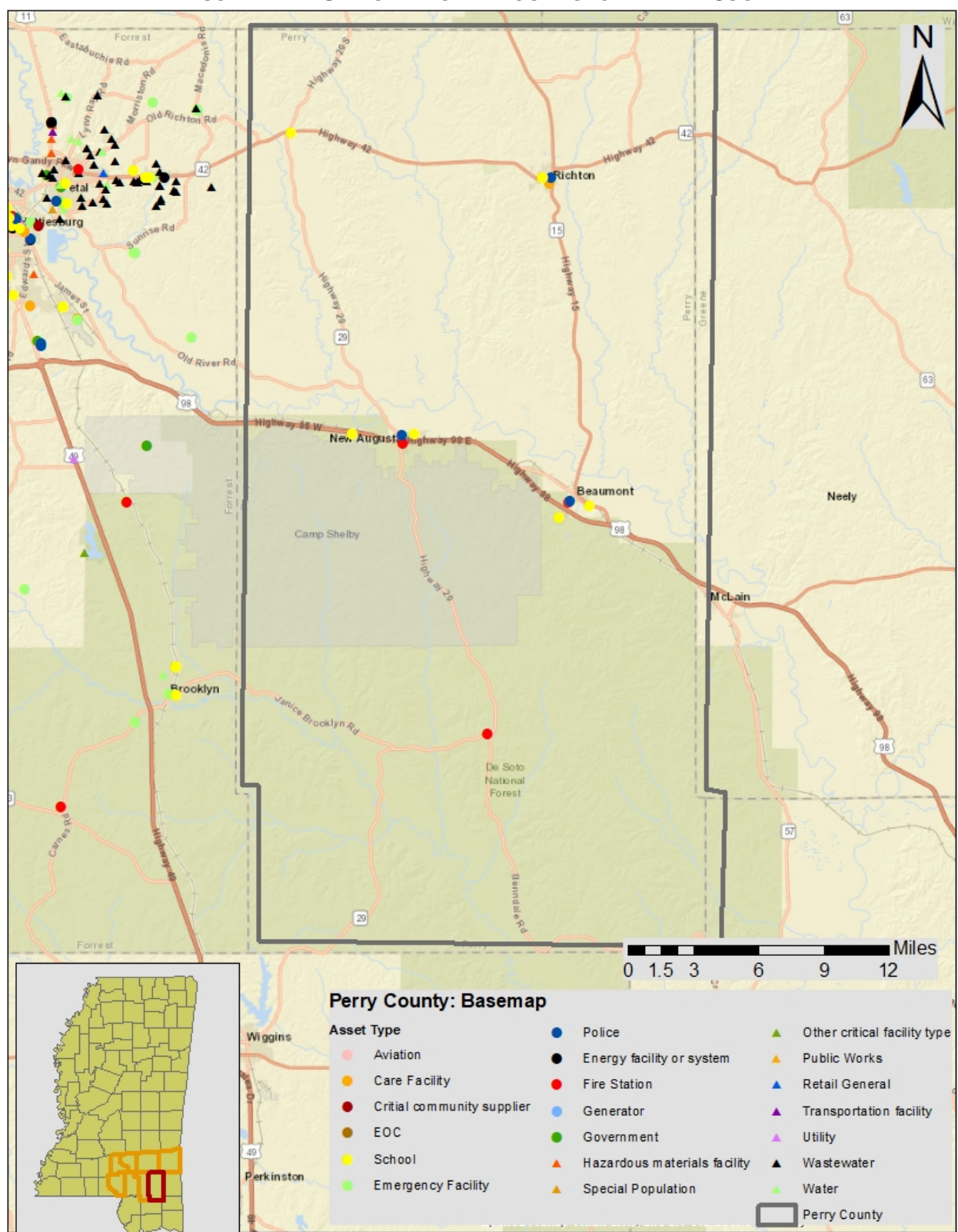
TABLE F.15: CRITICAL FACILITY INVENTORY IN PERRY COUNTY

Location	Fire Stations	Police Stations	Medical Care Facilities	EOC	Schools
Perry County	1	2	1	0	6
Beaumont	1	0	0	0	1
New Augusta	0	1	0	0	2
Richton	0	1	1	0	2
Unincorporated Area	0	0	0	0	1

Source: HAZUS-MH 4.2

¹⁷ Total assessed values for improvements is based on tax assessor records as joined to digital parcel data. This data does not include dollar figures for tax-exempt improvements such as publicly-owned buildings and facilities. It should also be noted that, due to record keeping, some duplication is possible thus potentially resulting in an inflated value exposure for an area.

FIGURE F.12: CRITICAL FACILITY LOCATIONS IN PERRY COUNTY



Source: HAZUS-MH 4.2

F.3.2 Social Vulnerability

In addition to identifying those assets potentially at risk to identified hazards, it is important to identify and assess those particular segments of the resident population in Perry County that are potentially at risk to these hazards.

Table F.30 lists the population by jurisdiction according to U.S. Census 2010 population estimates. Population counts are presented at the county and municipal level. The total population in Perry County according to Census data is 12,250 persons. Additional population estimates are presented above in Section F.1.

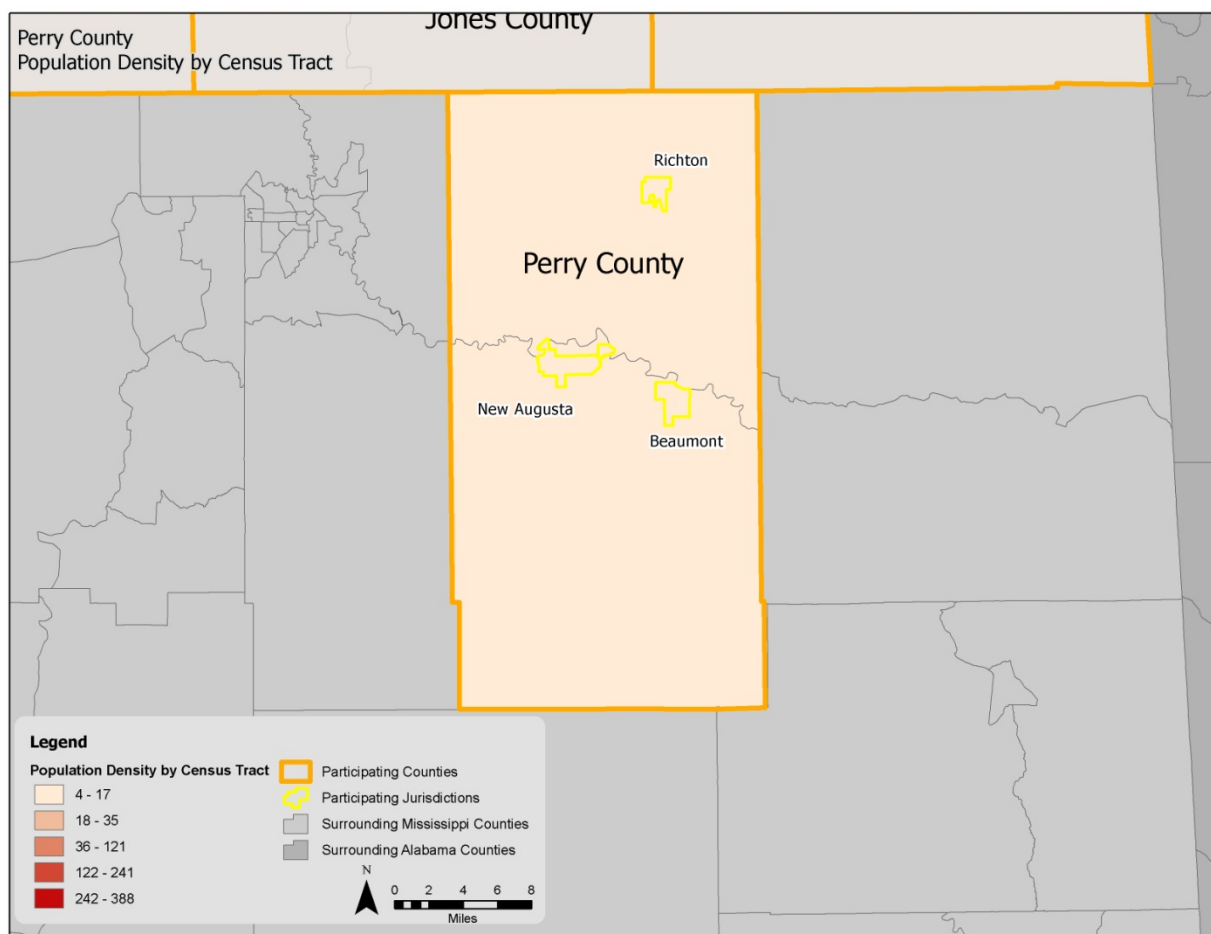
TABLE F.30: TOTAL POPULATION IN PERRY COUNTY

Location	Total 2010 Population
Beaumont	951
New Augusta	644
Richton	1,068
Unincorporated Area	9,587
PERRY COUNTY TOTAL	12,250

Source: U.S. Census 2010

In addition, **Figure F.13** illustrates the population density by census tract as it was reported by the U.S. Census Bureau in 2010.¹⁸ This information has not changed since the last plan update.

¹⁸ Population by census block was not available at the time this plan was completed.

FIGURE F.13: POPULATION DENSITY IN PERRY COUNTY

Source: U.S. Census Bureau, 2010

F.3.3 Vulnerability Assessment Results

As noted in Section 6: *Vulnerability Assessment*, only hazards with a specific geographic boundary, available modeling tool, or sufficient historical data allow for further analysis. Those results, specific to Perry County, are presented here. All other hazards are assumed to impact the entire planning region (drought, hailstorm, lightning, thunderstorm wind, tornado, and winter storm and freeze) or, due to lack of data, analysis would not lead to credible results (dam and levee failure, erosion, expansive soils, and landslide). The total county exposure, and thus risk, was presented in **Table F.28**.

The hazards to be further analyzed in this section include: flood, wildfire, earthquake, hurricane and tropical storm winds, and hazardous materials incident.

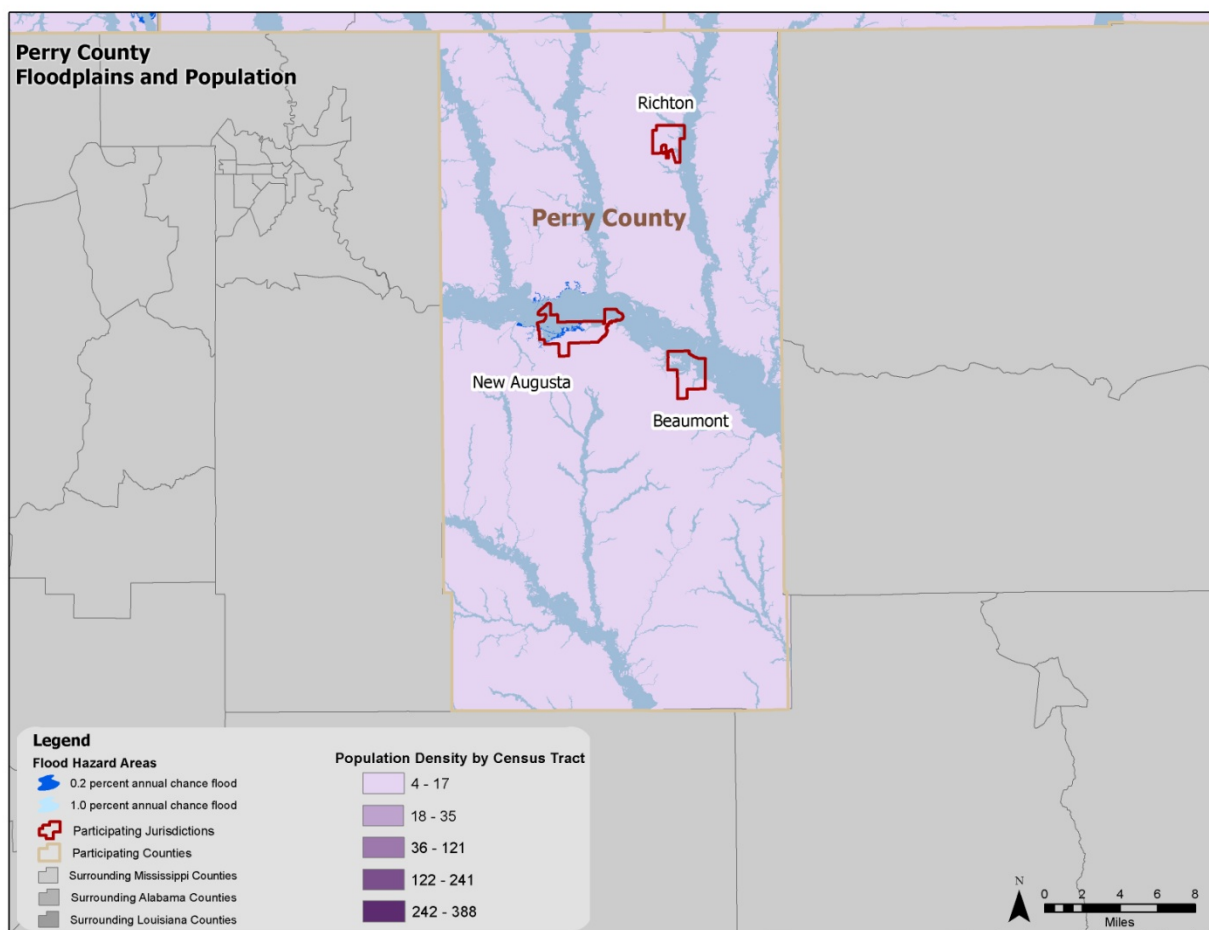
FLOOD

Historical evidence indicates that Perry County is susceptible to flood events. A total of 22 flood events have been reported by the National Centers for Environmental Information resulting in over \$1.9M in damages.

Social Vulnerability

Since 2010 population was available at the tract level, it was difficult to determine a reliable figure on population at-risk to flood due to tract level population data. **Figure F.3** is presented to gain a better understanding of at-risk population.

FIGURE F.14: POPULATION DENSITY NEAR FLOODPLAINS



Source: FEMA DFIRM, U.S. Census 2010

Critical Facilities

The critical facility analysis revealed that there are no critical facilities located in the Perry County 1.0-percent annual chance floodplain and two critical facilities located in the 0.2-percent annual chance floodplain based on FEMA DFIRM boundaries and GIS analysis. These two critical facilities are valued at over \$3.9M. A list of specific critical facilities and their associated risk can be found in **Table F.31** at the end of this section.

In conclusion, a flood has the potential to impact many existing and future buildings and populations in Perry County, though some areas are at a higher risk than others. All types of structures in a floodplain are at-risk, though elevated structures will have a reduced risk. As noted, the floodplains used in this analysis include the 100-year and 500-year FEMA regulated floodplain boundaries. It is certainly possible that more severe events could occur beyond these boundaries or urban (flash) flooding could impact additional structures. Such site-specific vulnerability determinations are outside the scope of this assessment but will be considered during future plan updates. Furthermore, areas subject to repetitive flooding should be analyzed for potential mitigation actions.

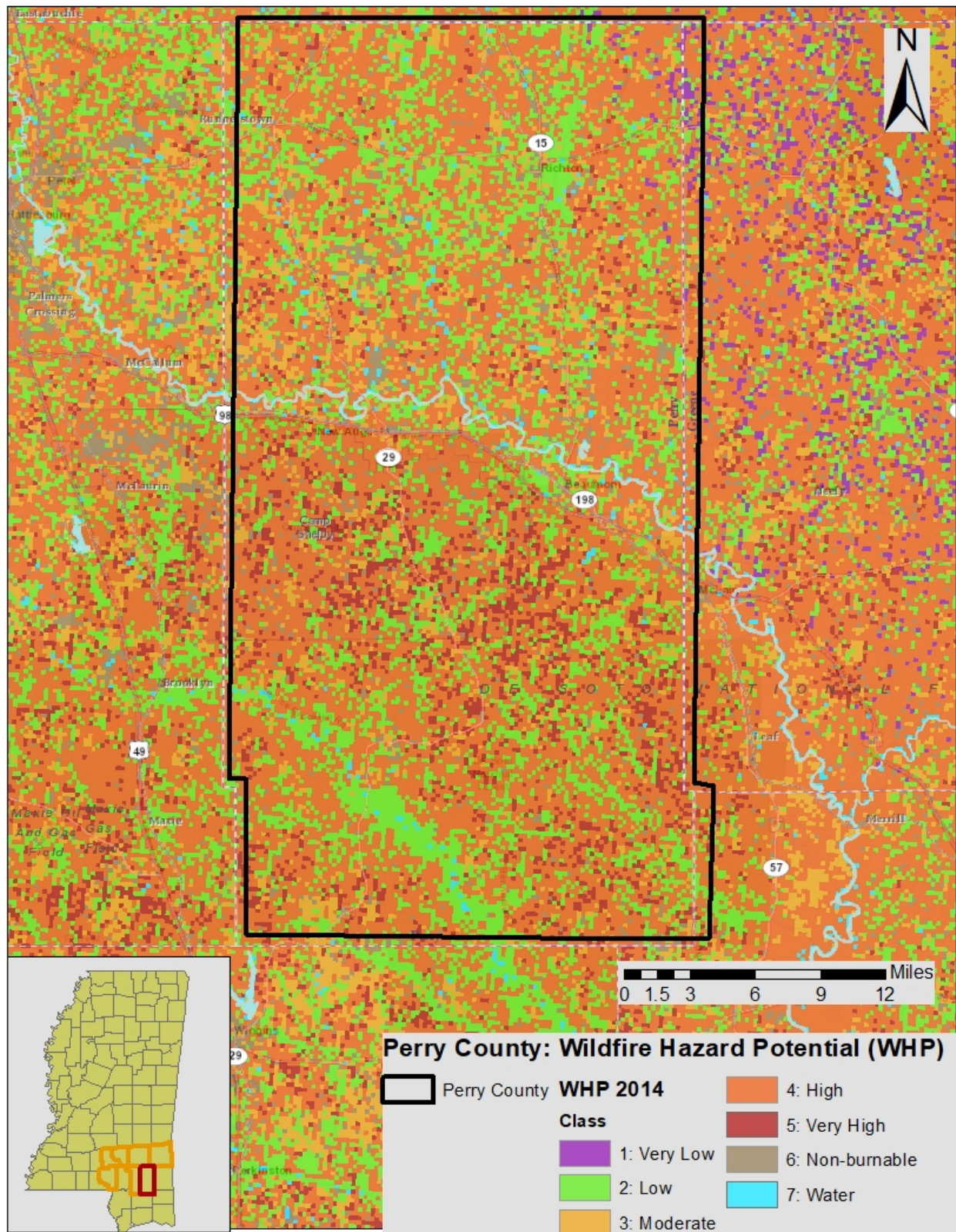
WILDFIRE

Although historical evidence indicates that Perry County is susceptible to wildfire events, there are few reports of damage.

To estimate exposure to wildfire, the wildfire hazard potential (WHP 2014) data provided via the US Forest Service was utilized. A GIS analysis was performed with the WHP dataset and identified critical facilities throughout MEMA District 8 in order to show the level of vulnerability.

Figure A.15 shows the wildfire hazard potential for Perry County. Most of the planning areas falls within the low to high category.

FIGURE F.15: WILDFIRE RISK AREAS IN PERRY COUNTY



Social Vulnerability

Although not all areas have equal vulnerability, there is some susceptibility across the entire county. It is assumed that the total population is at risk to the wildfire hazard. Determining the exact number of people in certain wildfire zones is difficult with existing data and could be misleading.

Critical Facilities

The critical facility analysis revealed that there are two critical facilities located in an area considered low risk valued at nearly \$4M. There are five critical facilities located in an area considered high risk valued at \$17.3M. It should be noted, however, that several factors could impact the spread of a wildfire putting all facilities at risk. A list of specific critical facilities and their associated risk can be found in **Table A.31** at the end of this section.

In conclusion, a wildfire event has the potential to impact many existing and future buildings, critical facilities, and populations in Perry County.

EARTHQUAKE

The HAZUS-MH earthquake scenario was generated for the region only and not on an individual county basis. The HAZUS-MH model and historical occurrences confirm, any earthquake activity in the area is likely to inflict minor damage to the county. HAZUS-MH 4.2 estimates a total exposure of approximately \$20,561,000 which includes buildings, inventory, and contents throughout the region. While this number is not an exact representation of assessed tax value, it is helpful in assessing the results of the HAZUS-MH scenario.

For the earthquake hazard vulnerability assessment, an arbitrary scenario was created to estimate damages to the planning area. HAZUS-MH estimates that no buildings would be moderately damaged.

Social Vulnerability

It can be assumed that all existing future populations are at risk to the earthquake hazard. No fatalities or injuries were reported in the above HAZUS-MH arbitrary scenario.

Critical Facilities

There are 13 critical facilities identified for Covington County, valued at \$49,825,789. All are vulnerable to the earthquake hazard.

In conclusion, an earthquake has the potential to impact all existing and future buildings, facilities, and populations in Perry County. While Perry County may not experience a large earthquake (there are none on record), localized damage is possible with an occurrence. A list of specific critical facilities and their associated risk can be found in **Table F.31** at the end of this section.

HURRICANE AND TROPICAL STORM

Historical evidence indicates that Perry County has an elevated risk to the hurricane and tropical storm hazard. Several tracks have come near or traversed through the county, as shown and discussed in Section F.2.10.

Hurricanes and tropical storms can cause damage through numerous additional hazards such as flooding, erosion, tornadoes, and high winds, thus it is difficult to estimate total potential losses from

these cumulative effects. The current HAZUS-MH hurricane model only analyzes hurricane winds and is not capable of modeling and estimating cumulative losses from all hazards associated with hurricanes; therefore, only hurricane winds are analyzed in this section. It can be assumed that all existing and future buildings and populations are at risk to the hurricane and tropical storm hazard. HAZUS-MH 4.2 was used to determine vulnerability to the hazard for a 100-Year event. There are an estimated 100,000 buildings in the region with a total building replacement value of \$20,562,000. A 100-year probabilistic scenario was created and modeled. HAZUS-MH estimated that approximately 1,892 buildings would be at least moderately damaged by the event; this is over two percent of the buildings in the Region. There is an estimated 69 buildings that would be damaged beyond repair.

Economic Losses

HAZUS-MH estimated economic losses for the scenario event. HAZUS-MH estimated losses at \$349.5M, which represents 1.7 percent of the total replacement value of the region's buildings. Nine percent of the losses were related to business interruption in the scenario region. 88 percent of the losses were sustained by residential structures.

Debris Generation

As part of the scenario, HAZUS-MH estimated the amount of debris that would be generated by the event. The types of debris considered were brick/wood, reinforced concrete/steel, eligible tree debris, and other tree debris. HAZUS-MH estimated that a total of 2,165,680 tons of debris would be generated by the event. Of that amount, 93 percent would be other tree debris, approximately 1.5 percent would be brick/wood, and the rest would comprise of would be eligible tree debris and brick/wood. Assuming a load of 25 tons per truck, this would equate to 1,190 truckloads of debris from this scenario.

Social Vulnerability

Given equal susceptibility across the county, it is assumed that the total population is at risk to the hurricane and tropical storm hazard.

Critical Facilities

Given equal vulnerability across Perry County, all critical facilities are considered to be at risk. Some buildings may perform better than others in the face of such an event due to construction and age, among other factors. There are 13 critical facilities identified for Perry County, valued at \$49,825,789. Some buildings may perform better than others in the face of such an event due to construction and age, among other factors. Determining individual building response is beyond the scope of this plan. However, this plan will consider mitigation action for especially vulnerable and/or critical facilities to mitigation against the effects of the hurricane hazard. A list of specific critical facilities can be found in **Table A.31** at the end of this section.

In conclusion, a hurricane event has the potential to impact many existing and future buildings, critical facilities, and populations in Perry County. Hurricane events can cause substantial damage in their wake including fatalities, extensive debris clean-up, and extended power outages.

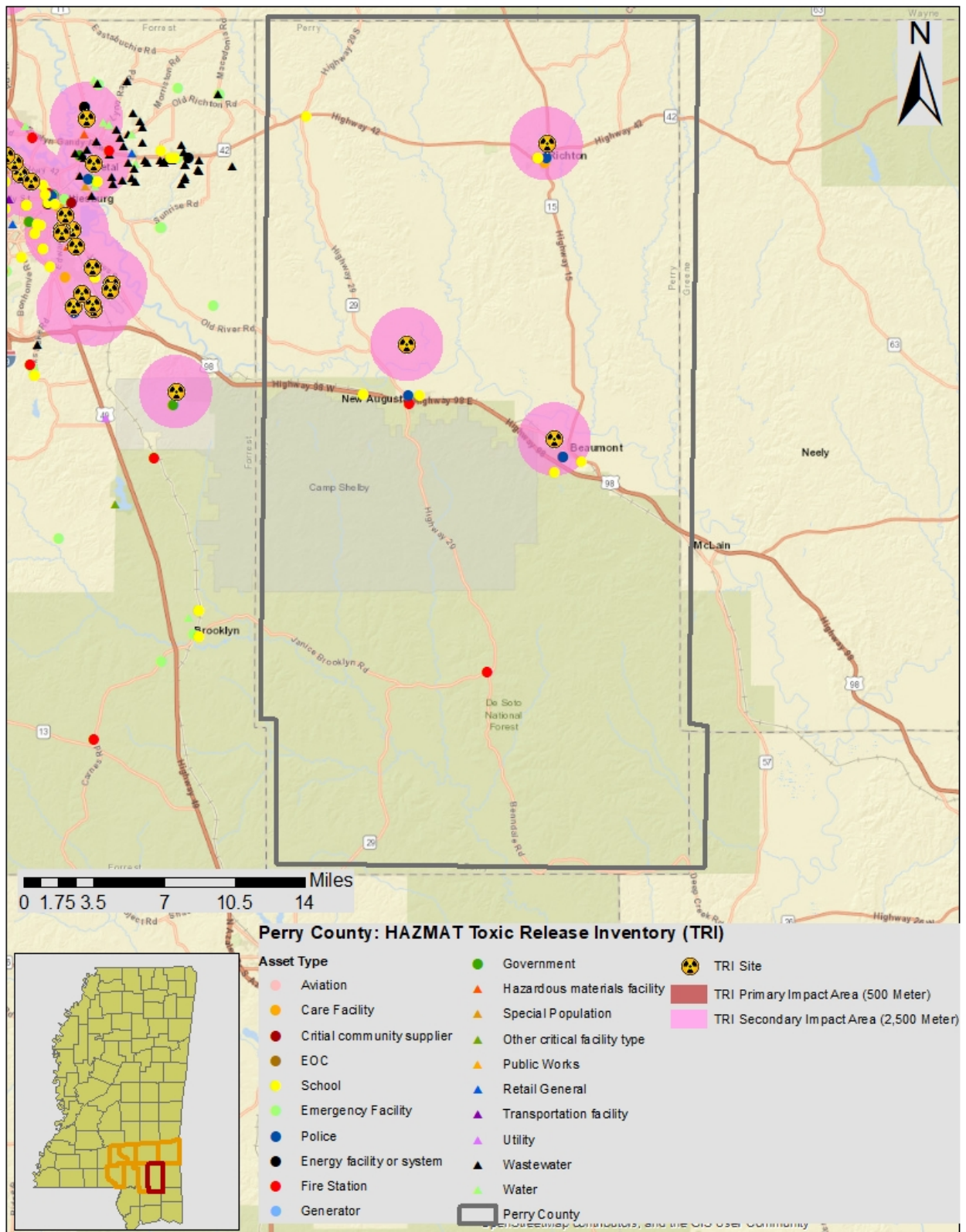
HAZARDOUS MATERIALS INCIDENT

Although historical evidence and existing Toxic Release Inventory sites indicate that Perry County is susceptible to hazardous materials events, there are few reports of damage.

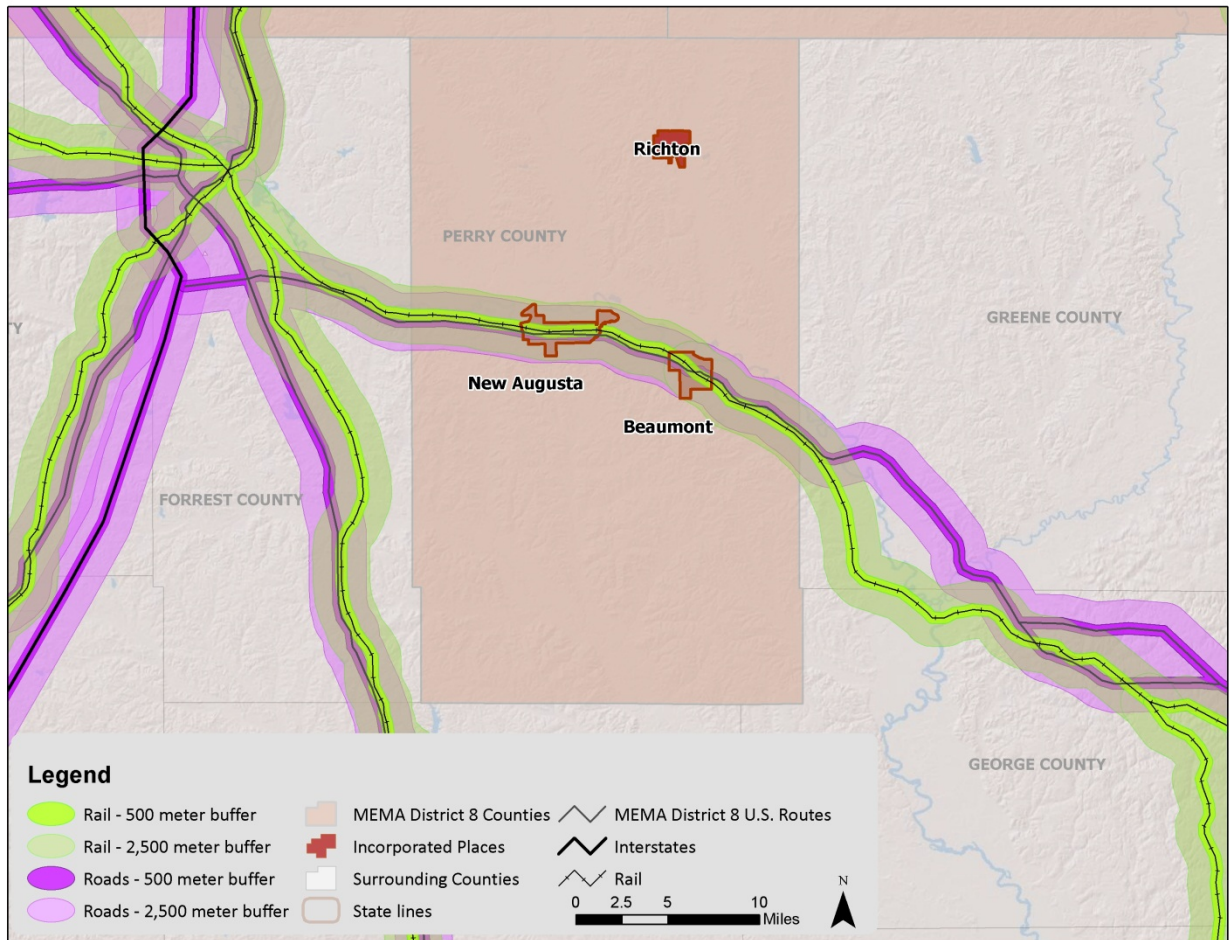
Most hazardous materials incidents that occur are contained and suppressed before destroying any property or threatening lives. However, they can have a significant negative impact. Such events can cause multiple deaths, completely shut down facilities for 30 days or more, and cause more than 50 percent of affected properties to be destroyed or suffer major damage. In a hazardous materials incident, solid, liquid, and/or gaseous contaminants may be released from fixed or mobile containers. Weather conditions will directly affect how the hazard develops. Certain chemicals may travel through the air or water, affecting a much larger area than the point of the incidence itself. Non-compliance with fire and building codes, as well as failure to maintain existing fire and containment features, can substantially increase the damage from a hazardous materials release. The duration of a hazardous materials incident can range from hours to days. Warning time is minimal to none.

In order to conduct the vulnerability assessment for this hazard, GIS analysis was used for fixed and mobile areas. In both scenarios, two sizes of buffers—500 and 2,500 meters—were used. These areas are assumed to respect the different levels of effect: immediate (primary) and secondary. Primary and secondary impact sites were selected based on guidance from FEMA 426, Reference Manual to Mitigate Potential Terrorist Attacks Against Buildings and engineering judgment. For the fixed site analysis, geo-referenced TRI listed toxic sites in Perry County, along with buffers, were used for analysis as shown in **Figure F.16**. For the mobile analysis, the major roads (Interstate highway, U.S. highway, and State highway) and railroads, where hazardous materials are primarily transported that could adversely impact people and buildings, were used for the GIS buffer analysis. **Figure F.17** shows the areas used for mobile toxic release buffer analysis. The mobile toxic release buffer data did not change since the last plan update.

FIGURE F.16: TRI SITES WITH BUFFERS IN PERRY COUNTY



Source: EPA

FIGURE F.17: MOBILE HAZMAT BUFFERS IN PERRY COUNTY

Social Vulnerability

Given high susceptibility across the entire county, it is assumed that the total population is at risk to a hazardous materials incident. It should be noted that areas of population concentration may be at an elevated risk due to a greater burden to evacuate population quickly.

Critical Facilities

Fixed Site Analysis:

The critical facility analysis for fixed TRI sites revealed that there are no critical facilities that would be impacted by only the 500M HAZMAT risk zone. There are 8 critical facilities that would be impacted by the 2500M HAZMAT risk zone, valued at nearly \$36M. A list of specific critical facilities and their associated risk can be found in **Table A.31** at the end of this section.

Mobile Analysis:

The critical facility analysis for transportation corridors in Covington County revealed that there are 18 critical facilities located in the 500M Highway mobile HAZMAT buffer areas valued at over \$18.7M, and there are 7 critical facilities located in the 500M Railway mobile HAZMAT buffer areas valued at approximately \$18.7M.

Expanding to a 2500M HAZMAT risk zone reveals there are nine critical facilities located in the highway mobile HAZMAT buffer areas are vulnerable, valued at approximately \$22.5M. There are 9 critical facilities located in the railway mobile HAZMAT buffer area that are vulnerable, also valued at \$22.5M. A list of specific critical facilities and their associated risk can be found in **Table A.31** at the end of this section.

In conclusion, a hazardous material incident has the potential to impact many existing and future buildings, critical facilities, and populations in Perry County. Those areas in a primary buffer are at the highest risk, though all areas carry some vulnerability due to variations in conditions that could alter the impact area (i.e., direction and speed of wind, volume of release, etc). Further, incidents from neighboring counties could also impact the county and participating jurisdictions.

CONCLUSIONS ON HAZARD VULNERABILITY

Table F.31 shows the critical facilities vulnerable to additional hazards analyzed in this section. The table lists those assets that are determined to be exposed to each of the identified hazards (marked with an “X”).

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TABLE F.31: AT-RISK CRITICAL FACILITIES IN PERRY COUNTY

		ATMOSPHERIC							GEOLOGIC			HYDROLOGIC			OTHER						
FACILITY NAME	FACILITY TYPE	Drought	Hailstorm	Hurricane and Tropical Storm	Lightning	Thunderstorm	Tornado	Winter Storm and Ice Storm	Earthquake	Landslide – Mod	Landslide- High	Dam and Levee Failure ¹⁹	Flood – 100 yr	Flood – 500 yr	Fixed HAZMAT 500m	Fixed HAZMAT 2,500 meter	Mobile HZMT Roads 500 METER	Mobile HZMT Roads 2,500 meter	Mobile HZMT Rails 500 METER	Mobile HZMT Rails 2,500 meter	Wildfire
Perry County																					
BEAUMONT ELEMENTARY SCHOOL	School	X	X	X	X	X	X	X	X							X		X		X	High
Beaumont Police Dept	Police Station	X	X	X	X	X	X	X	X							X	X	X	X	X	Low
Beaumont Volunteer Fire Company	Fire Department	X	X	X	X	X	X	X	X							X	X	X		X	Non-burnable
PERRY COUNTY ALTERNATIVE CENTER	School	X	X	X	X	X		X	X							X	X	X	X	X	High
NEW AUGUSTA ELEMENTARY SCHOOL	School	X	X	X	X	X		X	X					X			X	X	X	X	Low
PERRY CENTRAL HIGH SCHOOL	School	X	X	X	X	X		X	X								X	X	X	X	High
PERRY CO VOC COMPLEX	School	X	X	X	X	X		X	X								X	X	X	X	High
Perry County Sheriff's Dept	Police Station	X	X	X	X	X		X	X					X			X	X	X	X	Non-burnable
Town of New Augusta Volunteer Fire Depar	Fire Department	X	X	X	X	X		X	X								X	X	X	X	High
PERRY COUNTY GENERAL HOSPITAL	Care Facility	X	X	X	X	X		X	X							X					Non-burnable
RICHTON ELEMENTARY SCHOOL	School	X	X	X	X	X		X	X							X					Non-burnable

¹⁹ As noted previously, these facilities could be at risk to dam failure if located in an inundation area. Data was not available to conduct such an analysis. There was no local knowledge of these facilities being at risk to dam failure. As additional data becomes available, more in-depth analysis will be conducted.

		ATMOSPHERIC							GEOLOGIC			HYDROLOGIC			OTHER						
FACILITY NAME	FACILITY TYPE	Drought	Hailstorm	Hurricane and Tropical Storm	Lightning	Thunderstorm	Tornado	Winter Storm and Freeze	Earthquake	Landslide – Mod	Landslide- High	Dam and Levee Failure ¹⁹	Flood – 100 yr	Flood – 500 yr	Fixed HAZMAT 500m	Fixed HAZMAT 2,500 meter	Mobile HZMT Roads 500 METER	Mobile HZMT Roads 2,500 meter	Mobile HZMT Rails 500 METER	Mobile HZMT Rails 2,500 meter	Wildfire
RIGHTON HIGH SCHOOL	School	X	X	X	X	X		X	X							X					Non- burnable
Richton Police Dept	Police Station	X	X	X	X	X	X	X	X							X					Non- burnable

F.4 PERRY COUNTY CAPABILITY ASSESSMENT

This subsection discusses the capability of Perry County to implement hazard mitigation activities. More information on the purpose and methodology used to conduct the assessment can be found in Section 7: *Capability Assessment*.

F.4.1 Planning and Regulatory Capability

Table F.15 provides a summary of the relevant local plans, ordinances, and programs already in place or under development for Perry County. A checkmark (✓) indicates that the given item is currently in place and being implemented. An asterisk (*) indicates that the given item is currently being developed for future implementation. Each of these local plans, ordinances, and programs should be considered available mechanisms for incorporating the requirements of the MEMA District 8 Regional Hazard Mitigation Plan.

TABLE F.16: RELEVANT PLANS, ORDINANCES, AND PROGRAMS

Planning Tool/Regulatory Tool																							
	Hazard Mitigation Plan																						
	Comprehensive Land Use Plan																						
	Floodplain Management Plan																						
	Open Space Management Plan (Parks & Rec/Greenway Plan)																						
	Stormwater Management Plan/Ordinance																						
	Natural Resource Protection Plan																						
	Flood Response Plan																						
	Emergency Operations Plan																						
	Continuity of Operations Plan																						
	Evacuation Plan																						
	Disaster Recovery Plan																						
	Capital Improvements Plan																						
	Economic Development Plan																						
	Historic Preservation Plan																						
	Flood Damage Prevention Ordinance																						
	Zoning Ordinance																						
	Subdivision Ordinance																						
	Unified Development Ordinance																						
	Post-Disaster Redevelopment Ordinance																						
	Building Code																						
	Fire Code																						
	National Flood Insurance Program (NFIP)																						
	NFIP Community Rating System																						

A more detailed discussion on the county's planning and regulatory capabilities follows.

EMERGENCY MANAGEMENT

Hazard Mitigation Plan

Perry County has previously adopted a hazard mitigation plan. The Town of Beaumont, the Town of New Augusta, and the Town of Richton were also included in this plan.

Emergency Operations Plan

Perry County maintains an emergency operations plan through its Emergency Management Agency. The Town of Beaumont, the Town of New Augusta, and the Town of Richton are each covered by this plan.

GENERAL PLANNING

Comprehensive Land Use Plan

Perry County has not adopted a county comprehensive land use plan. However, the Town of New Augusta adopted a community development plan in 1976 and the Town of Richton adopted a city comprehensive plan in 1974.

Zoning Ordinance

Perry County does not have a zoning ordinance in place. However, the Town of New Augusta and the Town of Richton have zoning ordinances that were adopted in 1976 and 1974, respectively.

Subdivision Ordinance

Perry County does not have a subdivision ordinance in place. However, the Town of New Augusta and Town of Richton adopted subdivision regulations in 1976 and 1974, respectively.

Building Codes, Permitting, and Inspections

Perry County, the Town of Beaumont, the Town of New Augusta, and the Town of Richton have each adopted building codes.

FLOODPLAIN MANAGEMENT

Table F.16 provides NFIP policy and claim information for each participating jurisdiction in Perry County.

TABLE F.17: NFIP POLICY AND CLAIM INFORMATION

Jurisdiction	Date Joined NFIP	Current Effective Map Date	NFIP Policies in Force	Insurance in Force	Closed Claims	Total Payments to Date
PERRY COUNTY†	9/1/87	12/16/11	86	\$10,072,300	38	\$131,996
Beaumont	8/16/88	12/16/11	11	\$3,209,400	16	\$32,703
New Augusta	4/2/86	12/16/11	10	\$804,800	12	\$51,683
Richton	11/17/78	12/16/11(M)	4	\$553,000	1	\$42,415

†Includes unincorporated areas of county only

(M) – No Elevation Determined, All Zone A, C and X

Source: NFIP Community Status information as of 3/31/13; NFIP claims and policy information as of 5/15/13

Flood Damage Prevention Ordinance

All communities participating in the NFIP are required to adopt a local flood damage prevention ordinance. Perry County, the Town of Beaumont, the Town of New Augusta, and the Town of Richton all participate in the NFIP and have adopted flood damage prevention ordinances.

Open Space Management Plan

Perry County, the Town of Beaumont, the Town of New Augusta, and the Town of Richton are all included in the Southern Mississippi Planning and Development District (SMPDD) Regional Open Space Plan that was written in 1973.

F.4.2 Administrative and Technical Capability

Table F.17 provides a summary of the capability assessment results for Perry County with regard to relevant staff and personnel resources. A checkmark (✓) indicates the presence of a staff member(s) in that jurisdiction with the specified knowledge or skill.

TABLE F.18: RELEVANT STAFF / PERSONNEL RESOURCES

Staff / Personnel Resource	Planners with knowledge of land development/land management practices	Engineers or professionals trained in construction practices related to buildings and/or infrastructure	Planners or engineers with an understanding of natural and/or human-caused hazards	Emergency Manager	Floodplain Manager	Land Surveyors	Scientists familiar with the hazards of the community	Staff with education or expertise to assess the community's vulnerability to hazards	Personnel skilled in GIS and/or Hazus	Resource development staff or grant writers
PERRY COUNTY	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Beaumont		✓	✓	✓	✓		✓	✓	✓	
New Augusta		✓		✓	✓		✓	✓	✓	
Richton		✓		✓	✓		✓	✓	✓	

Credit for having a floodplain manager was given to those jurisdictions that have a flood damage prevention ordinance, and therefore an appointed floodplain administrator, regardless of whether the appointee was dedicated solely to floodplain management. Credit was given for having a scientist familiar with the hazards of the community if a jurisdiction has a Cooperative Extension Service or Soil and Water Conservation Department. Credit was also given for having staff with education or expertise to assess the community's vulnerability to hazards if a staff member from the jurisdiction was a participant on the existing hazard mitigation plan's planning committee.

F.4.3 Fiscal Capability

Table F.18 provides a summary of the results for Perry County with regard to relevant fiscal resources. A checkmark (✓) indicates that the given fiscal resource is locally available for hazard mitigation purposes.

(including match funds for state and federal mitigation grant funds) according to the previous county hazard mitigation plan.

TABLE F.19: RELEVANT FISCAL RESOURCES

Fiscal Tool / Resource	Capital Improvement Programming	Community Development Block Grants (CDBG)	Special Purpose Taxes (or taxing districts)	Gas/Electric Utility Fees	Water/Sewer Fees	Stormwater Utility Fees	Development Impact Fees	General Obligation, Revenue, and/or Special Tax Bonds	Partnering Arrangements or Intergovernmental Agreements
PERRY COUNTY	✓	✓							✓
Beaumont	✓	✓							✓
New Augusta	✓	✓							✓
Richton	✓	✓							✓

F.4.4 Political Capability

During the months immediately following a disaster, local public opinion in Perry County is more likely to shift in support of hazard mitigation efforts.

F.5 PERRY COUNTY MITIGATION STRATEGY

This subsection provides the blueprint for Perry County to follow in order to become less vulnerable to its identified hazards. It is based on general consensus of the Regional Hazard Mitigation Council and the findings and conclusions of the capability assessment and risk assessment. Additional Information can be found in Section 8: *Mitigation Strategy* and Section 9: *Mitigation Action Plan*.

F.5.1 Mitigation Goals

Perry County developed five mitigation goals in coordination with the other participating MEMA District 8 Region jurisdictions. The regional mitigation goals are presented in **Table F.19**.

TABLE F.20: MEMA DISTRICT 8 REGIONAL MITIGATION GOALS

	Goal
Goal #1	Develop a sustainable, comprehensive mitigation program to ensure safer communities.

	Goal
Goal #2	Reduce or avoid loss of life, injury, and damage to property, the economy, and the environment.
Goal #3	Enhance preparedness and effective response to hazards.
Goal #4	Strengthen and improve local mitigation capabilities.
Goal #5	Increase public awareness of hazard mitigation, hazard risk, and protective measures that can be taken to minimize potential loss and damage.

F.5.2 Mitigation Action Plan

The mitigation actions proposed by Perry County, the Town of Beaumont, the Town of New Augusta, and the Town of Richton are listed in the following individual Mitigation Action Plans.

Perry County Mitigation Action Plan

Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2019 Action Implementation Status
Prevention								
P-1	Identify high risk areas where hazards are most likely to occur.	All	High	N/A	TBD	County	Annual review	This action has been implemented/Ongoing. High risk areas are identified in this hazard mitigation plan.
P-2	Site-locate vulnerable populations on a County-wide map.	Multiple	High	Area Agency on Aging, USDA Rural Dev., COPS, FIRE	TBD	County EMA, County BOS	Within 1 year; Upon request	This action has been deferred until funding is available to implement the action.
P-3	Consider adoption of flood damage prevention ordinance in Perry County.	FL	High	Self-funded	No cost	County, County Floodplain Administrator	Ongoing	This action has been implemented. Completed
P-4	Consider adoption of subdivision regulations.	TH, FL, HU, TS	Medium	Self-funded	No cost	County	Ongoing	This action has been deferred.
P-5	Continue to maintain and upgrade drainage facilities.	HU, TS, FL, BH	High	CDBG, Small Muni. Grant, MSDA, USDA Rural Dev. Self-funded	TBD	County BOS, County Road Crews	Annual review	This action has been implemented/Ongoing.
P-6	Consider adoption of a comprehensive drainage plan.	FL, TS, HU	Medium	CDBG, Small Muni. Grant, MSDA, USDA Rural Dev.	Unknown	County	Within 5 years funding availability	Deferred based on funding availability.

Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2019 Action Implementation Status
P-7	Map the easements and rights-of-way of roadways and drainage ways.	All	Low to Medium	CDBG, Small Muni. Grant, MSDA, USDA Rural Dev.	Unknown	County	Within 5 years of funding availability	This action has been deferred due to lack of funding.
P-8	Support the development of a shared geographic data system for land use and site planning.	All	Medium to High	CDBG, Small Muni. Grant, MSDA, USDA Rural Dev. Self-funded	TBD	County	Within 2 years of funding availability	Deferred based on funding availability.
P-9	Develop a comprehensive development plan.	All	High	CDBG, MSDA	TBD	County	Within 2 years of funding availability	Deferred based on funding availability.
P-10	Incorporate the hazard mitigation plan into the comprehensive plan.	All	Medium	N/A	TBD	County	Concurrent with prep. of Comp Plan	This action has been deferred.
Property Protection								
PP-1	Promote alternative construction techniques such as the building of “safe rooms” in new construction and when remodeling existing structures.	HU, TS, TO, TH	Medium	CDBG, Small Muni. Grant, MSDA, USDA Rural Dev. Self-funded	TBD	County	Within 5 years of funding availability	This action has been implemented/Ongoing.
PP-2	Ensure that structures in floodplain areas are elevated. Including Repetitive Loss Properties	FL	High	CDBG, Small Muni. Grant, MSDA, USDA Rural Dev. Self-funded	TBD	County	Within 3 years of funding availability	This action has been implemented and ongoing.

Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2019 Action Implementation Status
PP-3	Ensure that new public buildings are designed and built to hurricane resistant building codes.	HU, TS, TO, HW	High	CDBG, Small Muni. Grant, MSDA, USDA Rural Dev. Self-funded	TBD	County	Annual Review	This action has been implemented and ongoing.
PP-4	Continue to retrofit public buildings and other critical facilities to withstand natural hazards.	All	High	HMGP	TBD	County	Within 2 years; Next round of HMGP funding	This action has been deferred awaiting funding.
PP-5	Ensure secure operation of water wells, water tanks and wastewater treatment facilities.	All	High	HGMP, USDA Rural Dev., CDBG, Small Muni. Grant	TBD	County	Annual Review	This action has been completed and ongoing.
Natural Resource Protection								
NRP-1	Preserve natural wetlands and riparian areas through acquisition of conservation easements.	HU, TS, FL	Low to Medium	Donation	Low or no cost	MS Land Trust, Land Trust for the MS Coastal Plain, County	Within 5 years	No action taken.
Emergency Services								
ES-1	Encourage participation by staff and elected officials in voluntary or extracurricular activities related to emergency management, disaster preparedness, civil defense, or other hazard mitigation activities.	All	Medium	Self-funded, MEMA	Low or no cost	County EMA	Annual Review	This action has been implemented and ongoing.

Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2019 Action Implementation Status
ES-2	Establish a notification procedure for populations in high risk areas.	All	Medium	HGMP, USDA Rural Dev., CDBG, Small Muni. Grant Self-funded	Unknown	County EMA, County BOS	Within 2 years with funding availability	This action has been deferred awaiting funding.
ES-3	Survey the existing emergency shelters and study the feasibility of expanding the capacity of shelters.	All	High	HMGP	Unknown	County EMA	Within 2 years	This action has been completed and ongoing.
ES-4	Explore potential sites for a new special needs shelter.	HU, TS, FL	High	HMGP	Unknown	County EMA, County	Within 2 years	This action has been completed. No Change
ES-5	Improve disaster communication systems within the County.	All	High	HGMP, USDA Rural Dev., CDBG, Small Muni. Grant Self-funded	Unknown	County EMA	Ongoing	This action has been implemented and ongoing.
ES-6	Consider generators for local radio station service areas.	HU, TO, TS	Medium	HMGP	Unknown	County EMA	Contingent upon funding	This action has been completed.
ES-7	Install warning sirens in the County.	TO, HU	Medium	HMGP	Unknown	County EMA	Contingent upon funding	This action has been deferred. Due to lack of funding
ES-8	Enhance Central Dispatch and other communications equipment.	All	Medium	HMGP	Unknown	County EMA	Within 2 years; Contingent upon funding	This action has been completed and ongoing.
ES-9	Explore upgrade/enhancement of 911 system in Perry County.	All	Low to Medium	HMGP, Self Funded	Unknown	County EMA	Within 5 years; Contingent upon funding	This action has been completed and ongoing.
ES-10	Explore potential to install Reverse 911 system.	All	Low to Medium	HMGP	Unknown	County EMA, County	Within 5 years; Contingent upon funding	In process included in new 911 system.

Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2019 Action Implementation Status
ES-11	Coordinate with neighboring jurisdictions to ensure consistency of evacuation plans.	FL, HU, TS, Others	Medium	Self-funded	No additional cost	County BOS, County EMA	Annual Review	This action has been implemented and ongoing.
ES-12	Enhance identification of evacuation routes through the distribution of MDOT maps.	FL, HU, TS, Others	High	Self-funded	No additional cost	County EMA	Ongoing	This action has been implemented and ongoing.
ES-13	Ensure continuity of utility services for public buildings and other critical facilities. This includes purchasing backup generators and/or transfer switches to existing and future critical assets.	All	High	HMGP	Unknown	County	Within 2 years; Next round of HMGP funding	This action has been implemented and ongoing.
ES-14	Develop a government services continuity plan.	All	Medium	USDA Rural Dev., CDBG, Small Muni. Grant	Unknown	County	Annual review	This action has been implemented.
ES-15	Explore funding sources to renovate existing County Multi-Purpose Center into Emergency Operations Center.	All	High	HMGP, USDA Rural Dev., CDBG, Small Muni. Grant	Unknown	County	Within 5 years; Annual review	This action has been deleted.
ES-16	Host a meeting to review Perry County Comprehensive Emergency Management Plan.	All	Medium	Self-funded	No additional cost	County	Annual Meeting	This action has been implemented and ongoing.
ES-17	Actively search for identify funding sources for the enhancement of emergency response abilities of Fire and Sheriff's Departments.	TT	Medium to High	DHS, SAFER, COPS, FIRE, Others	Unknown	County	Ongoing	This action has been implemented.
ES-18	Explore continuing education programs/ opportunities for first responders, especially in hazardous materials training.	Range	Medium	Self-funded, MEMA	Low cost	County	Ongoing	This action has been implemented and ongoing.

Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2019 Action Implementation Status
Structural Projects								
SP-1	Address cross-jurisdictional issues related to response, recovery and mitigation on key projects with overlapping boundaries.	HU, TS, FL, RH	Low to Medium	Self-funded	No additional cost	County	Within 2 years of funding availability.	Deferred due to lack of funding.
SP-2	Acquisitions of RL/SRL Properties	FL	High	FEMA, HMGP and PDM	TBD	County	2024	New
Public Education and Awareness								
PEA-1	Explore continuing education programs/ opportunities for staff and elected officials.	FL, TH, HU, TS	Medium	MEMA, FEMA, EMI		County	Ongoing	This action has been implemented and ongoing.
PEA-2	Provide education and outreach materials to citizens and visitors.	All	High	Self-funded	No cost	County EMA	Ongoing	This action has been implemented and ongoing.
PEA-3	Encourage the development of Family Disaster Plans.	All	High	Self-funded, COPS, FIRE	Low or no cost	County EMA	Annual presentations	This action has been implemented and ongoing.
PEA-4	Expand outreach information to property owners regarding retrofitting and flood-proofing techniques through community workshops, brochures, and newspaper articles.	FL, Multiple	High	Self-funded	No additional cost	County EMA, County	Upon request	This action has been implemented and ongoing.
PEA-5	Provide education/outreach to communities to encourage participation in the National Flood Insurance Program.	FL	High	Self-funded	No additional cost	County EMA	Ongoing	This action has been completed and ongoing .

ANNEX F: PERRY COUNTY

Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2019 Action Implementation Status
PEA-6	Encourage participation in the Community Rating System of the NFIP.	FL, HU, TS, TH, HW	Medium	USDA Rural Dev., CDBG, Small Muni. Grant, FEMA, Others	Unknown	County	Within 3 years`	No action taken.
FL = Flood TH = Thunderstorm HU = Hurricane TS = Tropical Storm TO = Tornado BH = Biological Hazards HW = High Winds RH = Roadway Hazards TT = Transportation and Technological Hazards CH = Civil Hazards County EMA = Perry County Emergency Management Agency County BOS = Perry County Board of Supervisors								

Town of Beaumont Mitigation Action Plan

Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2013 Action Implementation Status
Prevention								
P-1	Identify high risk areas where hazards are most likely to occur.	All	High	N/A	No additional cost	Town	Annual review	This action has been implemented/Ongoing. High risk areas are identified in this hazard mitigation plan.
P-2	Site-locate vulnerable populations on a County-wide map.	Multiple	High	Area Agency on Aging, USDA Rural Dev., COPS, FIRE	Unknown	County EMA, County BOS, Town	Within 1 year; Upon request	This action has been deferred until funding is available to implement the action.
P-3	Strictly enforce the Flood Damage Prevention Ordinance	FL	High	Self-funded	No cost	Town Floodplain Administrator	Ongoing	This action has been implemented. Completed
P-4	Consider adoption of subdivision regulations.	TH, FL, HU, TS	Medium	Self-funded	No cost	County, Town	Ongoing	This action has been deferred.
P-5	Continue to maintain and upgrade drainage facilities.	HU, TS, FL, BH	High	CDBG, Small Muni. Grant, MSDA, USDA Rural Dev., Self-funded	Unknown	County BOS, County Road Crews, Town	Annual review	This action has been implemented/Ongoing.
P-6	Consider adoption of a comprehensive drainage plan.	FL, TS, HU	Medium	CDBG, Small Muni. Grant, MSDA, USDA Rural Dev.	Unknown	County, Town	Within 5 years funding availability	Deferred based on funding availability.

Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2013 Action Implementation Status
P-7	Map the easements and rights-of-way of roadways and drainage ways.	All	Low to Medium	CDBG, Small Muni. Grant, MSDA, USDA Rural Dev.	Unknown	County, Town	Within 5 years of funding availability	This action has been deferred due to lack of funding.
P-8	Support the development of a shared geographic data system for land use and site planning.	All	Medium to High	CDBG, Small Muni. Grant, MSDA, USDA Rural Dev., Self-funded	No additional cost	County, Town	Within 2 years of funding availability	Deferred based on funding availability.
P-9	Develop a comprehensive development plan.	All	High	CDBG, MSDA		County, Town	Within 2 years of funding availability	Deferred based on funding availability.
P-10	Incorporate the hazard mitigation plan into the comprehensive plan.	All	Medium	N/A	No additional cost	County, Town	Concurrent with prep. of Comp Plan	This action has been deferred.
Property Protection								
PP-1	Promote alternative construction techniques such as the building of “safe rooms” in new construction and when remodeling existing structures.	HU, TS, TO, TH	Medium	CDBG, Small Muni. Grant, MSDA, USDA Rural Dev., Self-funded	No additional cost	Town	Within 5 years of funding availability	This action has been implemented/Ongoing.
PP-2	Ensure that structures in floodplain areas are elevated.	FL	High	CDBG, Small Muni. Grant, MSDA, USDA Rural Dev., Self-funded	No additional cost	County, Town	Within 3 years of funding availability	This action has been implemented and ongoing.

Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2013 Action Implementation Status
PP-3	Ensure that new public buildings are designed and built to hurricane resistant building codes.	HU, TS, TO, HW	High	CDBG, Small Muni. Grant, MSDA, USDA Rural Dev., Self-funded	No additional cost	County, Town	Annual Review	This action has been implemented and ongoing.
PP-4	Continue to retrofit public buildings and other critical facilities to withstand natural hazards.	All	High	HMGP	Unknown	County, Town	Within 2 years; Next round of HMGP funding	This action has been deferred awaiting funding.
PP-5	Ensure secure operation of water wells, water tanks and wastewater treatment facilities.	All	High	HGMP, USDA Rural Dev., CDBG, Small Muni. Grant	Unknown	County, Town	Annual Review	This action has been completed and ongoing.
Natural Resource Protection								
NRP-1	Preserve natural wetlands and riparian areas through acquisition of conservation easements.	HU, TS, FL	Low to Medium	Donation	Low or no cost	MS Land Trust, Land Trust for the MS Coastal Plain, County	Within 5 years	No action taken.
Emergency Services								
ES-1	Encourage participation by staff and elected officials in voluntary or extracurricular activities related to emergency management, disaster preparedness, civil defense, or other hazard mitigation activities.	All	Medium	Self-funded, MEMA	Low or no cost	County EMA	Annual Review	This action has been implemented and ongoing.
ES-2	Establish a notification procedure for populations in high risk areas.	All	Medium	Self-funded	No additional cost	County EMA, County BOS, Town	Within 2 years with funding availability	This action has been deferred awaiting funding.

Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2013 Action Implementation Status
ES-3	Survey the existing emergency shelters and study the feasibility of expanding the capacity of shelters.	All	High	HMGP	Unknown	County EMA, Town	Within 2 years	This action has been completed and ongoing.
ES-4	Explore potential sites for a new special needs shelter.	HU, TS, FL	High	HMGP	Unknown	County EMA, County, Town	Within 2 years	This action has been completed. No Change
ES-5	Improve disaster communication systems within the County.	All	High	HMGP	Unknown	County EMA	Ongoing	This action has been implemented and ongoing.
ES-6	Consider generators for local radio station service areas.	HU, TS, FL	High	HMGP	Unknown	County EMA, County	Contingent upon funding	This action has been completed.
ES-7	Install warning sirens in the County.	All	Medium	Unknown	Unknown	County EMA	Contingent upon funding	This action has been deferred. Due to lack of funding
ES-8	Enhance Central Dispatch and other communications equipment.	All	Medium	HMGP	Unknown	County EMA	Within 2 years; Contingent upon funding	This action has been completed and ongoing. Cities do not have their own dispatch- they use county resource.
ES-9	Explore upgrade/enhancement of 911 system in Perry County.	All	Low to Medium	HMGP	Unknown	County EMA	Within 5 years; Contingent upon funding	This action has been completed and ongoing.
ES-10	Explore potential to install Reverse 911 system.	All	Low to Medium	HMGP	Unknown	County EMA, County	Within 5 years; Contingent upon funding	In process included in new 911 system.
ES-11	Coordinate with neighboring jurisdictions to ensure consistency of evacuation plans.	FL, HU, TS, Others	Medium	Self-funded	No additional cost	County BOS, County EMA	Annual Review	This action has been implemented and ongoing.
ES-12	Enhance identification of evacuation routes through the distribution of MDOT maps.	FL, HU, TS, Others	High	Self-funded	No additional cost	County EMA	Ongoing	This action has been implemented and ongoing.

Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2013 Action Implementation Status
ES-13	Ensure continuity of utility services for public buildings and other critical facilities.	All	High	HMGP	Unknown	County	Within 2 years; Next round of HMGP funding	This action has been implemented and ongoing.
ES-14	Develop a government services continuity plan.	All	Medium	USDA Rural Dev., CDBG, Small Muni. Grant	Unknown	County	2024	Deferred
ES-15	Explore funding sources to renovate existing County Multi-Purpose Center into Emergency Operations Center.	All	High	HMGP, USDA Rural Dev., CDBG, Small Muni. Grant	Unknown	County	Within 5 years; Annual review	This action has been deleted.
ES-16	Host a meeting to review Perry County Comprehensive Emergency Management Plan.	All	Medium	Self-funded	No additional cost	County	Annual Meeting	This action has been implemented and ongoing.
ES-17	Actively search for identify funding sources for the enhancement of emergency response abilities of Fire and Sheriff's Departments.	TT	Medium to High	DHS, SAFER, COPS, FIRE, Others	Unknown	County, Town	Ongoing	This action has been implemented.
ES-18	Explore continuing education programs/ opportunities for first responders, especially in hazardous materials training.	Range	Medium	Self-funded, MEMA	Low cost	County, Town	Ongoing	This action has been implemented and ongoing.
Structural Projects								
SP-1	Address cross-jurisdictional issues related to response, recovery and mitigation on key projects with overlapping boundaries.	HU, TS, FL, RH	Low to Medium	Self-funded	No additional cost	County, Town	Within 2 years of funding availability.	Deferred due to lack of funding.
SP-2	Acquisitions of RL/SRL Properties	FL	High	FEMA, HMGP and PDM	TBD	County	2024	New

ANNEX F: PERRY COUNTY

Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2013 Action Implementation Status
Public Education and Awareness								
PEA-1	Explore continuing education programs/ opportunities for staff and elected officials.	FL, TH, HU, TS	Medium	MEMA, FEMA, EMI	Unknown	County	Ongoing	This action has been implemented and ongoing.
PEA-2	Provide education and outreach materials to citizens and visitors.	All	High	Self-funded	No cost	County EMA	Ongoing	This action has been implemented and ongoing.
PEA-3	Encourage the development of Family Disaster Plans.	All	High	Self-funded, COPS, FIRE	Low or no cost	County EMA	Annual presentations	This action has been implemented and ongoing.
PEA-4	Expand outreach information to property owners regarding retrofitting and flood-proofing techniques through community workshops, brochures, and newspaper articles.	FL, Multiple	High	Self-funded	No additional cost	County EMA, County	Upon request	This action has been implemented and ongoing.
PEA-5	Provide education/outreach to communities to encourage participation in the National Flood Insurance Program.	FL	High	Self-funded	No additional cost	County EMA	Ongoing	This action has been completed and ongoing .
PEA-6	Encourage participation in the Community Rating System of the NFIP.	FL, HU, TS, TH, HW	Medium	USDA Rural Dev., CDBG, Small Muni. Grant, FEMA, Others	Unknown	County, Town	Within 3 years`	No action taken.
PEA-7	Encourage businesses to develop business continuity or contingency operating plans.	Civil Hazards	High	Self-funded, SBA, SCORE	Low or no cost	County, Town	Within 2 years	This action has been deferred.
FL = Flood TH = Thunderstorm HU = Hurricane TS = Tropical Storm TO = Tornado BH = Biological Hazards HW = High Winds RH = Roadway Hazards TT = Transportation and Technological Hazards CH = Civil Hazards County EMA = Perry County Emergency Management Agency County BOS = Perry County Board of Supervisors								

Town of New Augusta Mitigation Action Plan

Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2019 Action Implementation Status
Prevention								
P-1	Identify high risk areas where hazards are most likely to occur.	All	High	N/A	No additional cost	Town	Annual review	This action has been implemented/Ongoing. High risk areas are identified in this hazard mitigation plan.
P-2	Site-locate vulnerable populations on a County-wide map.	Multiple	High	Area Agency on Aging, USDA Rural Dev., COPS, FIRE	Unknown	County EMA, County BOS, Town	Within 1 year; Upon request	This action has been deferred until funding is available to implement the action.
P-3	Strictly enforce the Flood Damage Prevention Ordinance	FL	High	Self-funded	No cost	Town Floodplain Administrator	Ongoing	This action has been implemented. Completed
P-4	Consider adoption of subdivision regulations.	TH, FL, HU, TS	Medium	Self-funded	No cost	County, Town	Ongoing	This action has been deferred.
P-5	Continue to maintain and upgrade drainage facilities.	HU, TS, FL, BH	High	CDBG, Small Muni. Grant, MSDA, USDA Rural Dev., Self-funded	Unknown	County BOS, County Road Crews, Town	Annual review	This action has been implemented/Ongoing.
P-6	Consider adoption of a comprehensive drainage plan.	FL, TS, HU	Medium	CDBG, Small Muni. Grant, MSDA, USDA Rural Dev.	Unknown	County, Town	Within 5 years funding availability	Deferred based on funding availability.

Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2019 Action Implementation Status
P-7	Map the easements and rights-of-way of roadways and drainage ways.	All	Low to Medium	CDBG, Small Muni. Grant, MSDA, USDA Rural Dev.	Unknown	County	Within 5 years of funding availability	This action has been deferred due to lack of funding.
P-8	Support the development of a shared geographic data system for land use and site planning.	All	Medium to High	CDBG, Small Muni. Grant, MSDA, USDA Rural Dev., Self-funded	No additional cost	County	Within 2 years of funding availability	Deferred based on funding availability.
P-9	Develop a comprehensive development plan.	All	High	CDBG, MSDA	Unknown	County	Within 2 years of funding availability	Deferred based on funding availability.
P-10	Incorporate the hazard mitigation plan into the comprehensive plan.	All	Medium	N/A	No additional cost	County	Concurrent with prep. of Comp Plan	This action has been deferred.
Property Protection								
PP-1	Promote alternative construction techniques such as the building of “safe rooms” in new construction and when remodeling existing structures.	HU, TS, TO, TH	Medium	CDBG, Small Muni. Grant, MSDA, USDA Rural Dev., Self-funded	No additional cost	Town	Within 5 years of funding availability	This action has been implemented/Ongoing.
PP-2	Ensure that structures in floodplain areas are elevated.	FL	High	CDBG, Small Muni. Grant, MSDA, USDA Rural Dev., Self-funded	No additional cost	County, Town	Within 3 years of funding availability	This action has been implemented and ongoing.

Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2019 Action Implementation Status
PP-3	Ensure that new public buildings are designed and built to hurricane resistant building codes.	HU, TS, TO, HW	High	CDBG, Small Muni. Grant, MSDA, USDA Rural Dev., Self-funded	No additional cost	County, Town	Annual Review	This action has been implemented and ongoing.
PP-4	Continue to retrofit public buildings and other critical facilities to withstand natural hazards.	All	High	HMGP	Unknown	County, Town	Within 2 years; Next round of HMGP funding	This action has been deferred awaiting funding.
PP-5	Ensure secure operation of water wells, water tanks and wastewater treatment facilities.	All	High	HGMP, USDA Rural Dev., CDBG, Small Muni. Grant	Unknown	County, Town	Annual Review	This action has been completed and ongoing.
Natural Resource Protection								
NRP-1	Preserve natural wetlands and riparian areas through acquisition of conservation easements.	HU, TS, FL	Low to Medium	Donation	Low or no cost	MS Land Trust, Land Trust for the MS Coastal Plain, County	Within 5 years	No action taken.
Emergency Services								
ES-1	Encourage participation by staff and elected officials in voluntary or extracurricular activities related to emergency management, disaster preparedness, civil defense, or other hazard mitigation activities.	All	Medium	Self-funded, MEMA	Low or no cost	County EMA	Annual Review	This action has been implemented and ongoing.
ES-2	Establish a notification procedure for populations in high risk areas.	All	Medium	Self-funded	No additional cost	County EMA, County BOS	Within 2 years with funding availability	This action has been deferred awaiting funding.

Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2019 Action Implementation Status
ES-3	Survey the existing emergency shelters and study the feasibility of expanding the capacity of shelters.	All	High	HMGP	Unknown	County EMA	Within 2 years	This action has been completed and ongoing.
ES-4	Explore potential sites for a new special needs shelter.	HU, TS, FL	High	HMGP	Unknown	County EMA, County	Within 2 years	This action has been completed. No Change
ES-5	Improve disaster communication systems within the County.	All	Medium	Unknown	Unknown	County EMA	Ongoing	This action has been implemented and ongoing.
ES-6	Consider generators for local radio station service areas.	HU, TO, TS	Medium	HMGP	Unknown	County EMA	Contingent upon funding	This action has been completed.
ES-7	Install warning sirens in the County.	TO, HU	Medium	HMGP	Unknown	County EMA	Contingent upon funding	This action has been deferred. Due to lack of funding. Two sirens installed in New Augusta since previous plan.
ES-8	Enhance Central Dispatch and other communications equipment.	All	Medium	HMGP	Unknown	County EMA	Within 2 years; Contingent upon funding	This action has been completed and ongoing. Cities do not have their own dispatch- use County resource.
ES-9	Explore upgrade/enhancement of 911 system in Perry County.	All	Low to Medium	HMGP	Unknown	County EMA	Within 5 years; Contingent upon funding	This action has been completed and ongoing.
ES-10	Explore potential to install Reverse 911 system.	All	Low to Medium	HMGP	Unknown	County EMA, County	Within 5 years; Contingent upon funding	In process included in new 911 system.
ES-11	Coordinate with neighboring jurisdictions to ensure consistency of evacuation plans.	FL, HU, TS, Others	Medium	Self-funded	No additional cost	County BOS, County EMA	Annual Review	This action has been implemented and ongoing.

Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2019 Action Implementation Status
ES-12	Enhance identification of evacuation routes through the distribution of MDOT maps.	FL, HU, TS, Others	High	Self-funded	No additional cost	County EMA	Ongoing	This action has been implemented and ongoing.
ES-13	Ensure continuity of utility services for public buildings and other critical facilities.	All	High	HMGP	Unknown	County	Within 2 years; Next round of HMGP funding	This action has been implemented and ongoing.
ES-14	Develop a government services continuity plan.	All	Medium	USDA Rural Dev., CDBG, Small Muni. Grant	Unknown	County	2024	Deferred
ES-15	Explore funding sources to renovate existing County Multi-Purpose Center into Emergency Operations Center.	All	High	HMGP, USDA Rural Dev., CDBG, Small Muni. Grant	Unknown	County	Within 5 years; Annual review	This action has been deleted.
ES-16	Host a meeting to review Perry County Comprehensive Emergency Management Plan.	All	Medium	Self-funded	No additional cost	County	Annual Meeting	This action has been implemented and ongoing.
ES-17	Actively search for identify funding sources for the enhancement of emergency response abilities of Fire and Sheriff's Departments.	TT	Medium to High	DHS, SAFER, COPS, FIRE, Others	Unknown	County, Town	Ongoing	This action has been implemented.
ES-18	Explore continuing education programs/ opportunities for first responders, especially in hazardous materials training.	Range	Medium	Self-funded, MEMA	Low cost	County, Town	Ongoing	This action has been implemented and ongoing.
Structural Projects								
SP-1	Address cross-jurisdictional issues related to response, recovery and mitigation on key projects with overlapping boundaries.	HU, TS, FL, RH	Low to Medium	Self-funded	No additional cost	County, Town	Within 2 years of funding availability.	Deferred due to lack of funding.

Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2019 Action Implementation Status
SP-2	Acquisitions of RL/SRL Properties	FL	High	FEMA, HMGP and PDM	TBD	County	2024	New
Public Education and Awareness								
PEA-1	Explore continuing education programs/ opportunities for staff and elected officials.	FL, TH, HU, TS	Medium	MEMA, FEMA, EMI	Unknown	Town	Ongoing	This action has been implemented and ongoing.
PEA-2	Provide education and outreach materials to citizens and visitors.	All	High	Self-funded	No cost	County EMA	Ongoing	This action has been implemented and ongoing.
PEA-3	Encourage the development of Family Disaster Plans.	All	High	Self-funded, COPS, FIRE	Low or no cost	County EMA	Annual presentations	This action has been implemented and ongoing.
PEA-4	Expand outreach information to property owners regarding retrofitting and flood-proofing techniques through community workshops, brochures, and newspaper articles.	FL, Multiple	High	Self-funded	No additional cost	County EMA, Town	Upon request	This action has been implemented and ongoing.
PEA-5	Provide education/outreach to communities to encourage participation in the National Flood Insurance Program.	FL	High	Self-funded	No additional cost	County EMA	Ongoing	This action has been completed and ongoing .

ANNEX F: PERRY COUNTY

Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2019 Action Implementation Status
PEA-6	Encourage participation in the Community Rating System of the NFIP.	FL, HU, TS, TH, HW	Medium	USDA Rural Dev., CDBG, Small Muni. Grant, FEMA, Others	Unknown	County, Town	Within 3 years`	No action taken.
PEA-7	Encourage businesses to develop business continuity or contingency operating plans.	Civil Hazards	High	Self-funded, SBA, SCORE	Low or no cost	County, Town	Within 2 years	This action has been deferred.
FL = Flood TH = Thunderstorm HU = Hurricane TS = Tropical Storm TO = Tornado BH = Biological Hazards HW = High Winds RH = Roadway Hazards TT = Transportation and Technological Hazards CH = Civil Hazards County EMA = Perry County Emergency Management Agency County BOS = Perry County Board of Supervisors								

Town of Richton Mitigation Action Plan

Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2019 Action Implementation Status
Prevention								
P-1	Identify high risk areas where hazards are most likely to occur.	All	High	N/A	No additional cost	Town	Annual review	This action has been implemented/Ongoing. High risk areas are identified in this hazard mitigation plan.
P-2	Site-locate vulnerable populations on a County-wide map.	Multiple	High	Area Agency on Aging, USDA Rural Dev., COPS, FIRE	Unknown	County EMA, County BOS, Town	Within 1 year; Upon request	This action has been deferred until funding is available to implement the action.
P-3	Strictly enforce the Flood Damage Prevention Ordinance	FL	High	Self-funded	No cost	Town Floodplain Administrator	Ongoing	This action has been implemented. Completed
P-4	Consider adoption of subdivision regulations.	TH, FL, HU, TS	Medium	Self-funded	No cost	County, Town	Ongoing	This action has been deferred.
P-5	Continue to maintain and upgrade drainage facilities.	HU, TS, FL, BH	High	CDBG, Small Muni. Grant, MSDA, USDA Rural Dev., Self-funded	Unknown	County BOS, County Road Crews, Town	Annual review	This action has been implemented/Ongoing.
P-6	Consider adoption of a comprehensive drainage plan.	FL, TS, HU	Medium	CDBG, Small Muni. Grant, MSDA, USDA Rural Dev.	Unknown	County, Town	Within 5 years funding availability	Deferred based on funding availability.

Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2019 Action Implementation Status
P-7	Map the easements and rights-of-way of roadways and drainage ways.	All	Low to Medium	CDBG, Small Muni. Grant, MSDA, USDA Rural Dev.	Unknown	County, Town	Within 5 years of funding availability	This action has been deferred due to lack of funding.
P-8	Support the development of a shared geographic data system for land use and site planning.	All	Medium to High	CDBG, Small Muni. Grant, MSDA, USDA Rural Dev., Self-funded	No additional cost	County, Town	Within 2 years of funding availability	Deferred based on funding availability.
P-9	Develop a comprehensive development plan.	All	High	CDBG, MSDA	Unknown	County, Town	Within 2 years of funding availability	Deferred based on funding availability.
P-10	Incorporate the hazard mitigation plan into the comprehensive plan.	All	Medium	N/A	No additional cost	County, Town	Concurrent with prep. of Comp Plan	This action has been deferred.
Property Protection								
PP-1	Promote alternative construction techniques such as the building of “safe rooms” in new construction and when remodeling existing structures.	HU, TS, TO, TH	Medium	CDBG, Small Muni. Grant, MSDA, USDA Rural Dev., Self-funded	No additional cost	Town	Within 5 years of funding availability	This action has been implemented/Ongoing.
PP-2	Ensure that structures in floodplain areas are elevated.	FL	High	CDBG, Small Muni. Grant, MSDA, USDA Rural Dev., Self-funded	No additional cost	County, Town	Within 3 years of funding availability	This action has been implemented and ongoing.

Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2019 Action Implementation Status
PP-3	Ensure that new public buildings are designed and built to hurricane resistant building codes.	HU, TS, TO, HW	High	CDBG, Small Muni. Grant, MSDA, USDA Rural Dev., Self-funded	No additional cost	County, Town	Annual Review	This action has been implemented and ongoing.
PP-4	Continue to retrofit public buildings and other critical facilities to withstand natural hazards.	All	High	HMGP	Unknown	County, Town	Within 2 years; Next round of HMGP funding	This action has been deferred awaiting funding.
PP-5	Ensure secure operation of water wells, water tanks and wastewater treatment facilities.	All	High	HGMP, USDA Rural Dev., CDBG, Small Muni. Grant	Unknown	County, Town	Annual Review	This action has been completed and ongoing.
Natural Resource Protection								
NRP-1	Preserve natural wetlands and riparian areas through acquisition of conservation easements.	HU, TS, FL	Low to Medium	Donation	Low or no cost	MS Land Trust, Land Trust for the MS Coastal Plain, County	Within 5 years	No action taken.
Emergency Services								
ES-1	Encourage participation by staff and elected officials in voluntary or extracurricular activities related to emergency management, disaster preparedness, civil defense, or other hazard mitigation activities.	All	Medium	Self-funded, MEMA	Low or no cost	County EMA	Annual Review	This action has been implemented and ongoing.
ES-2	Establish a notification procedure for populations in high risk areas.	All	Medium	Self-funded	No additional cost	County EMA, County BOS, Town	Within 2 years with funding availability	This action has been deferred awaiting funding.

Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2019 Action Implementation Status
ES-3	Survey the existing emergency shelters and study the feasibility of expanding the capacity of shelters.	All	High	HMGP	Unknown	County EMA	Within 2 years	This action has been completed and ongoing.
ES-4	Explore potential sites for a new special needs shelter.	HU, TS, FL	High	HMGP	Unknown	County EMA, County	Within 2 years	This action has been completed. No Change
ES-5	Improve disaster communication systems within the County.	All	Medium	Unknown	Unknown	County EMA	Ongoing	This action has been implemented and ongoing.
ES-6	Consider generators for local radio station service areas.	HU, TO, TS	Medium	HMGP	Unknown	County EMA	Contingent upon funding	This action has been completed.
ES-7	Install warning sirens in the County.	TO, HU	Medium	HMGP	Unknown	County EMA	Contingent upon funding	This action has been deferred. Due to lack of funding
ES-8	Enhance Central Dispatch and other communications equipment.	All	Medium	HMGP	Unknown	County EMA	Within 2 years; Contingent upon funding	This action has been completed and ongoing. Cities do not have their own dispatch- they use county resource.
ES-9	Explore upgrade/enhancement of 911 system in Perry County.	All	Low to Medium	HMGP	Unknown	County EMA	Within 5 years; Contingent upon funding	This action has been completed and ongoing.
ES-10	Explore potential to install Reverse 911 system.	All	Low to Medium	HMGP	Unknown	County EMA, County	Within 5 years; Contingent upon funding	In process included in new 911 system.
ES-11	Coordinate with neighboring jurisdictions to ensure consistency of evacuation plans.	FL, HU, TS, Others	Medium	Self-funded	No additional cost	County BOS, County EMA	Annual Review	This action has been implemented and ongoing.
ES-12	Enhance identification of evacuation routes through the distribution of MDOT maps.	FL, HU, TS, Others	High	Self-funded	No additional cost	County EMA	Ongoing	This action has been implemented and ongoing.

Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2019 Action Implementation Status
ES-13	Ensure continuity of utility services for public buildings and other critical facilities.	All	High	HMGP	Unknown	County	Within 2 years; Next round of HMGP funding	This action has been implemented and ongoing.
ES-14	Develop a government services continuity plan.	All	Medium	USDA Rural Dev., CDBG, Small Muni. Grant	Unknown	County	2024	Deferred
ES-15	Explore funding sources to renovate existing County Multi-Purpose Center into Emergency Operations Center.	All	High	HMGP, USDA Rural Dev., CDBG, Small Muni. Grant	Unknown	County	Within 5 years; Annual review	This action has been deleted.
ES-16	Host a meeting to review Perry County Comprehensive Emergency Management Plan.	All	Medium	Self-funded	No additional cost	County	Annual Meeting	This action has been implemented and ongoing.
ES-17	Actively search for identify funding sources for the enhancement of emergency response abilities of Fire and Sheriff's Departments.	TT	Medium to High	DHS, SAFER, COPS, FIRE, Others	Unknown	County, Town	Ongoing	This action has been implemented.
ES-18	Explore continuing education programs/ opportunities for first responders, especially in hazardous materials training.	Range	Medium	Self-funded, MEMA	Low cost	County, Town	Ongoing	This action has been implemented and ongoing.
Structural Projects								
SP-1	Address cross-jurisdictional issues related to response, recovery and mitigation on key projects with overlapping boundaries.	HU, TS, FL, RH	Low to Medium	Self-funded	No additional cost	County, Town	Within 2 years of funding availability.	Deferred due to lack of funding.
SP-2	Acquisitions of RL/SRL Properties	FL	High	FEMA, HMGP and PDM	TBD	County	2024	New

ANNEX F: PERRY COUNTY

Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2019 Action Implementation Status
Public Education and Awareness								
PEA-1	Explore continuing education programs/ opportunities for staff and elected officials.	FL, TH, HU, TS	Medium	MEMA, FEMA, EMI	Unknown	Town	Ongoing	This action has been implemented and ongoing.
PEA-2	Provide education and outreach materials to citizens and visitors.	All	High	Self-funded	No cost	County EMA	Ongoing	This action has been implemented and ongoing.
PEA-3	Encourage the development of Family Disaster Plans.	All	High	Self-funded, COPS, FIRE	Low or no cost	County EMA	Annual presentations	This action has been implemented and ongoing.
PEA-4	Expand outreach information to property owners regarding retrofitting and flood-proofing techniques through community workshops, brochures, and newspaper articles.	FL, Multiple	High	Self-funded	No additional cost	County EMA, Town	Upon request	This action has been implemented and ongoing.
PEA-5	Provide education/outreach to communities to encourage participation in the National Flood Insurance Program.	FL	High	Self-funded	No additional cost	County EMA	Ongoing	This action has been completed and ongoing .
PEA-6	Encourage participation in the Community Rating System of the NFIP.	FL, HU, TS, TH, HW	Medium	USDA Rural Dev., CDBG, Small Muni. Grant, FEMA, Others	Unknown	County, Town	Within 3 years`	No action taken.
PEA-7	Encourage businesses to develop business continuity or contingency operating plans.	Civil Hazards	High	Self-funded, SBA, SCORE	Low or no cost	County, Town	Within 2 years	This action has been deferred.
FL = Flood TH = Thunderstorm HU = Hurricane TS = Tropical Storm TO = Tornado BH = Biological Hazards HW = High Winds RH = Roadway Hazards TT = Transportation and Technological Hazards CH = Civil Hazards County EMA = Perry County Emergency Management Agency County BOS = Perry County Board of Supervisors								

Annex G

Wayne County

This annex includes jurisdiction-specific information for Wayne County and its participating municipalities. It consists of the following five subsections:

- ❖ G.1 Wayne County Community Profile
- ❖ G.2 Wayne County Risk Assessment
- ❖ G.3 Wayne County Vulnerability Assessment
- ❖ G.4 Wayne County Capability Assessment
- ❖ G.5 Wayne County Mitigation Strategy

G.1 WAYNE COUNTY COMMUNITY PROFILE

G.1.1 Geography and the Environment

Wayne County is located in southeast Mississippi on the Mississippi/Alabama state line. It comprises two municipalities, the Town of State Line and the City of Waynesboro, as well as many several unincorporated communities. An orientation map is provided as **Figure G.1**.

The county is rural in nature and 82 percent of the land is in commercial forests. Lakes and reservoirs include Silver Lake, Gum Pond, and Waynesboro Lake. Streams, rivers, and creeks include Bull Branch, Maxey Branch, Red Creek, Bee Branch, Maynor Creek, Byrd Branch, Rasher Branch, Yellow Creek, and Stevens Branch. The total area of the county is 814 square miles, 3 square miles of which is water area.

Summer temperatures in the county range from highs of about 92 degrees Fahrenheit (°F) to lows in the upper 60s. Winter temperatures range from highs in the upper 50s to 61°F to lows around 35°F. Average annual rainfall is approximately 56 inches, with the wettest months being December through March.

In Wayne County, the summers are long, hot, and oppressive; the winters are short and cold; and it is wet and partly cloudy year-round. Over the course of the year, the temperature typically varies from 39°F to 91°F and is rarely below 25°F or above 97°F.

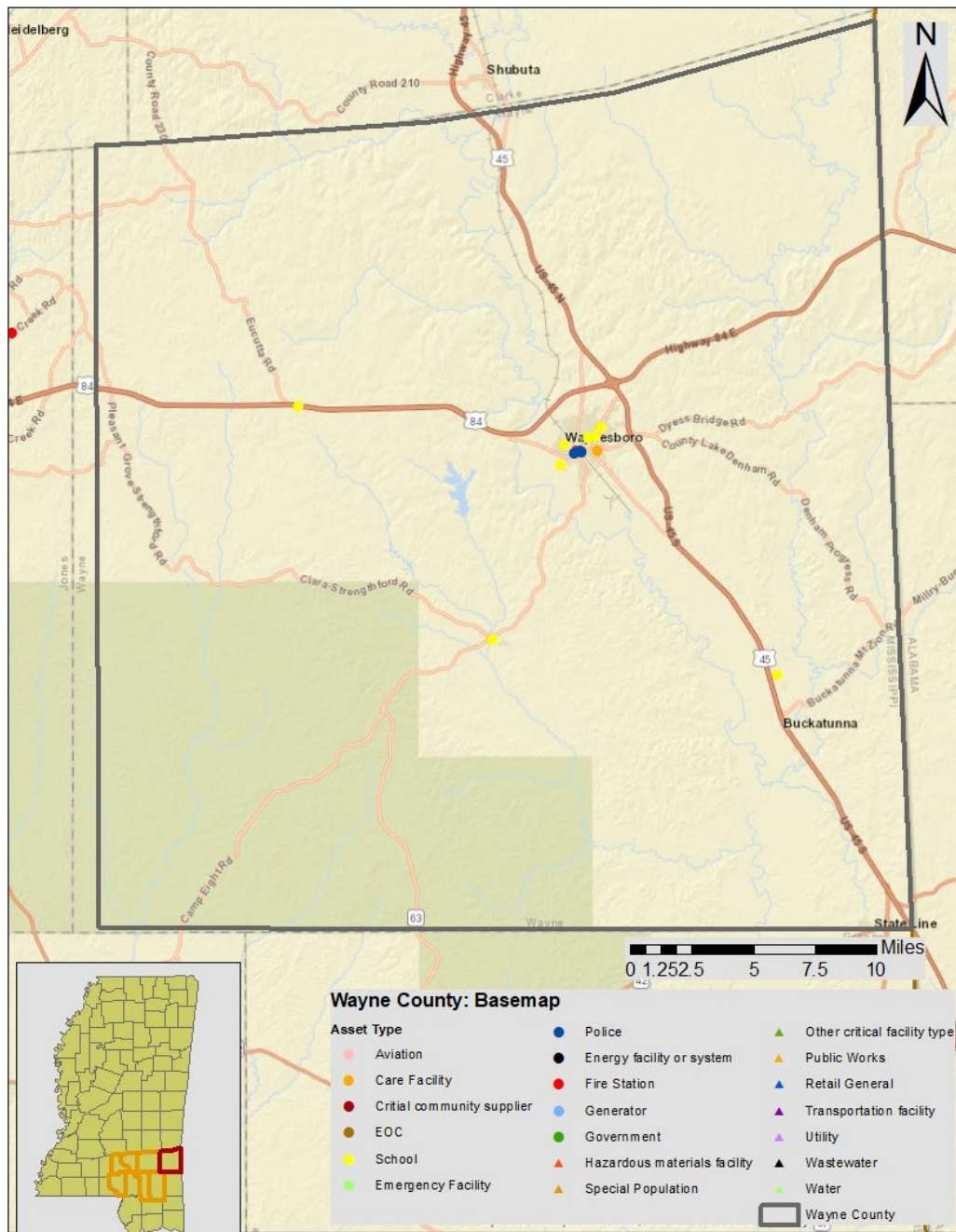
The hot season lasts for 4.1 months, from May 20 to September 25, with an average daily high temperature above 85°F. The hottest day of the year is August 11, with an average high of 91°F and low of 72°F. The cool season lasts for 2.8 months, from November 30 to February 23, with an average daily high temperature below 65°F. The coldest day of the year is January 17, with an average low of 39°F and high of 59°F.

A wet day is one with at least 0.04 inches of liquid or liquid-equivalent precipitation. The chance of wet days in Wayne County varies significantly throughout the year. The wetter season lasts 2.9 months, from May 28 to August 26, with a greater than 36% chance of a given day being a wet day. The chance of a wet day peaks at 52% on July 25.

The drier season lasts 9.1 months, from August 26 to May 28. The smallest chance of a wet day is 21% on October 8.

Among wet days, we distinguish between those that experience rain alone, snow alone, or a mixture of the two. Based on this categorization, the most common form of precipitation throughout the year is rain alone, with a peak probability of 52% on July 25. Wayne County experiences significant seasonal variation in monthly rainfall. Rain falls throughout the year. The most rain falls during the 31 days centered around February 15, with an average total accumulation of 5.5 inches. The least rain falls around October 5, with an average total accumulation of 3.0 inches.

Wayne County experiences extreme seasonal variation in the perceived humidity. The muggier period of the year lasts for 5.3 months, from May 3 to October 12, during which time the comfort level is muggy, oppressive, or miserable at least 25% of the time. The muggiest day of the year is July 23, with muggy conditions 96% of the time. The least muggy day of the year is January 29, with muggy conditions 1% of the time.

FIGURE G.1: WAYNE COUNTY ORIENTATION MAP

G.1.2 Population and Demographics

According to the 2010 Census, Wayne County has a population of 20,747 people. The county has seen a roughly 2 percent decline in population between 2000 and 2010, and the population density is 26 people per square mile. The decline continues. Per the Census Reports, in 2017, Wayne County had a population of 20,446, which is a .29 percent decline. The household income is \$35,215, which grew 2.2 percent. Population counts from the US Census Bureau for 1990, 2000, and 2010 for the county and both of the participating jurisdictions are presented in **Table G.1**. Estimates for 2017 are also included.

TABLE G.1: POPULATION COUNTS FOR WAYNE COUNTY

Jurisdiction	1990 Census Population	2000 Census Population	2010 Census Population	% Change 2000-2010	Estimated 2017 Census Population
Wayne County	19,517	21,216	20,747	-2.2%	20,446
State Line	N/A	555	565	1.8%	553
Waynesboro	5,143	5,197	5,043	-3.0%	4,903

Source: US Census Bureau

Based on the 2010 Census, the median age of residents of Wayne County is 37.2 years. Per 2017 estimates, the median age has not changed. The racial characteristics of the county are presented in **Table G.2** and will remain the same as the census data has not been officially updated. Due to the population decrease, the racial characteristics differ slightly. The population of white persons is 57.8 percent, 40.5 percent black or African American persons, .645 percent two or more races. Whites continue to make up the majority of the population in the county, accounting for 57.8 percent of the population.

TABLE G.2: DEMOGRAPHICS OF WAYNE COUNTY

Jurisdiction	White Persons, Percent (2010)	Black Persons, Percent (2010)	American Indian or Alaska Native, Percent (2010)	Other Race, Percent (2010)	Persons of Hispanic Origin, Percent (2010)*
Wayne County	59.3%	38.9%	0.2%	1.5%	1.2%
State Line	41.6%	57.2%	0.2%	1.1%	0.7%
Waynesboro	35.2%	61.9%	0.2%	2.6%	1.9%

*Hispanics may be of any race, so also are included in applicable race categories

Source: US Census Bureau

G.1.3 Housing

According to the 2010 US Census, there are 9,213 housing units in Wayne County, the majority of which are single family homes or mobile homes. Per 2018 estimates, the total number of housing units increased to 9,481 units. The median home value is \$80,100, which also increased by at least 8.24 percent. Housing information for the county and two towns is presented in **Table G.3**. As shown in the table, the two incorporated towns have similar percentages of seasonal housing units compared to the unincorporated county.

TABLE G.3: HOUSING CHARACTERISTICS OF WAYNE COUNTY

Jurisdiction	Housing Units (2000)	Housing Units (2010)	Seasonal Units, Percent (2010)	Median Home Value (2006-2010)	Housing Units (2018)	Median Home Value (2018)
Wayne County	9,049	9,213	2.2%	\$64,400	9,481	\$80,100
State Line	230	255	2.0%	\$77,100	273	\$66,393
Waynesboro	2,276	2,306	1.0%	\$85,300	2,354	\$86,917

Source: US Census Bureau

G.1.4 Infrastructure

TRANSPORTATION

Wayne County has a robust infrastructure network including Highways 84 and 45, both four-lane divided highways, which provide easy access to the ports of Mobile, New Orleans, and the Mississippi Gulf Coast. State Highway 63 also crosses Wayne County.

The City of Waynesboro has a general aviation airport; however, the nearest commercial airport is the Pine Belt Regional Airport, located about 60 miles away between Laurel and Hattiesburg.

Wayne County is also served by the Meridian Southern Railway, but no passenger service is offered at this time. There are also proposed upgrades to the rail service between Waynesboro and Meridian and rail extensions from Waynesboro to the Port of Pascagoula, and possibly to the Port of Mobile.

UTILITIES

Electrical power in Wayne County is provided by several sources, primarily Dixie Electric Power Association. Some areas are served by East Mississippi Electric Power Association and some by Singing River Electric Power Association.

Water and sewer service is provided to residents by a number of private utility companies. The City of Waynesboro is served by water wells and an activated sludge sewer treatment facility. The Town of State Line is served by the Town of State Line Utilities.

COMMUNITY FACILITIES

There are a number of buildings and community facilities located throughout Wayne County. According to the data collected for the vulnerability assessment (Section 6.4.1), there are 2 fire stations, 2 police stations, and 9 public schools located within the county.

There is one hospital located in Wayne County. Wayne General Hospital is an 80-bed medical-surgical hospital located in the City of Waynesboro.

Parks in Wayne County include the Chickasawhay State Wildlife Management Area, Thompson Creek Park, and Busby Game Refuge. Waynesboro is served by two major recreational facilities. The Maynor Creek Water Park is a very popular area for camping, fishing, picnicking, playgrounds, scenic nature trails, swimming, boating, and canoeing. Hogan Park is a 22-acre site operated by the City primarily as a sports complex with four ball fields, but also offering picnicking and playgrounds. Other recreation facilities include Dixie Park, a sports complex with six ball fields adapted for and used as soccer fields. The Eastside and Westside City Parks are playgrounds and City also contains fairgrounds and a public library.

G.1.5 Land Use

Many areas of Wayne County are undeveloped or sparsely developed due to the county's location just off the Gulf Coast and the conservation of land in state and national parks. There are a few incorporated municipalities located throughout the region, and these areas are where the region's population is generally concentrated. The incorporated areas are also where many businesses, commercial uses, and institutional uses are located. Land uses in the balance of the county generally consist of rural residential development, agricultural uses, and recreational areas.

G.1.6 Employment and Industry

According to the Mississippi Employment Security Commission, in 2019, Wayne County had an average annual employment of 4,937 workers and an average unemployment rate of 6.6 percent (compared to 6.0 percent for the state). In 2019, the Retail Trade industry continues to lead by employing the most people, with 16.1 percent of the workforce, followed by Manufacturing (12.6%) and Transportation and Warehousing (5.8%). The average annual wage in 2019 for Wayne County was \$36,816 compared to \$41,236 for the State of Mississippi.

G.2 WAYNE COUNTY RISK ASSESSMENT

This subsection includes hazard profiles for each of the significant hazards identified in Section 4: *Hazard Identification* as they pertain to Wayne County. Each hazard profile includes a description of the hazard's location and extent, notable historical occurrences, and the probability of future occurrences. Additional information can be found in Section 5: *Hazard Profiles*.

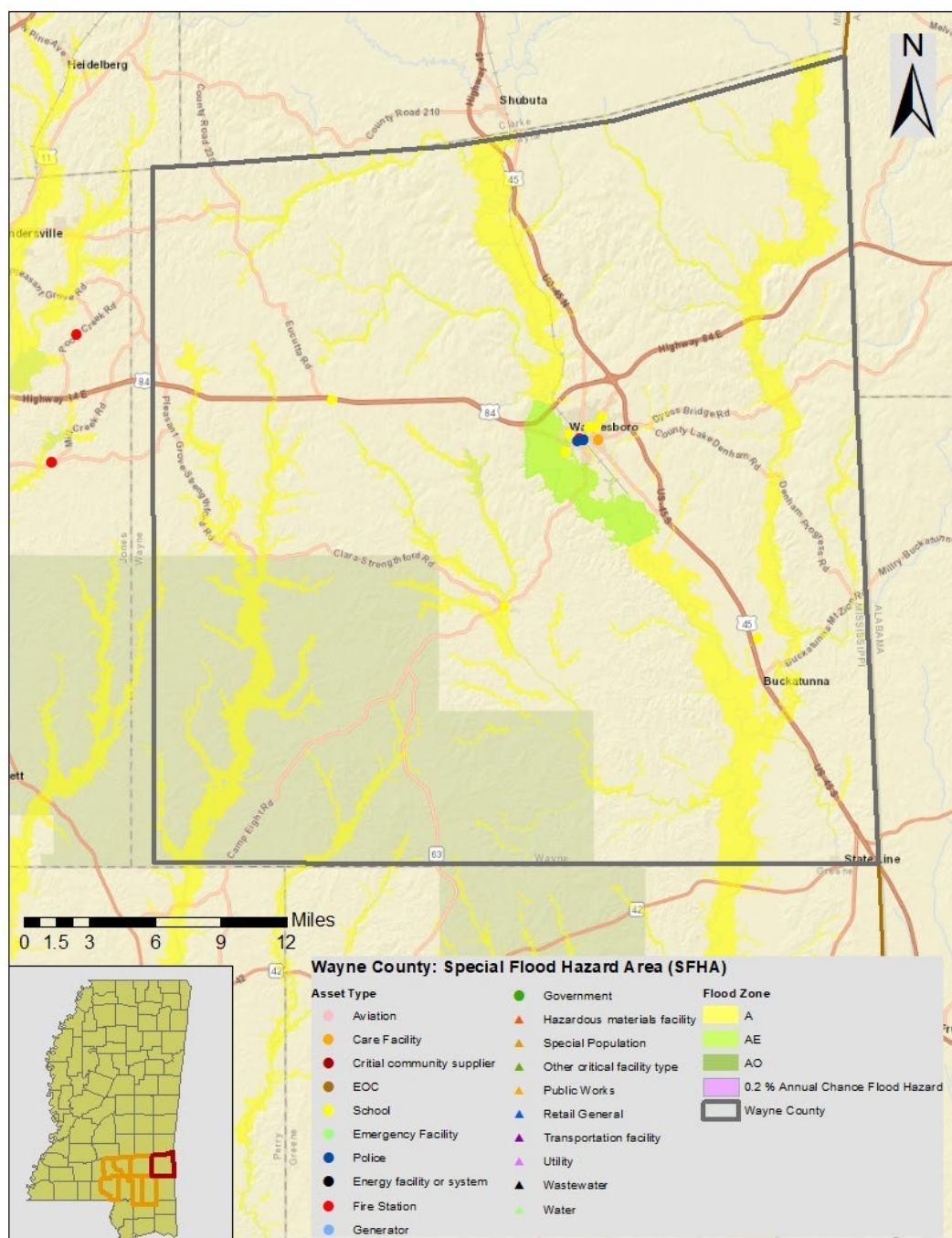
G.2.1 Flood

LOCATION AND SPATIAL EXTENT

There are areas in Wayne County that are susceptible to flood events. Special flood hazard areas in the county were mapped using Geographic Information System (GIS) and FEMA Digital Flood Insurance Rate Maps (DFIRM).¹ This includes Zone A (1-percent annual chance floodplain), Zone AE (1-percent annual chance floodplain with elevation), and the 0.2-percent annual chance floodplain). According to GIS analysis, of the 813 square miles that make up Wayne County, there are 122 square miles of land in zones A and AE (1-percent annual chance floodplain/100-year floodplain) and 0 square miles of land in the 0.2-percent annual chance floodplain (500-year floodplain).

These flood zone values account for 15.0 percent of the total land area in Wayne County. It is important to note that while FEMA digital flood data is recognized as best available data for planning purposes, it does not always reflect the most accurate and up-to-date flood risk. Flooding and flood-related losses often do occur outside of delineated special flood hazard areas.

¹ The county-level DFIRM data used for Wayne County were updated in 2011.

FIGURE G.2: SPECIAL FLOOD HAZARD AREAS IN WAYNE COUNTY

Source: Federal Emergency Management Agency

HISTORICAL OCCURRENCES

Floods resulted in seven disaster declarations in Wayne County in 1973, 1974, 2003, 2009, 2013, 2016, 2019.² Information from the National Centers for Environmental Information was used to ascertain

²A complete listing of historical disaster declarations can be found in Section 4: Hazard Identification.

historical flood events. The National Centers for Environmental Information reported a total of 26 events in Wayne County since 2019.³ A summary of these events is presented in **Table G.4**. These events accounted for over \$352,000 in property damage to the county. Specific information on flood events, including date, type of flooding, and deaths and injuries, can be found in **Table G.5**.

TABLE G.4: SUMMARY OF FLOOD OCCURRENCES IN WAYNE COUNTY

Location	Number of Occurrences	Deaths / Injuries	Property Damage
State Line	3	0/0	\$5,465
Waynesboro	10	0/0	\$74,280
Unincorporated Area	13	0/0	\$1,271,650
WAYNE COUNTY TOTAL	26	0/0	\$181,395

Source: National Centers for Environmental Information

TABLE G.5: HISTORICAL FLOOD EVENTS IN WAYNE COUNTY

Location	Date	Type	Deaths / Injuries	Property Damage*
State Line				
State Line	28-MAY-97	FLASH FLOOD	0/0	\$3,146
State Line	01-SEP-08	FLASH FLOOD	0/0	\$2,319
State Line	23-FEB-16	FLASH FLOOD	0/0	\$0
Waynesboro				
Waynesboro	29-JAN-99	FLASH FLOOD	0/0	\$3,025
Waynesboro	13-APR-09	FLASH FLOOD	0/0	\$11,255
Waynesboro	09-MAR-11	FLASH FLOOD	0/0	\$0
Waynesboro	09-MAR-11	FLASH FLOOD	0/0	\$0
Waynesboro	04-FEB-10	FLASH FLOOD	0/0	\$0
Waynesboro	22-MAR-12	FLASH FLOOD	0/0	\$0
Waynesboro	22-MAR-12	FLASH FLOOD	0/0	\$0
Waynesboro	22-MAR-12	FLASH FLOOD	0/0	\$0
Waynesboro	11-MAR-16	FLASH FLOOD	0/0	\$10,000
Waynesboro	11-MAR-16	FLASH FLOOD	0/0	\$50,000
Unincorporated Area				
WAYNE COUNTY	25-MAY-93	FLASH FLOOD	0/0	\$87,452
Central Portion	28-APR-98	FLASH FLOOD	0/0	\$38,722
Countywide	03-MAR-01	FLASH FLOOD	0/0	\$14,258
Countywide	01-JUL-03	FLASH FLOOD	0/0	\$0
East Portion	31-MAR-05	FLASH FLOOD	0/0	\$0
Countywide	29-AUG-05	FLASH FLOOD	0/0	\$0
Denham	09-MAR-11	FLOOD	0/0	\$10,609
EUCUTTA	09-MAR-11	FLASH FLOOD	0/0	\$10,609
Denham	04-FEB-10	FLASH FLOOD	0/0	\$0
Whistler	11-MAR-16	FLASH FLOOD	0/0	\$100,000
Eucutta	11-MAR-16	FLASH FLOOD	0/0	\$10,000
Boice	22-JUN-17	FLASH FLOOD	0/0	\$0

³ These events are only inclusive of those reported by NCEI. It is likely that additional occurrences have occurred and have gone unreported.

Location	Date	Type	Deaths / Injuries	Property Damage*
Mulberry	27-DEC-18	FLASH FLOOD	0/0	\$1,000,000

Source: National Centers for Environmental Information

HISTORICAL SUMMARY OF INSURED FLOOD LOSSES

Recently, FEMA issued a directive that prevents states or local governments from sharing NFIP information such as rep loss or severe rep loss data with third parties. Third parties are considered as consultants, contractors, etc. As a result, for continuity of information so that the reader will have an idea of the historical occurrences along with the corresponding damage amounts, the decision was made to leave the existing information in the plan.

According to FEMA flood insurance policy records as of March 2013, there have been 24 flood losses reported in Wayne County through the National Flood Insurance Program (NFIP) since 1978, totaling over \$258,000 in claims payments. A summary of these figures for the county is provided in **Table G.6**. It should be emphasized that these numbers include only those losses to structures that were insured through the NFIP policies, and for losses in which claims were sought and received. It is likely that many additional instances of flood loss in Wayne County were either uninsured, denied claims payment, or not reported.

TABLE G.6: SUMMARY OF INSURED FLOOD LOSSES IN WAYNE COUNTY

Location	Flood Losses	Claims Payments
State Line	1	\$6,924
Waynesboro	17	\$134,036
Unincorporated Area	6	\$117,636
WAYNE COUNTY TOTAL	24	\$258,596

Source: FEMA, NFIP

REPETITIVE LOSS PROPERTIES

No updates to this section can be provided at this time. Information normally used to update this section is not currently accessible. As a result, this information will remain the same for historical purposes.

As of May 2013, there are three non-mitigated repetitive loss properties located in Wayne County, which accounted for 11 losses and more than \$118,000 in claims payments under the NFIP. The average claim amount for these properties is \$10,803. Of the three properties, one is single family residential and two are non-residential. Without mitigation these properties will likely continue to experience flood losses. **Table G.7** presents detailed information on repetitive loss properties and NFIP claims and policies for Wayne County.

TABLE G.7: REPETITIVE LOSS PROPERTIES IN WAYNE COUNTY

Location	Number of Properties	Types of Properties	Number of Losses	Building Payments	Content Payments	Total Payments	Average Payment
State Line	0	--	0	\$0	\$0	\$0	\$0
Waynesboro	3	1 single family, 2 non-residential	11	\$35,268	\$83,559	\$118,828	\$10,803
Unincorporated Area	0	--	0	\$0	\$0	\$0	\$0

Location	Number of Properties	Types of Properties	Number of Losses	Building Payments	Content Payments	Total Payments	Average Payment
WAYNE COUNTY TOTAL	3		11	\$35,268	\$83,559	\$118,828	\$10,803

Source: National Flood Insurance Program

PROBABILITY OF FUTURE OCCURRENCES

Flood events will remain a threat in Wayne County, and the probability of future occurrences will remain likely (between 10 and 100 percent annual probability). The participating jurisdictions and unincorporated areas have risk to flooding, though not all areas will experience flood. The probability of future flood events based on magnitude and according to best available data is illustrated in the figures above, which indicates those areas susceptible to the 1-percent annual chance flood (100-year floodplain) and the 0.2-percent annual chance flood (500-year floodplain).

It can be inferred from the floodplain location maps, previous occurrences, and repetitive loss properties that risk varies throughout the county. For example, the eastern half of the county has more floodplain and thus a higher risk of flood than the western half of the county. Flood is not the greatest hazard of concern but will continue to occur and cause damage. Therefore, mitigation actions may be warranted, particularly for repetitive loss properties.

G.2.2 Erosion

LOCATION AND SPATIAL EXTENT

Erosion in Wayne County is typically caused by flash flooding events. Unlike coastal areas, areas of concern for erosion in Wayne County are primarily rivers and streams. Generally, vegetation helps to prevent erosion in the area, and it is not an extreme threat to any of the participating counties and jurisdictions. No areas of concern were reported by the planning committee.

HISTORICAL OCCURRENCES

Several sources were vetted to identify areas of erosion in Wayne County. This includes searching local newspapers, interviewing local officials, and reviewing previous hazard mitigation plans. No historical erosion occurrences were found in these sources.

PROBABILITY OF FUTURE OCCURRENCES

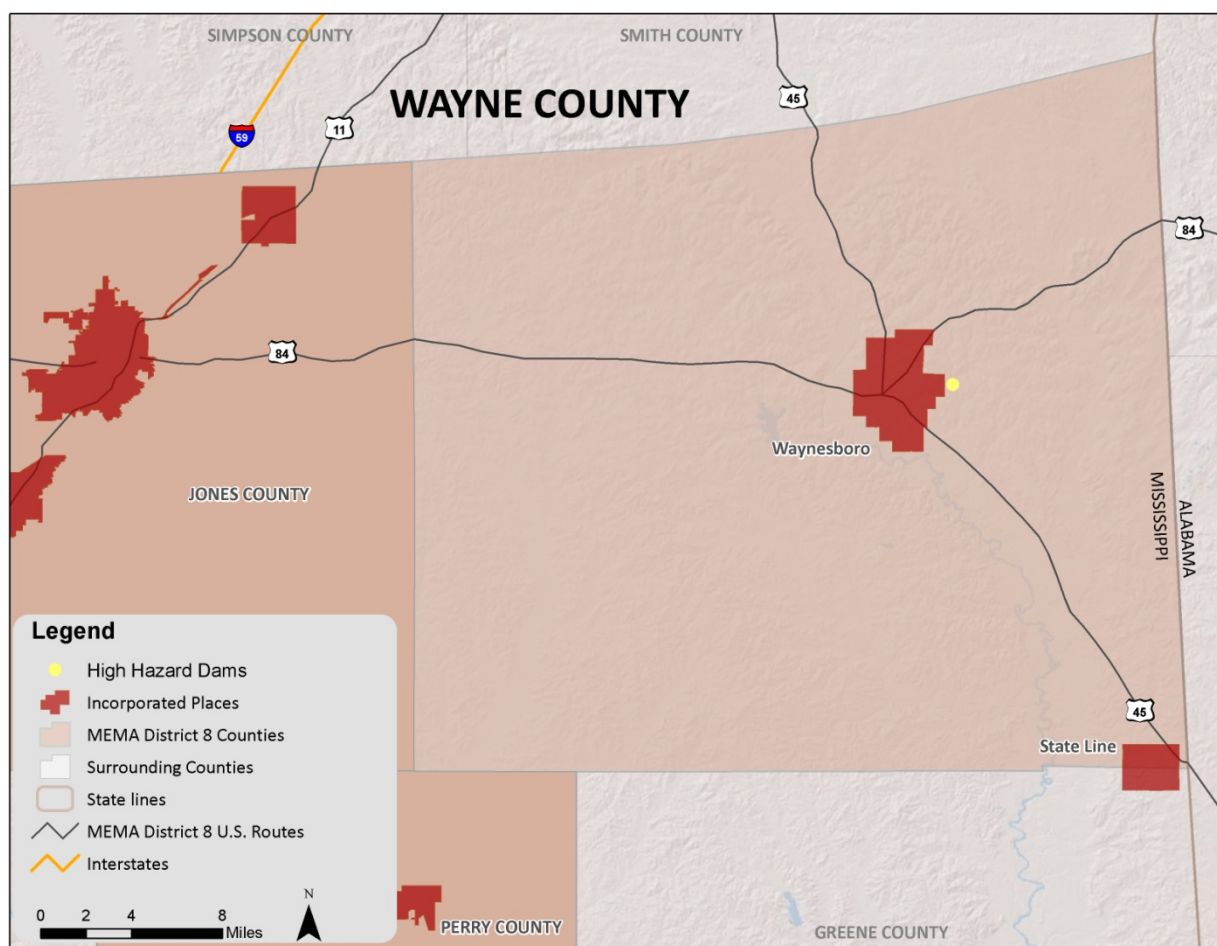
Erosion remains a natural, dynamic, and continuous process for Wayne County, and it will continue to occur. The annual probability level assigned for erosion is possible (between 1 and 10 percent annually).

G.2.3 Dam Failure

LOCATION AND SPATIAL EXTENT

During the last plan update, the Mississippi Division of Environmental Quality, recognized one high hazard dam in Wayne County.⁴ **Figure G.3** shows the location of the high hazard dam and **Table G.8** lists it by name.

FIGURE G.3: WAYNE COUNTY HIGH HAZARD DAM LOCATIONS



Source: Mississippi Division of Environmental Quality

⁴ The list of high hazard dams obtained from the Mississippi Division of Environmental Quality was reviewed and amended by local officials to the best of their knowledge.

TABLE G.8: WAYNE COUNTY HIGH HAZARD DAMS

Dam Name	Hazard Potential
Wayne County	
LAKELAND PARK LAKE DAM – No longer included	N/A

Source: Mississippi Division of Environmental Quality

Per the updated information provided by the Mississippi Division of Environmental Quality, there are no high hazard dams within Wayne County. All records indicate that there are now 28 low hazard dams within the county and Lakeland Park Lake Dam is not included on that list. As a result of this updated information, Table G.8 was amended to reflect these updates.

According to a consensus of local government officials and the Regional Hazard Mitigation Council, a majority of these dams would not pose a major threat in a breach or failure occurrence.

HISTORICAL OCCURRENCES

There is no record of dam breaches in Wayne County. However, several breach scenarios in the county could be catastrophic.

PROBABILITY OF FUTURE OCCURRENCES

Given the current dam inventory and historic data, a dam breach is unlikely (less than 1 percent annual probability) in the future. However, as has been demonstrated in the past, regular monitoring is necessary to prevent these events.

G.2.4 Winter Storm and Freeze

LOCATION AND SPATIAL EXTENT

Nearly the entire continental United States is susceptible to winter storm and freeze events. Some ice and winter storms may be large enough to affect several states, while others might affect limited, localized areas. The degree of exposure typically depends on the normal expected severity of local winter weather. Wayne County is not typically affected by major severe winter weather conditions and seldom receives extremely devastating winter weather, even during the winter months. Given the atmospheric nature of the hazard the entire county has uniform exposure to a winter storm.

HISTORICAL OCCURRENCES

According to the National Centers for Environmental Information, there have been a total of 11 recorded winter storm events in Wayne County since 2000 (Table G.9).⁵ These events were reported to

⁵ These ice and winter storm events are only inclusive of those reported by the National Centers for Environmental Information (NCEI). It is certain that additional winter storm conditions have affected Wayne County.

cause no damages. Detailed information on the recorded winter storm events can be found in **Table G.10.**⁶

TABLE G.9: SUMMARY OF WINTER STORM EVENTS IN WAYNE COUNTY

Location	Number of Occurrences	Deaths / Injuries	Property Damage (2013)
Wayne County	11	0/0	\$0

Source: National Centers for Environmental Information

TABLE G.10: HISTORICAL WINTER STORM IMPACTS IN WAYNE COUNTY

Location	Date	Type	Deaths / Injuries	Property Damage*
State Line				
None Reported	--	--	--	--
Waynesboro				
None Reported	--	--	--	--
Unincorporated Area				
WAYNE COUNTY	21-DEC-00	WINTER STORM	0/0	\$0
WAYNE COUNTY	27-JAN-00	SLEET	0/0	\$0
WAYNE COUNTY	01-JAN-01	WINTER STORM	0/0	\$0
WAYNE COUNTY	01-JAN-02	WINTER STORM	0/0	\$0
WAYNE COUNTY	19-JAN-08	HEAVY SNOW	0/0	\$0
WAYNE COUNTY	11-DEC-08	WINTER WEATHER	0/0	\$0
WAYNE COUNTY	28-JAN-14	WINTER STORM	0/0	\$0
WAYNE COUNTY	05-MAR-15	SLEET	0/0	\$0
WAYNE COUNTY	06-JAN-17	ICE STORM	0/0	\$0
WAYNE COUNTY	08-DEC-17	HEAVY SNOW	0/0	\$0
WAYNE COUNTY	16-JAN-18	WINTER STORM	0/0	\$0

*Property Damage is reported in 2013 dollars

Source: National Centers for Environmental Information

There have been several severe winter weather events in Wayne County. The text below describes two of the major events and associated impacts on the county. Similar impacts can be expected with severe winter weather.

January 2002 Winter Storm

A winter storm produced heavy snow across portions of southeast Mississippi. The heaviest snow recorded during the storm was four to four- and one-half inches. Icy bridges made traveling across the region very treacherous. As a result, several accidents occurred with two fatalities in Jones County.

January 2008 Winter Storm

This storm produced heavy snow across the region, with an average of three to four inches of snow. Some heavier amounts, between four to five inches, also fell in isolated areas. At the height of the snow, temperatures fell to near freezing, and accumulations occurred on roadways resulting in a number of traffic accidents. Additionally, some power outages occurred in the heaviest snow band due

⁶ The dollar amount of damages provided by NCEI is divided by the number of affected counties to reflect a damage estimate for the county.

to the weight of wet snow on limbs and lines. The heaviest snow fell in the areas around Covington, Jefferson Davis, and Jones Counties.

Winter storms throughout the county have several negative externalities including hypothermia, cost of snow and debris cleanup, business and government service interruption, traffic accidents, and power outages. Furthermore, citizens may resort to using inappropriate heating devices that could to fire or an accumulation of toxic fumes.

January 2018 Winter Storm

A winter weather event occurred across the area beginning on January 16th and on into January 17th across the Gulf Coast. This event came with measurable snow with low temperatures in the 20's. The winter accumulation resulted in very hazardous traveling conditions particularly over bridges and overpasses. Several roads were closed throughout the area. The National Weather Service indicated the area received two to three inches of snow.

PROBABILITY OF FUTURE OCCURRENCES

Winter storm events will continue to occur in Wayne County. According to historical information, the annual probability is possible (between 1 and 10 percent).

FIRE-RELATED HAZARDS

G.2.5 Drought

LOCATION AND SPATIAL EXTENT

Drought and heat waves typically cover a large area and cannot be confined to any geographic or political boundaries. Furthermore, it is assumed that Wayne County would be uniformly exposed to drought and heat waves, making the spatial extent potentially widespread. It is also notable that drought and extreme heat conditions typically do not cause significant damage to the built environment but may exacerbate wildfire conditions.

HISTORICAL OCCURRENCES

Drought

According to the U.S. Drought Monitor, Wayne County had drought levels (including abnormally dry) in all of the last sixteen years (2000-2018). Records show that there were no measurable drought events. **Table G.11** shows the most severe drought classification for each year, according to U.S. Drought Monitor classifications. It should be noted that the U.S. Drought Monitor also estimates what percentage of the county is in each classification of drought severity. For example, the most severe classification reported may be exceptional, but a majority of the county may actually be in a less severe condition.

TABLE G. 11: HISTORICAL DROUGHT OCCURRENCES IN WAYNE COUNTY



2000	EXCEPTIONAL
2001	MODERATE
2002	MODERATE
2003	ABNORMAL
2004	ABNORMAL
2005	ABNORMAL
2006	EXTREME
2007	EXTREME
2008	MODERATE
2009	ABNORMAL
2010	SEVERE
2011	EXTREME
2012	MODERATE
2013	ABNORMAL
2014	MODERATE
2015	MODERATE
2016	EXTREME
2017	MODERATE
2018	ABNORMAL
2019	ABNORMAL

Source: U.S. Drought Monitor

The National Centers for Environmental Information reported three drought events for Wayne County; however, there were property or crop damages associated with these events.

Heat Wave

The National Centers for Environmental Information was used to determine historical heat wave occurrences in the county.

Summer of 2000 – Hot temperatures persisted from July to September across the South and Plains. Known as the Summer of 2000 Heat Wave, high temperatures commonly peaked over 100 degrees. There were several days over 90 degree than the typical average. This was the fourth warmest July-August on record. In Waynesboro the temperature was 100 degrees or higher four days during the month with the hottest being 103 degrees.

August 2007 – A heat wave gripped most of the area with the warmest temperatures since 2000. It lasted from August 5th to the 16th.

PROBABILITY OF FUTURE OCCURRENCES

Drought

Based on historical occurrence information, it is assumed that all of Wayne County has a probability level of highly likely (100 percent annual probability) for future drought events. However, the extent (or magnitude) of drought and the amount of geographic area covered by drought, varies with each year. Historic information indicates that there is a much lower probability for extreme, long-lasting drought conditions.

Heat Wave

Based on historical occurrence information, it is assumed that all of Wayne County has a probability level of highly likely (100 percent annual probability) for future heat wave events.

G.2.6 Wildfire

LOCATION AND SPATIAL EXTENT

The entire county is at risk to a wildfire occurrence. However, several factors such as drought conditions or high levels of fuel on the forest floor, may make a wildfire more likely. Furthermore, areas in the urban-wildland interface are particularly susceptible to fire hazard as populations abut formerly undeveloped areas. The Fire Occurrence Areas in the figure below give an indication of historic location.

HISTORICAL OCCURRENCES

Based on data from the Mississippi Forestry Commission from 2008 to 2018, Wayne County experiences an average of 32.8 wildfires annually which burn an average of 318 acres per year. The data indicates that most of these fires are small, averaging nine acres per fire. **Table G.12** provides a summary of wildfire occurrences in Wayne County and **Table G.13** lists the number of reported wildfire occurrences in the county between the years 2008 and 2018.

TABLE G.12: SUMMARY TABLE OF ANNUAL WILDFIRE OCCURRENCES (2008 -2018) *

	Wayne County
Average Number of Fires per year	32.8
Average Number of Acres Burned per year	317.8
Average Number of Acres Burned per fire	9.7

*These values reflect averages over a 10-year period.

Source: Mississippi Forestry Commission

TABLE G.13: HISTORICAL WILDFIRE OCCURRENCES IN WAYNE COUNTY

Year	2008	2010	2011	2012	2013	2014	2015	2016	2017	2018
Wayne County										
Number of Fires	33	51	57	33	22	44	14	47	15	12
Number of Acres Burned	980	321	349	108	85	245	67	480	355	183

*No data reported for 2009

Source: Mississippi Forestry Commission

PROBABILITY OF FUTURE OCCURRENCES

Wildfire events will be an ongoing occurrence in Wayne County. The likelihood of wildfires increases during drought cycles and abnormally dry conditions. Fires are likely to stay small in size but could increase due local climate and ground conditions. Dry, windy conditions with an accumulation of forest

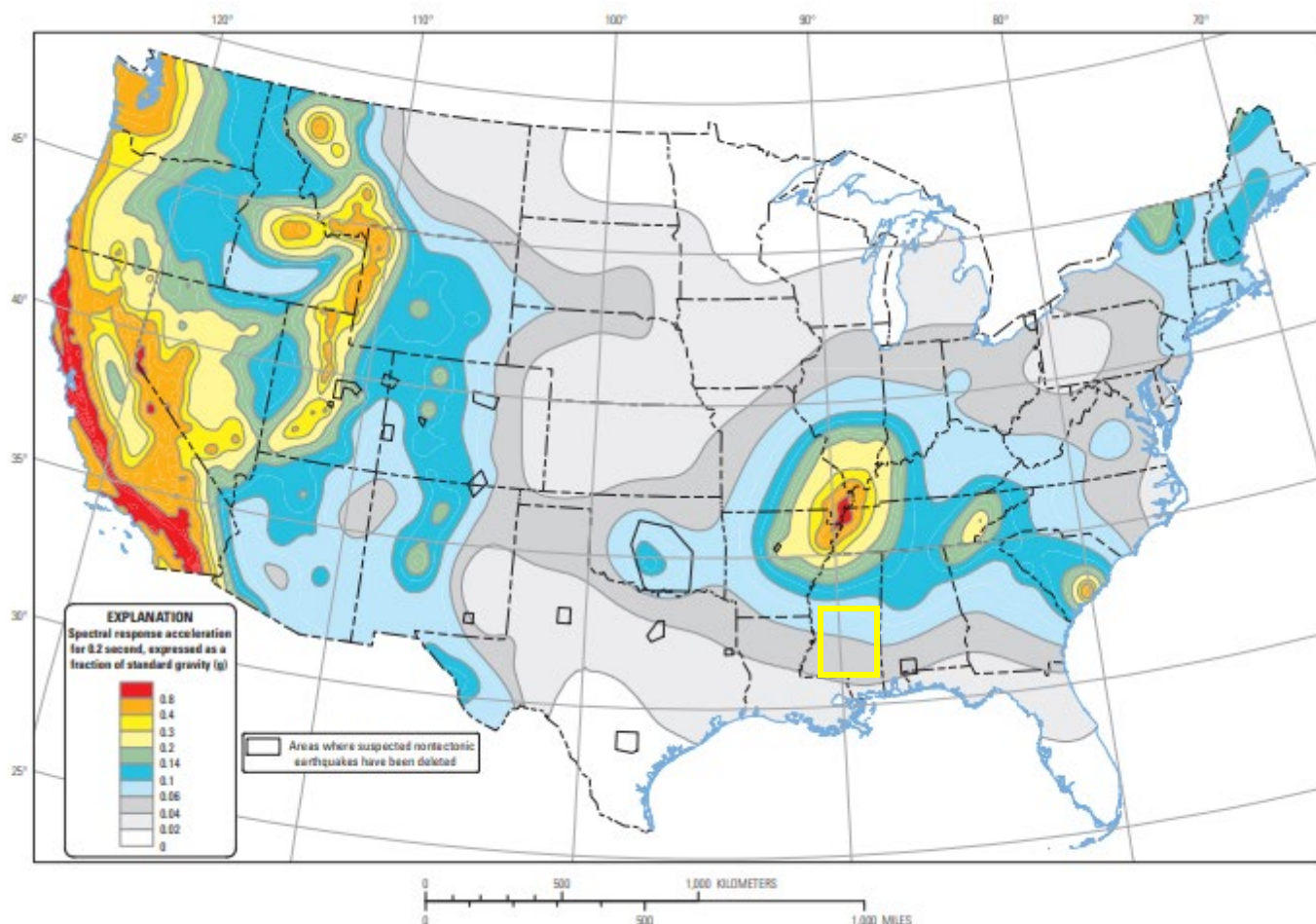
floor fuel (potentially due to ice storms or lack of fire) could create conditions for a large fire that spreads quickly. It should also be noted that some areas do vary somewhat in risk. For example, highly developed areas are less susceptible unless they are located near the urban-wildland boundary. The risk will also vary due to assets. Areas in the urban-wildland interface will have much more property at risk, resulting in increased vulnerability and need to mitigate compared to rural, mainly forested areas. In this case, the participating jurisdictions appear to have a similar risk to the surrounding areas. The probability assigned to Wayne County for future wildfire events is likely (a 10 and 100 percent annual probability).

GEOLOGIC HAZARDS

G.2.7 Earthquake

LOCATION AND SPATIAL EXTENT

Figure G.5 shows the intensity level associated with Wayne County, based on the national USGS map of peak acceleration with 10 percent probability of exceedance in 50 years. It is the probability that ground motion will reach a certain level during an earthquake. The data show peak horizontal ground acceleration (the fastest measured change in speed, for a particle at ground level that is moving horizontally due to an earthquake) with a 10 percent probability of exceedance in 50 years. The map was compiled by the U.S. Geological Survey (USGS) Geologic Hazards Team, which conducts global investigations of earthquake, geomagnetic, and landslide hazards. According to this map, Wayne County lies within an approximate zone of level “2” to “3” ground acceleration. This indicates that the county exists within an area of moderate seismic risk.

FIGURE G.5: PEAK ACCELERATION WITH 10 PERCENT PROBABILITY OF EXCEEDANCE IN 50 YEARS

Source: USGS, 2019

HISTORICAL OCCURRENCES

No earthquakes are known to have affected Wayne County since 1638. **Table G.14** provides a summary of earthquake events reported by the National Geophysical Data Center between 1638 and 1985.⁷

TABLE G.14: SUMMARY OF SEISMIC ACTIVITY IN WAYNE COUNTY

Location	Number of Occurrences	Greatest MMI Reported	Richter Scale Equivalent
State Line	0	--	--
Waynesboro	0	--	--
Unincorporated Area	0	--	--
WAYNE COUNTY TOTAL	0	--	--

Source: National Geophysical Data Center

⁷ Due to reporting mechanisms, not all earthquake events were recorded during this time.

PROBABILITY OF FUTURE OCCURRENCES

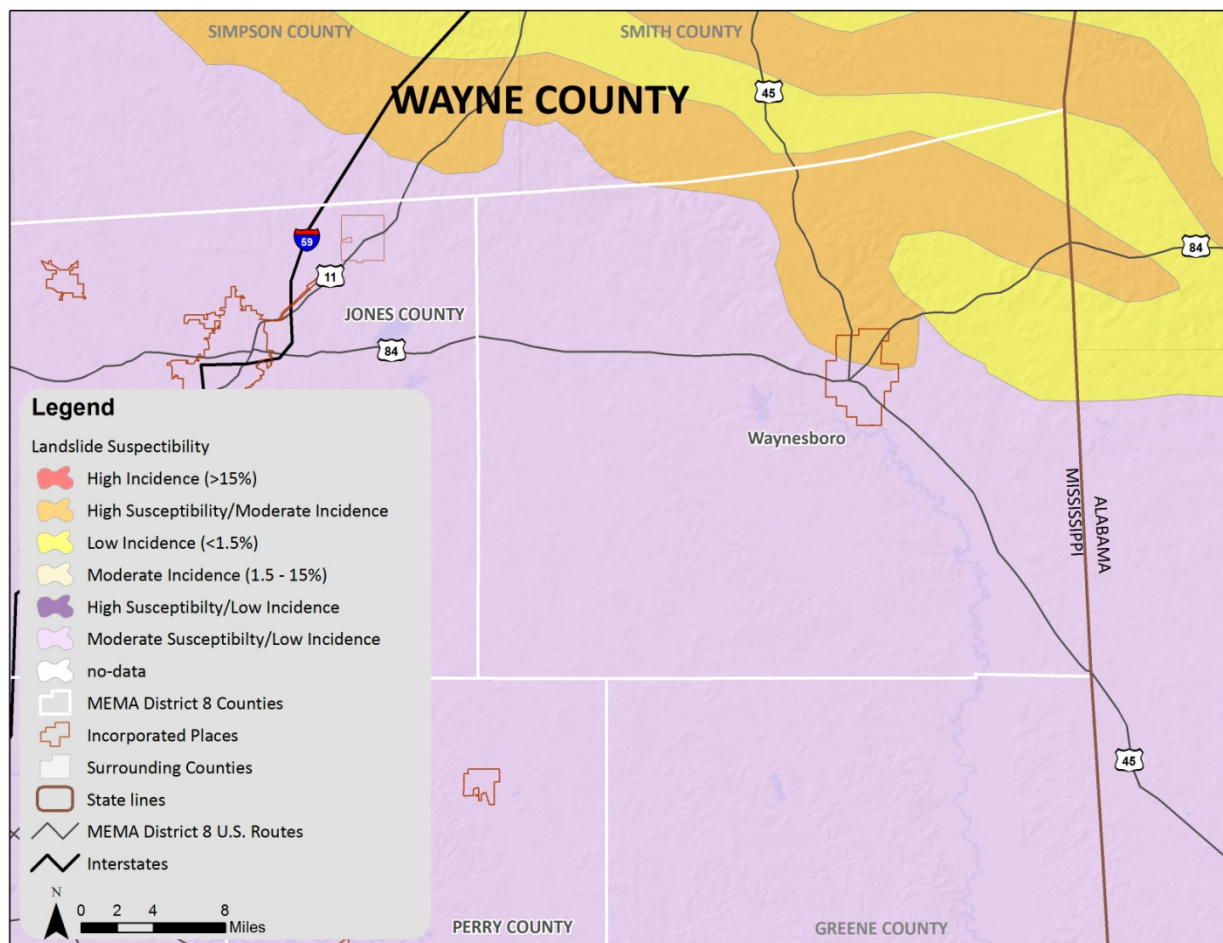
The probability of significant, damaging earthquake events affecting Wayne County is unlikely. However, it is possible that future earthquakes resulting in light to moderate perceived shaking and damages ranging from none to very light will affect the county. The annual probability level for the region is estimated to be less than 1 percent (unlikely).

G.2.8 Landslide

LOCATION AND SPATIAL EXTENT

Landslides occur along steep slopes when the pull of gravity can no longer be resisted (often due to heavy rain). Human development can also exacerbate risk by building on previously undevelopable steep slopes. Landslides are possible throughout Wayne County.

According to **Figure G.6** below, the entire county falls under a low incidence area (yellow and light purple). This indicates that less than 1.5 percent of the area is involved in landsliding. The areas in yellow are defined as low incidence and low susceptibility. The areas in light purple, however, indicate that a moderate susceptibility to landsliding activity is present. In addition, there is a small area of land in the northeast corner of the county (depicted in orange) reported as high susceptibility and moderate incidence. This area is the area at greatest risk to landsliding according to the United States Geological Survey data. There are no changes with susceptibility to the landslide hazard since the last plan update.

FIGURE G.6: LANDSLIDE SUSCEPTIBILITY AND INCIDENCE MAP OF WAYNE COUNTY

Source: USGS

HISTORICAL OCCURRENCES

There is no extensive history of landslides in Wayne. Landslide events typically occur in isolated areas.

PROBABILITY OF FUTURE OCCURRENCES

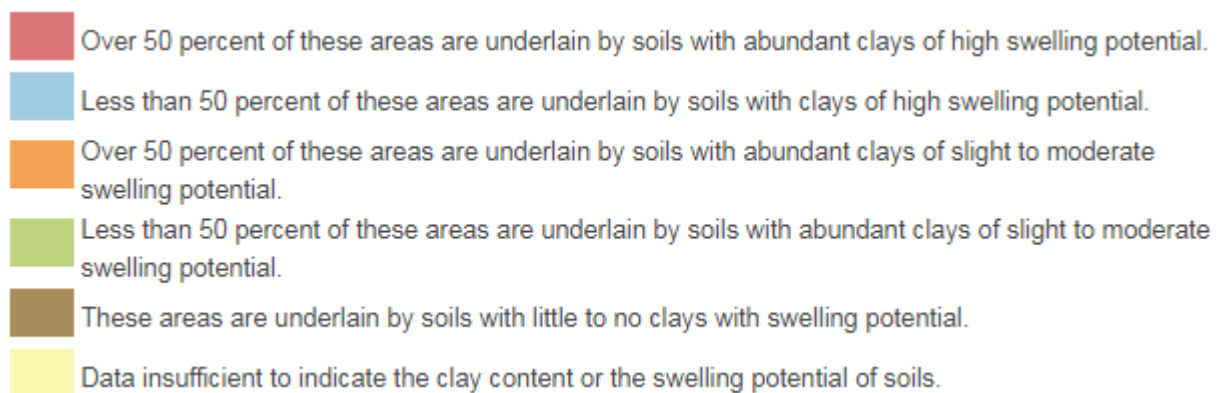
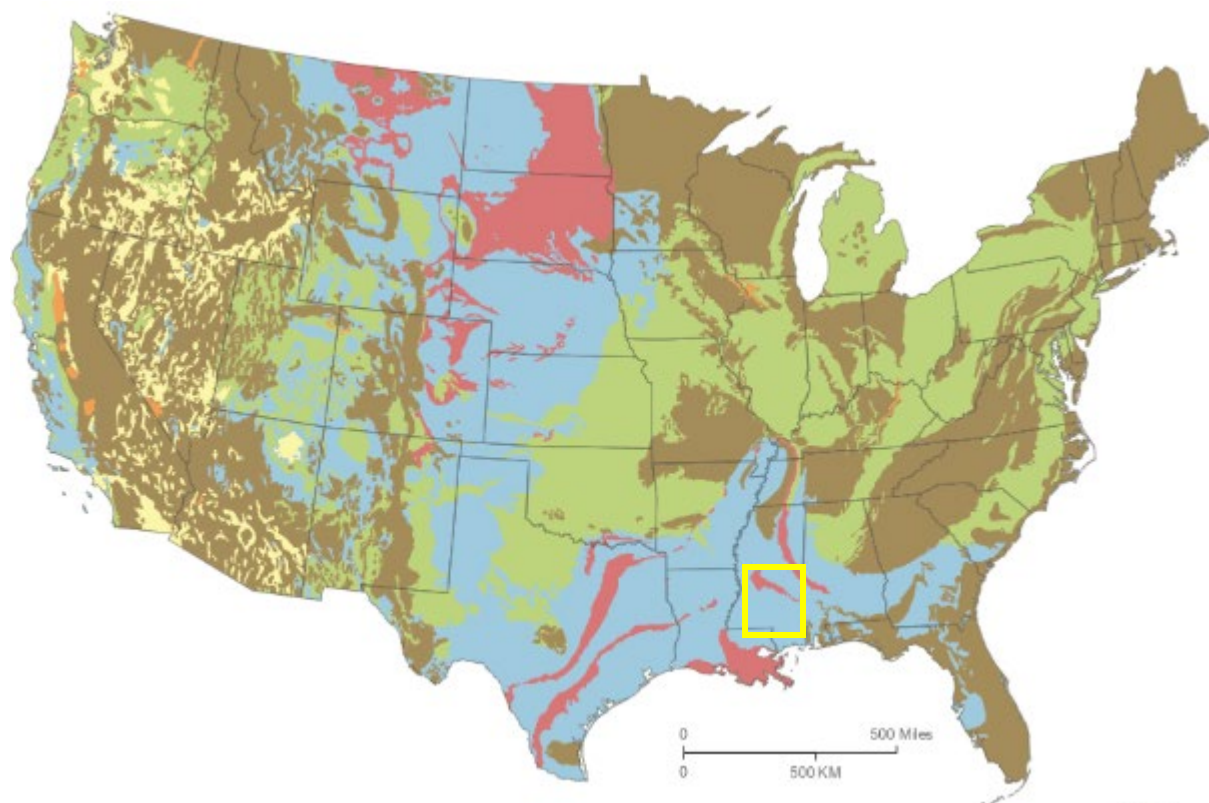
Based on historical information and the USGS susceptibility index, the probability of future landslide events is possible (1 to 10 percent probability). The USGS data indicates that nearly all areas in Wayne County have a low landslide incidence rate except for a small area in the northeast corner that is reported to have a moderate incidence rate. However, most areas are reported as having moderate or high susceptibility to landsliding activity. Local conditions may become more favorable for landslides due to heavy rain, for example. This would increase the likelihood of occurrence. It should also be noted that some areas in Wayne County have greater risk than others given factors such as steepness on slope and modification of slopes.

G.2.7 Expansive Soils

LOCATION AND SPATIAL EXTENT

Due to the amount of clay minerals present in Wayne County, expansive soils present a threat to the county. Areas underlain by soils with swelling potential are shown in **Figure G.7**. The areas in blue are underlain with generally less than 50 percent clay having high swelling potential.

FIGURE G.7: SWELLING CLAYS IN MISSISSIPPI



*Source: USGS

HISTORICAL OCCURRENCES

There is no historical record of significant expansive soil events in Wayne County. However, expansive soils can cause considerable damage to structural foundations in the county, although they do not pose a significant threat to human life.

PROBABILITY OF FUTURE OCCURRENCES

Based on historical information, the probability of future expansive soil events is possible (between 1 and 100 percent annually).

WIND-RELATED HAZARDS

G.2.10 Hurricane and Tropical Storm

LOCATION AND SPATIAL EXTENT

Hurricanes and tropical storms threaten the entire Atlantic and Gulf seaboard of the United States. While coastal areas are most directly exposed to the brunt of landfalling storms, their impact is often felt hundreds of miles inland and major hurricanes (category 3 or higher) may impact Wayne County. All areas in Wayne County are equally susceptible to hurricane and tropical storms.

HISTORICAL OCCURRENCES

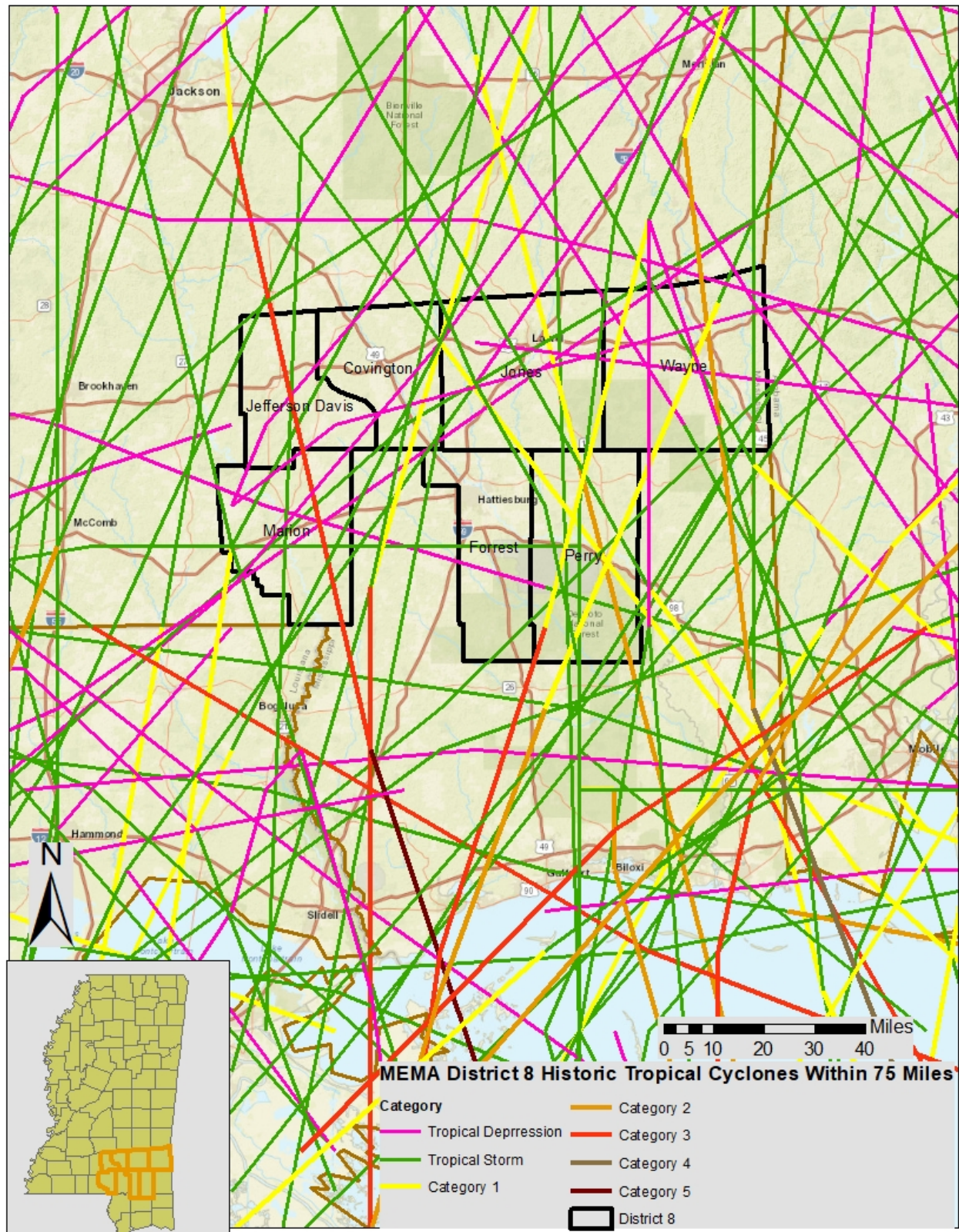
According to the National Hurricane Center's historical storm track records, a total of 64 hurricanes have passed within 75 miles of the county since 1851. This includes 1 category 5 storm, 1 category 4 storm, 8 category 3 storms, 4 category 2 storms, 9 category 1 storms, and 41 tropical storms as shown in **Figure G.8**.⁸

Of the recorded storm events, a total of 12 tracks passed directly through the county including the Unnamed Hurricane of 1855, Unnamed Hurricane of 1860, and Hurricane Frederic (1979). All of these events were tropical storms when they traversed the county except three aforementioned hurricanes. The Unnamed Hurricanes passed through as Category 1 storms and Frederic passed through as a Category 2 storm. **Table G.15** provides the detail for each storm that passed through the county including date of occurrence, name (if applicable), maximum wind speed (as recorded when traversing the county) and category of the storm based on the Saffir-Simpson Scale.

Fortunately, there have been no significant storms to have hit the area since the last planning period.

FIGURE G.8: HISTORICAL HURRICANE STORM TRACKS WITHIN 75 MILES OF WAYNE COUNTY

⁸ These storm track statistics do not include extra-tropical storms. Though these related hazard events are less severe in intensity, they may cause significant local impact in terms of rainfall and high winds.



Source: National Oceanic and Atmospheric Administration; National Hurricane Center

**TABLE G.15: HISTORICAL STORM TRACKS WITHIN 75 MILES OF WAYNE COUNTY
(1850–2019)**

Date of Occurrence	Storm Name	Maximum Wind Speed (miles per hour)	Storm Category
9/16/1855	UNNAMED	81	Category 1
9/15/1860	UNNAMED	81	Category 1
8/13/1881	UNNAMED	46	Tropical Storm
9/12/1892	UNNAMED	46	Tropical Storm
9/22/1907	UNNAMED	40	Tropical Storm
6/13/1912	UNNAMED	52	Tropical Storm
9/14/1912	UNNAMED	46	Tropical Storm
10/16/1932	UNNAMED	46	Tropical Storm
9/16/1939	UNNAMED	40	Tropical Storm
9/10/1944	UNNAMED	40	Tropical Storm
9/16/1960	ETHEL	40	Tropical Storm
9/13/1979	FREDERIC	109	Category 2
8/4/1995	ERIN	52	Tropical Storm
10/07/17	UNNAMED	60	Tropical Storm

Source: National Hurricane Center and National Centers for Environmental Information

Federal records indicate that disaster declarations were made in 1969 (Hurricane Camille), 1979 (Hurricane Frederic), 1998 (Hurricane Georges), 2004 (Hurricane Ivan), 2005 (Hurricane Dennis), 2005 (Hurricane Katrina), and 2012 (Hurricane Isaac).⁹ Hurricane and tropical storm events can cause substantial damage in the area due to high winds and flooding.

Flooding and high winds from hurricanes and tropical storms can cause damage throughout the county. Anecdotes are available from NCEI for the major storms that have impacted the county as found below:

Hurricane Erin – August 20, 1995

Hurricane Erin moved out of Washington County, Alabama into Greene and Wayne Counties in Mississippi. The storm moved generally along Highway 45 passing just south of Waynesboro. Trees and power lines were blown down across Northern Greene, Northern Perry and most of Wayne Counties as Erin moved northwest. Some homes were damaged along Highway 45 and in the cities of Buckatunna and Waynesboro. Most of the damage was from trees falling on homes or shingles being blown from roofs. Wind speeds of 50 to 60 mph were estimated in Waynesboro. Preliminary damage estimates in these three counties was around \$100 thousand.

Hurricane Ivan – September 16, 2004

Thousands of trees were blown down across Eastern Mississippi during the event as well as hundreds of power lines. The strong wind itself did not cause much structural damage, however the fallen trees did. These downed trees accounted for several hundred homes, mobile homes and businesses to be damaged or destroyed. Most locations across Eastern Mississippi reported sustained winds between 30 and 40 mph with Tropical Storm force gusts between 48 and 54 mph. The strongest reported winds occurred in Newton, Lauderdale and Oktibbeha Counties.

⁹ A complete listing of historical disaster declarations can be found in Section 4: Hazard Identification.

Overall, rainfall totals were held in check as Ivan steadily moved north. The heaviest rains were confined to far Eastern Mississippi where 3 to 4 inches fell over a 15 hour period. Due to the duration of the rain no flooding was reported. Across Eastern Mississippi, Hurricane Ivan was responsible for one fatality. This fatality occurred in Brooksville (Noxubee County) when a tree fell on a man. Damage from Ivan was estimated at \$200 million.

Hurricane Katrina – August 25, 2005

Hurricane Katrina will likely go down as the worst and costliest natural disaster in United States history. The amount of destruction, the cost of damaged property/agriculture and the large loss of life across the affected region has been overwhelming. Catastrophic damage was widespread across a large portion of the Gulf Coast region. The devastation was not only confined to the coastal region, widespread and significant damage occurred well inland up to the Hattiesburg area and northward past Interstate 20.

Devastation from Hurricane Katrina was widespread across the region. Hurricane force winds were common across the area. The region received sustained winds of 60-80 mph with gusts ranging from 80-120 mph. There was widespread damage to trees and power lines. Wind damage to structures was also widespread, with roofs blown off or partially peeled. Hundreds of signs were shredded or blown down. Businesses sustained structural damage. Power outages lasted from a few days to as long as four weeks. Agriculture and timber industries were severely impacted. Row crops, including cotton, rice, corn, and soybeans, took a hard hit. Other impacted industries were the catfish industry, dairy and cattle industry, and nursery businesses.

PROBABILITY OF FUTURE OCCURRENCES

Based on historical evidence, the probability level of future occurrence is likely (annual probability between 10 and 100 percent). Given the regional nature of the hazard, all areas in the county are equally exposed to this hazard. However, when the county is impacted, the damage could be catastrophic, threatening lives and property throughout the planning area.

G.2.11 Thunderstorm

LOCATION AND SPATIAL EXTENT

Thunderstorm / High Wind

A thunderstorm event is an atmospheric hazard, and thus has no geographic boundaries. It is typically a widespread event that can occur in all regions of the United States. However, thunderstorms are most common in the central and southern states because atmospheric conditions in those regions are favorable for generating these powerful storms. Also, Wayne County typically experiences several straight-line wind events each year. These wind events can and have caused significant damage. It is assumed that Wayne County has uniform exposure to an event and the spatial extent of an impact could be large.

Hailstorm

Hailstorms frequently accompany thunderstorms, so their locations and spatial extents coincide. It is assumed that Wayne County is uniformly exposed to severe thunderstorms; therefore, all areas of the county are equally exposed to hail which may be produced by such storms.

Lightning

Lightning occurs randomly, therefore it is impossible to predict where and with what frequency it will strike. It is assumed that all of Wayne County is uniformly exposed to lightning.

HISTORICAL OCCURRENCES

Thunderstorm / High Wind

Severe storms resulted in three disaster declarations in Wayne County in 2003, 2009, and 2013.¹⁰ According to NCEI, there have been 97 reported thunderstorm and high wind events since 1979 in Wayne County.¹¹ These events caused over \$752,000 in damages and seven reported injuries. **Table G.16** summarizes this information. **Table G.17** presents detailed thunderstorm and high wind event reports including date, magnitude, and associated damages for each event.¹²

TABLE G.16: SUMMARY OF THUNDERSTORM / HIGH WIND OCCURRENCES IN WAYNE COUNTY

Location	Number of Occurrences	Deaths / Injuries	Property Damage
State Line	7	0/0	\$67,209
Waynesboro	24	0/0	\$216,918
Unincorporated Area	66	0/7	\$321,605
WAYNE COUNTY TOTAL	97	0/7	\$752,732

Source: National Centers for Environmental Information

TABLE G.17: HISTORICAL THUNDERSTORM / HIGH WIND OCCURRENCES IN WAYNE COUNTY

Location	Date	Type	Magnitude	Deaths / Injuries	Property Damage*
State Line					
State Line	02-JAN-99	STRONG WINDS	55 kts.	0/0	\$7,563
State Line	20-AUG-01	TSTM WIND	50 kts.	0/0	\$11,406
State Line	14-APR-07	THUNDERSTORM WIND	50 kts.	0/0	\$14,329
State Line	20-DEC-07	THUNDERSTORM WIND	50 kts.	0/0	\$17,911
State Line	28-JUN-14	THUNDERSTORM WIND	61 kts.	0/0	\$10,000
State Line	23-FEB-16	THUNDERSTORM WIND	52 kts.	0/0	\$3,000
State Line	23-FEB-16	THUNDERSTORM WIND	52 kts.	0/0	\$3,000
Waynesboro					
Waynesboro	06-JAN-95	THUNDERSTORM WINDS	0 kts.	0/0	\$1,657
Waynesboro	07-MAR-95	THUNDERSTORM WINDS	0 kts.	0/0	\$16,572
Waynesboro	27-OCT-95	THUNDERSTORM WINDS	0 kts.	0/0	\$3,314
Waynesboro	28-JAN-97	TSTM WIND	52 kts.	0/0	\$6,292
Waynesboro	21-FEB-97	TSTM WIND	52 kts.	0/0	\$2,360

¹⁰ A complete listing of historical disaster declarations can be found in Section 4: Hazard Identification.

¹¹ These thunderstorm events are only inclusive of those reported by the National Centers for Environmental Information (NCEI). It is likely that additional thunderstorm events have occurred in Wayne County. As additional local data becomes available, this hazard profile will be amended.

¹² The dollar amount of damages provided by NCEI is divided by the number of affected counties to reflect a damage estimate for the county.

ANNEX G: WAYNE COUNTY

Location	Date	Type	Magnitude	Deaths / Injuries	Property Damage*
Waynesboro	26-APR-97	TSTM WIND	50 kts.	0/0	\$1,573
Waynesboro	28-MAY-97	TSTM WIND	50 kts.	0/0	\$2,360
Waynesboro	24-OCT-97	TSTM WIND	50 kts.	0/0	\$3,933
Waynesboro	02-APR-00	TSTM WIND	60 kts.	0/0	\$7,343
Waynesboro	16-JUL-00	TSTM WIND	55 kts.	0/0	\$7,343
Waynesboro	16-DEC-00	TSTM WIND	50 kts.	0/0	\$7,343
Waynesboro	12-MAR-01	TSTM WIND	60 kts.	0/0	\$7,129
Waynesboro	13-OCT-01	TSTM WIND	60 kts.	0/0	\$14,258
Waynesboro	25-AUG-02	TSTM WIND	55 kts.	0/0	\$41,527
Waynesboro	06-AUG-03	TSTM WIND	50 kts.	0/0	\$6,720
Waynesboro	30-APR-05	TSTM WIND	50 kts.	0/0	\$19,002
Waynesboro	24-MAY-05	TSTM WIND	50 kts.	0/0	\$12,688
Waynesboro	04-APR-08	THUNDERSTORM WIND	50 kts.	0/0	\$11,593
Waynesboro	11-APR-08	THUNDERSTORM WIND	50 kts.	0/0	\$13,911
Waynesboro	04-APR-11	THUNDERSTORM WIND	50 kts.	0/0	\$0
Waynesboro	13-OCT-14	THUNDERSTORM WIND	52 kts.	0/0	\$5,000
Waynesboro	15-FEB-16	THUNDERSTORM WIND	52 kts.	0/0	\$20,000
Waynesboro	02-JAN-17	THUNDERSTORM WIND	52 kts.	0/0	\$0
Waynesboro	01-11-18	THUNDERSTORM WIND	61 kts.	0/0	\$5,000
WAYNE COUNTY	04-APR-79	TSTM WIND	0 kts.	0/0	\$0
WAYNE COUNTY	04-NOV-81	TSTM WIND	0 kts.	0/0	\$0
WAYNE COUNTY	04-NOV-81	TSTM WIND	0 kts.	0/0	\$0
WAYNE COUNTY	03-JAN-82	TSTM WIND	0 kts.	0/0	\$0
WAYNE COUNTY	14-NOV-83	TSTM WIND	0 kts.	0/7	\$0
WAYNE COUNTY	12-FEB-84	TSTM WIND	0 kts.	0/0	\$0
WAYNE COUNTY	08-APR-86	TSTM WIND	0 kts.	0/0	\$0
WAYNE COUNTY	18-APR-88	TSTM WIND	0 kts.	0/0	\$0
WAYNE COUNTY	10-MAY-88	TSTM WIND	0 kts.	0/0	\$0
WAYNE COUNTY	04-NOV-88	TSTM WIND	0 kts.	0/0	\$0
WAYNE COUNTY	10-FEB-90	TSTM WIND	0 kts.	0/0	\$0
WAYNE COUNTY	03-JUN-90	TSTM WIND	0 kts.	0/0	\$0
WAYNE COUNTY	30-AUG-90	TSTM WIND	0 kts.	0/0	\$0
WAYNE COUNTY	30-AUG-90	TSTM WIND	0 kts.	0/0	\$0

ANNEX G: WAYNE COUNTY

Location	Date	Type	Magnitude	Deaths / Injuries	Property Damage*
WAYNE COUNTY	01-MAR-91	TSTM WIND	0 kts.	0/0	\$0
WAYNE COUNTY	14-APR-91	TSTM WIND	0 kts.	0/0	\$0
WAYNE COUNTY	09-MAR-94	THUNDERSTORM WINDS	0 kts.	0/0	\$852
WAYNE COUNTY	09-JUN-94	THUNDERSTORM WINDS	0 kts.	0/0	\$852
Strengthford	06-JAN-95	THUNDERSTORM WINDS	0 kts.	0/0	\$3,314
Strengthford	11-APR-95	THUNDERSTORM WINDS	0 kts.	0/0	\$829
Strengthford	20-APR-95	THUNDERSTORM WINDS	0 kts.	0/0	\$1,657
Whistler	28-MAY-95	THUNDERSTORM WINDS	0 kts.	0/0	\$829
Buckatunna	12-JUL-95	THUNDERSTORM WINDS	0 kts.	0/0	\$1,657
Clara	26-JAN-96	TSTM WIND	50 kts.	0/0	\$3,218
DENHAM	18-MAR-96	TSTM WIND	60 kts.	0/0	\$3,218
DENHAM	13-JUN-96	TSTM WIND	50 kts.	0/0	\$2,414
GRETNA	26-OCT-96	TSTM WIND	50 kts.	0/0	\$2,414
Mulberry	15-JAN-97	TSTM WIND	50 kts.	0/0	\$2,360
DENHAM	21-FEB-97	TSTM WIND	50 kts.	0/0	\$6,292
Clara	10-FEB-98	TSTM WIND	50 kts.	0/0	\$4,647
Whistler	26-FEB-98	TSTM WIND	50 kts.	0/0	\$4,647
Countywide	05-JUN-98	TSTM WIND	60 kts.	0/0	\$116,167
Mulberry	09-JAN-99	TSTM WIND	55 kts.	0/0	\$7,563
Whistler	22-JAN-99	TSTM WIND	55 kts.	0/0	\$7,563
Whistler	14-APR-99	TSTM WIND	50 kts.	0/0	\$4,538
EUCUTTA	25-AUG-99	TSTM WIND	50 kts.	0/0	\$7,563
Mulberry	29-JAN-01	TSTM WIND	55 kts.	0/0	\$7,129
MATHERVILLE	02-MAR-01	TSTM WIND	65 kts.	0/0	\$14,258
EUCUTTA	02-MAR-01	TSTM WIND	55 kts.	0/0	\$4,277
Clara	13-OCT-01	TSTM WIND	50 kts.	0/0	\$14,258
HIWANNEE	10-NOV-02	TSTM WIND	55 kts.	0/0	\$27,685
Clara	06-APR-03	TSTM WIND	50 kts.	0/0	\$6,720
HIWANNEE	06-APR-03	TSTM WIND	50 kts.	0/0	\$6,720
Smithtown	10-JAN-08	THUNDERSTORM WIND	50 kts.	0/0	\$11,593
Buckatunna	31-JAN-08	THUNDERSTORM WIND	50 kts.	0/0	\$28,982
HIWANNEE	03-MAR-08	THUNDERSTORM WIND	74 kts.	0/0	\$0
Clara	15-MAY-08	THUNDERSTORM WIND	50 kts.	0/0	\$17,389
Battles	04-APR-11	THUNDERSTORM WIND	50 kts.	0/0	\$0
Whistler	20-FEB-14	THUNDERSTORM WIND	52 kts.	0/0	\$1,000
Woodwards	28-APR-14	THUNDERSTORM WIND	83 kts.	0/0	\$50,000
Whistler	02-SEP-14	THUNDERSTORM WIND	61 kts.	0/0	\$5,000
Matherville	02-OCT-14	THUNDERSTORM WIND	52 kts.	0/0	\$5,000
Clara	13-OCT-14	THUNDERSTORM WIND	52 kts.	0/0	\$5,000
Clara	31-OCT-15	THUNDERSTORM WIND	52 kts.	0/0	\$10,000
Buckatunna	15-FEB-16	THUNDERSTORM WIND	52 kts.	0/0	\$5,000
Buckatunna	15-FEB-16	THUNDERSTORM WIND	52 kts.	0/0	\$20,000
Clara	15-FEB-16	THUNDERSTORM WIND	52 kts.	0/0	\$5,000
Clara	15-FEB-16	THUNDERSTORM WIND	52 kts.	0/0	\$10,000

Location	Date	Type	Magnitude	Deaths / Injuries	Property Damage*
Denham	15-FEB-16	THUNDERSTORM WIND	52 kts	0/0	\$3,000
Whistler	23-FEB-16	THUNDERSTORM WIND	52 kts	0/0	\$3,000
Mulberry	09-JUL-16	THUNDERSTORM WIND	52 kts	0/0	\$10,000
Clara	10-JUL-16	THUNDERSTORM WIND	52 kts	0/0	\$5,000
Denham	10-JUL-16	THUNDERSTORM WIND	52 kts	0/0	\$5,000
Whistler	10-JUL-16	THUNDERSTORM WIND	52 kts	0/0	\$5,000

Source: National Centers for Environmental Information

Hailstorm

According to the National Centers for Environmental Information, 55 recorded hailstorm events have affected Wayne County since 1985.¹³ **Table G.18** is a summary of the hail events in Wayne County. **Table G.19** provides detailed information about each event that occurred in the county. In all, hail occurrences resulted in over \$16,000 in property damages. Hail ranged in diameter from 0.75 inches to 1.75 inches. It should be noted that hail is notorious for causing substantial damage to cars, roofs, and other areas of the built environment that may not be reported to the National Centers for Environmental Information. Therefore, it is likely that damages are greater than the reported value.

TABLE G.18: SUMMARY OF HAIL OCCURRENCES IN WAYNE COUNTY

Location	Number of Occurrences	Deaths / Injuries	Property Damage
State Line	2	0/0	\$0
Waynesboro	11	0/0	\$1,180
Unincorporated Area	42	0/0	\$15,393
WAYNE COUNTY TOTAL	55	0/0	\$16,573

Source: National Centers for Environmental Information

TABLE G.19: HISTORICAL HAIL OCCURRENCES IN WAYNE COUNTY

Location	Date	Magnitude	Deaths / Injuries	Property Damage*
State Line				
State Line	25-APR-03	0.75 in.	0/0	\$0
State Line	15-MAR-16	1.00 in.	0/0	\$0
Waynesboro				
Waynesboro	06-MAR-96	0.75 in.	0/0	\$0
Waynesboro	06-MAR-96	1.75 in.	0/0	\$0
Waynesboro	18-MAR-96	1.75 in.	0/0	\$0
Waynesboro	12-DEC-96	1.00 in.	0/0	\$0
Waynesboro	22-APR-97	1.00 in.	0/0	\$1,180
Waynesboro	09-MAR-99	1.00 in.	0/0	\$0
Waynesboro	02-MAY-00	1.75 in.	0/0	\$0
Waynesboro	11-APR-05	0.75 in.	0/0	\$0
Waynesboro	22-APR-05	0.75 in.	0/0	\$0
Waynesboro	09-MAY-06	0.88 in.	0/0	\$0

¹³ These hail events are only inclusive of those reported by the National Centers for Environmental Information (NCEI). It is likely that additional hail events have affected Wayne County. As additional local data becomes available, this hazard profile will be amended.

ANNEX G: WAYNE COUNTY

Location	Date	Magnitude	Deaths / Injuries	Property Damage*
Waynesboro	22-MAR-15	1.00 in.	0/0	\$0
WAYNE COUNTY	11-JUL-85	0.75	0/0	\$0
WAYNE COUNTY	11-JUL-85	0.75	0/0	\$0
WAYNE COUNTY	12-MAR-88	0.75	0/0	\$0
WAYNE COUNTY	24-MAY-88	0.75	0/0	\$0
WAYNE COUNTY	09-JUN-88	1.00	0/0	\$0
WAYNE COUNTY	04-APR-89	1.00	0/0	\$0
WAYNE COUNTY	04-APR-89	1.00	0/0	\$0
WAYNE COUNTY	04-APR-89	1.00	0/0	\$0
WAYNE COUNTY	08-NOV-89	0.80	0/0	\$0
WAYNE COUNTY	21-MAY-90	0.80	0/0	\$0
WAYNE COUNTY	09-APR-91	0.75	0/0	\$0
WAYNE COUNTY	09-APR-91	0.75	0/0	\$0
Ethel	20-AUG-95	0.75	0/0	\$0
Purvis	27-OCT-95	0.88	0/0	\$0
Water Oak	06-MAR-96	1.00	0/0	\$0
Battles	06-MAR-96	1.00	0/0	\$0
Clara	18-MAR-96	1.75	0/0	\$0
Clara	07-NOV-96	0.75	0/0	\$0
BUCKATUNNA	12-DEC-96	1.75	0/0	\$0
WINCHESTER	12-DEC-96	0.75	0/0	\$0
HIWANNEE	22-APR-97	1.00	0/0	\$0
HIWANNEE	25-OCT-97	1.00	0/0	\$0
Boice	01-NOV-97	0.75	0/0	\$0
Boice	12-JAN-98	0.75	0/0	\$0
Mulberry	07-MAR-98	0.75	0/0	\$0
EUCUTTA	01-APR-00	1.75	0/0	\$0
HIWANNEE	03-APR-01	1.75	0/0	\$0
Clara	06-JUL-02	0.75	0/0	\$0
BUCKATUNNA	13-MAR-03	0.75	0/0	\$0
Battles	25-APR-03	0.75	0/0	\$0
Mulberry	03-MAY-03	0.88	0/0	\$0
HIWANNEE	07-APR-04	0.75	0/0	\$0
Clara	22-MAR-05	0.75	0/0	\$0
BUCKATUNNA	11-APR-05	0.75	0/0	\$0
Clara	22-APR-05	1.75	0/0	\$3,800
Clara	22-APR-05	0.88	0/0	\$0
Boice	26-APR-05	0.75	0/0	\$0
MATHERVILLE	20-JUN-08	0.88	0/0	\$11,593
Clara	15-APR-11	1.75	0/0	\$0
BUCKATUNNA	31-MAY-12	1.00	0/0	\$0
HIWANNEE	20-FEB-14	1.00	0/0	\$0
EUCUTTA	27-MAR-17	1.00	0/0	\$0

*All damage may not have been reported.

Source: National Centers for Environmental Information

Lightning

According to the National Centers for Environmental Information, there have been five recorded lightning events in Wayne County since 1995. These events resulted in almost \$136,000 in damages and two reported injuries, as listed in summary **Table G.20**.¹⁴ However, it is likely that more lightning events have in fact impacted the county. Many of the reported events are those that caused damage, and it should be expected that damages are likely much higher for this hazard than what is reported. Detailed information on historical lightning events can be found in **Table G.21**.

TABLE G.20: SUMMARY OF LIGHTNING OCCURRENCES IN WAYNE COUNTY

Location	Number of Occurrences	Deaths / Injuries	Property Damage
State Line	0	0/0	\$0
Waynesboro	5	0/2	\$135,618
Unincorporated Area	0	0/0	\$0
WAYNE COUNTY TOTAL	5	0/2	\$135,618

Source: National Centers for Environmental Information

TABLE G.21: HISTORICAL LIGHTNING OCCURRENCES IN WAYNE COUNTY

Location	Date	Deaths / Injuries	Property Damage*	Details
State Line				
None Reported	--	--	--	--
Waynesboro				
Waynesboro	06-JAN-95	0/0	\$49,715	Lightning severely damaged a house.
				Lightning struck a house near Waynesboro. The lightning strike caused a fire. The owners were able to extinguish the fire with only minor damage reported.
Waynesboro	09-SEP-96	0/0	\$3,218	
Waynesboro	22-JUL-98	0/0	\$15,489	Lightning struck a florist shop in Waynesboro.
				Two men working on Nabors Drilling Rig were injured when lightning struck the "grasshopper". They were both knocked to the ground by the strike. They were taken to the hospital, examined and released.
Waynesboro	11-JUN-01	0/2	\$0	
				Lightning struck a home and started a fire. The fire destroyed the home before the fire department could extinguish the blaze. No one was injured.
Waynesboro	27-AUG-03	0/0	\$67,196	
Unincorporated Area				
None Reported	--	--	--	--

* All damage may not have been reported.

Source: National Centers for Environmental Information

¹⁴ These lightning events are only inclusive of those reported by the National Centers for Environmental Information (NCEI). It is likely that additional lightning events have occurred in Wayne County. As additional local data becomes available, this hazard profile will be amended.

PROBABILITY OF FUTURE OCCURRENCES

Thunderstorm / High Wind

Given the high number of previous events, it is certain that wind events, including straight-line wind and thunderstorm wind, will occur in the future. This results in a probability level of highly likely (100 percent annual probability) for future wind events for the entire county.

Hailstorm

Based on historical occurrence information, it is assumed that the probability of future hail occurrences is likely (10 – 100 percent annual probability). Since hail is an atmospheric hazard (coinciding with thunderstorms), it is assumed that Wayne County has equal exposure to this hazard. It can be expected that future hail events will continue to cause minor damage to property and vehicles throughout the county.

Lightning

Although there was not a high number of historical lightning events reported in Wayne County via NCDC data, it is a regular occurrence accompanied by thunderstorms. In fact, lightning events will assuredly happen on an annual basis, though not all events will cause damage. According to Vaisala's U.S. National Lightning Detection Network (NLDN®), Wayne County is located in an area of the country that experienced an average of 6 to 8 lightning flashes per square kilometer per year between 1997 and 2010. Therefore, the probability of future events is highly likely (100 percent annual probability). It can be expected that future lightning events will continue to threaten life and cause minor property damages throughout the county.

G.2.12 Tornado

LOCATION AND SPATIAL EXTENT

Tornadoes occur throughout the state of Mississippi, and thus in Wayne County. Tornadoes typically impact a relatively small area, but damage may be extensive. Event locations are completely random, and it is not possible to predict specific areas that are more susceptible to tornado strikes over time. Therefore, it is assumed that Wayne County is uniformly exposed to this hazard.

HISTORICAL OCCURRENCES

Tornadoes resulted in five disaster declarations in Wayne County in 1973, 2003, 2009, 2013 and 2014.¹⁵ According to the National Centers for Environmental Information, there have been a total of 22 recorded tornado events in Wayne County since 1973 (**Table G.22**), resulting in nearly \$61.7 million in property damages.¹⁶ In addition, two fatalities were reported. The magnitude of these tornadoes ranges from F0 to F4 in intensity, although an F5 event is possible. Detailed information on historic tornado events can be found in **Table G.23**.

¹⁵ A complete listing of historical disaster declarations can be found in Section 4: Hazard Identification.

¹⁶ These tornado events are only inclusive of those reported by the National Centers for Environmental Information (NCEI). It is likely that additional tornadoes have occurred in Wayne County. As additional local data becomes available, this hazard profile will be amended.

TABLE G.22: SUMMARY OF TORNADO OCCURRENCES IN WAYNE COUNTY

Location	Number of Occurrences	Deaths / Injuries	Property Damage
State Line	4	0/0	\$117,133
Waynesboro	2	0/0	\$31,720
Unincorporated Area	16	2/0	\$61,521,199
WAYNE COUNTY TOTAL	22	2/0	\$61,670,052

Source: National Centers for Environmental Information

TABLE G.23: HISTORICAL TORNADO IMPACTS IN WAYNE COUNTY

Location	Date	Magnitude	Deaths / Injuries	Property Damage*	Details
State Line					
State Line	27-OCT-95	F0	0/0	\$0	A tornado briefly touched down along U.S. Highway 45 near State Line. No damage was found.
State Line	24-NOV-04	F0	0/0	\$6,524	A weak tornado downed trees near State Line.
State Line	15-APR-11	F0	0/0	\$10,609	The tornado continued northeast out of the State Line, Mississippi area. The National Weather Service Damage Survey Team observed a 100-yard-wide path of trees snapped with some minor damage to the roofing structure of a home. The tornado continued to the east crossing into Washington County, Alabama.
State Line	23-FEB-16	F1	0/0	\$100,000	The National Weather Service storm survey team found a third tornado touchdown in a heavily wooded area near State Line. Numerous large diameter (greater than 2 feet) hardwood and pine trees were either snapped near the base of the trunk or uprooted. The tornado continued affecting mostly wooded areas before lifting just to the northeast of Woulard Bend River Road.
Waynesboro					
Waynesboro	17-MAY-03	F0	0/0	\$6,720	A weak tornado briefly touched down near Waynesboro, blowing down several trees.
Waynesboro	07-OCT-17	F0	0/0	\$25,000	A brief EF-0 tornado initially touched down on Jo Land Drive, moved west northwest, and lifted just north of County Farm Road and Old Highway 145. Three homes experienced roof damage. Some trees were also uprooted.
Unincorporated Area					
WAYNE COUNTY	08-MAY-73	F1	0/0	\$1,421,475	
WAYNE COUNTY	26-FEB-58	F3	2/0	\$21,863	
WAYNE COUNTY	09-JAN-72	F3	0/0	\$151,232	
WAYNE COUNTY	28-JUN-57	F2	0/0	\$2,247,360	

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Location	Date	Magnitude	Deaths / Injuries	Property Damage*	Details
WAYNE COUNTY	11-MAY-59		0/0	\$21,749	
WAYNE COUNTY	04-FEB-60	F1	0/0	\$21,285	
WAYNE COUNTY	04-NOV-88	F3	0/0	\$533,525	
WAYNE COUNTY	28-FEB-87	F4	0/0	\$55,563,194	
Smithtown	19-FEB-96	F1	0/0	\$80,456	A TORNADO MOVED OUT OF GREENE COUNTY INTO WAYNE COUNTY ABOUT 222 PM CDT 3 MILES WEST OF SMITHTOWN AND 1 MILE WEST OF MS HWY 63. THE TORNADO CROSSED MS HWY 63 AND THEN SKIPPED ALONG THE GROUND ACROSS MOSTLY OPEN FIELDS BEFORE LIFTING BACK INTO THE CLOUDS JUST EAST OF CHICORA. SEVERAL HOMES HAD ROOF AND SIDING DAMAGE AND NUMEROUS TREES WERE BLOWN DOWN BY THE TORNADO. THE TORNADO SKIPPED ALONG THE GROUND FOR ABOUT 13 MILES WHILE IT WAS IN WAYNE COUNTY.
Good Hope	18-MAR-96	F1	0/0	\$24,137	A TORNADO MOVED OUT OF PERRY COUNTY TWO MILES NORTH OF GOOD HOPE INTO WAYNE COUNTY. THE TORNADO SKIPPED ALONG THE GROUND PASSING JUST SOUTH OF MULBERRY BEFORE LIFTING BACK INTO THE CLOUD NEAR STATE HWY 63 FOUR MILES SOUTH OF WATER OAK. THE TORNADO PASSED MOSTLY OVER OPEN LAND WITH DAMAGE CONFINED TO TREES AND POWER LINES. THE TORNADO WAS ON THE GROUND FOR ABOUT TWELVE MILES IN WAYNE COUNTY.
Mulberry	18-MAR-96	F1	0/0	\$16,091	A TORNADO MOVED OUT OF PERRY COUNTY AND INTO WAYNE COUNTY THREE MILES SOUTHWEST OF MULBERRY. THE STORM WAS ON THE GROUND FOR ABOUT THREE MILES AND THEN LIFTED BACK INTO THE CLOUD ABOUT TWO MILES SOUTHEAST OF MULBERRY. DAMAGE WAS CONFINED TO TREES AND POWER LINES BEING BLOWN DOWN.

Location	Date	Magnitude	Deaths / Injuries	Property Damage*	Details
BUCKATUNNA	18-MAR-96	F0	0/0	\$64,364	THE SAME STORM SYSTEM DROPPED ANOTHER TORNADO ABOUT NINE MILES SOUTHWEST OF BUCKATUNNA. THE TORNADO MOVED EAST NORTHEAST AND PASSED NEAR THE CITY OF BUCKATUNNA. THE TORNADO CONTINUED ON ACROSS U. S. HIGHWAY 45 AND THEN LIFTED BACK INTO THE CLOUD JUST BEFORE ENTERING INTO SOUTHWEST ALABAMA, ABOUT THREE MILES NORTHEAST OF BUCKATUNNA. THE TORNADO SKIPPED ALONG THE GROUND MOSTLY ALONG OPEN FARM LAND FOR ABOUT TWELVE MILES. DAMAGE WAS CONFINED TO MOSTLY DOWNED TREES AND POWER LINES. IN THE CITY OF BUCKATUNNA, SOME HOMES SUFFERED MINOR ROOF DAMAGE FROM SHINGLES BEING BLOWN OFF AND ALSO FROM TREES BEING BLOWN ON HOMES. NO INJURIES WERE REPORTED.
WHISTLER	15-NOV-06	F1	0/0	\$307,468	A tornado entered the southwest part of Wayne County from Jones County just south of US Highway 84. The tornado moved northeast causing mostly tree damage and crossed Highway 84. The tornado then crossed Harry Phippen Drive where it pushed a large tree on to a house. The tornado continued northeast over private property where it strengthened to an F1. Here it caused considerable tree damage and damaged a barn near Pleasant Grove Altair Road. The tornado crossed the road and this is where most of the damage occurred. A mobile home that was tied down was flipped and demolished. A large shed was flattened. Other homes in this area lost shingles and trees. The tornado lifted near Pleasant Grove Altair Road and Jack Fleming Road intersection.
WHISTLER	15-APR-11	F0	0/0		Tornado reported by EMA north of Strengthford near the Whistler area.
EUCUTTA	28-APR-14	F1	0/0	\$50,000	The National Weather Service Storm Survey team found that a small weak tornado moved into northwest Wayne County from northeast Jones County. The tornado tracked from west to east at around 50 mph. The most significant damage occurred to a chicken farm and to a mobile home that was rolled off its foundation. A family of four were inside the mobile home at the time it was hit by the tornado and escaped with minor injuries.

Location	Date	Magnitude	Deaths / Injuries	Property Damage*	Details
HIWANNEE	28-APR-14	F2	0/0	\$1,000,000	The N National Weather Service Survey team found evidence of a strong tornado that tracked across north central and northeast Wayne County. The tornado tracked from the west to the east at around 50 mph. A single-family home located on Waller Ridge Road and several single family homes and mobile homes on Spinkes Hayes Road were destroyed. Minor to moderate damage occurred to numerous other residences from Spinkes Hayes Road to Matherville Diamond Road.

Source: National Centers for Environmental Information

PROBABILITY OF FUTURE OCCURRENCES

According to historical information, tornado events pose a significant threat to Wayne County. The probability of future tornado occurrences affecting Wayne County is likely (10 – 100 percent annual probability).

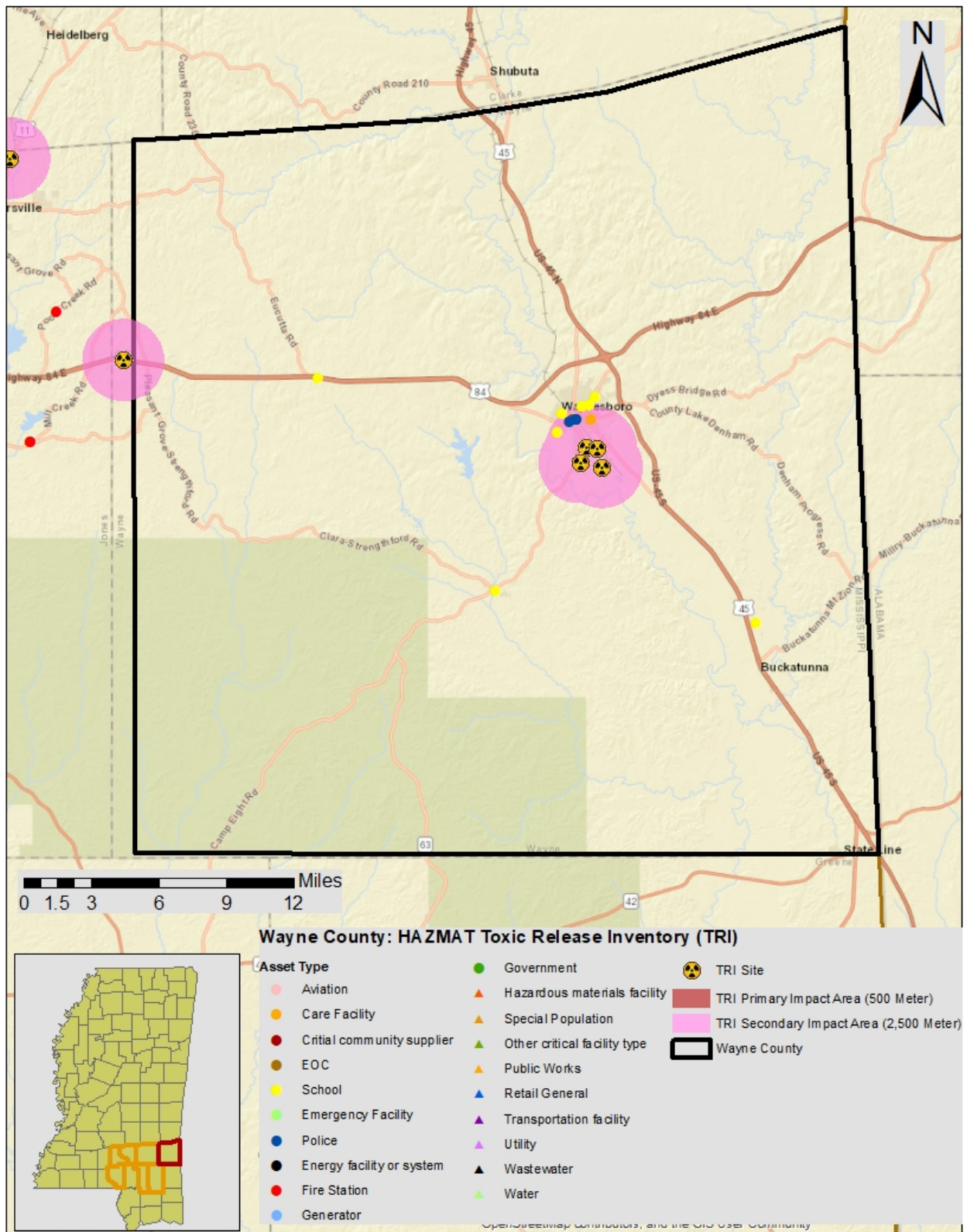
G.2.13 Hazardous Materials Incidents

LOCATION AND SPATIAL EXTENT

Hazardous Materials

Wayne County has four TRI sites. These sites are shown in **Figure G.9**.

FIGURE G.9: TOXIC RELEASE INVENTORY (TRI) SITES IN WAYNE COUNTY

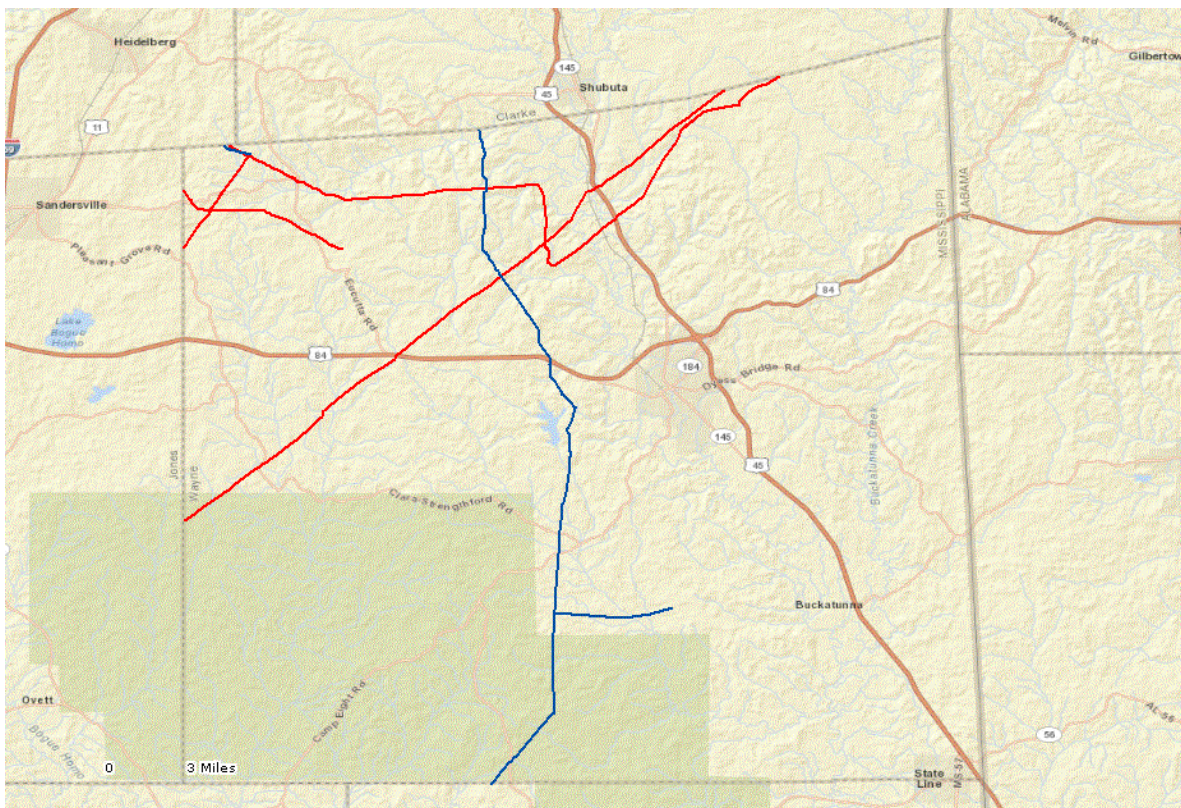


In addition to “fixed” hazardous materials locations, hazardous materials may also impact the county via roadways and rail. Many roads in the county are narrow, making hazardous material transport in the area especially treacherous. All roads that permit hazardous material transport are considered potentially at risk to an incident.

Pipelines

There are two distinct types of pipelines that are used in the transport of potentially hazardous materials, gas lines and hazardous liquid lines. **Figure G.10** shows the trunk lines for each of these material types but does not show the gathering or distribution pipelines. Gas lines are in blue and hazardous liquid lines are in red. This data has not changed since the last plan update.

FIGURE G.3: PIPELINES IN WAYNE COUNTY



Source: Pipeline and Hazardous Materials Safety Administration

Meth Labs

One of the greatest concerns about meth labs is that they are clandestine in nature. Additionally, once a meth lab has been identified, police authorities generally attempt to eliminate the site as quickly as possible. Therefore, it is nearly impossible to identify specific locations for meth labs and instead, the entire planning area is considered to be at risk to this hazard.

HISTORICAL OCCURRENCES

Hazardous Materials

There has been a total of six recorded HAZMAT incidents in Wayne County since 1979 (**Table G.24**), resulting in \$4,450 in property damages. In addition, one injury was reported. **Table G.25** presents detailed information on historic HAZMAT incidents in Wayne County as reported by the U.S. Department of Transportation Pipeline and Hazardous Materials Safety Administration (PHMSA).

TABLE G.24: SUMMARY OF HAZMAT INCIDENTS IN WAYNE COUNTY

Location	Number of Occurrences	Deaths / Injuries	Property Damage
State Line	0	0/0	\$0
Waynesboro	5	0/1	\$400
Unincorporated Area	1	0/0	\$4,050
WAYNE COUNTY TOTAL	6	0/1	\$4,450

Source: USDOT PHMSA

TABLE G.25: HAZMAT INCIDENTS IN WAYNE COUNTY

Report Number	Date	City	Mode	Serious Incident?	Fatalities/ Injuries	Damages (\$)	Quantity Released
State Line							
<i>None Reported</i>	--	--	--	--	--	--	--
Waynesboro							
I-1998100617	10/2/1998	WAYNESBORO	Highway	No	0/0	\$400	5 LGA
I-1979120895	11/18/1979	WAYNESBORO	Highway	No	0/0	\$0	42 LGA
I-2000031243	3/16/2000	WAYNESBORO	Highway	No	0/0	\$0	0
I-2012100243	9/14/2012	WAYNESBORO	Highway	No	0/0	\$0	10 LGA
E-2012110328	9/14/2012	WAYNESBORO	Highway	Yes	0/0	\$0	15 LGA
Unincorporated Area							
I-2003031009	2/15/2003	EUCUTTA	Highway	No	0/0	\$4,050	20 LGA

Source: USDOT PHMSA

Pipelines

Between 2002 and 2013, there have been no pipeline incidents in Wayne County.

Meth Labs

Meth lab incidents have occurred at various times throughout Wayne County. Although there is not an extensive documented record of these events, they have occurred in the past and are generally confined to single sites, often in residential areas.

PROBABILITY OF FUTURE OCCURRENCES

Hazardous Materials

Given the location of four toxic release inventory sites in Wayne County and several roadway and rail incidents, it is possible that a hazardous material incident may occur in the county (between one percent and ten percent annual probability). County and town officials are mindful of this possibility and take precautions to prevent such an event from occurring. Furthermore, there are detailed plans in place to respond to an occurrence.

Although there are just four TRI sites and a limited record of previous events in the county, hazardous materials incidents will continue to be a threat. The county may also be impacted by neighboring counties which also face risk due to TRI sites and narrow roadways.

Pipelines

Although there have been no pipeline incidents, there are 109 miles of gas and hazardous liquid lines in Wayne County. Therefore, it is anticipated that there will be future pipeline incidents in Wayne County.

Meth Labs

Meth lab incidents will likely continue to occur throughout Wayne County and are considered possible.

G.2.14 Cyber Attack

A cyber-attack is a malicious, intentional attempt to breach the information technology (IT) infrastructure of an individual or organization. The State of Mississippi defines a cyberterrorism incident as any adverse premeditated, politically, financially or maliciously motivated attack against informational systems. A cyberterrorism event can impact one or more of Wayne County's and its, corresponding departments' and divisions' information assets by the following ways, which includes, but are not limited to, the following:

- Unauthorized use
- Denial of Service
- Malicious code
- Network system failures
- Application system failures
- Unauthorized disclosure or loss of information
- Information security breach
- Structured Query Language (SQL) Injection

LOCATION AND HAZARD EXTENT

The cyberterrorism hazard is not geographically based. Attacks can originate from any computer to affect any other computer in the world. If a system is connected to the Internet or operating on a wireless frequency, it is susceptible to exploitation. Targets of cyberterrorism can be individual computers, networks, organizations, business sectors, or governments. Financial institutions and retailers are often targeted to extract personal and financial data that can be used to steal money from individuals and banks.

HISTORICAL OCCURRENCES

There have been no known historical occurrences to have occurred in in Wayne County to date.

PROBABILITY OF FUTURE OCCURRENCES

As is the case for any governmental organization, there will always be the potential for impact for Wayne County. As such, the county will continue to be compelled to respond to cyberterrorisms in the future. The nature of these attacks is projected to evolve in sophistication over time. Wayne County will

take a proactive position in its cyber security efforts and is expected to remain vigilant in its efforts to prevent attacks from occurring and/or disrupting business operations.

The reality remains that many computers and networks in organizations of all sizes and industries around the United States will continue to suffer intrusion attempts on a daily basis from viruses and malware that are passed through web sites and emails. Again, the potential for harm via this hazard is always present.

G.2.15 Conclusions on Hazard Risk

The hazard profiles presented above were developed using best available data and result in what may be considered principally a qualitative assessment as recommended by FEMA in its “How-to” guidance document titled *Understanding Your Risks: Identifying Hazards and Estimating Losses* (FEMA Publication 386-2). It relies heavily on historical and anecdotal data, stakeholder input, and professional and experienced judgment regarding observed and/or anticipated hazard impacts. It also carefully considers the findings in other relevant plans, studies, and technical reports.

HAZARD EXTENT

Table G.26 describes the extent of each natural hazard identified for Wayne County. The extent of a hazard is defined as its severity or magnitude, as it relates to the planning area.

TABLE F.26: EXTENT OF WAYNE COUNTY HAZARDS

Flood-related Hazards	
Flood	Flood extent can be measured by the amount of land and property in the floodplain as well as flood height and velocity. The amount of land in the floodplain accounts for 15.0 percent of the total land area in Wayne County. Flood depth and velocity are recorded via United States Geological Survey stream gages throughout the region. While a gage does not exist for each participating jurisdiction, there is one at or near many areas. The greatest peak discharge recorded for the county was at the Chickasawhay River near Waynesboro in 1900. Water reached a discharge of 73,000 cubic feet per second and the stream gage height was recorded at 50.30 feet.
Erosion	The extent of erosion can be defined by the measurable rate of erosion that occurs. There are no erosion rate records located in Wayne County.
Dam Failure	Dam Failure extent is defined using the Mississippi Division of Environmental Quality criteria. There is one dam classified as high-hazard in the county.
Winter Storm and Freeze	The extent of winter storms can be measured by the amount of snowfall received (in inches). Official long-term snow records are not kept for Wayne County. However, the greatest snowfall reported in Jackson (northwest of the county) was 11.7 inches in 1904 and in Meridian (north of the county) was 14.0 inches in 1963.
Fire-related Hazards	

Drought / Heat Wave	Drought extent is defined by the U.S. Drought Monitor Classifications which include Abnormally Dry, Moderate Drought, Severe Drought, Extreme Drought, and Exceptional Drought. According to the U.S. Drought Monitor Classifications, the most severe drought condition is Exceptional. Wayne County has received this ranking once over the eighteen-year reporting period. The extent of extreme heat can be measures by the record high temperature recorded. Official long-term temperature records are not kept for any areas in Wayne County. However, the highest recorded temperature in Hattiesburg (southwest of the county) was 106°F in 1989.
Wildfire	Wildfire data was provided by the Mississippi Forestry Commission and is reported annually by county from 2008-2018. The greatest number of fires to occur in Wayne County in any year was 57 in 2011. The greatest number of acres to burn in the county in a single year occurred in 2008 when 980 acres were burned. Although this data lists the extent that has occurred, larger and more frequent wildfires are possible throughout the county.
Geologic Hazards	
Earthquake	Earthquake extent can be measured by the Richter Scale and the Modified Mercalli Intensity (MMI) scale and the distance of the epicenter from Wayne County. According to data provided by the National Geophysical Data Center, no recorded earthquakes have been located in the county. However, USGS data shows Wayne County lies within an approximate zone of level .04 ground acceleration. This indicates that the county exists within an area of moderate seismic risk.
Landslide	As noted above in the landslide profile, there is no extensive history of landslides in Wayne County and landslide events typically occur in isolated areas. This provides a challenge when trying to determine an accurate extent for the landslide hazard. However, when using USGS landslide susceptibility index, extent can be measured with incidence, which is low throughout most of the county except for a small area of land in the northeast corner where it is moderate. There is also susceptibility throughout the county.
Expansive Soils	As noted above in the expansive soils profile, there is no historical record of significant expansive soil events in Wayne County. Again, this provides a challenge when trying to determine an accurate extent for the expansive soils hazard. However, when using USGS data on soils with clay swelling potential, extent can be measured with swelling potential, which is high in less than 50 percent of the soils Wayne County.
Wind-related Hazards	
Hurricane and Tropical Storm	Hurricane extent is defined by the Saffir-Simpson Scale which classifies hurricanes into Category 1 through Category 5. The greatest classification of hurricane to traverse directly through Wayne County was a Category 2 storm (Hurricane Frederic in 1979) which carried tropical force winds of 109 miles per hour upon arrival in the county.

Thunderstorm / Hail / Lightning	Thunderstorm extent is defined by the number of thunder events and wind speeds reported. According to a 63-year history from the National Centers for Environmental Information, the strongest recorded wind event in Wayne County was reported on March 3, 2008 at 74 knots (approximately 85 mph). It should be noted that future events may exceed these historical occurrences. Hail extent can be defined by the size of the hail stone. The largest hail stone reported in Wayne County was 1.75 inches (last reported on April 15, 2011). It should be noted that future events may exceed this. According to the Vaisala's flash density map, Wayne County is located in an area that experiences 6 to 8 lightning flashes per square kilometer per year. It should be noted that future lightning occurrences may exceed these figures.
Tornado	Tornado hazard extent is measured by tornado occurrences in the US provided by FEMA as well as the Fujita/Enhanced Fujita Scale. The greatest magnitude reported in Wayne County was an F4 (reported on February 28, 1987).
Other Hazards	
Hazardous Materials Incident	According to USDOT PHMSA, the largest hazardous materials incident reported in the county is 42 LGA released on the highway in Waynesboro. It should be noted that larger events are possible. A pipeline incident could have a potentially large impact in terms of extent. Based on recent history, the largest spill in the last 10 years in Mississippi caused over 10,000 barrels of hazardous liquid to be spilled. Because of the generally small-scale nature of most meth labs, the extent of a fire or explosion that was caused by a meth lab incident would likely not be larger than a few acres.
Cyber Attack	The extent of cyberterrorism is difficult to estimate. Attacks can originate from any computer to affect any other computer in the world. The resulting damages depends on the demands of the cyberterrorist.

PRIORITY RISK INDEX RESULTS

In order to draw some meaningful planning conclusions on hazard risk for Wayne County, the results of the hazard profiling process were used to generate countywide hazard classifications according to a "Priority Risk Index" (PRI). More information on the PRI and how it was calculated can be found in Section 5.16.2.

Table G.27 summarizes the degree of risk assigned to each category for all initially identified hazards based on the application of the PRI. Assigned risk levels were based on the detailed hazard profiles developed for this section, as well as input from the Regional Hazard Mitigation Council. The results were then used in calculating PRI values and making final determinations for the risk assessment.

TABLE G.27: SUMMARY OF PRI RESULTS FOR WAYNE COUNTY

Hazard	Category/Degree of Risk					
	Probability	Impact	Spatial Extent	Warning Time	Duration	PRI Score
Flood-related Hazards						
Flood	Likely	Limited	Small	6 to 12 hours	Less than 24 hours	2.4
Erosion	Possible	Minor	Small	More than 24 hours	More than 1 week	1.8
Dam Failure	Unlikely	Critical	Moderate	More than 24 hours	Less than 6 hours	2.0
Winter Storm and Freeze	Possible	Limited	Large	More than 24 hours	Less than 24 hours	2.3
Fire-related Hazards						
Drought / Heat Wave	Highly Likely	Minor	Large	More than 24 hours	More than 1 week	2.8
Wildfire	Likely	Minor	Small	Less than 6 hours	Less than 1 week	2.1
Geologic Hazards						
Earthquake	Unlikely	Minor	Moderate	Less than 6 hours	Less than 6 hours	1.7
Landslide	Possible	Minor	Small	Less than 6 hours	Less than 6 hours	1.8
Expansive Soils	Possible	Minor	Small	Less than 6 hours	Less than 6 hours	1.8
Wind-related Hazards						
Hurricane and Tropical Storm	Likely	Catastrophic	Large	More than 24 hours	Less than 24 hours	3.2
Thunderstorm Wind / High Wind	Highly Likely	Limited	Moderate	Less than 6 hours	Less than 6 hours	2.9
Hailstorm	Likely	Minor	Small	Less than 6 hours	Less than 6 hours	2.1
Lightning	Highly Likely	Limited	Negligible	Less than 6 hours	Less than 6 hours	2.5
Tornado	Likely	Critical	Small	Less than 6 hours	Less than 6 hours	2.7
Other Hazards						
Hazardous Materials Incident	Unlikely	Limited	Small	Less than 6 hours	Less than 24 hours	1.9
Pipeline Incident	Possible	Limited	Small	Less than 6 hours	Less than 24 hours	2.2
Meth Lab Incident	Possible	Minor	Small	Less than 6 hours	Less than 6 hours	1.8
Cyber-Attack	Unlikely					

G.2.16 Final Determinations on Hazard Risk

The conclusions drawn from the hazard profiling process for Wayne County, including the PRI results and input from the Regional Hazard Mitigation Council, resulted in the classification of risk for each identified hazard according to three categories: High Risk, Moderate Risk, and Low Risk (**Table F.28**). For purposes of these classifications, risk is expressed in relative terms according to the estimated impact that a hazard will have on human life and property throughout all of Wayne County. A more quantitative analysis to estimate potential dollar losses for each hazard has been performed separately and is described in Section 6: *Vulnerability Assessment* and below in Section F.3. It should be noted that although some hazards are classified below as posing low risk, their occurrence of varying or

unprecedented magnitudes is still possible in some cases and their assigned classification will continue to be evaluated during future plan updates.

TABLE G.28: CONCLUSIONS ON HAZARD RISK FOR WAYNE COUNTY

HIGH RISK	Hurricane and Tropical Storm Thunderstorm Wind / High Wind Tornado Flood
MODERATE RISK	Drought / Heat Wave Dam Failure Lightning Hailstorm Pipeline Incident Hazardous Material Incident Wildfire
LOW RISK	Winter Storm and Freeze Expansive Soils Landslide Erosion Earthquake Meth Lab Incident Cyber Attack

G.3 WAYNE COUNTY VULNERABILITY ASSESSMENT

This subsection identifies and quantifies the vulnerability of Wayne County to the significant hazards previously identified. This includes identifying and characterizing an inventory of assets in the county and assessing the potential impact and expected amount of damages caused to these assets by each identified hazard event. More information on the methodology and data sources used to conduct this assessment can be found in Section 6: *Vulnerability Assessment*.

G.3.1 Asset Inventory

Table G.29 lists the number of parcels and the total assessed value of improvements for Wayne County and its participating jurisdictions (study area of vulnerability assessment).¹⁷

¹⁷ Total assessed values for improvements is based on tax assessor records as joined to digital parcel data. This data does not include dollar figures for tax-exempt improvements such as publicly-owned buildings and facilities. It should also be noted that, due to record keeping, some duplication is possible thus potentially resulting in an inflated value exposure for an area.

TABLE G.29: IMPROVED PROPERTY IN WAYNE COUNTY

Location	Number of Parcels	Total Assessed Value of Improvements
Wayne County	9,627	\$1,501,381,000

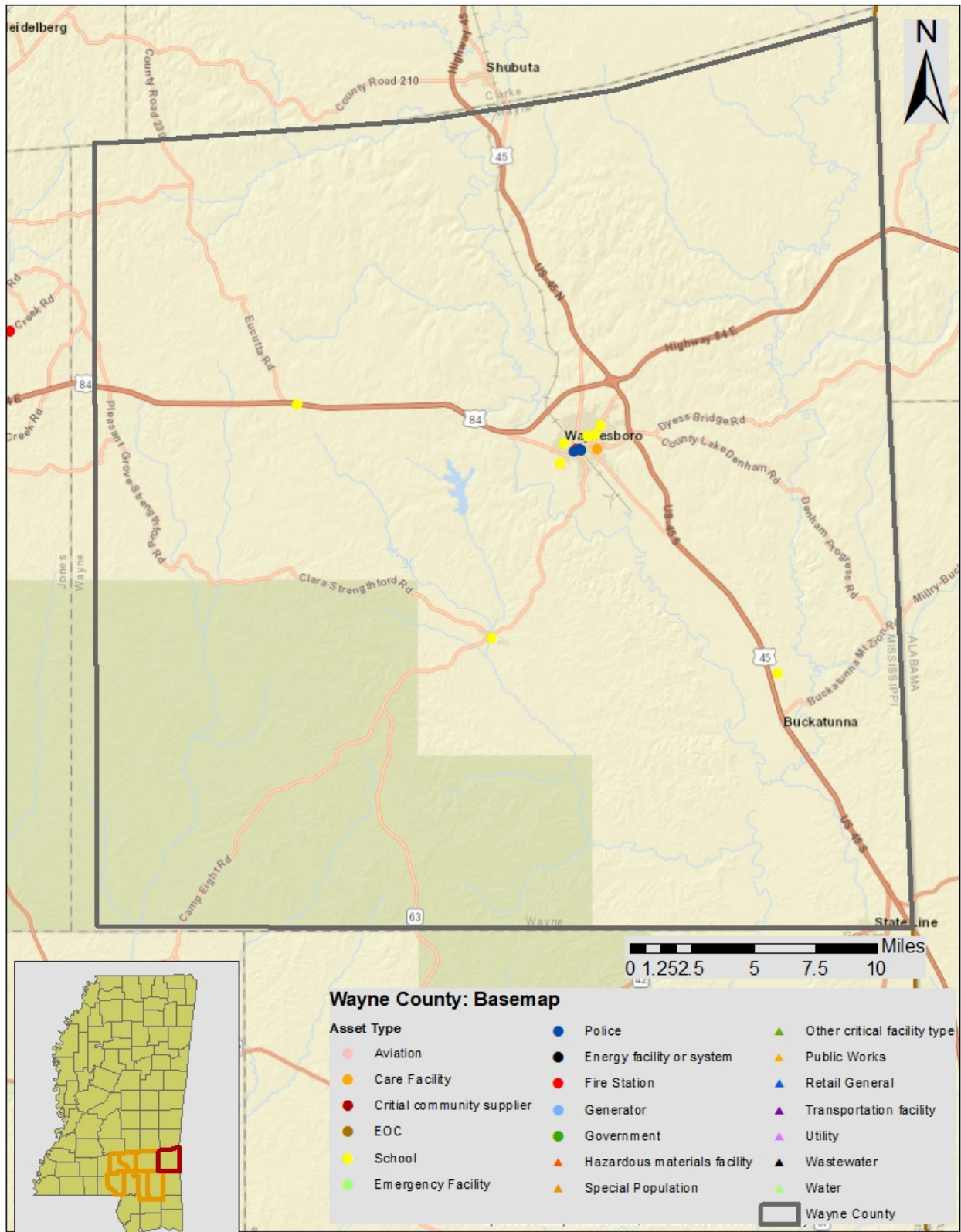
Table G.30 lists the fire stations, police stations, emergency operations centers (EOCs), medical care facilities, and schools and other critical facilities located in Wayne County. HAZUS-MH 4.2 was used to obtain the critical facilities for the county and this data was updated to reflect recent changes. In addition, **Figure G.11** shows the locations of essential facilities in Wayne County. **Table G.32**, near the end of this section, shows a complete list of the critical facilities by name, as well as the hazards that affect each facility. As noted previously, this list is not all-inclusive and only includes information provided by the county.

TABLE G.30: CRITICAL FACILITY INVENTORY IN WAYNE COUNTY

Location	Fire Stations	Police Stations	Medical Care Facilities	EOC	Schools
State Line	0	0	0	0	0
Waynesboro	2	2	1	1	8
Unincorporated Area	0	0	0	0	1
WAYNE COUNTY TOTAL	2	2	1	1	9

Source: HAZUS-MH 4.2

FIGURE G.4: CRITICAL FACILITY LOCATIONS IN WAYNE COUNTY



Source: HAZUS-MH 4.2

G.3.2 Social Vulnerability

In addition to identifying those assets potentially at risk to identified hazards, it is important to identify and assess those particular segments of the resident population in Wayne County that are potentially at risk to these hazards.

Table G.31 lists the population by jurisdiction according to U.S. Census 2010 population estimates. These counts are presented at the county and municipal levels. The total population in Wayne County according to Census data is 20,747 persons. Additional population estimates are presented above in Section G.1.

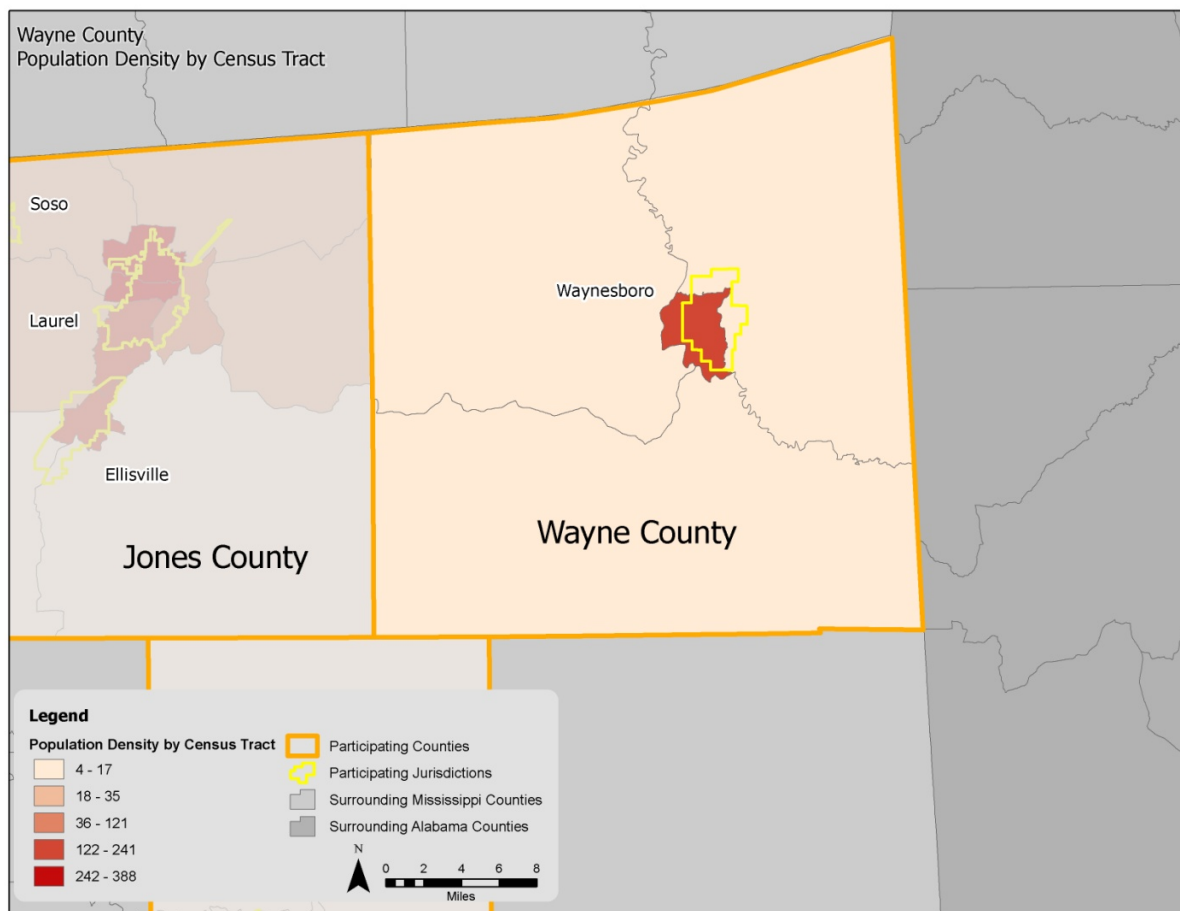
TABLE G.31: TOTAL POPULATION IN WAYNE COUNTY

Location	Total 2010 Population
State Line	565
Waynesboro	5,043
Unincorporated Area	15,139
WAYNE COUNTY TOTAL	20,747

Source: U.S. Census 2010

In addition, **Figure G.12** illustrates the population density by census tract as it was reported by the U.S. Census Bureau in 2010.¹⁸

¹⁸ Population by census block was not available at the time this plan was completed.

FIGURE G.5: POPULATION DENSITY IN WAYNE COUNTY

Source: U.S. Census Bureau, 2010

G.3.3 Vulnerability Assessment Results

As noted in Section 6: *Vulnerability Assessment*, only hazards with a specific geographic boundary, available modeling tool, or sufficient historical data allow for further analysis. Those results, specific to Wayne County, are presented here. All other hazards are assumed to impact the entire planning region (drought, hailstorm, lightning, thunderstorm wind, tornado, and winter storm and freeze) or, due to lack of data, analysis would not lead to credible results (dam and levee failure, erosion, expansive soils, and landslide). The total county exposure, and thus risk, was presented in **Table G.29**.

The hazards to be further analyzed in this section include: flood, wildfire, earthquake, hurricane and tropical storm winds, and hazardous materials incident.

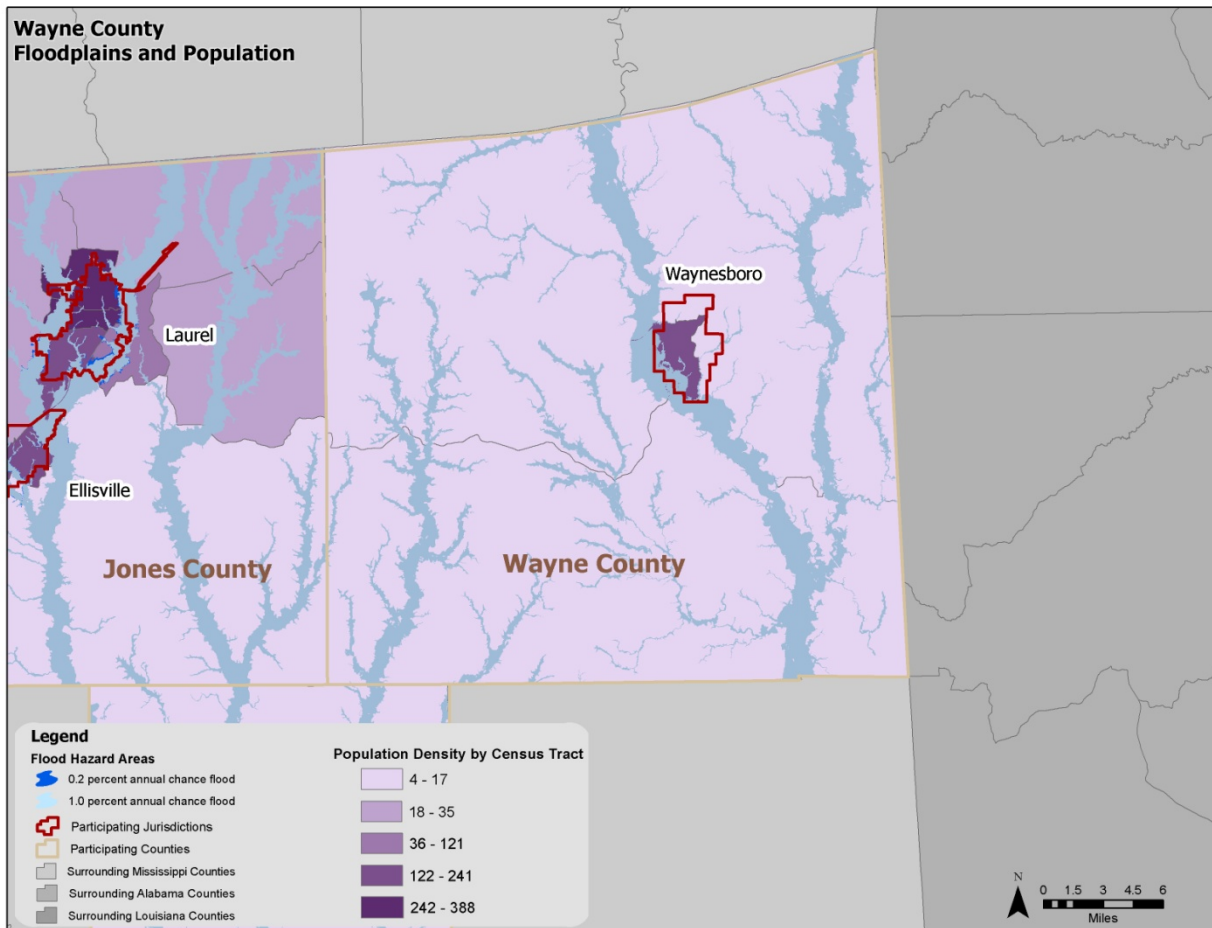
FLOOD

Historical evidence indicates that Wayne County is susceptible to flood events. A total of 18 flood events have been reported by the National Centers for Environmental Information resulting in \$1.241M in damages.

Social Vulnerability

Since 2010 population was available at the tract level, it was difficult to determine a reliable figure on population at-risk to flood due to tract level population data. **Figure G.13** is presented to gain a better understanding of at-risk population. This information has not changed since the last plan update.

FIGURE G.13: POPULATION DENSITY NEAR FLOODPLAINS



Source: FEMA DFIRM, U.S. Census 2010

Critical Facilities

The critical facility analysis revealed that there are no critical facilities located in the Wayne County 1.0-percent annual chance floodplain and 0.2-percent annual chance floodplain based on FEMA DFIRM boundaries and GIS analysis. A list of specific critical facilities and their associated risk can be found in **Table G.32** at the end of this section.

In conclusion, a flood has the potential to impact many existing and future buildings and populations in Wayne County, though some areas are at a higher risk than others. All types of structures in a floodplain are at-risk, though elevated structures will have a reduced risk. As noted, the floodplains used in this analysis include the 100-year and 500-year FEMA regulated floodplain boundaries. It is certainly possible that more severe events could occur beyond these boundaries or urban (flash) flooding could impact additional structures. Such site-specific vulnerability determinations are outside the scope of

this assessment but will be considered during future plan updates. Furthermore, areas subject to repetitive flooding should be analyzed for potential mitigation actions.

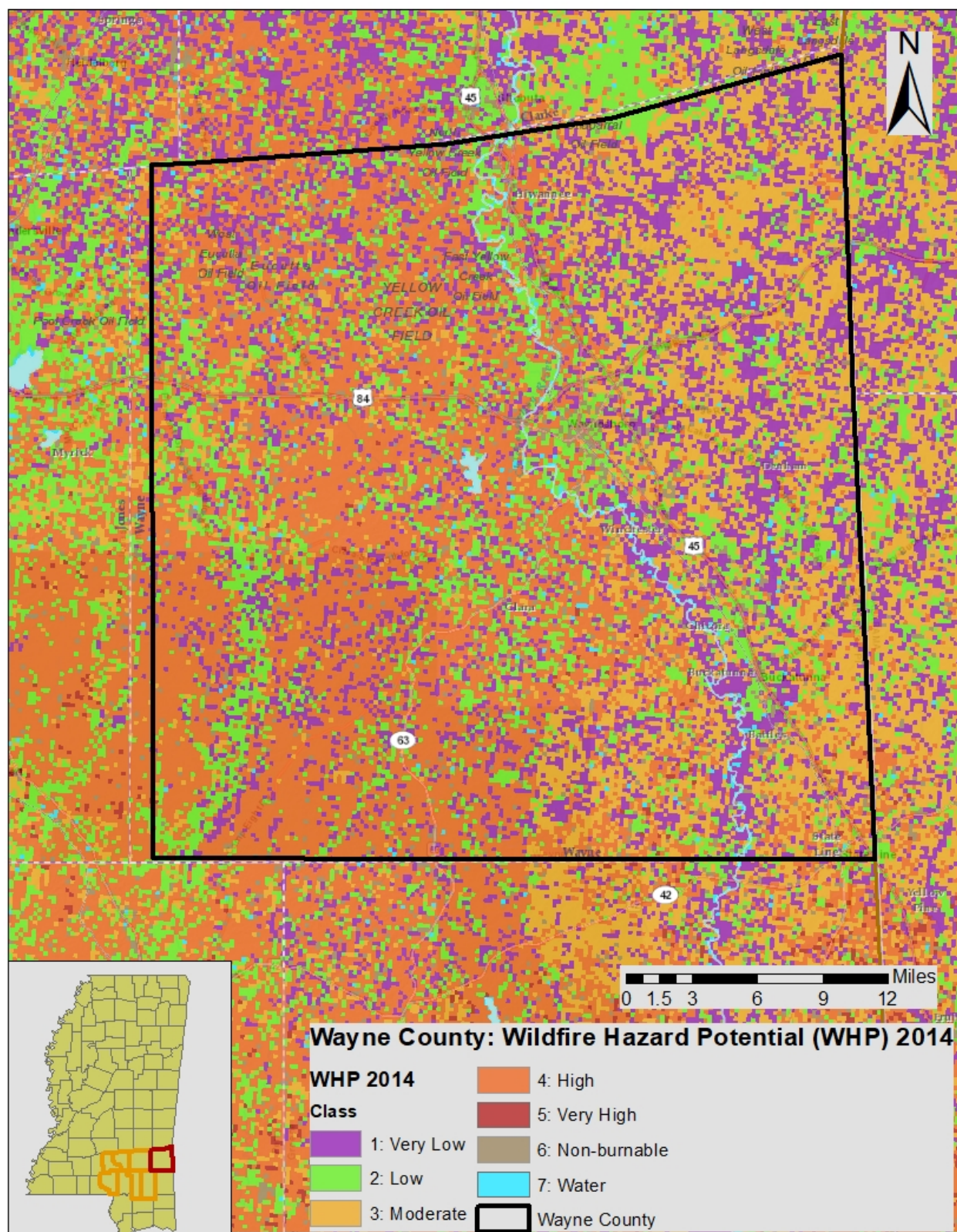
WILDFIRE

Although historical evidence indicates that Wayne County is susceptible to wildfire events, there are few reports of damage.

To estimate exposure to wildfire, the wildfire hazard potential (WHP 2014) data provided via the US Forest Service was utilized. A GIS analysis was performed with the WHP dataset and identified critical facilities throughout MEMA District 8 in order to show the level of vulnerability.

Figure A.14 shows the wildfire hazard potential for Covington County. Most of the planning areas falls within the very low to high category.

FIGURE G.6: WILDFIRE RISK AREAS IN WAYNE COUNTY



Source: U.S. Forrest Service

Social Vulnerability

Although not all areas have equal vulnerability, there is some susceptibility across the entire county. It is assumed that the total population is at risk to the wildfire hazard. Determining the exact number of people in certain wildfire zones is difficult with existing data and could be misleading.

Critical Facilities

The critical facility analysis revealed that there is one critical facility located in an area considered very low risk valued at over \$5.8M. There are three critical facilities located in an area considered low risk valued at nearly \$28M, and there is an additional structure located in an area considered high risk valued at \$4.7M. It should be noted, however, that several factors could impact the spread of a wildfire putting all facilities at risk. A list of specific critical facilities and their associated risk can be found in **Table A.32** at the end of this section.

In conclusion, a wildfire event has the potential to impact many existing and future buildings, critical facilities, and populations in Wayne County.

EARTHQUAKE

The HAZUS-MH earthquake scenario was generated for the region only and not on an individual county basis. The HAZUS-MH model and historical occurrences confirm, any earthquake activity in the area is likely to inflict minor damage to the county. HAZUS-MH 4.2 estimates a total exposure of approximately \$20,561,000 which includes buildings, inventory, and contents throughout the region. While this number is not an exact representation of assessed tax value, it is helpful in assessing the results of the HAZUS-MH scenario.

For the earthquake hazard vulnerability assessment, an arbitrary scenario was created to estimate damages to the planning area. HAZUS-MH estimates that no buildings would be moderately damaged.

Social Vulnerability

It can be assumed that all existing future populations are at risk to the earthquake hazard. No fatalities or injuries were reported in the above HAZUS-MH arbitrary scenario.

Critical Facilities

There are 15 critical facilities identified for Covington County, valued at \$77,706,036. All are vulnerable to the earthquake hazard.

In conclusion, an earthquake has the potential to impact all existing and future buildings, facilities, and populations in Wayne County. The HAZUS-MH scenario indicates that minimal damage is expected from an earthquake occurrence. While Wayne County may not experience a large earthquake (there are none on record), localized damage is possible with an occurrence. A list of specific critical facilities and their associated risk can be found in **Table G.32** at the end of this section.

HURRICANE AND TROPICAL STORM

Historical evidence indicates that Wayne County has an elevated risk to the hurricane and tropical storm hazard. Several tracks have come near or traversed through the county, as shown and discussed in Section G.2.10.

Hurricanes and tropical storms can cause damage through numerous additional hazards such as flooding, erosion, tornadoes, and high winds, thus it is difficult to estimate total potential losses from these cumulative effects. The current HAZUS-MH hurricane model only analyzes hurricane winds and is not capable of modeling and estimating cumulative losses from all hazards associated with hurricanes; therefore, only hurricane winds are analyzed in this section. It can be assumed that all existing and future buildings and populations are at risk to the hurricane and tropical storm hazard. HAZUS-MH 4.2 was used to determine vulnerability to the hazard for a 100-Year event. There are an estimated 100,000 buildings in the region with a total building replacement value of \$20,562,000. A 100-year probabilistic scenario was created and modeled. HAZUS-MH estimated that approximately 1,892 buildings would be at least moderately damaged by the event; this is over two percent of the buildings in the Region. There are an estimated 69 buildings that would be damaged beyond repair.

Economic Losses

HAZUS-MH estimated economic losses for the scenario event. HAZUS-MH estimated losses at \$349.5M, which represents 1.7 percent of the total replacement value of the region's buildings. Nine percent of the losses were related to business interruption in the scenario region. 88 percent of the losses were sustained by residential structures.

Debris Generation

As part of the scenario, HAZUS-MH estimated the amount of debris that would be generated by the event. The types of debris considered were brick/wood, reinforced concrete/steel, eligible tree debris, and other tree debris. HAZUS-MH estimated that a total of 2,165,680 tons of debris would be generated by the event. Of that amount, 93 percent would be other tree debris, approximately 1.5 percent would be brick/wood, and the rest would comprise of would be eligible tree debris and brick/wood. Assuming a load of 25 tons per truck, this would equate to 1,190 truckloads of debris from this scenario.

Social Vulnerability

Given equal susceptibility across the county, it is assumed that the total population is at risk to the hurricane and tropical storm hazard.

Critical Facilities

Given equal vulnerability across Wayne County, all critical facilities are considered to be at risk. There are 15 critical facilities identified for Wayne County, valued at \$77,706,036. Some buildings may perform better than others in the face of such an event due to construction and age, among other factors. In general, determining individual building response is beyond the scope of this plan. However, this plan will consider mitigation actions for vulnerable structures, including critical facilities, to reduce the impacts of the hurricane wind hazard. A list of specific critical facilities and their associated risk can be found in **Table G.32** at the end of this section.

In conclusion, a hurricane event has the potential to impact many existing and future buildings, critical facilities, and populations in Wayne County. Hurricane events can cause substantial damage in their wake including fatalities, extensive debris clean-up, and extended power outages.

HAZARDOUS MATERIALS INCIDENT

Although historical evidence and existing Toxic Release Inventory sites indicate that Wayne County is susceptible to hazardous materials events, there are few reports of damage.

Most hazardous materials incidents that occur are contained and suppressed before destroying any property or threatening lives. However, they can have a significant negative impact. Such events can cause multiple deaths, completely shut down facilities for 30 days or more, and cause more than 50 percent of affected properties to be destroyed or suffer major damage. In a hazardous materials incident, solid, liquid, and/or gaseous contaminants may be released from fixed or mobile containers. Weather conditions will directly affect how the hazard develops. Certain chemicals may travel through the air or water, affecting a much larger area than the point of the incidence itself. Non-compliance with fire and building codes, as well as failure to maintain existing fire and containment features, can substantially increase the damage from a hazardous materials release. The duration of a hazardous materials incident can range from hours to days. Warning time is minimal to none.

In order to conduct the vulnerability assessment for this hazard, GIS analysis was used for fixed and mobile areas. In both scenarios, two sizes of buffers—500 and 2,500 meters—were used. These areas are assumed to respect the different levels of effect: immediate (primary) and secondary. Primary and secondary impact sites were selected based on guidance from FEMA 426, Reference Manual to Mitigate Potential Terrorist Attacks Against Buildings and engineering judgment. For the fixed site analysis, geo-referenced TRI listed toxic sites in Wayne County, along with buffers, were used for analysis as shown in **Figure G.15**. For the mobile analysis, the major roads (Interstate highway, U.S. highway, and State highway) and railroads, where hazardous materials are primarily transported that could adversely impact people and buildings, were used for the GIS buffer analysis. **Figure G.16** shows the areas used for mobile toxic release buffer analysis. The mobile toxic release buffer data did not change since the last plan update.

FIGURE G.7: TRI SITES WITH BUFFERS IN WAYNE COUNTY

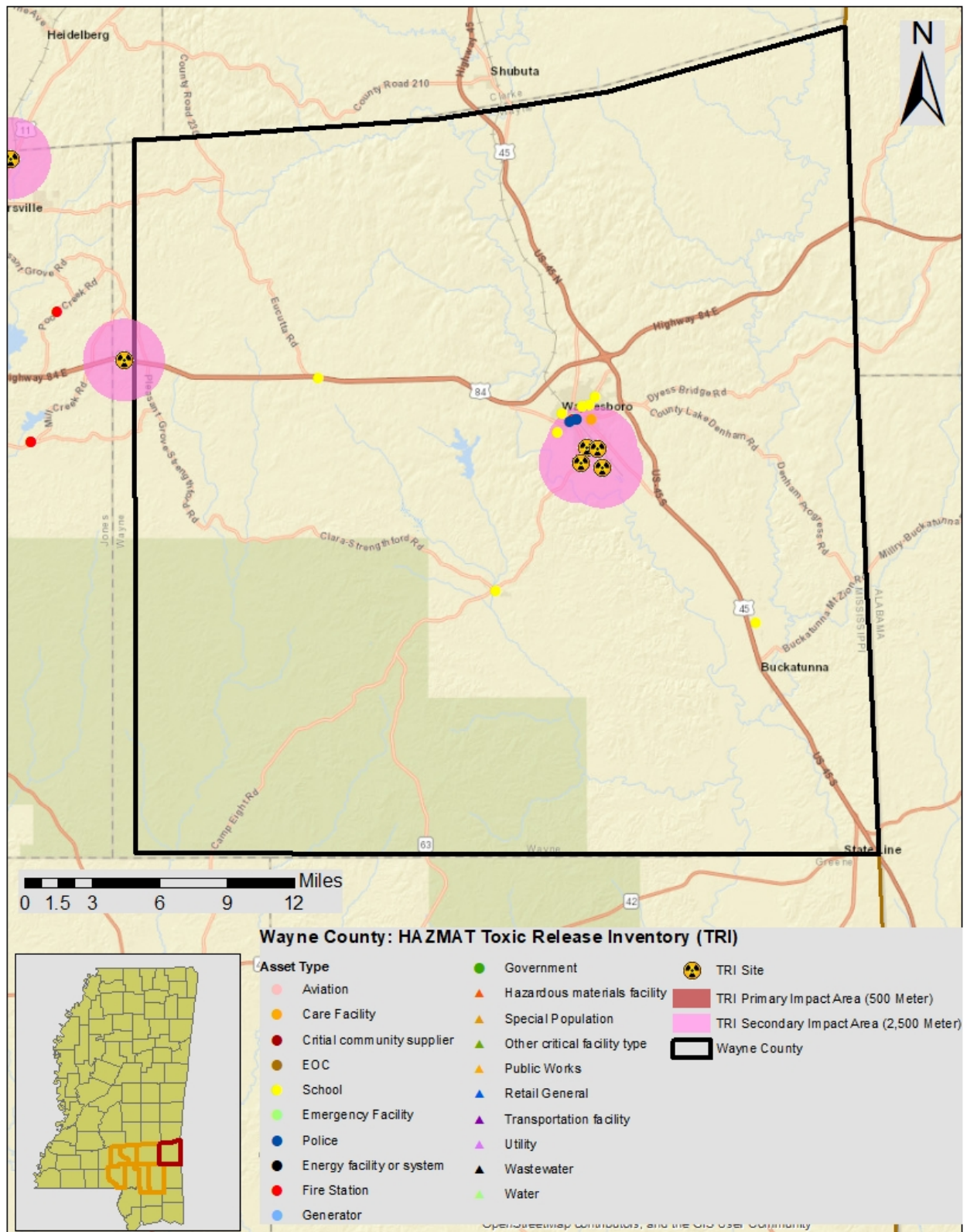
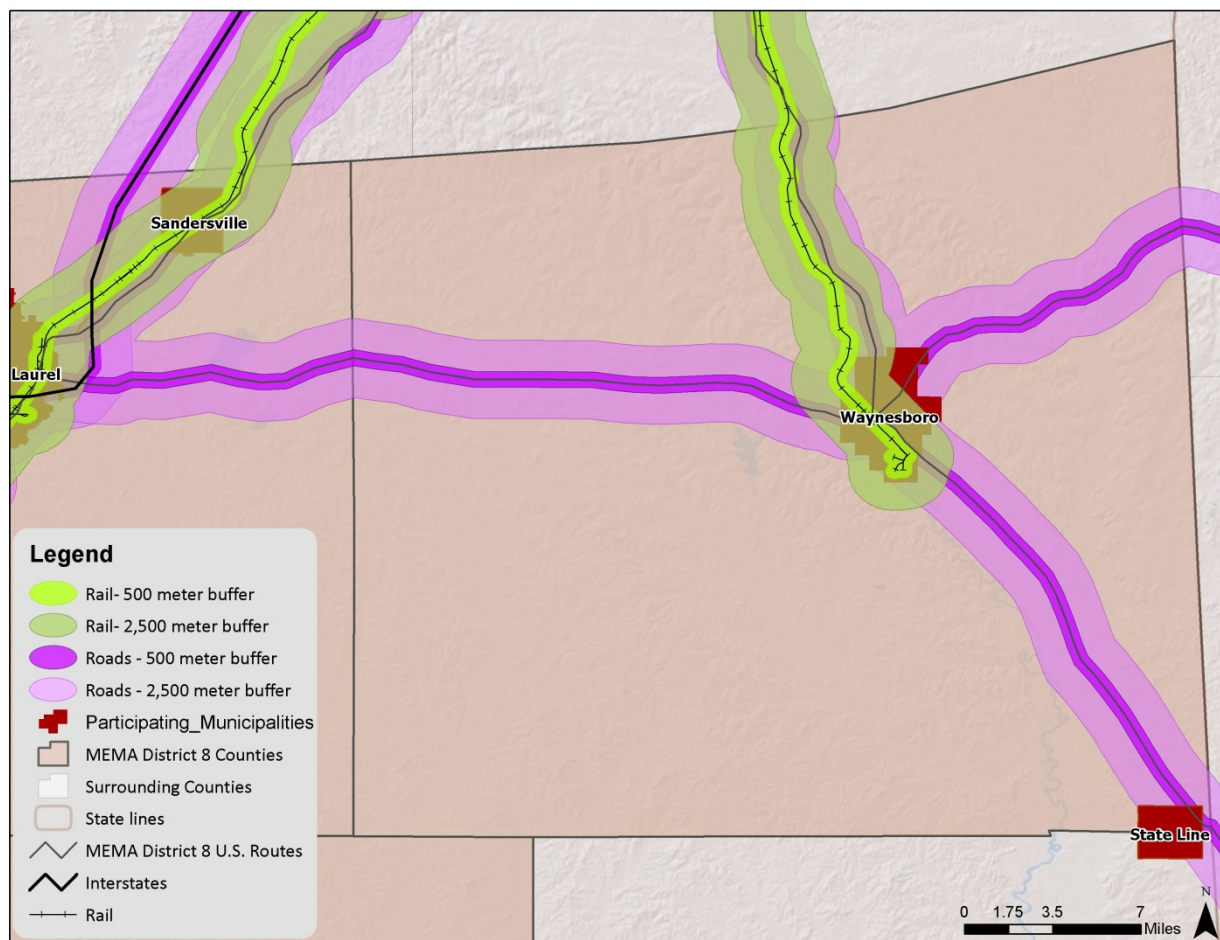


FIGURE G.8: MOBILE HAZMAT BUFFERS IN WAYNE COUNTY

Social Vulnerability

Given high susceptibility across the entire county, it is assumed that the total population is at risk to a hazardous materials incident. It should be noted that areas of population concentration may be at an elevated risk due to a greater burden to evacuate population quickly.

Critical Facilities

Fixed Site Analysis:

The critical facility analysis for fixed TRI sites revealed that there are no critical facilities that would be impacted by only the 500M HAZMAT risk zone. There are ten critical facilities that would be impacted by the 2500M HAZMAT risk zone, valued at over \$37M. A list of specific critical facilities and their associated risk can be found in **Table A.32** at the end of this section.

Mobile Analysis:

The critical facility analysis for transportation corridors in Wayne County revealed that there are 13 critical facilities located in the 500M Highway mobile HAZMAT buffer areas valued at nearly \$70M, and there are seven critical facilities located in the 500M Railway mobile HAZMAT buffer areas valued at approximately \$6.6M.

Expanding to a 2500M HAZMAT risk zone reveals that there are 14 critical facilities located in the highway mobile HAZMAT buffer areas are vulnerable, valued at \$71.8M. There are 13 critical facilities located in the railway mobile HAZMAT buffer area that are vulnerable, valued at over \$67M. A list of specific critical facilities and their associated risk can be found in **Table A.32** at the end of this section.

In conclusion, a hazardous material incident has the potential to impact many existing and future buildings, critical facilities, and populations in Wayne County. Those areas in a primary buffer are at the highest risk, though all areas carry some vulnerability due to variations in conditions that could alter the impact area (i.e., direction and speed of wind, volume of release, etc). Further, incidents from neighboring counties could also impact the county and participating jurisdictions.

CONCLUSIONS ON HAZARD VULNERABILITY

Table G.32 shows the critical facilities vulnerable to additional hazards analyzed in this section. The table lists those assets that are determined to be exposed to each of the identified hazards (marked with an “X”).

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TABLE G.32: AT-RISK CRITICAL FACILITIES IN WAYNE COUNTY

		ATMOSPHERIC							GEOLOGIC			HYDROLOGIC			OTHER						
FACILITY NAME	FACILITY TYPE	Drought	Hailstorm	Hurricane and Tropical Storm	Lightning	Thunderstorm	Tornado	Winter Storm and Freeze	Earthquake	Landslide – Mod	Landslide- High	Dam and Levee Failure ¹⁹	Flood – 100 yr	Flood – 500 yr	Fixed HAZMAT 500m	Fixed HAZMAT 2,500 meter	Mobile HZMT Roads 500 METER	Mobile HZMT Roads 2,500 meter	Mobile HZMT Rails 500 METER	Mobile HZMT Rails 2,500 meter	Wildfire
Wayne County																					
BUCKATUNNA ELEMENTARY SCHOOL	School	X	X	X	X	X		X	X									X			High
BEAT FOUR ELEMENTARY SCHOOL	School	X	X	X	X	X		X	X								X	X			High
CLARA ELEMENTARY SCHOOL	School	X	X	X	X	X		X	X												Very Low
WAYNE ACADEMY	School	X	X	X	X	X		X	X									X	X	X	Low
WAYNE CO VOCATIONAL COMPLEX	School	X	X	X	X	X	X	X	X							X	X	X		X	Non-burnable
WAYNE COUNTY ALTERNATIVE SCHOOL	School	X	X	X	X	X	X	X	X							X	X	X		X	Non-burnable
Wayne County Civil Defense	Emergency Facility	X	X	X	X	X	X	X	X							X	X	X	X	X	Non-burnable
WAYNE COUNTY HIGH SCHOOL	School	X	X	X	X	X	X	X	X								X	X		X	Low
Wayne County Sheriff	Police Station	X	X	X	X	X	X	X	X							X	X	X	X	X	Non-burnable
Wayne County VFD	Fire Department	X	X	X	X	X	X	X	X							X	X	X	X	X	Non-burnable
WAYNE GENERAL HOSPITAL	Care Facility	X	X	X	X	X		X	X							X	X	X		X	Non-burnable
WAYNESBORO ELEMENTARY SCH	School	X	X	X	X	X	X	X	X								X	X		X	Non-burnable

¹⁹ As noted previously, these facilities could be at risk to dam failure if located in an inundation area. Data was not available to conduct such an analysis. There was no local knowledge of these facilities being at risk to dam failure. As additional data becomes available, more in-depth analysis will be conducted.

FACILITY NAME	FACILITY TYPE	ATMOSPHERIC							GEOLOGIC			HYDROLOGIC			OTHER						
		Drought	Hailstorm	Hurricane and Tropical Storm	Lightning	Thunderstorm	Tornado	Winter Storm and Freeze	Earthquake	Landslide – Mod	Landslide- High	Dam and Levee Failure ¹⁹	Flood – 100 yr	Flood – 500 yr	Fixed HAZMAT 500m	Fixed HAZMAT 2,500 meter	Mobile HZMT Roads 500 METER	Mobile HZMT Roads 2,500 meter	Mobile HZMT Rails 500 METER	Mobile HZMT Rails 2,500 meter	Wildfire
Waynesboro Fire Department	Fire Department	X	X	X	X	X	X	X	X							X	X	X	X	X	Non-burnable
WAYNESBORO MIDDLE SCHOOL	School	X	X	X	X	X		X	X							X	X	X		X	Low
Waynesboro Police Clerk	Police Station	X	X	X	X	X	X	X	X							X	X	X	X	X	Non-burnable
Waynesboro Police Dept	Police Station	X	X	X	X	X	X	X	X							X	X	X	X	X	Non-burnable

G.4 WAYNE COUNTY CAPABILITY ASSESSMENT

This subsection discusses the capability of Wayne County to implement hazard mitigation activities. More information on the purpose and methodology used to conduct the assessment can be found in Section 7: *Capability Assessment*.

G.4.1 Planning and Regulatory Capability

Table G.32 provides a summary of the relevant local plans, ordinances, and programs already in place or under development for Wayne County. A checkmark (✓) indicates that the given item is currently in place and being implemented. An asterisk (*) indicates that the given item is currently being developed for future implementation. Each of these local plans, ordinances, and programs should be considered available mechanisms for incorporating the requirements of the MEMA District 8 Regional Hazard Mitigation Plan.

TABLE G.32: RELEVANT PLANS, ORDINANCES, AND PROGRAMS

Planning Tool/Regulatory Tool	Hazard Mitigation Plan	Comprehensive Land Use Plan	Floodplain Management Plan	Open Space Management Plan (Parks & Rec/Greenway Plan)	Stormwater Management Plan/Ordinance	Natural Resource Protection Plan	Flood Response Plan	Emergency Operations Plan	Continuity of Operations Plan	Evacuation Plan	Disaster Recovery Plan	Capital Improvements Plan	Economic Development Plan	Historic Preservation Plan	Flood Damage Prevention Ordinance	Zoning Ordinance	Subdivision Ordinance	Unified Development Ordinance	Post-Disaster Redevelopment Ordinance	Building Code	Fire Code	National Flood Insurance Program (NFIP)	NFIP Community Rating System
WAYNE COUNTY	✓			✓				✓	✓	✓			✓		✓							✓	
State Line	✓			✓				✓	✓	✓			✓		✓							✓	
Waynesboro	✓	✓		✓	✓			✓	✓	✓		✓	✓		✓	✓	✓		✓	✓	✓	✓	

A more detailed discussion on the county's planning and regulatory capabilities follows.

EMERGENCY MANAGEMENT

Hazard Mitigation Plan

Wayne County has previously adopted a hazard mitigation plan. The Town of State Line and the City of Waynesboro were also included in this plan.

Emergency Operations Plan

Wayne County maintains an emergency operations plan through its Emergency Management Agency. The Town of State Line and the City of Waynesboro are each covered by this plan.

GENERAL PLANNING

Comprehensive Land Use Plan

Wayne County has not adopted a county comprehensive land use plan. However, the City of Waynesboro adopted a city comprehensive plan that was adopted in 1998.

Zoning Ordinance

Wayne County does not have a zoning ordinance in place. However, the City of Waynesboro has a zoning ordinance that was adopted in 1998.

Subdivision Ordinance

Wayne County does not have a subdivision ordinance in place. However, the City of Waynesboro adopted subdivision regulations concurrently with its zoning ordinance in 1998.

Building Codes, Permitting, and Inspections

Wayne County and the City of Waynesboro have both adopted building codes.

FLOODPLAIN MANAGEMENT

Table G.33 provides NFIP policy and claim information for each participating jurisdiction in Wayne County.

TABLE G.33: NFIP POLICY AND CLAIM INFORMATION

Jurisdiction	Date Joined NFIP	Current Effective Map Date	NFIP Policies in Force	Insurance in Force	Closed Claims	Total Payments to Date
WAYNE COUNTY†	8/16/88	7/18/11	44	\$6,960,900	6	\$117,636
State Line	8/19/85	7/18/11(M)	1	\$22,900	1	\$6,924
Waynesboro	8/16/88	7/18/11	32	\$3,136,500	17	\$134,036

†Includes unincorporated areas of county only

(M) – No Elevation Determined, All Zone A, C and X

Source: NFIP Community Status information as of 3/31/13; NFIP claims and policy information as of 5/15/13

Flood Damage Prevention Ordinance

All communities participating in the NFIP are required to adopt a local flood damage prevention ordinance. Wayne County, the Town of State Line, and the City of Waynesboro all participate in the NFIP and have adopted flood damage prevention ordinances.

Open Space Management Plan

Wayne County, the Town of State Line, and the City of Waynesboro all included in the Southern Mississippi Planning and Development District (SMPDD) Regional Open Space Plan that was written in 1973.

G.4.2 Administrative and Technical Capability

Table G.34 provides a summary of the capability assessment results for Wayne County with regard to relevant staff and personnel resources. A checkmark (✓) indicates the presence of a staff member(s) in that jurisdiction with the specified knowledge or skill.

TABLE G.34: RELEVANT STAFF / PERSONNEL RESOURCES

Staff / Personnel Resource	Planners with knowledge of land development/land management practices	Engineers or professionals trained in construction practices related to buildings and/or infrastructure	Planners or engineers with an understanding of natural and/or human-caused hazards	Emergency Manager	Floodplain Manager	Land Surveyors	Scientists familiar with the hazards of the community	Staff with education or expertise to assess the community's vulnerability to hazards	Personnel skilled in GIS and/or Hazus	Resource development staff or grant writers
WAYNE COUNTY		✓	✓	✓	✓	✓	✓	✓	✓	
State Line		✓	✓	✓		✓	✓	✓	✓	
Waynesboro		✓	✓	✓	✓	✓	✓	✓	✓	

Credit for having a floodplain manager was given to those jurisdictions that have a flood damage prevention ordinance, and therefore an appointed floodplain administrator, regardless of whether the appointee was dedicated solely to floodplain management. Credit was given for having a scientist familiar with the hazards of the community if a jurisdiction has a Cooperative Extension Service or Soil and Water Conservation Department. Credit was also given for having staff with education or expertise to assess the community's vulnerability to hazards if a staff member from the jurisdiction was a participant on the existing hazard mitigation plan's planning committee.

G.4.3 Fiscal Capability

Table G.35 provides a summary of the results for Wayne County with regard to relevant fiscal resources. A checkmark (✓) indicates that the given fiscal resource is locally available for hazard mitigation purposes (including match funds for state and federal mitigation grant funds) according to the previous county hazard mitigation plan.

TABLE G.35: RELEVANT FISCAL RESOURCES

Fiscal Tool / Resource	Capital Improvement Programming	Community Development Block Grants (CDBG)	Special Purpose Taxes (or taxing districts)	Gas/Electric Utility Fees	Water/Sewer Fees	Stormwater Utility Fees	Development Impact Fees	General Obligation, Revenue, and/or Special Tax Bonds	Partnering Arrangements or Intergovernmental Agreements
WAYNE COUNTY	✓	✓	✓	✓	✓			✓	✓
State Line	✓	✓	✓	✓	✓			✓	✓
Waynesboro	✓	✓	✓	✓	✓			✓	✓

G.4.4 Political Capability

During the months immediately following a disaster, local public opinion in Wayne County is more likely to shift in support of hazard mitigation efforts.

G.5 WAYNE COUNTY MITIGATION STRATEGY

This subsection provides the blueprint for Wayne County to follow in order to become less vulnerable to its identified hazards. It is based on general consensus of the Regional Hazard Mitigation Council and the findings and conclusions of the capability assessment and risk assessment. Additional Information can be found in Section 8: *Mitigation Strategy* and Section 9: *Mitigation Action Plan*.

G.5.1 Mitigation Goals

Wayne County developed five mitigation goals in coordination with the other participating MEMA District 8 Region jurisdictions. The regional mitigation goals are presented in **Table G.36**.

TABLE G.36: MEMA DISTRICT 8 REGIONAL MITIGATION GOALS

	Goal
Goal #1	Develop a sustainable, comprehensive mitigation program to ensure safer communities.
Goal #2	Reduce or avoid loss of life, injury, and damage to property, the economy, and the environment.
Goal #3	Enhance preparedness and effective response to hazards.

	Goal
Goal #4	Strengthen and improve local mitigation capabilities.
Goal #5	Increase public awareness of hazard mitigation, hazard risk, and protective measures that can be taken to minimize potential loss and damage.

G.5.2 Mitigation Action Plan

The mitigation actions proposed by Wayne County, the Town of State Line, and the City of Waynesboro are listed in the following individual Mitigation Action Plans.

Wayne County Mitigation Action Plan

Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2019 Action Implementation Status
Prevention								
P-1	Identify high risk areas where hazards are most likely to occur.	All	High	N/A	No additional cost	County	Annual review	Action ongoing
P-2	Site-locate vulnerable population on a County-wide map.	Multiple	High	Area Agency on Aging, USDA Rural Dev., COPS, FIRE	Unknown	County EMA	Within 1 year; Upon request	Action ongoing
P-3	Consider adoption of flood damage prevention ordinance in Wayne County.	FL	High	Self-funded	No cost	County, County Floodplain Administrator	Ongoing	Action ongoing. Implemented 2011.
P-4	Consider adoption of subdivision regulations in Wayne County.	TH, FL, HU, TS	Medium	Self-funded	No cost	County	Ongoing	Deferred
P-5	Monitor flood levels of local rivers.	FL	High	HMGP	Unknown	County	Within 5 years	Action ongoing
P-6	Continue to maintain and upgrade drainage facilities within the County.	HU, TS, FL, BH	High	Self-funded	Unknown	County	Within 2 years; Next round of HMGP funding; Annual review	Action ongoing. Some progress implemented- clean out ditches annually.
P-7	Consider adoption of a comprehensive drainage plan.	HU, TS, FL, NH	High	CDBG, Small Muni. Grant, MSDA, USDA Rural Dev.	Unknown	County	Annual review	Deferred. Waynesboro is mapping drainage areas and it will include elevations, cross sections, and flow directions.

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Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2019 Action Implementation Status
P-8	Map the easements and rights-of-way of roadways and drainage ways.	All	Low to Medium	CDBG, Small Muni. Grant, MSDA, USDA Rural Dev.	Unknown	County	Within 5 years	Action ongoing
P-9	Develop a government services continuity plan.	All	Medium	USDA Rural Dev., CDBG, Small Muni. Grant	Unknown	County	Ongoing	Completed September 2019
P-10	Support the development of a shared geographic data system for land use and site planning.	All	Medium to High	Self-funded	No additional cost	County	Within 2 years	Action ongoing
P-11	Develop a comprehensive plan.	All	High	CDBG, MSDA	Unknown	County		Completed. Delete
Property Protection								
PP-1	Promote alternative construction techniques such as the building of "safe rooms" in new construction and when remodeling existing structures.	HU, TS, TO, TH	Medium	Self-funded	No additional cost	County	Within 5 years	Action ongoing
PP-2	Ensure that structures in floodplain areas are elevated.	FL	High	Self-funded	No additional cost	County	Within 3 years	Action ongoing
PP-3	Continue to retrofit public buildings to withstand natural hazards such as hurricanes and flooding.	All	High	HMGP	Unknown	County	Within 2 years; Next round of HMGP funding	Action ongoing
PP-4	Ensure that public buildings are designed and built to hurricane resistant building codes.	HU, TS, TO	High	Self-funded	No additional cost	County	Within 1 year	Action ongoing

Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2019 Action Implementation Status
PP-5	Ensure secure operation of water wells, water tanks and wastewater treatment facilities.	All	High	HMGP, USDA Rural Dev., CDBG, Small Muni. Grant	Unknown	County	Within 2 years; Next round of HMGP funding	Action ongoing
PP-6	Elevation and Acquisition of Flood prone structures	FL	Medium	HMA, MEMA	TBD	County	2024	New
PP-7	Generators and hook-ups for critical facilities	TH, HU, TS, TO	Medium	HMA, MEMA	TBD	County	2024	New
PP-8	Warning sirens throughout planning area	TH, TO	Medium	HMA, MEMA	TBD	County	2024	New
PP-9	Individual saferooms throughout planning area	TO	Medium	HMA, MEMA	\$5,000+	County	2024	New
PP-10	361 Saferooms were needed- location is TBD	TO	Medium	HMA, MEMA	TBD	County	2024	New
PP-11	Elevation of critical facilities, such as pumps, and equipment	FL	Medium	HMA, MEMA	TBD	County	2024	New
PP-12	Floodproofing measures for critical facilities prone to flood	FL	Medium	HMA, MEMA	TBD	County	2024	New
Natural Resource Protection								
NRP-1	Preserve natural wetlands and riparian areas through acquisition of conservation easements.	HU, TS, FL	Medium	Donation	Low or no cost	MS Land Trust, Land Trust for the MS Coastal Plain, County	Within 5 years	Action ongoing
Emergency Services								
ES-1	Encourage participation by staff and elected officials in voluntary or extracurricular activities related to emergency management, disaster preparedness, civil defense, or other hazard mitigation activities.	All	Medium	Self-funded, MEMA	Low or no cost	County EMA	Within 2 years	Action ongoing

Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2019 Action Implementation Status
ES-2	Establish a notification procedure for populations in high risk areas.	All	Medium	Self-funded	No additional cost	County EMA, County SD, County VFDs	Within 2 years	Action ongoing. Waynesboro has reverse call back system in place as of 2018.
ES-3	Survey the existing emergency shelters and study the feasibility of expanding the capacity of shelters and adding safe rooms.	All	High	HMGP	Unknown	County EMA	Within 2 years	Action ongoing
ES-4	Explore potential sites for a new special needs shelter.	HU, TS, FL	High	HMGP	Unknown	County EMA	Within 2 years	Action ongoing
ES-5	Improve disaster communication systems within the County.	All	High	HMGP	Unknown	County EMA	Within 2 years; Next round of HGMP funding	Action ongoing. MSWINN at Fire Department and all use social media.
ES-6	Explore establishment of a County-wide central dispatch system.	All	High	HMGP	Unknown	County EMA		Action completed. Delete
ES-7	Ensure that emergency sirens are in place county-wide.	All	High	HMGP	Unknown	County EMA	Within 2 years; Next round of HGMP funding	Action ongoing
ES-8	Install warning informers in buildings that house vulnerable populations.	All	High	HMGP	Unknown	County EMA	Within 2 years; Next round of HGMP funding	Action ongoing
ES-9	Install Alert FM service at radio station.	All	High	HMGP	Unknown	County EMA	Within 2 years; Next round of HGMP funding	Action completed
ES-10	Upgrade Emergency Broadcast System capabilities.	All	High	HMGP	Unknown	County EMA	Within 2 years; Next round of HGMP funding	Action ongoing
ES-11	Coordinate with neighboring jurisdictions to ensure consistency of evacuation plans.	HU, TS	Medium	Self-funded	No additional cost	County	Within 2 years	Action ongoing

Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2019 Action Implementation Status
ES-12	Enhance identification of evacuation routes through the distribution of MDOT maps.	HU, TS	Medium	Self-funded	No additional cost	County	Within 1 year	Action ongoing
ES-13	Ensure continuity of utility services for public buildings and other critical facilities.	All	High	HMGP	Unknown	County	Within 2 years; Next round of HMGP funding	Action ongoing
ES-14	Host a meeting to review Wayne County Comprehensive Emergency Management Plan.	TT	High	Self-funded	No additional cost	County LEPC, County	Within 2 years; Next round of HMGP funding	Action ongoing
ES-15	Actively search for and identify funding sources for the enhancement of emergency response abilities of Fire and Sheriff's Departments.	TT	Medium to High	DHS, SAFER, COPS, FIRE, Others	Unknown	County	Ongoing	Action ongoing
Structural Projects								
SP-1	Address cross-jurisdictional issues related to response, recovery and mitigation on key projects with overlapping boundaries.	HU, TS, FL, RH	Low to Medium	Self-funded	No additional cost	County	Within 2 years	Action ongoing
Public Education and Awareness								
PEA-1	Explore continuing education programs/ opportunities for staff and elected officials.	FL, TH, HU, TS	Medium	Self-funded, MEMA	Low cost	County	Within 2 years	Action ongoing
PEA-2	Provide education and outreach materials to citizens and visitors.	All	High	Self-funded	No cost	County EMA	Within 1 year	Action ongoing
PEA-3	Encourage the development of Family Disaster Plans.	All	High	Self-funded, COPS, FIRE	Low or no cost	County EMA, County Fire Coordinator	Within 1 year; Annual presentations	Action ongoing
PEA-4	Expand outreach information to property owners regarding retrofitting and flood-proofing techniques through community workshops, brochures, and newspaper articles.	FL; Multiple	High	Self-funded	No additional cost	County EMA	Upon request	Action ongoing

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Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2019 Action Implementation Status
PEA-5	Encourage businesses to develop business continuity or contingency operating plans.	CH	High	Self-funded, Chamber of Comm., SCORE	Low or no cost	County	Within 2 years	Action ongoing
PEA-6	Education and outreach regarding drought and water conservation procedures	All	Medium	Self-funded	Low or no cost	County	2024	New
FL = Flood TH = Thunderstorm HU = Hurricane TS = Tropical Storm TO = Tornado BH = Biological Hazards TT = Transportation and Technological Hazards RH = Roadway Hazards CH = Civil Hazards County EMA = Wayne County Emergency Management Agency County SD = Wayne County Sheriff's Dept. County VFD = Wayne County Volunteer Fire Dept. County LEPC = Wayne County Local Emergency Planning Committee								

Town of State Line Mitigation Action Plan

Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2019 Action Implementation Status
Prevention								
P-1	Identify high risk areas where hazards are most likely to occur.	All	High	N/A	No additional cost	Town	Annual review	Action ongoing
P-2	Site-locate vulnerable population on a County-wide map.	Multiple	High	Area Agency on Aging, USDA Rural Dev., COPS, FIRE	Unknown	County EMA	Within 1 year; Upon request	Action ongoing
P-3	Consider adoption of flood damage prevention ordinance in Wayne County.	FL	High	Self-funded	No additional cost	County, County Floodplain Administrator	Ongoing	Action ongoing. Implemented 2011.
P-4	Consider adoption of subdivision regulations in Wayne County.	TH, FL, HU, TS	Medium	Self-funded	No cost	County	Ongoing	Deferred
P-5	Monitor flood levels of local rivers.	FL	High	HMGP	Unknown	Town	Within 5 years	Action ongoing
P-6	Continue to maintain and upgrade drainage facilities within the County.	HU, TS, FL, BH	High	Self-funded	Unknown	Town	Within 2 years; Next round of HMGP funding; Annual review	Action ongoing. Some progress implemented- clean out ditches annually.
P-7	Consider adoption of a comprehensive drainage plan.	HU, TS, FL, NH	High	CDBG, Small Muni. Grant, MSDA, USDA Rural Dev.	Unknown	Town	Annual review	Deferred. Waynesboro is mapping drainage areas and it will include elevations, cross sections, and flow directions.

Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2019 Action Implementation Status
P-8	Map the easements and rights-of-way of roadways and drainage ways.	All	Low to Medium	CDBG, Small Muni. Grant, MSDA, USDA Rural Dev.	Unknown	Town	Within 5 years	Action ongoing
P-9	Develop a government services continuity plan.	All	Medium	USDA Rural Dev., CDBG, Small Muni. Grant	Unknown	County, Town	Ongoing	Completed September 2019
P-10	Support the development of a shared geographic data system for land use and site planning.	All	Medium to High	Self-funded	No additional cost	Town	Within 2 years	Action ongoing
P-11	Develop a comprehensive plan.	All	High	CDBG, MSDA	Unknown	Town		Completed. Delete
Property Protection								
PP-1	Promote alternative construction techniques such as the building of "safe rooms" in new construction and when remodeling existing structures.	HU, TS, TO, TH	Medium	Self-funded	No additional cost	Town	Within 5 years	Action ongoing
PP-2	Ensure that structures in floodplain areas are elevated.	FL	High	Self-funded	No additional cost	County, Town	Within 3 years	Action ongoing
PP-3	Continue to retrofit public buildings to withstand natural hazards such as hurricanes and flooding.	All	High	HMGP	Unknown	Town	Within 2 years; Next round of HMGP funding	Action ongoing
PP-4	Ensure that public buildings are designed and built to hurricane resistant building codes.	HU, TS, TO	High	Self-funded	No additional cost	Town	Within 1 year	Action ongoing

Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2019 Action Implementation Status
PP-5	Ensure secure operation of water wells, water tanks and wastewater treatment facilities.	All	High	HMGP, USDA Rural Dev., CDBG, Small Muni. Grant	Unknown	County, Town	Within 2 years; Next round of HMGP funding	Action ongoing
PP-6	Elevation and Acquisition of Flood prone structures	FL	Medium	HMA, MEMA	TBD	County	2024	New
PP-7	Generators and hook-ups for critical facilities	TH, HU, TS, TO	Medium	HMA, MEMA	TBD	County	2024	New
PP-8	Warning sirens throughout planning area	TH, TO	Medium	HMA, MEMA	TBD	County	2024	New
PP-9	Individual saferooms throughout planning area	TO	Medium	HMA, MEMA	\$5,000+	County	2024	New
PP-10	361 Saferooms were needed- location is TBD	TO	Medium	HMA, MEMA	TBD	County	2024	New
PP-11	Elevation of critical facilities, such as pumps, and equipment	FL	Medium	HMA, MEMA	TBD	County	2024	New
PP-12	Floodproofing measures for critical facilities prone to flood	FL	Medium	HMA, MEMA	TBD	County	2024	New
Natural Resource Protection								
NRP-1	Preserve natural wetlands and riparian areas through acquisition of conservation easements.	HU, TS, FL	Medium	Donation	Low or no cost	MS Land Trust, Land Trust for the MS Coastal Plain, Town	Within 5 years	Action ongoing
Emergency Services								
ES-1	Encourage participation by staff and elected officials in voluntary or extracurricular activities related to emergency management, disaster preparedness, civil defense, or other hazard mitigation activities.	All	Medium	Self-funded, MEMA	Low or no cost	County EMA	Within 2 years	Action ongoing

Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2019 Action Implementation Status
ES-2	Establish a notification procedure for populations in high risk areas.	All	Medium	Self-funded	No additional cost	County EMA, County SD, County VFDs	Within 2 years	Action ongoing. Waynesboro has reverse call back system in place as of 2018.
ES-3	Survey the existing emergency shelters and study the feasibility of expanding the capacity of shelters and adding safe rooms.	All	High	HMGP	Unknown	County EMA	Within 2 years	Action ongoing
ES-4	Explore potential sites for a new special needs shelter.	HU, TS, FL	High	HMGP	Unknown	County EMA	Within 2 years	Action ongoing
ES-5	Improve disaster communication systems within the County.	All	High	HMGP	Unknown	County EMA	Within 2 years; Next round of HGMP funding	Action ongoing. MSWINN at Fire Department and all use social media.
ES-6	Explore establishment of a County-wide central dispatch system.	All	High	HMGP	Unknown	County EMA		Action completed. Delete
ES-7	Ensure that emergency sirens are in place county-wide.	All	High	HMGP	Unknown	County EMA	Within 2 years; Next round of HGMP funding	Action ongoing
ES-8	Install warning informers in buildings that house vulnerable populations.	All	High	HMGP	Unknown	County EMA	Within 2 years; Next round of HGMP funding	Action ongoing
ES-9	Install Alert FM service at radio station.	All	High	HMGP	Unknown	County EMA	Within 2 years; Next round of HGMP funding	Action completed
ES-10	Upgrade Emergency Broadcast System capabilities.	All	High	HMGP	Unknown	County EMA	Within 2 years; Next round of HGMP funding	Action ongoing
ES-11	Coordinate with neighboring jurisdictions to ensure consistency of evacuation plans.	HU, TS	Medium	Self-funded	No additional cost	Town	Within 2 years	Action ongoing

Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2019 Action Implementation Status
ES-12	Enhance identification of evacuation routes through the distribution of MDOT maps.	HU, TS	Medium	Self-funded	No additional cost	Town	Within 1 year	Action ongoing
ES-13	Ensure continuity of utility services for public buildings and other critical facilities.	All	High	HMGP	Unknown	County, Town	Within 2 years; Next round of HMGP funding	Action ongoing
ES-14	Host a meeting to review Wayne County Comprehensive Emergency Management Plan.	TT	High	Self-funded	No additional cost	County LEPC, County, Town	Within 2 years; Next round of HMGP funding	Action ongoing
ES-15	Actively search for and identify funding sources for the enhancement of emergency response abilities of Fire and Sheriff's Departments.	TT	Medium to High	DHS, SAFER, COPS, FIRE, Others	Unknown	County, Town	Ongoing	Action ongoing
Structural Projects								
SP-1	Address cross-jurisdictional issues related to response, recovery and mitigation on key projects with overlapping boundaries.	HU, TS, FL, RH	Low to Medium	Self-funded	No additional cost	County, Town	Within 2 years	Action ongoing
Public Education and Awareness								
PEA-1	Explore continuing education programs/ opportunities for staff and elected officials.	FL, TH, HU, TS	Medium	Self-funded, MEMA	Low cost	Town	Within 2 years	Action ongoing
PEA-2	Provide education and outreach materials to citizens and visitors.	All	High	Self-funded	No cost	County EMA	Within 1 year	Action ongoing
PEA-3	Encourage the development of Family Disaster Plans.	All	High	Self-funded, COPS, FIRE	Low or no cost	County EMA, County Fire Coordinator	Within 1 year; Annual presentations	Action ongoing
PEA-4	Expand outreach information to property owners regarding retrofitting and flood-proofing techniques through community workshops, brochures, and newspaper articles.	FL; Multiple	High	Self-funded	No additional cost	County EMA	Upon request	Action ongoing

ANNEX G: WAYNE COUNTY

Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2019 Action Implementation Status
PEA-5	Encourage businesses to develop business continuity or contingency operating plans.	CH	High	Self-funded, Chamber of Comm., SCORE	Low or no cost	Town	Within 2 years	Action ongoing
PEA-6	Education and outreach regarding drought and water conservation procedures	All	Medium	Self-funded	Low or no cost	County	2024	New
FL = Flood TH = Thunderstorm HU = Hurricane TS = Tropical Storm TO = Tornado BH = Biological Hazards TT = Transportation and Technological Hazards RH = Roadway Hazards CH = Civil Hazards County EMA = Wayne County Emergency Management Agency County SD = Wayne County Sheriff's Dept. County VFD = Wayne County Volunteer Fire Dept. County LEPC = Wayne County Local Emergency Planning Committee								

City of Waynesboro Mitigation Action Plan

Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2019 Action Implementation Status
Prevention								
P-1	Identify high risk areas where hazards are most likely to occur.	All	High		No additional cost	City	Annual review	Action ongoing
P-2	Site-locate vulnerable population on a County-wide map.	Multiple	High	Area Agency on Aging, USDA Rural Dev., COPS, FIRE	Unknown	County EMA	Within 1 year; Upon request	Action ongoing
P-3	Strictly enforce the flood damage prevention ordinance.	FL	High	Self-funded	No additional cost	City Floodplain Administrator	Ongoing	Action ongoing. Implemented 2011.
P-4	Strictly enforce subdivision regulations concerning developments in flood hazard areas.	TH, FL, HU, TS	Medium	Self-funded	No additional cost	City	Ongoing	Deferred
P-5	Monitor flood levels of local rivers.	FL	High	HMGP	Unknown	City	Within 5 years	Action ongoing
P-6	Continue to maintain and upgrade drainage facilities within the County.	HU, TS, FL, BH	High	Self-funded	Unknown	City	Within 2 years; Next round of HMGP funding; Annual review	Action ongoing. Some progress implemented- clean out ditches annually.
P-7	Consider adoption of a comprehensive drainage plan.	HU, TS, FL, NH	High	CDBG, Small Muni. Grant, MSDA, USDA Rural Dev.	Unknown	City	Annual review	Deferred. Waynesboro is mapping drainage areas and it will include elevations, cross sections, and flow directions.

Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2019 Action Implementation Status
P-8	Map the easements and rights-of-way of roadways and drainage ways.	All	Low to Medium	CDBG, Small Muni. Grant, MSDA, USDA Rural Dev.	Unknown	City	Within 5 years	Action ongoing
P-9	Develop a government services continuity plan.	All	Medium	USDA Rural Dev., CDBG, Small Muni. Grant	Unknown	County, City	Ongoing	Completed September 2019
P-10	Support the development of a shared geographic data system for land use and site planning.	All	Medium to High	Self-funded	No additional cost	City	Within 2 years	Action ongoing
P-11	Develop a comprehensive plan.	All	High	CDBG, MSDA	Unknown	City		Completed. Delete
P-12	Develop City-wide H&H study	FL	High	Self-Funded	Unknown	City	2024	New
Property Protection								
PP-1	Promote alternative construction techniques such as the building of "safe rooms" in new construction and when remodeling existing structures.	HU, TS, TO, TH	Medium	Self-funded	No additional cost	City	Within 5 years	Action ongoing
PP-2	Ensure that structures in floodplain areas are elevated.	FL	High	Self-funded	No additional cost	County, City	Within 3 years	Action ongoing
PP-3	Continue to retrofit public buildings to withstand natural hazards such as hurricanes and flooding.	All	High	HMGP	Unknown	City	Within 2 years; Next round of HMGP funding	Action ongoing
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PEA-4	Expand outreach information to property owners regarding retrofitting and flood-proofing techniques through community workshops, brochures, and newspaper articles.	FL; Multiple	High	Self-funded	No additional cost	County EMA	Upon request	Action ongoing

ANNEX G: WAYNE COUNTY

Action #	Description	Hazard(s) Addressed	Relative Priority	Funding Sources	Estimated Cost	Responsible Party	Target Completion Date	2019 Action Implementation Status
PEA-5	Encourage businesses to develop business continuity or contingency operating plans.	CH	High	Self-funded, Chamber of Comm., SCORE	Low or no cost	City	Within 2 years	Action ongoing
PEA-6	Education and outreach regarding drought and water conservation procedures	All	Medium	Self-funded	Low or no cost	County	2024	New
FL = Flood TH = Thunderstorm HU = Hurricane TS = Tropical Storm TO = Tornado BH = Biological Hazards TT = Transportation and Technological Hazards RH = Roadway Hazards CH = Civil Hazards County EMA = Wayne County Emergency Management Agency County SD = Wayne County Sheriff's Dept. County VFD = Wayne County Volunteer Fire Dept. County LEPC = Wayne County Local Emergency Planning Committee								

Appendix A: Adoption Resolutions



FEMA

March 10, 2020

Ms. Jana Henderson, CFM
State Hazard Mitigation Officer
Mississippi Emergency Management Agency
Post Office Box 5644
Pearl, Mississippi 39208

Attention: Mr. Billy Patrick, Bureau Director, Mitigation Plans

Reference: Multi-jurisdictional Hazard Mitigation Plan: MEMA District 8 Regional

Dear Ms. Henderson:

This is to confirm that we have completed a Federal review of the draft MEMA District 8 Regional Multi-jurisdictional Hazard Mitigation Plan for compliance with the Federal hazard mitigation planning requirements contained in 44 CFR 201.6(b)-(d). We have determined that the MEMA District 8 Regional Multi-jurisdictional Hazard Mitigation Plan is now compliant with Federal requirements, subject to formal community adoption.

In order for our office to issue formal approval of the plan, the MEMA District 8 Regional must submit adoption documentation. Upon submittal of a copy of documentation of the adoption resolution(s) to our office, we will issue formal approval of the MEMA District 8 Regional Multi-jurisdictional Hazard Mitigation Plan. Please have MEMA District 8 Regional submit a final copy of their Plan, without draft notations and track changes.

For further information, please do not hesitate to contact Cathy Strickland, of the Hazard Mitigation Assistance Branch, at (770) 220-5328 or Marlene Dawkins, of my staff, at (770) 220-8715.

Sincerely,

A handwritten signature in blue ink that reads "Kristen M. Martinenza".

Kristen M. Martinenza, P.E., CFM
Branch Chief
Risk Analysis
FEMA Region IV



FEMA

April 13, 2020

Ms. Jana Henderson, CFM
State Hazard Mitigation Officer
Mississippi Emergency Management Agency
Post Office Box 5644
Pearl, Mississippi 39208

Attention: Mr. Billy Patrick, Bureau Director, Mitigation Plans,

Reference: Multi-Jurisdictional Hazard Mitigation Plan: MEMA District #8

Dear Ms. Henderson:

We are pleased to inform you that the MEMA District #8 Multi-Jurisdictional Hazard Mitigation Plan is in compliance with the Federal hazard mitigation planning requirements resulting from the Disaster Mitigation Act of 2000, as contained in 44 CFR 201.6. The plan is approved for a period of five (5) years, to April 12, 2025.

This plan approval extends to the following participating jurisdiction that provided a copy of their resolution adopting the plan:

- City of Collins

The approved participating jurisdiction is hereby an eligible applicant through the State for the following mitigation grant programs administered by the Federal Emergency Management Agency (FEMA):

- Hazard Mitigation Grant Program (HMGP)
- Pre-Disaster Mitigation (PDM)
- Flood Mitigation Assistance (FMA)

National Flood Insurance Program (NFIP) participation is required for some programs.

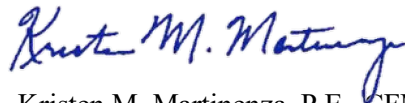
We commend the participants of the MEMA District #8 Multi-Jurisdictional Hazard Mitigation Plan for development of a solid, workable plan that will guide hazard mitigation activities over the coming years. Please note, all requests for funding will be evaluated individually according to the specific eligibility and other requirements of the particular program under which the application is submitted. For example, a specific mitigation activity or project identified in the plan may not meet the eligibility requirements for FEMA funding, and even eligible mitigation activities are not automatically approved for FEMA funding under any of the aforementioned programs.

We strongly encourage each community to perform an annual review and assessment of the effectiveness of their hazard mitigation plan; however, a formal plan update is required at least every five (5) years. We also encourage each community to conduct a plan update process within one (1) year of being included within a Presidential Disaster Declaration or of the adoption of major modifications to their local

Comprehensive Land Use Plan or other plans that affect hazard mitigation or land use and development. When you prepare a comprehensive plan update, it must be resubmitted through the State as a “plan update” and is subject to a formal review and approval process by our office. If the plan is not updated prior to the required five (5) year update, please ensure that the Draft update is submitted at least six (6) months prior to expiration of this plan approval.

The State and the participants of the MEMA District #8 Multi-Jurisdictional Hazard Mitigation Plan should be commended for their close coordination and communications with our office in the review and subsequent approval of the plan. If you or MEMA District #8 have any questions or need any additional information please do not hesitate to contact Cathy Strickland, of the Hazard Mitigation Assistance Branch, at (770) 220-5328 or Marlene Dawkins, of my staff, at (770) 220-8715.

Sincerely,



Kristen M. Martinenza, P.E., CFM
Branch Chief
Risk Analysis
FEMA Region IV

Congratulations on the approval of your hazard mitigation plan! If you wish to publicize this accomplishment, below is a template news release that you can tailor by filling in the red information in the brackets. You can send this release to local media, include the information in a community newsletter or website, and/or distribute as you would like. If you have questions about this release or would like assistance in sending it to news media, please contact Danon J. Lucas Public Affairs Mitigation Specialist for FEMA Region IV, at 770-220-5292 or Danon.Lucas@fema.dhs.gov

Date:

Media Contact:

News Release

[Insert entity name, i.e. Jurisdiction, County, Planning and Development District, etc.] Mitigation Plan Will Help [list entity, communities that plan covers, etc.] Better Prepare for Natural Disasters

[CITY, STATE]—[List entity, communities that plan covers, etc.] is better prepared for disasters with the recent approval of [its/their] local hazard mitigation plan, which is a long-term strategy to reduce the community's vulnerability to natural disasters. [Jurisdictions that adopted this plan include list jurisdictions if this sentence is applicable].

The plan identifies hazards and potential hazards in [list entity, communities that plan covers, etc.], and it creates a framework to help community officials make decisions that may ultimately protect lives and property.

The plan also outlines a strategy for implementing mitigation projects in [list entity, communities that plan covers, etc.]. Through projects such as [insert examples], [list entity, communities that plan covers, etc.] is taking proactive steps to lessen the impact of future disasters and the costly expenses associated with them.

History shows that the physical, financial and emotional losses caused by disasters can be reduced significantly through hazard mitigation planning. The planning process encourages communities to integrate mitigation with day-to-day decision making regarding land-use planning, floodplain management, site design and other activities.

The Federal Emergency Management Agency (FEMA) reviews and approves state, tribal and local hazard mitigation plans, which are required as a condition for states and communities to receive certain types of disaster assistance, including funding for mitigation projects. State mitigation plans must be approved every five years, and local and tribal mitigation plans must be approved at least once every five years.

###

The *Local Mitigation Plan Review Tool* demonstrates how the Local Mitigation Plan meets the regulation in 44 CFR §201.6 and offers States and FEMA Mitigation Planners an opportunity to provide feedback to the community.

- The [Regulation Checklist](#) provides a summary of FEMA's evaluation of whether the Plan has addressed all requirements.
- The [Plan Assessment](#) identifies the plan's strengths as well as documents areas for future improvement.
- The [Multi-jurisdiction Summary Sheet](#) is an optional worksheet that can be used to document how each jurisdiction met the requirements of the each Element of the Plan (Planning Process; Hazard Identification and Risk Assessment; Mitigation Strategy; Plan Review, Evaluation, and Implementation; and Plan Adoption).

The FEMA Mitigation Planner must reference this *Local Mitigation Plan Review Guide* when completing the *Local Mitigation Plan Review Tool*.

Jurisdiction: MEMA District 8	Title of Plan: MEMA District 8 Hazard Mitigation Plan	Date of Plan:
Local Point of Contact:	Address:	
Title:		
Agency:		
Phone Number:	E-Mail:	
State Reviewer: Marlene Dawkins	Title: Hazard Mitigation Planner	Date Completed: 12/5/2019
FEMA Reviewer: Marlene Dawkins Edwardine S. Marrone	Title: Hazard Mitigation Planner HM Program Analyst, FIT-NC	Date: 1/6/2020 3/9/2020
Date Received in FEMA Region 4	11/22/2019	
Plan Not Approved		
Plan Approvable Pending Adoption	3/9/2020	
Plan Approved	4/13/2020	

SECTION 1:
REGULATION CHECKLIST

INSTRUCTIONS: The Regulation Checklist must be completed by FEMA. The purpose of the Checklist is to identify the location of relevant or applicable content in the Plan by Element/sub-element and to determine if each requirement has been 'Met' or 'Not Met.' The 'Required Revisions' summary at the bottom of each Element must be completed by FEMA to provide a clear explanation of the revisions that are required for plan approval. Required revisions must be explained for each plan sub-element that is 'Not Met.' Sub-elements should be referenced in each summary by using the appropriate numbers (A1, B3, etc.), where applicable. Requirements for each Element and sub-element are described in detail in this *Plan Review Guide* in Section 4, Regulation Checklist.

1. REGULATION CHECKLIST Regulation (44 CFR 201.6 Local Mitigation Plans)	Location in Plan (section and/or page number)	Met	Not Met
<u>ELEMENT A. PLANNING PROCESS</u>			
A1. Does the Plan document the planning process, including how it was prepared and who was involved in the process for each jurisdiction? (Requirement §201.6(c)(1))	Section 2 Pgs 1-7	X	
A2. Does the Plan document an opportunity for neighboring communities, local and regional agencies involved in hazard mitigation activities, agencies that have the authority to regulate development as well as other interests to be involved in the planning process? (Requirement §201.6(b)(2))	Section 2 Pgs 3-7	X	
A3. Does the Plan document how the public was involved in the planning process during the drafting stage? (Requirement §201.6(b)(1))	Section 2 Pgs 8-9	X	
A4. Does the Plan describe the review and incorporation of existing plans, studies, reports, and technical information? (Requirement §201.6(b)(3))	Section 7.3-7.3.4	X	
A5. Is there discussion of how the community(ies) will continue public participation in the plan maintenance process? (Requirement §201.6(c)(4)(iii))	Section 10-10.3	X	
A6. Is there a description of the method and schedule for keeping the plan current (monitoring, evaluating and updating the mitigation plan within a 5-year cycle)? (Requirement §201.6(c)(4)(i))	Section 10-10.3	X	
<u>ELEMENT A: REQUIRED REVISIONS</u>			
Element A1			
<u>Requirement</u>			
c. Documentation of how the plan was prepared must include the schedule or timeframe and activities that made up the plan's development as well as who was involved. The plan must identify who represented each jurisdiction. The Plan must provide, at a minimum, the jurisdiction represented and the person's position or title and agency within the jurisdiction.			
<u>Required Revision</u>			

The plan must include who represented Cities of Laurel and Ellisville and Towns of Sandersville and Soso Including position or title and agency

Required Revision

The plan must include who represented Cities of Laurel and Ellisville and Towns of Sandersville and Soso Including position or title and agency and how participation occurred. Corrected

Element A2

Requirement

The plan must identify all stakeholders involved or given an opportunity to be involved in the planning process. At a minimum, stakeholders must include:

- 1)Local and regional agencies involved in hazard mitigation activities;
- 2)Agencies that have the authority to regulate development; and
- 3)Neighboring communities.

Required Revision

The plan stated, each of the seven County Emergency Management leads used a list for reference as they invited stakeholders from their counties to participate in the planning process. There is not an

Appendix D in the plan and list of invitees was not included. Correct the plan to for consistency and provided list of invitees and **supporting documentation** of the planning process.

Required Revision

The plan stated, each of the seven County Emergency Management leads used a list for reference as they invited stakeholders from their counties to participate in the planning process. There is not an Appendix D in the plan and list of invitees was not included. Correct the plan to for consistency and provided list of invitees and supporting documentation of the planning process. Additionally, it is highly recommended that the document be reviewed for correctness and completeness prior to submission for formal review by MEMA and FEMA. Hattiesburg was called as a town and/or city in areas of the plan. Changed town to city for Hattiesburg throughout Forrest County Annex. Appendix D referenced was removed.

Element A3

The participating jurisdictions will hold a public meetings prior to plan approval.

This requirement cannot be scored as met until the public meeting prior to plan approval has occurred.

Required Revision

Document that the public was provided an opportunity to comment on the Plan *prior to the approval*.

For additional information, please see the "Local Mitigation Plan Review Guide", Element A: Planning Process; dated October 1, 2011, Pages 14-17 and the Local Mitigation Handbook dated March 2013, Task 2.

The plan has been under public comment period since November 2019- with comment periods varying in time. A draft copy of the plan was made available for public comment.

We are gathering public comment documentation has jurisdictions complete this element.

1. REGULATION CHECKLIST Regulation (44 CFR 201.6 Local Mitigation Plans)		Location in Plan (section and/or page number)	Met	Not Met
<u>ELEMENT B. HAZARD IDENTIFICATION AND RISK ASSESSMENT</u>				
B1. Does the Plan include a description of the type, location, and extent of all natural hazards that can affect each jurisdiction(s)? (Requirement §201.6(c)(2)(i))		Section 4.3-4.5 Annexes A-G Sections 2.1-2.14	X	
B2. Does the Plan include information on previous occurrences of hazard events and on the probability of future hazard events for each jurisdiction? (Requirement §201.6(c)(2)(i))		Section 4.3-4.5 Section 5.1-5.17 Annexes A-G Sections 2.1-2.14	X	
B3. Is there a description of each identified hazard's impact on the community as well as an overall summary of the community's vulnerability for each jurisdiction? (Requirement §201.6(c)(2)(ii))		Section 6.5-6.6 Annexes A-G Sections 3-3.3	X	
B4. Does the Plan address NFIP insured structures within the jurisdiction that have been repetitively damaged by floods? (Requirement §201.6(c)(2)(ii))		Section 5.3.3 Annexes A-G Section 2.1	X	
<u>ELEMENT B: REQUIRED REVISIONS</u>				
<u>Element B1</u>				
Dam Failure				
Page G11 stated that during the last plan update, the Mississippi Division of Environmental Quality, recognized one high hazard dam in Wayne County. ¹ However on Page G12 stated that per the updated information provided by the Mississippi Division of Environmental Quality, there are no high hazard dams within Wayne County.				
<u>Required Revision</u>				
Update information on dams in Wayne County				
Drought				
Table of Historic Drought Occurrences was not updated since 2013				
<u>Required Revision</u>				
Update all Tables of Historic Drought Occurrences from 2013 to 2019 throughout the plan. Table G.8 has been amended to reflect changes.				

1. REGULATION CHECKLIST Regulation (44 CFR 201.6 Local Mitigation Plans)	Location in Plan (section and/or page number)	Met	Not Met
<u>ELEMENT C. MITIGATION STRATEGY</u>			
C1. Does the plan document each jurisdiction's existing authorities, policies, programs and resources and its ability to expand on and improve these existing policies and programs? (Requirement §201.6(c)(3))	Section 7.3.1 Annexes A-G Section 4.1	X	
C2. Does the Plan address each jurisdiction's participation in the NFIP and continued compliance with NFIP requirements, as appropriate? (Requirement §201.6(c)(3)(ii))	Section 5.3.3 Annexes A-G Section 4.1	X	
C3. Does the Plan include goals to reduce/avoid long-term vulnerabilities to the identified hazards? (Requirement §201.6(c)(3)(i))	Section 8.2 Annexes A-G Section 5.1	X	
C4. Does the Plan identify and analyze a comprehensive range of specific mitigation actions and projects for each jurisdiction being considered to reduce the effects of hazards, with emphasis on new and existing buildings and infrastructure? (Requirement §201.6(c)(3)(ii))	Section 9.2 Annexes A-G Section 5.2	X	
C5. Does the Plan contain an action plan that describes how the actions identified will be prioritized (including cost benefit review), implemented, and administered by each jurisdiction? (Requirement §201.6(c)(3)(iv)); (Requirement §201.6(c)(3)(iii))	Section 9.2 Annexes A-G Section 5.2	X	
C6. Does the Plan describe a process by which local governments will integrate the requirements of the mitigation plan into other planning mechanisms, such as comprehensive or capital improvement plans, when appropriate? (Requirement §201.6(c)(4)(ii))	Section 7.3.1 Annexes A-G Section 4.1-5.2	X	
<u>ELEMENT C: REQUIRED REVISIONS</u>			
<u>Element C2</u>			
Plan stated on page B.67 that Hattiesburg, 280053B, did not participate in the NFIP. Corrected			
Plan stated that Town of Sandersville, 280404 does not participate in the NFIP Corrected			
<u>Required Revision</u>			
Correct and explain notation on Table B.33 states that the Town of Sandersville does not participate in the NFIP. Corrected			
Correct and explain notation that the Town of Hattiesburg does not participate in the NFIP.			
Corrected also updated Section 5.3.5, Table 5.6 Updated			
<u>Element C3</u>			
Jones County mitigation action was stated as "Flood Elevation"			
<u>Required Revision</u>			
Jones County mitigation action related to "Flood Elevation" needs to be clarified. Pg. D94 updated action to include repetitive and severe repetitive loss structures.			

Element C5

The plan states that each jurisdiction assigns prioritization scale of mitigation actions

Required Revision

Clarify mitigation actions prioritization per jurisdiction: High, medium, moderate, and low.

Updates have been made to define prioritization. See page 8-3; edits are highlighted with a comment.

1. REGULATION CHECKLIST Regulation (44 CFR 201.6 Local Mitigation Plans)		Location in Plan (section and/or page number)	Met	Not Met
<u>ELEMENT D. PLAN REVIEW, EVALUATION, AND IMPLEMENTATION</u> (applicable to plan updates only)				
D1. Was the plan revised to reflect changes in development? (Requirement §201.6(d)(3))	Section 9 Annexes A-G Sections 5- 5.1	X		
D2. Was the plan revised to reflect progress in local mitigation efforts? (Requirement §201.6(d)(3))	Section 9 Annexes A-G Section 5.2	X		
D3. Was the plan revised to reflect changes in priorities? (Requirement §201.6(d)(3))	Section 9 Annexes A-G Section 5.2	X		
<u>ELEMENT D: REQUIRED REVISIONS</u>				
<u>ELEMENT E. PLAN ADOPTION</u>				
E1. Does the Plan include documentation that the plan has been formally adopted by the governing body of the jurisdiction requesting approval? (Requirement §201.6(c)(5))	Appendix will be added upon plan adoption		X	
E2. For multi-jurisdictional plans, has each jurisdiction requesting approval of the plan documented formal plan adoption? (Requirement §201.6(c)(5))	Request to be made upon receiving APA Status		X	
<u>ELEMENT E: REQUIRED REVISIONS</u> Add Required Revisions.				
<u>ELEMENT F. ADDITIONAL STATE REQUIREMENTS</u> (optional for State reviewers only; not to be completed by FEMA)				
F1.				
F2.				
<u>ELEMENT F: REQUIRED REVISION</u>				

SECTION 2: PLAN ASSESSMENT

INSTRUCTIONS: The purpose of the Plan Assessment is to offer the local community more comprehensive feedback to the community on the quality and utility of the plan in a narrative format. The audience for the Plan Assessment is not only the plan developer/local community planner, but also elected officials, local departments and agencies, and others involved in implementing the Local Mitigation Plan. The Plan Assessment must be completed by FEMA. The Assessment is an opportunity for FEMA to provide feedback and information to the community on: 1) suggested improvements to the Plan; 2) specific sections in the Plan where the community has gone above and beyond minimum requirements; 3) recommendations for plan implementation; and 4) ongoing partnership(s) and information on other FEMA programs, specifically RiskMAP and Hazard Mitigation Assistance programs. The Plan Assessment is divided into two sections:

1. Plan Strengths and Opportunities for Improvement
2. Resources for Implementing Your Approved Plan

Plan Strengths and Opportunities for Improvement is organized according to the plan Elements listed in the Regulation Checklist. Each Element includes a series of italicized bulleted items that are suggested topics for consideration while evaluating plans, but it is not intended to be a comprehensive list. FEMA Mitigation Planners are not required to answer each bullet item, and should use them as a guide to paraphrase their own written assessment (2-3 sentences) of each Element.

The Plan Assessment must not reiterate the required revisions from the Regulation Checklist or be regulatory in nature, and should be open-ended and to provide the community with suggestions for improvements or recommended revisions. The recommended revisions are suggestions for improvement and are not required to be made for the Plan to meet Federal regulatory requirements. The italicized text should be deleted once FEMA has added comments regarding strengths of the plan and potential improvements for future plan revisions. It is recommended that the Plan Assessment be a short synopsis of the overall strengths and weaknesses of the Plan (no longer than two pages), rather than a complete recap section by section.

Resources for Implementing Your Approved Plan provides a place for FEMA to offer information, data sources and general suggestions on the overall plan implementation and maintenance process. Information on other possible sources of assistance including, but not limited to, existing publications, grant funding or training opportunities, can be provided. States may add state and local resources, if available.

A. Plan Strengths and Opportunities for Improvement

This section provides a discussion of the strengths of the plan document and identifies areas where these could be improved beyond minimum requirements.

Element A: Planning Process

Strengths

Mitigation Council consists of members from each participating jurisdiction with either a responsibility for hazard mitigation or a vested interest in the communities' disaster resilience. Several avenues of communication, sharing and data gathering were used, such as; CMPDD Mitigation Planning website, attending the public meetings, completing survey forms, reviewing and commenting on the draft document, and news articles.

The MEMA District 8 classification groups of: **Flood Hazards** (Flood, Erosion, Dam Failure, Winter Storm); **Fire-related hazards** (Drought/Heat Wave, Wildfire); **Geologic hazards** (Earthquake, Landslide, Expansive Soils); **Wind Hazards** (Hurricane and Tropical Storm; Thunderstorm, including Wind, Hail, and Lighting; Tornado); and **Other Hazards** (HAZMAT, Pipeline Incident, Meth Lab Incident, Wildfire, and Cyber Terrorism).

Opportunities for Improvement

The planning process appears to have been conducted swiftly. The void of supporting documentation such as sign in sheets, notices of meetings means more details much be shared in the plan. Additionally, it is highly recommended that the document be reviewed for correctness and completeness prior to submission for formal review by MEMA and FEMA.

Element B: Hazard Identification and Risk Assessment

Strengths

The HIRA provided:

- Clear, consistent, and systematic review of each county and local jurisdiction's assessment. Which Included meth lab incidents and other information not required.
- Framework for quick reference of information when needed by all user to include citizens
- A user-friendly Priority Risk Index provides a comprehensive comparative matrix from county to county.
- Vulnerability assessment included HAZUS analysis and other strong practices.

Element C: Mitigation Strategy

Strengths

The MEMA District 8 Regional Hazard Mitigation Plan update provided current and relevant information for each jurisdiction facilitating changes to jurisdictional mitigation actions. For example, new actions such as focusing on property acquisition was added for some counties and increased outreach to citizens and training for staff was re-enforced for others.

Throughout the regional plan, there was evidence of the Mitigation Council cohesive review of the plan's elements. The goals were highlighted by the completion of and accomplishments of goals and changes in prioritization of actions due to recent conditions. The plan is, therefore, illustrating a telling document with intent of maintaining the hazard mitigation plan as a living document. The Plan Maintenance Section is consistent with that goal. The use of various tools to get updated information relative to hazards, development, planning, and mitigation action statuses was illustrated.

Opportunities for Improvement

Because the mitigation actions come out of each county's vulnerability discussions, it is recommended that additional information and input from the participants be included in the plan. While some actions can only be considered during the planning process, insights into each county's need can drive FEMA conversations and mitigation projects.

In the Jones County mitigation action, a mitigation action was listed as "Flood Elevation." This statement needs to be clarified.

Element D: Plan Update, Evaluation, and Implementation (Plan Updates Only)

Strengths

The plan update cycle of the MEMA District #8 HMP included Forrest County throughout the elements and documented the progress made by all counties.

B. Resources for Implementing Your Approved Plan

This section provides examples of possible resources plan implementation.

Ideas may be offered on moving the mitigation plan forward and continuing the relationship with key mitigation stakeholders such as the following:

- What FEMA assistance (funding) programs are available (for example, Hazard Mitigation Assistance (HMA)) to the jurisdiction(s) to assist with implementing the mitigation actions?
- What other Federal programs (National Flood Insurance Program (NFIP), Community Rating System (CRS), Risk MAP, etc.) may provide assistance for mitigation activities?
- What publications, technical guidance or other resources are available to the jurisdiction(s) relevant to the identified mitigation actions?
- Are there upcoming trainings/workshops (Benefit-Cost Analysis (BCA), HMA, etc.) to assist the jurisdictions(s)?
- What mitigation actions can be funded by other Federal agencies (for example, U.S. Forest Service, National Oceanic and Atmospheric Administration (NOAA), Environmental Protection Agency (EPA) Smart Growth, Housing and Urban Development (HUD) Sustainable Communities, etc.) and/or state and local agencies?

FEMA Mitigation grants are available to eligible applicants. Search [grants.gov](https://www.grants.gov) for additional resources for implementing mitigation actions.

Mitigation Planning Toolkit

This is an extensive web-based tool to assist States, Local, and Tribal Communities involved in Hazard Mitigation Plan Development and Updates. The content will help guide the direction of plan development and required updates.

<http://www.fema.gov/library/viewRecord.do?id=5580>

Local Mitigation Planning Handbook

This Handbook provides guidance to local governments on developing or updating hazard mitigation plans to meet the requirements under the Code of Federal Regulations (CFR) Title 44 – Emergency Management and Assistance §201.6.

Use the Local Plan Guide and Handbook in tandem to understand technical requirements.

<http://www.fema.gov/library/viewRecord.do?fromSearch=fromsearch&id=7209>

Integrating Mitigation Strategies with Local Planning

This resource provides practical guidance on how to incorporate risk reduction strategies into existing local plans, policies, codes, and programs that guide community development or redevelopment patterns.

<http://www.fema.gov/library/viewRecord.do?id=7130>

Mitigation Ideas

Communities can use this resource to identify and evaluate a range of potential mitigation actions for reducing risk to natural hazards and disasters.

<http://www.fema.gov/media-library/assets/documents/30627>

Dam Safety: The following publications are now available:

FEMA Dam Safety Program Fact Sheet (FEMA P-1069) December 2015 -

<http://www.fema.gov/media-library-data/1450388948415->

[f5b5e8abef6b6fa6ed42920cb1206036/NDSPFlashFactSheet2015.pdf](http://www.fema.gov/media-library-data/1450388948415-f5b5e8abef6b6fa6ed42920cb1206036/NDSPFlashFactSheet2015.pdf)

FEMA Mitigation Dam Task Force Strategic White Paper on Dam Risk (DR-SC-4241)

November 17, 2015 - <http://www.fema.gov/media-library-data/1450272827214->

[fb60879c33e180f3541a5cfb133e54b2/DR-SC-4241-FinalWhitePaper.pdf](http://www.fema.gov/media-library-data/1450272827214-fb60879c33e180f3541a5cfb133e54b2/DR-SC-4241-FinalWhitePaper.pdf)

Analyzing the Dam Failure Hazard in the Hazard Mitigation Assistance Program Benefit Cost Analysis - <http://www.fema.gov/media-library-data/1449672388618->

[b773792390ea6008a0f9984046dcf8ee/DamFailureFAQ.pdf](http://www.fema.gov/media-library-data/1449672388618-b773792390ea6008a0f9984046dcf8ee/DamFailureFAQ.pdf)

Climate Resiliency HMA Project types:

Climate Resilient Mitigation Activities for Hazard Mitigation Assistance

<http://www.fema.gov/media-library/assets/documents/110202>

Other potential Federal Sources for Funding of Mitigation Activities:**Environmental Protection Agency**

The EPA makes available funds for water management and wetlands protection programs that help mitigate against future costs associated with hazard damage.

Mitigation Funding Sources Program	Details	Notes
Clean Water Act Section 319 Grants	Grants for water source management programs including technical assistance, financial assistance, education, training, technology transfer, demonstration projects, and regulation. http://www.epa.gov/OWOW/NPS/cwact.html	Funds are provided only to designated state and tribal agencies
Clean Water State Revolving Funds	State grants to capitalize loan funds. States make loans to communities, individuals, and others for high-priority water-quality activities. http://www.epa.gov/owow/wetlands/initiative/srf.html	States and Puerto Rico
Wetland Program Development Grants	Funds for projects that promote research, investigations, experiments, training, demonstrations, surveys, and studies relating to the causes, effects, extent, prevention, reduction, and elimination of water pollution. http://www.epa.gov/owow/wetlands/initiative/#financial	See website

Floodplain, Wetland and Watershed Protection Programs:

USACE and the U.S. Fish and Wildlife Service offer funding and technical support for programs designed to protect floodplains, wetlands, and watersheds.

Funding and Technical Assistance for Wetlands and Floodplains Program	Details	Notes
USACE Planning Assistance to States (PAS)	Fund plans for the development and conservation of water resources, dam safety, flood damage reduction and floodplain management. http://www.lre.usace.army.mil/planning/assist.html	50 percent non-federal match
USACE Flood Plain Management Services (FPMS)	Technical support for effective floodplain management. http://www.lrl.usace.army.mil/p3md-o/article.asp?id=9&MyCategory=126	See website
USACE Environmental Laboratory	Guidance for implementing environmental programs such as ecosystem restoration and reuse of dredged materials.	See website

	http://el.erdc.usace.army.mil/index.cfm	
U.S. Fish & Wildlife Service Coastal Wetlands Conservation Grant Program	Matching grants to states for acquisition, restoration, management or enhancement of coastal wetlands. http://ecos.fws.gov/coastal_grants/viewContent.do?viewPage=home	States only. 50 percent federal share
U.S. Fish & Wildlife Service Partners for Fish and Wildlife Program	Program that provides financial and technical assistance to private landowners interested in restoring degraded wildlife habitat. http://ecos.fws.gov/partners/viewContent.do?viewPage=home	Funding for volunteer-based programs

Housing and Urban Development:

The Community Development Block Grants (CDBG) administered by HUD can be used to fund hazard mitigation projects.

Mitigation Funding Sources Program	Details	Notes
Community Development Block Grants (CDBG)	Grants to develop viable communities, principally for low- and moderate-income persons. CDBG funds available through Disaster Recovery Initiative. http://www.hud.gov/offices/cpd/communitydevelopment/programs/	Disaster funds contingent upon Presidential disaster declaration
Disaster Recovery Assistance	Disaster relief and recovery assistance in the form of special mortgage financing for rehabilitation of impacted homes. http://www.hud.gov/offices/cpd/communitydevelopment/programs/dri/assistance.cfm	Individuals
Neighborhood Stabilization Program	Funding for the purchase and rehabilitation of foreclosed and vacant property in order to renew neighborhoods devastated by the economic crisis. http://www.hud.gov/offices/cpd/communitydevelopment/programs/neighborhoodspg/	State and local governments and non-profits

LOCAL MITIGATION PLAN REVIEW TOOL

MULTI-JURISDICTION SUMMARY SHEET (OPTIONAL)

INSTRUCTIONS: For multi-jurisdictional plans, a Multi-jurisdiction Summary Spreadsheet may be completed by listing each participating jurisdiction, which required Elements for each jurisdiction were 'Met' or 'Not Met,' and when the adoption resolutions were received. This Summary Sheet does not imply that a mini-plan be developed for each jurisdiction; it should be used as an optional worksheet to ensure that each jurisdiction participating in the Plan has been documented and has met the requirements for those Elements (A through E).

	MULTI-JURISDICTION SUMMARY SHEET											
#	Jurisdiction Name	Jurisdiction Type (city/borough/ township/ village, etc.)	P l a n P O C	Mailin g Addres s	Em ail	Phone	Requirements Met (Y/N)					
							A. Planni ng Proces s	B. Hazard Identifica tion & Risk Assessme nt	C. Mitiga tion Strate gy	D. Plan Review, Evaluation & Implement ation	E. Plan Adoption	F. NFIP Status
1	Covington County	County					Y	Y	Y	Y	N	
2	Collins	City					Y	Y	Y	Y	Y	

MULTI-JURISDICTION SUMMARY SHEET												
#	Jurisdiction Name	Jurisdiction Type (city/borough/ township/ village, etc.)	P l a n P O C	Mailin g Addre ss	Emai l	Phon e	Requirements Met (Y/N)					
							A. Plannin g Process	B. Hazard Identifi cation & Risk Assess ment	C. Mitiga tion Strate gy	D. Plan Revie w, Evalu ation & Imple menta tion	E. Plan Adopti on	F. NFIP Status
3	Mount Olive	Town					Y	Y	Y	Y	N	
4	Seminary	Town					Y	Y	Y	Y	N	
5	Jefferson Davis County	County					Y	Y	Y	Y	N	
6	Bassfield	Town					Y	Y	Y	Y	N	

LOCAL MITIGATION PLAN REVIEW TOOL

7	Prentiss	Town					Y	Y	Y	Y	N	
8	Jones County	County					Y	Y	Y	Y	N	
9	Ellisville	City					Y	Y	Y	Y	N	
10	Laurel	City					Y	Y	Y	Y	N	
11	Sandersville	Town					N	Y	Y	Y	N	
12	Soso	Town					N	Y	Y	Y	N	
13	Marion County	County					Y	Y	Y	Y	N	
14	Columbia	City					Y	Y	Y	Y	N	
15	Perry County	County					Y	Y	Y	Y	N	
16	Beaumont	Town					Y	Y	Y	Y	N	
17	New Augusta	Town					Y	Y	Y	Y	N	
18	Richton	Town					Y	Y	Y	Y	N	
19	Wayne County	County					Y	Y	Y	Y	N	
20	State Line	Town					Y	Y	Y	Y	N	
21	Waynesboro	City					Y	Y	Y	Y	N	
22	Laurel	City					Y	Y	Y	Y	N	
23	Sandersville	Town					Y	Y	Y	Y	N	
24	Forrest County	County					Y	Y	Y	Y	N	
25	Hattiesburg	City					Y	Y	Y	Y	N	
26	Petal	Town					Y	Y	Y	Y	N	

Appendix B: Meeting Materials

Date: March 25, 2019
To: MEMA District 8 Regional Hazard Mitigation Council
From: Billy Patrick, Staff Officer MEMA Mitigation
Re: Mississippi Emergency Management Agency District 8 Regional Hazard Mitigation Plan Kickoff Meeting

The Mississippi Emergency Management Agency (MEMA) District 8 is beginning the process to update the regional hazard mitigation plan. This plan update will reassess the risks and vulnerabilities to the Region and its assets, and the plan will provide a strategy to address the identified risks and vulnerabilities. In order for MEMA District 8 to receive certain categories of FEMA funding, this plan must be updated every five years.

You are invited to participate in the Regional Hazard Mitigation Council for the plan development process. The Regional Hazard Mitigation Council is responsible for guiding the plan update process, for making decisions regarding plan content, for providing direction to the planning contractor, for providing data and input on the plan contents, and for reviewing draft sections of the plan for accuracy and completeness. The first meeting details are as follows:

Date: Wednesday April 10, 2019
Time: 10am-12pm
Location: EM District Forrest County
4080 Hwy 11
Hattiesburg, MS 39402

MEMA has contracted with a planning consultant for this plan update process. Please confirm your intent to attend this meeting to our consultant planning project manager, Erin Buchanan (ebuchanan@wittobriens.com), no later than Friday April 5, 2019. If you are unable to attend, please consider sending an alternate in your place.

Mississippi Emergency Management Agency (MEMA)
District 8
Regional Hazard Mitigation Plan Kick-off Meeting

Date: April 10, 2019

Sign-in Sheet			
Name	Office/Department/Agency	Title	Email
Shenetta Henderson	Witt O'Brien's	Mitigation Planner	shenderson@wittobriens.com
Jake Halley	Witt O'Brien's	GIS/HAZUS-MH Specialist	jhalley@wittobriens.com
Colby Price	Perry County EMA	Director	peraiemd@co.perry.ms.us
5224 Bulis	EMMA	Director	5224e@forrest.com
Chip Brown	Forrest County EMA	(communications)	chip@forrestco.com
Joel M. Ragsdale	Jefferson Davis Co. EMA	EMA Director	jeffersondavis33ema@yahoo.com
Paul Sheffield	Jones Co. EOC	Director	paul@jonescoc.com
Shane Knight	City of Collins	Asst Director	ShaneKnight@cityofcollins.com
Gary Sanford	Cavinton Co EMA	Director	gsanford@cavintonco.org
Angela Gibson	Wayne Co. EMA	Director	agibson@waynecountymn.gov
Bull Petura	MEMA	Staff Officer	bpatura@memn.mn.gov

Date: October 3, 2019
To: MEMA District 8 Regional Hazard Mitigation Council
From: Billy Patrick, Staff Officer MEMA Mitigation
Re: Mississippi Emergency Management Agency District 8 Regional Hazard Mitigation Plan Meeting

The next Planning Committee meeting for the Hazard Mitigation Plan Update is scheduled for October 16, 2019. The core planning meeting will focus on the mitigation strategy; including updating the plan's goals and actions. The planning meeting will also include discussion on capabilities and plan maintenance.

In addition, Witt O'Brien's will meet with each county/municipality either before or after the scheduled core planning meeting to go over county/municipality specific mitigation actions and capabilities. The meetings will focus on actions previously included in the Regional Hazard Mitigation Plan including the project's status (completed, deferred, or needs removed). We will also discuss any new actions that need to be included in this plan update, as well as any updates to include for mitigation capabilities. The meeting details are:

Date: Wednesday October 16, 2019
Time: Varies-

- Core Planning Meeting 9-10am
- Individual County / Municipality Meetings 8am-9am, 10am-11pm, 11pm-12pm, and after 12pm as needed
 - Each county/municipality will need to sign-up for a specific timeframe. Slots are limited for each timeframe listed.

Location: Laurel Train Depot
230 Maple Street
Laurel, MS 39440

Please confirm your intent to attend this meeting to our consultant planning project manager, Erin Buchanan (ebuchanan@wittobriens.com), no later than Monday October 14, 2019. If you are unable to attend, please consider sending an alternate in your place.

Mississippi Emergency Management Agency District 8 Regional Hazard Mitigation Plan

Regional Hazard Mitigation Council Planning Meeting

October 16, 2019

Agenda

- Review of Last Meeting and Status Update
- Mitigation Strategy
 - Validate Goals
 - Discuss Actions
- Plan Maintenance Schedule
- Upcoming Schedule
- Q&A

Review of Last Meeting and Status Update

- Review of Last Meeting
 - Hazard Identification Exercise
 - Mostly remained the same with the addition of Cyber Terrorism
- Status Update
 - Hazard Identification and Risk Assessment (HIRA) Complete
 - Planning Committee Comment Period was September 9th– September 26th

Mitigation Strategy

- Mitigation Plans are required to have goals as part of the strategy (44 CFR, 201.6 (c) (3) (i).
- Goals are defined as broad policy statements that explain what is to be achieved.
- As a group, we will validate existing mitigation goals and decided on any changes.

Mitigation Strategy: Goals

- Goal 1- Develop a sustainable, comprehensive mitigation program to ensure safer communities.
- Goal 2- Reduce or avoid loss of life, injury, and damage to property, the economy, and the environment.
- Goal 3- Enhance preparedness and effective response to hazards.
- Goal 4- Strengthen and improve local mitigation capabilities.
- Goal 5- Increase public awareness of hazard mitigation, hazard risk, and protective measures that can be taken to minimize potential loss and damage.

Mitigation Strategy: Goals

Forrest County

- Goal 1- Encourage the development and maintenance of facilities and infrastructure that will mitigate hazards.
- Goal 2- Foster an on-going community education program on hazard mitigation safety and preparation.
- Goal 3- Enhance response procedures and capabilities.
- Goal 4- Utilize technology to protect and develop records and data.

Mitigation Strategy: Goals

Forrest County

- Goal 1- Encourage the development and maintenance of facilities and infrastructure that will mitigate hazards. Possibly combine into Goal 2- reduce or avoid loss of life, injury and damage to property, the economy, and the environment.
- Goal 2- Foster an on-going community education program on hazard mitigation safety and preparation. Possibly combine into Goal 5- increase public awareness of hazard mitigation, hazard risk, and protective measures that can be taken to minimize potential loss and damages.

Mitigation Strategy: Goals

Forrest County

- Goal 3- Enhance response procedures and capabilities. Possibly combine into Goal 3- enhance preparedness and effective response to hazards.
- Goal 4- Utilize technology to protect and develop records and data. Possibly combine into Goal 4- enhance preparedness and effective response to hazards. Consider specific action for utilizing technology to protect and develop records and data.

Mitigation Strategy: Actions

- What are the main challenges for implementing actions within the hazard mitigation plan? – technical, political, funding, coordination with other agencies, capacity, etc.
- Other actions to consider-
 - Drought- Public education materials regarding water conservation and heat exhaustion will be made available to the local newspaper, radio stations, and television stations during period of drought or extreme heat.
 - Residential Mitigation
 - Generators

Mitigation Plan Maintenance

- Schedule-
 - Plan is updated every five-years
 - Planning committee will reconvene during that time.
 - Suggestion that the planning process begin 1.5 years in advance of plan expiration
 - Annual progress monitoring of mitigation actions.
 - Meet in March every year to evaluate progress and make revisions as necessary
 - Meet after any disaster event that warrants reevaluation of mitigation actions
 - Forrest County plan references quarterly progress meetings as well as annual.

Next Steps

- Finalize Mitigation Strategy
- QA/QC and Format Edits to the Plan
- Planning Committee Review of Draft Plan / Public Comment Period
- Plan Submitted to MEMA / FEMA

Questions

- Erin Buchanan, Project Manager and Senior Mitigation Planner
 - ebuchanan@wittobriens.com
 - 615.972.1414
- Jake Halley, GIS/HAZUS-MH Specialist
 - jhalley@wittobriens.com
 - 318.381.3429

MEMA District 8 Hazard Mitigation Plan Update: Mitigation Strategy Workshop October 16, 2019			
Name	County/Agency	Phone	Email
Jake Halley	Witt O'Brien's	318.381.3429	jhalley@witobriens.com
Erin Buchanan	Witt O'Brien's	1015.972.1414	ebuchanan@witobriens.com
Paul Skeffield	Jones County EOC	601.649.3535	paul@jonescoc.com
Glen Moore	Forest County EMA	601-544-5911	glen@forestcoc.org
Glen Moore	Forest County EMA	601-544-5911	glen@forestcoc.org
Chip Brown	Forest County EMA	601 544.5911	chip@forestcoc.org
Kevin Speers	Wayne County EMA	661-785-6049	kwspeers@waynecounty.ms.gov
Angela Johnson	Wayne Co EMA	601-410-4075	ajohnson@waynecounty.ms.gov
Jeffrey Rayfield	Jeff. Davis Co. EMA	601-992-5377	jrayfield@jdc.org
Greg Sanford	Carroll County EMA	601-765-1667	gsanford@carrollcounty.ms.gov
Joseph Loydel	Leflore County	601-528-3466	jloydel@leflco.com
Bill Patrick	MEMA	601 933 6607	bp@memama.org

MEMA District 8 Hazard Mitigation Plan Update: Mitigation Strategy Workshop October 16, 2019			
Name	County/Agency	Phone	Email
Jake Halley	Witt O'Brien's	318.381.3429	jhalley@witobriens.com
Erin Buchanan	Witt O'Brien's	1015.972.1414	ebuchanan@witobriens.com
Paul Skeffield	Jones County EOC	601.649.3535	paul@jonescoc.com
Glen Moore	Forest County EMA	601-544-5911	glen@forestcoc.org
Glen Moore	Forest County EMA	601-544-5911	glen@forestcoc.org
Chip Brown	Forest County EMA	601 544.5911	chip@forestcoc.org
Kevin Speers	Wayne County EMA	661-785-6049	kspeers@waynecounty.ms.gov
Angela Johnson	Wayne Co EMA	601-410-4075	ajohnson@waynecounty.ms.gov
Jeffrey Rayfield	Jeff. Davis Co. EMA	601-992-5377	jrayfield@jdc.org
Greg Sanford	Coalington County EMA	601-765-1667	gsanford@coalingtoncountypr.org
Joseph Loydel	Llanoesboro	601-528-3466	zaydel@yaho.com
Bill Patrick	MEMA	601 933 6607	patrick@memama.org

MEMA District 8 Hazard Mitigation Plan Update: Mitigation Strategy Workshop October 15, 2019

[illegible]



Memorandum

To: Mayor Toby Barker and Members of City Council

From: Anthony Parker

cc: Kermas Eaton, City Clerk

Date: Tuesday, August 18, 2020

Re: Adopt a Resolution declaring equipment surplus and authorize the disposal of said equipment and authorize removal of equipment from the City inventory of the Hattiesburg Police Department.
File Number: 2020-548
Minute Book #

Summary

Adopt a Resolution declaring equipment surplus (per attached list) and authorize the disposal of said equipment; authorize removal of equipment from the City inventory of the Hattiesburg Police Department.

Recommendation Statement

I recommend adoption of resolution to surplus items.

Please place this on the August 18, 2020 City Council meeting for consideration.



THE CITY OF HATTIESBURG

One of America's Great Small Cities!

Anthony Parker, Chief of Police

MEMORANDUM

To: Mayor and City Council

From: Chief Anthony Parker 

Date: August 7, 2020

Re: **Surplus Items**

This memo is to request that the following items be placed on the Hattiesburg Police Department's inventory list and declared as surplus property for disposal.

If you have any questions, please feel free to contact me.

AP/tdl

HATTIESBURG POLICE DEPARTMENT LIST OF ITEMS TO BE REMOVED FROM INVENTORY 2020

This list of items needs to be authorized removal of equipment from Hattiesburg Police Dept inventory

12928	LAMINATOR-CARD-4 IN POUCH Inoperable
13411	STINGER SPIKE SYSTEM (LEL-ALCHOHOL GRANT) Inoperable
13412	STINGER SPIKE SYSTEM (LEL-ALCHOHOL GRANT) Inoperable
13413	STINGER SPIKE SYSTEM (LEL-ALCHOHOL GRANT) Inoperable
13414	STINGER SPIKE SYSTEM (LEL-ALCHOHOL GRANT) Inoperable
13415	STINGER SPIKE SYSTEM (LEL-ALCHOHOL GRANT) Inoperable
13416	STINGER SPIKE SYSTEM (LEL-ALCHOHOL GRANT) Inoperable
13417	STINGER SPIKE SYSTEM (LEL-ALCHOHOL GRANT) Inoperable
13418	STINGER SPIKE SYSTEM (LEL-ALCHOHOL GRANT) Inoperable
13419	STINGER SPIKE SYSTEM (LEL-ALCHOHOL GRANT) Inoperable
13420	STINGER SPIKE SYSTEM (LEL-ALCHOHOL GRANT) Inoperable
13421	STINGER SPIKE SYSTEM (LEL-ALCHOHOL GRANT) Inoperable
13422	STINGER SPIKE SYSTEM (LEL-ALCHOHOL GRANT) Inoperable
13817	STINGER SPIKE SYSTEM (LEL-ALCHOHOL GRANT) INOPERABLE
13818	STINGER SPIKE SYSTEM (LEL-ALCHOHOL GRANT) Inoperable
13819	STINGER SPIKE SYSTEM (LEL-ALCHOHOL GRANT) Inoperable
13820	STINGER SPIKE SYSTEM (LEL-ALCHOHOL GRANT) Inoperable
13821	STINGER SPIKE SYSTEM (LEL-ALCHOHOL GRANT) Inoperable
13822	STINGER SPIKE SYSTEM (LEL-ALCHOHOL GRANT) Inoperable
13823	STINGER SPIKE SYSTEM (LEL-ALCHOHOL GRANT) Inoperable
13824	STINGER SPIKE SYSTEM (LEL-ALCHOHOL GRANT) Inoperable
13825	STINGER SPIKE SYSTEM (LEL-ALCHOHOL GRANT) Inoperable

HATTIESBURG POLICE DEPARTMENT LIST OF ITEMS TO BE REMOVED FROM INVENTORY 2020

13826	STINGER SPIKE SYSTEM (LEL-ALCOHOL GRANT) Inoperable
14530	UTILITY VEHICLE-YAMAHA BIG BEAR 400 Inoperable
14601	STINGER SPIKE SYSTEM - TROOPER 15" Inoperable
14602	STINGER SPIKE SYSTEM - TROOPER 15" Inoperable
14603	STINGER SPIKE SYSTEM - TROOPER 15" Inoperable
14604	STINGER SPIKE SYSTEM - TROOPER 15" Inoperable
14605	STINGER SPIKE SYSTEM - TROOPER 15" Inoperable
14606	STINGER SPIKE SYSTEM - TROOPER 15" Inoperable
14607	STINGER SPIKE SYSTEM - TROOPER 15" Inoperable
14608	STINGER SPIKE SYSTEM - TROOPER 15" Inoperable
14609	STINGER SPIKE SYSTEM - TROOPER 15" Inoperable
14610	STINGER SPIKE SYSTEM - TROOPER 15" Inoperable
14611	STINGER SPIKE SYSTEM - TROOPER 15" Inoperable
14612	STINGER SPIKE SYSTEM - TROOPER 15" Inoperable
14613	STINGER SPIKE SYSTEM - TROOPER 15" Inoperable
14614	STINGER SPIKE SYSTEM - TROOPER 15" Inoperable
15539	SAW-CHAIN-STIHL MS260 Stolen/Replaced
15540	SAW-CHAIN-STIHL MS260 Stolen/Replaced
18153	POLICE SERVICE CENTER BLDG Inoperable/Old Building
16665	Police Service Center Buildings were removed from area for new Law Enforcement Complex.
21358	PC-HP LAPTOP - KSHC432 Cemetery
21359	PC-HP LAPTOP - KSHC432 Cemetery
21372	PC-LAPTOP HP SMART BUY 250G7 15.6" SCREEN BUNDLE IT
19730	ID Card Badging System —purchased 2/3/2014—Remove item due to out of service not compatible with new system/outdated

HATTIESBURG POLICE DEPARTMENT LIST OF ITEMS TO BE REMOVED FROM INVENTORY 2020

The following serial numbers (X2 Tasers) have been relinquished to AXON due to malfunctioning of the central display screens and are no longer property of the Hattiesburg Police Department.:

- | | |
|----------------|-----------|
| 1. 19671 Taser | X29001X6C |
| 2. 19682 Taser | X29001XTN |
| 3. 19684 | X29001XV6 |
| 4. 19685 | X29001XVA |
| 5. 19686 | X29001XVD |
| 6. 19693 | X29001X72 |
| 7. 19674 Taser | X29001XMW |
| 8. 19690 | X29001XWA |
| 9. 19698 | X29001Y07 |

The following serial numbers (Service weapon) have been issued to retired officers at the time of their retirement. Was voted on by the City Council Board.

1. MUY433 Mike Sumner
2. MUY450 Zach Denny to Mark Denny
3. MUY457 Liquori Tate
4. MUY461 Rick Hoerner
5. MUY474 Fraizer Bolton
6. MUY502 BJ Deen
7. MVH768 Peggy Sealy
8. MUY552 Frank Misenhelter
9. MUY548 Jon Traxler

The Following Gun was destroyed in Officer Badons house Fire December 2019
Glock MUY497

RESOLUTION

WHEREAS, the City of Hattiesburg finds and determines the following equipment, as per attached list, is no longer needed for municipal or related purposes and is not to be used in the future operation of the City; and

WHEREAS, the governing authorities of the City of Hattiesburg are authorized and empowered in their discretion to dispose of said equipment in accordance with appropriate Miss Code statutes; and

WHEREAS, the governing authorities of the City of Hattiesburg desire to dispose of said equipment with no residual value at the solid waste landfill and dispose at auction any equipment having a residual value;

NOW, THEREFORE, BE IT RESOLVED that the Mayor and Hattiesburg City Council does hereby declare surplus the following equipment, as per attached memo, and authorize disposal or sale of said equipment.

The foregoing resolution having been reduced to writing, the same was introduced by Council member _____, seconded by Council member _____, and was adopted by the following vote, to wit:

YEAS:

NAYS:

The President thereby declared the motion carried and the Resolution adopted, on this 18th day of August, 2020.

(SEAL)

ATTEST:

ADOPTED:

CLERK OF COUNCIL

PRESIDENT OF COUNCIL

The above and foregoing Resolution having been submitted to and approved by the Mayor, on this 18th day of August, 2020.

ATTEST:

ADOPTED:

CITY CLERK

MAYOR



Memorandum

To: Mayor Toby Barker and Members of City Council

From: Anthony Parker

cc: Kermas Eaton, City Clerk

Date: Tuesday, August 18, 2020

Re: Adopt a Resolution declaring certain vehicles as surplus (per attached memo) and authorize sale of said vehicles and remove from the City's inventory of the Hattiesburg Police Department.
File Number: 2020-549
Minute Book #

Summary

Adopt a Resolution declaring certain vehicles as surplus (per attached memo) and authorize disposal or sale of said vehicles at auction and remove from the City's inventory of the Hattiesburg Police Department

Recommendation Statement

I recommend adoption of resolution to surplus vehicles.

Please place this on the August 18, 2020 City Council meeting for consideration.



THE CITY OF HATTIESBURG

One of America's Great Small Cities!

Anthony Parker, Chief of Police

MEMORANDUM

To: Mayor and City Council

From: Chief Anthony Parker

A handwritten signature in blue ink, appearing to be "AP", is written over a horizontal line.

Date: August 7, 2020

Re: **Items for Inventory**

This memo is to request that the following vehicles be removed from the Hattiesburg Police Department's inventory list, declared as surplus property, and to be sold as salvage.

If you have any questions, please feel free to contact me.

AP/tdl

HATTIESBURG POLICE DEPARTMENT REQUEST TO REMOVE ITEMS

**LIST OF 2020 ITEMS AND VEHICLES TO BE REMOVED FROM HATTIESBURG POLICE DEPARTMENT
INVENTORY FOR SALE OR DISPOSAL**

16643	FORD-CROWN VICTORIA-2008-WHITE Inoperable
16644	FORD-CROWN VICTORIA-2008-WHITE Inoperable
16645	FORD-CROWN VICTORIA-2008-WHITE Inoperable
16647	FORD-CROWN VICTORIA-2008-WHITEG46309 Inoperable
16651	FORD-CROWN VICTORIA-2008-WHITE Inoperable
16653	FORD-CROWN VICTORIA-2008-WHITE Inoperable
16655	FORD-CROWN VICTORIA-2008-WHITE Inoperable
17314	FORD-CROWN VICTORIA-2009-WHITE Inoperable
17706	CHEVROLET-SUBURBAN- 2001 Inoperable
19349	2014 DODGE CHARGER PURSUIT Inoperable
18017	METAL DETECTOR-CS5000 MAGNASCANNER VER 2.5 Inoperable
18751	TIRE CHANGER-COATS 50XE2 Inoperable
18752	WHEEL BALANCER COATS COMPUTER MODEL 875 Inoperable
14530	UTILITY VEHICLE-YAMAHA BIG BEAR 400 Inoperable

RESOLUTION

WHEREAS, the City of Hattiesburg finds and determines the following equipment, as per attached list, is no longer needed for municipal or related purposes and is not to be used in the future operation of the City; and

WHEREAS, the governing authorities of the City of Hattiesburg are authorized and empowered in their discretion to dispose of said equipment in accordance with appropriate Miss Code statutes; and

WHEREAS, the governing authorities of the City of Hattiesburg desire to dispose of said equipment with no residual value at the solid waste landfill and dispose at auction any equipment having a residual value;

NOW, THEREFORE, BE IT RESOLVED that the Mayor and Hattiesburg City Council does hereby declare surplus the following equipment, as per attached memo, and authorize disposal or sale of said equipment.

The foregoing resolution having been reduced to writing, the same was introduced by Council member _____, seconded by Council member _____, and was adopted by the following vote, to wit:

YEAS:

NAYS:

The President thereby declared the motion carried and the Resolution adopted, on this 18th day of August, 2020.

(SEAL)

ATTEST:

ADOPTED:

CLERK OF COUNCIL

PRESIDENT OF COUNCIL

The above and foregoing Resolution having been submitted to and approved by the Mayor, on this 18th day of August, 2020.

ATTEST:

ADOPTED:

CITY CLERK

MAYOR



Memorandum

To: Mayor Toby Barker and Members of City Council

From: Lamar Rutland

cc:

Date: Tuesday, August 18, 2020

Re: Adopt a Resolution authorizing Requisition No. 70 from the Project Fund Construction Account in connection with a certain loan agreement dated August 18, 2016, by and between the Mississippi Development Bank and the City of Hattiesburg.
File Number: 2020-556
Minute Book #

Summary

Adopt a Resolution authorizing Requisition No. 70 from the Project Fund Construction Account in connection with a certain loan agreement dated August 18, 2016, by and between the Mississippi Development Bank and the City of Hattiesburg.

Recommendation Statement

I recommend approval of this item.

Please place this on the August 18, 2020 City Council meeting for consideration.

RESOLUTION OF THE CITY COUNCIL OF THE CITY OF HATTIESBURG, MISSISSIPPI (THE “CITY”) AUTHORIZING REQUISITION NO. 70 FROM THE PROJECT FUND CONSTRUCTION ACCOUNT IN CONNECTION WITH THAT CERTAIN LOAN AGREEMENT, DATED AS OF AUGUST 18, 2016, BY AND BETWEEN THE MISSISSIPPI DEVELOPMENT BANK AND THE CITY.

Whereas, the City Council of the City now finds it necessary to approve Requisition No. **70** from the Project Fund Construction Account under the Loan in the total aggregate amount of **\$334,361.53** for the purpose of paying Water & Sewer Projects in connection with the loan as more particularly described in Exhibit A.

SECTION 1. The City Council of the City hereby authorizes and approves Requisition No. **70** from the Project Fund Construction Account under the Loan in the total aggregate amount of **Three Hundred Thirty-Four Thousand Three Hundred Sixty-One and 53/100 dollars (\$334,361.53)** for the purpose of paying Water & Sewer Projects in connection with the loan as more particularly described in Exhibit A.

SECTION 3. The Mayor and City Clerk are hereby authorized and directed for and on behalf of the City to take any and all action as may be required by the City to carry out and give effect to the aforesaid documents authorized pursuant to this Resolution and to execute all papers, documents, certificates and other instruments that may be required for the carrying out of the authority conferred by this Resolution in order to evidence the authority.

ABSENT:

The motion having received the affirmative vote of a majority of the Council members present, the President declared the motion carried and the resolution adopted, on this the **18th** day of **August, 2020**.

(SEAL)

ATTEST:

ADOPTED:

CLERK OF COUNCIL

PRESIDENT

The above and foregoing Resolution having been submitted to and approved by the Mayor, this the **18th** day of **August, 2020**.

ATTEST:

APPROVED:

CITY CLERK

MAYOR

EXHIBIT A

PROJECT FUND CONSTRUCTION ACCOUNT REQUISITION

PROJECT FUND CONSTRUCTION ACCOUNT REQUISITION

RE: \$25,000,000.00 Mississippi Development Bank Taxable Special Obligation Bonds, Series 2016 (Hattiesburg, Mississippi Combined Water and Sewer System Construction Project) (the "Series 2016 Bonds") secured by \$25,000,000.00 Taxable Promissory Note (Hattiesburg, Mississippi Combined Water and Sewer System Construction Project), dated August 18, 2016 (the "Series 2016 Note").

**TO: Regions Bank
400 West Capitol, 7th Floor
Little Rock, AR 72201
ATTN: Corporate Trust Department**

REQUISITION NO.: 70

DATE OF REQUISITION: 8/18/2020

Item #	Payee Name & Address	Budget Line Item	Payment Amount	Invoice #	Purpose of Payment
1	Wildstone Construction Services, LLC P O Box 1122 Madison, MS 39130	093695.7220.69	55,576.95	Pay Est. No. 5	Camp Street Improvements Period: Through 06/24/2020 MB 2019-227
2	DNA Underground, LLC 16101 S. Swan Road Gulfport, MS 39503	093695.7220.74	247,122.08	Pay App. No. 12	Sewer Improvements Ph XII Period: 7/1/20 - 7/31/20 MB 2019-58
3	Shows, Dearman, & Waits, Inc. 301 Second Ave Hattiesburg, MS 39401	093695.7245.13	3,697.50	21584	Katie Ave & Arledge St Infrastructure Period: 06/28/20 - 07/25/20 MB 2018-25 SDW #11258
4	Shows, Dearman, & Waits, Inc. 301 Second Ave Hattiesburg, MS 39401	093695.7220.70	6,385.00	21580	Sewer Improvements Ph VIII - Camp St. Area Period: 06/28/20 - 07/25/20 MB 2011-4/89-110 SDW #1273-S010
5	Shows, Dearman, & Waits, Inc. 301 Second Ave Hattiesburg, MS 39401	093695.7220.74	12,585.00	21563	Sewer Improvements Ph XII Period: 06/28/20 - 07/25/20 MB 2011-4/89-110 SDW #1273-S012

Item #	Payee Name & Address	Budget Line Item	Payment Amount	Invoice #	Purpose of Payment
6	Shows, Dearman, & Waits, Inc. 301 Second Ave Hattiesburg, MS 39401	093695.7220.75	8,277.50	21559	CIPP Project Period: 06/28/20 - 07/25/20 MB 2011-4/89-110 SDW #11256
7	Shows, Dearman, & Waits, Inc. 301 Second Ave Hattiesburg, MS 39401	093695.7245.12	717.50	21558	North 40th & North 39th Ave Period: 06/28/20 - 07/25/20 MB 2012-1/34 SDW #11254
			<u>334,361.53</u>		

August 10, 2020
N-S Project No. 15481.000

Lamar Rutland, P.E.
Engineering Director
City of Hattiesburg
P.O. Box 1898
Hattiesburg, MS 39403-1898

REFERENCE: CONTRACTOR PROGRESS ESTIMATE #5
CITY OF HATTIESBURG, FORREST COUNTY
CAMP STREET IMPROVEMENTS – 25TH AVE TO 19TH AVE

Dear Mr. Rutland:

Enclosed is one (1) Application and Certifications for Payment No. 5 for the referenced project. I have reviewed the Contractor's Application & Certification of Payment Request No. 5 and find the pay application to be in order. I, therefore, recommend payment to the contractor Wildstone Construction Services, LLC, in the amount of \$55,576.95 for work completed.

Please call me at 545-1565 if you have any questions or need additional information.

Sincerely,

NEEL-SCHAFFER, INC.


Geoffrey Crosby, P.E.
Senior Project Manager

GPC

Enclosures

APPLICATION AND CERTIFICATION FOR PAYMENT

TO OWNER:
 City of Hattiesburg
 200 Forrest Street
 Hattiesburg, MS 39401

PROJECT:
 Camp Street Improvements
 25th Avenue to 19th Avenue

FROM CONTRACTOR:
 Wildstone Construction Services, LLC
 PO Box 1122
 Madison, MS 39130

VIA ENGINEER:
 Neel-Schaffer, Inc.
 704 Hardy Street
 Hattiesburg, MS 39401

CONTRACT FOR

CONTRACTOR'S APPLICATION FOR PAYMENT

Application is made for payment, as shown below, in connection with the Contract, Continuation Sheet, AIA Document G703, is attached.

1. ORIGINAL CONTRACT SUM \$ 341,006.50
2. Net change by Change Orders \$ \$1,880.00
3. CONTRACT SUM TO DATE (Line 1 + 2) \$ 372,886.50
4. TOTAL COMPLETED & STORED TO DATE (Column G on G703) \$ \$350,489.49
5. RETAINAGE:
 - a. 5 % of Completed Work \$17,524.47
 - b. 5 % of Stored Material \$0.00
6. TOTAL EARNED LESS RETAINAGE (Line 4 Less Line 5 Total) \$ 332,965.02
7. LESS PREVIOUS CERTIFICATES FOR PAYMENT (Line 6 from prior Certificate) \$ \$277,388.07
8. CURRENT PAYMENT DUE \$ 55,576.95
9. BALANCE TO FINISH, INCLUDING RETAINAGE (Line 3 less Line 6) \$ 39,921.48

CHANGE ORDER SUMMARY	ADDITIONS	DEDUCTIONS
Total changes approved in previous months by Owner	\$0.00	
Total approved this Month	\$31,880.00	
TOTALS	\$31,880.00	
NET CHANGES by Change Order	\$31,880.00	

AIA DOCUMENT G703 - APPLICATION AND CERTIFICATION FOR PAYMENT 1992 EDITION - AIA - C1949

Users may obtain validation of this document by requesting a completed AIA Document D401 - Certification of Document's Authenticity from the Licensee.

Application for Payment

AIA DOCUMENT G702
 APPLICATION NO: \$
 PERIOD TO: 06/24/20
 PROJECT NO: X OWNER
 X ENGINEER
 CONTRACT DATE: 10/21/19
 CONTRACTOR

The undersigned Contractor certifies that to the best of the Contractor's knowledge, information and belief the Work covered by this Application for Payment has been completed in accordance with the Contract Documents, that all amounts have been paid by the Contractor for Work for which previous Certificates for Payment were issued and payments received from the Owner, and that current payment shown herein is now due.

CONTRACTOR:

By: Emily B Put Date: 7-22-2020
 State of: Mississippi County of: Madison
 Subscribed and sworn to before me this 22nd day of July 2020
 Notary Public: Martha A. House
 My Commission expires: 2-23-2024

ARCHITECT'S CERTIFICATE FOR PAYMENT

In accordance with the Contract Documents, based on on-site observations and the data comprising the application, the Architect certifies to the Owner that to the best of the Architect's knowledge, information and belief the Work has progressed as indicated, the quality of the Work is in accordance with the Contract Documents, and the Contractor is entitled to payment of the AMOUNT CERTIFIED

AMOUNT CERTIFIED \$ 55,576.95

(Attach explanation if amount certified differs from the amount applied. Initial all figures on this Application and on the Continuation Sheet that are changed to conform with the amount certified.)

ARCHITECT: Jeffrey Luby Date: 08/10/2020

This Certificate is not negotiable. The AMOUNT CERTIFIED is payable only to the Contractor named herein. Issuance, payment and acceptance of payment are without prejudice to any rights of the Owner or Contractor under this Contract.

THE AMERICAN INSTITUTE OF ARCHITECTS, 1735 NEW YORK AVE., N.W., WASHINGTON, DC 20006-5242



(Schedule of Value - Work in Place)

Fax:

Progress Invoice No:

5

[illegible]

A ITEM NO.	B DESCRIPTION OF WORK	C UNITS	D QUANTITY VALUE	E UNIT PRICE	F TOTAL CONTRACT AMOUNT	G		H		I QUANTITY THIS PERIOD	J TOTAL THIS PERIOD	K		L MATERIAL STORED TOTAL THIS PERIOD	M TOTAL COMPLETED TO DATE	N BALANCE TO FINISH	O RETAINAGE		
						QUANTITY PREVIOUS APP.	APP.	TOTAL PREVIOUS APP.	APP.			QUANTITY THIS PERIOD	TOTAL THIS PERIOD					QUANTITY THIS PERIOD	TOTAL THIS PERIOD
BASE BID																			
201-B	Clearing and Grubbing	Acre	1	\$31,000.00	\$31,000.00	0.1		\$3,100.00		0	\$0.00	0	\$0.00	0	\$3,100.00	\$27,900.00	\$155.00		
202-A	Removal of Obstructions	LS	1	\$10,000.00	\$10,000.00	1		\$10,000.00		0	\$0.00	0	\$0.00	0	\$0.00	\$0.00	\$500.00		
202-B	Removal of Pavement, All Types and Depths	SY	591	\$35.00	\$20,685.00	537.67		\$18,818.45		0	\$0.00	0	\$0.00	0	\$0.00	\$1,866.55	\$940.92		
203-B	Excess Excavation, FM	CY	250	\$14.00	\$3,500.00	61.49		\$860.86		50	\$700.00	0	\$0.00	0	\$0.00	\$1,939.14	\$78.04		
203-EX	Borrow Excavation, AH, FME, Class B7-6	CY	100	\$30.00	\$3,000.00	71.14		\$2,134.20		0	\$0.00	0	\$0.00	0	\$0.00	\$865.80	\$106.71		
203-I	Site Grading	SY	170	\$27.00	\$4,590.00	0		\$0.00		170	\$4,590.00	0	\$0.00	0	\$0.00	\$0.00	\$229.50		
211-B	Topsoil for Slope Treatment, Contractor Furnished	CY	25	\$35.00	\$875.00	18.4		\$644.00		6.6	\$231.00	0	\$0.00	0	\$0.00	\$0.00	\$43.75		
211-D	Topsoil for Plant Pits, Contractor Furnished	CY	90	\$40.00	\$3,600.00	6.63		\$265.20		83.37	\$3,334.80	0	\$0.00	0	\$0.00	\$3,600.00	\$180.00		
216-B	Solid Sodding, Centipede	SY	500	\$8.00	\$4,000.00	581.82		\$4,634.56		111	\$888.00	0	\$0.00	0	\$0.00	\$5,542.56	\$277.13		
219-A	Watering	KGAL	80	\$20.00	\$1,600.00	0		\$0.00		8	\$160.00	0	\$0.00	0	\$0.00	\$1,440.00	\$8.00		
230-A	Shrub Planting, Knockout Rose	EA	31	\$20.00	\$620.00	30		\$600.00		0	\$0.00	0	\$0.00	0	\$0.00	\$20.00	\$30.00		
230-A	Shrub Planting, Juniper	EA	165	\$20.00	\$3,300.00	122		\$2,440.00		43	\$860.00	0	\$0.00	0	\$0.00	\$3,300.00	\$165.00		
230-B	Tree Planting, Natchez Grape Myrtle	EA	4	\$150.00	\$600.00	0		\$0.00		0	\$0.00	0	\$0.00	0	\$0.00	\$0.00	\$30.00		
230-D	Bed Preparation	SF	1000	\$3.00	\$3,000.00	1055.43		\$3,166.29		0	\$0.00	0	\$0.00	0	\$0.00	\$3,166.29	\$158.31		
230-F	Ground Cover and Shrub Planting, Big Blue Lirope	EA	675	\$12.50	\$8,437.50	370		\$4,625.00		305	\$3,812.50	0	\$0.00	0	\$0.00	\$8,437.50	\$421.88		
234-A	Temporary Silt Fence	LF	300	\$5.00	\$1,500.00	100		\$500.00		0	\$0.00	0	\$0.00	0	\$0.00	\$500.00	\$25.00		
237-A	Wattles, 12"	LF	100	\$8.00	\$800.00	30		\$240.00		20	\$160.00	0	\$0.00	0	\$0.00	\$400.00	\$20.00		
907-242-PP	Pedestrian Entry Arch, Per Plans	EA	1	\$11,500.00	\$11,500.00	1		\$11,500.00		0	\$0.00	0	\$0.00	0	\$0.00	\$11,500.00	\$575.00		
246-A	Sandbags	EA	100	\$10.00	\$1,000.00	0		\$0.00		0	\$0.00	0	\$0.00	0	\$0.00	\$1,000.00	\$0.00		
907-258-E	Trash Receptacle, Per Plans	EA	1	\$800.00	\$800.00	0		\$0.00		1	\$800.00	0	\$0.00	0	\$0.00	\$800.00	\$40.00		
907-258-J	Metal Bench, Per Plans	EA	2	\$1,200.00	\$2,400.00	0		\$0.00		0	\$0.00	21	\$2,400.00	0	\$0.00	\$2,400.00	\$120.00		
907-258-X	Bike Rack, Per Plans	EA	1	\$1,200.00	\$1,200.00	0		\$0.00		0	\$0.00	1	\$1,200.00	0	\$0.00	\$1,200.00	\$60.00		
304-H	Size 610 Crushed Stone Base, AEA	CY	155	\$75.00	\$11,625.00	16.41		\$1,230.75		0	\$0.00	0	\$0.00	0	\$0.00	\$1,230.75	\$61.54		
601-B	Class "B" Concrete Minor Structures	CY	4	\$700.00	\$2,800.00	0		\$0.00		2.15	\$1,505.00	0	\$0.00	0	\$0.00	\$1,295.00	\$75.25		
602-A	Reinforcing Steel	LBS	100	\$5.00	\$500.00	0		\$0.00		143.2	\$716.00	0	\$0.00	0	\$0.00	(\$216.00)	\$35.80		
603-PE	12" Corrugated Polyethylene Pipe	LF	60	\$100.00	\$6,000.00	20		\$2,000.00		4	\$400.00	0	\$0.00	0	\$0.00	\$2,400.00	\$120.00		
608-A	Concrete Sidewalk Without Reinforcement	SY	200	\$9.00	\$1,800.00	295.82		\$17,453.38		0	\$0.00	0	\$0.00	0	\$0.00	\$17,453.38	\$872.67		
907-608-E	Asphalt Pavement Texturing	SF	650	\$11.50	\$7,475.00	0		\$0.00		1047	\$12,040.50	0	\$0.00	0	\$0.00	\$12,040.50	\$602.03		
609-B	Concrete Header Curb	LF	840	\$25.00	\$21,000.00	782		\$19,550.00		0	\$0.00	0	\$0.00	0	\$0.00	\$1,450.00	\$977.50		
609-B	Small Concrete Median Island	LF	0	\$35.00	\$0.00	123		\$4,305.00		0	\$0.00	0	\$0.00	0	\$0.00	\$4,305.00	\$215.25		
613-A	Adjustment of Castings, Gratings, and Utility Apertureance	LS	1	\$4,000.00	\$4,000.00	0		\$0.00		1	\$4,000.00	0	\$0.00	0	\$0.00	\$4,000.00	\$200.00		
618-A	Maintenance of Traffic	LS	1	\$45,000.00	\$45,000.00	1		\$45,000.00		0	\$0.00	0	\$0.00	0	\$0.00	\$45,000.00	\$2,250.00		
620-A	Mobilization	LS	1	\$30,000.00	\$30,000.00	1		\$30,000.00		0	\$0.00	0	\$0.00	0	\$0.00	\$0.00	\$1,500.00		
907-626-G	Thermoplastic Detail Stripe, White 6"	LF	400	\$4.00	\$1,600.00	0		\$0.00		995	\$3,980.00	0	\$0.00	0	\$0.00	\$3,980.00	\$195.00		
907-626-G	Thermoplastic Detail Stripe, Yellow	LF	200	\$4.00	\$800.00	0		\$0.00		780	\$3,120.00	0	\$0.00	0	\$0.00	\$3,120.00	\$156.00		
907-626-H	Thermoplastic Legend, Bike Lane Symbol	EA	12	\$500.00	\$6,000.00	0		\$0.00		12	\$6,000.00	0	\$0.00	0	\$0.00	\$6,000.00	\$300.00		
907-626-H	Thermoplastic Legend, White	SF	72	\$10.00	\$720.00	0		\$0.00		72	\$720.00	0	\$0.00	0	\$0.00	\$720.00	\$36.00		
907-626-Z	Thermoplastic Legend, White 6" Equivalent	LF	1000	\$4.00	\$4,000.00	0		\$0.00		996	\$3,984.00	0	\$0.00	0	\$0.00	\$3,984.00	\$199.20		
630-A	Standard Roadside Signs, Sheet Aluminum, 0.080" Thickne	LF	25	\$75.00	\$1,875.00	55		\$4,125.00		0	\$0.00	0	\$0.00	0	\$0.00	\$4,125.00	\$206.25		
630-A	Standard Roadside Signs, Sheet Aluminum, 0.125" Thickne	LF	114	\$35.00	\$3,990.00	114		\$3,990.00		0	\$0.00	0	\$0.00	0	\$0.00	\$3,990.00	\$199.50		
630-C	Steel U-Section Posts, 3.0 To 3.5 LB/FT	EA	336	\$24.00	\$8,064.00	360		\$8,640.00		0	\$0.00	0	\$0.00	0	\$0.00	\$8,640.00	\$432.00		
699-A	Roadway Construction Staking	EA	1	\$5,000.00	\$5,000.00	1		\$5,000.00		0	\$0.00	0	\$0.00	0	\$0.00	\$5,000.00	\$250.00		
202-C	Removal and Replacement of Concrete Curb and Gutter	LF	32	\$90.00	\$2,880.00	112		\$10,080.00		0	\$0.00	0	\$0.00	0	\$0.00	\$10,080.00	\$504.00		
609-B	Small Concrete Median Island w/Brick Paver	LF	1450	\$55.00	\$79,750.00	1360		\$74,800.00		83	\$4,565.00	0	\$0.00	0	\$0.00	\$79,365.00	\$3,968.25		
BASE BID TOTAL								\$290,322.69			\$60,166.80		\$0.00		\$350,489.49	\$22,397.01	\$17,524.47		



Engineering Progress

August 4, 2020

City of Hattiesburg
Post Office Box 1898
Hattiesburg MS 39403-1898

Attn: Lamar Rutland, P.E.

**RE: Comprehensive Sewer Improvements Ph XII
City of Hattiesburg**

Dear Mr. Rutland:

Enclosed please find Pay Estimate No. 12 in the amount of \$247,122.08 for the above referenced project.

Should you have any questions and/or comments, please, do not hesitate to contact me.

Sincerely,

A handwritten signature in blue ink, appearing to read 'K. Wallace', is written over the word 'Sincerely'.

Kyle D. Wallace, P.E.
Project Engineer

/md

cc: DNA Underground, LLC
SDW files

093695.7220.74
MB 2019-58

RECEIVED
8/4/20

Contractor's Application for Payment No. 12

Application Period:	7/1/20 to 7/31/20	Application Date:	7/31/2020
To (Owner):	City of Hattiesburg	Via (Engineer):	
Project:	Comprehensive Sewer Improvements - Phase XII	Contract:	
Owner's Contract No.:	1273-5012	Contractor's Project No.:	

**Application For Payment
Change Order Summary**

Approved Change Orders	Number	Additions	Deductions	
1. ORIGINAL CONTRACT PRICE.....				\$ \$1,913,694.00
2. Net change by Change Orders.....				\$
3. Current Contract Price (Line 1 ± 2).....				\$ \$1,913,694.00
4. TOTAL COMPLETED AND STORED TO DATE (Column F total on Progress Estimates).....				\$ \$1,364,632.10
5. RETAINAGE:				
a. 5% X \$1,364,632.10 Work Completed.....				\$ \$68,231.61
b. 5% X Stored Material.....				\$
c. Total Retainage (Line 5.a + Line 5.b).....				\$ \$68,231.61
6. AMOUNT ELIGIBLE TO DATE (Line 4 - Line 5.c).....				\$ \$1,296,400.50
7. LESS PREVIOUS PAYMENTS (Line 6 from prior Application).....				\$ \$1,049,278.42
8. AMOUNT DUE THIS APPLICATION.....				\$ \$247,122.08
9. BALANCE TO FINISH, PLUS RETAINAGE (Column G total on Progress Estimates + Line 5.c above).....				\$ \$617,293.51

TOTALS
NET CHANGE BY
CHANGE ORDERS

Contractor's Certification

I hereby certify that the labor and materials listed on this request for payment has been used in the construction of this work or that all materials included in this request for payment and not yet incorporated into the construction are now on the site or stored at an approved location; and payment received from the last request for payment has been used to make payments to all first-tier subcontractors and suppliers except as listed below.

By: [Signature] Date: 8-3-20
Subscribed and sworn to me this 3rd day of August, 2020
Notary Public: [Signature]
My Commission Expires: May 6, 2024



Payment of: \$ 247,122.08
(Line 8 or other - attach explanation of the other amount)
is recommended by [Signature] (Engineer) 8-4-2020 (Date)
Payment of: \$ _____ (Line 8 or other - attach explanation of the other amount)
_____ (Owner) _____ (Date)
Funding or Financing Entity (if applicable) _____ (Date)

Contractor's Application

EJCDC® K C-620 Contractor's Application for Payment
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Page 1 of 4

Contractor's Application

EJCDC® C-620 Contractor's Application for Payment
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Page 2 of 4

Contractor's Application

EJCDC® C-620 Contractor's Application for Payment
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Page 3 of 4

Progress Estimate - Unit Price Work

Contractor's Application

For (Contract): Comprehensive Sewer Improvements - Phase XII										Application Number: 12												
Application Period: 7/1/20 to 7/31/20										Application Date: 31-Jul-20												
A			B				C			D		E		F								
Item			Contract Information				Quantity Previous App		Value Previous		Estimated Quantity Installed		Value of Work Installed to Date		Materials Presently Stored		Total Completed and Stored to Date (E+F+G)		% (H/I)		Balance to Finish (B - H)	
Bid Item No.	Description	Item Quantity	Units	Unit Price	Total Value	of Item (\$)																
80	Temporary Erosion Control	1	LS	\$ 20,000.00	\$	20,000.00	0.514	\$	10,280.00	0.196	\$3,920.00											
81	Maintenance of Traffic	1	LS	\$ 60,000.00	\$	60,000.00	0.575	\$	34,500.00	0.135	\$8,100.00											
82	Mobilization	1	LS	\$ 185,000.00	\$	185,000.00	1	\$	185,000.00													
Totals								\$	1,104,503.60		\$260,128.50											
								\$	1,913,694.00													



CITY OF HATTIESBURG
P. O. BOX 1898
HATTIESBURG, MS 39403-1898

July 30, 2020
Project No: 11258
Invoice No: 21584

Project Manager Shea McNease

Project 11258 Infrastructure Improvements on Katie Ave & Arledge St

Professional Services from June 28, 2020 to July 25, 2020

Phase CM Construction Management

Professional Personnel

	Hours	Rate	Amount	
RESIDENT PROJECT REPRESENTATIVE				
Jackson, Terry	26.00	85.00	2,210.00	
PROJECT ENGINEER				
McNease, Shea	8.50	175.00	1,487.50	
Totals	34.50		3,697.50	
Total Labor				3,697.50
		Total this Phase		\$3,697.50
		Total this Invoice		\$3,697.50

Please make checks payable to Shows, Dearman and Waits, Inc. Thank you.

093695. 7245. 13

MB 2018-212

301 Second Ave. | Hattiesburg, MS 39401 | (p) 601.544.1821 | sd-w.com



CITY OF HATTIESBURG
P. O. BOX 1898
HATTIESBURG, MS 39403-1898

July 30, 2020
Project No: 1273-S010
Invoice No: 21580

Project Manager John Weeks
Project 1273-S010 ComSWIP Sewer Phase VIII - Camp St. Area

Professional Services from June 28, 2020 to July 25, 2020

Phase CM Construction Phase Services

Professional Personnel

	Hours	Rate	Amount	
CADD TECHNICIAN I				
Simmons, Skyler	50.00	90.00	4,500.00	
Sullivan, Richard	1.00	105.00	105.00	
RESIDENT PROJECT REPRESENTATIVE				
Tingle, William	4.00	95.00	380.00	
PROJECT ENGINEER				
Weeks, John	8.00	175.00	1,400.00	
Totals	63.00		6,385.00	
Total Labor				6,385.00
		Total this Phase		\$6,385.00
		Total this Invoice		\$6,385.00

Please make checks payable to Shows, Dearman and Waits, Inc. Thank you.

093695.7220.70
MTB 2011-4/89-110

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CITY OF HATTIESBURG
P. O. BOX 1898
HATTIESBURG, MS 39403-1898

July 30, 2020
Project No: 1273-S012
Invoice No: 21563

Project Manager Kyle Wallace

Project 1273-S012 COMSWIP Sewer Improv. Phase XII - J Ed Turner & Forrest Ave.

Professional Services from June 28, 2020 to July 25, 2020

Phase CM Construction Management

Professional Personnel

	Hours	Rate	Amount
RESIDENT PROJECT REPRESENTATIVE			
Phillips, Michael	32.00	85.00	2,720.00
RESIDENT PROJECT REPRESENTATIVE			
Tingle, William	12.00	95.00	1,140.00
RESIDENT PROJECT REPRESENTATIVE			
Broome, Blake	155.00	45.00	6,975.00
PROJECT ENGINEER			
Wallace, Kyle	10.00	175.00	1,750.00
Totals	209.00		12,585.00
Total Labor			12,585.00
		Total this Phase	\$12,585.00
		Total this Invoice	\$12,585.00

Please make checks payable to Shows, Dearman and Waits, Inc. Thank you.

093695.7220.74
MB 2011-4/89-110

301 Second Ave. | Hattiesburg, MS 39401 | (p) 601.544.1821 | sd-w.com



CITY OF HATTIESBURG
P. O. BOX 1898
HATTIESBURG, MS 39403-1898

July 30, 2020
Project No: 11256
Invoice No: 21559

Project Manager Kyle Wallace
Project 11256 CIPP Sewer in Various Locations

Professional Services from June 28, 2020 to July 25, 2020

Phase CM Construction Phase Services

Professional Personnel

	Hours	Rate	Amount	
RESIDENT PROJECT REPRESENTATIVE				
Jackson, Terry	49.00	85.00	4,165.00	
PROJECT ENGINEER				
Wallace, Kyle	14.50	175.00	2,537.50	
Weeks, John	9.00	175.00	1,575.00	
Totals	72.50		8,277.50	
Total Labor				8,277.50
		Total this Phase		\$8,277.50
		Total this Invoice		\$8,277.50

Please make checks payable to Shows, Dearman and Waits, Inc. Thank you.

093695.7220.75
MB 2011-4/89-110

301 Second Ave. | Hattiesburg, MS 39401 | (p) 601.544.1821 | sd-w.com



CITY OF HATTIESBURG
P. O. BOX 1898
HATTIESBURG, MS 39403-1898

July 30, 2020
Project No: 11254
Invoice No: 21558

Project Manager Kyle Wallace

Project 11254 Infrastructure Improvements on N 40th & N 39th Avenues

Professional Services from June 28, 2020 to July 25, 2020

Professional Personnel

	Hours	Rate	Amount	
CADD TECHNICIAN I				
Simmons, Skyler	1.00	90.00	90.00	
Sullivan, Richard	.50	105.00	52.50	
ENGINEERING INTERN				
Thomas, Louis	5.00	115.00	575.00	
Totals	6.50		717.50	
Total Labor				717.50
		Total this Invoice		\$717.50

Please make checks payable to Shows, Dearman and Waits, Inc. Thank you.

093695. 7245.12

MB 2012-1/34

301 Second Ave. | Hattiesburg, MS 39401 | (p) 601.544.1821 | sd-w.com

Hattiesburg, Mississippi does hereby certify to Regions Bank, as trustee in respect to the referenced Bonds (the Trustee”):

- (1) The amounts herein requisitioned to be paid to the above-designated payees are for the items or services hereinabove described.
- (2) The items or services listed above for which payment is proposed to be made hereunder have not formed the basis for any payment heretofore made from the Series 2016 Project Fund Construction Account.
- (3) Each of the items was reasonable and necessary in connection with the “Construction Project” being financed pursuant to the Loan Agreement dated as of August 18, 2016 (the “Loan Agreement”).
- (4) The payment herein authorized and approved is a proper charge against the Series 2016 Project Fund Construction Account as provided for in Section 3 of the Loan Agreement.
- (5) The invoices or statements from the contractor, vendor or other payee or other document supporting the amounts requisitioned herein are on file with the City.

CITY OF HATTIESBURG, MISSISSIPPI

By: _____
Title: Mayor or City Clerk
(Authorized City Representative)

As Approved by:

Regions Commercial Equipment Finance, LLC
As Purchaser

Authorized Officer

RESOLUTION OF THE CITY COUNCIL OF THE CITY OF HATTIESBURG, MISSISSIPPI (THE “CITY”) AUTHORIZING REQUISITION NO. 70 FROM THE PROJECT FUND CONSTRUCTION ACCOUNT IN CONNECTION WITH THAT CERTAIN LOAN AGREEMENT, DATED AS OF AUGUST 18, 2016, BY AND BETWEEN THE MISSISSIPPI DEVELOPMENT BANK AND THE CITY.

Whereas, the City Council of the City now finds it necessary to approve Requisition No. **70** from the Project Fund Construction Account under the Loan in the total aggregate amount of **\$334,361.53** for the purpose of paying Water & Sewer Projects in connection with the loan as more particularly described in Exhibit A.

SECTION 1. The City Council of the City hereby authorizes and approves Requisition No. **70** from the Project Fund Construction Account under the Loan in the total aggregate amount of **Three Hundred Thirty-Four Thousand Three Hundred Sixty-One and 53/100 dollars (\$334,361.53)** for the purpose of paying Water & Sewer Projects in connection with the loan as more particularly described in Exhibit A.

SECTION 3. The Mayor and City Clerk are hereby authorized and directed for and on behalf of the City to take any and all action as may be required by the City to carry out and give effect to the aforesaid documents authorized pursuant to this Resolution and to execute all papers, documents, certificates and other instruments that may be required for the carrying out of the authority conferred by this Resolution in order to evidence the authority.

ABSENT:

The motion having received the affirmative vote of a majority of the Council members present, the President declared the motion carried and the resolution adopted, on this the **18th** day of **August, 2020**.

(SEAL)

ATTEST:

ADOPTED:

CLERK OF COUNCIL

PRESIDENT

The above and foregoing Resolution having been submitted to and approved by the Mayor, this the **18th** day of **August, 2020**.

ATTEST:

APPROVED:

CITY CLERK

MAYOR

EXHIBIT A

PROJECT FUND CONSTRUCTION ACCOUNT REQUISITION

Hattiesburg, Mississippi does hereby certify to Regions Bank, as trustee in respect to the referenced Bonds (the Trustee”):

- (1) The amounts herein requisitioned to be paid to the above-designated payees are for the items or services hereinabove described.
- (2) The items or services listed above for which payment is proposed to be made hereunder have not formed the basis for any payment heretofore made from the Series 2016 Project Fund Construction Account.
- (3) Each of the items was reasonable and necessary in connection with the “Construction Project” being financed pursuant to the Loan Agreement dated as of August 18, 2016 (the “Loan Agreement”).
- (4) The payment herein authorized and approved is a proper charge against the Series 2016 Project Fund Construction Account as provided for in Section 3 of the Loan Agreement.
- (5) The invoices or statements from the contractor, vendor or other payee or other document supporting the amounts requisitioned herein are on file with the City.

CITY OF HATTIESBURG, MISSISSIPPI

By: _____
Title: Mayor or City Clerk
(Authorized City Representative)

As Approved by:

Regions Commercial Equipment Finance, LLC
As Purchaser

Authorized Officer



Memorandum

To: Mayor Toby Barker and Members of City Council

From: Lamar Rutland

cc:

Date: Tuesday, August 18, 2020

Re: Approve Letter Agreement with Neel-Schaffer, Inc. for Engineering Services related to the Lincoln Road and Mobile Street Paving Project and authorize the Mayor to execute in duplicate.
File Number: 2020-554
Minute Book #

Summary

Approve letter agreement with Neel-Schaffer, Inc. for Engineering Services related to the Lincoln Road and Mobile Street Paving Project: Authorize Mayor to execute in duplicate.

Recommendation Statement

I recommend approval of this item.

Please place this on the August 18, 2020 City Council meeting for consideration.

August 7, 2020

Honorable Toby Barker
Mayor
City of Hattiesburg
P.O. Box 1898
Hattiesburg, MS 39403-1898

RE: LINCOLN ROAD AND MOBILE STREET PAVING PROJECT

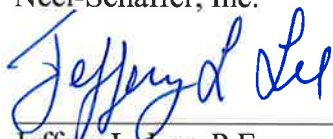
Dear Mayor Barker:

Neel-Schaffer is pleased to offer our professional services to the City of Hattiesburg in reference to the Lincoln Road and Mobile Street Paving Project. Our services will be provided for a fixed fee of \$81,160.00 and will be in accordance with Exhibit A – Scope of Work, Exhibit B – Project Map and Exhibit C – General Terms and Conditions, which are attached hereto and made part of this Letter Agreement.

Please indicate your acceptance of this Agreement by executing all three (3) original documents and returning one to our office. Thank you for the opportunity to be of continued service to the City of Hattiesburg.

Sincerely,

Neel-Schaffer, Inc.



Jeffery L. Lee, P.E.
Vice President

ACCEPTED:

BY: _____ DATE: _____

Attachments

EXHIBIT A - Scope of Work

This project generally includes milling, base repairs as needed, asphalt paving and striping of collector and local streets in the Mobile Street and Lincoln Road areas. Mobile Street will be milled and paved from Hwy 42 to 2nd Street in the base bid and an additive alternate will include milling and paving of Mobile Street from Front Street to Buschman Street.

The second area includes the milling and paving of Lincoln Road from 28th Ave to Hwy 11 and from Hwy 11 to Hwy 49 and adjacent local streets. Local roads/streets in this area include Wall Street, Tucker Street (Lincoln Rd to Byron Street), Byron Street (Hwy 11 to Lincoln Rd), Fowler Street (Lincoln Rd to Byron St), Hill Street (Lincoln Rd to Byron St), Stone Street (Lincoln Rd to Byron St) Lott Street and Houston Street. Lincoln Road work will be included in the base bid while local streets will be included in an additive alternate bid.

I - Items included in the Scope of Work:

1. Develop base drawings using aerial maps.
2. Development of Construction Plans and Specifications
3. Development of Final Cost Estimate and Bid Documents
4. Bidding Assistance
5. Construction Administration and Inspection

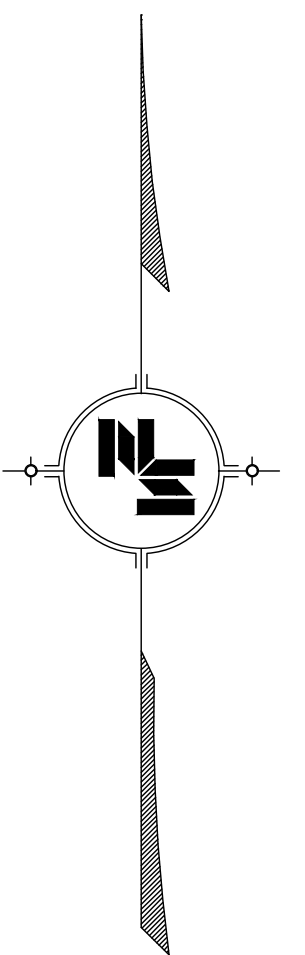
II- Items NOT included in the Scope of Work:

1. Boundary and Topographic Surveys
2. Property Acquisition Services
3. Environmental, Cultural or Historical Assessments



LINCOLN RD.
12160 SY

WALL ST.
760 SY



NOTICE TO DRAWING HOLDER

NEEL-SCHAFER, INC., HERINAFTER REFERRED TO AS THE ENGINEER HAS PREPARED AND FURNISHED THIS DRAWING TO THE OWNER FOR USE ON THIS PROJECT ONLY. THIS DRAWING SHOULD NOT BE USED ON EXTENSIONS OF THIS PROJECT OR ON ANY OTHER PROJECT. ANY REUSE OF THIS DRAWING, WITHOUT WRITTEN VERIFICATION OR ADAPTATION BY THE ENGINEER, SHALL BE AT THE REUSER'S SOLE RISK AND THE REUSER SHALL INDEMNIFY AND HOLD HARMLESS THE ENGINEER FROM ALL CLAIMS, DAMAGES, LOSSES AND EXPENSES, INCLUDING ATTORNEY'S FEES ARISING OUT OF OR RESULTING THEREFROM.

REVISIONS			DRAWING INFORMATION	
NO.	DATE	BY	DESCRIPTION	
				N-S PROJECT NO.: 15406.000
				FILENAME: 2020 Paving Exhibit.dwg
				SCALE: 1" = 100'
				SURVEYED BY: N/A
				DSGN: JLL DATE: 07/2020
				DRWN: ZAW DATE: 07/2020
				CHKD: DATE:
				QA/QC: DATE:

LINCOLN ROAD PAVING PROJECT

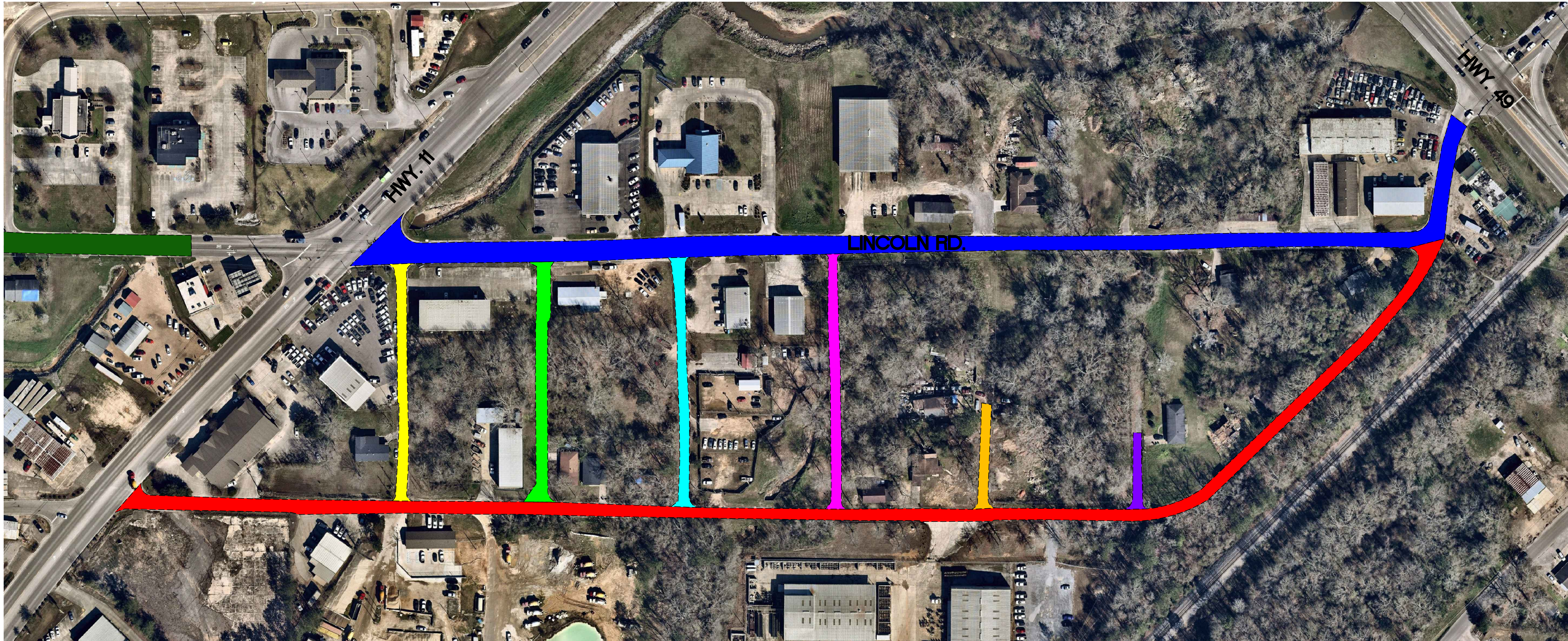
HATTIESBURG, MISSISSIPPI



EXHIBIT B

WORKING NUMBER:

DRAWING NUMBER:



LINCOLN RD.
6750 SY

TUCKER ST.
810 SY

HILL ST.
900 SY

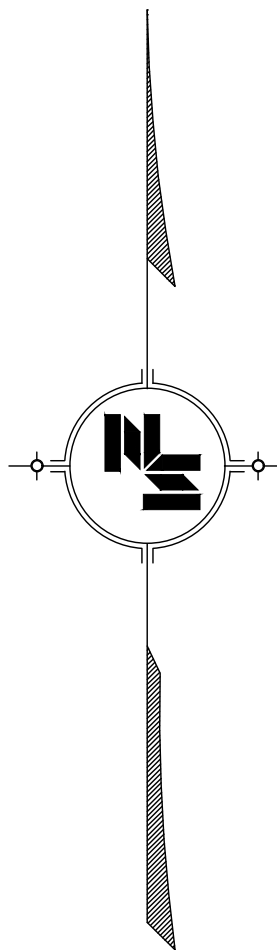
LOTT ST.
360 SY

BYRON ST.
5670 SY

FOWLER ST.
1080 SY

STONE ST.
900 SY

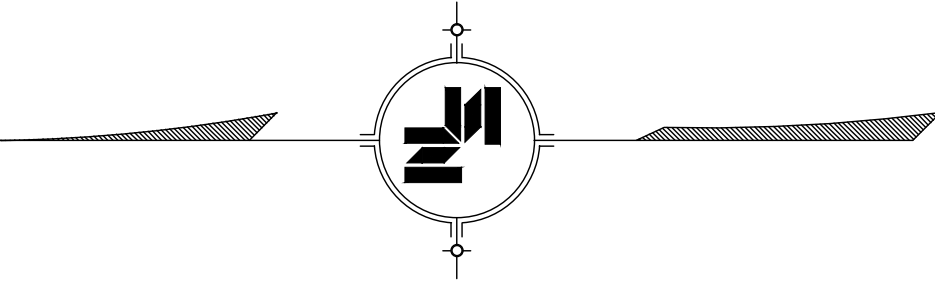
HOUSTON ST.
270 SY



NOTICE TO DRAWING HOLDER NEEL-SCHAFFER, INC., HERINAFTER REFERRED TO AS THE ENGINEER HAS PREPARED AND FURNISHED THIS DRAWING TO THE OWNER FOR USE ON THIS PROJECT ONLY. THIS DRAWING SHOULD NOT BE USED ON EXTENSIONS OF THIS PROJECT OR ON ANY OTHER PROJECT. ANY REUSE OF THIS DRAWING, WITHOUT WRITTEN VERIFICATION OR ADAPTATION BY THE ENGINEER, SHALL BE AT THE REUSER'S SOLE RISK AND THE REUSER SHALL INDEMNIFY AND HOLD HARMLESS THE ENGINEER FROM ALL CLAIMS, DAMAGES, LOSSES AND EXPENSES, INCLUDING ATTORNEY'S FEES ARISING OUT OF OR RESULTING THEREFROM.	REVISIONS			DRAWING INFORMATION		LINCOLN ROAD PAVING PROJECT HATTIESBURG, MISSISSIPPI		EXHIBIT B	
	NO.	DATE	BY	DESCRIPTION	N-S PROJECT NO.: 15406.000			WORKING NUMBER:	DRAWING NUMBER:
					FILENAME: 2020 Paving Exhibit.dwg				
					SCALE: 1" = 80'				
					SURVEYED BY: N/A				
					DSGN: JLL DATE: 07/2020				
					DRWN: ZAW DATE: 07/2020				
					CHKD: DATE:				
					QA/QC: DATE:				



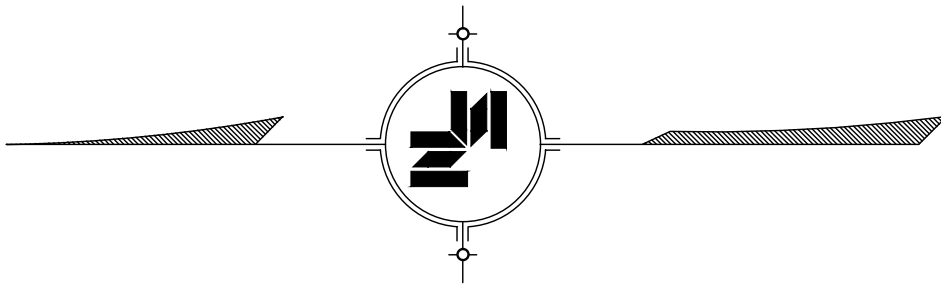
MOBILE ST.
16011 SY



NOTICE TO DRAWING HOLDER NEEL-SCHAFER, INC., HERINAFTER REFERRED TO AS THE ENGINEER HAS PREPARED AND FURNISHED THIS DRAWING TO THE OWNER FOR USE ON THIS PROJECT ONLY. THIS DRAWING SHOULD NOT BE USED ON EXTENSIONS OF THIS PROJECT OR ON ANY OTHER PROJECT. ANY REUSE OF THIS DRAWING, WITHOUT WRITTEN VERIFICATION OR ADAPTATION BY THE ENGINEER, SHALL BE AT THE REUSER'S SOLE RISK AND THE REUSER SHALL INDEMNIFY AND HOLD HARMLESS THE ENGINEER FROM ALL CLAIMS, DAMAGES, LOSSES AND EXPENSES, INCLUDING ATTORNEY'S FEES ARISING OUT OF OR RESULTING THEREFROM.	REVISIONS			DRAWING INFORMATION		MOBILE STREET PAVING PROJECT HATTIESBURG, MISSISSIPPI			EXHIBIT B	
	NO.	DATE	BY	DESCRIPTION	N-S PROJECT NO.: 15406.000					
					FILENAME: 2020 Paving Exhibit.dwg					
					SCALE: 1" = 80'					
					SURVEYED BY: N/A					
					DSGN: JLL DATE: 07/2020					
					DRWN: ZAW DATE: 07/2020					
					CHKD: DATE:				WORKING NUMBER:	DRAWING NUMBER:
					QA/QC: DATE:					



MOBILE ST.
16011 SY



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					CHKD: DATE:				WORKING NUMBER:	DRAWING NUMBER:
					QA/QC: DATE:					

EXHIBIT C
GENERAL TERMS AND CONDITIONS
PROFESSIONAL SERVICES

1. **Relationship between Consultant and Client.** Neel Schaffer, Inc. ("Consultant") shall serve as the Client's professional consultant in those phases of the Project to which this Agreement applies. The relationship is that of a buyer and seller of professional services and it is understood that the parties have not entered into any joint venture or partnership with the other. Consultant shall not be considered to be the agent or fiduciary of the Client.

contractor's failure to furnish and perform its work in accordance with the plans and specifications.

In the event Consultant's scope of services does not include the observation and monitoring of work performed by Client's separate contractors, the Client assumes all responsibility for construction observation, and Client waives any claims against Consultant arising therefrom.
2. **Responsibility of Consultant.** Consultant will perform services under this Agreement in a manner consistent with that standard of care and skill ordinarily exercised by members of the profession currently practicing in the same locality under similar conditions (the "Standard of Care"). No other representation, warranty or guarantee, express or implied, is included or intended in this Agreement or in any report, opinion, document, or otherwise.
3. **Responsibility of the Client.** Client shall provide all information and criteria as to its requirements for the Project, including budgetary limitations. Client shall arrange for Consultant to enter upon public and private property and obtain all necessary approvals required from all governmental authorities having jurisdiction over the Project. Client shall give prompt written notice to Consultant whenever Client observes or otherwise becomes aware of any development that affects the scope or timing of Consultant's services.

The Client shall promptly report to the Consultant any defects or suspected defects in the Consultant's services of which the Client becomes aware, so that Consultant may take measures to minimize the consequences of such a defect. Should legal liability for the defects exist, failure by the Client to notify the Consultant shall relieve the Consultant of any liability for costs of remedying the defects above the sum such remedy would have cost had prompt notification been given when such defects were first discovered.
4. **Construction Phase Services.** If Consultant's scope of services includes the observation and monitoring of work performed by Client's separate contractors, Consultant shall provide personnel to observe and monitor the work in accordance with the Standard of Care in order to ascertain that it is being performed, in general, in accordance with the plans and specifications. Consultant shall not supervise, direct, or have control over the contractor's work. Consultant shall not have authority over or responsibility for construction means, methods, techniques, sequences or procedures or for safety precautions and programs in connection with the work of the contractor. Consultant does not guarantee the performance of the construction contract by the contractor and does not assume responsibility for the
5. **Designation of Authorized Representatives.** Each party shall designate one or more persons to act with authority on its behalf with respect to appropriate aspects of the Project. The persons designated shall review and respond promptly to all communications received from the party.
6. **Ownership of Documents.** All reports, notes, drawings, specifications, data, calculations, and other documents, including those in electronic form prepared by Consultant are instruments of Consultant's service that shall remain Consultant's property. The Client agrees not to use Consultant generated documents for projects other than the project for which the documents were prepared by Consultant, or for future modifications to the Project, without Consultant's express written permission. Any reuse or distribution to third parties without such express written permission or project-specific adaptation by Consultant will be at the Client's sole risk and without liability to Consultant or its employees, subsidiaries, and subconsultants.
7. **Opinion of Costs.** When required as a part of its scope of services, Consultant will furnish opinions or estimates of construction cost on the basis of Consultant's experience and qualifications, but Consultant does not guarantee the accuracy of such estimates. The parties recognize that Consultant has no control over the cost of labor, material, equipment, or services furnished by others or over market conditions or contractors' methods of determining prices.
8. **Changes or Delays.** In the event new developments or circumstances beyond the control of Consultant require a change in the scope of services or schedule, Consultant shall be entitled to an equitable adjustment to the fee and/or schedule. Such events include, but are not limited to, unreasonable delays caused by Client's failure to provide specified direction or information, delays caused by Client's other contractors or consultants, or if Consultant's failure to perform is due to any act of God, labor shortage, fire, inclement weather, act of governmental authority, failure of transportation, accident, power failure, or interruption or any other cause beyond the reasonable control of Consultant.

EXHIBIT C
GENERAL TERMS AND CONDITIONS
PROFESSIONAL SERVICES

9. **Suspension of Services.** Client may, at any time, by written notice, suspend further services by Consultant. Upon receipt of such notice, Consultant shall take all reasonable steps to mitigate costs allocable to the suspended services. Client, however, shall pay all reasonable and necessary costs associated with such suspension including the cost of assembling documents, personnel and equipment, rescheduling or reassignment costs necessary to maintain continuity and the staff required to resume the services upon expiration of the suspension. Consultant will not be obligated to provide the same personnel in the event the period of any suspension exceeds 30 days.
10. **Termination.** This Agreement may be terminated by either party upon 30 days' written to the other party. Upon such termination, Client shall pay Consultant for all services performed up to the date of termination. If Client is the terminating party, Client shall pay Consultant all reasonable cost and expenses incurred by Consultant in effecting the termination, including but not limited to non-cancellable commitments and demobilization costs, if any.
11. **Indemnification.** Consultant shall indemnify and hold harmless Client from and against those damages and costs (including reasonable attorneys' fees) that Client incurs as a result of third party claims for personal injury or property damage to the extent caused by the negligent acts, errors or omissions of Consultant.
- To the fullest extent permitted by law, Client shall indemnify and hold harmless Consultant from and against those damages and costs (including reasonable attorneys' fees) that Consultant incurs as a result of third party claims for personal injury or property damage to the extent caused by the negligent acts, errors or omissions of Client.
12. **Legal Proceedings.** In the event Consultant or its employees are required by Client to provide testimony, answer interrogatories, produce documents or otherwise provide information in relation to any litigation, arbitration, proceeding or other inquiry arising out of Consultant's services, where Consultant is not a party to such proceeding, Client will compensate Consultant for its services and reimburse Consultant for all related direct costs incurred in connection with providing such testimony or information. This provision shall not apply in the event Client engages Consultant to provide expert testimony or litigation support, which services shall be the subject of a separate agreement or an amendment to this Agreement.
13. **Successors and Assigns.** The terms of this Agreement shall be binding upon and inure to the benefit of the parties and their respective successors and assigns;
- provided however, that neither party shall assign this Agreement in whole or in part without the prior written consent of the other party.
14. **Insurance.** Consultant agrees to maintain the following insurance coverage with the following limits of insurance during the performance of Consultant's work hereunder:
- (a) Commercial General Liability insurance with standard ISO coverage and available limits of \$1,000,000 per occurrence and \$2,000,000 general aggregate;
 - (b) Automobile Liability insurance with standard ISO coverage and available combined single limits of \$1,000,000 per accident;
 - (c) Worker's Compensation insurance with limits as required by statute and Employer's Liability insurance with limits of \$1,000,000 per employee for bodily injury by accident/\$1,000,000 per employee for bodily injury by disease/\$1,000,000 policy limit for disease; and
 - (d) Professional Liability insurance covering Consultant's negligent acts, errors, or omissions in the performance of professional services with available limits of \$1,000,000 per claim and annual aggregate.
- Consultant shall provide evidence of procuring the above insurance coverages by delivering a certificate of insurance to Client prior to the start of Consultant's work and annually upon renewal of coverage. Consultant shall cause Client to be named as an additional insured on Consultant's commercial general liability policy, which shall be primary and noncontributory.
15. **Information Provided by the Client.** Consultant shall be entitled to rely upon, without liability, the accuracy and completeness of any and all information provided by Client, without the obligation of independent verification.
16. **Consequential Damages.** Neither Client nor Consultant shall be liable to the other or shall make any claim for any special, incidental, indirect or consequential damages arising out of, or connected in any way to the Project or this Agreement. This mutual waiver includes, but is not limited to, damages related to loss of use, loss of profits, loss of income, loss of reputation, loss of business or diminution of property value and shall apply regardless of legal theory such damages are alleged including negligence, strict liability, breach of contract and breach of warranty.
17. **Payment.** Unless agreed to otherwise, Consultant shall submit monthly invoices to the Client. Payment in full

EXHIBIT C
GENERAL TERMS AND CONDITIONS
PROFESSIONAL SERVICES

shall be due upon receipt of the invoice. Payment of any invoices by the Client shall be taken to mean that the Client is satisfied with the Consultant's services to the date of the payment and is not aware of any deficiencies in those services. If payments are delinquent after 30 days from invoice date, the Client agrees to pay interest on the unpaid balance at the rate of one percent (1%) per month. If the Client fails to make payments; then Consultant, after giving seven (7) days written notice to the Client, may suspend services until the Client has paid in full all amounts due for services, expenses, and other related charges without recourse to the Client for loss or damage caused by such suspension. The Client waives any and all claims against the Consultant for any such suspension. Payment for Consultant's services is not contingent on any factor, except the Consultant's ability to provide services in a manner consistent with that Standard of Care. Payment of invoices shall not be subject to any discounts, set-offs or back-charges unless agreed to in writing by both parties. If the Client contests an invoice, the Client may withhold only that portion so contested and shall pay the undisputed portion, after the Client has notified Consultant in writing within 30 days of receiving the invoice and shall identify the specific cause of the disagreement and the amount in dispute.

18. **Force Majeure.** Neither Client nor Consultant shall be liable for any fault or delay caused by any contingency beyond their control, including but not limited to, acts of God, wars, strikes, walkouts, fires, natural calamities, or demands or requirements of governmental agencies.
19. **Compliance with Laws.** To the extent they apply to its employees or its services, Consultant shall exercise due professional care to comply with all applicable laws, including ordinances of any political subdivisions or governing agencies.
20. **Invalid Terms.** If any provisions of this Agreement are held to be invalid or unenforceable, the remaining provisions shall be valid and binding as if the unenforceable provisions were never included in the Agreement.
21. **Governing Law.** This Agreement shall be governed by and construed in accordance with the laws of the state where the services are performed.
22. **Dispute Resolution.** All disputes, controversies or claims, of whatever kind or character, between the Parties, their agents and/or principals, arising out of or in connection with the subject matter of this Agreement shall be litigated in a court of competent jurisdiction.
23. **Additional Services.** Consultant shall be entitled to an equitable adjustment of its fee for services resulting from significant changes in the general scope, extent or

character of the Project or its design including, but not limited to, changes in size, complexity, Client's schedule, construction schedule, character of construction or method of financing; and revising previously accepted studies, reports, design documents or other documents when such revisions are required by changes in laws, rules, regulations, ordinances, codes or orders enacted subsequent to the preparation of such studies, reports or documents, or are due to any other causes beyond Consultant's control.

24. **Amendment.** This Agreement may only be amended in writing and where such amendment is executed by a duly authorized representatives of each party.
25. **Entire Understanding of Agreement.** This Agreement represents and incorporates the entire understanding of the parties hereto, and each party acknowledges that there are no warranties, representations, covenants or understandings of any kind, matter or description whatsoever, made by either party to the other except as expressly set forth herein. Client and Consultant hereby agree that any purchase orders, invoices, confirmations, acknowledgments or other similar documents executed or delivered with respect to the subject matter hereof that conflict with the terms of this Agreement shall be null, void and without effect to the extent they conflict with the terms of this Agreement.
26. **Survival of Provisions.** The provisions of this Agreement shall continue to be binding upon the parties hereto notwithstanding termination of this Agreement for any reason.
27. **Nonwaiver.** No waiver by a party of any provision of this Agreement shall be deemed to have been made unless in writing and signed by such party.
28. **Identity of Project Owner.** Within ten (10) days of the entry of this Agreement, Client, if Client is not the Project Owner, shall provide to Consultant the Project Owner's full legal name; Project Owner's physical address; Project Owner's mailing address; and the name, physical address and mailing address of the Client's point of contact with the Owner for the Project.
29. **Conflicting Terms.** In the event that there are multiple agreements with varying or conflicting terms and conditions between Client and Consultant, the terms and conditions contained in this Agreement shall supersede and have precedence over any other conflicting terms and conditions contained in any other written or oral agreement.
30. **Course of Dealing.** Client and Consultant agree that these General Terms and Conditions establish a course of dealing between them and shall apply to this and all

EXHIBIT C
GENERAL TERMS AND CONDITIONS
PROFESSIONAL SERVICES

other services, projects, agreements or dealings between the them, unless Client or Consultant gives the other written notice of objection to any term or condition before commencement of performance in connection with any other provision of services or projects involving the two of them.

[The remainder of this page intentionally left blank]



Memorandum

To: Mayor Toby Barker and Members of City Council

From: Lamar Rutland

cc:

Date: Tuesday, August 18, 2020

Re: Approve Agreement with the Natural Resources Conservation Services for an Emergency Watershed Protection (EWP) Project at Campbell Loop #3, Oceola McCarty Park, McLeod @ Gordon Creek, Forrest to McCleod & Hi-Fi Crusin for a total cost of \$1,523,250.00 of which \$1,142,437.50 is Federally funded and \$380,812.50 is City funded and authorize the Mayor to execute any and all documents required for the project pre-application, application, and other required documents.
File Number: 2020-570
Minute Book #

Summary

Approve Agreement with the Natural Resources Conservation Services for an Emergency Watershed Protection (EWP) Project at Campbell Loop #3, Oceola McCarty Park, McLeod @ Gordon Creek, Forrest to McCleod & Hi-Fi Crusin for a total cost of \$1,523,250.00 of which \$1,142,437.50 is Federally funded and \$380,812.50 is City funded; Authorize the Mayor to execute any and all documents required for the project pre-application, application, and other required documents.

Recommendation Statement

I recommend approval of this item.

Please place this on the August 18, 2020 City Council meeting for consideration.

RECIPIENT CONTACT INFORMATION

RECIPIENT ORGANIZATION NAME: City of Hattiesburg

Recipient Project Manager for Agreement	
Name:	Lamar Rutland
Title:	Director of Engineering
Street Address:	212 East Front Street
City:	Hattiesburg
Zip Code:	39401
PO Box:	PO Box 1898
Zip Code:	39403-1898
Office Phone:	601-545-4540
Cell Phone:	601-606-2077
Fax Number:	601-545-4642
Email Address:	lrutland@hattiesburgms.com

Recipient Financial Point of Contact	
Name:	Connie Everett
Title:	Chief Financial Officer
Street Address:	200 Forrest Street
City:	Hattiesburg
Zip Code:	39401
PO Box:	PO Box 1898
Zip Code:	39401
Office Phone:	601-545-4680
Cell Phone:	
Fax Number:	601-545-4563
Email Address:	ceverett@hattiesburgms.com

Recipient Official Authorized to Sign the Agreement	
Name:	Toby Barker
Title:	Mayor
Street Address:	200 Forrest Street
City:	Hattiesburg
Zip Code:	39401
PO Box:	PO Box 1898
Zip Code:	39403
Office Phone:	601-545-4501
Cell Phone:	
Fax Number:	601-545-4608
Email Address:	mayor@hattiesburgms.com

April 27, 2020

Kurt Readus, State Conservationist
Natural Resources Conservation Service
100 W. Capitol Street, Suite 1321
Jackson, MS 39269-1602

RE: Emergency Watershed Protection (EWP) Assistance Request

Dear Mr. Readus:

We are requesting Federal assistance under the provisions of Section 216 of the Flood Control Act of 1950, Public Law 81-516 or Section 403 of the Agricultural Credit Act Of 1978, Public Law 95-334, to restore damages sustained in **City of Hattiesburg** by the extreme rainfall that occurred during **April 13, 2020** storm event. Roads, streams, utilities and structures in our area were adversely impacted as a result of this storm event.

We understand that as sponsors of an Emergency Watershed Protection (EWP) Program project, our responsibilities will include acquiring land rights and potentially any permits needed for construction. We also agree to operate and maintain the proposed measures. We are prepared to provide local funding and support for the cost of construction work in dollars.

The administrative and technical contact person for our organization is:

Lamar Rutland, Director of Engineering
P O Box 1898
Hattiesburg, MS 39403-1898
601-545-4540
lrutland@hattiesburgms.com

Thank you for your consideration of our request

Sincerely,

Toby Barker, Mayor

**PLEASE COMPLETE HIGHLIGHTED AREAS AND PLACE DOCUMENT ON
SPONSOR LETTERHEAD BEFORE RETURNING**

April 27, 2020 (Don't edit this date)

Kurt Readus, State Conservationist
Natural Resources Conservation Service
100 W. Capitol Street, Suite 1321
Jackson, MS 39269-1602

RE: Emergency Watershed Protection (EWP) Assistance Request

Dear Mr. Readus:

We are requesting Federal assistance under the provisions of Section 216 of the Flood Control Act of 1950, Public Law 81-516 or Section 403 of the Agricultural Credit Act Of 1978, Public Law 95-334, to restore damages sustained in **City of Hattiesburg** by the extreme rainfall that occurred during **April 13, 2020** storm event. Roads, streams, utilities and structures in our area were adversely impacted as a result of this storm event.

We understand that as sponsors of an Emergency Watershed Protection (EWP) Program project, our responsibilities will include acquiring land rights and potentially any permits needed for construction. We also agree to operate and maintain the proposed measures. We are prepared to provide local funding and support for the cost of construction work in dollars.

The administrative and technical contact person for our organization is:

NAME, TITLE

MAILING ADDRESS

PHONE

E-MAIL

Thank you for your consideration of our request

Sincerely,

SIGNATURE

PRINT NAME

RECIPIENT CONTACT INFORMATION

RECIPIENT ORGANIZATION NAME: City of Hattiesburg

Recipient Project Manager for Agreement
Name:
Title:
Street Address:
City:
Zip Code:
PO Box:
Zip Code:
Office Phone:
Cell Phone:
Fax Number:
Email Address:

Recipient Financial Point of Contact
Name:
Title:
Street Address:
City:
Zip Code:
PO Box:
Zip Code:
Office Phone:
Cell Phone:
Fax Number:
Email Address:

Recipient Official Authorized to Sign the Agreement
Name:
Title:
Street Address:
City:
Zip Code:
PO Box:
Zip Code:
Office Phone:
Cell Phone:
Fax Number:
Email Address:

Approved EWP Site Agreement Package Instructions and Checklist for Sponsors Federal Contract

Sponsor: City of Hattiesburg

EWP Site Name: Campbell Loop #3, Ocoola McCarty Park, McLeod @ Gordon Creek,
Forrest To McLeod & Hi-Fi Crusin

The EWP site listed above that you submitted has been approved for funding by NRCS. In order to efficiently move forward with the requirements associated with this site being approved, the following checklist has been developed to assist you (the sponsor) in providing NRCS with the required items needed to ensure continued funding and project completion. Failure to provide the items listed below will delay the start of your project and could result in the termination of project funding if applicable deadlines are not met.

Attached behind this checklist are the following items that will need to be properly filled out and the originals returned to NRCS. Please use this checklist as a guide to ensure that the documents are completed according to the instructions given and that you have completed each required document.

Document Checklist and Instructions:

____ **1. NRCS-ADS-78:** This two page document should be signed on page 2 by the Mayor (for city projects) or the President of the Board of Supervisors (for county projects) and attested by the chancery clerk.

____ **2. Title of Opinion:** Attached with this package is a sample title of opinion letter which is simply an example of what a title of opinion looks like. Your city attorney or county attorney must copy the sample letter's paragraph onto the attorney's official letterhead and sign it. The attorney is certifying that the sponsor has acquired the temporary easements necessary for a contractor to complete the project.

____ **3. Operation and Maintenance Agreement:** This three page agreement should be signed on page 3 by the Mayor (for city projects) or the President of the Board of Supervisors (for county projects) and attested by the chancery clerk.

____ **4. Operation and Maintenance Plan:** This two page document should simply be reviewed by the sponsor and returned.

Keep in mind that there are deadlines associated with this project funding and each project must be completed within 220 days of funding. So your prompt return of the above documents will prevent loss of funding and ensure that the project is completed in the 220 day timeframe.

Please return this completed checklist along with all of the properly filled out documents listed above electronically to Norman Patterson as follows: norman.patterson@ms.usda.gov

Or mail to: Natural Resources Conservation Service
ATTN: Norman Patterson
113 Fairfield Suite 110
Hattiesburg,

**ASSURANCES RELATING TO
REAL PROPERTY ACQUISITION**

A. PURPOSE - This form is to be used by sponsor(s) to provide the assurances to the Natural Resources Conservation Service of the U.S. Department of Agriculture which is required in connection with the installation project measures which involve Federal financial assistance furnished by the Natural Resources Conservation Service.

B. PROJECT MEASURES COVERED -

Name of project: DSR: 28-04-20-5294-300, 28-04-20-5294-301, 28-04-20-5294-302,
20-04-20-5294-303 & 20-04-20-5294-304

Identity of improvement or development: Erosion Control

Location: Forrest Co. – Site(s): Campbell Loop #3, Ocoola McCarty Park, McLeod
@ Gordon Creek, Forrest To McLeod & Hi-Fi Crusin

C. REAL PROPERTY ACQUISITION ASSURANCE -

This assurance is applicable if real property interests were acquired for the installation of project measures, and/or if persons, businesses, or farm operations were displaced as a result of such installation; and this assurance was not previously provided for in the watershed, project measure, or other type of plan.

If this assurance was not previously provided, the undersigned sponsor(s) hereby assures they have complied, to the extent practicable under State law, with the requirements of the Uniform Relocation Assistance and Real Property Acquisition Policies Act (42 U.S.C. 4601-4655), as implemented in 7 C.F.R. Part 21. Any exceptions taken from the real property acquisition requirements under the authority of 42 U.S.C. 4655 because of State law have been or are hereby furnished to the Natural Resources Conservation Service along with the opinion of the Chief Legal Officer of the State containing a full discussion of the facts and law furnished.

D. ASSURANCE OF ADEQUACY OF REAL PROPERTY RIGHTS -

The undersigned sponsor(s) hereby assures that adequate real property rights and interests, water rights if applicable, permits and licenses required by Federal, State, and local law, ordinance or regulation, and related actions have been taken to obtain the legal right to install, operate, maintain, inspect and inspect the above-described project measures, except for structures or improvements that are to be removed, relocated, modified, or salvaged before and/or during the installation process.

This assurance is given with the knowledge that sponsor(s) are responsible for any excess costs or other consequences in the event the real property rights are found to be inadequate during the installation process.

Furthermore, this assurance is supported by an attorney's opinion attached hereto that certifies an examination of the real property instruments and files was made and they were found to provide adequate title, right, permission and authority for the purpose(s) for which the property was acquired.

If any of the real property rights or interests were obtained by condemnation (eminent domain) proceedings, sponsor(s) further assure and agree to prosecute the proceedings to a final conclusion and pay such damages as awarded by the court.

City of Hattiesburg

(Name of Sponsor)

By: _____
(Signature)

Title: _____

Date: _____

This action is authorized at an official meeting
of the _____

on ____ day of _____, 20____
State of Mississippi

Attest

(Name)

(Title)

ASSURANCES RELATING TO REAL PROPERTY ACQUISITION

-
- A. **PURPOSE** — This form is to be used by sponsor(s) to provide the assurances to the Natural Resources Conservation Service of the U.S. Department of Agriculture which is required in connection with the installation of project measures which involve Federal financial assistance furnished by the Natural Resources Conservation Service.

-
- B. **PROJECT MEASURES COVERED** —

Name of project _____

Identity of improvement or development _____

Location _____

-
- C. **REAL PROPERTY ACQUISITION ASSURANCE** —

This assurance is applicable if real property interests were acquired for the installation of project measures, and/or if persons, businesses, or farm operations were displaced as a result of such installation; *and* this assurance was not previously provided for in the watershed, project measure, or other type of plan.

If this assurance was not previously provided, the undersigned sponsor(s) hereby assures they have complied, to the extent practicable under State law, with the requirements of the Uniform Relocation Assistance and Real Property Acquisition Policies Act (42 U.S.C. 4601-4655), as implemented in 7 C.F.R. Part 21. Any exceptions taken from the real property acquisition requirements under the authority of 42 U.S.C. 4655 because of State law have been or is hereby furnished to the Natural Resources Conservation Service along with the opinion of the Chief Legal Officer of the State containing a full discussion of the facts and law furnished.

-
- D. **ASSURANCE OF ADEQUACY OF REAL PROPERTY RIGHTS** —

The undersigned sponsor(s) hereby assures that adequate real property rights and interests, water rights if applicable, permits and licenses required by Federal, State, and local law, ordinance or regulation, and related actions have been taken to obtain the legal right to install, operate, maintain, and inspect the above-described project measures, except for structures or improvements that are to be removed, relocated, modified, or salvaged before and/or during the installation process.

This assurance is given with the knowledge that sponsor(s) are responsible for any excess costs or other consequences in the event the real property rights are found to be inadequate during the installation process.

Furthermore, this assurance is supported by an attorney's opinion attached hereto that certifies an examination of the real property instruments and files was made and they were found to provide adequate title, right, permission and authority for the purpose(s) for which the property was acquired.

If any of the real property rights or interests were obtained by condemnation (eminent domain) proceedings, sponsor(s) further assure and agree to prosecute the proceedings to a final conclusion and pay such damages as awarded by the court.

(Name of Sponsor)

By: _____

Title: _____

Date: _____

This action authorized
at an official meeting _____

_____ on _____

day of _____, 19____, _____

at _____

State of _____

Attest: _____

(Name)

(Title)

(Name of Sponsor)

By: _____

Title: _____

Date: _____

This action authorized
at an official meeting _____

_____ on _____

day of _____, 19____, _____

at _____

State of _____

Attest: _____

(Name)

(Title)

SAMPLE-
PLEASE TYPE ON ATTORNEY'S LETTERHEAD

"TITLE OF OPINION"

TO: USDA, Natural Resources Conservation Service
Suite 1321, Federal Building
100 West Capitol Street
Jackson, MS 39269

RE: **City of Hattiesburg (MS):**

**Campbell Loop #3, Ocala McCarty Park, McLeod @ Gordon Creek,
Forrest To McLeod & Hi-Fi Crusin (Forrest County):**

As attorney for and on behalf of the _____, I
(Sponsor)

hereby certify that I have examined the real property instruments and files that relate to the right-of-way of the sponsors to enter upon, construct, and operate and maintain the works of improvement above, and find them to provide adequate title, right, permission, and authority for the purpose for which these instruments were acquired.

Attorney -

Date

THIS IS A SAMPLE ATTORNEY'S OPINION <SPONSOR OR REPRESENTING FIRMS LETTERHEAD>
--

OPINION OF TITLE

<Date>

<Name>

State Conservationist

USDA-Natural Resources Conservation Service

<Address 1>

<Address 2>

<City, ST Zip>

RE: Assurances Relating to Real Property Acquisition
Smith Creek Project, EWP, Smith County, State

Dear <Name>:

As Attorney for the <Town/Village/County of _____>, I certify an examination of the real property instruments and files for the referenced project were made and they were found to provide adequate title, right, permission and authority for the purpose(s) for which the property was acquired.

<Signature of Attorney>

<Title Block>

Watershed: City of Hattiesburg

OPERATION AND MAINTENANCE AGREEMENT

This agreement is entered into by and between the Natural Resources Conservation Service, United States Department of Agriculture, hereinafter referred to as NRCS, and the following organization(s), hereinafter referred to as the Sponsor(s):

City of Hattiesburg (MS)

The Sponsor(s) and the Service agree to carry out the terms of this agreement for the operation and maintenance of the project measures in the State of Mississippi. The project measures covered by this agreement are identified as follows: Streambank stabilization with rock riprap- Campbell Loop #3, Oceola McCarty Park, McLeod @ Gordon Creek, Forrest To McLeod & Hi-Fi Crusin.

I. OPERATIONS

- A. The Sponsor(s) will be responsible for operating the measure without cost to the Service as follows:
 - 1. In compliance with applicable Federal, State and local laws;
 - 2. In compliance with the conditions set out in the instruments by which rights were acquired to install, operate and maintain the measure(s);
 - 3. In a manner that will protect the environment and permit the measure(s) to serve the purpose for which installed as set forth in the program agreement;
 - 4. In keeping with the requirements to provide inspection, operation and maintenance reports within the time frame provided in the attached plan.
- B. The Service will, upon request of the Sponsor(s) and to the extent that its resources permit, provide consultative assistance in the operation of the structural measures.
- C. Admission or users fees shall be charged only as necessary to produce revenues required by the Sponsor(s) to amortize its share of installation costs for that portion of the measures pertaining to recreation of fish and wildlife and to provide adequate inspection, operation, maintenance, and replacement of the same.
- D. In a recreation or fish and wildlife measure the Sponsor(s) may dispense such services and commodities, or arrange with private concessionaires for the dispensing of such services and commodities, which will contribute to the full use and enjoyment of the measure by the public at prices which are reasonable and compatible with prices for similar services and commodities within the area served by the measure.

II. MAINTENANCE

- A. The Sponsor(s) will:

1. Be responsible for and promptly perform or have performed without cost to the Service all maintenance of the measures determined by either the Sponsor(s) or the Service to be needed.
 2. Obtain prior Service approval of all plans, designs and specifications for maintenance work.
- B. The Service will upon request of the Sponsor(s) and to the extent that its resources will permit, provide consultative assistance in the maintenance of the measure(s).

III. REPLACEMENT

- A. The Sponsor(s) will be responsible for the replacement of parts or portions of the measure(s) which has a physical life of less duration than the evaluated life of the measure(s).
- B. The Service will upon request of the Sponsor(s), provide consultative assistance in the replacement of measure parts or portions.

IV. PLAN OF OPERATION AND MAINTENANCE

The Service and the Sponsor(s) will prepare a detailed plan of operation and maintenance for each measure covered by the agreement. More than one measure may be included in a single plan provided that the measures are sufficiently similar to warrant such action. Each such plan shall be attached to become a part of this agreement.

V. INSPECTIONS AND REPORTS

- A. The sponsor(s) will inspect the measures at least annually and after each major storm or occurrence of any unusual conditions that might adversely affect the measure(s).
- B. The Service or Federal land administering agency may inspect the measures at any reasonable time during the period covered by this agreement. At the discretion of the State Conservationist, Service personnel may assist the Sponsor(s) in their inspection.
- C. A written report will be made of each inspection. A copy of each report will be provided by the inspecting party to the other party within ten days of the date on which the inspection was made. The report will describe the conditions found and list any corrective action needed with a time frame to complete each action.

VI. TIME OF RESPONSIBILITY

The Sponsor(s)' responsibility for operation and maintenance begins when a part of or all of the work of installing a measure is completed and accepted or is determined complete by the Service. This responsibility shall continue until the expiration of the evaluated life of all the installed project measures. This does not relieve the Sponsor(s)' liability which continues throughout the life of the measure or until the measure is modified to remove potential loss of life or property.

VII. RECORDS

The Sponsor(s) will maintain in a centralized location a record of all inspections and significant actions taken, cost of performance and completion date with respect to

operation, maintenance and replacement. The Service may inspect these records at any reasonable time during the term of the agreement.

VIII. GENERAL

- A. The Sponsor(s) will:
 - 1. Prohibit the installation of any structure or facilities that will interfere with the operation or maintenance of the project measures.
 - 2. Obtain prior Service approval of the plans and specifications for any alteration or improvement to the structural measures.
 - 3. Obtain prior Service approval of any agreement to be entered into with other parties for the operation or maintenance of all or any part of the agreement after it has been signed by the Sponsor(s) and the other party.
- B. Service personnel will be provided the right to free access to the project measures at any reasonable time for the purpose of carrying out the terms of this agreement.
- C. The responsibilities of the Sponsor(s) under this agreement are effective simultaneously with the acceptance of the project measures in whole or part.
- D. Comply with the attached PROPERTY MANAGEMENT STANDARDS.

Name of Sponsor: **City of Hattiesburg (MS)**

By: _____ Title: _____ Date: _____

This action was authorized at an official meeting of the Sponsor named immediately above on _____ at _____

Attest: _____ Title: _____

Natural Resources Conservation Service, United States Department of Agriculture

By: _____ Title: _____ Date: _____

OPERATION AND MAINTENANCE PLAN

City of Hattiesburg

Campbell Loop #3, Ocoola McCarty Park, McLeod @ Gordon Creek, Forrest To McLeod & Hi-Fi Crusin

I. Operation

The Sponsors will operate this measure in accordance with the terms of the Operation and Maintenance Agreement. This includes the administration, management, and performance of nonmaintenance actions needed to keep completed works of improvement functioning as planned.

II. Maintenance

- A. The channel should be maintained in such a way as to keep it free of any debris, silt bars or other obstructions that will reduce its capacity. Bank stabilization measures should be used to prevent erosion. The undesirable vegetation should be cut or sprayed with approved herbicides and removed from the channel. An access road should be maintained alongside the channel for easy maintenance.
- B. It is anticipated that the following items of maintenance, repair, or replacement will be needed during the effective life of the measure.
 - 1. Vegetation:
 - a. Reseed, resod, and fertilize areas of stand or areas destroyed by erosion, freezing, or drought. If necessary, restore eroded areas before reseeding.
 - b. Cut or spray with approved herbicide and remove undesirable vegetation. Observe local ordinances regarding spraying and burning.
 - c. Fertilize vegetation as required to maintain a vigorous stand.
 - d. Control grazing to insure proper vegetative cover.
 - e. Mow grass at regular intervals to maintain optimum cover.
 - 2. Channels - lined and unlined
 - a. Remove sand and gravel bars and properly dispose of them outside the channel perimeter.
 - b. Remove and properly dispose of debris. Give special attention to removal and proper disposal of debris and repair erosion damage at structures.
 - c. Replace, reinforce, or extend riprap where needed. Make repairs to grade control structures where needed.
 - d. Keep access roads for maintenance and maintenance travel ways in usable condition.
 - e. Maintain dikes and spoil to divert water to protected inlets and prevent overbank flow.
 - f. Renovate channel banks damaged by storm flow.
 - g. Rehabilitate damaged pipe inlets from fields or side channels. Replace eroded soil adjacent to structures.
- C. The estimated average annual cost of providing the necessary maintenance for this measure is \$200.00. Funds to finance this cost will be provided by the City of Hattiesburg, from general tax revenues.

- D. The **City of Hattiesburg** will be responsible for and promptly perform or have performed all maintenance of the measure determined by either the Sponsors or the Service to be needed.
- The **City of Hattiesburg**, with consulting assistance from the Natural Resources Conservation Service, will assist in the maintenance which can be accomplished with normal farm equipment such as removal of debris, control of undesirable vegetation, controlled grazing and mowing, and fertilizing vegetation.
- E. The measure will be inspected at least annually and after unusually severe floods or the occurrence of any other unusual condition that might adversely affect the measure. Annual inspections will be performed during the month of July. Annual and special inspections will include but not be limited to an examination of the following items.
1. Stability of channel grades and side slopes
 2. Excessive sedimentation
 3. Condition of rip-rapped areas
 4. Obstructions and undesirable vegetative growth
 5. Scour at bridge piers, abutments and other adjacent property
 6. Severity of erosion of berms and undesirable vegetative growth
 7. Condition of cleared and snagged areas
 8. Condition of fences and gates
- F. A written report will be made of each inspection as provided in the O&M Agreement. A follow-up report will be provided when all corrective action has been accomplished.
- G. The requirements will remain in effect until the expiration of the effective life of the measure based on a mutual determination of the Sponsors and the Service.
- H. Service personnel will assist the Sponsors on annual and special inspections until such time as the State Conservationist determines that Service participation is no longer necessary. At this time, he will so notify the Sponsor in writing. This notice will constitute an amendment to the Plan.
- I. Each sponsoring organization that has responsibility for O&M of any project measure will be furnished an Operation and Maintenance Handbook. The handbook is to acquaint Sponsors with the essentials of operating and maintaining their projects. The information and suggestions can help Sponsors understand the jobs and how to carry them out in a timely and efficient manner.

OPERATION AND MAINTENANCE PLAN EXAMPLE

The sponsor(s) are responsible for maintaining all measures installed under the Emergency Watershed Protection (EWP) Program. Most measures such as rock flumes and checks, earth fill, and vegetation require only minimal maintenance. The maintenance requirements are obvious and no special documentation of the maintenance is needed. Measures that are considered permanent structures and those that require regular maintenance to insure that proper functioning must have an Operation and Maintenance (O&M) Plan. Examples of structures requiring an O&M Plan are riprap streambank protection; pipe drop structures; gabion drop structures or retaining walls; important concrete structures; other measures that may be critical for public safety.

An O&M Plan may be prepared for a single site or a group of sites. The plan should state who is responsible for operation and maintenance activities (generally the sponsor). It should state the specific activities that must be performed to keep the measures in good condition and functioning properly. Usually an estimate of the annual cost of O&M activities is included. The O&M Plan should outline the timing and frequency of required inspections.

The O&M Plan should be prepared by the engineer who designs the EWP measure.

An example O&M Plan follows and should be included as an Attachment to the Project Agreement.

ATTACHMENT ____

OPERATION AND MAINTENANCE PLAN **EMERGENCY WATERSHED PROTECTION**

SITE: _____

I. Operation

The Sponsor(s) _____ is responsible for the operation and maintenance (O&M) for this project. Operation includes the administration, management, and performing of non-maintenance actions needed to keep a completed practice safe and functioning as planned for the life span of the practice.

II. Maintenance

The Sponsor(s) shall be responsible for promptly performing or have performed maintenance determined by either the Sponsor(s) or the NRCS. Maintenance includes performance of work and providing the materials to prevent the deterioration of practices and/or repair damage to, or replacement of, the practice if one or more of its components fail. This includes both routine and recurring needs in a timely manner. Damages to completed practices caused by normal deterioration, drought, flooding caused by rainfall in excess of design rainfall, or vandalism are considered to be maintenance. Maintenance may include replacing displaced rocks, re-chinking, removing gravel and debris, filling undercut areas, repair of eroded banks, and vegetative treatment.

It is anticipated that the following items of maintenance, repair, or replacement will be needed during the effective life of the practice.

1. Vegetation

- a. Reshape as necessary and either reseed or resod, and fertilize areas of poor stand, including those areas damaged by erosion, freezing, or drought.
- b. Fertilize vegetation as required to maintain a vigorous stand.
- c. Mow grass at regular intervals to maintain optimum cover.

- d. Spray or cut undesirable brush. Maintain desired brush. Cuttings for propagation on other sites are allowed with NRCS prior approval.

2. Structures

- a. Remove and properly dispose of logs, trees and debris impacting flows.
- b. Maintain diversions. Reshape areas to eliminate depressions and rills caused by concentrated runoff.
- c. Repair structures; streambanks; reshape and repair rock basins and rock flumes as needed, to keep functional. Add rock as needed.

- 3. The estimated average annual cost of providing the necessary maintenance for this site is \$_____. Funds to finance this cost will be provided by the Sponsor.

III. Inspection

As part of the Operation and Maintenance duties, the Sponsor is responsible for making the necessary inspections. If a problem is encountered, the Sponsor is encouraged to contact the Natural Resource Conservation Service (NRCS) representative to assist in developing a solution. The Sponsor shall not make any changes to, or within proximity of, the practice that will alter the original designed function without prior approval of NRCS. The Sponsor shall notify NRCS of any work to be done in a timely manner.

Inspections shall be performed on an annual basis before May 15 and also after major storm events. Inspection shall include but is not limited to:

- 1. Condition of the rock:
 - a. check all rocks for accelerated weathering and displacement including chinking
- 2. Condition of the channel bed and banks:
 - a. streambed scour at the toe rock or erosion of adjacent banks
 - b. failure of adjacent structures
 - c. gravel or debris build-up in the vicinity of the practice
 - d. soil settlement or ground cracks in the vicinity of the practice
 - e. presence of burrows due to animals

- f. damage due to vandalism, vehicles, livestock, etc.

- 3. Condition of the vegetation:

- a. health/vigor of vegetation used as/in conjunction with the practice
 - b. bio-engineering/planting techniques during the establishment period

A written report will be made of each inspection. If it is determined during the inspection, that the items above could affect the functioning of the site, corrective action and repairs will be made immediately in order to reduce the possibility of further damage and/or failure. A follow-up report will be provided when all corrective action has been accomplished.

IV. Land Rights

Project Sponsors must have or obtain land rights adequate for carrying out their O&M responsibilities.

Application for Federal Assistance SF-424

*** 1. Type of Submission:**

- ☐ Preapplication
☒ Application
☐ Changed/Corrected Application

*** 2. Type of Application:**

- ☒ New
☐ Continuation
☐ Revision

*** If Revision, select appropriate letter(s):**

*** Other (Specify):**

*** 3. Date Received:**

4. Applicant Identifier:

5a. Federal Entity Identifier:

5b. Federal Award Identifier:

State Use Only:

6. Date Received by State:

7. State Application Identifier:

8. APPLICANT INFORMATION:

*** a. Legal Name:**

Sponsor Name Here

*** b. Employer/Taxpayer Identification Number (EIN/TIN):**

*** c. Organizational DUNS:**

d. Address:

*** Street1:**

Street2:

*** City:**

County/Parish:

*** State:**

Province:

*** Country:**

USA: UNITED STATES

*** Zip / Postal Code:**

e. Organizational Unit:

Department Name:

Division Name:

f. Name and contact information of person to be contacted on matters involving this application:

Prefix:

*** First Name:**

Middle Name:

*** Last Name:**

Suffix:

Title:

Organizational Affiliation:

*** Telephone Number:**

Fax Number:

*** Email:**

Application for Federal Assistance SF-424

* 9. Type of Applicant 1: Select Applicant Type:

Type of Applicant 2: Select Applicant Type:

Type of Applicant 3: Select Applicant Type:

* Other (specify):

* 10. Name of Federal Agency:

USDA, Natural Resources Conservation Service

11. Catalog of Federal Domestic Assistance Number:

10.923

CFDA Title:

Emergency Watershed Protection Program

* 12. Funding Opportunity Number:

N/A

* Title:

N/A

13. Competition Identification Number:

N/A

Title:

N/A

14. Areas Affected by Project (Cities, Counties, States, etc.):

Add Attachment

Delete Attachment

View Attachment

* 15. Descriptive Title of Applicant's Project:

Attach supporting documents as specified in agency instructions.

Add Attachments

Delete Attachments

View Attachments

Application for Federal Assistance SF-424**16. Congressional Districts Of:**

* a. Applicant

* b. Program/Project

Attach an additional list of Program/Project Congressional Districts if needed.

Add Attachment

Delete Attachment

View Attachment

17. Proposed Project:

* a. Start Date:

* b. End Date:

18. Estimated Funding (\$):

* a. Federal

* b. Applicant

* c. State

* d. Local

* e. Other

* f. Program Income

* g. TOTAL

*** 19. Is Application Subject to Review By State Under Executive Order 12372 Process?**☐ a. This application was made available to the State under the Executive Order 12372 Process for review on☐ b. Program is subject to E.O. 12372 but has not been selected by the State for review.☒ c. Program is not covered by E.O. 12372.*** 20. Is the Applicant Delinquent On Any Federal Debt? (If "Yes," provide explanation in attachment.)**☐ Yes☐ No

If "Yes", provide explanation and attach

Add Attachment

Delete Attachment

View Attachment

21. *By signing this application, I certify (1) to the statements contained in the list of certifications and (2) that the statements herein are true, complete and accurate to the best of my knowledge. I also provide the required assurances** and agree to comply with any resulting terms if I accept an award. I am aware that any false, fictitious, or fraudulent statements or claims may subject me to criminal, civil, or administrative penalties. (U.S. Code, Title 218, Section 1001)**

☐ ** I AGREE

** The list of certifications and assurances, or an internet site where you may obtain this list, is contained in the announcement or agency specific instructions.

Authorized Representative:

Prefix:

* First Name:

Middle Name:

* Last Name:

Suffix:

* Title:

* Telephone Number:

Fax Number:

* Email:

* Signature of Authorized Representative:

* Date Signed:

Application for Federal Assistance SF-424

*** 1. Type of Submission:**

- ☐ Preapplication
☐ Application
☐ Changed/Corrected Application

*** 2. Type of Application:**

- ☐ New
☐ Continuation
☐ Revision

* If Revision, select appropriate letter(s):

* Other (Specify):

* 3. Date Received:

4. Applicant Identifier:

5a. Federal Entity Identifier:

5b. Federal Award Identifier:

State Use Only:

6. Date Received by State:

7. State Application Identifier:

8. APPLICANT INFORMATION:

* a. Legal Name:

* b. Employer/Taxpayer Identification Number (EIN/TIN):

* c. Organizational DUNS:

d. Address:

* Street1:

Street2:

* City:

County/Parish:

* State:

Province:

* Country:

* Zip / Postal Code:

e. Organizational Unit:

Department Name:

Division Name:

f. Name and contact information of person to be contacted on matters involving this application:

Prefix:

* First Name:

Middle Name:

* Last Name:

Suffix:

Title:

Organizational Affiliation:

* Telephone Number:

Fax Number:

* Email:

Application for Federal Assistance SF-424

* 9. Type of Applicant 1: Select Applicant Type:

Type of Applicant 2: Select Applicant Type:

Type of Applicant 3: Select Applicant Type:

* Other (specify):

* 10. Name of Federal Agency:

11. Catalog of Federal Domestic Assistance Number:

CFDA Title:

* 12. Funding Opportunity Number:

* Title:

13. Competition Identification Number:

Title:

14. Areas Affected by Project (Cities, Counties, States, etc.):

Add Attachment

Delete Attachment

View Attachment

* 15. Descriptive Title of Applicant's Project:

Attach supporting documents as specified in agency instructions.

Add Attachments

Delete Attachments

View Attachments

Application for Federal Assistance SF-424**16. Congressional Districts Of:**

* a. Applicant

* b. Program/Project

Attach an additional list of Program/Project Congressional Districts if needed.

Add Attachment

Delete Attachment

View Attachment

17. Proposed Project:

* a. Start Date:

* b. End Date:

18. Estimated Funding (\$):

* a. Federal

* b. Applicant

* c. State

* d. Local

* e. Other

* f. Program Income

* g. TOTAL

*** 19. Is Application Subject to Review By State Under Executive Order 12372 Process?**☐ a. This application was made available to the State under the Executive Order 12372 Process for review on☐ b. Program is subject to E.O. 12372 but has not been selected by the State for review.☐ c. Program is not covered by E.O. 12372.*** 20. Is the Applicant Delinquent On Any Federal Debt? (If "Yes," provide explanation in attachment.)**☐ Yes☐ No

If "Yes", provide explanation and attach

Add Attachment

Delete Attachment

View Attachment

21. *By signing this application, I certify (1) to the statements contained in the list of certifications and (2) that the statements herein are true, complete and accurate to the best of my knowledge. I also provide the required assurances** and agree to comply with any resulting terms if I accept an award. I am aware that any false, fictitious, or fraudulent statements or claims may subject me to criminal, civil, or administrative penalties. (U.S. Code, Title 218, Section 1001)**

☐ ** I AGREE

** The list of certifications and assurances, or an internet site where you may obtain this list, is contained in the announcement or agency specific instructions.

Authorized Representative:

Prefix:

* First Name:

Middle Name:

* Last Name:

Suffix:

* Title:

* Telephone Number:

Fax Number:

* Email:

* Signature of Authorized Representative:

* Date Signed:



Memorandum

To: Mayor Toby Barker and Members of City Council

From: Lamar Rutland

cc:

Date: Tuesday, August 18, 2020

Re: Approve Lighting Agreement with Mississippi Power Company for additional lighting on Graymont Avenue for a monthly increase of \$42.96 and authorize the Mayor to execute the same.
File Number: 2020-546
Minute Book #

Summary

Approve lighting agreement with Mississippi Power Company for additional lighting on Graymont Avenue for a monthly increase of \$42.96; authorize Mayor to execute.

Recommendation Statement

I am recommending approval of additional lighting on Graymont Avenue.

Please place this on the August 18, 2020 City Council meeting for consideration.

DATE: 8/4/20

RE: STREET LIGHT REQUEST AND AUTHORIZATION LETTER

FROM: CITY/TOWN OF Hattiesburg PHONE: _____

AUTHORIZED SIGNATURE _____ DATE: _____

DEVELOPER NAME _____ ACCOUNT # 59841/82000

DEVELOPER SIGNATURE _____ DATE: _____

DATE GOVERNMENTAL AUTHORITY TO TAKE OWNERSHIP OF PAYMENT: _____

Attach a plat for development.

TO: MISSISSIPPI POWER COMPANY, ATTN. : (MPC LIGHTING SERVICES) P.O. Box 4079,

Gulfport, MS 39502 or Email: (G2MPCLSVC@southernco.com)

DATE MAIL/EMAIL RECEIVED _____

INSTRUCTIONS: INSTALL STREET LIGHTS AS NOTED IN THE SCHEDULE BELOW. CONSIDER THIS YOUR AUTHORIZATION TO BILL THE NEW LIGHTS UNDER THE TERMS OF THE CURRENTLY APPLICABLE STREET LIGHT RATE (SL) AS APPROVED BY THE MISSISSIPPI PUBLIC SERVICE COMMISSION.

PLEASE TAKE NOTICE: By and through Developer's request and execution hereof, Developer acknowledges and agrees that any electric lighting service for outdoor lighting is subject to MPC's Rules Governing Electric Service and MPC's Outdoor Lighting Electric Rate Schedule (OL). Developer understands and agrees that OL provides for a three (3) year minimum term for lighting (other than special lighting) and Developer shall be liable to MPC for all service under the rate schedule until termination, provided however that Developer shall, in no event, be excused from liability for service during the applicable minimum term. MPC shall be entitled to pursue any and all available legal remedies in the event Developer, or Developer's successors or assigns, fails to make any and all payments as and when due during the term of service.

TYPE LIGHT	NUMBER TO INSTALL (I)	LOCATION AND COMMENTS
	NUMBER TO REMOVE (R)	
COBRA HEAD FIXTURES		
100 WATT HPS	Remove - 1	Graymont Ave
150 WATT HPS	Remove - 1	
250 WATT HPS		
400 WATT HPS		
1000 WATT HPS		
350 WATT MH		
LED FIXTURES		
90 WATT LED	Install - 5	Monthly Increase \$42.96
110 WATT LED		
190 WATT LED		
280 WATT LED		
OTHER FIXTURES		

NOTE: FOR NON ROUTINE INSTALLATIONS REQUIRING POLES, UNDERGROUND WIRING OR OTHER SPECIAL CONDITIONS PLEASE CONTACT YOUR MARKET SPECIALIST AND SPECIFIC CONTRACTS WILL BE PREPARED.

PLEASE MAIL OR EMAIL THIS FULLY COMPLETED FORM TO MPC'S LIGHTING SERVICES DEPT.
AND WE WILL INSTALL THE LIGHTING INSTALLATIONS THAT YOU REQUEST. YOU MAY ALSO USE THIS FORM TO REPORT LIGHTS NOT BURNING BY LISTING THE ESTIMATED SIZE AND LOCATION ON THE FORM AND FAXING TO US.



Memorandum

To: Mayor Toby Barker and Members of City Council

From:

cc: Lamar Rutland

Date: Tuesday, August 18, 2020

Re: Approve Lighting Agreement with Mississippi Power Company for additional lighting on Butler Avenue for a monthly increase of \$35.06 and authorize the Mayor to execute the same.
File Number: 2020-547
Minute Book #

Summary

Approve lighting agreement with Mississippi Power Company for additional lighting on Butler Avenue for a monthly increase of \$35.06; authorize Mayor to execute.

Recommendation Statement

I am recommending approval of street light request and authorization for additional lighting on Butler Avenue.

Please place this on the August 18, 2020 City Council meeting for consideration.

DATE: 8/4/20

RE: STREET LIGHT REQUEST AND AUTHORIZATION LETTER

FROM: CITY/TOWN OF Hattiesburg PHONE: _____

AUTHORIZED SIGNATURE _____ DATE: _____

DEVELOPER NAME _____ ACCOUNT # 59841/82000

DEVELOPER SIGNATURE _____ DATE: _____

DATE GOVERNMENTAL AUTHORITY TO TAKE OWNERSHIP OF PAYMENT: _____

Attach a plat for development.

TO: MISSISSIPPI POWER COMPANY, ATTN. : (MPC LIGHTING SERVICES) P.O. Box 4079,

Gulfport, MS 39502 or Email: (G2MPCLSVC@southernco.com)

DATE MAIL/EMAIL RECEIVED _____

INSTRUCTIONS: INSTALL STREET LIGHTS AS NOTED IN THE SCHEDULE BELOW. CONSIDER THIS YOUR AUTHORIZATION TO BILL THE NEW LIGHTS UNDER THE TERMS OF THE CURRENTLY APPLICABLE STREET LIGHT RATE (SL) AS APPROVED BY THE MISSISSIPPI PUBLIC SERVICE COMMISSION.

PLEASE TAKE NOTICE: By and through Developer's request and execution hereof, Developer acknowledges and agrees that any electric lighting service for outdoor lighting is subject to MPC's Rules Governing Electric Service and MPC's Outdoor Lighting Electric Rate Schedule (OL). Developer understands and agrees that OL provides for a three (3) year minimum term for lighting (other than special lighting) and Developer shall be liable to MPC for all service under the rate schedule until termination, provided however that Developer shall, in no event, be excused from liability for service during the applicable minimum term. MPC shall be entitled to pursue any and all available legal remedies in the event Developer, or Developer's successors or assigns, fails to make any and all payments as and when due during the term of service.

TYPE LIGHT	NUMBER TO INSTALL (I) NUMBER TO REMOVE (R)	LOCATION AND COMMENTS
COBRA HEAD FIXTURES		
100 WATT HPS	<u>Remove - 3</u>	<u>Butler Ave - A light will be installed at very end.</u>
150 WATT HPS	<u>Remove - 1</u>	_____
250 WATT HPS	_____	_____
400 WATT HPS	_____	_____
1000 WATT HPS	_____	_____
350 WATT MH	_____	_____
LED FIXTURES		
90 WATT LED	<u>Install - 6</u>	<u>Monthly Increase \$35.06</u>
110 WATT LED	_____	_____
190 WATT LED	_____	_____
280 WATT LED	_____	_____
OTHER FIXTURES		
_____	_____	_____
_____	_____	_____
_____	_____	_____

NOTE: FOR NON ROUTINE INSTALLATIONS REQUIRING POLES, UNDERGROUND WIRING OR OTHER SPECIAL CONDITIONS PLEASE CONTACT YOUR MARKET SPECIALIST AND SPECIFIC CONTRACTS WILL BE PREPARED.

PLEASE MAIL OR EMAIL THIS FULLY COMPLETED FORM TO MPC'S LIGHTING SERVICES DEPT.
AND WE WILL INSTALL THE LIGHTING INSTALLATIONS THAT YOU REQUEST. YOU MAY ALSO USE THIS FORM TO REPORT LIGHTS NOT BURNING BY LISTING THE ESTIMATED SIZE AND LOCATION ON THE FORM AND FAXING TO US.



Memorandum

To: Mayor Toby Barker and Members of City Council

From: Ann Jones

cc:

Date: Tuesday, August 18, 2020

Re: Approve Agreement with Mississippi Power Company to use property located at Tatum Park in the event of emergency restoration efforts related to disaster recovery and authorize the Mayor to execute the same.
File Number: 2020-591
Minute Book #

Summary

Authorize Mayor to execute agreement between City of Hattiesburg and Mississippi Power Company to use property located at Tatum Park in the event of emergency restoration efforts related to disaster recovery.

Recommendation Statement

I recommend the approval of the agreement between the City of Hattiesburg and MS Power to use Tatum Park as a lay-down area(designated areas only) in the event of a disaster.

Please place this on the August 18, 2020 City Council meeting for consideration.

HOLD HARMLESS AGREEMENT

Mississippi Power Company ("MPC") agrees to hold harmless and defend City of Hattiesburg (Parks and Recreation) ("Owners"), its agents, successors, officers, employees and assigns, from any and all liability of any kind whatsoever for any personal injury or damages to any property only on account of the actions or inactions of MPC, its agents, successors, employees and assigns. It is specifically understood and agreed that MPC's obligation to hold harmless and defend Owner is limited to the period of time during which MPC is on or using all, or a part of, Owner's property described as:

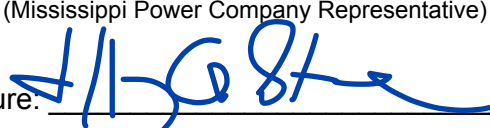
Location: **Tatum Park** 101Parkway Blvd. Hattiesburg, MS 39401
See areas circled in red on attached map. (the "Property")

It being further specifically understood and agreed that MPC's hold harmless and defense obligation does not extend to, or will in any way compensate, any of Owner's, if any, loss of revenue, income, profits or any other consequential damages incurred by Owner arising from, in connection with or resulting from MPC's use of Owner's Property. It is the intent of this agreement to only hold harmless and defend Owner for personal injury and property damage in the scope detailed above.

MPC further agrees to repair any damages to Owner's Property caused by MPC, its agents, successors, employees or assigns arising out of MPC's presence on or use of Owner's Property.

This agreement will remain valid for a period of three (3) years from the last date of signature and can be terminated at any time by either party with thirty (30) days written notice; provided, however, this agreement may not be terminated if MPC is using the Property or if a named tropical system is in the Gulf of Mexico or predicted to be in the Gulf of Mexico within seven (7) days of the date of notice.

By: Jeff Stone (Print Name)
(Mississippi Power Company Representative)

Signature: 

Title: Vice President

Date: August 10, 2020

[Owner's Permission and Signature Page to Follow]

MPC is being granted permission by City of Hattiesburg (Parks and Recreation) for use of the Property described above in the event of emergency restoration efforts.

By: _____
(Owner or Representative - please sign)

Name and Title: Toby Barker, Mayor

Date: _____

Property

Tatum Park – (Designated use areas outlined in Red)





Memorandum

To: Mayor Toby Barker and Members of City Council

From: Lamar Rutland

cc:

Date: Tuesday, August 18, 2020

Re: Approve Change Order No. 2 with Hanco Corporation for the Public Safety Complex and authorize the Mayor to execute in triplicate.
File Number: 2020-564
Minute Book #

Summary

Approve Change Order No. 2 with Hanco Corporation for the Public Safety Complex and authorize the Mayor to execute in triplicate.

Recommendation Statement

I recommend approval of this item.

Please place this on the August 18, 2020 City Council meeting for consideration.



Document G701™ – 2017

Change Order

PROJECT: (Name and address)
Hattiesburg Public Safety Complex
Police and Municipal Court Buildings

CONTRACT INFORMATION:
Contract For: General Construction
Date: 08 April 2020

CHANGE ORDER INFORMATION:
Change Order Number: 002
Date: 5 August 2020

OWNER: (Name and address)
City of Hattiesburg

ARCHITECT: (Name and address)
Albert & McCleskey Associates
Architects
P.O. Box 1567
Hattiesburg, Mississippi 39403

CONTRACTOR: (Name and address)
Hanco Corporation
P.O. Box 17678
Hattiesburg, Mississippi 39404

THE CONTRACT IS CHANGED AS FOLLOWS:

(Insert a detailed description of the change and, if applicable, attach or reference specific exhibits. Also include agreed upon adjustments attributable to executed Construction Change Directives.)

Additional work to be added back to Contract at the Owner's request. Work to include: (See attached documentation)

1. Courtroom Hardening: furnish and install 2 layers of 3/4" fire treated plywood with one layer of 14 gauge sheet metal in A126, A125, A124, and A123 from floor to ceiling \$ 92,957.00
 2. Millwork in Courtroom A126: to add prefinished wood panels as shown on cost reduction drawings \$ 70,435.00
 3. AV Allowance: Proposal for purchase and installation of the AV system \$ 175,000.00
 4. Solid Surface in Police and Court Lobby: Proposal to change countertops from plastic laminate to solid surface in rooms A150, A105, A118 and A152 \$ 9,835.00
 5. Acoustical Panels in courtroom: Proposal to furnish and install the acoustical panels as shown on elevation 1 sheet A10.4 of original contract drawings dated 11/19/18 \$ 9,000.00
- Overhead 10% \$ 35,722.70
Profit 10% \$ 35,722.70
Bonds, Tax and Insurance \$ 25,720.34

TOTAL: \$ 454,392.74

The original Contract Sum was	\$ 26,500,000.00
The net change by previously authorized Change Orders	\$ 160,017.60
The Contract Sum prior to this Change Order was	\$ 26,660,017.60
The Contract Sum will be increased by this Change Order in the amount of	\$ 454,392.74
The new Contract Sum including this Change Order will be	\$ 27,114,410.34

The Contract Time will be increased by Zero (0) days.

The new date of Substantial Completion will be 9 March 2022

NOTE: This Change Order does not include adjustments to the Contract Sum or Guaranteed Maximum Price, or the Contract Time, that have been authorized by Construction Change Directive until the cost and time have been agreed upon by both the Owner and Contractor, in which case a Change Order is executed to supersede the Construction Change Directive.

NOT VALID UNTIL SIGNED BY THE ARCHITECT, CONTRACTOR AND OWNER.

Albert & McCleskey Associates
Architects

ARCHITECT (Firm name)

SIGNATURE

PRINTED NAME AND TITLE

Larry A. Albert, AIA, Principal

DATE

8-10-2020

Hanco Corporation

CONTRACTOR (Firm name)

SIGNATURE

PRINTED NAME AND TITLE

Chris Hudson, President

DATE

8/10/20

City of Hattiesburg

OWNER (Firm name)

SIGNATURE

PRINTED NAME AND TITLE

Mayor Toby Barker

DATE

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MAYOR
Toby Barker

COUNCIL - WARD ONE
Jeffrey George

COUNCIL - WARD TWO
Deborah Denard Delgado

COUNCIL - WARD THREE
Carter Carroll

COUNCIL - WARD FOUR
Mary Dryden

COUNCIL - WARD FIVE
Nicholas Brown

July 22, 2020

Larry Albert , AIA
Albert & Robinson Architects
514 Main St,
Hattiesburg, MS 39401

Mr. Albert,

The City of Hattiesburg would like to add the following items back into our Public Safety Contract with Hanco. These items will need to be included via change order while we already have a value from Hanco on a few of these items we would like for Hanco to submit one change order to include the following: All of the Courtroom Millwork, Courtroom Hardening, Acoustical panels in the court room, add the A/V equipment allowance of \$175,000 and add solid Surface counter tops to rooms to the Police and the Court room lobbies rooms A150, A105, A118 and A152.

The City of Hattiesburg has also looked into your concern about the contractor's requirement to bid out allowances. We have consulted with the State Auditor's office and the Bureau of Buildings. The State Auditor stated:

"With respect to state law, there is no requirement for any rebid for a \$30k change order on a \$26.5M. Our office cannot speak to the requirements of the Bureau of Buildings. I will say that I have personally never heard of such restriction, though."

In talking with Trish Ware with the Bureau of Buildings she provided me with the following from State code S 31-7-13(c)(iv)(2) which states:

"Specifications for construction projects may include allowance for commodities, equipment, furniture, construction materials or systems in which prospective bidders are instructed to include in their bids specified amounts for such items so as long as the allowance items are acquired by the vendor in a commercially reasonable manner and approved by the agency/governing authority. Such acquisitions shall not be made to circumvent the public purchasing laws. "

She confirmed that this does not require the contractor to bid out items purchased by the allowance. Please feel free to contact me if you have any questions.

Sincerely,


Lamar Rutland

CC: Ann Jones, Randy Pope



P.O. BOX 17678
HATTIESBURG, MS
39404

P 601.583.6500
F 601.583.6503

7/29/20

Larry Albert

Albert and Associates Architects, PA

Project: Hattiesburg Public Safety Complex

Re: Change Order Proposal #2 for Items requested by City to add pack per letter dated 7/22/20

Dear Mr. Albert:

Per the City's request we would like to provide you with a proposal for change

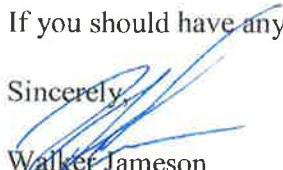
These are as follows:

1. **Courtroom Hardening** Based upon the directive given by Albert and Associates in the OAC meeting to furnish and install **2 layers of 3/4" fire treated plywood with one layer of 14 gauge sheet metal** sandwiched inside along the interior side of the courtroom A126 and the interior side of the courtroom vestibules A125, A124, and A123 from floor to deck.
\$92,957.00
2. **Millwork in Courtroom A126** Proposal to add prefinished wood panels as shown on the elevations 1 and 2 on sheet A10.4 and elevation 2 on sheet A10.3 in the "June 2019 cost reduction drawings".
\$70,435.00
3. **AV Allowance** Proposal to include \$175,000.00 for the purchase and installation of the AV System.
\$175,000.00
4. **Solid Surface in Police and Court Lobby.** Based upon direction provided by Lamar Rutland in the letter dated 7/22/20. Proposal to change countertops from Plastic laminate to solid surface in rooms A150, A105, A118, and A152.
\$9,835.00
5. **Acoustical Panels in Courtroom** Based upon direction provided by Lamar Rutland in the letter dated 7/22/20. Proposal to furnish and install the acoustical panels as show on elevation 1 sheet A10.4 of the original contract drawings dated 11-19-18
\$9,000.0

Sub-Total	\$357,227.00
Overhead 10%	\$35,722.70
Profit 10%	\$35,722.70
Bonds, Tax, and Insurance	\$25,720.34
Total	\$454,392.74

If you should have any questions, please give me a call.

Sincerely,


Walker Jameson

Hanco Corporation



P.O. BOX 17678
HATTIESBURG, MS
39404

P 601.583.6500
F 601.583.6503

8/4/20

Larry Albert

Albert and Associates Architects, PA

Project: Hattiesburg Public Safety Complex

Re: Cost Breakdown for PCO 002

1. Courtroom Hardening

Labor and Material to upsize to 18 ga studs	\$11,014.00
Labor and Material to furnish and install ¾" FT plywood	\$39,050.00
Labor and Material to Furnish and install 14 ga sheet metal	\$41,293.00
Equipment Rental	\$1,600.00
Subtotal cost	\$92,957.00

2. Millwork Panels at Courtroom (approximately 1600 sf)

Prefinished Wood Panels/Clips/Fasteners Material	\$38,300.00
Labor	\$32,135.00
Subtotal Cost	\$70,435.00

3. AV Allowance

Subtotal Cost	\$175,000.00
---------------	---------------------

4. Solid Surface in Police and Court Lobby

Solid Surface Material	\$16,200.00
Labor	\$2,450.00
Credit for PLAM	(\$7,640.00)
Labor credit for PLAM	(\$1,175.00)
Subtotal Cost	\$9,835.00

5. Acoustical Panels (approximately 460 sf)

Material Cost with Clips and Fasteners	\$5,980.00
Labor for Install	\$3,020.00
Subtotal Cost	\$9,000.00

If you should have any questions, please give me a call.

Sincerely,

Walker Jameson

Hanco Corporation



Memorandum

To: Mayor Toby Barker and Members of City Council

From: Anthony Parker

cc:

Date: Tuesday, August 18, 2020

Re: Approve Alcohol Grant Agreement with MS Department of Public Safety, Office of Highway Safety FY2021, in the amount of \$49,499.20 and authorize the Mayor to execute in duplicate.
File Number: 2020-567
Minute Book #

Summary

MS Office of Highway Safety FY2021 154 Alcohol Grant Agreement

Recommendation Statement

I recommend approval and authorization for Mayor to execute in duplicate the MS Department of Public Safety, Office of Highway Safety FY2021 154 Alcohol Grant Agreement in the amount of \$49,499.20.

Please place this on the August 18, 2020 City Council meeting for consideration.



MISSISSIPPI
Office of Highway Safety

August 10, 2020

Toby Barker, Mayor
City of Hattiesburg
Hattiesburg Police Department
300 Klondyke Street
Hattiesburg, MS 39401

Project Number: 154AL-2021-ST-21-51 Conditional
Funding Source and Title: 154 Alcohol

Dear Toby Barker:

Enclosed please find the Mississippi Office of Highway Safety (MOHS) and **Hattiesburg Police Department** Grant Agreement for the Fiscal Year 2021. Your agency has been approved for **154 Alcohol** funding, in the amount of **\$49,499.20**, pending final review and approval by NHTSA in the FY21 Highway Safety Plan.

The enclosed agreement is not fully executed until both the agency Authorized Signatory Official (Mayor, Board of Supervisor President, Director, Commissioner, etc.) and the MOHS Office Director, have signed and dated the agreement. Grant activities are not to be implemented and performed, until the agency receives a fully executed copy of the agreement. A copy of the executed agreement, will be provided to the agency after the required Grant Implementation meeting.

All FY21 grant activities begin October 1, 2020 and must be concluded by September 30, 2021. In addition, the FY21 Sub-Grantee Closeout Report must be received by the Mississippi Office of Highway Safety, no later than 5:00 p.m. on November 15, 2021.

Please thoroughly read the Fiscal Control and Fund Accounting Procedures, Grant Agreement, Certifications and Assurances, as changes have been made for FY21. **Your completed original copy grant agreement and all required documents must be returned to the MOHS by 5:00 p.m. on September 4, 2020.** Please make sure that you complete items 1-9 in their entirety and all documents are an **original signature signed in BLUE ink** by the Authorized Signatory Official (Mayor, Board of Supervisor President, Director, Commissioner, etc.).

1. MOHS Fiscal Control and Fund Accounting Procedures
2. Signature Page
3. State Certification and Assurance: Pursuit Policies; (Enforcement grants only)
4. Enclose a copy of your agency's Pursuit Policy (Enforcement grants only)
5. Assurance of Understanding Requirement for Sub-grantees
6. Local Governmental Resolution Agreement and Authorization to Proceed (If Applicable)
7. Designation of Secondary Signatory Official Form (If Applicable)
8. Enclose a copy of your agency's leave policy (policy should include personal, vacation, sick, holiday, and military leave)
9. Enclose a copy of your agency's overtime policy and a payroll schedule (schedule should include beginning and ending dates of pay periods and paycheck dates for October 1, 2020–September 30, 2021)

Mississippi Office of Highway Safety 1025 Northpark Drive, Ridgeland, Mississippi 39157

Failure to return your completed grant agreement and required documents by the above date may result in the reallocation of grant funds. Please mail the original completed grant agreement and all required documents to the following address:

Mississippi Office of Highway Safety
Attn: Kimberly Harris, Office Manager
1025 Northpark Drive
Ridgeland, MS 39157

Please feel free to contact me at tspeech@dps.ms.gov or 601-977-3747 if you should have any questions concerning the completion of the grant agreement.

Sincerely,

Tenicia Speech

Tenicia Speech, Bureau Director
Mississippi Office of Highway Safety
Mississippi Department of Public Safety Planning



August 10, 2020

Toby Barker, Mayor
City of Hattiesburg
Hattiesburg Police Department
300 Klondyke Street
Hattiesburg, MS 39401

Project Number: 154AL-2021-ST-21-51 Conditional
Funding Source and Title: 154 Alcohol

Dear Toby Barker:

The City of Hattiesburg / Hattiesburg Police Department FY21 Grant Agreement is being awarded on **“conditional status”** due to the following:

- Audit findings listed in the Audit Report

The conditional status was placed on the grant after completing an FY21 MOHS Risk Assessment and review of your agency's Audit Report submitted with the grant application. Additional project monitoring and technical assistance will be provided to ensure compliance of federal and state guidelines as outlined in your Grant Agreement. The grant will remain with a “conditional status” until the audit findings are removed.

If you should have any questions or wish to discuss the “conditional status” of this Grant Agreement, please contact me at 601-977-3747 or tspeech@dps.ms.gov.

Sincerely,

Tenicia Speech

Tenicia Speech, Bureau Director
Mississippi Office of Highway Safety
Mississippi Department of Public Safety Planning

Cc: Helen Porter, MOHS Director

Mississippi Office of Highway Safety 1025 Northpark Drive, Ridgeland, Mississippi 39157

Mississippi Office of Highway Safety Fiscal Control and Fund Accounting Procedures

Federal regulations prohibit the commingling of Federal grant funds with funds from other sources, and require grant recipients to maintain separate accounting over grant funds to ensure the funds are used for authorized purposes only. Federal grant funds cannot be commingled with general operating funds.

The Mississippi Office of Highway Safety has established the following criteria that must be met by all agencies receiving MOHS funds:

All recipients of MOHS funds are required to follow the federal regulations prohibiting the commingling of federal funds and maintain appropriate financial records that fully disclose the amount and disposition of MOHS funds received. Adequate record keeping includes financial documentation for disbursements.

All recipients of MOHS funds will follow the requirement above, establish and maintain both fiscal and program controls and funds accounting procedures acceptable to the Mississippi Office of Highway Safety, to assure the proper expenditure and disbursement of all funds and for program management and execution. Books and records will be kept and maintained until audited by the MOHS, federal granting agency, Office of the Inspector General, or any other agency requesting records, who shall have the right to access to any pertinent books, documents, papers or other records of the sub-grantee, which are pertinent to the award, in order to make audits, examinations, excerpts and transcripts. The right to access are limited to the required retention period, but last as long as the records are retained (Reference 2CFR 200.336). Records must be maintained for a period of at least three years. Before destruction of any record, written approval must be obtained from the Mississippi Office of Highway Safety. These records include, but are not limited to:

- Financial report covering expenditures of the grant
- General ledger, cash receipts journals, cash disbursements journals, and other subsidiary records
- Approved budget and subsequent modifications
- Indirect cost allocation plans
- All invoices, billings, and reporting worksheets
- All personnel records of individuals paid with grant funds, including time sheets,
- wage authorization, tax withholdings forms, employment applications and other relevant data
- Inventory records for all property purchased with grant funds showing acquisition data, cost of property, identification number, bid information, and the use of the property
- Bank statements and reconciliations;
- Internal and external audit reports and project evaluation

We have read and understand all Fiscal Control and Fund Accounting Procedures as shown above and agree to comply with these conditions in the operation of the grant.

8/18/2020

Authorizing Official's Signature
(Mayor, Board President, Commissioner, Director)

Date

Toby Barker

Mayor

Print Authorizing Official's Name

Authorizing Official's Title

FY21 MOHS GRANT AGREEMENT

MS Office of Highway Safety

1025 Northpark Drive

Ridgeland, MS 39157

Phone: (601) 977-3700; Fax: (601) 977-3701

1. Sub-grantee's Name & Mailing Address: City of Hattiesburg Hattiesburg Police Department 300 Klondyke Street Hattiesburg, MS 39401 Telephone Number: (601) 544-7900 Fax: (601) 595-4952 E-Mail: jshows@hattiesburgms.com		2. Effective Date of Grant: October 1, 2020 3. Subgrant Number: 154AL-2021-ST-21-51 Conditional 4. Grant Identifier (Funding Source & Year): 154 Alcohol FY21 5. Beginning and Ending Dates: October 1, 2020 – September 30, 2021 6. Subgrant Payment Method: <u> X </u> Cost Reimbursement Method	
7. CFDA # - 20.607		8. DUNS # - 079448130	
10. A:FAIN #: 69A37518300001540MSA 69A37519300001540MSA		11.A: Initial Federal Award Date: 5/2/2018 4/17/2019	
10.B. Federal Awarding Agency: NHTSA		11.B: Secondary Federal Award Date: 12. Research and Development Grant: ___ Yes <u> X </u> No Continuation Grant: <u> X </u> Yes ___ No	
13. The following funds are obligated:			
A. COST CATEGORY		B. SOURCE OF FUNDS	
(1) Personal Services-Salary	\$49,499.20	(1) Federal	\$49,499.20
(2) Personal Services-Fringe	\$0.00	(2) State	
(3) Contractual Services	\$0.00	(3) Local	
(4) Travel	\$0.00	(4) Other	
(5) Equipment	\$0.00	Total:	\$49,499.20
(6) Commodities	\$0.00	E. TOTAL OF ALL FEDERAL GRANTS THROUGH MOHS TO AGENCY:	
(7) Indirect Costs	\$0.00	Number of Grants: 1	154AL
TOTAL		\$49,499.20	
		TOTAL: \$49,499.20	
The Sub-Grantee agrees to operate the program outlined in this Agreement in accordance with all provisions of this Agreement as included herein. The following sections are attached and incorporated into this Agreement: Final Approved Agreement which includes: Sub-Grantee Signature Sheet; Sub-Grantee Targets, Performance Measures and Strategies; Task by Quarter; Cost Summary Support Sheet; Agreement of Understanding and Compliances, Designation of Secondary Official (If Applicable) All policies, terms, conditions, and provisions listed in funding guidelines, grant agreement, and agreement of understanding which has been provided to Sub-Grantee, are also incorporated into this agreement, and Sub-Grantee agrees to fully comply therewith.			
14. Approved for Grantee: Signature Date Name: Helen Porter Title: Office Director, MS Office of Highway Safety		15. Approved for Sub-Grantee: 8/18/2020 Signature Date Name: Toby Barker Title: Mayor, City of Hattiesburg	

FY21 Sub-Grantee Project Description (Law Enforcement):

MOHS Law Enforcement grant programs are provided with Federal grant funds to local police departments, sheriff's and state agencies for enforcement in jurisdictions all across Mississippi. All jurisdictions will provide enforcement, for hours that are specified in each agency Agreement, in support of the DUI program. These enforcement grants will be coordinated with the national campaigns, along with any state blitz campaigns that the MOHS develops for FY21.

All law enforcement agencies participating in the MOHS Law Enforcement grant program will utilize data to target the need and deploy resources based on problem identification and traffic trends in the agency locale and make adjustments to the program as needed.

Law Enforcement agencies use the funding for salaries (Individual Officer and part-time) that has been reviewed and approved by the MOHS. All information on budget can be found in the agency budget. The agency will generate at least (1) earned media campaign during the blitz campaigns.

FY21 Sub-Grantee-Target(s), Performance Measures and Strategies

Agency Name: City of Hattiesburg / Hattiesburg Police Department

List the target(s) that the Sub-Grantee will accomplish during the FY21 grant year. Performance measures should be set to help the Sub-Grantee accomplish the target(s) for the grant year. Strategies must be listed to show how the strategies will be implemented to meet the performance measures and to accomplish the target(s) set by the agency.

Target(s):

The jurisdiction/agency of Hattiesburg Police Department will maintain the number of alcohol related fatalities from 2 in 2018 to 2 by the end of 2021.

The jurisdiction/agency of Hattiesburg Police Department will reduce the number of alcohol related injuries from 9 in 2018 to 7 by the end of 2021.

Performance Measures:

Issue 146 grant funded DUI Arrest in FY21.

Strategies:

Select or Hire Individual Officer and Overtime Enforcement

SFST Instructor

Conduct 2 Alcohol education outreach activities/presentations

7 Checkpoints

7 Saturation Patrols

Generate Earned Media

Publicize patrol activities results (after occurrence)

Attend Troop LEL Network Meeting

Participate in the National blitz campaigns with enhanced DUI enforcement:

Drive Sober or Get Pulled Over – Christmas/ New Year's

Drive Sober or Get Pulled Over – Labor Day

Participate in the State blitz campaigns with enhanced DUI enforcement: Super Bowl, Memorial Day, 4th of July

FY21 MOHS TASKS BY QUARTERS									
-----------------------------	--	--	--	--	--	--	--	--	--

AGENCY NAME: City of Hattiesburg / Hattiesburg Police Department

PROJECTION TASKS BY QUARTERS:

SCHEDULE PROJECTION OF TASKS BY QUARTERS									
--	--	--	--	--	--	--	--	--	--

List the performance schedule of tasks by quarters referring specifically to the Statement of Tasks in the narrative description and defining the components of tasks to be accomplished by quarters. Tasks that extend beyond one quarter should specify the elements of the tasks that are to be performed for the particular quarters.

1st QUARTER (OCTOBER, NOVEMBER & DECEMBER)

Conduct not less than 2 checkpoints during quarter.

Conduct not less than 2 saturation patrols during quarter.

Issue a minimum of **37** DUI Arrest citations during quarter, to reach a goal of **146** for FY2021.

Submit all required reporting documents by scheduled date(s) as defined in agreement by MS Office of Highway Safety, i.e. (Monthly Cost Reporting Worksheets for reimbursement, Monthly Activity reports, etc.)

Additional Tasks:

Participate in the Drive Sober or Get Pulled Over national Christmas/New Year's blitz campaign with enhanced DUI enforcement and earned media with at least one (1) newspaper, television, social media or radio presentations.

Projected Expenditures for 1st Quarter: \$12,374.80

FY21 MOHS TASK BY QUARTERS

AGENCY NAME: City of Hattiesburg / Hattiesburg Police Department

PROJECTION TASK BY QUARTERS

SCHEDULE PROJECTION OF TASKS BY QUARTERS

List the performance schedule of tasks by quarters referring specifically to the Statement of Tasks in the narrative description and defining the components of tasks to be accomplished by quarters. Tasks that extend beyond one quarter should specify the elements of the tasks that are to be performed for the particular quarters.

2nd QUARTER (JANUARY, FEBRUARY & MARCH)

Conduct not less than **1** checkpoints during quarter.

Conduct not less than **1** saturation patrols during quarter.

Issue a minimum of **36** DUI Arrest citations during quarter, to reach a goal of **146** for FY2021.

Submit all required reporting documents by scheduled date(s) as defined in agreement by MS Office of Highway Safety, i.e. (Monthly Cost Reporting Worksheets for reimbursement, Monthly Activity reports, etc.)

Additional Tasks:

Participate in the Drive Sober or Get Pulled Over national Christmas/New Year's blitz campaign with enhanced DUI enforcement and earned media with at least one (1) newspaper, television, social media or radio presentations.

Projected Expenditures for 2nd Quarter: \$12,374.80

FY21 MOHS TASK BY QUARTERS

AGENCY NAME: City of Hattiesburg / Hattiesburg Police Department

PROJECTION TASK BY QUARTERS

SCHEDULE PROJECTION OF TASKS BY QUARTERS

List the performance schedule of tasks by quarters referring specifically to the Statement of Tasks in the narrative description and defining the components of tasks to be accomplished by quarters. Tasks that extend beyond one quarter should specify the elements of the tasks that are to be performed for the particular quarters.

3RD QUARTER (APRIL, MAY & JUNE)

Conduct not less than 2 checkpoints during quarter.

Conduct not less than 2 saturation patrols during quarter.

Issue a minimum of 36 DUI Arrest citations during quarter, to reach a goal of 146 for FY2021.

Submit all required reporting documents by scheduled date(s) as defined in agreement by MS Office of Highway Safety, i.e. (Monthly Cost Reporting Worksheets for reimbursement, Monthly Activity reports, etc.)

Additional Tasks:

Participate in the State Memorial Day blitz campaign with enhanced DUI enforcement and earned media with at least one (1) newspaper, television, social media or radio presentations.

Projected Expenditures for 3rd Quarter: \$12,374.80

FY21 MOHS TASK BY QUARTERS

AGENCY NAME: City of Hattiesburg / Hattiesburg Police Department

PROJECTION TASK BY QUARTERS

SCHEDULE PROJECTION OF TASKS BY QUARTERS

List the performance schedule of tasks by quarters referring specifically to the Statement of Tasks in the narrative description and defining the components of tasks to be accomplished by quarters. Tasks that extend beyond one quarter should specify the elements of the tasks that are to be performed for the particular quarters.

4TH QUARTER (JULY, AUGUST & SEPTEMBER)

Conduct not less than 2 checkpoints during quarter.

Conduct not less than 2 saturation patrols during quarter.

Issue a minimum of 37 DUI Arrest citations during quarter, to reach a goal of 146 for FY2021.

Submit all required reporting documents by scheduled date(s) as defined in agreement by MS Office of Highway Safety, i.e. (Monthly Cost Reporting Worksheets for reimbursement, Monthly Activity reports, etc.)

Additional Tasks:

Participate in the Drive Sober or Get Pulled Over State 4th of July and national Labor Day blitz campaign with enhanced DUI enforcement and earned media with at least one (1) newspaper, television, social media or radio presentations.

Projected Expenditures for 4th Quarter: \$12,374.80

FY21 Mississippi Office of Highway Safety-Cost Summary Support Sheet

1. Applicant Agency: City of Hattiesburg / Hattiesburg Police Department				
2. Subgrant Number: 154AL-2021-ST-21-51	3. Grant ID: 154 Alcohol	4. Beginning: October 1, 2020	5. Ending: September 30, 2021	
6. Activity: DUI Enforcement				
7. Category & Line Item	8. Description of item and/or Basis for Valuation	9. Budget		
		Federal	All Other	Total
Personal Services-Salary	Individual Officer @ approx. \$18.99 X @ approx. 2080 hours = \$39,499.20	\$49,499.20		\$49,499.20
	Officers over-time or regular time above and beyond normal work hours @ approx. \$25.00 X @ approx. 400 hours = \$10,000.00			
	Total Salaries= \$49,499.20			
		\$49,499.20		\$49,499.20
TOTALS				

Mississippi Office of Highway Safety

FY21 Agreement of Understanding and Compliance

This Agreement made and entered into by and between the State of Mississippi by and through the MS Office of Highway Safety, hereinafter referred to as State, and the Governmental Unit or agency named in this application, hereinafter referred to as Sub-Grantee.

WHEREAS, the National Highway Traffic Safety Act of 1966, as amended, provides Federal funds to the State for approved highway safety projects for the purpose of reducing injuries and fatalities as result of motor vehicle crashes, and

WHEREAS, the State may make said funds available to state, county, and municipal agencies and/or government or political subdivisions and/or non-profit entities upon application and approval by State and the National Highway Traffic Safety Administration (NHTSA) if applicable, and

WHEREAS, the Sub-Grantee must comply with the requirements listed herein, to be eligible for Federal funds in approved highway safety projects, and

WHEREAS, the State is obligated to reimburse NHTSA out of its funds for any ineligible or unauthorized expenditures for which Federal funds have been claimed and payment received, and

WHEREAS, the Sub-Grantee has submitted an application for Federal funds for highway safety projects:

NOW, THEREFORE, IN CONSIDERATION OF MUTUAL PROMISES AND OTHER GOOD AND VALUABLE CONSIDERATION, THE PARTIES AGREE AS FOLLOWS:

I. REIMBURSEMENT OF ELIGIBLE EXPENSES

- A. It is mutually agreed that upon written application by Sub-Grantee and approval by State and NHTSA (if applicable), State will obligate Federal funds to Sub-Grantee account for reimbursement of eligible expenditures as set forth in the application.
- B. It is understood that the State has the right to monitor and pre-audit any and all claims presented for reimbursement. Arrangements have been made for the financial and compliance audit required by 2CFR Subpart F, which is to be conducted within the prescribed audit reporting cycle (failure to furnish an acceptable audit, as determined by the cognizant Federal agency, may result in denial or require return of Federal funds). It is mutually agreed and promised that Sub-Grantee reimburse State for any ineligible or unauthorized expenditure for which Federal funds have been claimed and payment received as determined by a State or Federal audit.
- C. It is also understood, pursuant to 2 CFR 200.336, the awarding agency and the Comptroller General of the United States, or any of their authorized representatives (such as National Highway Traffic Administration otherwise known as NHTSA), shall have the right of access to any pertinent books, documents, papers, or other records of grantees and Sub-Grantees which are pertinent to the grant, in order to make audits, examinations, excerpts, and transcripts.
- D. It is further agreed that where reimbursement is made to Sub-Grantee in installments, State shall have the right to withhold any installments to make up reimbursement(s) received for any ineligible or unauthorized expenditure until such time as the ineligible claim is made up or corrected by Sub-Grantee.

- E. Unless otherwise directed, Sub-Grantees must submit monthly reimbursement, activity reports and back up documentation, by the **10th working day** of the following month to receive reimbursement for project activities. Reports reflect the status of project implementation and progress toward reaching goals. Each activity report shall describe the project status and shall be submitted to the State, no later than the 10th working day following the end of the month.
- F. Final Closeout Report and Reimbursement Claim with all required documentation must be received to MS Office of Highway Safety within forty-five (45) days of completion of the project (**Close of Business (COB) November 15th**). Appropriate forms will be provided to the Project Director. All required due dates for MOHS documents are provided in the Project Director's Guide.

Any Sub-Grantee delinquent in submitting monthly reimbursement, monthly activity, and/or final accomplishment reports, or incomplete progress reports that lack sufficient detail of progress during the period in question, may be subject to having submitted reimbursement requests delayed, pending additional justification. Once completed reports are received, reimbursement requests will be processed.

II. ON-SITE MONITORING AND EVALUATION

Pursuant to Federal guidelines, the State has developed a plan for evaluating all projects. Each Sub-Grantee will be required to have at least one (1) on-site monitoring visits during the grant year. All written documents will be reviewed to determine progress, problems and reimbursements of the project. The State evaluates all sub recipient's risk of noncompliance with Federal statutes, regulations and the terms and conditions of the sub-award for the purposes of determining the appropriate level of sub recipient monitoring.

III. PROPERTY AGREEMENT

- Facilities and equipment acquired under this agreement for use in highway safety program areas shall be used and kept in operation for highway safety purposes by the MS Office of Highway Safety; or the State, by formal agreement with appropriate officials of a political subdivision, State agency, or non-profit entities.
- It is mutually agreed and promised that the Sub-Grantee shall immediately notify the MS Office of Highway Safety, if any equipment purchased under this project ceases to be used in the manner set forth by the project agreement. In such event, Sub-Grantee further agrees to transfer or otherwise dispose of such equipment, as directed by the MS Office of Highway Safety.
- It is mutually agreed and promised by the Sub-Grantee that no equipment will be conveyed, sold, salvaged, transferred, etc., without the express written approval of the MS Office of Highway Safety.
- It is mutually agreed and promised that the Sub-Grantee shall maintain, or cause to be maintained for its useful life, any equipment purchased under this project.
- Each Sub-Grantee of federal grant funds has a financial management system that complies with the minimum requirements of 2 CFR Part 200 (Super Circular).
- All equipment awarded in this project agreement must be ordered within ninety (90) days after project implementation. If unforeseen circumstances arise which prohibit this being accomplished, the MS Office of Highway Safety must be notified as to the reason for the delay and projected purchase date of the equipment.
- Property records must be maintained that include a description of the property, a serial number or other identification number, the source of the property, who holds the title, the acquisition date, cost of the property, percentage of Federal participation in the cost of the property, the location use and condition of the property and any ultimate disposition data including the data of disposal and sale price of the property.

- A physical inventory of the property must be taken and the results reconciled with the property records at least once every two (2) years for the useful life of the property.
- A control system must be developed to ensure adequate safeguards to prevent loss, damage or theft of the property. Any loss, damage or theft shall be investigated.
- Adequate maintenance procedures must be developed to keep the property in good and working condition.
- If the Sub-Grantee is authorized or required to sell the property, proper sales procedures must be established to ensure the highest possible return. Sale of items must be approved by the MOHS.
- Costs for equipment items are allowable only as part of a comprehensive program effort. All approved equipment must be included on the Federal Conformation Product List (CPL), where applicable. Approved equipment purchased with federal funds, must be in compliance of the Buy America Act (23 U.S.C. 313).
- Approved equipment with a purchase price of \$5,000.00, must be approved in writing from the National Highway Traffic Safety Administration, before the purchase of approved equipment purchased with federal funds.

IV. STAFFING

Positions covered by this project that are funded 100% or 2080 enforcement hours must be new positions. If staff of the Sub-Grantee agency is transferred to work on this project, the agency must replace the vacant position with a new hire. Salaries in this project are for the purpose of remuneration for personal services over and above the present manpower level of the agency. All positions require detailed activity documentation, as directed by MS Office of Highway Safety.

The Individual Officer(s) on this project is defined as an officer working enforcement at approximately 2080 hours at an approximate rate of pay per hour.

V. GENERAL PROJECT REQUIREMENTS

- A. Any change to out-of-state travel approved in the Grant Application, must have prior written approval by the MS Office of Highway Safety for changes. Requests for change should be submitted to the MS Office of Highway Safety not less than two (2) weeks before the intended date of travel on Agency letterhead.
 - Out of State Travel - All federal funded **out of state travel** requires expenses incurred to be placed on the authorized travel voucher. All cost must be based on current state and federal policies.
 - In State Travel - All federal funded **in state travel** requires itemized receipts for expenses incurred, as well as the authorized travel voucher. All cost must be based on current state and federal policies.
 - In State Travel - Meals can only be claimed with an overnight hotel stay.
- B. The Mississippi Office of Highway Safety can only reimburse sub-grantees for grant funded activity. If a sub-grantee is on non-grant related activities for more than 15 minutes; after such time, they should revert to their own agency funding.
- C. No budget modification requests will be accepted by the MS Office of Highway Safety after **July 31st**. Any proposed changes in this Agreement that would result in changes in the scope, character, or complexity of the agreement, require a Letter and Budget Modification Request to the MS Office of Highway Safety. Changes to the Agreement will not be effective, until both parties have executed the modification.
- D. Sub-Grantee must submit any proposed agreements for contractual services to the MS Office of Highway Safety. Contractual Services must be submitted forty-five (45) days prior to acceptance, due to the fact that contracts **must have** review and approval by DPS and NHTSA.
- E. Any program income earned by projects financed in whole or in part with Federal funds must be documented and accounted for. Program income earned during the project period shall be retained by the

Sub-Grantee and used for project related expenses or to offset eligible expenses, with the approval of the MS Office of Highway Safety.

- F. Sub-Grantee **must complete** the Authorized Official or Local Government Resolution included within this Agreement, to accept on behalf of the agency that is represented in this Agreement for federal funding to defray the costs of the project described in the award. **Grant Agreements are not effective until both parties (MOHS and the Sub-Grantee) have fully executed (signed and dated) the Grant Agreement.**
- G. Sub-Grantee **must maintain** in the Agency grant file, the most current copy of the following policies with the Application for funding. If Agency does not have a current policy, please inform the MS Office of Highway Safety of the un-availability of the policy.
- Seat belt policy (Must Retain a Copy);
 - Warning citation policy (If Applicable);
 - Pursuit policy (Must Retain a Copy);
 - Checkpoint policy (If Applicable);
 - Saturation patrol policy (If Applicable); and
 - DUI enforcement policy (If Applicable)
 - Agency seat belt survey procedures must be provided if usage rate is identified as a performance measure within agreement (If Applicable)
- H. Sub-Grantee **must submit** to the MS Office of Highway Safety a copy of the following policy(s):
- Agency Payroll Schedule- Payroll period begin and payroll end dates & check date);
 - Agency Leave policy (personal, vacation, sick, holiday, and military); and
 - Agency Overtime Policy
 - Fiscal Control and Fund Accounting Procedures
 - Pursuit Policy (Law Enforcement Only)
 - In-Direct Cost Agreement (If Applicable)
- I. All training received under federal funded programs must be program related and the Sub-Grantee **must** maintain a copy of the certificate of completion and **must** be available for inspection in the Sub-Grantee grant file. A copy of the certificate of completion **must** be submitted to the MOHS for reimbursement of training expenses.
- J. A Property Inventory form **must** be completed for all equipment. All equipment cost exceeding \$1,000.00 and/or all computer equipment, will be tagged with a Department of Public Safety inventory control number. All equipment will be maintained on the MOHS inventory data base. All equipment purchased with grant funds must be available for inspection. A copy of the most current Property Inventory form must be available in the Agency's grant file.
- K. Implementation of Agreement: All Sub-Grantees **are required** to attend a mandatory grant implementation meeting. Failure to attend one (1) of the available mandatory grant implementation meetings will result in rescinding of the grant funds allocated for the project.
- L. Termination of Agreement:
- In the event of Sub-Grantee noncompliance with any of the provisions of this agreement, the MS Office of Highway Safety may terminate this Agreement by giving the Sub-Grantee a thirty (30) day notice. Before issuing notice of termination of this Agreement, the MS Office of Highway Safety, shall allow the Sub-Grantee a reasonable opportunity to correct noncompliance issues. For noncompliance with the

nondiscrimination section of this agreement or with any of the said rules, regulations or orders, this agreement may be canceled, terminated, or suspended in whole or in part.

- The Sub-Grantee may terminate its participation in this agreement by notifying and submitting the required closeout documentation to the MS Office of Highway Safety, thirty (30) days in advance of the termination date.
- Agreements: Unless otherwise authorized in writing by the MS Office of Highway Safety, the Sub-Grantee shall not assign any portion of the work to be performed under this Agreement, or execute any Agreement, amendment or change order thereto, or obligate itself in any manner with any third party with respect to its rights and responsibilities under this Agreement without the prior written concurrence of the MS Office of Highway Safety. Any subcontract under this Agreement must include all required and/or applicable clauses and provisions of this agreement.
- Sub-Grantee failure to meet all reporting, attendance at meeting(s), scheduled events and timely submission of reimbursement requests set forth in the Agreement by the MS Office of Highway Safety, may result in the withholding of reimbursement payments.

VI. UNALLOWABLE COST

Limitations and Conditions: The provisions stated in the following section are not intended to deny flexibility in supporting potential accident and injury reduction activities; however, the conditions do serve as a guide in describing costs that are **not allowable** for highway safety funding. See NHTSA Highway Safety Grant Funding Guidance.

The following are unallowable:

A. Unallowable Costs for Facilities and Construction:

- Highway construction, maintenance, or design other than design of safety features of highways incorporated into Roadway Safety guidelines
- Construction or reconstruction of permanent facilities, such as paving, driving ranges, towers and non-portable skid pads
- Highway safety appurtenances including longitudinal barriers (such as guardrails), sign supports (except as allowed under Allowable Costs with Conditions for selected Items, Part II.A.2.), luminaire supports, and utility poles (FHWA safety construction Federal-aid funds are available)
- Construction, rehabilitation, or remodeling for any buildings or structures or for purchase of office furnishings and fixtures;

Examples of office furnishings and fixtures

- | | | |
|-------------|------------------|--------------------------|
| • Chair | • Bookcase | • Portable Partition |
| • Table | • Filing Cabinet | • Picture, Wall Clock |
| • Shelving | • Floor Covering | • Draperies and Hardware |
| • Coat Rack | • Office Planter | • Fixed Lighting/Lamp |

- Land (except for SAFETEA-LU Section 2010 and MAP-21 Section 405(f) motorcycle safety grant funds used to purchase a facility which includes the purchase of land upon which the facilities sit.)

B. Unallowable Equipment Costs:

- Fixed and portable truck scales (Motor Carrier safety program funds are available for truck scales)
- Traffic signal preemption systems (FHWA Federal-aid highway program funds are available for traffic signal preemption systems)
- Automated traffic enforcement systems may not be purchased, operated, or maintained with Section 402 funds (including MAP-21 Section 405(b) High Seat Belt Use Rate funds, 405(d) Ignition Interlock

funds, 405(e) Distracted Driving funds, and 405(g) GDL funds, in which a State has been approved to use for any eligible project or activity under 23 USC 402). (23 CFR Part 1300.13(c)).

- Radars or other speed measuring devices using MAP-21 Section 405-Impaired Driving Countermeasures and SAFETEA-LU Section 410 Alcohol Impaired Driving Countermeasures grant funds.

C. Unallowable Training Costs:

- Training of employees of Federal civilian and Federal military agencies. Note: Training for Department of the Interior personnel who are assigned Section 402 responsibilities is covered under the 5 percent administrative allowance.
- An individual's salary while pursuing training (except when the individual's salary is already supported with highway safety funds under an approved project).
- Overtime for police officers attending drug recognition expert training.

D. Program Administration:

- General costs of government. For States, local governments and Indian Tribes, the general costs of government are unallowable (except as provided in § 200.474 Travel. Reference 2 CFR § 200.444 and 2 CFR § 200.474).
- NHTSA highway safety grant funds used to defray expenses incurred or sought to be incurred for activities of Federal civilian or military agencies or employees. For Department of the Interior, personnel expenditures for the Section 402 program are covered under the five percent administrative allowance.
- Alcoholic beverages for any consumption purposes or techniques for determining driver impairment are not allowable (See Part III, D.3.). Reference 2 CFR § 200.423.
- Drug impaired activities, equipment and drug impaired training is not allowable using Sections 154/164 funds.

E. Lobbying:

- Federal - the cost of influencing the U.S. Congress and Federal agency officials for activities associated with obtaining grants, contracts, cooperative agreements or loans.
- State and Local-No Federal funds may be used for any activity specifically designed to urge or influence a State or local legislator to favor or oppose the adoption of any specific legislative proposal pending before any State or local legislative body. Such activities include both direct and indirect (e.g., grassroots) lobbying activities, with one exception. This does not preclude a State official whose salary is supported with NHTSA funds to engage in direct contact with State or local legislative officials, in accordance with customary State practice, even if it urges legislative officials to favor or oppose the adoption of a specific pending legislative proposal. (23 CFR Part 1300)

F. Additional Items Unallowable:

- Cell phones and guns are **not** allowable for purchase with these funds under any circumstances.
- Costs for equipment purchases exceeding \$5,000.00, must have prior approval from NHTSA. The MS Office of Highway Safety will obtain the approval letter and provide a copy to the Sub-Grantee.
- Where major multi-purpose equipment is to be purchased, costs shall be factored, based on utilization for highway safety purposes.
- Costs for the following equipment items are allowable only if a part of a comprehensive program effort. All allowable equipment must be included on the Federal Conformation Product List (CPL):
 - (1) Police traffic radar and other speed measuring devices used by the police (devices must meet the recommended federal guidelines);
 - (2) Alcohol testing; and

(3) Mobile video systems.

- The cost of training is allowable using DOT/NHTSA developed, equivalent, or endorsed curriculum. Documentation must be provided in order to receive reimbursement for a Individual Officer's salary for training. MOHS will reimburse an officer's salary, as long as the proper documentation is submitted such as a Certificate of Completion or Certificate of Attendance.
- Development costs of new training curriculum and materials are allowable, if they will not duplicate materials already developed for similar purposes by DOT/NHTSA or by other states. This does not preclude modifications of present materials necessary to meet particular state and local instructional needs.
- Costs are **not** allowable to pay for an employee's salary while pursuing training, nor to pay the salary of the employee's replacement except where the employee's salary is supported 100% under an approved project.
- All training **must be** included within the grant Agreement. Only DUI (Alcohol) training is allowed under alcohol funding. Occupant protection training is allowed under occupant protection funding.
- Supplanting, includes: (a) replacing routine and/or existing State or local expenditures with the use of Federal grant funds and/or (b) using Federal grant funds for costs of activities that constitute general expenses required to carry out the overall responsibilities of State, local, or Federally-recognized Indian tribal governments.
- The MOHS **will not reimburse** for the assistance of providing training to law enforcement officers through specialized training activities, unless approved in the MOHS Agreement. Any training or training assistance that is claimed and not listed in the approved MOHS Agreement will not be reimbursed.
- Cost to purchase program advertising space in the mass communication media is **not** allowable for Sub-Grantees.

CERTIFICATIONS AND ASSURANCES
FEDERAL CERTIFICATIONS AND ASSURANCES

NONDISCRIMINATION
(APPLIES TO SUB RECIPIENTS AS WELL AS SUB-GRANTEES)

The Sub-Grantee will comply with all Federal statutes and implementing regulations relating to Nondiscrimination ("Federal Nondiscrimination Authorities"). These include but are not limited to:

- TITLE VI OF THE CIVIL RIGHTS ACT OF 1964 (42 U.S.C. 2000d *et seq.*, 78 stat. 252), (prohibits discrimination on the basis of race, color, national origin) and 49 CFR part 21;
- THE UNIFORM RELOCATION ASSISTANCE AND REAL PROPERTY ACQUISITION POLICIES Act of 1970, (42 U.S.C. 4601), (prohibits unfair treatment of persons displaced or whose property has been acquired because of Federal or Federal-aid programs and projects);
- FEDERAL-AID HIGHWAY ACT OF 1973, (23 U.S.C. 324 *et seq.*), AND TITLE IX OF THE EDUCATION AMENDMENTS OF 1972, as amended (20 U.S.C. 1681-1683 and 1685-1686) (prohibit discrimination on the basis of sex);
- SECTION 504 OF THE REHABILITATION ACT OF 1973, (29 U.S.C. 794 *et seq.*), as amended, (prohibits discrimination on the basis of disability) and 49 CFR part 27;
- THE AGE DISCRIMINATION ACT OF 1975, as amended, (42 U.S.C. 6101 *et seq.*), (prohibits discrimination on the basis of age);
- THE CIVIL RIGHTS RESTORATION ACT OF 1987, (Pub. L. 100-209), (broadens scope, coverage and applicability of Title VI of the Civil Rights Act of 1964, The Age Discrimination Act of 1975 and Section 504 of the Rehabilitation Act of 1973, by expanding the definition of the terms "programs or activities" to include all of the programs or activities of the Federal aid recipients, sub-recipients and contractors, whether such programs or activities are Federally-funded or not);

- TITLES II AND III OF THE AMERICANS WITH DISABILITIES ACT (42 U.S.C. 12131-12189) (prohibits discrimination on the basis of disability in the operation of public entities, public and private transportation systems, places of public accommodation, and certain testing) and 49 CFR parts 37 and 38;
- EXECUTIVE ORDER 12898, FEDERAL ACTIONS TO ADDRESS ENVIRONMENTAL JUSTICE IN MINORITY POPULATIONS AND LOW-INCOME POPULATIONS (prevents discrimination against minority populations by discouraging programs, policies, and activities with disproportionately high and adverse human health or environmental effects on minority and low-income populations); and
- EXECUTIVE ORDER 13166, IMPROVING ACCESS TO SERVICES FOR PERSONS WITH LIMITED ENGLISH PROFICIENCY (guards against Title VI national origin discrimination/discrimination because of limited English proficiency (LEP) by ensuring that funding recipients take reasonable steps to ensure that LEP persons have meaningful access to programs (70 FR 74087-74100).

The Sub-Grantee—

- Will take all measures necessary to ensure that no person in the United States shall, on the grounds of race, color, national origin, disability, sex, age, limited English proficiency, or membership in any other class protected by Federal Nondiscrimination Authorities, be excluded from participation in, be denied the benefits of, or be otherwise subjected to discrimination under any of its programs or activities, so long as any portion of the program is Federally-assisted;
- Will administer the program in a manner that reasonably ensures that any of its sub recipients, contractors, subcontractors, and consultants receiving Federal financial assistance under this program will comply with all requirements of the Non-Discrimination Authorities identified in this Assurance;
- Agrees to comply (and require any of its sub recipients, contractors, subcontractors, and consultants to comply) with all applicable provisions of law or regulation governing US DOT's or NHTSA's access to records, accounts, documents, information, facilities, and staff, and to cooperate and comply with any program or compliance reviews, and/or complaint investigations conducted by US DOT or NHTSA under any Federal Nondiscrimination Authority;
- Acknowledges that the United States has a right to seek judicial enforcement with regard to any matter arising under these Non-Discrimination Authorities and this Assurance;
- Agrees to insert in all contracts and funding agreements with other State or private entities the following clause:
 - “During the performance of this contract/funding agreement, the contractor/funding recipient agrees—
 - a. To comply with all Federal nondiscrimination laws and regulations, as may be amended from time to time;
 - b. Not to participate directly or indirectly in the discrimination prohibited by any Federal non-discrimination law or regulation, as set forth in appendix B of 49 CFR part 21 and herein;
 - c. To permit access to its books, records, accounts, other sources of information, and its facilities as required by the State highway safety office, US DOT or NHTSA;
 - d. That, in event a contractor/funding recipient fails to comply with any nondiscrimination provisions in this contract/funding agreement, the State highway safety agency will have the right to impose such contract/agreement sanctions as it or NHTSA determine are appropriate, including but not limited to withholding payments to the contractor/funding recipient under the contract/agreement until the contractor/funding recipient complies; and/or cancelling, terminating, or suspending a contract or funding agreement, in whole or in part; and

e. To insert this clause, including paragraphs (a) through (e), in every subcontract and sub agreement and in every solicitation for a subcontract or sub-agreement that receives Federal funds under this program.

POLITICAL ACTIVITY (HATCH ACT)

(APPLIES TO SUB RECIPIENTS AS WELL AS SUB-GRANTEES)

The Sub-Grantee will comply with provisions of the Hatch Act (5 U.S.C. 1501-1508), which limits the political activities of employees whose principal employment activities are funded in whole or in part with Federal funds.

CERTIFICATION REGARDING FEDERAL LOBBYING

(APPLIES TO SUB RECIPIENTS AS WELL AS SUB-GRANTEES)

Certification for Contracts, Grants, Loans, and Cooperative Agreements

The undersigned certifies, to the best of his or her knowledge and belief, that:

1. No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement;
2. If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions;
3. The undersigned shall require that the language of this certification be included in the award documents for all sub-award at all tiers (including subcontracts, subgrants, and contracts under grant, loans, and cooperative agreements) and that all sub recipients shall certify and disclose accordingly.

This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by section 1352, title 31, U.S. Code. Any person who fails to file the required certification shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.

RESTRICTION ON STATE LOBBYING

(APPLIES TO SUB RECIPIENTS AS WELL AS SUB-GRANTEES)

None of the funds under this program will be used for any activity specifically designed to urge or influence a State or local legislator to favor or oppose the adoption of any specific legislative proposal pending before any

State or local legislative body. Such activities include both direct and indirect (e.g., “grassroots”) lobbying activities, with one exception. This does not preclude a State official whose salary is supported with NHTSA funds from engaging in direct communications with State or local legislative officials, in accordance with customary State practice, even if such communications urge legislative officials to favor or oppose the adoption of a specific pending legislative proposal.

CERTIFICATION REGARDING DEBARMENT AND SUSPENSION

(APPLIES TO SUB RECIPIENTS AS WELL AS SUB-GRANTEES)

Instructions for Primary Certification (Sub-Grantees)

1. By signing and submitting this proposal, the prospective primary tier participant is providing the certification set out below and agrees to comply with the requirements of 2 CFR parts 180 and 1200.
2. The inability of a person to provide the certification required below will not necessarily result in denial of participation in this covered transaction. The prospective primary tier participant shall submit an explanation of why it cannot provide the certification set out below. The certification or explanation will be considered in connection with the department or agency's determination whether to enter into this transaction. However, failure of the prospective primary tier participant to furnish a certification or an explanation shall disqualify such person from participation in this transaction.
3. The certification in this clause is a material representation of fact upon which reliance was placed when the department or agency determined to enter into this transaction. If it is later determined that the prospective primary tier participant knowingly rendered an erroneous certification, in addition to other remedies available to the Federal Government, the department or agency may terminate this transaction for cause or default or may pursue suspension or debarment.
4. The prospective primary tier participant shall provide immediate written notice to the department or agency to which this proposal is submitted if at any time the prospective primary tier participant learns its certification was erroneous when submitted or has become erroneous by reason of changed circumstances.
5. The terms *covered transaction*, *civil judgment*, *debarment*, *suspension*, *ineligible*, *participant*, *person*, *principal*, and *voluntarily excluded*, as used in this clause, are defined in 2 CFR parts 180 and 1200. You may contact the department or agency to which this proposal is being submitted for assistance in obtaining a copy of those regulations.
6. The prospective primary tier participant agrees by submitting this proposal that, should the proposed covered transaction be entered into, it shall not knowingly enter into any lower tier covered transaction with a person who is proposed for debarment under 48 CFR part 9, subpart 9.4, debarred, suspended, declared ineligible, or voluntarily excluded from participation in this covered transaction, unless authorized by the department or agency entering into this transaction.
7. The prospective primary tier participant further agrees by submitting this proposal that it will include the clause titled “Instructions for Lower Tier Certification” including the “Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion—Lower Tier Covered Transaction,” provided by the department or agency entering into this covered transaction, without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions and will require lower tier participants to comply with 2 CFR parts 180 and 1200.

8. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that it is not proposed for debarment under 48 CFR part 9, subpart 9.4, debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. A participant is responsible for ensuring that its principals are not suspended, debarred, or otherwise ineligible to participate in covered transactions. To verify the eligibility of its principals, as well as the eligibility of any prospective lower tier participants, each participant may, but is not required to check the System for Award Management Exclusions website (<https://www.sam.gov>)
9. Nothing contained in the foregoing shall be construed to require establishment of a system of records in order to render in good faith the certification required by this clause. The knowledge and information of a participant is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.
10. Except for transactions authorized under paragraph 6 of these instructions, if a participant in a covered transaction knowingly enters into a lower tier covered transaction with a person who is proposed for debarment under 48 CFR part 9, subpart 9.4, suspended, debarred, ineligible, or voluntarily excluded from participation in this transaction, in addition to other remedies available to the Federal government, the department or agency may terminate the transaction for cause or default.

Certification Regarding Debarment, Suspension, and Other Responsibility Matters—Primary Tier Covered Transactions

- (1) The prospective primary tier participant certifies to the best of its knowledge and belief, that it and its principals:
 - (a) Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participating in covered transactions by any Federal department or agency;
 - (b) Have not within a three-year period preceding this proposal been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State or local) transaction or contract under a public transaction; violation of Federal or State antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of record, making false statements, or receiving stolen property;
 - (c) Are not presently indicted for or otherwise criminally or civilly charged by a governmental entity (Federal, State or Local) with commission of any of the offenses enumerated in paragraph (1)(b) of this certification; and
 - (d) Have not within a three-year period preceding this application/proposal had one or more public transactions (Federal, State, or local) terminated for cause or default.
- (2) Where the prospective primary tier participant is unable to certify to any of the Statements in this certification, such prospective participant shall attach an explanation to this proposal.

Instructions for Lower Tier Certification

1. By signing and submitting this proposal, the prospective lower tier participant is providing the certification set out below and agrees to comply with the requirements of 2 CFR parts 180 and 1200.
2. The certification in this clause is a material representation of fact upon which reliance was placed when this transaction was entered into. If it is later determined that the prospective lower tier participant knowingly rendered an erroneous certification, in addition to other remedies available to the Federal

government, the department or agency with which this transaction originated may pursue available remedies, including suspension or debarment.

3. The prospective lower tier participant shall provide immediate written notice to the person to which this proposal is submitted if at any time the prospective lower tier participant learns that its certification was erroneous when submitted or has become erroneous by reason of changed circumstances.
4. The terms *covered transaction*, *civil judgment*, *debarment*, *suspension*, *ineligible*, *participant*, *person*, *principal*, and *voluntarily excluded*, as used in this clause, are defined in 2 CFR parts 180 and 1200. You may contact the person to whom this proposal is submitted for assistance in obtaining a copy of those regulations.
5. The prospective lower tier participant agrees by submitting this proposal that, should the proposed covered transaction be entered into, it shall not knowingly enter into any lower tier covered transaction with a person who is proposed for debarment under 48 CFR part 9, subpart 9.4, debarred, suspended, declared ineligible, or voluntarily excluded from participation in this covered transaction, unless authorized by the department of agency with which this transaction originated.
6. The prospective lower tier participant further agrees by submitting this proposal that it will include the clause titled “Instructions for Lower Tier Certification” including the “Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion—Lower Tier Covered Transaction,” without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions and will require lower tier participants to comply with 2 CFR parts 180 and 1200.
7. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that it is not proposed for debarment under 48 CFR part 9, subpart 9.4, debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. A participant is responsible for ensuring that its principals are not suspended, debarred, or otherwise ineligible to participate in covered transactions. To verify the eligibility of its principals, as well as the eligibility of any prospective lower tier participants, each participant may, but is not required to, check the System for Award Management Exclusions website (<https://www.sam.gov>).
8. Nothing contained in the foregoing shall be construed to require establishment of a system of records in order to render in good faith the certification required by this clause. The knowledge and information of a participant is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.
9. Except for transactions authorized under paragraph 5 of these instructions, if a participant in a covered transaction knowingly enters into a lower tier covered transaction with a person who is proposed for debarment under 48 CFR part 9, subpart 9.4, suspended, debarred, ineligible, or voluntarily excluded from participation in this transaction, in addition to other remedies available to the Federal government, the department or agency with which this transaction originated may pursue available remedies, including suspension or debarment.

Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion—Lower Tier Covered Transactions

1. The prospective lower tier participant certifies, by submission of this proposal, that neither it nor its principals is presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participation in covered transaction by any Federal department or agency.
2. Where the prospective lower tier participant is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation to this proposal.

BUY AMERICA ACT

(APPLIES TO SUB RECIPIENTS AS WELL AS SUB-GRANTEES)

The Sub-Grantee and each sub recipient will comply with the Buy America requirement (23 U.S.C. 313) when purchasing items using Federal funds. Buy America requires a State, or sub recipient, to purchase with Federal funds only steel, iron and manufactured products produced in the United States, unless the Secretary of Transportation determines that such domestically produced items would be inconsistent with the public interest, that such materials are not reasonably available and of a satisfactory quality, or that inclusion of domestic materials will increase the cost of the overall project contract by more than 25 percent. In order to use Federal funds to purchase foreign produced items, the Sub-Grantee must submit a waiver request that provides an adequate basis and justification for approval by the Secretary of Transportation.

PROHIBITION ON USING GRANT FUNDS TO CHECK FOR HELMET USAGE

(APPLIES TO SUB RECIPIENTS AS WELL AS SUB-GRANTEES)

The Sub-Grantee and each sub recipient will not use 23 U.S.C. Chapter 4 grant funds for programs to check helmet usage or to create checkpoints that specifically target motorcyclists.

MS OFFICE OF HIGHWAY SAFETY CERTIFICATIONS AND ASSURANCES

Alcohol/Impaired Driving/Occupant Protection/Police Traffic Services/Law Enforcement Liaison (LEL) Coordination and High Visibility Enforcement (HVE) Participation Compliance **(Applies only to Law Enforcement Sub-Grantees)**

Law enforcement agencies funded with Federal Highway Safety funds administered by the MS Office of Highway Safety for the purpose of LEL Coordination and HVE Enforcement Participation must comply with the following:

1. Sub-Grantee with a LEL Network Coordinator Grant **must hold** a LEL Troop Network meeting to promote State/County/Local networking for the national blitz campaigns, blitz reporting, and PI&E efforts. **(LEL Coordination Sub-Grantees Only)**
2. Sub-Grantee with a LEL Network Coordinator Grant **must allow** the LEL network coordinators to assist the MS Office of Highway Safety in promoting and gathering statistics from the NHTSA national blitz campaigns. **(LEL Coordination Sub-Grantees Only)**
3. Sub-Grantee **must engage** in three (3) sustained enforcement blitz periods during the national campaigns for Christmas/New Year's, Memorial Day, and the Labor Day Holiday by conducting checkpoints and/or saturation patrols.

4. Sub-Grantee **must** engage in two (2) sustained enforcement blitz periods during Super Bowl Sunday, 4th of July Holiday Period, and any additional sustained enforcement periods coordinated by the MOHS by conducting checkpoints and/or saturation patrols during the state campaigns.
5. For each of the national blitz campaigns, Sub-Grantee **must maintain** relevant statistics and **submit** a mobilization form reporting the total number of checkpoints, saturation patrols, arrests and other citations/relevant statistics by the MOHS required deadline. Failure to comply with this requirement may result in delay of reimbursement payments.
6. Sub-Grantee **is required** to generate earned media (example: press conference, TV, radio, social media or print news articles) before, during, or after High Visibility Enforcement (HVE) state and national campaign events and must submit documentation with each activity report.
7. Law Enforcement Sub-Grantees **will use** the following criteria to help identify locations in each city/county for intensified enforcement including checkpoints and saturation patrols.
 - ☐ Unusual incidents of alcohol/ drug related crashes/fatalities;
 - ☐ Alcohol/ drug impaired driving violations;
 - ☐ Unusual number of nighttime single vehicle crashes/fatalities (Impaired, Unbelted and Speed);
 - ☐ Any other documented alcohol/ drug related vehicular incidents;
 - ☐ Citation data related to restrained and unrestrained occupants;
 - ☐ Unusual incidents of unbelted crashes/fatalities
 - ☐ Seatbelt/Child restraint violations;
 - ☐ Unusual incidents of teen crashes/fatalities; and
 - ☐ Unusual incidents of speed crashes/fatalities.

DUI/Impaired Enforcement Compliance

(Applies only to Sub-Grantees funded with Impaired Driving (405d), Alcohol (154) funds, and/or any Police Traffic Service (402) funds used for Impaired Driving and/or Alcohol enforcement)

Law enforcement agencies funded with Federal Highway Safety funds administered by the MS Office of Highway Safety for the purpose of DUI/Impaired Enforcement must comply with the following:

1. Sub-Grantee **agrees and commits** to have the Individual Officer(s) (if applicable) and/or other officers assigned to work DUI/Impaired overtime to engage their efforts during peak hours when most impaired drivers are likely driving under the influence.
 - Individual DUI/Impaired Officer(s) shift hours **will include** 4:00 p.m. and no later than 7:00 a.m. and will include Thursday, Friday and Saturday.
 - Overtime hours for DUI/Impaired Enforcement **will include** 4:00 p.m. and no later than 7:00 a.m. and will include Thursday, Friday and Saturday.

If proper justification can be made regarding **other dates or time periods** within the jurisdiction for needed enforcement, a written request can be made to MOHS for consideration and approval. However, written approval **must** be given by MOHS prior to implementing hours and day of week outside the above shifts.

2. Specific DUI/Impaired activities in which the DUI/Impaired officer(s) (if applicable) and/or other officers working overtime **will include** checkpoints, saturation patrols and other impaired driving enforcement activities as designated.
3. The Sub-Grantee **will engage** in national campaigns endorsed by the National Highway Traffic Safety Administration.
4. The Sub-Grantee **will engage** in **all** activities as described in the High Visibility Enforcement (HVE) Participation Compliance.
5. The Sub-Grantee **will engage** in sustained enforcement blitz periods during Super Bowl Sunday, 4th of July Holiday Period, and any additional sustained enforcement periods coordinated by the MOHS by conducting checkpoints and/or saturation patrols during the state campaigns.
6. The Sub-Grantee **will generate** earned media (example: press conference, TV, social media, radio or print news articles) either before, during, or after High Visibility Enforcement (HVE) national campaign events and must submit documentation with each quarterly report.

Occupant Protection/Police Traffic Services

High Visibility Enforcement (HVE)

Applies only to Sub-Grantee funded with 402 (OP), 402(PTS) or 405(B)

Law enforcement agencies funded with Federal Highway Safety funds administered by the MS Office of Highway Safety for the purpose of Occupant Protection/Police Traffic Service Enforcement must comply with the following:

1. Sub-Grantee funded under a 402/405(b) Occupant Protection/Police Traffic Services Federal grant funds **must participate** in the National Click It or Ticket Campaign Mobilization and Child Passenger Safety week.
2. Sub-Grantee **will submit** forms containing the number of child restraint/safety belt citations, etc. and **submit** by the reporting deadline set forth by the MS Office of Highway Safety for the National Click It or Ticket Campaign. Failure to comply with this requirement may result in the delay of reimbursement payments.
3. Sub-Grantee **will generate** earned media (example: press conference, TV, social media, radio or print news articles) either before, during, or after High Visibility Enforcement (HVE) national campaign events and must submit documentation with each activity report.

Audit Requirements:

Law enforcement, state, local, non-profit agencies funded with Federal Highway Safety funds administered by the MS Office of Highway Safety for the purpose of grant activity must comply with the following (2 CFR§200.501):

(a) *Audit required.* A non-Federal entity that expends \$750,000 or more during the non-Federal entity's fiscal year in Federal awards must have a single or program-specific audit conducted for that year in accordance with the provisions of this part.

(b) *Single audit.* A non-Federal entity that expends \$750,000 or more during the non-Federal entity's fiscal year in Federal awards must have a single audit conducted in accordance with §200.514 Scope of audit except when it elects to have a program-specific audit conducted in accordance with paragraph (c) of this section.

(c) *Program-specific audit election.* When an auditee expends Federal awards under only one Federal program (excluding R&D) and the Federal program's statutes, regulations, or the terms and conditions of the Federal award do not require a financial statement audit of the auditee, the auditee may elect to have a program-specific audit conducted in accordance with §200.507 Program-specific audits. A program-specific audit may not be elected for R&D unless all of the Federal awards expended were received from the same Federal agency, or the same Federal agency and the same pass-through entity, and that Federal agency, or pass-through entity in the case of a sub recipient, approves in advance a program-specific audit.

(d) *Exemption when Federal awards expended are less than \$750,000.* A non-Federal entity that expends less than \$750,000 during the non-Federal entity's fiscal year in Federal awards is exempt from Federal audit requirements for that year, except as noted in §200.503 Relation to other audit requirements, but records must be available for review or audit by appropriate officials of the Federal agency, pass-through entity, and Government Accountability Office (GAO).

(e) *Federally Funded Research and Development Centers (FFRDC).* Management of an auditee that owns or operates a FFRDC may elect to treat the FFRDC as a separate entity for purposes of this part.

(f) *Sub-recipients and Contractors.* An auditee may simultaneously be a recipient, a sub recipient, and a contractor. Federal awards expended as a recipient or a sub recipient are subject to audit under this part. The payments received for goods or services provided as a contractor are not Federal awards. Section §200.330 Sub recipient and contractor determinations sets forth the considerations in determining whether payments constitute a Federal award or a payment for goods or services provided as a contractor.

(g) *Compliance responsibility for contractors.* In most cases, the auditee's compliance responsibility for contractors is only to ensure that the procurement, receipt, and payment for goods and services comply with Federal statutes, regulations, and the terms and conditions of Federal awards. Federal award compliance requirements normally do not pass through to contractors. However, the auditee is responsible for ensuring compliance for procurement transactions which are structured such that the contractor is responsible for program compliance or the contractor's records must be reviewed to determine program compliance. Also, when these procurement transactions relate to a major program, the scope of the audit must include determining whether these transactions are in compliance with Federal statutes, regulations, and the terms and conditions of Federal awards.

(h) *For-profit sub recipient.* Since this part does not apply to for-profit sub recipients, the pass-through entity is responsible for establishing requirements, as necessary, to ensure compliance by for-profit sub recipients. The

agreement with the for-profit sub recipient must describe applicable compliance requirements and the for-profit sub recipient's compliance responsibility. Methods to ensure compliance for Federal awards made to for-profit sub recipients may include pre-award audits, monitoring during the agreement, and post-award audits. See also §200.331 Requirements for pass-through entities.

Sub-Grantees are required to provide a copy of the jurisdiction/agency(s) most recent financial audit with the submission of the Grant Application. If the agency receives an updated audit during the grant year, the agency is required to provide a copy of the audit to the MOHS.

STATE CERTIFICATION AND ASSURANCE

**CERTIFICATION AND STANDARD ASSURANCE REQUIREMENT FOR:
(APPLIES TO SUB RECIPIENTS AS WELL AS SUB-GRANTEES)**

CONCERNING: STATE, COUNTY AND LOCAL EMERGENCY RESPONSE AND VEHICULAR PURSUIT POLICIES

When truly applicable and in full cooperation with the MS Office of Highway Safety, all grant and/or Sub-Grantee recipients (regardless of the type of entity or the amount awarded) must show substantial compliance with the following statutory requirement: On or after January 1, 2005, each state, county and local law enforcement agency that conducts emergency response and vehicular pursuits shall adopt written policies and training procedures that set forth the manner in which these operations shall be conducted. Each law enforcement agency may create its own policies or adopt an existing model. All pursuit policies created or adopted by any law enforcement agency must address situations in which police pursuits cross over into other jurisdictions. Law enforcement agencies which do not comply with the requirements of this provision are subject to the withholding of any state funding or state administered federal funding.

MS Code Annotated § 45-1-43, effective from and after July 1, 2004.

The obligation of a Sub-Grantee is to formulate, implement, and maintain certain written pursuit policies and training procedures which specifically set forth how these operations shall be conducted in accordance with State law. Note that "recipient" means any state, county or local law enforcement agency that conducts emergency response and vehicular pursuits and which may also receive any state funding or state administered federal funding.

A true copy of the law enforcement agency's emergency response and vehicular pursuit policy with pertinent training procedures must be retained in the agency grant file and be available for review. However, when otherwise allowed to submit an alternative for the required documentary confirmation, recipient must specifically identify and acknowledge the use of viable pertinent policies and training procedures, as these factors may be especially expressed through an appropriate letter or timely memorandum of understanding. All relevant information submitted or received by the MOHS, becomes an actual documented part of the grant documentation and thus will be placed within the MOHS master file for grants.

During any occurrence or time period for application, selection, award, implementation or close out of a grant or an award, if the grantee, Sub-Grantee, or recipient does not show compliance with the statute emphasized above, the grantee, Sub-Grantee or recipient is subject to the withholding of any state funding or state administered federal funding. Failure of grantee, Sub-Grantee or recipient to communicate the relevant policy that is required by statute may lead to adverse cost adjustment, disallowance of costs and/or recovery of

As the Authorized Official for, City of Hattiesburg **(Sub-Grantee Name)**, I certify by my signature below, that I have fully read and I am cognizant of our duties and responsibilities under the emergency response and vehicular pursuit policies statute. Therefore, I hereby comply with this Certification and Standard Assurance requirement by retaining true copy of the applicable state, county or local emergency response and vehicular pursuit policies with training procedures which are pertinent to this organization. A copy of the vehicular pursuit policy must be maintained in the Sub-Grantee agency grant file.

Authorizing Official's Title

Authorizing Official's Title

LOCAL GOVERNMENTAL RESOLUTION AGREEMENT AND AUTHORIZATION TO PROCEED

WHEREAS, the City of Hattiesburg
(Governing Body of Unit of Government)

Herein called the "SUB-GRANTEE" has thoroughly considered the problem addressed in the application (Program Source) **154 ALCOHOL** and has reviewed the project described in the agreement; and

WHEREAS, under the terms of Public Law 89-564 as amended, the United States of America has authorized the Department of Transportation, through the Mississippi Office of Highway Safety to make federal contracts to assist local governments in the improvement of highway safety,

NOW THEREFORE BE IT RESOLVED BY THE City of Hattiesburg
(Governing Body of Unit of Government)

IN THE JURISDICTION Hattiesburg **MISSISSIPPI, THIS** 18th **Day of**
August, **20** 20 **AS**

FOLLOWS:

1. That the project above is in the best interest of the Sub-Grantee and the general public.
2. Mayor Toby Barker is authorized to accept, on behalf of the
(Name and Title of Representative)
Sub-Grantee, an award in the form prescribed by the MS Office of Highway Safety for federal funding in the amount of \$ 49,499.20 to be made to the Sub-Grantee defraying the cost
(Federal Dollar Requested)
of the project described in the award.
3. One original or certified copy of this resolution must be included as part of the award referenced above.
4. That this resolution shall take effect immediately upon its adoption.

(If Applicable)

DONE AND ORDERED IN OPEN MEETING BY Mayor Toby Barker
(Chairman of Board/Mayor)

Alderman/Councilperson _____ offered the foregoing resolution and moved its adoption, which was seconded by Alderman/Councilperson _____ and, was duly adopted.

Date: 8/18/2020

Seal (City/County Seal is required)

Attest: _____

By: _____
(Blue Ink)

Mississippi Office of Highway Safety Designation of Secondary Signatory Official

Pursuant to the MS Department of Public Safety's requirements that the signatory official is the only person authorized to sign official documentation in relation to the sub-grant, such as monthly financial cost reporting worksheets, the (agency/department name) City of Hattiesburg has authorized and approved (print designated secondary signatory official name) Lisa Hanson to sign any/all forms related to this contract.

Upon approval of this request said person will then be **Responsible/Liable**, as the signatory official, for claims submitted by them to this agency. The approval of this request will allow this person to complete required documentation in the absence and/or on behalf of the signatory official.

Name: Lisa Hanson Title: Comptroller
(Designated Secondary Signatory Official)

Organization Name: City of Hattiesburg

Mailing Address: P.O. Box 1898

City: Hattiesburg Zip Code: 39403-1898

Telephone Number: (601) 554-1034 Cellular Number: ()

Email Address: lhanson@hattiesburgms.com

Signature of Designated Secondary Signatory Official: _____

Appointed by Authorizing Official: Toby Barker Date: 8/18/2020
(Mayor, Board President, Commissioner, Director) (Print Name)

Signature: _____ Title: Mayor
(Authorizing Official)



Memorandum

To: Mayor Toby Barker and Members of City Council

From:

cc:

Date: Tuesday, August 18, 2020

Re: Approve contract with Topp McWhorter Harvey PLLC to audit the financial statements of the City of Hattiesburg for the fiscal year ending September 30, 2020 and authorize the Council President to execute in duplicate.
File Number: 2020-588
Minute Book #

Summary

Authorize Council President to execute duplicate contract with Topp McWhorter Harvey PLLC to audit the financial statements of the City of Hattiesburg for the fiscal year ending September 30, 2020.

Recommendation Statement

I recommend authorizing the Council President to execute said agreement.

Please place this on the August 18, 2020 City Council meeting for consideration.



**SINGLE AUDIT ENGAGEMENT LETTER:
GOVERNMENTAL ENTITY**

August 6, 2020

To the City Council
Attention: Mr. Carter Carroll, President
City of Hattiesburg, Mississippi
Post Office Box 1898
Hattiesburg, Mississippi 39401

Dear Mr. Carroll:

You have requested that we audit the financial statements of the governmental activities, the business-type activities, the aggregate discretely presented component unit, each major fund, and the aggregate remaining fund information of the City of Hattiesburg, Mississippi, as of September 30, 2020 and for the year then ended, and the related notes to the financial statements, which collectively comprise City of Hattiesburg Mississippi's basic financial statements as listed in the table of contents.

In addition, we will audit the entity's compliance over major federal award programs for the year ended September 30, 2020. We are pleased to confirm our acceptance and our understanding of this audit engagement by means of this letter. Our audits will be conducted with the objectives of our expressing an opinion on each opinion unit and an opinion on compliance regarding the entity's major federal award programs.

Accounting principles generally accepted in the United States of America (U.S. GAAP) as promulgated by the Governmental Accounting Standards Board (GASB) require that supplementary information be presented to supplement the basic financial statements. Such information, although not a part of the basic financial statements, is required by GASB, who considers it to be an essential part of financial reporting for placing the basic financial statements in an appropriate operational, economic, or historical context. As part of our engagement, we will apply certain limited procedures to the required supplementary information (RSI) in accordance with auditing standards generally accepted in the United States of America. These limited procedures will consist primarily of inquiries of management regarding their methods of measurement and presentation, and comparing the information for consistency with management's responses to our inquiries. We will not express an opinion or provide any form of assurance on the RSI. The following RSI is required by accounting principles generally accepted in the United States of America. This RSI will be subjected to certain limited procedures but will not be audited:

- Management's Discussion and Analysis (MD&A)
- Budgetary Comparison Schedules for the General Fund, any major Special Revenue Funds, and related notes
- Schedule of City's Proportionate Share of the Net Pension Liability – PERS and PFDR
- Schedule of City's Contributions – PERS and PFDR
- Schedule of Change in the Total OPEB Liability and Related Ratios
- Notes to the Required Supplementary Information



HATTIESBURG
2 Southern Pointe Parkway, Suite 100
Hattiesburg, MS 39401-8025

P. O. Drawer 15099
Hattiesburg, MS 39404-5099

FAX: 601.264.3642

COLUMBIA
150 Old Highway 98 E
Columbia, MS 39429-6447

P. O. Box 609
Columbia, MS 39429-0609

FAX: 601.736.0501

GULFPORT
2019 23rd Avenue
Gulfport, MS 39501-2968

P. O. Box 1842
Gulfport, MS 39502-1842

FAX: 228.864.3850

To the City Council
Attention: Mr. Carter Carroll, President
City of Hattiesburg, Mississippi
August 6, 2020
Page 2 of 8

Supplementary information other than RSI will accompany the City of Hattiesburg, Mississippi's basic financial statements. We will subject the following supplementary information to the auditing procedures applied in our audit of the basic financial statements and certain additional procedures, including comparing and reconciling the supplementary information to the underlying accounting and other records used to prepare the financial statements or to the financial statements themselves, and additional procedures in accordance with auditing standards generally accepted in the United States of America. We intend to provide an opinion on the following supplementary information in relation to the financial statements as a whole:

- Nonmajor and Agency Combining Fund Statements
- Statement of Department Expenditures - Budgetary Basis - General Fund
- Schedule of Surety Bonds for Municipal Officials
- Full Cost Accounting - Solid Waste Management Services
- Report on Revenues and Expenditures Additional 1% Sales Tax for City Parks & Recreation Projects and Improvements to USM Athletic Facilities - Modified Accrual Basis
- Water and Sewer Budgetary Basis Statements
- Schedule of Expenditures of Federal Awards and related notes

Schedule of Expenditures of Federal Awards

We will subject the schedule of expenditures of federal awards to the auditing procedures applied in our audit of the basic financial statements and certain additional procedures, including comparing and reconciling the schedule to the underlying accounting and other records used to prepare the financial statements or to the financial statements themselves, and additional procedures in accordance with auditing standards generally accepted in the United States of America. We intend to provide an opinion on whether the schedule of expenditures of federal awards is presented fairly in all material respects in relation to the financial statements as a whole.

Also, the document we submit to you will include the following other additional information that will not be subjected to the auditing procedures applied in our audit of the financial statements:

- Letter of Transmittal
- List of Public Officials
- Statistical Information required for the Comprehensive Annual Financial Report presentation

Data Collection Form

Prior to the completion of our engagement, we will complete the sections of the Data Collection Form that are our responsibility. The form will summarize our audit findings, amounts and conclusions. It is management's responsibility to submit a reporting package including financial statements, schedule of expenditure of federal awards, summary schedule of prior audit findings and corrective action plan along with the Data Collection Form to the federal audit clearinghouse. The financial reporting package must be text searchable, unencrypted, and unlocked. Otherwise, the reporting package will not be accepted by the federal audit clearinghouse. We will assist you in the electronic submission and certification. You may request from us copies of our report for you to include with the reporting package submitted to pass-through entities.

The Data Collection Form is required to be submitted within the *earlier* of 30 days after receipt of our auditors' reports or nine months after the end of the audit period, unless specifically waived by a federal cognizant or oversight agency for audits. Data Collection Forms submitted untimely are one of the factors in assessing programs at a higher risk.

To the City Council
Attention: Mr. Carter Carroll, President
City of Hattiesburg, Mississippi
August 6, 2020
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Audit of the Financial Statements

We will conduct our audit in accordance with auditing standards generally accepted in the United States of America (U.S. GAAS), the standards applicable to financial audits contained in *Government Auditing Standards*, issued by the Comptroller General of the United States of America; the audit requirements of Title 2 U.S. Code of Federal Regulations (CFR) Part 200, *Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards* (Uniform Guidance), and, if applicable, in accordance with any state or regulatory audit requirements. Those standards and the Uniform Guidance require that we plan and perform the audit to obtain reasonable assurance about whether the basic financial statements are free from material misstatement. An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditor's judgment, including the assessment of the risks of material misstatement of the financial statements, whether due to error, fraudulent financial reporting, misappropriation of assets, or violations of laws, governmental regulations, grant agreements, or contractual agreements.

An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluating the overall presentation of the financial statements. If appropriate, our procedures will therefore include tests of documentary evidence that support the transactions recorded in the accounts, tests of the physical existence of inventories, and direct confirmation of cash, investments, and certain other assets and liabilities by correspondence with creditors and financial institutions. As part of our audit process, we will request written representations from your attorneys, and they may bill you for responding. At the conclusion of our audit, we will also request certain written representations from you about the financial statements and related matters.

Because of the inherent limitations of an audit, together with the inherent limitations of internal control, an unavoidable risk that some material misstatements or noncompliance (whether caused by errors, fraudulent financial reporting, misappropriation of assets, detected abuse, or violations of laws or governmental regulations) may not be detected exists, even though the audit is properly planned and performed in accordance with U.S. GAAS and *Government Auditing Standards* of the Comptroller General of the United States of America, and, if applicable, in accordance with any state or regulatory audit requirements. Please note that the determination of abuse is subjective and *Government Auditing Standards* does not require auditors to detect abuse.

In making our risk assessments, we consider internal control relevant to the entity's preparation and fair presentation of the financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal control. However, we will communicate to you in writing concerning any significant deficiencies or material weaknesses in internal control relevant to the audit of the financial statements that we have identified during the audit. Our responsibility as auditors is, of course, limited to the period covered by our audit and does not extend to any other periods.

We will issue a written report upon completion of our audit of the City of Hattiesburg, Mississippi's basic financial statements. Our report will be addressed to the Honorable Mayor and Members of the City Council of the City of Hattiesburg, Mississippi. We cannot provide assurance that unmodified opinions will be expressed. Circumstances may arise in which it is necessary for us to modify our opinions, add an emphasis-of-matter or other-matter paragraph(s), or withdraw from the engagement.

In accordance with the requirements of *Government Auditing Standards*, we will also issue a written report describing the scope of our testing over internal control over financial reporting and over compliance with laws, regulations, and provisions of grants and contracts, including the results of that testing. However, providing an

To the City Council
Attention: Mr. Carter Carroll, President
City of Hattiesburg, Mississippi
August 6, 2020
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opinion on internal control and compliance over financial reporting will not be an objective of the audit and, therefore, no such opinion will be expressed.

We also will issue a written report on compliance with state laws and regulations upon completion of our audit

Audit of Major Program Compliance

Our audit of the City of Hattiesburg, Mississippi's major federal award programs compliance will be conducted in accordance with the requirements of the Single Audit Act, as amended; and the Uniform Guidance, and will include tests of accounting records, a determination of major programs in accordance with the Uniform Guidance and other procedures we consider necessary to enable us to express such an opinion on major federal award program compliance and to render the required reports. We cannot provide assurance that an unmodified opinion on compliance will be expressed. Circumstances may arise in which it is necessary for us to modify our opinion or withdraw from the engagement.

The Uniform Guidance requires that we also plan and perform the audit to obtain reasonable assurance about whether the entity has complied with applicable laws and regulations and the provisions of contracts and grant agreements applicable to major federal award programs. Our procedures will consist of determining major federal programs and performing the applicable procedures described in the U.S. Office of Management and Budget *OMB Compliance Supplement* for the types of compliance requirements that could have a direct and material effect on each of the entity's major programs. The purpose of those procedures will be to express an opinion on the entity's compliance with requirements applicable to each of its major programs in our report on compliance issued pursuant to the Uniform Guidance.

Also, as required by the Uniform Guidance, we will perform tests of controls to evaluate the effectiveness of the design and operation of controls that we consider relevant to preventing or detecting material noncompliance with compliance requirements applicable to each of the entity's major federal award programs. However, our tests will be less in scope than would be necessary to render an opinion on these controls and, accordingly, no opinion will be expressed in our report.

We will issue a report on compliance that will include an opinion or disclaimer of opinion regarding the entity's major federal award programs, and a report on internal controls over compliance that will report any significant deficiencies and material weaknesses identified; however, such report will not express an opinion on internal control.

Management's Responsibilities

Our audit will be conducted on the basis that management acknowledges and understands that they have responsibility:

1. For the preparation and fair presentation of the financial statements in accordance with accounting principles generally accepted in the United States of America;
2. For the design, implementation, and maintenance of internal control relevant to the preparation and fair presentation of financial statements that are free from material misstatement, whether due to fraud or error;
3. For identifying, in its accounts, all federal awards received and expended during the period and the federal programs under which they were received, including federal awards and funding increments received prior to December 26, 2014 (if any), and those received in accordance with the Uniform Guidance (generally received after December 26, 2014);

To the City Council
Attention: Mr. Carter Carroll, President
City of Hattiesburg, Mississippi
August 6, 2020
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4. For maintaining records that adequately identify the source and application of funds for federally funded activities;
5. For preparing the schedule of expenditures of federal awards (including notes and noncash assistance received) in accordance with the Uniform Guidance;
6. For the design, implementation, and maintenance of internal control over federal awards;
7. For establishing and maintaining effective internal control over federal awards that provides reasonable assurance that the nonfederal entity is managing federal awards in compliance with federal statutes, regulations, and the terms and conditions of the federal awards;
8. For identifying and ensuring that the entity complies with federal statutes, regulations, and the terms and conditions of federal award programs and implementing systems designed to achieve compliance with applicable federal statutes, regulations, and the terms and conditions of federal award programs;
9. For disclosing accurately, currently, and completely the financial results of each federal award in accordance with the requirements of the award;
10. For identifying and providing report copies of previous audits, attestation engagements, or other studies that directly relate to the objectives of the audit, including whether related recommendations have been implemented;
11. For taking prompt action when instances of noncompliance are identified;
12. For addressing the findings and recommendations of auditors, for establishing and maintaining a process to track the status of such findings and recommendations and taking corrective action on reported audit findings from prior periods and preparing a summary schedule of prior audit findings;
13. For following up and taking corrective action on current year audit findings and preparing a corrective action plan for such findings;
14. For submitting the reporting package and data collection form to the appropriate parties;
15. For making the auditor aware of any significant contractor relationships where the contractor is responsible for program compliance;
16. To provide us with:
 - a. Access to all information of which management is aware that is relevant to the preparation and fair presentation of the financial statements, and relevant to federal award programs, such as records, documentation, and other matters;
 - b. Additional information that we may request from management for the purpose of the audit; and
 - c. Unrestricted access to persons within the entity from whom we determine it necessary to obtain audit evidence.
17. For adjusting the financial statements to correct material misstatements and confirming to us in the management representation letter that the effects of any uncorrected misstatements aggregated by us during the current engagement and pertaining to the current year period under audit are immaterial, both individually and in the aggregate, to the financial statements as a whole;
18. For acceptance of nonattest services, including identifying the proper party to oversee nonattest work;
19. For maintaining adequate records, selecting and applying accounting principles, and safeguarding assets;
20. For informing us of any known or suspected fraud affecting the entity involving management, employees with significant role in internal control and others where fraud could have a material effect on compliance;
21. For the accuracy and completeness of all information provided;
22. For taking reasonable measures to safeguard protected personally identifiable and other sensitive information; and
23. For confirming your understanding of your responsibilities as defined in this letter to us in your management representation letter.

With regard to the schedule of expenditures of federal awards referred to above, you acknowledge and understand your responsibility (a) for the preparation of the schedule of expenditures of federal awards in accordance with the

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August 6, 2020
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Uniform Guidance, (b) to provide us with the appropriate written representations regarding the schedule of expenditures of federal awards, (c) to include our report on the schedule of expenditures of federal awards in any document that contains the schedule of expenditures of federal awards and that indicates that we have reported on such schedule, and (d) to present the schedule of expenditures of federal awards with the audited financial statements, or if the schedule will not be presented with the audited financial statements, to make the audited financial statements readily available to the intended users of the schedule of expenditures of federal awards no later than the date of issuance by you of the schedule and our report thereon.

As part of our audit process, we will request from management, written confirmation concerning representations made to us in connection with the audit.

We understand that your employees will prepare all confirmations we request and will locate any documents or invoices selected by us for testing.

Fees and Timing

We expect to begin our audit on approximately September 1, 2020 and to issue our reports no later than April 30, 2021.

Paige M. Johnson, CPA is the engagement partner for the audit services specified in this letter. Her responsibilities include supervising TMH's services performed as part of this engagement and signing or authorizing another qualified firm representative to sign the audit report.

Our fees are based on the amount of time required at various levels of responsibility, plus actual out-of-pocket expenses. Invoices will be rendered every two weeks and are payable upon presentation. We estimate that our fee for the audit will be One Hundred Ninety Thousand Dollars and No Cents (\$190,000.00), plus report reproduction costs for all reports. We will notify you immediately of any circumstances we encounter that could significantly affect this initial fee estimate. Whenever possible, we will attempt to use the City of Hattiesburg, Mississippi's personnel to assist in the preparation of schedules and analyses of accounts. This effort could substantially reduce our time requirements and facilitate the timely conclusion of the audit.

Other Matters

During the course of the engagement, we may communicate with you or your personnel via fax or e-mail, and you should be aware that communication in those mediums contains a risk of misdirected or intercepted communications.

Regarding the electronic dissemination of audited financial statements, including financial statements published electronically on your Internet website, you understand that electronic sites are a means to distribute information and, therefore, we are not required to read the information contained in these sites or to consider the consistency of other information in the electronic site with the original document.

The audit documentation for this engagement is the property of TMH and constitutes confidential information. However, we may be requested to make certain audit documentation available to the Office of the State Auditor, federal agencies and the U.S. Government Accountability Office pursuant to authority given to it by law or regulation, or to peer reviewers. If requested, access to such audit documentation will be provided under the supervision of TMH's personnel. Furthermore, upon request, we may provide copies of selected audit documentation to these agencies and regulators. The regulators and agencies may intend, or decide, to distribute the copies of information

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contained therein to others, including other governmental agencies. We agree to retain our audit documentation or work papers for a period of at least five years from the date of our report.

Further, we will be available during the year to consult with you on financial management and accounting matters of a routine nature.

With respect to any nonattest services we perform, as detailed below, we will not assume management responsibilities on behalf of the City of Hattiesburg, Mississippi. However, we will provide advice and recommendations to assist management of the City of Hattiesburg, Mississippi in performing its responsibilities.

- Assist in preparing the financial statements of the City of Hattiesburg, Mississippi in conformity with U.S. GAAP based on information provided by you.
- Assist in the conversion of cash to accrual basis and the recording of GASB conversion entries by making journal entries prepared by management or by making corrective journal entries with management's consent to facilitate financial statement preparation.

The City of Hattiesburg, Mississippi's management is responsible for (a) making all management decisions and performing all management functions; (b) assigning a competent individual to oversee the services; (c) evaluating the adequacy of the services performed; (d) evaluating and accepting responsibility for the results of the services performed; and (e) establishing and maintaining internal controls, including monitoring ongoing activities.

Our responsibilities and limitations of the engagement are as follows:

We will perform the services in accordance with applicable professional standards.

This engagement is limited to the financial statement preparation services and journal entries previously outlined. Our firm, in its sole professional judgment, reserves the right to refuse to do any procedure or take any action that could be construed as making management decisions or assuming management responsibilities, including determining account codings and approving journal entries.

During the course of the audit, we may observe opportunities for economy in, or improved controls over, your operations. We will bring such matters to the attention of the appropriate level of management, either orally or in writing.

You agree to inform us of facts that may affect the financial statements of which you may become aware during the period from the date of the auditor's report to the date the financial statements are issued.

At the conclusion of our audit engagement, we will communicate to the Honorable Mayor and Members of the City Council the following significant findings from the audit:

- Our view about the qualitative aspects of the entity's significant accounting practices;
- Significant difficulties, if any, encountered during the audit;
- Uncorrected misstatements, other than those we believe are trivial, if any;
- Disagreements with management, if any;
- Other findings or issues, if any, arising from the audit that are, in our professional judgment, significant and relevant to those charged with governance regarding their oversight of the financial reporting process;
- Material, corrected misstatements that were brought to the attention of management as a result of our audit procedures;

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- Representations we requested from management;
- Management's consultations with other accountants, if any; and
- Significant issues, if any, arising from the audit that were discussed, or the subject of correspondence, with management.

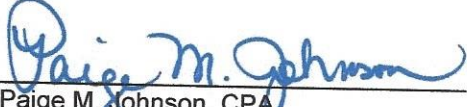
In accordance with the requirements of *Government Auditing Standards*, we have attached a copy of our latest external peer review report of our firm for your consideration and files.

Please sign and return the attached copy of this letter to indicate your acknowledgment of, and agreement with, the arrangements for our audit of the financial statements compliance over major federal award programs including our respective responsibilities.

We appreciate the opportunity to be your financial statement auditors and look forward to working with you and your staff.

Respectfully,

TMH


Paige M. Johnson, CPA

RESPONSE:

This letter correctly sets forth our understanding.

City of Hattiesburg, Mississippi

Acknowledged and agreed on behalf of the City of Hattiesburg, Mississippi by:

Officer Name - Printed

Officer - Signature

Officer Title

Date



Report on the Firm's System of Quality Control

May 15, 2019

To the Partners of Topp McWhorter Harvey, PLLC
and the Peer Review Committee of the Mississippi Society of CPAs

We have reviewed the system of quality control for the accounting and auditing practice of TMH (the firm) in effect for the year ended December 31, 2018. Our peer review was conducted in accordance with the Standards for Performing and Reporting on Peer Reviews established by the Peer Review Board of the American Institute of Certified Public Accountants (Standards). A summary of the nature, objectives, scope, limitations of, and the procedures performed in a System Review as described in the Standards may be found at www.aicpa.org/prsummary. The summary also includes an explanation of how engagements identified as not performed or reported in conformity with applicable professional standards, if any, are evaluated by a peer reviewer to determine a peer review rating.

Firm's Responsibility

The firm is responsible for designing a system of quality control and complying with it to provide the firm with reasonable assurance of performing and reporting in conformity with applicable professional standards in all material respects. The firm is also responsible for evaluating actions to promptly remediate engagements deemed as not performed or reported in conformity with professional standards, when appropriate, and for remediating weaknesses in its system of quality control, if any.

Peer Reviewer's Responsibility

Our responsibility is to express an opinion on the design of the system of quality control and the firm's compliance therewith based on our review.

Required Selections and Considerations

Engagements selected for review included engagements performed under *Government Auditing Standards*, including a compliance audit under the Single Audit Act and audits of employee benefit plans.

As a part of our peer review, we considered reviews by regulatory entities as communicated by the firm, if applicable, in determining the nature and extent of our procedures.

Opinion

In our opinion, the system of quality control for the accounting and auditing practice of TMH in effect for the year ended December 31, 2018, has been suitably designed and complied with to provide the firm with reasonable assurance of performing and reporting in conformity with applicable professional standards in all material respects. Firms can receive a rating of *pass*, *pass with deficiency(ies)* or *fail*. TMH has received a peer review rating of *pass*.

Eide Bailly LLP

What inspires you, inspires us. eidebailly.com

400 Pine St., Ste. 600 Abilene, TX 79601-5190 T 325.672.4000 TF 800.588.2525 F 325.672.7049 EOE



Memorandum

To: Mayor Toby Barker and Members of City Council

From: Rick Taylor, Executive Director of Hattiesburg Convention Commission

cc:

Date: Tuesday, August 18, 2020

Re: Approve contract with the Hattiesburg Convention Commission for the management, operations and upkeep of the Hattiesburg Zoo, beginning October 1, 2020 and authorize the Mayor to execute the same.
File Number: 2020-593
Minute Book #

Summary

Contract for the management, operations and upkeep of the Zoo by the Hattiesburg Convention Commission.

Recommendation Statement

I recommend approval

Please place this on the August 18, 2020 City Council meeting for consideration.

HATTIESBURG ZOO AGREEMENT

This Agreement, effective the 1st day of October, 2020 between the City of Hattiesburg (hereafter sometimes "the City") and the Hattiesburg Convention Commission (hereafter sometimes "the Commission");

RECITALS

1. Senate Bill 3232 approved May 3, 1991, creates the Hattiesburg Convention Commission for the promotion of conventions and tourism. [SECTION 2(1)]
2. SECTION 4 of the Act states in part,

The Commission shall have jurisdiction and authority over all matters relating to the establishment, development, construction, furnishing and equipping of convention and tourism-related facilities within the City of Hattiesburg, including the authority to enter into such contracts and agreements as may be necessary to carry out the intent of this act.....
3. SECTION 5 of the Act refers to the provision of funds for the construction, furnishing, equipping, erection and operation of tourism and convention facilities. The Commission is authorized to make contracts in that respect and has full and sole discretion and authority to do so as long as it complies with the law.
4. The Commission, created by Legislative act, is a separate and independent body, corporate and politic. Its members are appointed by the Mayor and confirmed by the City Council. The Commission seeks to function with the City in common effort to achieve economic growth and responsible stewardship.
5. All funds for the construction, operation and maintenance of Convention Commission facilities are derived solely from earned income and the Special 2% Food and Beverage tax enacted by Senate Bill 3232.
6. The City has requested the Commission to provide operational funding, operational management, marketing, staffing and overall management and development of the Hattiesburg Zoo and related property. The Commission is authorized to, and accepts such request.

WITNESSETH

Therefore, in consideration of the foregoing and the terms and conditions hereinafter contained, the City and the Hattiesburg Convention Commission do hereby agree as follows:

Article I **SCOPE**

The Scope of contract shall be to provide operational funding, operational management, marketing, economic growth, general staffing and overall management and development of the Hattiesburg Zoo, a cultural and quality-of-life venue owned by the City of Hattiesburg. Excluded from this contract are the tennis courts, baseball field, and playground equipment and playground area, all of which will remain under the control and direction of the City of Hattiesburg.

Article II

DURATION OF CONTRACT

The Commission shall begin the herein described duties under this contract on October 1, 2020. These contracted duties and responsibilities shall be performed by the Hattiesburg Convention Commission until either party exercises its rights of cancellation as outlined in Article III.

Article III

NOTICE OF CANCELLATION

The City of Hattiesburg and the Hattiesburg Convention Commission reserve the right to cancel this agreement at any time upon six months written notice to the other party. The City of Hattiesburg agrees to reimburse on a pro rata basis, the Hattiesburg Convention Commission for capital equipment, expansion expenditures or major renovation expenditures executed for benefit of the City in the two years prior to date of notice of cancellation.

Article IV

COVENANT AGAINST CONTINGENT FEES

The Hattiesburg Convention Commission shall comply with all relevant federal, state and local laws. The Commission warrants that it has not employed or retained any company or person, other than a bona fide employee working for the Commission, to secure this contract, and that it has not paid or agreed to pay any company or person any fee, commission, percentage, brokerage fee, gift, or any other consideration, contingent upon or resulting from the awarding of this contract. For evidenced breach or violation of this warranty the City shall have the right to annul this contract without liability.

Article V

MANAGEMENT AUTHORITY

The City of Hattiesburg authorizes the Hattiesburg Convention Commission as their duly appointed agent and designee, as Owner's Representative with respect to all matters related to the Hattiesburg Zoo. Further, the City understands that it is the intent of the Commission to operate the Hattiesburg Zoo in a manner that seeks to maximize the community and economic value of the Zoo for the purposes of providing increased quality of life, facility return-on-investment, and public enjoyment while seeking to increase operational revenue and insure efficiency of expenditures.

Execution of this contract by the City shall designate the Hattiesburg Convention Commission as the Management Agency of record for the Hattiesburg Zoo. The Hattiesburg Convention Commission shall be authorized to act on behalf of the City with regard to all contractual matters including, but not limited to, zoo management and marketing, evaluation, approval and contracting of current and future outsourced services, establishment of operational procedures, development and implementation of reasonable operational policies and procedures for all users, provision of data and information, collection of revenues and application of same towards operations, as well as contact with the press, media and general public. The Hattiesburg Convention Commission shall have sole and complete authority over and with respect to personnel employment, including the right to hire and terminate for cause or for considerations of operational performance and efficiency and such other rights as are accorded by law.

Article VI

GEOGRAPHICAL DEFINITION

All areas contained within the Zoo fence bounded on the west by Gordon's Creek, the east by South 17th Avenue, the North by Hardy Street and the South by parking area and entry to the Zoo; as well as Kamper Park Pavilions.

Article VII

ECONOMIC DEFINITION

Contract shall include all income and expense including, but not limited to; personnel, marketing, and operations. Items not included in the 2008 City Zoo Line Item (initial project) budget but currently in place and necessary for operation will remain the responsibility of the City, which it agrees to continue in full force; such items include water, sewer, garbage, recycling, external lawn care and property insurance.

Article VIII

EQUIPMENT

The City agrees that all Zoo-specific equipment or equipment assigned to the Zoo will remain available as required for Zoo operations. City agrees to permit use of critical specialty equipment necessary for achieving Zoo improvements to qualified and approved Convention Commission operators (e.g., backhoe, dump truck, etc.) as available and without charge.

Article IX

INUREMENT

All operating revenue and donations at the Zoo will accrue to Hattiesburg Convention Commission. All physical or capital development will inure to the benefit of the owner (City of Hattiesburg) including; branding, marketing products and activities, physical improvements, building, constructions, expansion and other enhancements, and in accordance with Article III.

Article X

TERMS

Both parties agree that the intent of this contract is, in part, to reduce expenditures by the City of Hattiesburg in operating the Hattiesburg Zoo. In that spirit, the HCC commits to implement reasonable measures that increase operational revenue and reduce operational expenditures. Effective June 1, 2012, the Hattiesburg Convention Commission agreed to accept full financial responsibility for operation of the Hattiesburg Zoo. This contract will extend that financial responsibility of the Commission as long as the contract remains in force.

Both parties enter into this agreement committing to a mutually agreeable and beneficial partnership that provides ongoing benefit to the City of Hattiesburg, while not financially harming the Hattiesburg Convention Commission. As such, all parties agree to allow for the review of the financial status, including annual profit and loss analysis, of the Zoo operations at mutually agreeable times during the term of this contract.

Article XI

INDEMNIFICATION FOR CLAIMS AND LIABILITY TO THE EXTENT PERMITTED BY LAW:

(a) The Hattiesburg Convention Commission and its agents, assigns or licensees shall be indemnified by the City of Hattiesburg for any and all damages to property or persons which shall save harmless their officers, agents, and employees from all suits, claims, actions, or damages of any nature whatsoever resulting from the operations of the Zoo, performance of work under this contract or any pre-existing conditions of this project; provided however, this indemnification shall not extend to negligent acts or omissions of the Commission. The City of Hattiesburg shall maintain its current general liability policies with any endorsements required to cover their ownership of the Zoo facilities as well as fire, hazard and extended coverage insurance on all buildings and structures comprising the Zoo facilities.

(b) The City shall be indemnified by the Hattiesburg Convention Commission for any and all damages to property or persons and shall save harmless its officers, agents, and employees from all suits, claims, actions, or damages of any nature whatsoever resulting from the performance of duties under this contract or any pre-existing conditions of the Commission, provided however, this indemnification shall not extend to negligent acts or omissions of the City. The Hattiesburg Convention Commission and its agents, assigns or licensees shall maintain in effect their current general liability policies with any endorsements required to cover their operation and management of the Zoo facilities.

Article XII

ASSIGNMENT OR TRANSFER

The Hattiesburg Convention Commission agrees not to assign or transfer this contract in whole without prior written approval of the City. The Commission reserves the right to assign specific performance functions named in this contract to privately contracted firms as it

deems appropriate. The Commission agrees that said assignment does not waive their responsibilities or obligations under the terms of this agreement.

Article XIII

COVENANTS BINDING UPON SUCCESSORS AND ASSIGNS

The covenants herein contained shall, except as otherwise indicated, accrue to the benefit of and be binding upon the successors and assigns of the parties hereto.

IN WITNESS WHEREOF, said parties have hereto set their hands and affixed their seals the day and year above first written.

HATTIESBURG CONVENTION COMMISSION
One Convention Center Plaza
Hattiesburg, MS 39401

CITY OF HATTIESBURG
P. O. Box 1898
Hattiesburg, MS 39403-1898

By: _____

Jennifer Payne, Chair

By:

Toby Barker, Mayor

Appendix A

DEFINITION

The term "facilities" as used herein, shall mean all structures and improvements planned, developed and operated under the City of Hattiesburg Budget 2008-09, entitled, Parks & Recreation, Kamper Park, Zoo Division.

ZOO DEVELOPMENT

Zoo Development - As the Commission determines appropriate and productive, it will evaluate and implement appropriate construction, installation and modification of the facility to improve its effectiveness as a cultural venue and attraction to the Hattiesburg area. The Commission agrees that any significant expansions of the Zoo will be discussed and reviewed with the City to preserve the overall viability of Kamper Park. Further, the Commission will review, develop, modify, increase or decrease existing and future revenue streams to improve the financial viability of the Zoo.

ZOO OPERATIONS

Operational Structure and Staffing - The Commission will employ all zoo personnel under the Hattiesburg Convention Commission. The Commission will additionally utilize existing knowledge and expertise of its staff to encourage economies of scale with regard to Maintenance, Operations, Events, Sales and Marketing.

The Commission maintains policies and practices that are designed to prevent discrimination against any qualified employee or applicant on the basis of race, color, religion, ancestry, national origin, sex, age, marital status, sexual orientation, disability and medical condition to the extent protected by law. This policy of nondiscrimination applies to all employment practices, including hiring, compensation, benefits, promotion, training, and termination.

Operations Sub-Contracting - The Commission will evaluate and act upon its findings with respect to fixed and optional sub-contracted operational contracts for the Zoo.

Marketing, Sales, Promotions, Sponsorship and Event Management - The Commission will develop, administer and oversee all sales, sponsorship and event management services for the Zoo during the terms of this contract. The Commission will identify potential Zoo group, leisure and scholastic clientele. The Commission will identify potential donors, sponsors, investors and other contributors for the purposes of enhancing the Zoo and its activities. The Commission will develop a comprehensive marketing strategy, a specific marketing plan and fund an overall marketing budget on an annual basis. In addition, the Commission will coordinate the production of marketing and collateral materials, develop contracts with potential clients, and establish multi-year advertising campaigns.



EMPLOYEE HANDBOOK

August 2020

INTRODUCTION

This Handbook has been adopted by the City Council of Hattiesburg, Mississippi (hereinafter “the City”), to inform you about the City’s employment policies and procedures, and to summarize the employee obligations owed by you to the City, as your employer, as well as the employee benefits available to you as a City employee. It is your responsibility to read your Handbook and familiarize yourself with the information it contains, and thereafter to refer to it whenever you have a question. If you have a question that is not answered by the Handbook, ask your department head, the Human Resources Department or the City Clerk.

As a City employee, the taxpayers and citizens of Hattiesburg, Mississippi, collectively are your ultimate “boss”. You are an integral part of a diversified work force which has the single purpose of serving the taxpayers and citizens of our city. The skills and experience you bring to your job are an important aspect of providing this service. Your day to day and occasional contacts with individual citizens will often be the only basis by which they are able to determine the efficiency, professionalism and responsiveness of the whole of City government. Therefore, it is of the utmost importance you always make the best possible impression when you are interacting with members of the general public. Your job, as is each job with the City, is an essential part of the overall operation of our City. As an employee, we all are counting on you to always provide honest, efficient, reliable and courteous service.

The City administration, acting by and through the elected City Council, reserves the right to amend, modify, supplement or cancel this Handbook at any time whatsoever, including, without limitation, any or all of the various policies, rules, procedures, and programs outlined within this Handbook. Whenever the masculine gender (he, him, his) is used, it also refers to the feminine gender (she, her, hers).

This handbook is not to be construed in any manner as a contract of employment. It does not create a contractual relationship between the City and any employee, nor shall anything in this Handbook be deemed to imply a guarantee of continued employment or benefits for any length of time whatsoever. This Handbook fully preserves the EMPLOYMENT AT WILL doctrine. Although it is hoped your employment relationship with us will be for an extended duration, you or the City of Hattiesburg may terminate this employment relationship at any time, with or without cause or notice. No director, chief, supervisor, manager, or representative of the City of Hattiesburg has the authority to enter into any agreement with you for employment for any specified period of time or to make any promises or commitments contrary to the at-will relationship between you and the City of Hattiesburg.

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CHAPTER ONE

EMPLOYMENT INFORMATION

1-1. At-Will Employment

Employment with the City of Hattiesburg is on an at-will basis. At-will means employment with the City may be ended at any time, for any reason, with or without cause by either you or the City of Hattiesburg. You should not rely upon any written or verbal statement to the contrary, no matter who provides it, as it is invalid. This handbook does not alter the at-will relationship, and nothing in this handbook should be interpreted as a guarantee of continued employment.

1-2. Equal Employment Opportunity

The City of Hattiesburg is committed to providing employment opportunities for all qualified employees and applicants. The City of Hattiesburg also seeks to employ the most competent, qualified, and motivated individuals into available positions, while remaining in compliance with federal and state requirements against discrimination. The City of Hattiesburg does not and shall not discriminate on the basis of race, gender, gender identity, sexual orientation, personal or family genetic predisposition, age, religious beliefs, national origin, veteran, and/or disability status. The City provides reasonable accommodation to individuals with a disability during the application process and as an employee. The obligation applies to all terms, condition and privileges of employment including, but not limited to: hiring, placement, upgrading, transfer and demotion, termination, and/or suspension, recruitment, advertising or compensation, treatment during employment, selection of training, and social and recreational programs.

1-3. Commitment to Diversity

The City of Hattiesburg is committed to being a diverse organization and actively seeks to recognize, value, and incorporate diversity in its services, policies and operations, vendors and workforce. In the event you have a work-related dispute or complaint, please raise your concern in accordance with the City of Hattiesburg's Grievance policy found in this handbook.

1-4. Immigration Employment Law Compliance

The City of Hattiesburg only employs citizens of the United States and alien persons who are authorized to work in the United States. Newly hired employees must complete the federal government I-9 eligibility verification form and present documentation to the Human Resources Department establishing employment eligibility and identity. The City of Hattiesburg uses the E-Verify government system to help establish eligibility.

If you do not present the required verification information that establishes your right to work

in the United States, you will not be permitted to work.

1-5. Infectious Diseases

The City of Hattiesburg does not discriminate against individuals with infectious diseases, including those who are infected with the Acquired Immune Deficiency Syndrome (AIDS) virus. The City will make reasonable accommodations for such individuals who are otherwise qualified to perform their assigned job duties. While privacy of the individual will be protected, the City reserves the right to inform any employee who might have been exposed to infectious diseases in a medically recognized situation.

1-6. Employment of Relatives

Your relatives who apply for employment with the City of Hattiesburg are eligible to be employed unless specifically prohibited by the state nepotism law or unless there is the possibility that public safety will be compromised. These individuals will be evaluated on their qualifications for the position and their relationship to you will be neither an advantage nor disadvantage. However, relatives employed with the City are not to be placed in close working proximity to each other and are not to supervise each other, directly or indirectly.

If you apply for an internal transfer to an available position, your relationship to the supervisor/manager, etc. of the position will be taken into consideration before a transfer is approved.

For the purposes of this policy, a relative is defined as:

Relative by Blood

Parent
Child
Grandparent
Grandchild
Sibling

Relative by Marriage

Spouse
Stepchild
Stepparent
Parent In-Law
Sibling In-Law

AND any other relative who lives in your household.

It is your responsibility to inform management when a relationship (as defined above) exists. Failure to do so could result in disciplinary action.

1-7. Employment Process

A. Position Announcement

In general, positions which have been approved to be filled and open to all candidates will be posted in Human Resources, on the City's website, the Job Line, and at various departmental locations. In addition, notice of position openings will be sent to the MS Employment Security office and sent out using the City's social media process. The City does, however, retain the discretion to allow department heads to verbally announce an opening and hire from within the department. Interested, qualified individuals may apply on-line by going to the City's website or by coming to the HR Department.

To ensure the City reviews applications that are from candidates currently interested in a position, only applications for posted positions are accepted and applicants must submit a new application to be considered for additional positions that become open.

Employees are encouraged to apply for a transfer should a position come open they are qualified for and interested in and the employee is out of their probationary period. When applying for an internal transfer which requires testing for skills such as Typing, Word and/or Excel, you will be required to submit to these skills tests.

To allow ample opportunity for internal transfer requests, vacant positions are posted a minimum of five (5) days before a selection is made and a job offer extended. The interview process will not begin until the minimum 5 day posting requirement is met.

You may apply for the next available Police or Fire Academy only when such applications are being actively recruited, in accordance with Civil Service guidelines. You must meet the minimum requirements for the position(s).

B. Probation Period

You are considered to be on probationary status for a period of six (6) months (12 months for sworn police and fire personnel). This probationary period gives you the opportunity to become familiar with the job and your supervisor an opportunity to evaluate your performance. As a standard practice, you will be evaluated at 2 months, 4 months and 5 months of employment. Should you not be performing at an acceptable level, your supervisor may establish a performance improvement plan.

During this period of employment, you may be reassigned or terminated without grievance or appeal rights.

If you are a temporary employee and are subsequently hired into a full-time position, you will serve a full six months (one year if sworn personnel) probation period; this period begins with the first workday in the permanent position.

C. Duty Assignment

Your supervisor is responsible for assigning duties, and you are expected to carry out these assignments to the best of your ability with a cooperative and helpful attitude. You may not change assignments without the knowledge and permission of your supervisor.

1-8. Classification of Employees

Fair Labor Standards Act Classifications

All paid positions with the City of Hattiesburg are classified as either exempt or nonexempt from the minimum wage and overtime provisions of the Fair Labor Standards Act (FLSA). For purposes of salary administration and eligibility for overtime payments, employees are classified as follows:

Non-exempt employees

Employees who are required to be paid the minimum wage and overtime or compensatory time at the rate of one and one-half times the employee's regular rate of pay for all hours worked in excess of forty hours in a workweek, in accordance with applicable federal wage and hour laws, or more frequently in accordance with certain state or local wage and hour laws.

Exempt employees

Employees who are not required to be paid the minimum wage and overtime or compensatory time in accordance with applicable federal wage and hour laws for work performed in excess of forty (40) hours in a workweek. Executives, professional employees, certain administrative and computer employees are typically exempt.

The City of Hattiesburg (COH) intends to comply with all federal regulations with respect to the Fair Labor Standards (FLSA). In this regard, the FLSA provides an exemption from both minimum wage and overtime payment for employees employed in a bona fide executive, administrative, professional and computer positions. To qualify for an overtime exemption, an employee generally must be paid no less than \$35,368 a year or \$684 per week on a salary basis (certain exempt computer employees may be paid at least \$684 on a salary basis or on an hourly basis at a rate not less than \$27.63 per hour.)

Being paid on a "salary basis" refers to an employee who regularly receives a predetermined amount of compensation each pay period on a weekly or less frequent basis which cannot be reduced

because of variations in the quality or quantity of work. Subject to the exceptions listed below, an exempt employee must receive his or her full salary for any workweek in which the employee performs any work, regardless of the number of days or hours worked. Exempt employees do not need to be paid for any work week in which they perform no work and will not be paid, unless appropriate accrued leave is utilized. If deductions are made from an employee's predetermined salary because of the employer's operating requirements, that employee is not paid on a "salary basis." If the employee is ready, willing, and able to work, deductions may not be made for time when work is not available.

Deductions from pay are permissible when an exempt employee is:

- absent from work for personal reasons, other than sickness or disability;
- absent from work due to sickness and disability, if the deduction is made in accordance with a bona fide plan, policy or practice of providing compensation for salary lost due to illness;
- in receipt of amounts such as jury or witness fees; or
- on an unpaid disciplinary suspension for one or more full days, imposed in good faith for workplace conduct rule infractions.

Also, the COH is not required to pay an employee's full salary in the initial or final week of employment, for penalties imposed in good faith for infractions of safety rules of major significance, or for weeks in which an exempt employee takes unpaid leave under the Family and Medical Leave Act. In these circumstances, either a partial-day or full-day deduction may be made. Finally, as a public sector employer, the COH operates under principles of public accountability, which permit deductions from the pay of an exempt employee for partial-day or full-day absences due to illness, injury, or personal reasons when accrued paid leave is not used by an employee because:

- permission for its use has not been sought or has been sought and denied;
- accrued leave has been exhausted; or
- the employee chooses to use leave without pay, if such leave is available.

The COH has classified those positions which are considered to be "exempt." It is the policy of the COH to comply with the "salary basis" requirements of the FLSA with regard to exempt employees.

If you believe that an improper deduction has been made to your salary, you should immediately report this information to the Human Resources Department. Reports of an improper deduction from wages will be promptly investigated. If it is determined that an improper deduction has occurred, you will be promptly reimbursed for improper deduction.

Job titles do not determine exempt status. In order for an exemption to apply, an employee's specific job duties and salary must meet all the requirements of the Department of Labor's regulations and must be approved by your Director and by Administration. The City of Hattiesburg may compensate certain exempt executive, administrative, professional, and computer employees on a guaranteed salary basis. Deductions from these salaries may only be made when the employee absents himself/herself for personal reasons, for sickness when his/her bona-fide sick leave plan has been exhausted, for disciplinary reasons for infractions of major safety or conduct rules, or in initial or terminal weeks. It is the policy of the City of Hattiesburg to not make any improper salary deductions based on variations in quantity or quality of work

done. Any salaried exempt employee who believes that an improper deduction was made from his/her salary may file a written complaint with the Human Resources Department over such deduction. The Human Resources Department will conduct an investigation into the deduction to determine if it was improper. If it is found that the deduction was improper, the amount of the deduction will be reimbursed to the employee by no later than the next pay day, and the City of Hattiesburg will ensure that such deduction is not made in the future from any exempt employee's salary. There will be no retaliation against the employee for filing a complaint under this section.

All salaried employees of the City of Hattiesburg are paid salaries that are intended to cover all hours that are worked.

Types of Employees

1. Elected and Appointed Officials - Mayor, Council Member, Director/Chief, City Attorney, Municipal City Clerk, Deputy Municipal Clerk, Deputy Municipal Court Clerk, Clerk of Council, Deputy Clerk of Council, Municipal Court Clerk, Municipal Judge, Municipal Prosecutor, and Municipal Public Defender.
2. Permanent Full Time – Employees, who are hired to work longer than six months, and who are regularly scheduled to work forty hours in a work week; or, if a sworn police or fire employee hired to work their scheduled FSLA cycle.
3. Permanent Part Time – employees who are hired to work longer than six months, and who are regularly scheduled to work less than forty hours in a work week. These employees are not entitled to full time benefits. They may, however, be required to participate in the Public Employees Retirement System. Human Resources will make that determination. These employees may work more than part-time hours on a temporary basis only, but will remain classified as part-time.
4. Temporary – employees hired to work less than 4 1/2 months because of seasonal needs or emergency situations. Such employees may work full time hours or part time hours. These employees are not entitled to employee benefits including participation in the Public Employees Retirement System.
5. Inactive – employees who, for whatever reason, are unable to work, have no available leave time, and are not eligible or no longer eligible for Family Medical Leave. Employees on inactive status will no longer continue to accrue benefits and are responsible for paying their single health and life insurance premium and any other voluntary deductions. Employees can only

remain on inactive status for 6 months. At 6 months of inactive status if the employee is unable to return to work, the employee's employment will automatically be terminated. Nothing in the previous statement shall prohibit from reapplying for employment.

1-9. Retirement

To be classified as a retiree with the City of Hattiesburg, you as an employee must meet the established criteria for eligibility for service retirement benefits under the Public Employees Retirement System (PERS) or the Municipal System. You also must be employed with the City when you become eligible and at the time you apply for retirement benefits.

To be eligible for service retirement benefits under PERS, you must have four (4) years of contributing membership service if you began paying into the retirement system before 07/01/07. If you began paying into the retirement system 07/01/07 or later, you must have eight (8) years of contributing membership AND be age 60 or older. You may begin drawing retirement benefits at any age if you have 30 years of creditable service in the retirement system (25 years of creditable service if hired 6/30/11 or before) or you are approved for disability retirement benefits by the retirement system. Benefits are based on the number of years of creditable service you have accrued and on the average of the greatest four years of compensation you earned.

For details, please see the Public Employee's Retirement System website at www.pers.ms.gov.

1.10. Compensation

The City of Hattiesburg has established by Ordinance a classification/compensation plan known as the Hattiesburg Variable Plan (HAV PAY). All employee salary ranges fall under this plan. The City encourages all pay be direct deposited into a checking or savings account and have established relationships with financial institutions to help employees meet this standard if needed.

A. Pay Period

The City's workweek begins on Saturday and ends on the following Friday. There are two workweeks in a pay period. Therefore, each paycheck you receive will be payment for hours worked or accrued leave time taken for the previous two workweeks.

You are responsible for clocking in when you begin work and out when you leave work into the City's time keeping system by entering your Employee ID Number and your biometric fingerprint. Employees may also be required to clock in/out for their meal period. Your biometric fingerprint clocking your work time is the official record of the time you have worked and is used to determine your pay. No one shall clock in or out for another unless fulfilling a supervisory responsibility.

Information on your pay will be given only to you, unless you have submitted signed authorization to your supervisor or to Human Resources identifying someone else who is allowed to obtain your pay information. The person you give permission to obtain this information for you must present picture identification for verification.

B. Rate of Pay

The City of Hattiesburg has established wage guidelines and ranges for all positions, including sworn police and fire personnel. Compensation paid is within this established range. There are exceptions, but they occur rarely and only with prior approval of the Mayor. The City will attempt, for the benefit of employees, to maintain wages that are competitive with those paid for similar work by other cities and local industry.

1-11. Work Hours

Workdays for City employees are based on the type of work done and are set by individual departments. A “normal” workweek is 40 hours for non-sworn employees. Sworn employees are paid every two weeks, but their assigned work hours will be different. However, in certain instances work schedules may vary and various employees may work different schedules because of our responsibility to the citizens of the City of Hattiesburg. Your supervisor determines scheduling of your work hours and any unpaid meal period. Your work schedule may need to be changed temporarily to meet the needs of the City. If you refuse to meet needed changes, disciplinary action, up to and including termination, may be taken.

Due to the nature of certain jobs in the City of Hattiesburg, some hourly (non-exempt) employees are subject to being on-call, ready to return to work after their normal work shift is finished.

For the inconvenience of being in such on-call status, employees will be paid \$2.00 per hour for any time spent in such waiting to be called back to work. For any time that such employee is working when called-in back to work, he/she will be paid their normal hourly rate of pay (time and a half such regular rate of pay for hours worked over 40 in a week). Overtime will be calculated on the on-call pay by use of the Wage and Hour Coefficient Table, an acceptable method of overtime pay computation per the Wage and Hour Division.

In order for such employee to be able to return to work in a safe and healthy condition, such employee must refrain from taking any substances, such as alcohol or drugs, including prescription drugs, that may hinder or impede him/her from performing their work. Also, they must be able to report back to work within 30 minutes.

Failure of any employee to accept on-call status and/or work may result in disciplinary action against the employee, up to and including termination of employment. Failure of an on-call

employee to remain sober and able to return to work while in on-call status may result in disciplinary action, up to and including termination of employment. Failure of the on-call employee to remain in close proximity to their job location that would permit them to report back to work within 30 minutes of being notified of the requirement that they return to work may result in disciplinary action against the employee, up to and including termination of employment.

1-12. Meal Period

You are normally given a meal period break during the workday. Meal periods are typically 30 minutes to one hour and you generally are not compensated. Meal periods are scheduled in advance at the discretion of your supervisor. You are required to take your meal period away from your work station area. The City provides a break area for employees who wish to remain at their job location during their meal period.

In rare circumstances, and only with your supervisor's prior approval and there is productive work available, you will be allowed to skip or shorten the meal period to shorten your workday or to make up worktime missed.

1-13. Work Breaks

Breaks may be provided, but not required, and must be approved by the supervisor and scheduled for the convenience of the department. In no case shall there be more than two breaks per eight (8) hour shift, and each break should be no more than fifteen (15) minutes long.

1-14. Overtime

If you are required to work beyond the normal work week or work cycle, you should be granted equal time off during that same work week so the total actual hours worked is the normal total hours in a workweek.

When this is impossible or impractical, if you are a nonexempt employee, you will be paid at one and one-half times your normal hourly rate of pay or accrue compensatory time at the rate of one and one-half hours for all hours worked beyond the normal work week (must work a minimum of 40 hours) in accordance with the Fair Labor Standards Act – FLSA. You may work overtime ONLY with prior authorization of your supervisor and are required to work additional hours as instructed. Refusal to work additional or other than normal scheduled hours may result in disciplinary action up to, and including termination of employment. You will need to provide an explanation of overtime worked to your supervisor so it can be entered into the timekeeping system as an explanation of duties performed to warrant additional work time. If you fail to clock in/out when working or do not report additional time worked to your supervisor during the pay period it is earned, it can be reported and calculated for inclusion on the next paycheck. A manual check will not be

issued to pay over-time hours not included when you fail to use the timekeeping system or report your work hours within the required timeframe. You may have to wait until the next regularly scheduled pay date.

When calculating overtime, do not count holidays or accrued leave time (personal, sick or compensatory hours) as hours worked.

1-15. Compensatory Time

You may, at times, receive credit for compensatory leave. This generally happens when your manager considers it essential you work after normal hours and you are unable to take the time off during the same workweek.

If you are a non-exempt, non-sworn employee, you may earn compensatory time -- instead of cash overtime pay - at a rate of an hour and half for each hour worked over forty (40) hours in a workweek (as defined in Department of Labor regulations). You are limited to 240 hours of earned compensatory time. Sworn Police and Fire have different limits.

Any compensatory hours you earn above the maximum will not be accrued but will be paid out to you. You must first exhaust all accrued compensatory hours when requesting personal leave. Your accrued unused compensatory time will be paid to you when you attain exempt status or leave City employment.

1-16. Promotions

A promotion is the movement of an employee from one position to another position that requires a higher level of skill and/or responsibility. It is also usually assigned to a higher pay range.

After you have served six (6) months in a position or meet the established standards for sworn personnel, you may apply for promotional opportunities through the internal transfer process.

1-17. Internal Transfer

Whenever possible, the City of Hattiesburg promotes and encourages personal and/or professional growth and development for its employees through internal transfers, promotions, and training and educational opportunities. Occasionally, the City will opt to change an employee's duties or position, not at the individual's request, but as a result of some other need, for instance job performance or elimination of the position.

There are two types of transfer requests for non-sworn employees:

A. Employee Request

You may request a transfer to an approved and posted position by submitting a completed Application for Transfer Form and a resume. Applicants must also meet the minimum criteria as listed below:

- You have held your current position for at least six (6) months.
- You have met or exceed the minimum requirements for the position.
- You have a satisfactory job performance and attendance record.
- The position has been approved to be filled and is posted.
- If the position requires candidates to successfully pass a typing test and/or other Clerical Skills test, internal transfer applicants who meet all other minimum requirements will be scheduled for testing.
- An approval for a transfer is at the discretion of the manager with the position open, it is not a guarantee.

The section on the form that you complete must be submitted to your manager. To give you ample time to apply for a transfer and perform any required tests, available positions are posted for a minimum of 5 working days before a hiring decision is made.

Internal transfer requests are only given more consideration than an outside applicant when all other qualifications are equal. Management will consider your ability, employment record and other qualifications in deciding whether to select you for a transfer. (In the event that two or more employees apply for a transfer to the same position and ALL qualifications - including education, initiative, attitude and other factors - are essentially the same among all applicants, the job will be awarded to the employee with seniority.)

If you request and receive a transfer, you will be placed on a six (6) month probationary period to determine job suitability. If your performance in the new position is unsatisfactory, your employment may be terminated if an alternative solution is not determined.

Your pay may be adjusted (either increased or decreased) to accommodate new job duties.

B. Management Transfer

Occasionally, the organizational needs of the City warrant movement of an employee to a different position. Because this movement is at the discretion of management, the previous criteria established for an employee internal transfer does not apply.

If you are a management-transferred employee, you will also be placed on a six (6) month probationary period to determine job suitability. If your performance in the new position is unsatisfactory, your employment may be terminated if an alternative solution is not determined.

If you receive a management transfer, you may receive an adjustment in your pay (either increase or decrease) to fit the responsibilities and the budget of the new position.

1-18. Personnel Records, References and Privacy

Personnel records shall be maintained for each employee in Human Resources. These records are the property of the City and are confidential. Departments are permitted to maintain additional files of employee information, but the official employment record is the one in Human Resources. All appropriate documentation must be forwarded to Human Resources to be included in this file. As an employee of the City, you are required to notify Human Resources of any changes in personal status (i.e.; marital status, number of dependents, beneficiaries, home address, telephone number, etc.) and of any additional educational and skill training you acquire after you are hired.

You may view your personnel records by notifying Human Resources and scheduling a time for inspection that is mutually convenient. If you are a current employee, you may request a copy of your file. Former employees are only allowed access to their employment files by court order.

All inquiries concerning current and former employees shall be referred to the Human Resources Department.

1-19. Performance Evaluations

As a City of Hattiesburg employee, your job performance will be evaluated to help identify your successes as well as areas that need improvement. Newly hired employees and employees who transfer to a new position, will be evaluated several times over the 6 month probationary period (note: Fire and Police Sworn Personnel are under a 1 year probationary period). Evaluations allow your supervisor to measure your work against the requirements of the position and to assess specific behaviors related to your job performance. As part of the process, you will be given the opportunity to review the evaluation and to set goals. If improvement is needed, your supervisor will work with you to develop an action plan that notes any required improvements and provides a time frame for achieving them.

You will be re-evaluated at the appropriate time to determine if improvement has been made; if you are unwilling or unable to make necessary adjustments, termination may be considered.

Performance evaluations will become a permanent part of your personnel file.

1-20. Travel and Expenses

If you are required to travel in the performance of an official duty, City policy allows you to be reimbursed for reasonable expenses incurred as allowed by policy. You are required to use city-owned vehicles when traveling unless circumstances prohibit and you have obtained prior written approval for use of a personal vehicle from your Director or Manager. You can be reimbursed for overnight lodging if you have proper authorization and receipts, and if travel circumstances prevent departure and return on the same day. You are expected to exercise the same care incurring expenses as a prudent person traveling for personal reasons.

It is your responsibility to obtain information regarding the City's travel reimbursement procedure from your department's purchasing and travel manual before you travel. To be reimbursed for any travel expenses, you must follow pre-established rules and regulations. The Purchasing Division is available to answer any additional questions you may have.

1-21. Polygraph Examination

As a condition of employment with the City, applicants for certain positions may be required to take a post-offer of employment polygraph examination. These are positions of trust that involve the handling of cash, property, evidence, equipment, confidential information, civilian law enforcement position, and/or those occupations designated as Deputy Municipal Clerk or Deputy Court Clerk. Results will not be used as the only factor in the hiring decision.

Employees may also be required to participate in specific-issue polygraph examinations during an investigation. It is a condition of employment with the City that you fully cooperate with any law enforcement agency's criminal investigation. Refusing or failing a polygraph with supporting evidence may result in disciplinary action, up to and including termination of employment. Results of a polygraph will be confidential and will be shared only with those who are in a "need-to-know" position.

1-22. Information Technology

The use of computer, electronic mail and Internet systems is reserved for the conduct of business within the City of Hattiesburg. Any unauthorized access or use of the City of Hattiesburg's computer systems is strictly prohibited. The City has established a computing policy. Upon employment, you are given a copy and are responsible for compliance. The City of Hattiesburg's computing Policy is incorporated by reference herein. A violation of this policy may result in disciplinary action ranging from a verbal warning up to discharge from employment.

1-23. Position which requires Bonding

If you were hired into a position which requires you to be bonded or should you transfer to a position which requires you to be bonded, you will **not be allowed to work** in that position until you successfully complete the bonding process and have been bonded. The bond will be paid for by the City. You are also responsible to remain in compliance with all bonding requirements to ensure your bond does not lapse. Failure to obtain bonding will mean termination of your employment should alternative arrangements not be feasible.

CHAPTER TWO

STANDARDS OF EMPLOYEE CONDUCT

2.1. Attendance

Regardless of your position or the duties you perform, you are a valuable employee and your presence is needed if the City is to function properly and efficiently. It is your responsibility to be ready and able to work at the start of your shift.

If for any reason you cannot report to duty or are unable to report to work on time, you must follow pre-established guidelines and notify your supervisor prior to the start of your scheduled work time. Your manager will provide you instructions on how you are to contact your department should an unforeseen circumstance occur.

If you report to work after the scheduled start time, even if it is due to circumstances beyond your control, you will be considered tardy and may be subject to disciplinary action.

If you are absent three or more consecutive days without proper notice or explanation to your supervisor, you may be considered to have abandoned your position and your employment may be terminated.

2.2. Commitment During Work Hours

While at work, you should apply yourself to your assigned duties during the entire work period for which you are being compensated, except for reasonable time needed to take care of personal needs, as approved by your supervisor.

2.3. Resignation

You are required to submit a written resignation to your supervisor if you want to terminate your employment. You should provide a minimum resignation period (“notice”) of ten (10) working days. You may not use compensatory time, personal time, or sick leave during your resignation period. If you happen to fall ill during your resignation period, you must submit a doctor’s excuse to be allowed to use accrued sick time. The resignation period may be extended for the number of days missed due to illness.

If your resignation period ends on a scheduled holiday, you must work the day after the holiday to be eligible to receive holiday pay.

2.4. Conflict of Interest

You should be very careful to avoid using, or appearing to use, your position with the City of Hattiesburg for personal gain. As an employee, you are not to engage in any activity,

whether in private or on official City business, which may pose or appear to pose a conflict of interest.

2.5. Political Activity

You shall not be compelled to participate in any political campaign, nor may you do so voluntarily while on paid duty time. You are encouraged to register to vote and to exercise that right in local, state, and federal elections. You are allowed to voice your opinion on issues and candidates on your own time and as a private citizen, but may not wear buttons, T-shirts, caps, stickers, etc., endorsing a particular candidate or party as part of your work attire or uniform.

2.6. Outside Employment

You are not prohibited from holding outside employment as long as it does not interfere with the performance of your duties, does not create a conflict of interest, and as long as you have informed your supervisor of your outside employment. However, you may not work for another employer while being paid accrued sick leave hours.

2.7. Workplace Violence

Safety of employees is our highest concern. We encourage you always to be alert to the possibility of workplace violence and require that you immediately report all acts of violence or threats of violence to your supervisor. All reports of violence will be handled in a confidential manner, with information released only to those who have a need to know. Every effort will be made to protect the safety and anonymity of anyone who comes forward with concerns about a threat or act of violence. You are given a copy of the City's Work Place Violence Policy upon employment. This policy is incorporated by reference herein. A violation of this policy may result in disciplinary action ranging from a verbal warning up to discharge from employment.

2-8. Harassment – including Harassment of a Sexual Nature

The City is committed in providing a work environment that is free from the hostile atmosphere created by harassment or intimidation. Unlawful harassment of any kind will not be tolerated. Harassment based upon an individual's sex, race, ethnicity, national origin, age, religion, or any other characteristics protected by law will not be tolerated. All employees, including management personnel, both elected and unelected, are expected and required to abide by this policy.

Use of racial or ethnic derogatory remarks, jokes, or gestures will not be allowed, the same shall be investigated, and disciplinary action may be taken, whenever found warranted.

Harassment of a sexual nature is also prohibited. Sexual harassment does not refer to

occasional compliments of a socially acceptable nature. It refers to behavior that is not welcome, that is personally offensive, that lowers morale and that, therefore, interferes with work effectiveness. Specifically, unwelcome sexual advances, requests for sexual favors, and other verbal or physical conduct of a sexual nature constitutes sexual harassment when: (1) submission to or rejection of such conduct is made either explicitly or implicitly a term or condition of an individual's employment, (2) submission to or rejection of such conduct by an individual is used as the basis for decisions about employment, promotion, transfer, selection for training, performance evaluations, benefits, or other terms and conditions of employment; or (3) such conduct has the purpose or effect of substantially interfering with an individual's work performance or creating an intimidating, hostile, or offensive work environment.

If you believe you have been harassed on the basis of your sex, race, national origin, ethnicity, religion, or any other legally protected background as described in this Handbook, by any individual, including management personnel, employed by the City, you should immediately report the incident to your Director, the Human Resources Manager, the Chief Administrative Officer or the City Clerk. If your supervisor is one of the above or it involves a Council member, you should report harassing conduct to the Mayor. Such charges shall be promptly investigated and, if substantiated, the offending individual will be appropriately disciplined. To the extent possible, all persons involved in a complaint of harassment will be given the utmost protection of privacy, and such matters will be handled as discreetly and confidentially as possible. Persons complaining of harassment will be protected from reprisals and retaliation by other employees as a result of such complaints, and any claim of retaliation, or complaint of filing false harassment claims, shall be investigated and disciplinary action and disciplinary action may be taken, whenever found warranted.

2-9. Substance Abuse in the Workplace

The City of Hattiesburg is committed to maintaining a workplace free of alcohol or drug abuse, and therefore prohibits the sale, possession, and use of alcohol and/or drugs. You will be tested — and must successfully pass — a drug and/or alcohol test before the offer of employment is confirmed. You are subject to testing during your employment with the City for reasonable suspicion and after an accident/incident. A positive test is grounds for immediate termination. Employees in the positions of sworn police, sworn fire, equipment operators, plant operators, employees in Mass Transit, and any other position requiring a CDL are subject to random testing. Should you face the problem of drug/alcohol abuse, please know that you have the option, before testing, of accepting help through the City's Employee Assistance program. However, you can't ask for help after an incident or accident has already occurred. In addition, accessing the Employee Assistance Program does not mean you cannot be disciplined if warranted if you violate City policy, even if the discipline is for actions that are traceable to substance abuse. You are given a copy of the City's Substance Abuse in the Workplace Policy and Program upon employment. This policy is incorporated by reference herein. A violation of this policy may result in disciplinary action ranging from a verbal warning up to discharge from employment.

2-10. Intimate Relationships

You, as an employee, are encouraged to socialize and develop professional relationships in the workplace provided that these relationships do not interfere with the work performance of you or the other person. When you engage in personal relationships (including romantic and sexual relationships) you should always be aware of your professional responsibilities and assure that the relationship does not raise concerns about favoritism, bias, ethics and conflict of interest.

Romantic or sexual relationships between employees, even if consensual, where one individual has influence or control over the other's conditions of employment are inappropriate and prohibited. These relationships or behavior may result in disciplinary action up to and including immediate termination of employment for both parties.

2-11. Personal Phone Calls or Text Messages

Please place your cell phone on vibrate or silent mode when in city buildings. No-hands free cell phone devices are to be worn while at work at any time.

In conducting personal business while at work, you are expected to exercise the same discretion when using personal cellular phones as when using City of Hattiesburg phones. Making or receiving personal calls or text messages during the workday, regardless of the phone used, will interfere with productivity and may distract others.

You are asked to keep personal phone calls, received or made, during work hours to a minimum and to limit them to no more than three (3) minutes at a time. Although the City of Hattiesburg understands you may have personal obligations you feel demand immediate attention, City policy requires you make and receive personal phone calls and/or text messages during non-work-time. Please make sure family members and friends are made aware and adhere to the City's policy.

If an emergency arises, you may be contacted through your supervisor.

You should have no expectation of privacy in the use of City owned cell-phones, computers or other electronic devices. These devices may be searched and monitored.

2-12. Personal Use of City Provided Cellular Phones or Devices

Business cellular phones or other devices may be issued to employees as a necessary part of their jobs. City-issued cellular phones or devices are to be used for business purposes only. If you use a city-issued phone or other device for personal business, you may be required to reimburse the City.

As stated previously, employees should have no expectation of privacy in the use of City owned cell-phones, pagers, computers or other electronic devices. These devices may be searched and monitored.

2-13. Safety Issues for Use of Cellular Phones or Devices

City employees are bombarded with distractions when driving. Limiting the use of cellular devices during this time is one way to minimize the risk of an accident for our employees. Safety must come before all other concerns.

If your job responsibilities include regular or occasional driving, whether in a City-owned or personal vehicle, while on City time, you are expected to refrain from using any type of cell phone while driving a vehicle. Sending or reading text messages, surfing the Internet, receiving or responding to email, and checking text messages is **prohibited** while driving. (Note: Bluetooth may be used for conversation only in vehicles that have capability.)

You should pull safely off of the road and stop your vehicle before placing or accepting a phone call or reading/sending a text message. Texting while driving is not only against City policy but it is also illegal.

You are acting outside the scope of your employment if you use a cell-phone while driving. You are never to place yourself or others at risk to fulfill business needs.

If you are charged with traffic violations occurring because you were driving while using a City-issued or personal cell phone or other device or sending/reading text messages, you will be solely responsible for all liabilities that result from your actions and will be subject to disciplinary action up to and including termination of employment.

2-14. Assigned City Equipment

If you have been assigned City equipment for the performance of your job duties, it must be returned in good condition by your last day of employment or when requested. Should you fail to do so, the fair market value of the equipment may be withheld from your earnings or accrued time as allowed by law.

You are also expected to protect City equipment (i.e., cellular phone, radio, laptop, etc.) assigned to you from loss, damage, or theft. You may be responsible for repaying the City for lost or damaged equipment assigned to your care. If equipment assigned to you is stolen, you must complete a police report. City policy prohibits the misuse or use of City equipment for personal business. You should have no expectation of privacy in the use of City-owned cell phones, pagers, computers or other electronic devices. These devices may be searched and monitored.

2-15. Assignment or Use of City Vehicle

If you are assigned or use a city vehicle and receive a vehicle citation while using that vehicle you are personally responsible for reporting the incident to your immediate supervisor and payment of the citation in a timely manner. Depending on the circumstances you may be subject to disciplinary action up to and including termination of employment.

2-16. Smoking in the Workplace

The City of Hattiesburg is a smoke-free work environment. Breaks may be provided, but are not required and must be scheduled for the convenience of the department. If a break is provided, you may smoke in designated areas only and follow the City of Hattiesburg's Smoking Ordinance. Each break should be no more than fifteen (15) minutes long, and in no case should you take more than two breaks per eight (8) hour shift. Employees are not allowed to smoke in any City owned vehicle.

2-17. Driver's License

As an employee with the City of Hattiesburg you will have the potential to operate a City vehicle, motorized equipment (i.e., tractor, backhoe, etc.), or your personal vehicle while working. Therefore, unless specifically exempted by your Department Director and Administration, you are required to have and maintain a valid MS driver's license throughout the course of your employment. State law requires MS residents obtain a Mississippi license within 30 days, even if their previous license has not expired.

You are required to immediately report to your supervisor should your license expire, or becomes suspended or invalid for any reason.

If you are not exempted from having a valid driver's license for you to perform your day to day job duties and your license becomes *suspended* you will be suspended for 3 work days and given no more than 90 days to have your license reinstated. During this 90-day period of time, and only if it is feasible, you will be temporarily reassigned to duties which do not require a license. If temporary reassignment is not feasible, you will not be able to work until you obtain your valid license (you can use available Personal Leave or will be in a non-paid status.)

Failure to comply with these requirements may result in disciplinary actions up to and including termination of your employment.

2-18. Dress Code

The dress code and appearance of City employees is a direct reflection on the

professionalism of our services. City employees meet with the public daily as part of their regular work day. A neat, well-groomed employee will present a positive image of the City and demonstrate the pride of our City employees. Our appearance and attire have a definite impact on the way we are perceived by others and the confidence that citizens have in our ability to provide quality services.

City employees are expected to be neat, clean, and dress in attire appropriate to their positions. The following information should guide employees on proper dress in the workplace. Although it is difficult to develop a policy that will cover all individual variations in dress and style for each work situation or circumstance, the following guidelines have been established based on public image, job safety, and personal hygiene.

Non-Uniformed Personnel – Office Environment:

The following items of clothing are considered inappropriate for the office environment (Guidelines apply to full-time, part-time, interns, work-study, etc.)

- T-shirts or sweatshirts (unless with supervisor approval)
- Tube tops, halter tops, tank tops, muscle shirts
- Sweat pants or workout clothes
- Any clothing that is overly revealing or outlandish so as to cause distraction
- Clothing with advertisements (City-related logos are acceptable)
- Body-hugging clothing, including leggings and spandex garments
- Shorts
- Jeans (except on Casual Fridays)
- Military or hunting clothes
- Athletic shoes, tennis shoes, flip flops

Leggings are allowed if paired with an appropriate upper garment that is no more than 3 inches above the knee. Cardigan sweaters, dresses or full-length blazers are recommended attire with leggings. Long shirts are not considered a dress. The employee should be conscious of the length of attire to ensure professionalism is maintained.

Casual Friday is considered a casual dress day. Although considered more casual than the normal business attire, the guidelines set forth previously are to be followed. Jeans must not be overly worn, faded, or in disrepair.

Field workers in the office setting for a full day shall follow the same guidelines for non-uniformed personnel.

Please exercise good judgment when dressing for work. Violations may be just cause to require that you leave the work site to change into appropriate attire; you **will not** be paid for

work time missed if you are required to change clothes.

2-19. City Identification Badges

Upon employment, you are provided a City badge identifying you as an employee and listing your position and department. Badges are to be worn while at work and when on official City business unless you are working in certain outside jobs and wear a city uniform with your name on the shirt.

You are required to return your badge to your supervisor if you resign or your employment is terminated. If a badge is lost, there is a replacement fee to obtain a new one as allowed by law. Damaged badges will be replaced at no cost but may result in disciplinary action.

2-20. Solicitation

The City of Hattiesburg limits solicitation and distribution on its premises because such activities can interfere with normal City operations, can be detrimental to efficiency, can be annoying, and can pose a threat to security.

Persons who are not employed by the City are prohibited from soliciting funds or signatures, conducting membership drives, posting, distributing literature or gifts, offering to sell or to purchase merchandise or services (except by representative of properly identified supplies), or engaging in any other solicitation, distribution, or similar activity on City property. The City of Hattiesburg may authorize a limited number of fund drives by employees on behalf of charitable organizations.

The City may permit employees to engage in solicitation or distribution of literature for any group or organization, including charitable organizations, within the following guidelines:

- The sale of merchandise is limited to City functions and activities. Solicitation and distribution of literature with proper approval from Administration should not interfere with work time of either the employee making the solicitation or distribution, or the targeted employee. The term “work time” does not include an employee’s authorized lunch or rest period or other time when the employee is not required to be working.
- The City of Hattiesburg maintains bulletin boards to communicate City information to employees and to post notices required by law. Any unauthorized posting of notices, photographs, or other printed or written material on bulletin boards or any other City property is prohibited. There is only one community bulletin board. It is located on the second floor of City Hall outside of Council Chambers.

2-21. Social Media Policy

- The City of Hattiesburg respects the right of employees to use social media and networking sites as well as personal websites and blogs, but it is important that employees’ personal use of these sites does not damage the reputation of the City or have the potential to affect the operations of the City.
- All employees of the City of Hattiesburg shall observe the following while participating in any social media websites.

Access of social media websites for individual (personal) use during hours when an employee is on duty is prohibited.

Employees shall not post any data, documents, photos or other information to any website or application that has the potential to affect the operations of the City.

Employees shall never use their personal social media accounts in any way purporting to be or speaking for the City of Hattiesburg.

- Violation of any of these policies may result in disciplinary action up to and including termination.

CHAPTER THREE
EMPLOYMENT BENEFITS

3-1. Holidays

Full-time employees receive regular pay for ten (10) legal holidays and for any other day proclaimed as a holiday by the Governor or the President of the United States (section 3-3-7, Mississippi Code of 1972, Annotated, as amended).

If you are a full-time employee, you are required to work your regularly scheduled workday immediately before and after a scheduled holiday to be eligible to receive holiday pay, unless you are on an approved leave of absence, or have requested and been approved in advance to use your accrued personal time off. If you do not have available personal time, you must work the workday immediately before and after a holiday to be eligible to receive pay for the holiday. If you become sick and have to miss the day before or after a holiday, you must submit a physician's certification of illness or a physician's excuse to your supervisor immediately upon your return to work to be eligible for the holiday pay.

The legal holidays are as follows:

January 1	New Year's Day
The Third Monday of January	Martin Luther King's Birthday
The Third Monday of February	Washington's Birthday/President's Day
The Last Monday of April	Confederate Memorial Day [the City substitutes the Friday before Easter Sunday (Good Friday) in lieu of Confederate Memorial Day]
The Last Monday of May	Memorial Day
July 4	Independence Day
The First Monday of September	Labor Day
November 11	Armistice or Veteran's Day
A day fixed by proclamation by the Governor	Thanksgiving Day

of Mississippi as a day of Thanksgiving, which shall be fixed to correspond to the date proclaimed by the President of the United States.

December 25

Christmas Day

The exact dates for observing holidays are published following formal Council adoption each year. If you are a full-time employee who is required to work on an announced holiday, you will receive holiday pay (or equitable compensatory time) and pay for actual hours worked. Holiday pay does not count as hours worked for determining overtime. If you are an exempt employee scheduled to work during a holiday, you may take the holiday at a later date as approved by your supervisor. A holiday cannot be taken before it occurs.

The City of Hattiesburg reserves the right to decrease or add additional holidays each year, as it deems appropriate.

3-2. Personal Leave

A. Accrual

Full-time employees accrue personal leave time based on continuous full-time employment. You are not allowed to use accrued personal leave until you have reached your six-month period of full-time employment.

Full time employees accrue personal leave time hours as indicated below:

Continuing Full Time Employment	Accrual Rate Monthly	Days Earned Annually
1 month - 2 years	8 hours	12 days
25 months - 12 years	12 hours	18 days
145months - 20 years	16 hours	24 days
241months and longer	18 hours	27 days

Advances on personal leave are not permitted.

B. Accumulation

There is no limit to the accumulation of personal leave. Unused personal leave will be carried over from year to year.

C. Payout

If you are resigning or retiring, upon separation of employment you may request to be paid up to 30 days (240 hours) of earned, unused personal leave. All remaining unused accrued personal leave will be certified to the Public Employees Retirement System (PERS) for award as creditable service under the state retirement plan.

D. Personal Leave Request

All personal leave off must be requested and approved in advance by your manager/supervisor. Occasionally situations may arise where you need to be off and requesting off in advance is not an option. Those situations will be handled on a case by case basis and are at the sole discretion of your supervisor.

When requesting off three (3) or more consecutive days, you should provide your manager a minimum of two (2) work weeks of notice. Some departments may require longer, so be sure to check with your supervisor. Unused Holidays and accrued compensatory time must be exhausted before you may use accrued personal leave.

3-3. Sick Leave

A. Accrual

As a full-time employees accrue sick leave time based on continuous full-time employment. Leave cannot be taken before it is earned.

You are eligible to request to use sick leave as soon as it is accrued.

<u>Continuing Full Time Employment</u>	<u>Accrual Rate Monthly</u>	<u>Days Earned Annually</u>
1 month to 2 years	8 hours	12 days
25 months to 12 years	7 hours	10.5 days
145 months to 20 years	6 hours	9 days
241 months and longer	5 hours	7.5 days

B. Accumulation

There is no limit to the accumulation of sick leave. Unused sick leave will be carried over from year to year.

C. Usage

You may only use accrued sick leave for the following reasons:

1. Absence from work due to personal illness
2. Absence from work for a doctor's appointment (includes dentist, eye, etc.)
3. Absence from work due to an approved Family Medical Leave qualifying event (even if an immediate family member)
4. Absence from work (maximum of 3 days) for the death of an immediate family member (spouse, child, parent, brother, sister, grandparents, grandchildren, or similar relationships that are "in-law" or "step."). This is called Emergency Leave.

D. Documentation Required

You are required to submit a physician's certification of illness (sick excuse) before you will be allowed to use accrued sick time for the following reasons:

- on the 3rd consecutive day of illness
- for a medical condition that will require periodic absences from work for a time frame beyond your initial absences
- for a Family Medical Leave event
- when your supervisor has notified you in writing that a physician's certificate of illness will be required for further absences for a specific period of time due to illness/doctor's appointment
- when you miss work due to illness the work day before or the work day after a holiday.

If at anytime, 10% or more of employees scheduled to work in a department designated as vital to the safety of the City of Hattiesburg (Sworn Fire and Police) or to ensure City functions (Sanitation, Water, Mass Transit, etc.) are out at the same time due to illness, all employees who missed work during that period will be required to present a doctor's certificate of illness upon their return to work.

E. Payout

You will not be paid out your accumulated, unused sick hours upon separation of employment. Rather, the unused hours will be certified to the Public Employee's Retirement System (PERS) for award as creditable service under the state retirement plan.

3-4. Administrative Leave

A. Administrative Leave - With Pay

The Mayor may grant you administrative leave with pay when you must serve as a juror, City witness or party litigant in City-related cases, as verified by the clerk of the applicable court (such leave may be in addition to any fees paid for such services). Verification must accompany your timesheet.

The Mayor may also grant administrative leave with pay for a specific length of time if you are involved in a traumatic situation and leave is recommended by your Chief or Director, or if you are under investigation for a violation of City policy and it is in the best interest of the City that you not appear at work. This type of administrative leave is usually of a short duration.

The Mayor may also grant administrative leave with pay in the event of extreme weather conditions or in the event of a man-made, technological, natural disaster, pandemic or other emergency.

B. Administrative Leave - Without Pay

As a City employee, you may be placed on leave without pay for disciplinary reasons and upon approval of your Chief or Director and the Mayor. However, the Mayor may permit you to continue to work when you, with a recommendation from your Director, request instead that a like number of days be deducted from your personal or compensatory leave accumulation, or a combination thereof. Suspension for disciplinary reasons with pay is prohibited.

In extreme and rare situations, you may be allowed to take leave without pay for a period of time not to exceed six (6) months. Leave without pay is granted on a case-by-case basis after all accrued leave is exhausted and if you are not eligible or no longer eligible for Family and Medical Leave. Your Chief or Director, with the Mayor's knowledge and approval, may grant leave without pay for up to one (1) month; only the Mayor can approve leave without pay for periods longer than one month (up to six months).

While on leave without pay, you will be placed on inactive status and will not be eligible to accrue benefits. You also will be responsible for paying individual or family insurance premium(s) each month to maintain coverage. You may choose to drop coverage if it is not under the Section 125 Cafeteria plan, however, if health insurance is terminated you will have to wait until the first of the month after 90 days of active status for your health insurance to go back into effect. You will not be able to pick up coverage again on optional benefits such as dental, vision, etc. until the City's annual open enrollment period.

Upon your timely return from an approved Administrative Leave - Without Pay, you

will be guaranteed your prior position or a position of equal status and equal pay.

3-5. Leave of Absence from Work

The City follows all legal requirements for allowing employees to be off from work including Pregnancy, Family and Medical Leave, and Military. A leave of absence is granted when your department can spare you, when your employee record justifies the privilege, and/or when there is a legal requirement to do so. An approved leave of absence does not guarantee you a job when you are able to return to work, except for Military and Medical Leave. Please contact the Human Resources Department for specifics on any leave of absence from work.

3-6. Jury Duty and Court Appearances

If you are selected for Jury duty, special leave with pay will be granted at your normal rate of pay. You must present a certificate from the court that indicates the date(s) of service to the Human Resources Department.

Should the court excuse you during your normal work hours, you are to report to work.

3-7. Voting

The City of Hattiesburg fully supports our democratic system and affords all of its employees an opportunity to exercise their right to vote. Upon the approval of your supervisor or manager, you may take up to two hours of compensatory or accumulated personal leave should it be impossible to vote either before or after your normal work schedule.

3-8. Employee Assistance Program

As an employee of The City of Hattiesburg, you have access to the Employee Assistance Program (EAP). EAP offers a variety of services to you and your spouse, and/or your dependent children, including personal assessments, referrals, counseling, and educational information to assist in resolving personal problems.

All contacts with EAP are handled professionally and are strictly confidential.

You have two avenues of referral:

- Self- Referral - You recognize that there is a problem and call the EAP to request an assessment. After the assessment, a recommendation and referral will be made for counseling or treatment.
- Supervisor /Mandatory Referral - A supervisor, recognizing a decline in job

performance and suspecting that personal problems may be a significant factor, consults with Human Resources and directs you to obtain an assessment from EAP. After the assessment has been completed, a recommendation and referral will be made and counseling or treatment may begin if needed. As a condition of continued employment, you are required to abide by the recommendation from EAP.

Please contact the Human Resources Department for information on the City's current provider.

3-9. Employee Health Clinic

Employees and eligible dependents may access the City's Employee Health Clinic. It is staffed by a Nurse Practitioner and a Lab Technician to provide free non-emergency health care. All services provided at the clinic are FREE! Un-insured City employees and their eligible dependents may also use the clinic but are required to pay a fee for each office visit and pay the cost for labs performed.

3-10. Employee Professional Development/Training

As an employee you may be afforded an opportunity to enhance your work skills. Details on training offered will be provided by your supervisor.

3-11. Worker's Compensation

The Mississippi Workers' Compensation Law covers all City employees. This law provides certain benefits in the event you suffer a work-related illness or injury. In case of a work-related fatality, this law guarantees the payments of benefits to your spouse and/or dependents. These benefits are provided at no cost to you or your dependents. Contact the Risk Management department for specifics.

You must report any work-related illness or injury to your immediate supervisor as soon as possible so appropriate medical treatment can be arranged. Timely reporting also insures you will be paid all wage loss benefits without undue delay.

3-12. Payroll Deductions for Benefits

Full-time, regular status employees are entitled to receive health, dental, or vision group insurance. Only single group health is provided free of charge. If you elect to cover yourself, you may also elect to cover your dependent(s).

Dependent Classification

You must be legally married in order to insure someone as a spouse.

To insure a child as a dependent, he/she MUST be:

- You or your spouse's biological child, OR
- You or your spouse's legally adoptive child, OR
- You or your spouse's legal foster child, OR
- You or your spouse is the legal guardian of the child, AND
- The child is age 26 or under to be covered under the group health plan, OR age 25 and under AND a full-time student at a college or university to be covered under the group dental or vision plan. For the group dental and vision plans, the college or university must provide verification of full-time enrollment status each fall by September 15 and again in the spring semester by January 15 of each year the dependent remains covered.

A. Health Insurance

As a full-time, regular status employee, you are provided health insurance coverage by the City of Hattiesburg on the first of the month following the completion of sixty (60) days of continuous full-time employment. Dependent coverage is available and is paid through payroll deduction. Should you wish to add dependent coverage at a later date, it can only be done during the City's annual Open Enrollment period unless you have a "qualifying event."

Changes must be made within 31 days of the "qualifying event." Please contact Human Resources if you have questions about "qualifying events."

If you enter into an inactive status, you are responsible for paying the total premium for single health (as well as family health, if applicable) until the time you return to full-time active status.

Upon termination/retirement you may elect to remain on the City's health insurance for the time period allowed by the Consolidated Omnibus Budget Reconciliation Act (COBRA). You are responsible for paying the total monthly premium.

B. Basic Life Insurance

As a full-time, regular status employee, you are provided a Basic Term Life and Accidental Death and Dismemberment Insurance policy of \$20,000. The effective date of coverage is the same as the health insurance, on the first of the month following the completion of sixty (60) days of continuous full-time employment.

C. Optional Term Life Insurance

As a full-time, regular status employee, you are provided an opportunity to purchase additional term life insurance. Group rates are based on your age. Coverage may also be obtained on your spouse and/or dependent children if you choose the additional voluntary life. If a newly eligible employee, you are given a one-time opportunity to obtain up to a \$100,000 policy without underwriting requirements. Spouses and dependents do not have the same guarantee. The effective date of coverage is the first of the month following the completion of sixty (60) days of continuous full-time employment. After initial eligibility, coverage can only be added during the City's annual Open Enrollment period.

D. Dental Insurance

As a full-time, regular status employee, you may elect to purchase group dental insurance, paying your premiums through payroll deduction. The effective date of coverage is the first of the month after sixty (60) days of continuous full-time employment. Dependent coverage is also available. Should you wish to add dependent coverage at a later date, it can only be done during the City's annual Open Enrollment period unless you have a "qualifying event." Changes must be made within 31 days of the "qualifying event." After initial eligibility, coverage can only be added during the City's annual Open Enrollment period.

Upon termination/retirement you may elect to remain on the City's health insurance for the time period allowed by the Consolidated Omnibus Budget Reconciliation Act (COBRA). You are responsible for paying the total monthly premium.

E. Vision Insurance

As a full-time, regular status employee, you may elect to purchase group vision insurance, paying your premiums through payroll deduction. The effective date of coverage is the first of the month after sixty (60) days of continuous full-time employment. Dependent coverage is also available. Should you wish to add dependent coverage at a later date, it can only be done during the City's annual Open Enrollment period unless you have a "qualifying event." Changes must be made within 31 days of the "qualifying event." After initial eligibility, coverage can only be added during the City's annual Open Enrollment period.

Upon termination/retirement you may elect to remain on the City's health insurance for the time period allowed by the Consolidated Omnibus Budget Reconciliation Act (COBRA). You are responsible for paying the total monthly premium.

F. Retirement

Another one of the great benefits you receive as an employee working for the City is your required participation in the Public Employee's Retirement System (PERS) of Mississippi. If you are an eligible employee, both you and the City contribute a percentage of your gross pay each payroll towards your individual retirement account. Currently you will be required to contribute 9% of your gross and the City will contribute 15.75%! This contribution rate may be adjusted in the future by the PERS retirement system. Please go to the Public Employees Retirement System website at www.pers.state.ms.us for additional information as well as current percentages.

If you do not retire but leave public service, you may obtain a refund of your contributions, less 20% withholding for income tax purposes. A penalty may be assessed; retirement contributions are not taxable until they are withdrawn. Please contact the Human Resources Department for additional information.

G. Deferred Compensation

Deferred Compensation is a supplemental, voluntary savings plan administered by the Public Employee's Retirement System offering tax advantages to participants. If you choose to participate, you may set aside part of your salary each year; income tax liability is postponed on that part of the salary until the year you receive the deferred amount. Interest and/or earnings also are tax deferred until withdrawal. Please contact Human Resources for more information

H. Section 125 Cafeteria Plan

The City of Hattiesburg participates in a tax savings mechanism permitted by

Section 125 of the Internal Revenue Code and Sections 25-17-1 to 25-17-9, Mississippi Code of 1972, Annotated, as amended. A Section 125 plan, also legally known as a "cafeteria plan," allows you to payroll deduct, before taxes, premiums paid for health, dental, vision, accident, and other policies. If you place an item under the cafeteria plan, you are prohibited by law from dropping the elected coverage for one year or until the next "Open Enrollment" effective date, unless you experience an eligible "qualifying event." A qualifying event includes marriage or divorce, employment termination, birth or adoption of a child, and loss of a dependent due to age or death. If you experience a qualifying event, you may make

changes to your coverage within 31 days of the qualifying event; any changes must be directly related to the qualifying event. Contact Human Resources for specifics on participating in this plan.

I. Social Security

The City and you (through payroll deduction) each contribute a percentage of your gross taxable income for Social Security/Medicare contributions. Federal law determines the amount to be withheld.

J. Federal and State Income Taxes

As required by law, the City will deduct federal and state income taxes from each of your paychecks. The amount withheld is based on your gross income, marital status, and the number of exemptions you claim and the current tax table.

K. Credit Unions

As a City employee, you may join Central Sunbelt's Federal Credit Union and Southern Mississippi Federal Credit Union for savings or checking accounts or personal loans and have those items withheld as payroll deductions.

L. Garnishments

The City of Hattiesburg will process employee garnishments as required by law. Should you be involved in a garnishment, please know that as long as your financial concerns do not interfere with your job performance, the City of Hattiesburg will merely make the deductions and payments as required. If they do interfere with your job performance, the City may take disciplinary action, as related to your job performance.

M. Optional Deductions

During Open Enrollment, authorized vendors will be on hand to offer additional insurances, such as accident/disability, life, etc. You may sign up for these items and have them payroll deducted during the Open Enrollment Period. In addition, you may join the Family Y and/or the Institute for Wellness and Sports Medicine any time during the year and have those monthly fees payroll deducted.

3-13. Grievance Process

The City of Hattiesburg does its best to provide you fair and equitable treatment. It also encourages you to discuss problems that may arise concerning your working conditions or the treatment you receive in the workplace. Therefore, a grievance process has been established to provide you a mechanism to resolve your issues of concern and a subsequent appeals process.

Ultimately, the grievance process is designed to:

- Resolve the grievance in a manner that is timely and that avoids bias and unfair employment practices;
- Settle the dispute at the lowest management level possible;
- Correct the cause of the grievance, if appropriate and if possible, and prevent future similar complaints;
- Afford the aggrieved party all the applicable safeguards of procedural due-process; and
- Guarantee that as an employee who files a grievance, you are free from reprisal.

The grievance procedure is a step-structured, time-limited process. You may file a formal grievance through this process. However, if you are sworn Police or Fire personnel you are not to use this process, please refer to your Civil Service grievance guidelines.

Employment actions or issues that you may dispute (grieve) are listed below:

- Disciplinary actions (non-sworn personnel only);
- Application of personnel policies, procedures, rules, regulations, ordinances, and statutes;
- Acts of reprisal against you for filing a grievance;
- Complaints of discrimination on the basis of race, color, creed, political affiliation, religion, age, disability, national origin, or gender;
- Performance appraisal ratings, if they affect or potentially may affect your employment status or compensation.

If the employment action is a suspension, demotion, or a reduction in pay, you may dispute these issues by submitting a written, signed, dated document directly with the Chief Administrative Officer (CAO) within five (5) working days from the employment action. The CAO will meet with you within five (5) working days of receiving the document of dispute, and after consultation with the Mayor, will provide you a written response within ten (10) working days of this meeting. This written decision will be final.

The following are employment actions or issues that you may NOT dispute (grieve):

- Issues which are pending or have been concluded by direct appeal through administrative or judicial procedures;
- Relocation or transfer;
- Temporary work assignments which do not exceed 90 days;
- Budget and organizational structure, including the number or assignment of employees or positions in any organizational unit;
- Performance standards and performance elements established as criteria for performance appraisal;
- The selection of an individual to fill a position through promotion, transfer, or demotion, unless it is alleged that selection is in violation of a written City policy or Civil Service statutes;
- Internal security practices;
- Termination or lay-off from duties because of lack of work, reduction of the work force or job abolishment;
- Any matter which is not within the jurisdiction or control of the appointing authority;
- The content of published City or department policy;
- An action by the City pursuant to federal or state law;
- Establishment and revision of the compensation plan (HAV Pay), position classification, and general benefits;
- At Will Employment.

Technical Assistance The Human Resources Division, will provide technical assistance in grieving/appealing issues or actions. Such assistance will not include the actual preparing of grievances/appeals and responses but may include reviewing drafts to assure the forms are technically correct.

Grievance Procedure:

- people
- Step I.
- a. You should first discuss the issue with your immediate supervisor and make every effort to resolve the issue before filing a formal grievance. Submit your concerns in writing to your immediate Supervisor within five (5) working days of the effective date of the action causing concern. There is not a form that you must use, just write your complaint. Be specific as possible. Include dates, involved, etc. to fully explain what happened. Be sure to include your signature and the date on the document you submit to your manager.
 - b. Your immediate supervisor will meet in person with you within five (5) working days of receiving your written grievance.
 - c. After your meeting, you will receive a response in writing from your Supervisor within five (5) working days.

- Step II .
- a. If you do not agree with your supervisor's response, you may, if desired, further grieve the issue by submitting to your Department Director a signed and dated written document stating you do not agree with the outcome of your meeting with your supervisor and the reason for your disagreement. Be specific. You must submit this written document within five (5) working days of your immediate supervisor's written response.
 - b. Your Department Director will meet with you within five (5) working days of receiving your grievance to discuss your concerns. You will receive a written response within five (5) working days of that meeting.
- Step III.
- a. Finally, if you do not agree with the Director's written response, you may further grieve the issue with the Chief Administrative Officer (CAO) by submitting to your Department Director a signed and dated, written document stating you do not agree with the outcome of your meeting and the reason(s) why. Be very specific. This written document must be submitted within five (5) working days of your receipt of your Director's written response.
 - b. The CAO (or designated other) will meet with you within five (5) working days of receiving your grievance and will respond in writing within ten (10) working days of that meeting. The CAO's decision will be final. Should the Department Director or CAO not be available, a person may be designated to act in their stead to continue the process. The CAO or designee's decision will be final.

Time Limit: If you do not initiate the grievance of an issue within the time as set forth above, it will be dismissed. Also, if your grievance is not advanced to the next step within the specified time limit, or within an agreed-upon extension of that limit, it will be considered settled on the basis of the response. Time limits on each step may be extended by mutual agreement of the parties involved. The extension must be in writing, dated, and signed by all parties.

CHAPTER FOUR

EMPLOYEE DISCIPLINE

4-1. Discipline Procedures

The City is committed to a disciplinary procedure that is more corrective and constructive than punitive. Disciplinary actions may arise when an employee violates any rules, regulations, or policies/procedures governing his/her employment, when an employee is guilty of offenses or misconduct which violate general rules of civil behavior, or for offenses against the City.

Normally, the disciplinary procedure to be followed is progressive in nature, as outlined below. However, each situation is considered individually, and the City reserves the right to bypass any of the normal process should circumstances warrant.

- A. Oral Reprimand - Designed to allow a supervisor to give informal, corrective guidance to an employee for a minor infraction or misbehavior.
- B. Written Reprimand - Designed to be issued when an employee has committed a more serious infraction or misbehavior or has repeated a minor infraction or behavior for which he/she has already been warned.
- C. Suspension-Without Pay - This action may be taken when an employee has committed a third infraction or misbehavior for which he/she has been reprimanded twice, either orally or in writing, previously or if an infraction or misconduct of a more serious nature occurs. An employee may be suspended without pay for up to five (5) working days. For suspensions greater than one day, the days will be consecutive work days. When, in the opinion of the director/chief, actual time-off would hinder the operation of the division/department, the employee may be offered the opportunity to have an equivalent number of days deducted from his/her vacation leave and/or compensatory time accruals. In either case, the notice of suspension will include notification of his/her grievance/appeal rights.
- D. Termination: - When infractions or acts of misconduct are repeated or where a single infraction or misconduct is severe, an employee may be terminated from City employment. Terminations will be effective immediately with the employee being advised of his/her grievance/appeal rights.
- E. Personal Conduct - City employees are always in the public eye. It is, therefore, especially important that actions which bring discredit to the City should be avoided in our relationships with the public and each other as fellow employees. Conduct by employees should conform to published rules and regulations and accepted customs

and standards of courtesy, conduct and cooperation. Listed below are examples of actions and conduct (although this is not an exhaustive list) which are unacceptable to the City and may result in disciplinary action, up to and including termination of employment. This policy is not all-inclusive, and the City of Hattiesburg reserves the right to add to or amend to this policy as necessary.

- a. Unauthorized absences or excessive tardiness. Three (3) days no call, no show employee is subject to immediate termination.
- b. Abuse of City Leave Policy
- c. Leaving work without permission or stopping work before time authorized
- d. Conviction of a felony or a crime involving moral turpitude, or a job- related Misdemeanor, or conviction of embezzlement
- e. Conduct unbecoming a City employee
- f. Negligence in performing job duties
- g. Failure to follow instructions of individuals in line of supervisory authority
- h. Insubordination
- I. Willful disregard or violation of safety rules
- j. Failure to report an accident, incident and/or injury
- k. Unauthorized use or mis-use of City equipment or property (including traffic signal control devices)
- l. Theft or removal of City property or that of a fellow employee
- m. Involvement in an accident chargeable to the employee while operating a City vehicle
- n. Accidents/incidents chargeable to the employee that result in injury and/or property damage
- o. Possession, use, distribution or sale of drugs or alcohol on the job
- p. Reporting to work under the influence of alcohol or drugs
- q. Testing positive (as defined by the alcohol/drug testing policy) on an alcohol/drug test
- r. Falsifying leave or work records, giving false information, or giving false testimony in an administrative or judicial proceeding
- s. Use of abusive language
- t. Threats against supervisors, co-workers, or other individuals encountered in the performance of his/her duties
- u. Fighting on the job
- v. Failure to cooperate in an internal investigation, including but not limited to, taking a polygraph examination
- w. Failure of a supervisor to discipline his/her employees at all or consistently

CHAPTER FIVE

EMPLOYEE ATTENDANCE

5-1. EMPLOYEE ATTENDANCE

There are two types of missed work time: Tardy or an Absence.

A. Tardiness

It is important for the operations of the City of Hattiesburg that you are at work and available to begin working at your scheduled start time. Tardiness causes undue hardship on co-workers and diminishes the City of Hattiesburg's service to its citizens.

Tardiness is defined as beginning the workday after your scheduled start time without prior authorization or returning from a rest or lunch period after your scheduled return time without prior authorization; even if you clocked in within the established rounding window for the timekeeping system and your pay is not being adjusted for the minutes late (docked). For any tardy in excess of 2 hours, you will be dismissed for the remainder of the day and will not be allowed to use accrued leave time.

This policy is not all-inclusive, and the City of Hattiesburg reserves the right to add to or amend to this policy as necessary.

B. Absences

There are two types of absences from work; Excused Absence and Unexcused Absence

Excused Absence

For an absence from work to be considered excused, your supervisor must approve the absence **prior** to your missing work. Under certain circumstances (i.e.; absences falling under FMLA, etc.) absences may be excused after an absence. To ensure departmental needs are being met and to allow proper scheduling, you should request time off less than 4 hours at least 12 hours in advance. Time off of 4 hours or more should be requested at least 3 workdays in advance.

Unexcused Absence

An unexcused absence should only occur in cases of unforeseeable circumstances or emergencies.

You are required to personally notify your supervisor that you need time off before the start of your work shift, unless you are hospitalized or otherwise physically unable to do so. Divisions may establish specific guidelines setting the minimum amount of notice that must be given and how you are to call in. Be sure to follow these guidelines to ensure you are meeting your departmental requirements.

If you are abusing your accumulated leave time, your manager may notify you in writing that you will not be allowed future use of your accumulated sick leave time without a written physician's excuse until notified in writing the requirement is lifted.

You are required to work your scheduled work day immediately before or after a City approved Holiday to be eligible for Holiday pay unless you are on approved paid Leave (Personal or Sick).

This policy is not all-inclusive, and the City of Hattiesburg reserves the right to add or amend to this policy as deemed necessary.

CHAPTER SIX

LEAVE PAYMENT – RESIGNATION OR TERMINATION OF EMPLOYMENT

Disclaimer: While the City of Hattiesburg does acknowledge different types of separations from employment and places higher merit on forms of separation such as resignation for unforeseen reasons, PERS statutes do not

The City of Hattiesburg has established the following guidelines for paying your accrued personal leave, accrued sick, and earned compensatory time when you terminate (leave) employment.

6-1. Resigning and Terminated Employee

A. Personal Leave Hours

If you have been employed in a permanent full-time position six months or greater and resign from the City of Hattiesburg, your final check may include pay for unused personal leave; state statute limits this pay to thirty (30) days of accrued hours (total of 240 hours).

As standard procedure, Human Resources will pay your available accrued hours (up to 240 hours) on your final check unless you submit a written request for **less** hours to the Human Resources Department by 5:00 p.m. the Monday before the Friday of your final payday (should that Monday be a holiday, you will need to contact Human Resources before the holiday to make other arrangements).

Any time you have remaining after the payout will be certified to the Public Employees Retirement System (PERS) for award as creditable service under the state retirement plan.

B. Sick Hours

You cannot be paid for accrued, unused sick hours when you are resigning. Instead, all unused time will be certified to the Public Employees Retirement System (PERS) for award as creditable service under the state retirement plan. You may not use sick hours during a resignation period unless you have presented a physician's certification of illness for the time you are sick or for the time you are visiting a doctor.

C. Compensatory Hours

Your unused earned compensatory hours will be paid out on your final payroll check. You may not use compensatory hours during a resignation period.

6-2. Retiring Employee

A. Personal Leave Hours

If you are retiring, you will be allowed to remain on payroll (if desired and you have sufficient unused accrued personal leave time) for up to 30 workdays. A workday is defined as 8 hours, therefore, the total can be no more than 240 hours. You may not use earned, unused sick leave or compensatory time, and at no time will you be allowed to remain on payroll after this date.

State statute allows you to receive a lump-sum payment on your final check for accrued personal leave hours of up to 240 hours.

As standard procedure, Human Resources will pay your available accrued hours (up to 240 hours) on your final check unless you submit a written request for less hours to the Human Resources Department by 5:00 p.m. the Monday before the Friday of your final payday (should that Monday be a holiday, you will need to contact Human Resources before the holiday to make other arrangements).

Any accrued time you have remaining after the payout will be certified to the Public Employees Retirement System (PERS) for award as creditable service under the state retirement plan.

B. Sick Hours

You cannot be paid for accrued, unused sick hours when you are retiring. Instead, all unused time will be certified to the Public Employees Retirement System (PERS) for award as creditable service under the state retirement plan. You may not use sick hours during a resignation period unless you have presented a physician's certification of illness for the time you are sick or for the time you are visiting a doctor.

C. Compensatory Hours

When you retire, your unused earned compensatory hours will be paid out on your final payroll check. You may not use compensatory hours during your resignation period.



Memorandum

To: Mayor Toby Barker and Members of City Council

From: Andrew Ellard, Director

cc: Kermas Eaton, City Clerk

Date: Tuesday, August 18, 2020

Re: Approve and authorize issuance of manual checks for CDBG Program Claims for 213 S 11th Avenue - C. White; 207 W 5th Street - S. Brister; 735 Longstreet Drive - B. Booth; 303 J.C. Killingsworth Drive - H. O'Neal.
File Number: 2020-568
Minute Book #

Summary

Approve and authorize issuance of manual checks for CDBG Program Claims per attached Memorandum. {Entitlement CDBG}

Recommendation Statement

I recommend issuance of manual checks for CDBG Program Claims per attached Memorandum

Please place this on the August 18, 2020 City Council meeting for consideration.

BONNER ANALYTICAL TESTING CO. INC.2703 Oak Grove Rd.
Hattiesburg, MS 39402

Invoice

Customer No.: HATT

Invoice No.: 72113

Bill To: **CITY OF HATTIESBURG**
ACCOUNTING DEPT
P O BOX 1898
HATTIESBURG, MS 39403-1898Ship To: **CITY OF HATTIESBURG**
ATTN: PETRA WINGO
P O BOX 1898
HATTIESBURG, MS 39403-1898

Date	Ship Via	F.O.B.	Terms
07/31/20		Origin	
Purchase Order Number	Order Date	Sales Person	Our Order Number
	07/31/20		

Quantity			Item Number	Description	Unit Price	Amount
Required	Shipped	B.O.				
1	1			LEAD CLEARANCE INSPECTION #1 PERFORMED 4-7 2020 213 SOUTH 11TH AVE. HATTIESBURG, MS	488.10	488.10

Invoice subtotal 488.10

Invoice total 488.10

RECEIVED
7/31/20
PW

Thank You

BONNER ANALYTICAL TESTING CO. INC.

2703 Oak Grove Rd.
Hattiesburg, MS 39402

Invoice

Customer No.: HATT

Invoice No.: 72114

Bill To: **CITY OF HATTIESBURG**
ACCOUNTING DEPT
P O BOX 1898
HATTIESBURG, MS 39403-1898

Ship To: **CITY OF HATTIESBURG**
ATTN: PETRA WINGO
P O BOX 1898
HATTIESBURG, MS 39403-1898

Date	Ship Via	F.O.B.	Terms
07/31/20		Origin	
Purchase Order Number	Order Date	Sales Person	Our Order Number
	07/31/20		

Quantity			Item Number	Description	Unit Price	Amount
Required	Shipped	B.O.				
1	1			LEAD CLEARANCE INSPECTION #2 PERFORMED 07-13-2020 213 SOUTH 11TH AVE. HATTIESBURG, MS	676.10	676.10

Invoice subtotal 676.10

Invoice total 676.10

RECEIVED
7/30/20
[Signature]

Thank You



LUMAR
DEVELOPMENT

General Contractors | Commercial & Residential
P.O. Box 143 | Hattiesburg, MS 39403
Email: CBourn@LuMarDevelopment.com

Cedrick Bourn - 601-543-8810

INVOICE

Date 8/10/2020

Submitted To City of Hattiesburg

Address PO Box 1898

City Hattiesburg

State MS

Zip

Phone (601) 554-1006

Email:

Location

Notes: This invoice covers work completed at 207 W 5th Street

We hereby propose to furnish materials and labor necessary for the completion of:

Description	
Dug out footings for piers on all support walls	
Placed concrete & poured rebar for footings for piers	
Replaced floor joists in all areas shaded red on flow chart	
Replaced all bad bottom plates	
Leveled floor joist and house	
Install all new windows in home	
Install new sub flooring	
Hung all new exterior and interior doors	
Install bat insulation for all exterior walls	
Hung, tape, floated, mud finished & painted all new drywall in home	
Install all new plumbing fixtures	
Install hot water heater	

All materials guaranteed to be specified. All work to be completed in a workmanlike manner according to standard practices. Any alteration or deviation from the above specifications involving extra costs will be executed only upon written orders, and will become an extra charge over and above the estimate on agreements contingent upon strikes, accidents or delays beyond our control. Owner to carry fire, tornado and other necessary insurance. Our workers are fully covered by Workmen's Compensation Insurance.

Authorized Signature x Cedrick Bourn Date 8/10/2020

SUB-TOTAL \$

\$20,000.00

TAX \$

We Propose: hereby to furnish material and labor- complete in accordance with above specifications, for the sum of:

TOTAL  \$

\$20,000.00

Payment Method:

Acceptance of Proposal - The above prices, specifications and conditions are satisfactory and are hereby accepted. You are authorized to do the work as specified.

Payment will be made as outlined above



Authorized Signature X

Date of Acceptance

Signature X

NOTE: This Proposal may be withdrawn by us if not accepted within Days

08-10-20P03:43 RCVD



BONNER ANALYTICAL TESTING CO. INC.

2703 Oak Grove Rd.
Hattiesburg, MS 39402

Invoice

Customer No.: HATT

Invoice No.: 72089

Bill To: **CITY OF HATTIESBURG**
ACCOUNTING DEPT
P O BOX 1898
HATTIESBURG, MS 39403-1898

Ship To: **CITY OF HATTIESBURG**
ATTN: PETRA WINGO
P O BOX 1898
HATTIESBURG, MS 39403-1898

Date		Ship Via		F.O.B.		Terms		
07/29/20				Origin				
Purchase Order Number			Order Date		Sales Person		Our Order Number	
			07/29/20					
Quantity			Item Number	Description	Unit Price	Amount		
Required	Shipped	B.O.						
1	1			LEAD BASED PAINT INSPECTION PERFORMED 02-12-2020 @ 303 J.C. KILLINGSWORTH HATTIESBURG, MS	635.15	635.15		

Invoice subtotal 635.15

Invoice total 635.15

07-29-20A09:38 RCVD



Thank You

BONNER ANALYTICAL TESTING CO. INC.

2703 Oak Grove Rd.
Hattiesburg, MS 39402

Invoice

Customer No.: HATT

Invoice No.: 72090

Bill To: **CITY OF HATTIESBURG**
ACCOUNTING DEPT
P O BOX 1898
HATTIESBURG, MS 39403-1898

Ship To: **CITY OF HATTIESBURG**
ATTN: PETRA WINGO
P O BOX 1898
HATTIESBURG, MS 39403-1898

Date		Ship Via		F.O.B.	Terms	
07/29/20				Origin		
Purchase Order Number			Order Date	Sales Person		Our Order Number
			07/29/20			
Quantity			Item Number	Description	Unit Price	Amount
Required	Shipped	B.O.				
1	1			LEAD BASED PAINT INSPECTION PERFORMED 02-12-2020 @ 735 LONGSTREET DRIVE HATTIESBURG, MS	609.29	609.29

Invoice subtotal 609.29

Invoice total 609.29

07-29-20A09:38 RCVD



07 8-20A09:38 RCVD

Thank You



Memorandum

To: Mayor Toby Barker and Members of City Council

From: Lamar Rutland

cc:

Date: Tuesday, August 18, 2020

Re: Acknowledge receipt of grant offer from the Mississippi Transportation Commission for the Bobby L. Chain Municipal Airport Project No. 3-28-0031-027-2020 in the amount of \$216,750.00 and authorize the Mayor to execute Airport Federal Matching Grant Agreement in triplicate.
File Number: 2020-552
Minute Book #

Summary

Acknowledge receipt of grant offer from the Mississippi Transportation Commission for the Bobby L. Chain Municipal Airport Project No. 3-28-0031-027-2020 in the amount of \$216,750.00; authorize Mayor to execute Airport Federal Matching Grant Agreement in triplicate.

Recommendation Statement

I recommend approval of this item.

Please place this on the August 18, 2020 City Council meeting for consideration.

**MISSISSIPPI TRANSPORTATION COMMISSION
AIRPORT FEDERAL MATCHING GRANT AGREEMENT
Project No. AIP-3-28-0031-027-2020
Hattiesburg-Bobby L. Chain Airport**

PART I - OFFER

TO: City of Hattiesburg, Mississippi
(hereinafter referred to as the RECIPIENT)

FROM: The Mississippi Transportation Commission
(hereinafter referred to as the COMMISSION)

WHEREAS, Title 61 of the Mississippi Code of 1972, as amended, authorizes the COMMISSION, subject to the limitations and conditions stated therein, to render financial aid in the acquisition, development, operation or maintenance of airports and to aid in the establishment, development, and maintenance of the civil air patrol program; and,

WHEREAS, The RECIPIENT submitted an Application for Federal Assistance (hereinafter referred to as Application) to the Federal Aviation Administration (hereinafter referred to as FAA) for federal financial assistance for development of the Hattiesburg-Bobby L. Chain Airport (hereinafter referred to as Airport), and the FAA subsequently issued a Grant Offer of federal funds, dated January 27, 2020 for Airport Improvement Project No. 3-28-0031-027-2020 (hereinafter referred to as Project) consisting of the following:

Rehabilitate apron

all as more particularly described in the plans and specifications for the Project which were approved by the FAA; and,

WHEREAS, the Application included a request to the COMMISSION for financial assistance in payment of the RECIPIENT'S ten percent (10%) share of the Project costs;

NOW, THEREFORE, The COMMISSION hereby offers and agrees to pay as the COMMISSION'S share, **\$216,750**, of the eligible costs incurred in accomplishing the Project, subject to the following terms and conditions:

1. The maximum obligation of the COMMISSION payable under this offer shall be one-hundred percent (100%) of the RECIPIENT'S share of the final eligible Project costs.
2. The RECIPIENT shall:
 - a. expend an amount greater than ten percent (10%) of the final Project costs.
 - b. carry out and complete the project **by December 30, 2025**, and in accordance with the approved plans and specifications or contracts for the project, incorporated herein by reference, and any revisions or modifications approved by the COMMISSION.

3. The RECIPIENT is obligated to pay the full 10% recipient share of any FAA Grant Amendments to increase the FAA funding participation in the Project.
4. Project payments pursuant to this Grant will be made for eligible costs documented by invoices for the work or services incurred in accomplishing the project within the period set forth in 2(b) above. Final payment will be made after final review and approval of the completed Project by the FAA and the COMMISSION and after all conditions relating to the Project have been satisfied.
5. The COMMISSION reserves the right to amend or withdraw this Offer at any time prior to its acceptance by the RECIPIENT.
6. The RECIPIENT shall establish and maintain financial records of the Project in accordance with applicable State audit requirements and will make them available to personnel of the COMMISSION upon request.
7. All terms, conditions, and assurances contained in the FAA Grant Agreement for the project are incorporated herein by reference.
8. The RECIPIENT shall carry out and complete (physical and financial) the project without undue delays and in accordance with the terms herein.
9. The RECIPIENT will comply with the E-Verify Program described in the attached Supplemental Condition and by executing the form in Attachment C.

The RECIPIENT'S acceptance of this Offer shall be evidenced by execution of this instrument by the RECIPIENT and said offer and acceptance shall comprise an Airport Development Agreement, as provided by the COMMISSION constituting the obligations and rights of the COMMISSION and the RECIPIENT with respect to the accomplishment of the Project. Such Airport Development Agreement shall become effective upon the RECIPIENT'S acceptance of this Offer.

The COMMISSION executes all its orders and directives through the personnel of the MISSISSIPPI DEPARTMENT OF TRANSPORTATION. All notices and correspondence with or to the COMMISSION pursuant to the Project identified in this Agreement shall be directed to the Director, Aeronautics Division, Mississippi Department of Transportation.

This Agreement shall be governed by and construed under the laws of the State of Mississippi. Any term or provision or portion thereof which violates the laws of the State of Mississippi, shall be null and void.

Witness this my signature in execution hereof this the ____ day of _____, 2020.

MISSISSIPPI TRANSPORTATION COMMISSION, BY
AND THROUGH THE DULY AUTHORIZED EXECUTIVE
DIRECTOR OF THE MISSISSIPPI DEPARTMENT OF
TRANSPORTATION

Melinda L. McGrath, PE

Bk _____, Pg _____

PART II - ACCEPTANCE

The **City of Hattiesburg, Mississippi** does hereby accept said Offer and all terms and conditions contained therein.

Witness this my signature in execution hereof this the 18th day of August, 2020.

City of Hattiesburg, Mississippi

Attest: _____

City Clerk
(Title)

By: _____

Mayor
(Title)

SUPPLEMENTAL CONDITIONS

Immigrant Status Certification/ E-Verify

The RECIPIENT represents and warrants that it will ensure its compliance with the Mississippi Employment Protection Act, **Section 71-11-1, et seq. of the Mississippi Code Annotated (Supp 2008)**, and will register and participate in the status verification system for all newly hired employees. The term "employee" as used herein means any person that is hired to perform work within the State of Mississippi. As used herein, "status verification system" means the Illegal Immigration Reform and Immigration Responsibility Act of 1996 that is operated by the United States Department of Homeland Security, also known as the E-Verify Program, or any other successor electronic verification system replacing the E-Verify Program. The RECIPIENT agrees to maintain records of such compliance and, upon request of the State **and approval of the Social Security Administration or Department of Homeland Security, where required**, to provide a copy of each such verification to the State. The RECIPIENT further represents and warrants that any person assigned to perform services hereunder meets the employment eligibility requirements of all immigration laws of the State of Mississippi. The RECIPIENT understands and agrees that any breach of these warranties may subject the RECIPIENT to the following: (a) termination of this GRANT and ineligibility for any State or public contract in Mississippi for up to three (3) years, with notice of such cancellation/termination being made public, or (b) the loss of any license, permit, certification or other document granted to the RECIPIENT by an agency, department or governmental entity for the right to do business in Mississippi for up to one (1) year, or (c) both. In the event of such termination/cancellation, the RECIPIENT would also be liable for any additional costs incurred by the State due to GRANT cancellation or loss of license or permit. **The RECIPIENT is required to provide the certification on Attachment "C" to this GRANT to the COMMISSION verifying that the RECIPIENT and SUB-RECIPIENTS (Contractors, Subcontractors, Consultants), if any, are registered and participating in E-Verify prior to execution of this GRANT.**

It is agreed by the parties that no person employed by the RECIPIENT pursuant to the provisions hereof will be considered an agent or employee of the COMMISSION or the Mississippi Department of Transportation.

It is further agreed by the parties that no provision of this GRANT is intended nor shall it be construed to give rise to a third party beneficiary claim on the person or entity not a party hereto.

ATTACHMENT C

CONSULTANT / CONTRACTOR EEV CERTIFICATION AND AGREEMENT

Hattiesburg-Bobby L. Chain Airport

By executing this Certification and Agreement, the undersigned verifies its compliance with the "Mississippi Employment Protection Act," Section 71-11-1 et seq. Mississippi Code of 1972, as amended, and any rules or regulations promulgated by Mississippi Transportation Commission [MTC], Department of Employment Security, State Tax Commission, Secretary of State, Department of Human Services in accordance with the Mississippi Administrative Procedures Law (Section 25-43-1 et seq., Mississippi Code of 1972, as amended), stating affirmatively that the individual, firm or corporation which is contracting with MTC has registered with and is participating in a Federal work authorization program* operated by the United States Department of Homeland Security to electronically verify information of newly hired employees pursuant to the Immigration Reform and Control Act of 1986, Pub. L. 99-603,100, Stat 3359, as amended. The undersigned agrees to inform the MTC if the undersigned is no longer registered or participating in the program.

The undersigned agrees that, should it employ or contract with any sub-consultant(s) and/or subcontractor(s) in connection with the performance of this GRANT, the undersigned will secure from such sub-consultant(s) and/or subcontractor(s) verification of compliance with the Mississippi Employment Protection Act. The undersigned further agrees to maintain records of such compliance and provide a copy of each such verification to MTC, if requested, for the benefit of the MTC or this GRANT.

134257

EV* Company Identification Number [Required]

The undersigned certifies that the above information is complete, true and correct to the best of my knowledge and belief. The undersigned acknowledges that any violation may be subject to the cancellation of the GRANT, ineligibility for any State or public contract for up to three (3) years, the loss of any license, permit, certificate or other document granted by any agency, department or government entity for the right to do business in Mississippi for up to one (1) year, or both, any and all additional costs incurred because of the GRANT cancellation or the loss of any license or permit, and may be subject to additional felony prosecution for knowingly or recklessly accepting employment for compensation from an unauthorized alien as defined by 8 U.S.C §1324a(h)(3), said action punishable by imprisonment for not less than one (1) year nor more than five (5) years, a fine of not less than One Thousand Dollars (\$1,000.00) nor more than Ten Thousand Dollars (\$10,000.00), or both, in addition to such prosecution and penalties as provided by Federal law.

BY: _____,
Authorized Officer or Agent

8/18/2020

Date

Toby Barker
Printed Name of Authorized Officer or Agent of
the RECIPIENT

Mayor
Title of Authorized Officer or Agent of
the RECIPIENT

SWORN TO AND SUBSCRIBED before me on this the ____ day of _____, 20__.

NOTARY PUBLIC

My Commission Expires: _____

* As of the effective date of the Mississippi Employment Protection Act, the applicable Federal work authorization program is E-Verify™ operated by the U. S. Citizenship and Immigration Services of the U.S. Department of Homeland Security, in conjunction with the Social Security Administration.



Memorandum

To: Mayor Toby Barker and Members of City Council

From: Andrew Ellard, Director

cc: Kermas Eaton, City Clerk, Wiley Quinn, Code Enforcement Division Manager

Date: Tuesday, August 18, 2020

Re: Authorize the Mayor to execute an Authority to cancel Resolution of Adjudication for property located at 202 N. 23rd Avenue; authorize recording of the same.
File Number: 2020-553
Minute Book #

Summary

Correction of an adjudication due to an incorrect assessment amount.

Recommendation Statement

I recommend approval of the release of this adjudication.

Please place this on the August 18, 2020 City Council meeting for consideration.

STATE OF MISSISSIPPI

COUNTY OF FORREST

RELEASE

KNOW ALL MEN BY THESE PRESENT: That the CITY OF HATTIESBURG, having previously filed a Resolution as a result of code enforcement action against certain property in the following location:

DATE FILED:	August 8, 2019
BOOK:	1318
PAGE:	611-612
BENEFICIARY:	City of Hattiesburg
AMOUNT:	\$250.00
NAME:	Anthony Shindelar

in the office of the Chancery Clerk of Forrest County, Mississippi, is now hereby released; and the Clerk of Chancery Court of Forrest County, Mississippi, is hereby authorized to enter this order upon the records of said County as is provided by law.

202 N 23rd Avenue; Parcel No. 2-028J-08-257

Legal Description:

The South Half (S 1/2) of Lot Nine (9) and all of Lot Ten (10) of Block Eleven (11), Hattiesburg Heights Second Survey, according to the map or plat thereof on file in the office of the Chancery Clerk of Forrest County, Mississippi, together with all improvements thereon and appurtenances there unto belonging.

IN WITNESS WHEREOF, this instrument is executed on this the ____ day of _____, 20____.

CITY OF HATTIESBURG

BY: _____
TOBY BARKER, MAYOR

ATTEST:

KERMAS EATON

STATE OF MISSISSIPPI

COUNTY OF FORREST

Personally appeared before me, the undersigned authority in and for said county and state, on this the ____ day of _____, the within named **TOBY BARKER**, who acknowledged that he is the **MAYOR OF THE CITY OF HATTIESBURG**, and that for and on behalf of said corporation, and as its act and deed he executed the above and foregoing instrument, after first having been duly authorized by said corporation so to do.

NOTARY PUBLIC

MY COMMISSION EXPIRES:



Memorandum

To: Mayor Toby Barker and Members of City Council

From: Lamar Rutland

cc:

Date: Tuesday, August 18, 2020

Re: Authorize acquisition of a portion of a parcel of property identified as Forrest County Parcel No. 2-030M-11-278.00 (PPIN 022501) for the Hall Avenue Overpass Project: Acknowledge receipt of Appraisal Report; Determine the appraisal valuation of \$3,900.00 to be Just Compensation for the aforementioned portion of the parcel; Authorize Mayor to make a Fair Market Value Offer for the property of \$3,900.00; Authorize Mayor to execute any and all documents required to complete the transaction; Authorize issuance of a manual check in payment thereof upon closing of transaction.

File Number: 2020-580
Minute Book #

Summary

Authorize acquisition of a portion of a parcel of property identified as Forrest County Parcel No. 2-030M-11-278.00 (PPIN 022501) for the Hall Avenue Overpass Project: Acknowledge receipt of Appraisal Report; Determine the appraisal valuation of \$3,900.00 to be Just Compensation for the aforementioned portion of the parcel; Authorize Mayor to make a Fair Market Value Offer for the property of \$3,900.00; Authorize Mayor to execute any and all documents required to complete the transaction; Authorize issuance of a manual check in payment thereof upon closing of transaction.

Recommendation Statement

I recommend approval of this item.

Please place this on the August 18, 2020 City Council meeting for consideration.

Richard & Thomas, PLLC
Attorneys at Law

Stephen K. Thomas

132 Westover Drive
Hattiesburg, MS 39402
(601)602-2457 phone
(601)602-2458 fax

October 1, 2019

City of Hattiesburg
Attn: Lamar Rutland
P.O. Box 1898
Hattiesburg, MS 39403-1898

Re: Hall Avenue East Project (Property 10)

Begin at the Southwest corner of Lot 6, Block 16 of the Omega Addition to the City of Hattiesburg, and run North 50 feet; thence at right angles east 120 feet; thence South 50 feet; thence West 120 feet to the Point of Beginning. Said land being located in the SW ¼ of the SW ¼ of Section 11, Township 4 North, Range 13 West, Forrest County, Mississippi.

Pursuant to your request, I have examined the land records on file in the office of the Chancery Clerk of Forrest County, Mississippi, relating to the above described real property for a period back of thirty-one years prior to this date, and find sufficient evidence that the above described property was conveyed by Warranty Deed to **ROXIE LEWIS**, dated August 14, 1942, and recorded in Land Deed Book 71 at Page 598. Based upon my examination for the aforesaid period and with the presumption that prior conveyances in chain of title are legal and valid, it is my opinion that the said Roxie Lewis, owns a fee simple, merchantable in and to above described real property subject to the following liens, encumbrances and reservations;

RESERVATIONS

1. This opinion does not cover the oil, gas or other minerals lying on or under said property and no opinion is given thereon.
2. As no current survey is present, I do not certify as to the actual occupancy, nor to matters which should be revealed by an accurate survey of subject lands, nor do I certify rights of parties in possession, deficiency in the quantity of lands, boundary line disputes, roadways, unrecorded servitudes or easements, any matters not of proper record which would be disclosed by a true and accurate survey and inspection of the property, and easements or other uses of subject lands not so visible from the surface.
3. Title is subject to any liability or loss due to environmental contamination by past uses of

the property as a toxic hazardous waste site, or due to violation of any environmental protection law of any governmental body.

4. Title is subject to instruments of record being properly filed and indexed in the office of the Chancery Clerk where the property is located.

5. This is not a guarantee of title and is not an insurance policy on said property, and this opinion is for the use and benefit of only the party or parties to whom it is addressed and may not be availed of or relied upon by any other person(s) or entity.

ENCUMBRANCES

None.

TAXES

Taxes assessed by Forrest County, Mississippi for 2019 are not due and owing but would constitute a lien against said property if not paid by January 31, 2020.

2018 Forrest County ad valorem taxes for Parcel No. 2-030M-11-278.00, PPIN 22501, are **paid** in the amount of \$31.65.

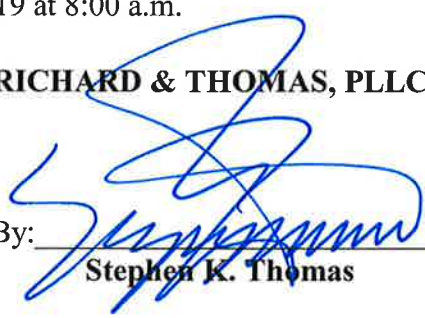
JUDGMENTS

This opinion reflects only those judgments recorded on the Judgment Rolls in the office of the Circuit Clerk of Forrest County, Mississippi. As of this date, no such judgments appear.

This, the 1st day of October, A.D., 2019 at 8:00 a.m.

RICHARD & THOMAS, PLLC

By: _____


Stephen K. Thomas

APPRAISAL OF PROPERTY ON

KLONDYKE STREET

PIN # 022501

HATTIESBURG, MS

LIGHTSEY & ASSOCIATES

P.O. Box 15489
Hattiesburg, MS 39404
(601) 584-6260

May 6, 2020

Mr. Lamar Rutland
City of Hattiesburg
P.O. Box 1898
Hattiesburg, MS 39403

RE: Appraisal of property on Klondyke Street,
Hattiesburg, MS

Dear Mr. Rutland:

In accordance with the your request, I have made an inspection and investigation of the property located on Klondyke Street, Hattiesburg, Mississippi, for the purpose of forming an opinion of the Market Value, in fee simple, as of April 30, 2020, the effective date of the appraisal being the date the subject property was last inspected. The value opinion is both before and after the taking of a 2,947 square foot parcel (.07 acre) in conjunction with the Hall Avenue railroad overpass by the City of Hattiesburg and noting damages to the remainder, if any.

Market Value is defined as the most probable price in cash, terms equivalent to cash, or in other precisely revealed terms, for which the property will sell in an open and competitive market under all conditions requisite to a fair sale, with the buyer and seller each acting prudently, knowledgeably, and for self interest, and assuming that neither is under undue duress.

NEIGHBORHOOD DESCRIPTION

The subject area lies to the southeast of downtown Hattiesburg and is located east of Williams Street and the Canadian National Railway right of way. The general area contains a wide age range of properties that range from commercial/retail uses to single-family dwellings and multi-family dwellings. The subject is in relative close proximity to public schools, shopping and employment centers, and medical facilities. The new Hattiesburg Law Enforcement Complex is under construction on Hall Avenue at the southern end of Bay Street. The majority of properties in the area are in excess of fifty years old.

SITE DESCRIPTION

The subject site is located at the northeasterly corner of Klondyke Street and Hall Avenue. It has a frontage of 50 feet on Klondyke and extends to a depth of 100 feet along Hall Avenue. The site is rectangular in shape and contains approximately 5,000 square feet. The site is at or above street grade, and appears to have adequate utility for use a single unit dwelling site. The property does appear to lie in a designated flood area, though this is subject to certification by a professional engineer or surveyor. All public utilities area connected or available to the site. A survey and plat map are included in the addenda of this report in order to assist the reader in visualizing the property. There were no adverse soil or subsoil conditions observed; however, no soil tests have been made as a part of this report. The property is zoned R-1C, Single Unit Residential, by the zoning authorities of the City of Hattiesburg. The City of Hattiesburg intends to take a 2,947 square foot irregularly shaped parcel along Hall Avenue. Following the taking, the subject site will be effectively reduced in size to 2,053 square feet. The remainder parcel will be irregular in shape and would not lend itself to use as a single unit building lot. Because of this, the remainder is considered to be an uneconomic remnant and is assigned a nominal value of \$100.00.

IMPROVEMENTS DESCRIPTIONS

There are no known improvements on the subject site.

PROPERTY HISTORY

The subject property appears to have been under the present ownership for in excess five years per tax assessor's records.

TAXES

The total taxes for the subject property for 2019 are \$31.54. The total true value (tax value) of the property is \$1,150.00 with an assessed value of \$173.00.

HIGHEST AND BEST USE

In order to estimate the Highest and Best Use of the subject, the surrounding property uses as well as the four tests of Highest and Best Use were considered. These are 1)physically possible, 2)legally permissible, 3)financially feasible, and 4)maximally productive. After considering these factors, the Highest and Best Use of the site as vacant is estimated to be for a single unit house site in the before condition. The remainder property is considered to be an uneconomic remnant.

INTENDED USE AND SCOPE OF THE APPRAISAL

This appraisal is intended to assist the client, Mr. Lamar Rutland of the City of Hattiesburg, in forming an opinion of value of the subject property both before and after the taking of a 948 square foot parcel by the City for road widening. In preparing this appraisal, the appraiser inspected the subject site; gathered information on comparable land sales and listings, confirmed and analyzed the data and applied the Sales Comparison Approach to value. As only the land was considered in this appraisal, this was the only approach deemed applicable to the subject's valuation.

APPRAISAL PROCESS

In good appraisal practice, three approaches to value are normally used to arrive at a value conclusion for a given property. These approaches are the Sales Comparison Approach, the Cost Approach, and the Income Approach. The Sales Comparison Approach is based on deriving a value indication by comparing properties that have been sold recently to the subject property and adjusting the sales price of the comparables for any basic differences. The Income Approach considers the present value of the future benefits of income and ownership. To estimate the income potential of the subject, comparable rents are obtained and reconciled to the subject, then a deduction is made for anticipated expenses. The resulting net income is then capitalized into value using a rate supported by market data. The Cost Approach provides a value indicator based on the cost to reproduce the improvements less any observed depreciation. The value estimate of the land developed through the Sales Comparison Approach is then added to the depreciated value estimate of the Improvements. As noted above, the appraiser has utilized the Sales Comparison Approach only as the land only is considered in this appraisal report.

LAND SALES

The following vacant land sales were utilized to arrive at opinion of value for the subject site.

LAND SALE NO. 1

Location: Walnut Street, Hattiesburg
Date: 04/07/2016
Price: \$20,000
Size: 18,270 sq ft
Price/SF: \$1.09
Zoning: R-1A, Single Unit Residential
Confirmation: MLS # 103560/Re/Max Real Estate
Comments: Located just south of Southern Avenue on Walnut Street.
Generally level vacant site.

LAND SALE NO. 2

Location: North 24th Avenue., Hattiesburg
Date: 04/07/2017
Price: \$22,000
Size: 36,940 sq ft
Price/SF: \$.60
Zoning: R-1B, Single Unit Residential
Confirmation: MLS # 107417/Coldwell Banker
Comments: Corner of North 24th and Quinn Street.
Vacant site purchased for future development.

LAND SALE NO. 3

Location: South 21st Avenue , Hattiesburg

Date: 06/30/2015

Price: \$10,000

Size: 15,000 sq ft

Price/SF: \$.67

Zoning: R-1A, Single Unit Residential

Confirmation: MLS # 101179/Realty Executives

Comments: Located just south of Hardy Street. Vacant site purchased for future development.

The above lot sales indicate an unadjusted range in value from \$.60 to \$1.09 per square foot. All are in the subject market segment. The subject area is virtually fully developed and there are very few vacant sites that are available for sale. Research of the market found these sales to be the most recent and relevant to the subject's valuation. Sale 1 was given the most reliance due to time and location. After considering time, size, location, topography, the subject's location in a flood zone, and other pertinent factors, the value opinion of the subject site is \$.80 per square foot. Thus the value of the subject is:

BEFORE VALUE

5,000 sf @ \$.80 = \$4,000.00

AFTER VALUE

Uneconomic Remnant = \$ 100.00

Value Before Taking	\$4,000.00
Value After Taking	\$ 100.00
Damages	\$ -0-
Just Compensation Due Owner	\$3,900.00

I appreciate the opportunity to prepare this appraisal report for you. Should you have any questions regarding this matter, please do not hesitate to contact me.

Sincerely

Stan Lightsey

Stan Lightsey
RA-16

ADDENDA

APPRAISER'S CERTIFICATION

I certify that, to the best of my knowledge and belief:

- the statements contained in this report are true and correct.**
- the reported analyses, opinions, and conclusions are limited only by the reporting assumptions and limiting conditions and are my personal, impartial, and unbiased professional analyses, opinions, and conclusions.**
- I have no present or prospective interest in the property that is the subject of this report, and I have no personal interest with respect to the parties involved unless otherwise stated.**
- I have no bias with respect to the property that is the subject of this report or to the parties involved with this assignment.**
- my engagement in this assignment was not contingent upon developing or reporting predetermined results.**
- My compensation for completing this assignment is not contingent upon the developing or reporting of a predetermined value or a direction in value that favors the cause of the client, the amount of the value opinion, the attainment of a stipulated result, or the occurrence of a subsequent event directly related to the intended use of this appraisal.**
- no one provided significant appraisal assistance to the person signing this appraisal unless otherwise noted.**
- unless otherwise noted, the person signing this report has not performed an appraisal or rendered any other service regarding the subject property in the past three years.**
- The Appraisal Institute conducts a voluntary re-certification process for its designated members. I am currently certified under this program.**

Stan Lightsey

**Stan Lightsey
RA-16**

UNDERLYING ASSUMPTIONS AND LIMITING CONDITIONS

This appraisal is subject to the following limiting conditions:

The legal description furnished is assumed to be correct.

No responsibility is assumed for matters of a legal character nor does the appraiser render any opinion as to title which is assumed to be good. All existing liens and encumbrances have been disregarded unless otherwise noted and the property is appraised as though free and clear and under responsible ownership and competent management.

The appraiser believes to be accurate the information provided by others; but assumes no responsibility for its accuracy.

Possession of this report, or a copy thereof, does not carry with it the right of publication, and neither all nor any part of the contents of this report may be disseminated to the public through media of any type nor may be used for any other purpose other than that specified in the engagement by the client without the previous written consent of the appraiser and client particularly as to the value conclusions, the identity of the appraiser or the firm with which he is employed, or to the SRA designation of The Appraisal Institute.

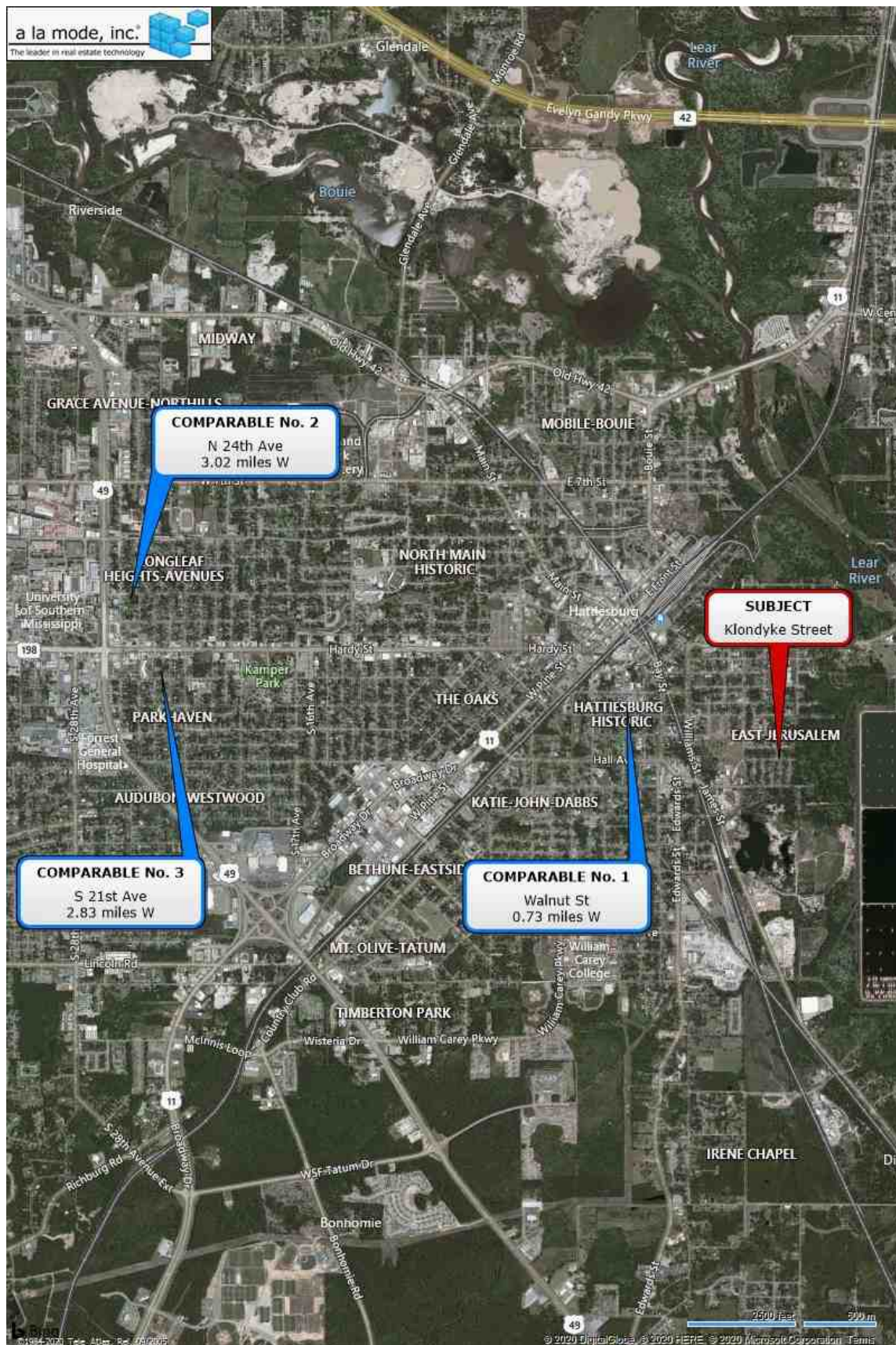
The appraiser will not be required to give testimony or appear in court by reason of this appraisal, with reference to the property in question, unless prior arrangements have been made.

The distribution of the total valuation in this report between land and improvements applies only under the existing program of utilization. The separate valuations for land and improvements must not be used in conjunction with any other appraisal and are invalid if so used.

Unless otherwise stated in this report, the existence of hazardous substances, including but not limited to asbestos, poly-chlorinated biphenyls, petroleum leakage, mold, or agricultural chemicals; which may or may not be present on the property, or other environmental conditions; were not called to the attention of nor did the appraiser become aware of such during the inspection of the property. The appraiser has no knowledge of the existence of such materials on or in the property unless otherwise stated. The appraiser is not an expert in the environmental field and is not qualified to test for such substances or conditions. If the presence of hazardous substances or environmental conditions may affect the value of the property, the value opinion is predicated on the assumption that there is no such condition in or on the property or in such proximity thereto that it would cause a loss in value. No responsibility is assumed for such conditions; nor for any expertise or knowledge required to discover them. The client is advised to retain an expert in the field of environmental impact on real estate if such conditions are suspected.

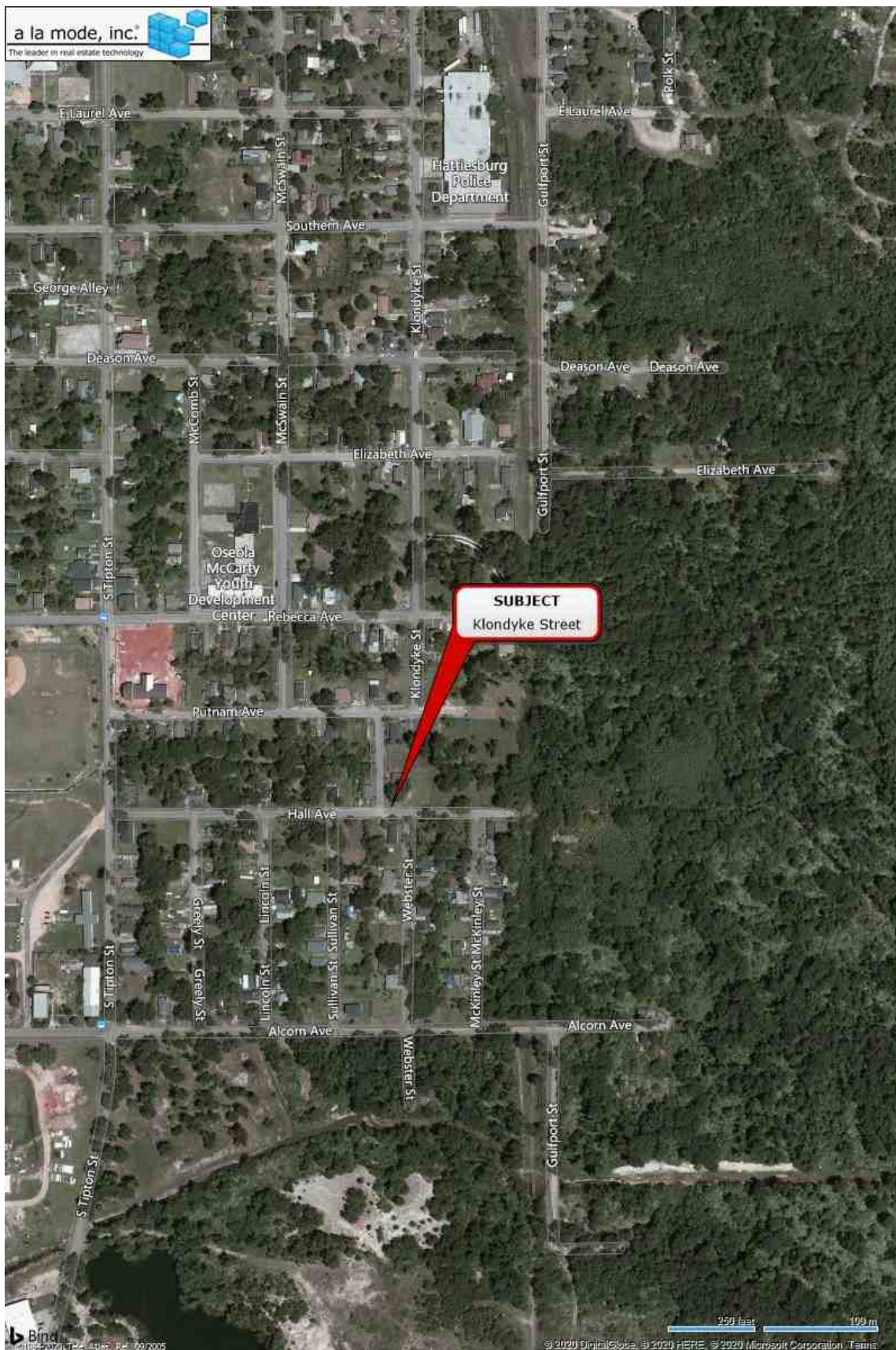
Location Map

Owner	Roxie Lewis						
Property Address	Klondyke Street						
City	Hattiesburg	County	Forrest	State	MS	Zip Code	39401
Client	City of Hattiesburg						



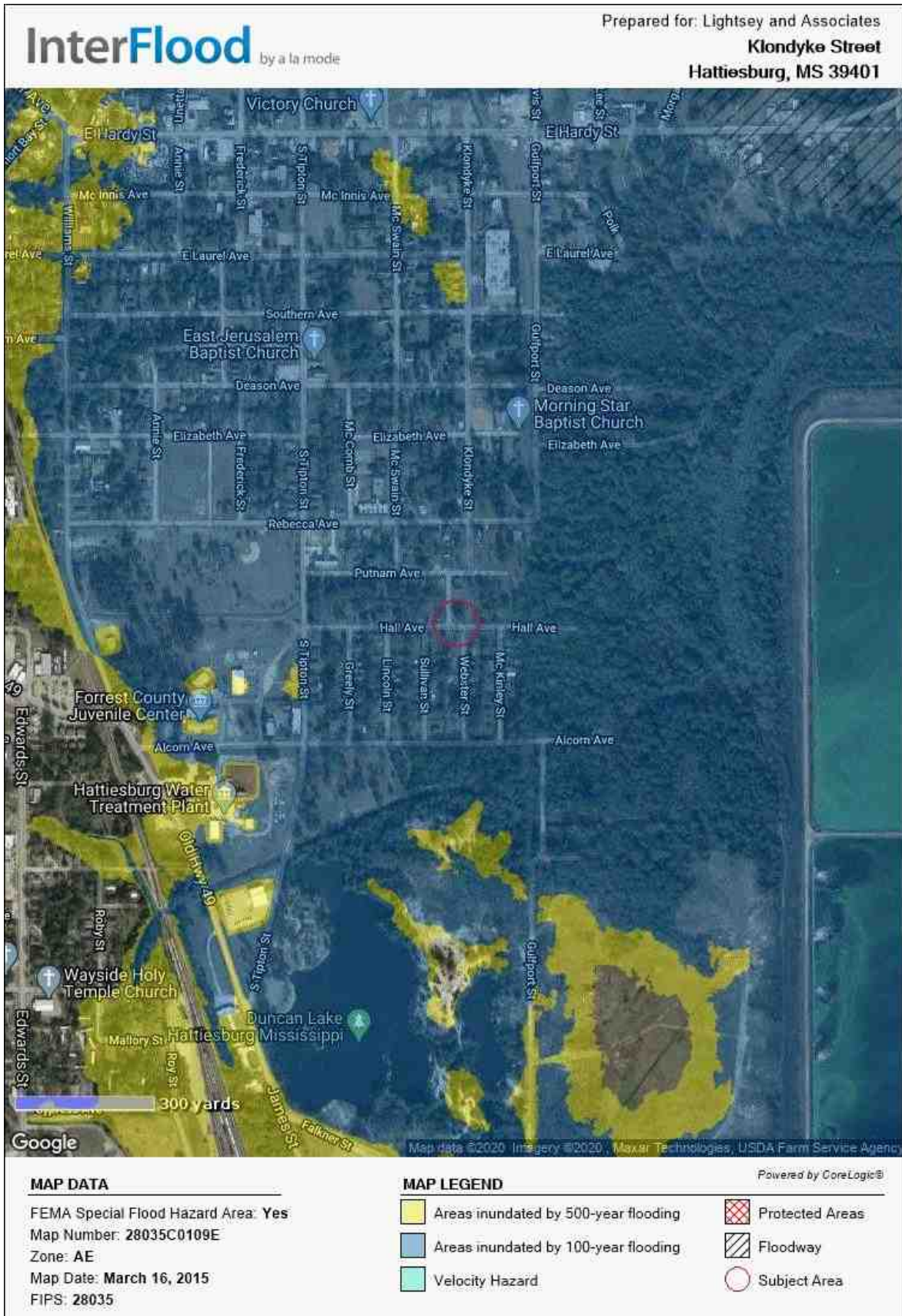
Location Map

Owner	Roxie Lewis					
Property Address	Klondyke Street					
City	Hattiesburg	County	Forrest	State	MS	Zip Code 39401
Client	City of Hattiesburg					



Flood Map

Owner	Roxie Lewis					
Property Address	Klondyke Street					
City	Hattiesburg	County	Forrest	State	MS	Zip Code 39401
Client	City of Hattiesburg					



Plat Map

5/6/2020

Forrest Parcel Viewer



Forrest Parcel Viewer



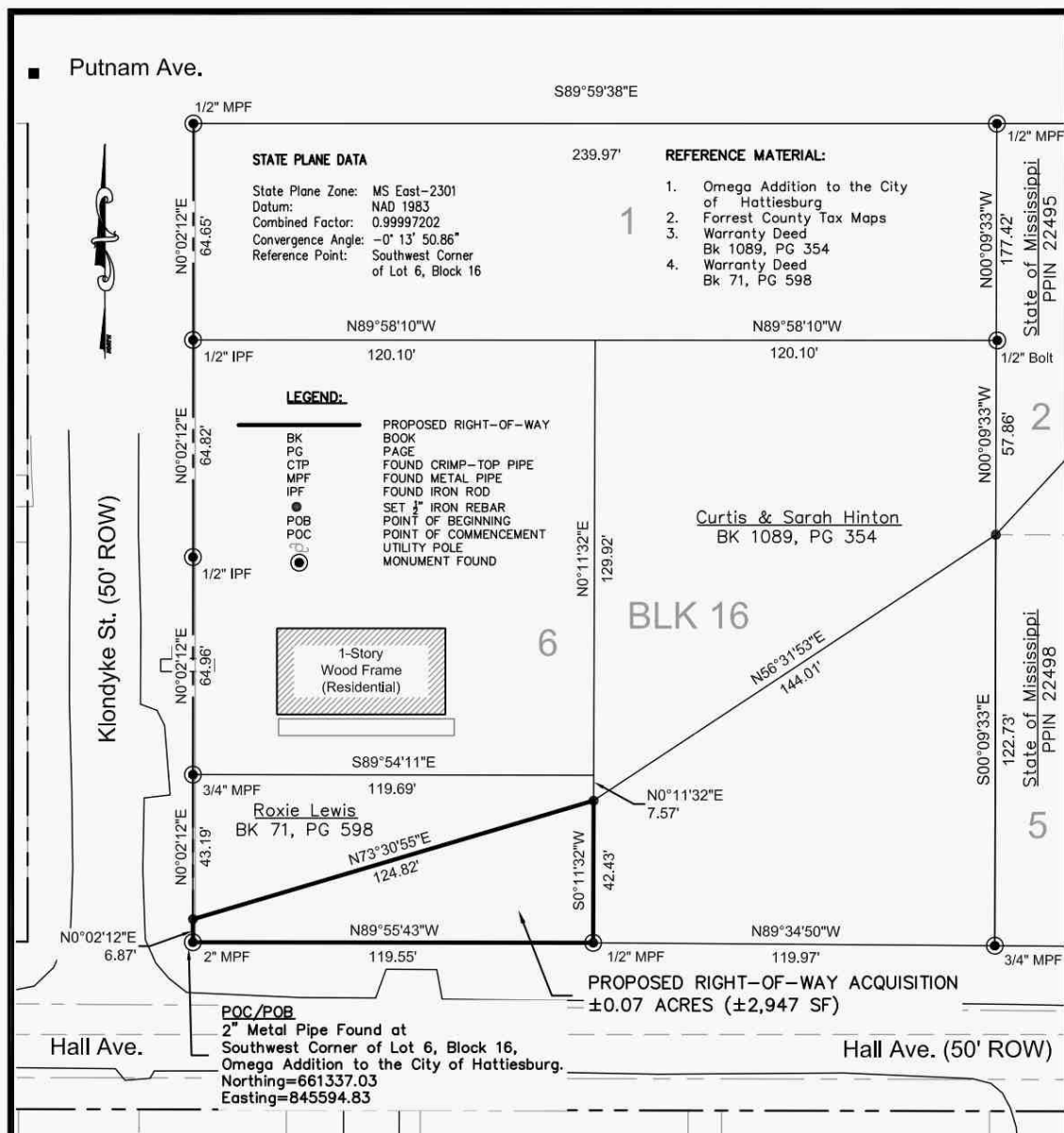
40ft

-89.27631.318 Degrees

<https://agdonline.maps.arcgis.com/apps/webappviewer/index.html?id=507a95128fbb423abaffacd073a5f2a5>

1/1

Survey



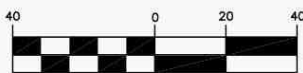
Roxie Lewis - +/-0.07 Ac.

LEGAL DESCRIPTION (Proposed Right-of-Way Acquisition)

A parcel of land being part of Lot 6 of Block 16 of Omega Addition to the City of Hattiesburg, Forrest County, Mississippi, as per map or plat thereof on file in the office of Chancery Clerk of Forrest County, Mississippi, being more particularly described as follows:

Commencing a found 2" metal pipe at the Southwest Corner of Lot 6 of Block 16 of Said Omega Addition to the City of Hattiesburg, Mississippi, said point also being the Point of Beginning; thence run and along the eastern right-of-way boundary of Klondyke Street North 00 degrees 02 minutes 12 seconds East for a distance of 6.87 feet; thence leaving said eastern right-of-way boundary run North 73 degrees 30 minutes 55 seconds East for a distance of 124.82 feet to a point on the western boundary of a parcel of land being described in Deed Book 1089, Page 354 on file in the office of Chancery Clerk of Forrest County, Mississippi; thence run and along said western boundary South 00 degrees 11 minutes 32 seconds West for a distance of 42.43 feet to a found 1/2" metal pipe at the Southwest Corner of said Parcel said point also being a point on the northern right-of-way boundary of Hall Avenue; thence run and along said northern right-of-way boundary North 89 degrees 55 minutes 43 seconds West for a distance of 119.55 feet back to the POINT OF BEGINNING. Said parcel contains 0.07 acres (2,947 square feet), more or less.

GRAPHIC SCALE



(IN FEET)

1 inch = 40 ft.

NOTES:

1. Class "B" Survey.
2. No Additional Record Search for Easements was Conducted.
3. Date of Field Survey: Nov. 5, 2019.
4. Orientation is based on GPS observation, Grid North, as referenced to MS State Plane Coordinate System, East Zone



PRELIMINARY - PINS NOT SET

Clearpoint
CONSULTING ENGINEERS, P.A.

6652 US Highway 98 | Hattiesburg, MS 39402
t 601.261.2609 | f 601.261.5573 | clearpointengineers.com



Right-of-Way Survey

Roxie Lewis
PPIN: 22501

CCE NO.: 76242036

SCALE: 1" = 40'

DATE: 11/30/2019

CHECKED: RTB

DRAWN: JCR

SHEET 1 OF 1

Drawing Location: S:\76242036\chp\PLATS\76242036-PLATS.dwg

Tax Data

5/6/2020

Delta Computer Systems

Forrest County Mississippi



Delta Computer Systems, Inc.

Property Link FORREST COUNTY, MS

Current Date 5/ 6/2020

Tax Year 2019

Records Last Updated 5/ 6/2020

PROPERTY DETAIL

OWNER LEWIS ROXIE ACRES : **NA**
806 KLONDYKE LAND VALUE : 1150
HATTIESBURG MS 39401 IMPROVEMENTS : **NA**
TOTAL VALUE: 1150
ASSESSED : 173

PARCEL 2-030M-11-278.00

ADDRESS KLONDYKE STREET

TAX INFORMATION

YEAR 2019	TAX DUE	PAID	BALANCE
COUNTY	11.26	11.26	0.00
CITY	9.19	9.19	0.00
SCHOOL	11.09	11.09	0.00
TOTAL	31.54	31.54	0.00

LAST PAYMENT DATE 12 / 20 / 2019

MISCELLANEOUS INFORMATION

EXEMPT CODE LEGAL S 50 FT OF W 120 FT LOT 6 BLK
HOMESTEAD CODE None 16
TAX DISTRICT 1110 PREV #:H0696-16-009
PPIN 022501 OMEGA
SECTION 10
TOWNSHIP 04N
RANGE 13W

Book Page

[PURCHASE COUNTY TAX SALE FILES](#)

TAX SALES HISTORY, FOR UNPAID TAXES

Year Sold To Redeemed Date/By:
NO TAX SALES FOUND

[View Appraisal Record](#)

[Back](#)

[Forrest County Home](#) | [Chancery Court](#) | [Instrument Indexing](#) | [Online Property Tax Payments](#) | [Online Personal Property Tax Payments](#) | [Online Mobile Home Tax Payments](#) | [Online Car Tag Payments](#)
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Photograph Addendum

Owner	Roxie Lewis					
Property Address	Klondyke Street					
City	Hattiesburg	County	Forrest	State	MS	Zip Code 39401
Client	City of Hattiesburg					



View of Subject



View of Hall Avenue

Photograph Addendum

Owner	Roxie Lewis					
Property Address	Klondyke Street					
City	Hattiesburg	County	Forrest	State	MS	Zip Code 39401
Client	City of Hattiesburg					



View of Subject



Memorandum

To: Mayor Toby Barker and Members of City Council

From: Lamar Rutland

cc:

Date: Tuesday, August 18, 2020

Re: Authorize acquisition of a portion of a parcel of property identified as Forrest County Parcel No. 2-030M-11-279.00 (PPIN 022502) for the Hall Avenue Overpass Project: Acknowledge receipt of Appraisal Report; Determine the appraisal valuation of \$7,925.00 to be Just Compensation for the aforementioned portion of the parcel; Authorize Mayor to make a Fair Market Value Offer for the property of \$7,925.00; Authorize Mayor to execute any and all documents required to complete the transaction; Authorize issuance of a manual check in payment thereof upon closing of transaction.

File Number: 2020-581

Minute Book #

Summary

Authorize acquisition of a portion of a parcel of property identified as Forrest County Parcel No. 2-030M-11-279.00 (PPIN 022502) for the Hall Avenue Overpass Project: Acknowledge receipt of Appraisal Report; Determine the appraisal valuation of \$7,925.00 to be Just Compensation for the aforementioned portion of the parcel; Authorize Mayor to make a Fair Market Value Offer for the property of \$7,925.00; Authorize Mayor to execute any and all documents required to complete the transaction; Authorize issuance of a manual check in payment thereof upon closing of transaction.

Recommendation Statement

I recommend approval of this item.

Please place this on the August 18, 2020 City Council meeting for consideration.

Richard & Thomas, PLLC
Attorneys at Law

Stephen K. Thomas

132 Westover Drive
Hattiesburg, MS 39402
(601)602-2457 phone
(601)602-2458 fax

October 1, 2019

City of Hattiesburg
Attn: Lamar Rutland
P.O. Box 1898
Hattiesburg, MS 39403-1898

Re: Hall Avenue East Project (Property 11)

East Half (E ½) Lot 6, Block 16, Omega Subdivision, Hattiesburg, Forrest County, Mississippi, as per the official map or plat thereof on file in the office of the Chancery Clerk of Forrest County, Mississippi.

Also referred to as:

E1/2 Lt. 6, Blk 16 Omega Rec#18686 PPIN#22502 Alt. Parcel #243-0696-016-010.00

Section 10, Township 4 North, Range 13 West

Parcel/PPIN 2030M112279.00

Forrest County, Mississippi

Pursuant to your request, I have examined the land records on file in the office of the Chancery Clerk of Forrest County, Mississippi, relating to the above described real property for a period back of thirty-one years prior to this date, and find sufficient evidence that the above described property was conveyed by Forfeited Tax Land Patent from the State of Mississippi to **CURTIS G. HINTON and SARAH HINTON**, dated September 29, 2010, and recorded in Land Deed Book 1089 at Page 354. Based upon my examination for the aforesaid period and with the presumption that prior conveyances in chain of title are legal and valid, it is my opinion that the said Curtis G. Hinton and Sarah Hinton, own a tax title in and to above described real property subject to the following liens, encumbrances and reservations;

RESERVATIONS

1. This opinion does not cover the oil, gas or other minerals lying on or under said property and no opinion is given thereon.
2. As no current survey is present, I do not certify as to the actual occupancy, nor to matters which should be revealed by an accurate survey of subject lands, nor do I certify rights of parties in possession, deficiency in the quantity of lands, boundary line disputes, roadways, unrecorded

servitudes or easements, any matters not of proper record which would be disclosed by a true and accurate survey and inspection of the property, and easements or other uses of subject lands not so visible from the surface.

3. Title is subject to any liability or loss due to environmental contamination by past uses of the property as a toxic hazardous waste site, or due to violation of any environmental protection law of any governmental body.
4. Title is subject to instruments of record being properly filed and indexed in the office of the Chancery Clerk where the property is located.
5. This is not a guarantee of title and is not an insurance policy on said property, and this opinion is for the use and benefit of only the party or parties to whom it is addressed and may not be availed of or relied upon by any other person(s) or entity.
6. Title is subject to confirmation of the vesting Forfeited Tax Land Patent from the State of Mississippi, dated September 24, 2010, and recorded in Land Deed Book 1089 at Page 354.
7. Title is subject to that the interest of the tax title holders of that certain Tax Deed issued by the Forrest County Chancery Clerk to **Suzette McInnis**, dated August 31, 1989, and recorded in Land Deed Book 626 at Page 388 for the 1986 Forrest County ad valorem real property taxes.
8. Title is subject to that the interest of the tax title holders of that certain Tax Deed issued by the Forrest County Chancery Clerk to Edward McInnis, dated January 4, 1988, and recorded in Land Deed Book 614 at Page 652 for the 1984 Forrest County ad valorem real property taxes; said title was subsequently conveyed to **Robert J. Giraud** by Quitclaim Deed recorded in Land Deed Book 614 at Page 653.
9. Title is subject to that the interest of **Sheridan, Inc.**, which is the last owner of the real property prior to the aforementioned matured tax sales and deed.

ENCUMBRANCES

None.

TAXES

Taxes assessed by Forrest County, Mississippi for 2019 are not due and owing but would constitute a lien against said property if not paid by January 31, 2020.

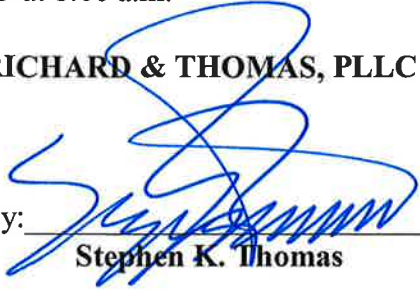
2018 Forrest County ad valorem taxes for Parcel No. 2-0030M-11-279.00, PPIN 22502, are **paid** in the amount of \$85.61.

JUDGMENTS

This opinion reflects only those judgments recorded on the Judgment Rolls in the office of the Circuit Clerk of Forrest County, Mississippi. As of this date, no such judgments appear.

This, the 1st day of October, A.D., 2019 at 8:00 a.m.

RICHARD & THOMAS, PLLC

By: 

Stephen K. Thomas

APPRAISAL OF PROPERTY AT

HALL AVENUE

PIN # 022502

HATTIESBURG, MS

LIGHTSEY & ASSOCIATES

P.O. Box 15489
Hattiesburg, MS 39404
(601) 584-6260

May 7, 2020

Mr. Lamar Rutland
City of Hattiesburg
P.O. Box 1898
Hattiesburg, MS 39403

RE: Appraisal of property at Hall Avenue,
Hattiesburg, MS

Dear Mr. Rutland:

In accordance with the your request, I have made an inspection and investigation of the property located on Hall Avenue, Hattiesburg, Mississippi, for the purpose of forming an opinion of the Market Value, in fee simple, as of April 30, 2020, the effective date of the appraisal being the date the subject property was last inspected. The value opinion is both before and after the taking of a 9,905 square foot parcel (.23 acre) in conjunction with the Hall Avenue railroad overpass by the City of Hattiesburg and noting damages to the remainder, if any.

Market Value is defined as the most probable price in cash, terms equivalent to cash, or in other precisely revealed terms, for which the property will sell in an open and competitive market under all conditions requisite to a fair sale, with the buyer and seller each acting prudently, knowledgeably, and for self interest, and assuming that neither is under undue duress.

NEIGHBORHOOD DESCRIPTION

The subject area lies to the southeast of downtown Hattiesburg and is located east of Williams Street and the Canadian National Railway right of way. The general area contains a wide age range of properties that range from commercial/retail uses to single-family dwellings and multi-family dwellings. The subject is in relative close proximity to public schools, shopping and employment centers, and medical facilities. The new Hattiesburg Law Enforcement Complex is under construction on Hall Avenue at the southern end of Bay Street. The majority of properties in the area are in excess of fifty years old.

SITE DESCRIPTION

The subject site is located on the northerly side of Hall Avenue just east of Klondyke Street. It has a frontage of 120 feet on Hall Avenue and extends to a uniform depth of 180 feet. The site is rectangular in shape and contains approximately 21,600 square feet. The site is at or above street grade, and appears to have adequate utility for use a single unit dwelling site. The property does appear to lie in a designated flood area, though this is subject to certification by a professional engineer or surveyor. All public utilities area connected or available to the site. A survey and plat map are included in the addenda of this report in order to assist the reader in visualizing the property. There were no adverse soil or subsoil conditions observed; however, no soil tests have been made as a part of this report. The property is zoned R-1C, Single Unit Residential, by the zoning authorities of the City of Hattiesburg. The City of Hattiesburg intends to take a 9,905 square foot irregularly shaped parcel along Hall Avenue. Following the taking, the subject site will be effectively reduced in size to 11,695 square feet. Access and utility will remain essentially the same as in the before condition.

IMPROVEMENTS DESCRIPTIONS

There are no known improvements on the subject property.

PROPERTY HISTORY

The subject property appears to have been under the present ownership for in excess of five years. The subject property is not known to be listed for sale nor under contract.

TAXES

The total taxes for the subject property for 2019 are \$85.31. The total true value (tax value) of the property is \$3,120.00 with an assessed value of \$468.00.

HIGHEST AND BEST USE

In order to estimate the Highest and Best Use of the subject, the surrounding property uses as well as the four tests of Highest and Best Use were considered. These are 1)physically possible, 2)legally permissible, 3)financially feasible, and 4)maximally productive. After considering these factors, the Highest and Best Use of the site as vacant is estimated to be for a single unit house site, in both the before and after conditions.

INTENDED USE AND SCOPE OF THE APPRAISAL

This appraisal is intended to assist the client, Mr. Lamar Rutland of the City of Hattiesburg, in forming an opinion of value of the subject property both before and after the taking of a 9,905 square foot parcel by the City for road widening. In preparing this appraisal, the appraiser inspected the subject site; gathered information on comparable land sales and listings, confirmed and analyzed the data and applied the Sales Comparison Approach to value. As only the land was considered in this appraisal, this was the only approach deemed applicable to the subject's valuation.

APPRAISAL PROCESS

In good appraisal practice, three approaches to value are normally used to arrive at a value conclusion for a given property. These approaches are the Sales Comparison Approach, the Cost Approach, and the Income Approach. The Sales Comparison Approach is based on deriving a value indication by comparing properties that have been sold recently to the subject property and adjusting the sales price of the comparables for any basic differences. The Income Approach considers the present value of the future benefits of income and ownership. To estimate the income potential of the subject, comparable rents are obtained and reconciled to the subject, then a deduction is made for anticipated expenses. The resulting net income is then capitalized into value using a rate supported by market data. The Cost Approach provides a value indicator based on the cost to reproduce the improvements less any observed depreciation. The value estimate of the land developed through the Sales Comparison Approach is then added to the depreciated value estimate of the Improvements. As noted above, the appraiser has utilized the Sales Comparison Approach only as the land only is considered in this appraisal report.

LAND SALES

The following vacant land sales were utilized to arrive at opinion of value for the subject site.

LAND SALE NO. 1

Location: Walnut Street, Hattiesburg
Date: 04/07/2016
Price: \$20,000
Size: 18,270 sq ft
Price/SF: \$1.09
Zoning: R-1A, Single Unit Residential
Confirmation: MLS # 103560/Re/Max Real Estate
Comments: Located just south of Southern Avenue on Walnut Street.
Generally level vacant site.

LAND SALE NO. 2

Location: North 24th Avenue., Hattiesburg
Date: 04/07/2017
Price: \$22,000
Size: 36,940 sq ft
Price/SF: \$.60
Zoning: R-1B, Single Unit Residential
Confirmation: MLS # 107417/Coldwell Banker
Comments: Corner of North 24th and Quinn Street.
Vacant site purchased for future development.

LAND SALE NO. 3

Location: South 21st Avenue , Hattiesburg

Date: 06/30/2015

Price: \$10,000

Size: 15,000 sq ft

Price/SF: \$.67

Zoning: R-1A, Single Unit Residential

Confirmation: MLS # 101179/Realty Executives

Comments: Located just south of Hardy Street. Vacant site purchased for future development.

The above lot sales indicate an unadjusted range in value from \$.60 to \$1.09 per square foot. All are in the subject market segment. The subject area is virtually fully developed and there are very few vacant sites that are available for sale. Research of the market found these sales to be the most recent and relevant to the subject's valuation. Sale 1 was given the most reliance due to time and location. After considering time, size, location, topography, the subject's location in a flood zone, and other pertinent factors, the value opinion of the subject site is \$.80 per square foot. Thus the value of the subject is:

BEFORE VALUE

21,600 sf @ \$.80 = \$17,280.00

AFTER VALUE

11,695 sf @ \$.80 = \$ 9,356.00

Value Before Taking	\$17,280.00
Value After Taking	\$ 9,356.00
Damages	\$ -0-
Just Compensation Due Owner	\$ 7,924.00
Rounded	\$ 7,925.00

I appreciate the opportunity to prepare this appraisal report for you. Should you have any questions regarding this matter, please do not hesitate to contact me.

Sincerely

Stan Lightsey

Stan Lightsey
RA-16

ADDENDA

APPRAISER'S CERTIFICATION

I certify that, to the best of my knowledge and belief:

- the statements contained in this report are true and correct.**
- the reported analyses, opinions, and conclusions are limited only by the reporting assumptions and limiting conditions and are my personal, impartial, and unbiased professional analyses, opinions, and conclusions.**
- I have no present or prospective interest in the property that is the subject of this report, and I have no personal interest with respect to the parties involved unless otherwise stated.**
- I have no bias with respect to the property that is the subject of this report or to the parties involved with this assignment.**
- my engagement in this assignment was not contingent upon developing or reporting predetermined results.**
- My compensation for completing this assignment is not contingent upon the developing or reporting of a predetermined value or a direction in value that favors the cause of the client, the amount of the value opinion, the attainment of a stipulated result, or the occurrence of a subsequent event directly related to the intended use of this appraisal.**
- no one provided significant appraisal assistance to the person signing this appraisal unless otherwise noted.**
- unless otherwise noted, the person signing this report has not performed an appraisal or rendered any other service regarding the subject property in the past three years.**
- The Appraisal Institute conducts a voluntary re-certification process for its designated members. I am currently certified under this program.**

Stan Lightsey

**Stan Lightsey
RA-16**

UNDERLYING ASSUMPTIONS AND LIMITING CONDITIONS

This appraisal is subject to the following limiting conditions:

The legal description furnished is assumed to be correct.

No responsibility is assumed for matters of a legal character nor does the appraiser render any opinion as to title which is assumed to be good. All existing liens and encumbrances have been disregarded unless otherwise noted and the property is appraised as though free and clear and under responsible ownership and competent management.

The appraiser believes to be accurate the information provided by others; but assumes no responsibility for its accuracy.

Possession of this report, or a copy thereof, does not carry with it the right of publication, and neither all nor any part of the contents of this report may be disseminated to the public through media of any type nor may be used for any other purpose other than that specified in the engagement by the client without the previous written consent of the appraiser and client particularly as to the value conclusions, the identity of the appraiser or the firm with which he is employed, or to the SRA designation of The Appraisal Institute.

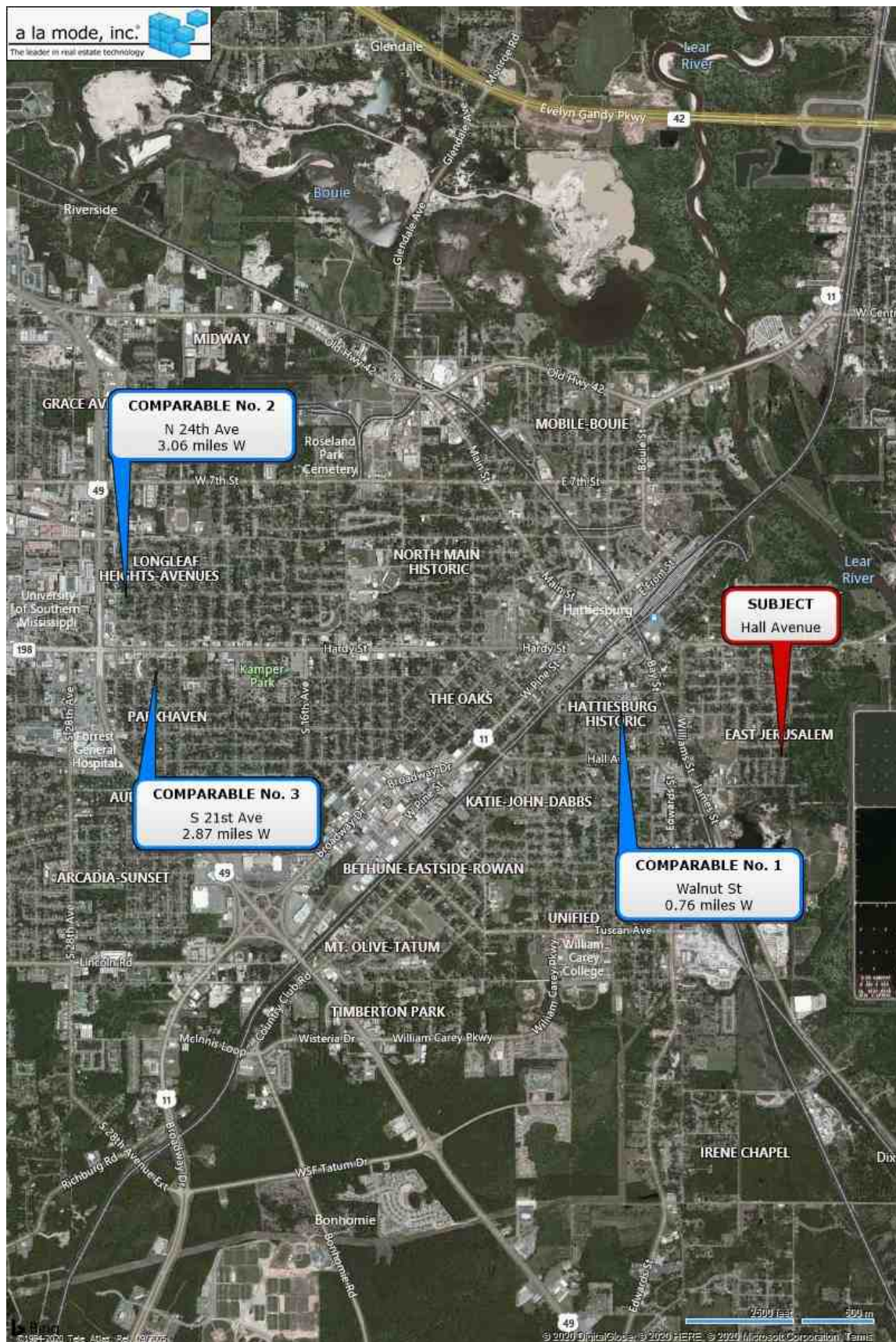
The appraiser will not be required to give testimony or appear in court by reason of this appraisal, with reference to the property in question, unless prior arrangements have been made.

The distribution of the total valuation in this report between land and improvements applies only under the existing program of utilization. The separate valuations for land and improvements must not be used in conjunction with any other appraisal and are invalid if so used.

Unless otherwise stated in this report, the existence of hazardous substances, including but not limited to asbestos, poly-chlorinated biphenyls, petroleum leakage, mold, or agricultural chemicals; which may or may not be present on the property, or other environmental conditions; were not called to the attention of nor did the appraiser become aware of such during the inspection of the property. The appraiser has no knowledge of the existence of such materials on or in the property unless otherwise stated. The appraiser is not an expert in the environmental field and is not qualified to test for such substances or conditions. If the presence of hazardous substances or environmental conditions may affect the value of the property, the value opinion is predicated on the assumption that there is no such condition in or on the property or in such proximity thereto that it would cause a loss in value. No responsibility is assumed for such conditions; nor for any expertise or knowledge required to discover them. The client is advised to retain an expert in the field of environmental impact on real estate if such conditions are suspected.

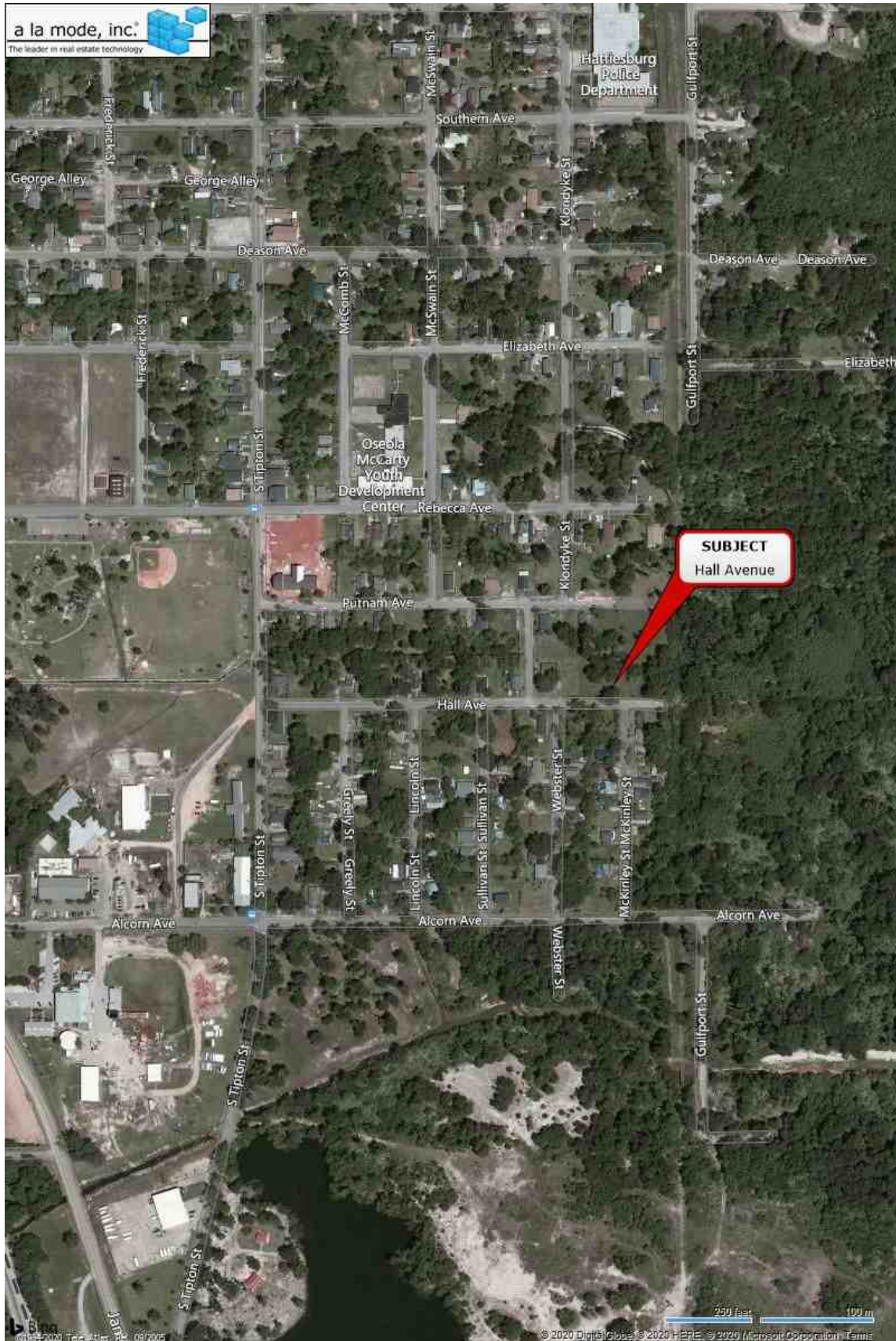
Location Map

Owner	Curtis and Sarah Hinton						
Property Address	Hall Avenue						
City	Hattiesburg	County	Forrest	State	MS	Zip Code	39401
Client	City of Hattiesburg						



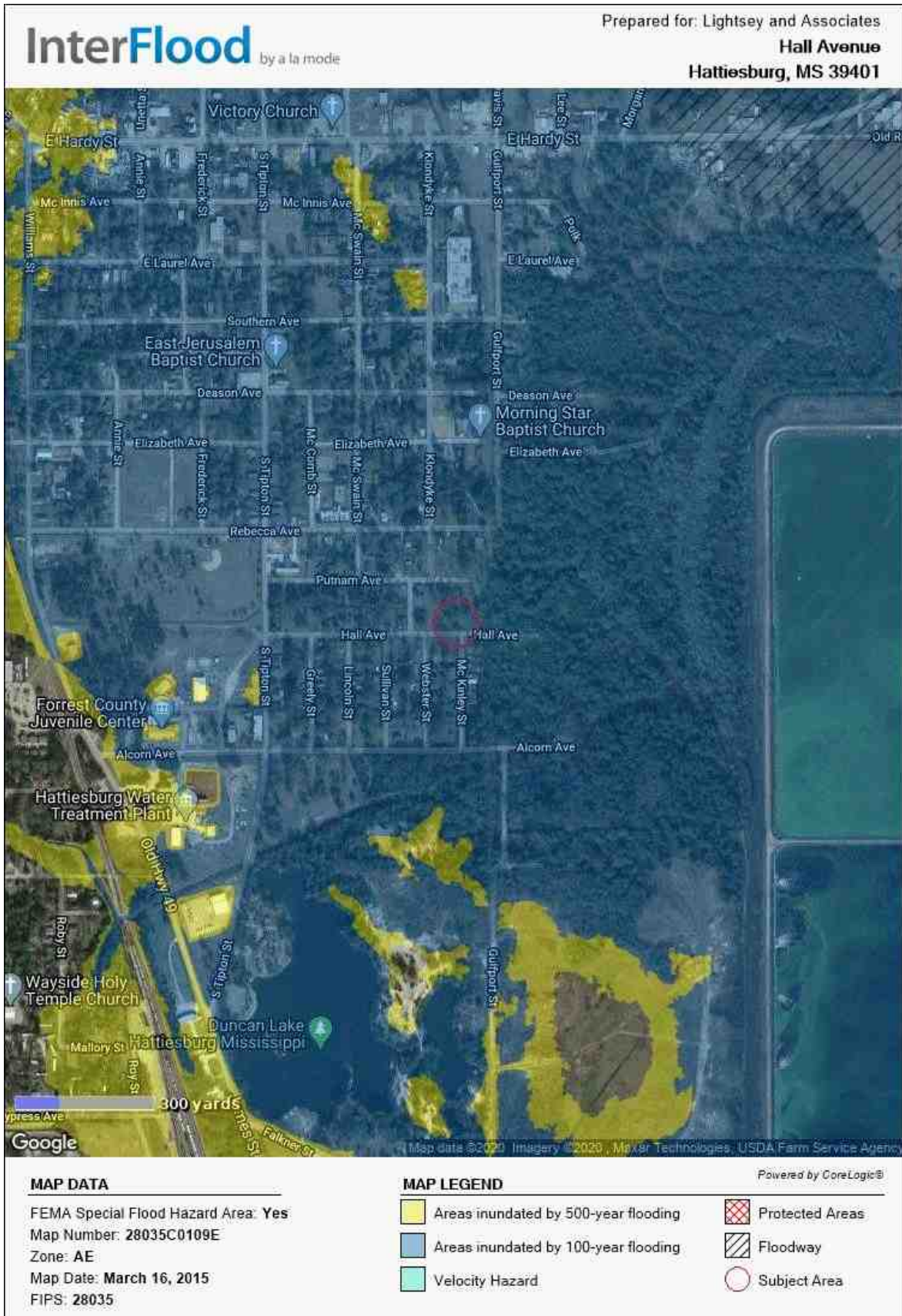
Location Map

Owner	Curtis and Sarah Hinton					
Property Address	Hall Avenue					
City	Hattiesburg	County	Forrest	State	MS	Zip Code 39401
Client	City of Hattiesburg					



Flood Map

Owner	Curtis and Sarah Hinton					
Property Address	Hall Avenue					
City	Hattiesburg	County	Forrest	State	MS	Zip Code 39401
Client	City of Hattiesburg					



Plat Map

5/7/2020

Forrest Parcel Viewer



Forrest Parcel Viewer

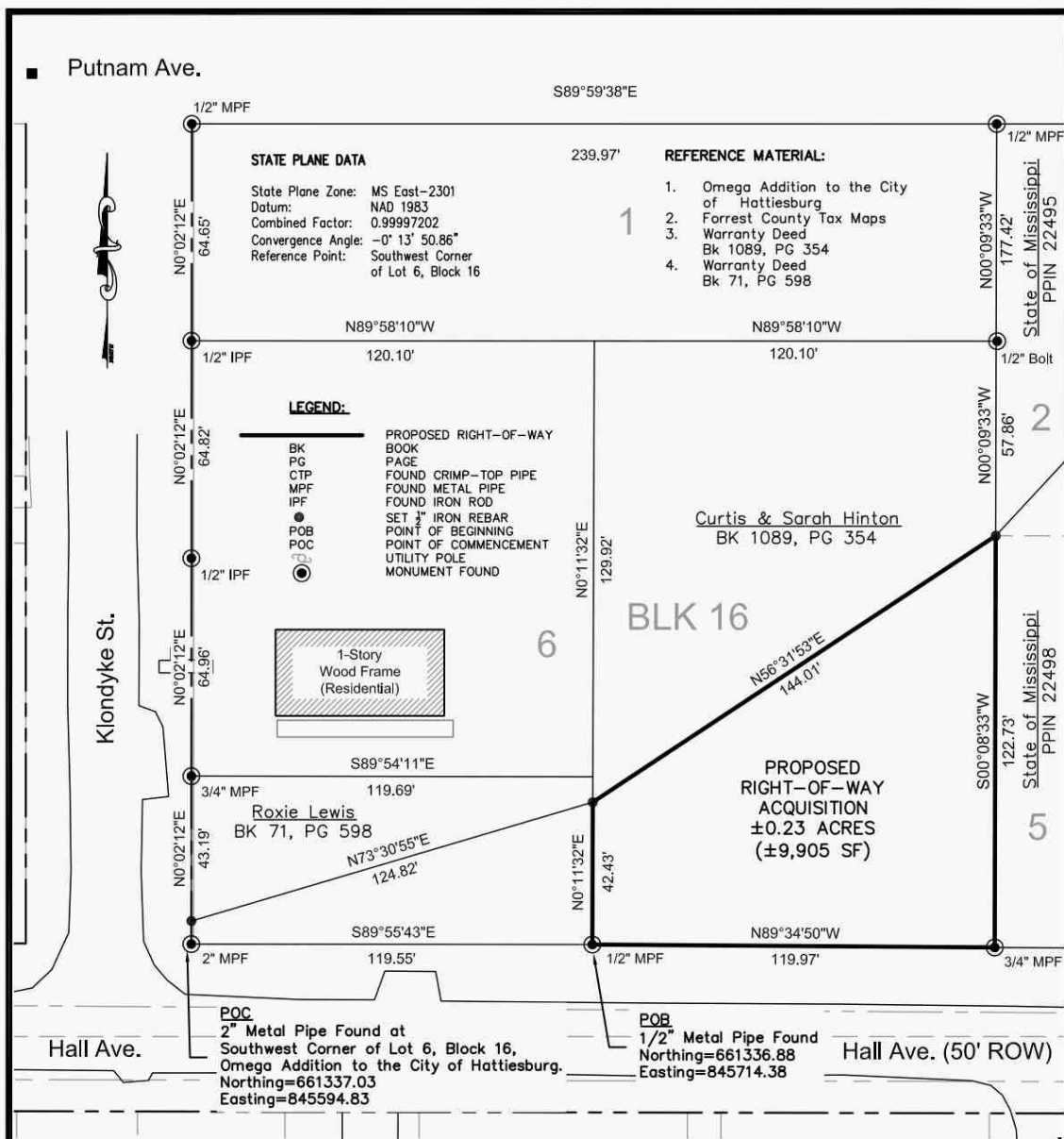


100ft
-89.275 31.319 Degrees

<https://agdonline.maps.arcgis.com/apps/webappviewer/index.html?id=507a95128fbb423abaffacd073a5f2a5>

1/1

Survey



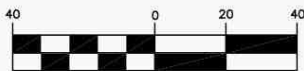
Curtis and Sarah Hinton - ±0.23 Ac.

LEGAL DESCRIPTION (Proposed Right-of-Way Acquisition)

A parcel of land being part of Lot 6 of Block 16 of Omega Addition to the City of Hattiesburg, Forrest County, Mississippi, as per map or plat thereof on file in the office of Chancery Clerk of Forrest County, Mississippi, being more particularly described as follows:

Commencing at a found 2" metal pipe at the Southwest Corner of Lot 6 of Block 16 of Said Omega Addition to the City of Hattiesburg, Mississippi; thence run and along the northern right-of-way boundary of Hall Avenue South 89 degrees 55 minutes 43 seconds East for a distance of 119.55 feet to a found 1/2" metal pipe, said point also being the Point of Beginning; thence leaving said northern right-of-way boundary run North 00 degrees 11 minutes 32 seconds East for a distance of 42.43 feet; thence run North 56 degrees 31 minutes 53 seconds East for a distance of 144.01 feet; thence run South 00 degrees 08 minutes 28 seconds West for a distance of 122.73 feet to a found 3/4" metal pipe said point also being a point on the northern right-of-way boundary of Hall Avenue; thence run and along said northern right-of-way boundary North 89 degrees 34 minutes 50 seconds West for a distance of 119.97 feet back to the POINT OF BEGINNING. Said parcel contains 0.23 acres (9,905 square feet), more or less.

GRAPHIC SCALE

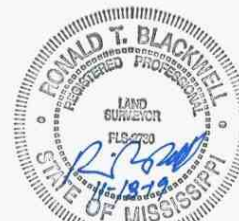


(IN FEET)

1 inch = 40 ft.

NOTES:

1. Class "B" Survey.
2. No Additional Record Search for Easements was Conducted.
3. Date of Field Survey: Nov. 5, 2019.
4. Orientation is based on GPS observation, Grid North, as referenced to MS State Plane Coordinate System, East Zone



PRELIMINARY - PINS NOT SET

Clearpoint
CONSULTING ENGINEERS, P.A.

6652 US Highway 98 | Hattiesburg, MS 39402
t 601.261.2609 | f 601.261.5573 | clearpointengineers.com



PREPARED FOR:

Right-of-Way Survey

Curtis and Sarah Hinton
PPIN: 22502

CCE NO.: 76242036

SCALE: 1" = 40'

DATE: 11/30/2019

CHECKED: RTB

DRAWN: JCR

SHEET 1 OF 1

Drawing Location: S:\76242036\dwg\PLATS\76242036-PLATS.dwg

5/7/2020

Delta Computer Systems

Forrest County Mississippi



Delta Computer Systems, Inc.

Property Link

FORREST COUNTY, MS

Current Date 5/ 7/2020 Tax Year 2019
 Records Last Updated 5/ 7/2020

PROPERTY DETAIL

OWNER HINTON CURTIS G & SARAH
 112 CLARK AVE
 HATTIESBURG MS 39401

ACRES : **NA**
LAND VALUE : 3120
IMPROVEMENTS : **NA**
TOTAL VALUE: 3120
ASSESSED : 468

PARCEL 2-030M-11-279.00**ADDRESS** HALL AVENUE**TAX INFORMATION**

YEAR 2019	TAX DUE	PAID	BALANCE
COUNTY	30.45	30.45	0.00
CITY	24.86	24.86	0.00
SCHOOL	30.00	30.00	0.00
TOTAL	85.31	85.31	0.00

LAST PAYMENT DATE 1 / 15 / 2020**MISCELLANEOUS INFORMATION**

EXEMPT CODE	LEGAL
HOMESTEAD CODE None	E 1/2 LOT 6 BLK 16 BK 625 PG 388 11/27/1989
TAX DISTRICT 1110	PREV #:H0696-16-010
PPIN 022502	TAX FORFEITED
SECTION 10	OMEGA
TOWNSHIP 04N	
RANGE 13W	

Book 1089**Page** 354[PURCHASE COUNTY TAX SALE FILES](#)**TAX SALES HISTORY, FOR UNPAID TAXES**

Year	Sold To	Redeemed Date/By
NO TAX SALES FOUND		

[View Appraisal Record](#)[Back](#)

[Forrest County Home](#) | [Chancery Court](#) | [Instrument Indexing](#) | [Online Property Tax Payments](#) | [Online Personal Property Tax Payments](#) | [Online Mobile Home Tax Payments](#) | [Online Car Tag Payments](#)
[Privacy Policy](#) | [Terms of Use](#) | [Contact Us](#) | [Help](#)

Photograph Addendum

Owner	Curtis and Sarah Hinton					
Property Address	Hall Avenue					
City	Hattiesburg	County	Forrest	State	MS	Zip Code 39401
Client	City of Hattiesburg					



View of Subject



View of Hall Avenue

Photograph Addendum

Owner	Curtis and Sarah Hinton					
Property Address	Hall Avenue					
City	Hattiesburg	County	Forrest	State	MS	Zip Code 39401
Client	City of Hattiesburg					



View of Subject



Memorandum

To: Mayor Toby Barker and Members of City Council

From: Lamar Rutland

cc:

Date: Tuesday, August 18, 2020

Re: Authorize acquisition of a portion of a parcel of property identified as Forrest County Parcel No. 2-030M-11-247.00 (PPIN 022489) for the Hall Avenue Overpass Project: Acknowledge receipt of Appraisal Report; Determine the appraisal valuation of \$330.00 to be Just Compensation for the aforementioned portion of the parcel; Authorize Mayor to make a Fair Market Value Offer for the property of \$330.00; Authorize Mayor to execute any and all documents required to complete the transaction; Authorize issuance of a manual check in payment thereof upon closing of transaction.

File Number: 2020-582

Minute Book #

Summary

Authorize acquisition of a portion of a parcel of property identified as Forrest County Parcel No. 2-030M-11-247.00 (PPIN 022489) for the Hall Avenue Overpass Project: Acknowledge receipt of Appraisal Report; Determine the appraisal valuation of \$330.00 to be Just Compensation for the aforementioned portion of the parcel; Authorize Mayor to make a Fair Market Value Offer for the property of \$330.00; Authorize Mayor to execute any and all documents required to complete the transaction; Authorize issuance of a manual check in payment thereof upon closing of transaction.

Recommendation Statement

I recommend approval of this item.

Please place this on the August 18, 2020 City Council meeting for consideration.

Richard & Thomas, PLLC
Attorneys at Law

Stephen K. Thomas

132 Westover Drive
Hattiesburg, MS 39402
(601)602-2457 phone
(601)602-2458 fax

October 1, 2019

City of Hattiesburg
Attn: Lamar Rutland
P.O. Box 1898
Hattiesburg, MS 39403-1898

Re: Hall Avenue East Project (Property 13)

South 55 feet of Lots 6 & 7, Block 15, Omega Subdivision, Hattiesburg, Forrest County, Mississippi, as per the official map or plat thereof on file in the office of the Chancery Clerk of Forrest County, Mississippi.

Also referred to as:

S 55 FT LOTS 6 & 7 BLK 15 OMEGA SUB
Section 10, Township 4 North, Range 13 West
Parcel/PPIN 1824300693015005
Forrest County, Mississippi

Pursuant to your request, I have examined the land records on file in the office of the Chancery Clerk of Forrest County, Mississippi, relating to the above described real property for a period back of thirty-one years prior to this date, and find sufficient evidence that the above described property was conveyed by Forfeited Tax Land Patent from the State of Mississippi to **SAMUEL M. MACK**, dated March 10, 2005, and recorded in Land Deed Book 959 at Page 77. Based upon my examination for the aforesaid period and with the presumption that prior conveyances in chain of title are legal and valid, it is my opinion that the said Samuel M. Mack, own a tax title in and to above described real property subject to the following liens, encumbrances and reservations;

RESERVATIONS

1. This opinion does not cover the oil, gas or other minerals lying on or under said property and no opinion is given thereon.
2. As no current survey is present, I do not certify as to the actual occupancy, nor to matters which should be revealed by an accurate survey of subject lands, nor do I certify rights of parties in possession, deficiency in the quantity of lands, boundary line disputes, roadways, unrecorded

servitudes or easements, any matters not of proper record which would be disclosed by a true and accurate survey and inspection of the property, and easements or other uses of subject lands not so visible from the surface.

3. Title is subject to any liability or loss due to environmental contamination by past uses of the property as a toxic hazardous waste site, or due to violation of any environmental protection law of any governmental body.
4. Title is subject to instruments of record being properly filed and indexed in the office of the Chancery Clerk where the property is located.
5. This is not a guarantee of title and is not an insurance policy on said property, and this opinion is for the use and benefit of only the party or parties to whom it is addressed and may not be availed of or relied upon by any other person(s) or entity.
6. Title is subject to confirmation of the vesting Forfeited Tax Land Patent from the State of Mississippi, dated March 10, 2005, and recorded in Land Deed Book 959 at Page 77.
7. Title is subject to that the interest of the tax title holders of that certain Tax Deed issued by the City Clerk, City of Hattiesburg to **George Merritt Tax Co., Inc.**, dated December 3, 1991, and recorded in Land Deed Book 663 at Page 605 for the 1988 City of Hattiesburg ad valorem real property taxes.
8. Title is subject to that the interest of the tax title holders of that certain Tax Deed issued by the Forrest County Chancery Clerk to **George Merritt Tax Co., Inc.**, dated November 25, 1991, and recorded in Land Deed Book 663 at Page 224 for the 1988 Forrest County ad valorem real property taxes.
9. Title is subject to that the interest of the tax title holders of that certain Tax Deed issued by the City Clerk, City of Hattiesburg to **George Merritt**, dated October 25, 1985, and recorded in Land Deed Book 561 at Page 243 for the 1982 City of Hattiesburg ad valorem real property taxes.
10. Title is subject to that the interest of the tax title holders of that certain Tax Deed issued by the Forrest County Chancery Clerk to **George Merritt**, dated September 30, 1985, and recorded in Land Deed Book 560 at Page 188 for the 1982 Forrest County ad valorem real property taxes.
11. Title is subject to that the interest of the tax title holders of that certain Tax Deed issued by the Forrest County Chancery Clerk to Crisler Boys, Inc., dated March 12, 1976, and recorded in Land Deed Book 418 at Page 457 for the 1971 Forrest County ad valorem real property taxes; and subsequently conveyed by Quitclaim Deed to **College Investments Co., a Mississippi corporation**, dated April 20, 1976, and recorded in Land Deed Book 420 at Page 251..
12. Title is subject to that the interest of **Sheridan, Inc.**, which is the last owner of the real property prior to the aforementioned matured tax sales and deed.

13. Title is subject to those certain Condemnations of Unsafe and Dilapidated Property issued by the City of Hattiesburg dated January 2, 1996, and recorded in Land Deed Book 745 at Page 215; and dated December 3, 1996, and recorded in Land Deed Book 764 at Page 225; and dated November 4, 1997, and recorded in Land Deed Book 781 at Page 181.

ENCUMBRANCES

None.

TAXES

Taxes assessed by Forrest County, Mississippi for 2019 are not due and owing but would constitute a lien against said property if not paid by January 31, 2020.

2018 Forrest County ad valorem taxes for Parcel No. 2-0030M-11-247.00, PPIN 22489, are **due and owing** in the amount of \$40.61 plus penalty and interest accruing.

2017 Forrest County ad valorem taxes for Parcel No. 2-0030M-11-247.00, PPIN 22489, are **due and owing** in the amount of \$40.33 plus penalty and interest accruing.

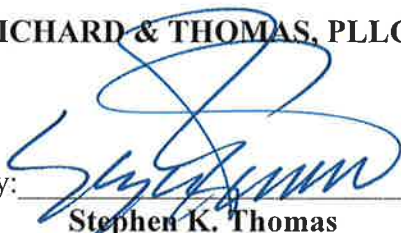
JUDGMENTS

This opinion reflects only those judgments recorded on the Judgment Rolls in the office of the Circuit Clerk of Forrest County, Mississippi. As of this date, the following judgment appears:

Judgment No. 3205-635 against Samuel Mack in favor of Wesley Health System in the amount of \$718.71 plus cost rendered on July 15, 2019 and enrolled October 10, 2019.

This, the 1st day of October, A.D., 2019 at 8:00 a.m.

RICHARD & THOMAS, PLLC

By: 

Stephen K. Thomas

APPRAISAL OF PROPERTY AT

1404 PUTNAM AVENUE

PIN # 022489

HATTIESBURG, MS

LIGHTSEY & ASSOCIATES

P.O. Box 15489
Hattiesburg, MS 39404
(601) 584-6260

May 7, 2020

Mr. Lamar Rutland
City of Hattiesburg
P.O. Box 1898
Hattiesburg, MS 39403

RE: Appraisal of property at 1404 Putnam Avenue,
Hattiesburg, MS

Dear Mr. Rutland:

In accordance with the your request, I have made an inspection and investigation of the property located on Hall Avenue, Hattiesburg, Mississippi, for the purpose of forming an opinion of the Market Value, in fee simple, as of April 30, 2020, the effective date of the appraisal being the date the subject property was last inspected. The value opinion is both before and after the taking of a 412 square foot parcel (.009 acre) in conjunction with the Hall Avenue railroad overpass by the City of Hattiesburg and noting damages to the remainder, if any.

Market Value is defined as the most probable price in cash, terms equivalent to cash, or in other precisely revealed terms, for which the property will sell in an open and competitive market under all conditions requisite to a fair sale, with the buyer and seller each acting prudently, knowledgeably, and for self interest, and assuming that neither is under undue duress.

NEIGHBORHOOD DESCRIPTION

The subject area lies to the southeast of downtown Hattiesburg and is located east of Williams Street and the Canadian National Railway right of way. The general area contains a wide age range of properties that range from commercial/retail uses to single-family dwellings and multi-family dwellings. The subject is in relative close proximity to public schools, shopping and employment centers, and medical facilities. The new Hattiesburg Law Enforcement Complex is under construction on Hall Avenue at the southern end of Bay Street. The majority of properties in the area are in excess of fifty years old.

SITE DESCRIPTION

The subject site is located on the northerly side of Putnam Avenue just east of Klondyke Street. It has a frontage of 108 feet on Putnam Avenue and extends to a uniform depth of 55 feet. The site is rectangular in shape and contains approximately 5,940 square feet. The site is at or above street grade, and appears to have adequate utility for use a single unit dwelling site. The property does appear to lie in a designated flood area, though this is subject to certification by a professional engineer or surveyor. All public utilities area connected or available to the site. A survey and plat map are included in the addenda of this report in order to assist the reader in visualizing the property. There were no adverse soil or subsoil conditions observed; however, no soil tests have been made as a part of this report. The property is zoned R-1C, Single Unit Residential, by the zoning authorities of the City of Hattiesburg. The City of Hattiesburg intends to take a 412 square foot triangular shaped parcel along Putnam Avenue. Following the taking, the subject site will be effectively reduced in size to 5,528 square feet. Access and utility will remain essentially the same as in the before condition.

IMPROVEMENTS DESCRIPTIONS

There are no known improvements on the subject property.

PROPERTY HISTORY

The subject property appears to have been under the present ownership for in excess of five years. The subject property is not known to be listed for sale nor under contract.

TAXES

The total taxes for the subject property for 2019 are \$40.46. The total true value (tax value) of the property is \$1,480.00 with an assessed value of \$222.00.

HIGHEST AND BEST USE

In order to estimate the Highest and Best Use of the subject, the surrounding property uses as well as the four tests of Highest and Best Use were considered. These are 1)physically possible, 2)legally permissible, 3)financially feasible, and 4)maximally productive. After considering these factors, the Highest and Best Use of the site as vacant is estimated to be for a single unit house site, in both the before and after conditions.

INTENDED USE AND SCOPE OF THE APPRAISAL

This appraisal is intended to assist the client, Mr. Lamar Rutland of the City of Hattiesburg, in forming an opinion of value of the subject property both before and after the taking of a 412 square foot parcel by the City for road widening. In preparing this appraisal, the appraiser inspected the subject site; gathered information on comparable land sales and listings, confirmed and analyzed the data and applied the Sales Comparison Approach to value. As only the land was considered in this appraisal, this was the only approach deemed applicable to the subject's valuation.

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Confirmation: MLS # 103560/Re/Max Real Estate
Comments: Located just south of Southern Avenue on Walnut Street.
Generally level vacant site.

LAND SALE NO. 2

Location: North 24th Avenue., Hattiesburg
Date: 04/07/2017
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Zoning: R-1B, Single Unit Residential
Confirmation: MLS # 107417/Coldwell Banker
Comments: Corner of North 24th and Quinn Street.
Vacant site purchased for future development.

LAND SALE NO. 3

Location: South 21st Avenue , Hattiesburg

Date: 06/30/2015

Price: \$10,000

Size: 15,000 sq ft

Price/SF: \$.67

Zoning: R-1A, Single Unit Residential

Confirmation: MLS # 101179/Realty Executives

Comments: Located just south of Hardy Street. Vacant site purchased for future development.

The above lot sales indicate an unadjusted range in value from \$.60 to \$1.09 per square foot. All are in the subject market segment. The subject area is virtually fully developed and there are very few vacant sites that are available for sale. Research of the market found these sales to be the most recent and relevant to the subject's valuation. Sale 1 was given the most reliance due to time and location. After considering time, size, location, topography, the subject's location in a flood zone, and other pertinent factors, the value opinion of the subject site is \$.80 per square foot. Thus the value of the subject is:

BEFORE VALUE

5,940 sf @ \$.80 = \$4,752.00

AFTER VALUE

5,528 sf @ \$.80 = \$4,422.00

Value Before Taking	\$4,752.00
Value After Taking	\$4,422.00
Damages	\$ -0-
Just Compensation Due Owner	\$ 330.00

I appreciate the opportunity to prepare this appraisal report for you. Should you have any questions regarding this matter, please do not hesitate to contact me.

Sincerely

Stan Lightsey

Stan Lightsey
RA-16

ADDENDA

APPRAISER'S CERTIFICATION

I certify that, to the best of my knowledge and belief:

- the statements contained in this report are true and correct.**
- the reported analyses, opinions, and conclusions are limited only by the reporting assumptions and limiting conditions and are my personal, impartial, and unbiased professional analyses, opinions, and conclusions.**
- I have no present or prospective interest in the property that is the subject of this report, and I have no personal interest with respect to the parties involved unless otherwise stated.**
- I have no bias with respect to the property that is the subject of this report or to the parties involved with this assignment.**
- my engagement in this assignment was not contingent upon developing or reporting predetermined results.**
- My compensation for completing this assignment is not contingent upon the developing or reporting of a predetermined value or a direction in value that favors the cause of the client, the amount of the value opinion, the attainment of a stipulated result, or the occurrence of a subsequent event directly related to the intended use of this appraisal.**
- no one provided significant appraisal assistance to the person signing this appraisal unless otherwise noted.**
- unless otherwise noted, the person signing this report has not performed an appraisal or rendered any other service regarding the subject property in the past three years.**
- The Appraisal Institute conducts a voluntary re-certification process for its designated members. I am currently certified under this program.**

Stan Lightsey

**Stan Lightsey
RA-16**

UNDERLYING ASSUMPTIONS AND LIMITING CONDITIONS

This appraisal is subject to the following limiting conditions:

The legal description furnished is assumed to be correct.

No responsibility is assumed for matters of a legal character nor does the appraiser render any opinion as to title which is assumed to be good. All existing liens and encumbrances have been disregarded unless otherwise noted and the property is appraised as though free and clear and under responsible ownership and competent management.

The appraiser believes to be accurate the information provided by others; but assumes no responsibility for its accuracy.

Possession of this report, or a copy thereof, does not carry with it the right of publication, and neither all nor any part of the contents of this report may be disseminated to the public through media of any type nor may be used for any other purpose other than that specified in the engagement by the client without the previous written consent of the appraiser and client particularly as to the value conclusions, the identity of the appraiser or the firm with which he is employed, or to the SRA designation of The Appraisal Institute.

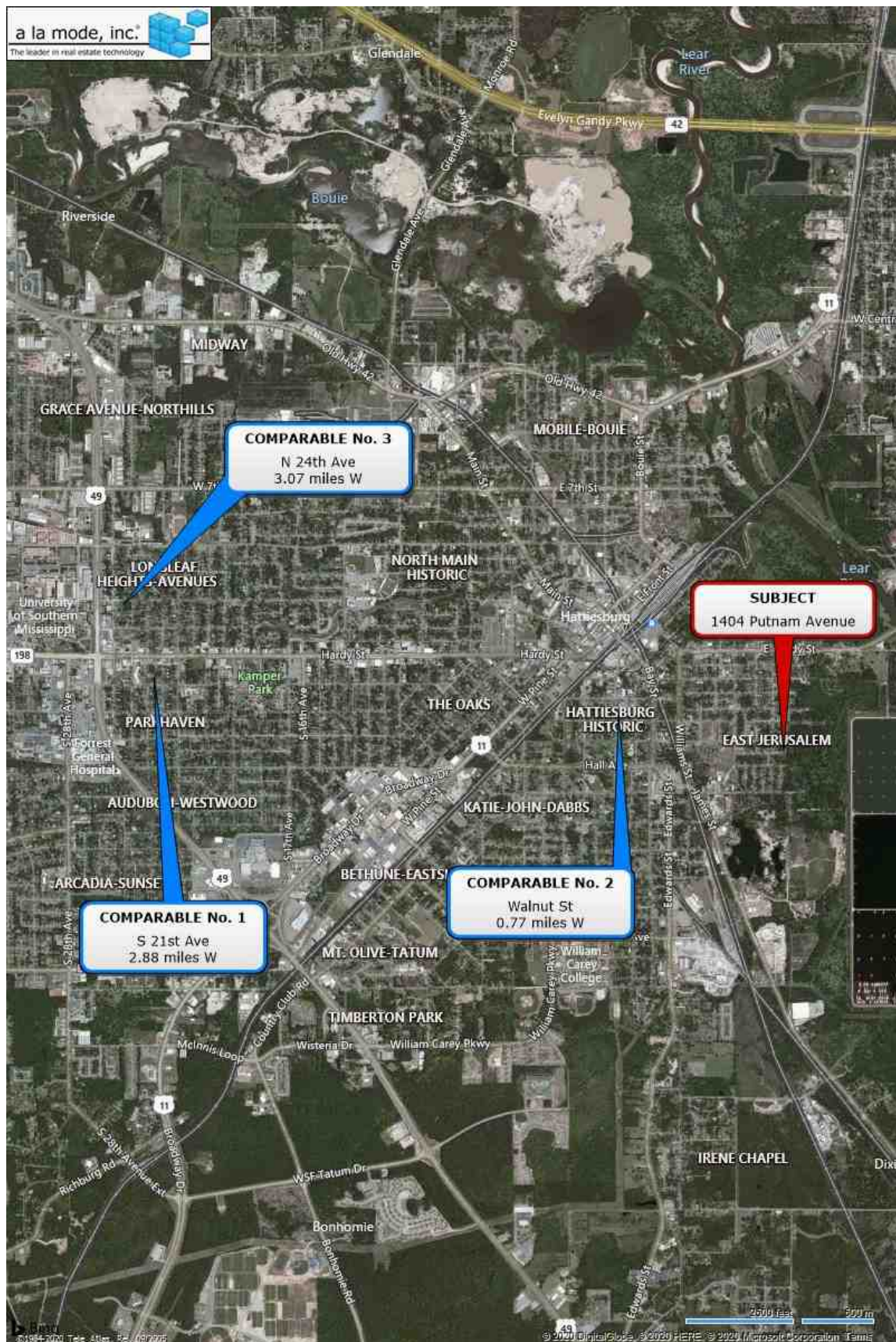
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Unless otherwise stated in this report, the existence of hazardous substances, including but not limited to asbestos, poly-chlorinated biphenyls, petroleum leakage, mold, or agricultural chemicals; which may or may not be present on the property, or other environmental conditions; were not called to the attention of nor did the appraiser become aware of such during the inspection of the property. The appraiser has no knowledge of the existence of such materials on or in the property unless otherwise stated. The appraiser is not an expert in the environmental field and is not qualified to test for such substances or conditions. If the presence of hazardous substances or environmental conditions may affect the value of the property, the value opinion is predicated on the assumption that there is no such condition in or on the property or in such proximity thereto that it would cause a loss in value. No responsibility is assumed for such conditions; nor for any expertise or knowledge required to discover them. The client is advised to retain an expert in the field of environmental impact on real estate if such conditions are suspected.

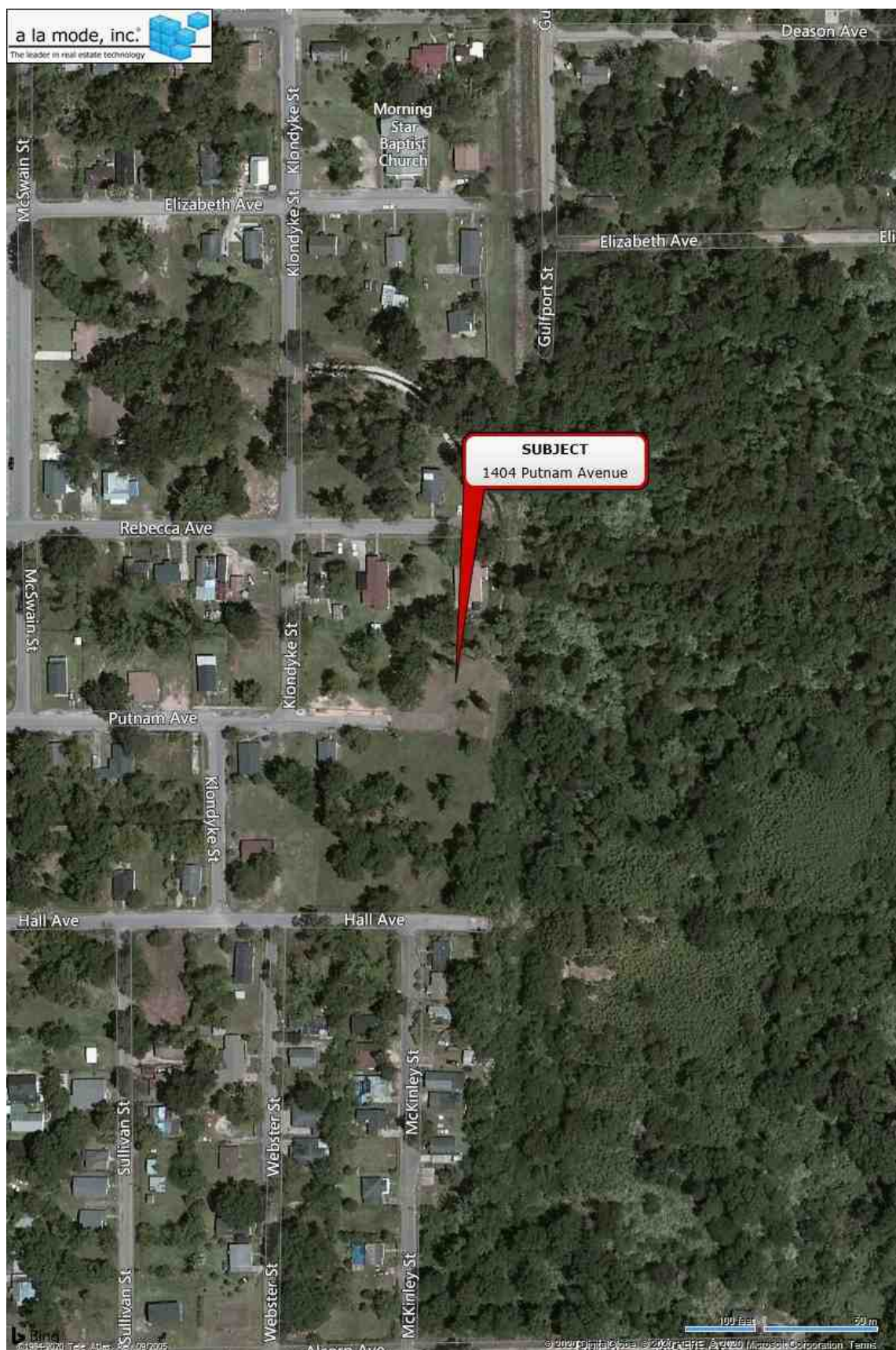
Location Map

Owner	Samuel Mack					
Property Address	1404 Putnam Avenue					
City	Hattiesburg	County	Forrest	State	MS	Zip Code 39401
Client	City of Hattiesburg					



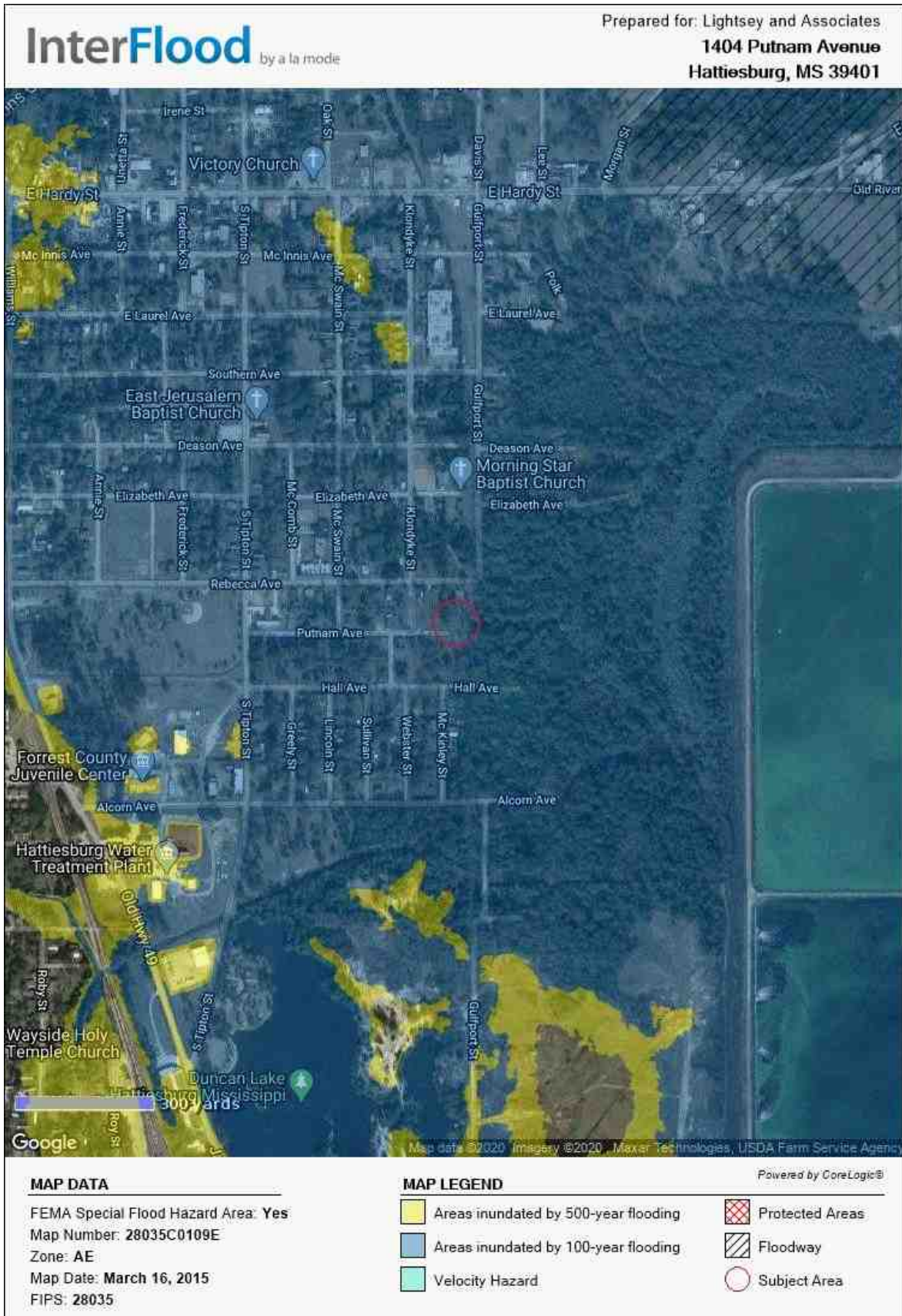
Location Map

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Property Address	1404 Putnam Avenue					
City	Hattiesburg	County	Forrest	State	MS	Zip Code 39401
Client	City of Hattiesburg					



Flood Map

Owner	Samuel Mack					
Property Address	1404 Putnam Avenue					
City	Hattiesburg	County	Forrest	State	MS	Zip Code 39401
Client	City of Hattiesburg					



Plat Map

5/7/2020

Forrest Parcel Viewer



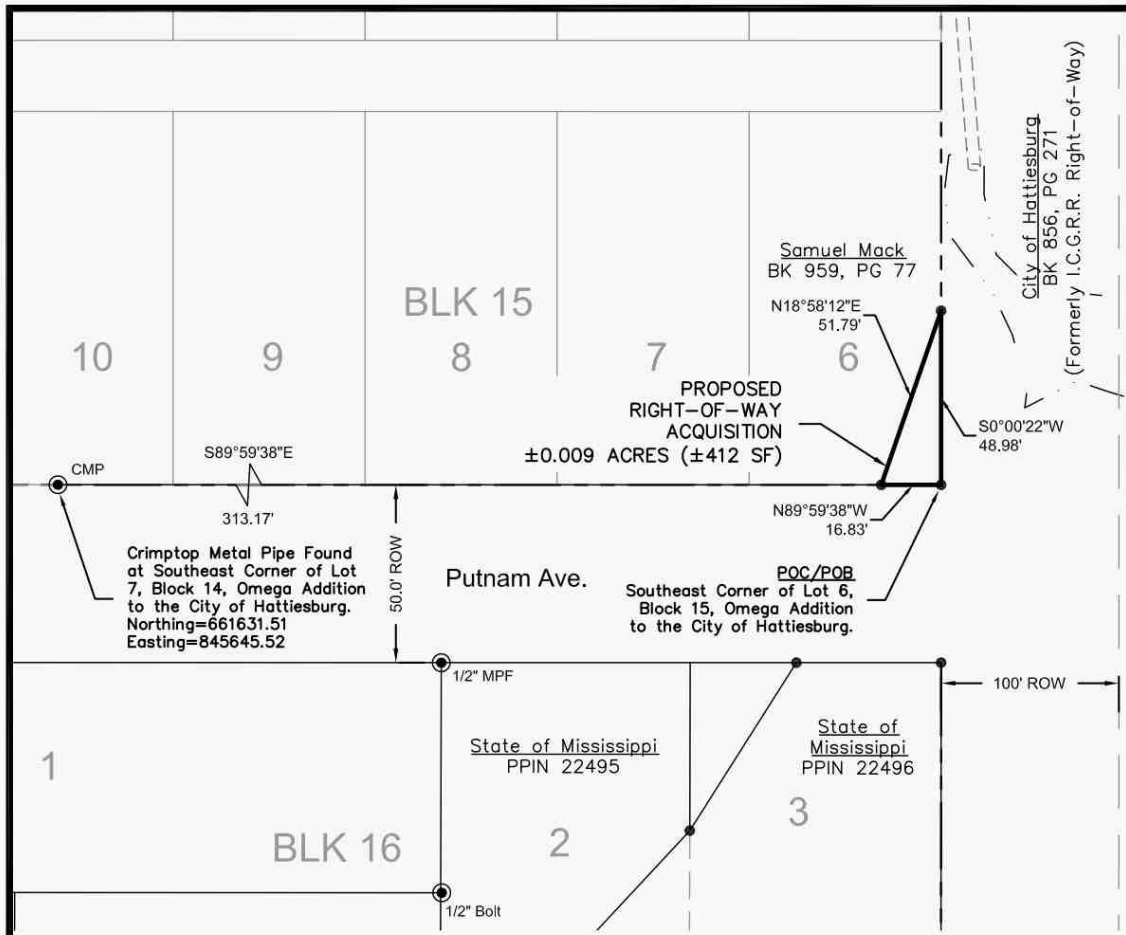
Forrest Parcel Viewer



<https://agdonline.maps.arcgis.com/apps/webappviewer/index.html?id=507a95128fbb423abaffacd073a5f2a5>

1/1

Survey



Samuel Mack - +/-0.009 Ac.

LEGAL DESCRIPTION (Proposed Right-of-Way Acquisition)

A parcel of land being part of Lot 6 of Block 15 of Omega Addition to the City of Hattiesburg, Forrest County, Mississippi, as per map or plat thereof on file in the office of Chancery Clerk of Forrest County, Mississippi, being more particularly described as follows:

Commencing at the Southeast Corner of Lot 6 of Block 15 of Said Omega Addition to the City of Hattiesburg, Mississippi, said point also being the Point of Beginning; thence run and along the northern right-of-way boundary of Putnam Avenue North 89 degrees 59 minutes 38 seconds West for a distance of 16.83 feet; thence leaving said northern right-of-way boundary run North 18 degrees 58 minutes 12 seconds East for a distance of 51.79 feet to a point on the western boundary of a parcel of land being described in Deed Book 856, Page 271 on file in the office of Chancery Clerk of Forrest County, Mississippi; thence run and along said western boundary South 00 degrees 00 minutes 22 seconds West for a distance of 48.98 feet back to the POINT OF BEGINNING. Said parcel contains 0.009 acres (412 square feet), more or less.

STATE PLANE DATA

State Plane Zone: MS East-2301
Datum: NAD 1983
Combined Factor: 0.99997201
Convergence Angle: -0° 13' 50.58"
Reference Point: Southeast Corner of Lot 7, Block 14

REFERENCE MATERIAL:

1. Omega Addition to the City of Hattiesburg
2. Forrest County Tax Maps
3. Warranty Deed Bk 959, PG 77
4. Warranty Deed Bk 856, PG 271

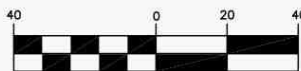
NOTES:

1. Class "B" Survey.
2. No Additional Record Search for Easements was Conducted.
3. Date of Field Survey: Nov. 5, 2019.
4. Orientation is based on GPS observation, Grid North, as referenced to MS State Plane Coordinate System, East Zone
5. Location of existing subdivision lines based upon monuments from on the interior of Omega Addition Subdivision.

LEGEND:

BK BOOK
 PG PAGE
 CTP FOUND CRIMP-TOP PIPE
 MPF FOUND METAL PIPE
 IPF FOUND IRON ROD
 SET 1/2" IRON REBAR
 POB POINT OF BEGINNING
 POC POINT OF COMMENCEMENT
 UTILITY POLE
 MONUMENT FOUND

GRAPHIC SCALE



(IN FEET)

1 inch = 40 ft.

PRELIMINARY - PINS NOT SET

Clearpoint
CONSULTING ENGINEERS, P.A.

6652 US Highway 98 | Hattiesburg, MS 39402
t 601.261.2609 | f 601.261.5573 | clearpointengineers.com

PREPARED FOR:



Right-of-Way Survey

Samuel Mack
PPIN: 22489

CCE NO: 76242036

SCALE: 1" = 40'

DATE: 11/30/2019

CHECKED: RTB

DRAWN: JCR

SHEET 1 OF 1

Drawing Location: S:\76242036\dwg\PLATS\76242036-PLATS.dwg

Tax Data

5/7/2020

Delta Computer Systems

Forrest County Mississippi



Delta Computer Systems, Inc.

Property Link FORREST COUNTY, MS

Current Date 5/ 7/2020

Tax Year 2019
Records Last Updated 5/ 7/2020

OWNER MACK SAMUEL M
1407 REBECCA AVE

HATTIESBURG MS 39401

ACRES : **NA**
LAND VALUE : 1480
IMPROVEMENTS : **NA**
TOTAL VALUE: 1480
ASSESSED : 222

PARCEL 2-030M-11-247.00
ADDRESS 1404 PUTNAM AVENUE

PROPERTY DETAIL

YEAR 2019	TAX DUE	PAID	BALANCE
COUNTY	14.44	0.00	15.02
CITY	11.79	0.00	12.26
SCHOOL	14.23	0.00	14.80
TOTAL	40.46	0.00	42.08 4% Penalty

LAST PAYMENT DATE **NA**

TAXES DELINQUENT PRIOR YEAR MISCELLANEOUS INFORMATION

EXEMPT CODE		LEGAL S 55 FT LOTS 6 & 7 BLK 15
HOMESTEAD CODE None		PREV #:H0696-15-005
TAX DISTRICT 1110		TAX DEED 663/224 12/91
PPIN 022489		OMEGA
SECTION 10		
TOWNSHIP 04N		
RANGE 13W		

B 0959 P 077 03/10/2005

Book 0959 **Page** 077

[PURCHASE COUNTY TAX SALE FILES](#)

TAX SALES HISTORY, FOR UNPAID TAXES

Year	Sold To	Redeemed Date/By
2018	KALE FARMS	NOT REDEEMED
2017	KALE FARMS	NOT REDEEMED
2016	JMD TAX SERVICE	8/23/2019 MACK SANDRA
2015	DUGAN ROBERT	2/ 8/2017 MACK SANDRA
2014	SHO LLC	9/30/2015 MACK SANDRA FOR SAMUEL M MACK
2013	STATE OF MISSISSIPPI	2/24/2015 MACK SANDRA

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[Privacy Policy](#) | [Terms of Use](#) | [Contact Us](#) | [Help](#)

Photograph Addendum

Owner	Samuel Mack				
Property Address	1404 Putnam Avenue				
City	Hattiesburg	County	Forrest	State	MS Zip Code 39401
Client	City of Hattiesburg				



View of Subject



View of Putnam Avenue

Photograph Addendum

Owner	Samuel Mack					
Property Address	1404 Putnam Avenue					
City	Hattiesburg	County	Forrest	State	MS	Zip Code 39401
Client	City of Hattiesburg					



View of Subject



Memorandum

To: Mayor Toby Barker and Members of City Council

From: Lamar Rutland

cc:

Date: Tuesday, August 18, 2020

Re: Authorize acquisition of a portion of a parcel of property identified as Forrest County Parcel No. 2-037D-14-105.00 (PPIN 022050) for the Hall Avenue Overpass Project: Acknowledge receipt of Appraisal Report; Determine the appraisal valuation of \$650.00 to be Just Compensation for the aforementioned portion of the parcel; Authorize Mayor to make a Fair Market Value Offer for the property of \$650.00; Authorize Mayor to execute any and all documents required to complete the transaction; Authorize issuance of a manual check in payment thereof upon closing of transaction.
File Number: 2020-583
Minute Book #

Summary

Authorize acquisition of a portion of a parcel of property identified as Forrest County Parcel No. 2-037D-14-105.00 (PPIN 022050) for the Hall Avenue Overpass Project: Acknowledge receipt of Appraisal Report; Determine the appraisal valuation of \$650.00 to be Just Compensation for the aforementioned portion of the parcel; Authorize Mayor to make a Fair Market Value Offer for the property of \$650.00; Authorize Mayor to execute any and all documents required to complete the transaction; Authorize issuance of a manual check in payment thereof upon closing of transaction.

Recommendation Statement

I recommend approval of this item.

Please place this on the August 18, 2020 City Council meeting for consideration.

Richard & Thomas, PLLC
Attorneys at Law

Stephen K. Thomas

132 Westover Drive
Hattiesburg, MS 39402
(601)602-2457 phone
(601)602-2458 fax

October 1, 2019

City of Hattiesburg
Attn: Lamar Rutland
P.O. Box 1898
Hattiesburg, MS 39403-1898

Re: Hall Avenue East Project (Property 8)

Lot 12, Block 4, McInnis, Mitchell, & Longre Subdivision, Hattiesburg, Forrest County, Mississippi, as per the official map or plat thereof on file in the office of the Chancery Clerk of Forrest County, Mississippi.

Also referred to as:

LOT 12 BLK 4 MCINNIS, MITCHELL & LONGRE SUB

Parcel: 2-037D-14-105.00/Previsou H0656-04-011/PPIN: 22050

Section 14, Township 4 North, Range 13 West

Tax Deed recorded DB 1078 / PG 346

Pursuant to your request, I have examined the land records on file in the office of the Chancery Clerk of Forrest County, Mississippi, relating to the above described real property for a period back of thirty-one years prior to this date, and find sufficient evidence that the above described property was conveyed by Quitclaim Deed to **CURTIS R. GATES**, dated April 30, 2010, and recorded in Land Deed Book 1081 at Page 685. Based upon my examination for the aforesaid period and with the presumption that prior conveyances in chain of title are legal and valid, it is my opinion that the said Curits R. Gates, own a tax title in and to above described real property subject to the following liens, encumbrances and reservations;

RESERVATIONS

1. This opinion does not cover the oil, gas or other minerals lying on or under said property and no opinion is given thereon.
2. As no current survey is present, I do not certify as to the actual occupancy, nor to matters which should be revealed by an accurate survey of subject lands, nor do I certify rights of parties in possession, deficiency in the quantity of lands, boundary line disputes, roadways, unrecorded servitudes or easements, any matters not of proper record which would be disclosed by a true and

accurate survey and inspection of the property, and easements or other uses of subject lands not so visible from the surface.

3. Title is subject to any liability or loss due to environmental contamination by past uses of the property as a toxic hazardous waste site, or due to violation of any environmental protection law of any governmental body.
4. Title is subject to instruments of record being properly filed and indexed in the office of the Chancery Clerk where the property is located.
5. This is not a guarantee of title and is not an insurance policy on said property, and this opinion is for the use and benefit of only the party or parties to whom it is addressed and may not be availed of or relied upon by any other person(s) or entity.
6. Title is subject to confirmation of the vesting tax sale in interest obtained by Tax Deed from the Forrest County Chancery Clerk to Edgewood, LLC, dated March 3, 2010, and recorded in Land Deed Book 1078 at Page 346 for the 2006 Forrest County ad valorem real property taxes.
7. Title is subject to that the interest of **James Charles Trotter, Jr.**, who is the last record owner of the real property prior to the aforementioned matured tax sales and deed. Further, title is subject to the conveyance into James Charles Trotter, Jr., by Quitclaim Deed dated January 10, 2005, and recorded in Land Deed Book 955 at Page 177; which deed was made using a power of attorney from Flora Hicks to Lula Trotter which is not of record in the land records on file in the office of the Chancery Clerk of Forrest County, Mississippi.
8. Title is subject to those certain Condemnation of Unsafe and Dilapidated Property issued by the City of Hattiesburg dated April 17, 2007, and recorded in Land Deed Book 1012 at Page 287.

ENCUMBRANCES

None.

TAXES

Taxes assessed by Forrest County, Mississippi for 2019 are not due and owing but would constitute a lien against said property if not paid by January 31, 2020.

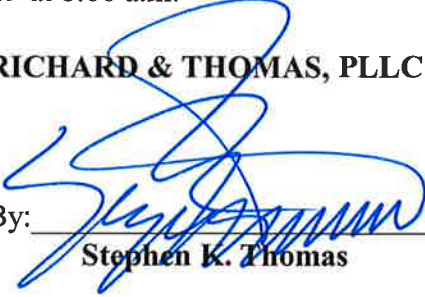
2018 Forrest County ad valorem taxes for Parcel No. 2-037D-14-105.00, PPIN 22050, are **due and owing** in the amount of \$31.10 plus penalty and interest accruing.

JUDGMENTS

This opinion reflects only those judgments recorded on the Judgment Rolls in the office of the Circuit Clerk of Forrest County, Mississippi. As of this date, no such judgments appear.

This, the 1st day of October, A.D., 2019 at 8:00 a.m.

RICHARD & THOMAS, PLLC

By: 

Stephen K. Thomas

APPRAISAL OF PROPERTY AT

HALL AVENUE

PIN # 022050

HATTIESBURG, MS

LIGHTSEY & ASSOCIATES

P.O. Box 15489
Hattiesburg, MS 39404
(601) 584-6260

April 9, 2020

Mr. Lamar Rutland
City of Hattiesburg
P.O. Box 1898
Hattiesburg, MS 39403

RE: Appraisal of property at Hall Avenue,
Hattiesburg, MS

Dear Mr. Rutland:

In accordance with the your request, I have made an inspection and investigation of the property located on Hall Avenue, Hattiesburg, Mississippi, for the purpose of forming an opinion of the Market Value, in fee simple, as of April 8, 2020, the effective date of the appraisal being the date the subject property was last inspected. The value opinion is both before and after the taking of a 775 square foot parcel (.02 acre) in conjunction with the Hall Avenue railroad overpass by the City of Hattiesburg and noting damages to the remainder, if any.

Market Value is defined as the most probable price in cash, terms equivalent to cash, or in other precisely revealed terms, for which the property will sell in an open and competitive market under all conditions requisite to a fair sale, with the buyer and seller each acting prudently, knowledgeably, and for self interest, and assuming that neither is under undue duress.

NEIGHBORHOOD DESCRIPTION

The subject area lies to the southeast of downtown Hattiesburg and is located east of Williams Street and the Canadian National Railway right of way. The general area contains a wide age range of properties that range from commercial/retail uses to single-family dwellings and multi-family dwellings. The subject is in relative close proximity to public schools, shopping and employment centers, and medical facilities. The new Hattiesburg Law Enforcement Complex is under construction on Hall Avenue at the southern end of Bay Street. The majority of properties in the area are in excess of fifty years old.

SITE DESCRIPTION

The subject site is located on the southerly side of Hall Avenue at the southeasterly corner of Hall Avenue and Sullivan Street. It has a frontage of 80 feet on Hall Avenue and extends to a depth of 50 feet along Sullivan Street. The site is rectangular in shape and contains approximately 4,000 square feet. The site is at or above street grade, and appears to have adequate utility for use a single unit dwelling site. The property does appear to lie in a designated flood area, though this is subject to certification by a professional engineer or surveyor. All public utilities area connected or available to the site. A survey and plat map are included in the addenda of this report in order to assist the reader in visualizing the property. There were no adverse soil or subsoil conditions observed; however, no soil tests have been made as a part of this report. The property is zoned R-1C, Single Unit Residential, by the zoning authorities of the City of Hattiesburg. The City of Hattiesburg intends to take a 775 square foot rectangularly shaped parcel along Hall Avenue. Following the taking, the subject site will be effectively reduced in size to 3,225 square feet. Access and utility will remain essentially the same as in the before condition.

IMPROVEMENTS DESCRIPTIONS

There are no known improvements on the subject property.

PROPERTY HISTORY

The subject property appears to have been under the present ownership for in excess of five years. The subject property is not known to be listed for sale nor under contract.

TAXES

The total taxes for the subject property for 2019 are \$30.99. The total true value (tax value) of the property is \$1,130.00 with an assessed value of \$170.00.

HIGHEST AND BEST USE

In order to estimate the Highest and Best Use of the subject, the surrounding property uses as well as the four tests of Highest and Best Use were considered. These are 1)physically possible, 2)legally permissible, 3)financially feasible, and 4)maximally productive. After considering these factors, the Highest and Best Use of the site as vacant is estimated to be for a single unit house site, in both the before and after conditions.

INTENDED USE AND SCOPE OF THE APPRAISAL

This appraisal is intended to assist the client, Mr. Lamar Rutland of the City of Hattiesburg, in forming an opinion of value of the subject property both before and after the taking of a 775 square foot parcel by the City for road widening. In preparing this appraisal, the appraiser inspected the subject site; gathered information on comparable land sales and listings, confirmed and analyzed the data and applied the Sales Comparison Approach to value. As only the land was considered in this appraisal, this was the only approach deemed applicable to the subject's valuation.

APPRAISAL PROCESS

In good appraisal practice, three approaches to value are normally used to arrive at a value conclusion for a given property. These approaches are the Sales Comparison Approach, the Cost Approach, and the Income Approach. The Sales Comparison Approach is based on deriving a value indication by comparing properties that have been sold recently to the subject property and adjusting the sales price of the comparables for any basic differences. The Income Approach considers the present value of the future benefits of income and ownership. To estimate the income potential of the subject, comparable rents are obtained and reconciled to the subject, then a deduction is made for anticipated expenses. The resulting net income is then capitalized into value using a rate supported by market data. The Cost Approach provides a value indicator based on the cost to reproduce the improvements less any observed depreciation. The value estimate of the land developed through the Sales Comparison Approach is then added to the depreciated value estimate of the Improvements. As noted above, the appraiser has utilized the Sales Comparison Approach only as the land only is considered in this appraisal report.

LAND SALES

The following vacant land sales were utilized to arrive at opinion of value for the subject site.

LAND SALE NO. 1

Location: Walnut Street, Hattiesburg
Date: 04/07/2016
Price: \$20,000
Size: 18,270 sq ft
Price/SF: \$1.09
Zoning: R-1A, Single Unit Residential
Confirmation: MLS # 103560/Re/Max Real Estate
Comments: Located just south of Southern Avenue on Walnut Street.
Generally level vacant site.

LAND SALE NO. 2

Location: North 24th Avenue., Hattiesburg
Date: 04/07/2017
Price: \$22,000
Size: 36,940 sq ft
Price/SF: \$.60
Zoning: R-1B, Single Unit Residential
Confirmation: MLS # 107417/Coldwell Banker
Comments: Corner of North 24th and Quinn Street.
Vacant site purchased for future development.

LAND SALE NO. 3

Location: South 21st Avenue , Hattiesburg

Date: 06/30/2015

Price: \$10,000

Size: 15,000 sq ft

Price/SF: \$.67

Zoning: R-1A, Single Unit Residential

Confirmation: MLS # 101179/Realty Executives

Comments: Located just south of Hardy Street. Vacant site purchased for future development.

The above lot sales indicate an unadjusted range in value from \$.60 to \$1.09 per square foot. All are in the subject market segment. The subject area is virtually fully developed and there are very few vacant sites that are available for sale. Research of the market found these sales to be the most recent and relevant to the subject's valuation. Sale 1 was given the most reliance due to time and location. After considering time, size, location, topography, the subject's location in a flood zone, and other pertinent factors, the value opinion of the subject site is \$.80 per square foot. Thus the value of the subject is:

BEFORE VALUE

4,000 sf @ \$.80 = \$3,200.00

AFTER VALUE

3,225 sf @ \$.80 = \$2,360.00

Value Before Taking	\$3,200.00
Value After Taking	\$2,580.00
Damages	\$ -0-
Just Compensation Due Owner	\$ 620.00
Rounded	\$ 650.00

I appreciate the opportunity to prepare this appraisal report for you. Should you have any questions regarding this matter, please do not hesitate to contact me.

Sincerely

Stan Lightsey

Stan Lightsey
RA-16

ADDENDA

APPRAISER'S CERTIFICATION

I certify that, to the best of my knowledge and belief:

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Stan Lightsey

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RA-16**

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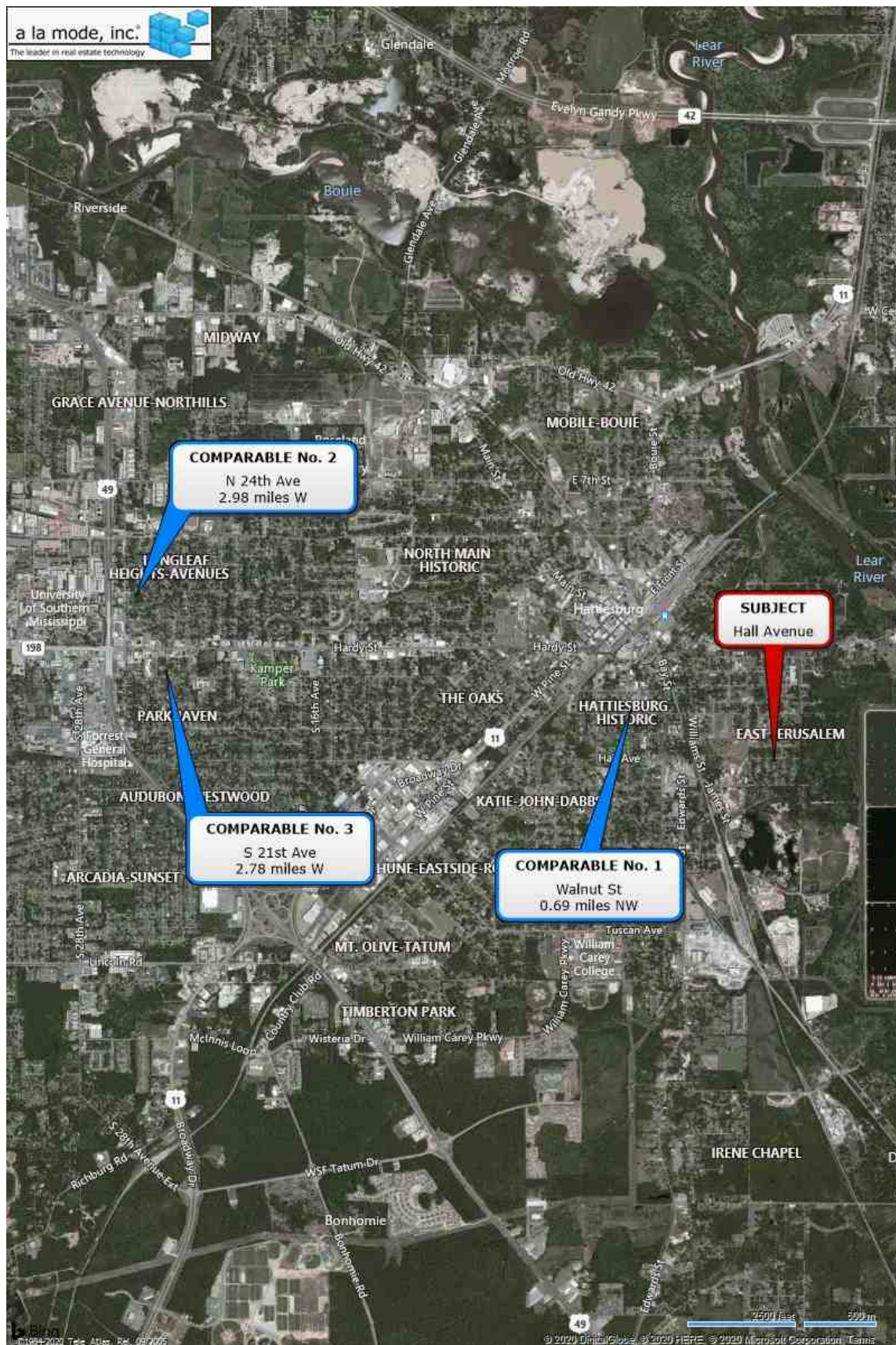
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The distribution of the total valuation in this report between land and improvements applies only under the existing program of utilization. The separate valuations for land and improvements must not be used in conjunction with any other appraisal and are invalid if so used.

Unless otherwise stated in this report, the existence of hazardous substances, including but not limited to asbestos, poly-chlorinated biphenyls, petroleum leakage, mold, or agricultural chemicals; which may or may not be present on the property, or other environmental conditions; were not called to the attention of nor did the appraiser become aware of such during the inspection of the property. The appraiser has no knowledge of the existence of such materials on or in the property unless otherwise stated. The appraiser is not an expert in the environmental field and is not qualified to test for such substances or conditions. If the presence of hazardous substances or environmental conditions may affect the value of the property, the value opinion is predicated on the assumption that there is no such condition in or on the property or in such proximity thereto that it would cause a loss in value. No responsibility is assumed for such conditions; nor for any expertise or knowledge required to discover them. The client is advised to retain an expert in the field of environmental impact on real estate if such conditions are suspected.

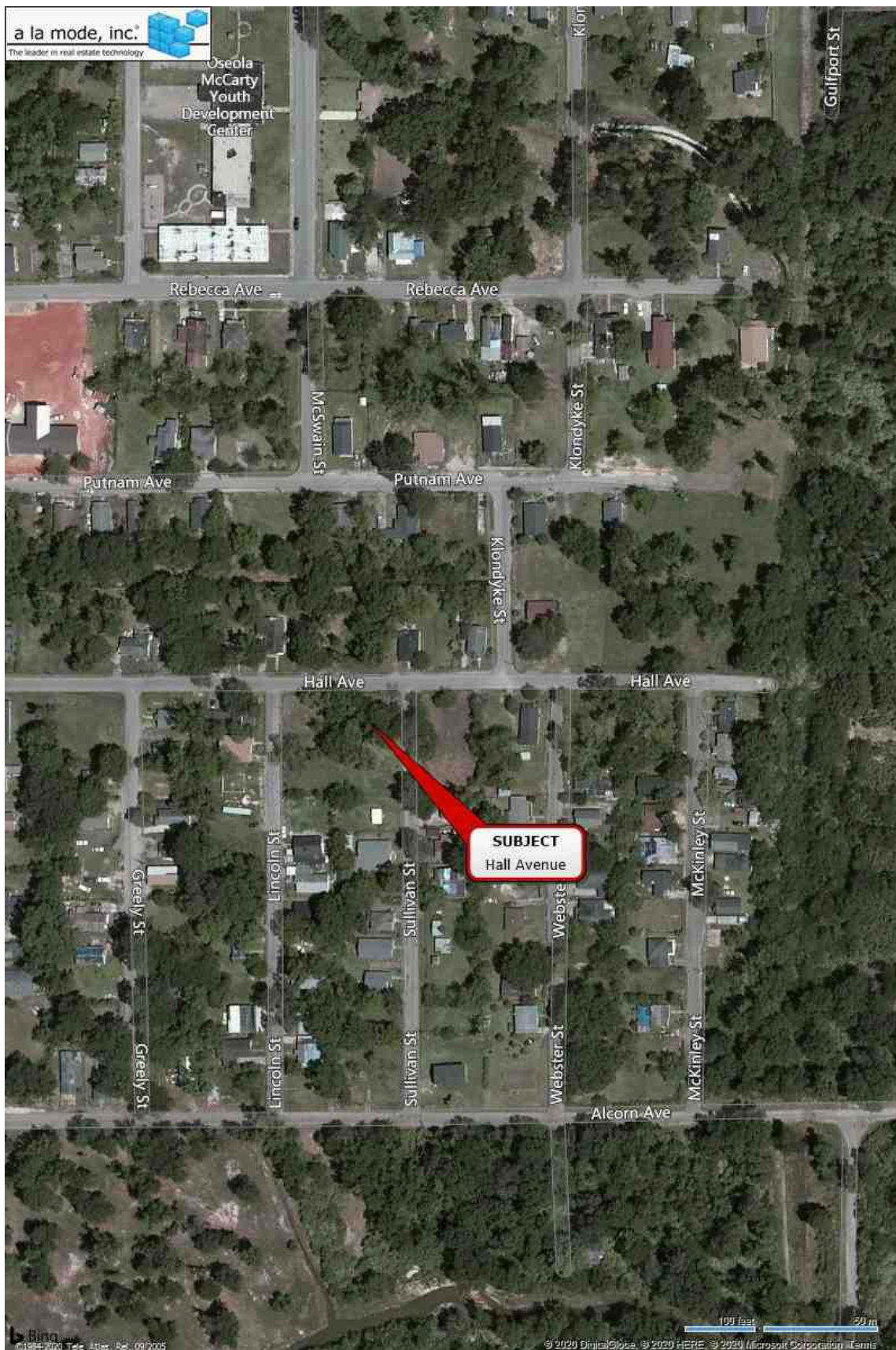
Location Map

Owner	Curtis R. Gates						
Property Address	Hall Avenue						
City	Hattiesburg	County	Forrest	State	MS	Zip Code	39401
Client	City of Hattiesburg						



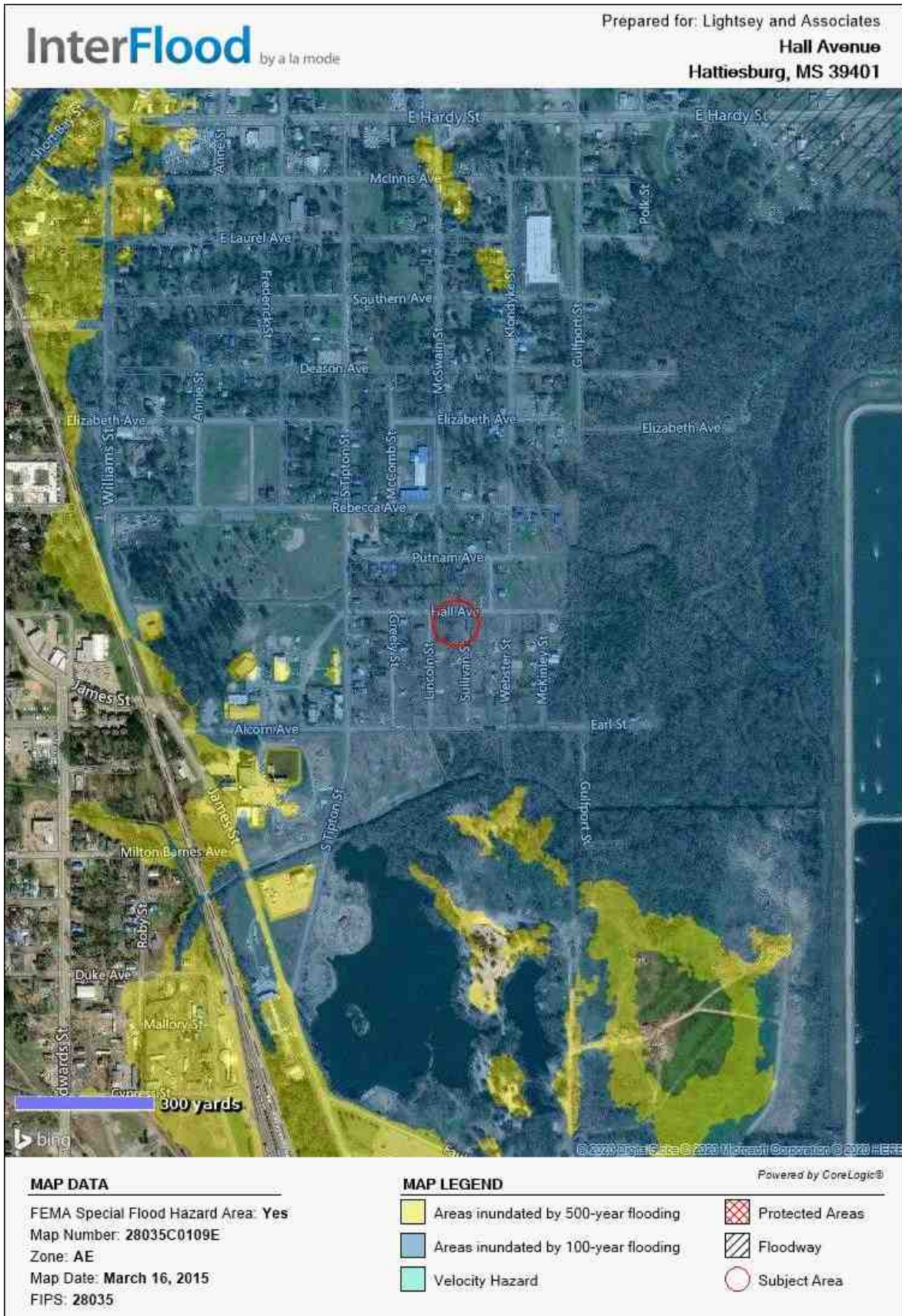
Location Map

Owner	Curtis R. Gates					
Property Address	Hall Avenue					
City	Hattiesburg	County	Forrest	State	MS	Zip Code 39401
Client	City of Hattiesburg					



Flood Map

Owner	Curtis R. Gates					
Property Address	Hall Avenue					
City	Hattiesburg	County	Forrest	State	MS	Zip Code 39401
Client	City of Hattiesburg					



Plat Map



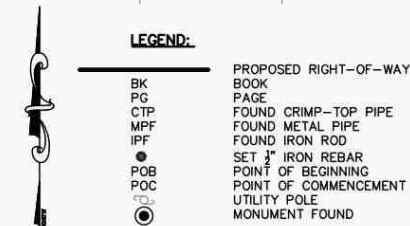
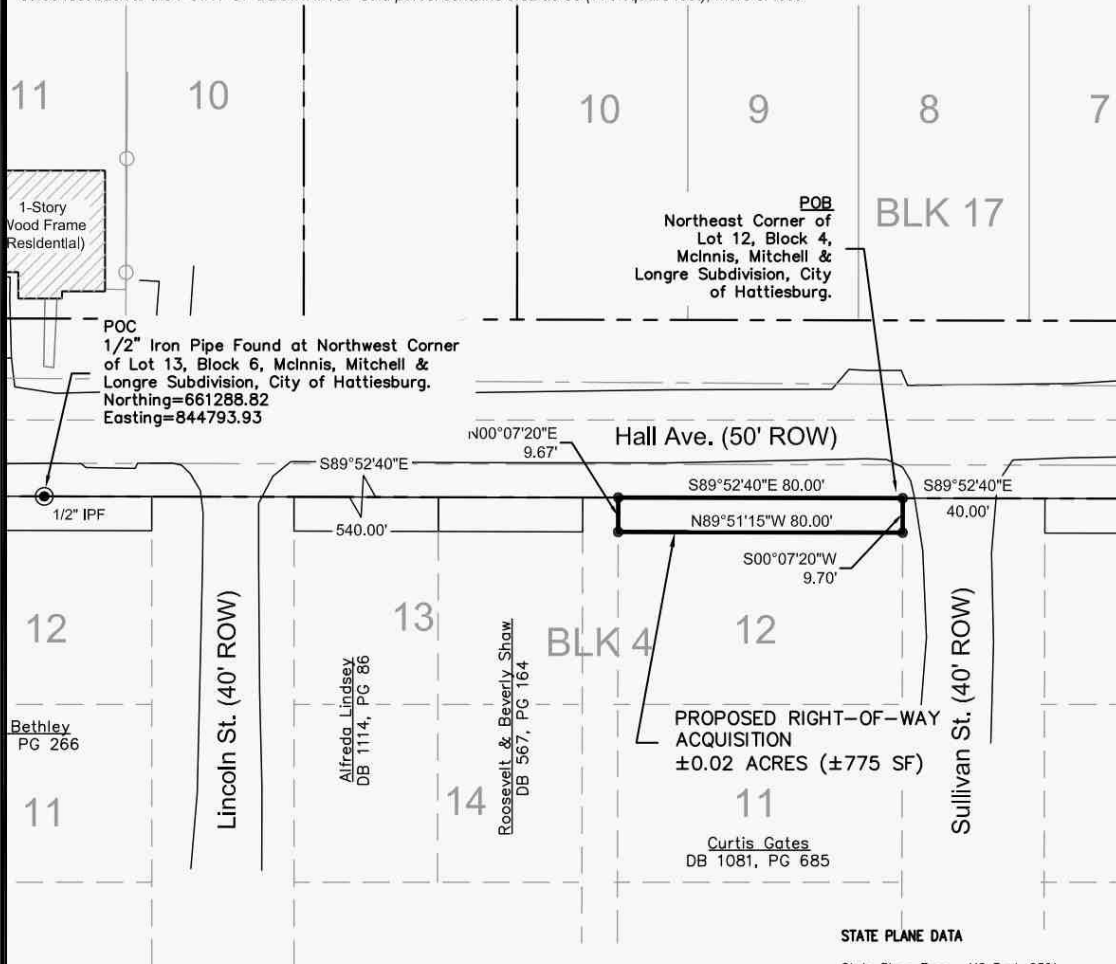
Survey

Curtis Gates - +/-0.02 Ac.

LEGAL DESCRIPTION (Proposed Right-of-Way Acquisition)

Subdivision, City of Hattiesburg, Forrest County, Mississippi, as per map or plat thereof on file in the office of Chancery Clerk of Forrest County, Mississippi, being more particularly described as follows:

Commencing at a found 1/2" iron pipe at the Northwest Corner of Lot 13 of Block 6 of Said McInnis, Mitchell & Longre Subdivision, City of Hattiesburg, Mississippi; thence run and along the southern right-of-way boundary of Hall Avenue South 89 degrees 52 minutes 40 seconds East for a distance of 540.00 feet, to the Northwest Corner of Lot 12 of Block 4 of Said McInnis, Mitchell & Longre Subdivision, City of Hattiesburg, Mississippi, said point also being the Point of Beginning; thence continue and along said southern right-of-way boundary South 89 degrees 52 minutes 40 seconds East for a distance of 80.00 feet said point also being the Northeast Corner of Lot 12 of Block 4 of Said McInnis, Mitchell & Longre Subdivision, City of Hattiesburg, Mississippi, thence run and along the western right-of-way boundary of Sullivan Street South 00 degrees 07 minutes 20 seconds West for a distance of 9.70 feet; thence leaving said western right-of-way boundary run North 89 degrees 51 minutes 15 seconds West for a distance of 80.00 feet to a point on the western boundary of said Lot 12 of Block 4; thence run and along said western boundary North 00 degrees 07 minutes 20 seconds East for a distance of 9.67 feet to the Northwest Corner of said Lot 12, of Block 4, said point also being a point on the southern right-of-way boundary of Hall Avenue; thence run and along said southern right-of-way boundary South 89 degrees 52 minutes 40 seconds East for a distance of 80.00 feet back to the POINT OF BEGINNING. Said parcel contains 0.02 acres (775 square feet), more or less.

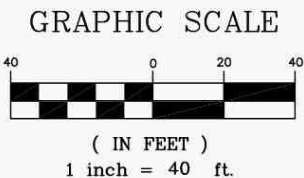


NOTES:

1. Class "B" Survey.
2. No Additional Record Search for Easements was Conducted.
3. Date of Field Survey: Nov. 5, 2019.
4. Orientation is based on GPS observation, Grid North, as referenced to MS State Plane Coordinate System, East Zone.
5. Location of existing subdivision lines based upon monuments from on the interior of McInnis, Mitchell, & Longre Subdivision.

STATE PLANE DATA

State Plane Zone: MS East-2301
Datum: NAD 1983
Combined Factor: 0.99997228
Convergence Angle: -0° 13' 55.65"
Reference Point: Northwest Corner of Lot 13, Block 6



REFERENCE MATERIAL:

1. McInnis, Mitchell, & Longre Subdivision Plat in the City of Hattiesburg
2. Forrest County Tax Maps
3. Quitclaim Deed Bk 1081, PG 685



PRELIMINARY - PINS NOT SET

Clearpoint
CONSULTING ENGINEERS, P.A.

6652 US Highway 98 | Hattiesburg, MS 39402
t 601.261.2609 | f 601.261.5573 | clearpointengineers.com



PREPARED FOR: **Right-of-Way Survey**

Curtis Gates
PPIN: 22050

CCE NO: 76242036

SCALE: 1" = 40'

DATE: 11/30/2019

CHECKED: RTB

DRAWN: JCR

SHEET 1 OF 1

Drawing Location: S:\76242036\dwg\PLATS\76242036-PLATS.dwg

Tax Data

4/9/2020

Delta Computer Systems

Forrest County Mississippi



Delta Computer Systems, Inc.

Property Link FORREST COUNTY, MS

Current Date 4/ 9/2020

Tax Year 2019

Records Last Updated 4/ 9/2020

PROPERTY DETAIL

OWNER GATES CURTIS R
P O BOX 615
NEW AUGUSTA MS 39469

ACRES : **NA**
LAND VALUE : 1130
IMPROVEMENTS : **NA**
TOTAL VALUE: 1130
ASSESSED : 170

PARCEL 2-037D-14-105.00
ADDRESS 1307 HALL AVENUE

TAX INFORMATION

YEAR 2019	TAX DUE	PAID	BALANCE
COUNTY	11.06	0.00	11.39
CITY	9.03	0.00	9.30
SCHOOL	10.90	0.00	11.23
TOTAL	30.99	0.00	31.92 3% Penalty

Pay Tax

LAST PAYMENT DATE **NA**

MISCELLANEOUS INFORMATION

EXEMPT CODE		LEGAL LT 12 BLK 4
HOMESTEAD CODE	None	PREV #:H0656-04-011
TAX DISTRICT	1110	MCINNIS, MITCHELL, & LONGRE
PPIN	022050	
SECTION	14	
TOWNSHIP	04N	
RANGE	13W	B 1081 P 685 04/30/2010
Book 1081	Page 685	

[PURCHASE COUNTY TAX SALE FILES](#)

TAX SALES HISTORY, FOR UNPAID TAXES

<u>Year</u>	<u>Sold To</u>	<u>Redeemed Date/By</u>
NO TAX SALES FOUND		

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Photograph Addendum

Owner	Curtis R. Gates					
Property Address	Hall Avenue					
City	Hattiesburg	County	Forrest	State	MS	Zip Code 39401
Client	City of Hattiesburg					



View of Subject



View of Hall Avenue



Memorandum

To: Mayor Toby Barker and Members of City Council

From: Lamar Rutland

cc:

Date: Tuesday, August 18, 2020

Re: Authorize acquisition of a portion of a parcel of property identified as Forrest County Parcel No. 2-037D-14-104.00 (PPIN 022033) for the Hall Avenue Overpass Project: Acknowledge receipt of Appraisal Report; Determine the appraisal valuation of \$825.00 to be Just Compensation for the aforementioned portion of the parcel; Authorize Mayor to make a Fair Market Value Offer for the property of \$825.00; Authorize Mayor to execute any and all documents required to complete the transaction; Authorize issuance of a manual check in payment thereof upon closing of transaction.

File Number: 2020-584

Minute Book #

Summary

Authorize acquisition of a portion of a parcel of property identified as Forrest County Parcel No. 2-037D-14-104.00 (PPIN 022033) for the Hall Avenue Overpass Project: Acknowledge receipt of Appraisal Report; Determine the appraisal valuation of \$825.00 to be Just Compensation for the aforementioned portion of the parcel; Authorize Mayor to make a Fair Market Value Offer for the property of \$825.00; Authorize Mayor to execute any and all documents required to complete the transaction; Authorize issuance of a manual check in payment thereof upon closing of transaction.

Recommendation Statement

I recommend approval of this item.

Please place this on the August 18, 2020 City Council meeting for consideration.

Richard & Thomas, PLLC
Attorneys at Law

Stephen K. Thomas

132 Westover Drive
Hattiesburg, MS 39402
(601)602-2457 phone
(601)602-2458 fax

October 1, 2019

City of Hattiesburg
Attn: Lamar Rutland
P.O. Box 1898
Hattiesburg, MS 39403-1898

Re: Hall Avenue East Project (Property 9)

Lots 13 and 14 in Block 3 of the McInnis, Mitchell & Longre Survey of the City of Hattiesburg, Forrest County, Mississippi, as per the official map or plat thereof on file in the office of the Chancery Clerk of Forrest County, Mississippi.

Pursuant to your request, I have examined the land records on file in the office of the Chancery Clerk of Forrest County, Mississippi, relating to the above described real property for a period back of thirty-one years prior to this date, and find sufficient evidence that the above described property was conveyed by Warranty Deed to **RUTH HYDE**, dated August 20, 1974, and recorded in Land Deed Book 396 at Page 580. Based upon my examination for the aforesaid period and with the presumption that prior conveyances in chain of title are legal and valid, it is my opinion that the said Ruth Hyde, owns a fee simple, merchantable in and to above described real property subject to the following liens, encumbrances and reservations;

RESERVATIONS

1. This opinion does not cover the oil, gas or other minerals lying on or under said property and no opinion is given thereon.
2. As no current survey is present, I do not certify as to the actual occupancy, nor to matters which should be revealed by an accurate survey of subject lands, nor do I certify rights of parties in possession, deficiency in the quantity of lands, boundary line disputes, roadways, unrecorded servitudes or easements, any matters not of proper record which would be disclosed by a true and accurate survey and inspection of the property, and easements or other uses of subject lands not so visible from the surface.
3. Title is subject to any liability or loss due to environmental contamination by past uses of the property as a toxic hazardous waste site, or due to violation of any environmental protection

law of any governmental body.

4. Title is subject to instruments of record being properly filed and indexed in the office of the Chancery Clerk where the property is located.

5. This is not a guarantee of title and is not an insurance policy on said property, and this opinion is for the use and benefit of only the party or parties to whom it is addressed and may not be availed of or relied upon by any other person(s) or entity.

6. Title is subject to proof of death of Mattie McCalebb, who held a life estate in the subject property created by Warranty Deed dated June 4, 1968 and recorded in Land Deed Book 312 at Page 46.

ENCUMBRANCES

None.

TAXES

Taxes assessed by Forrest County, Mississippi for 2019 are not due and owing but would constitute a lien against said property if not paid by January 31, 2020.

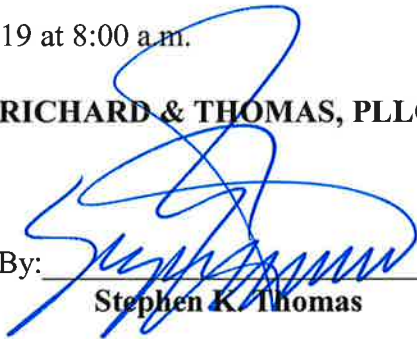
2018 Forrest County ad valorem taxes for Parcel No. 2-037D-14-104.00, PPIN 22033, are **paid** in the amount of \$55.43.

JUDGMENTS

This opinion reflects only those judgments recorded on the Judgment Rolls in the office of the Circuit Clerk of Forrest County, Mississippi. As of this date, no such judgments appear.

This, the 1st day of October, A.D., 2019 at 8:00 a.m.

RICHARD & THOMAS, PLLC

By: 

Stephen K. Thomas

APPRAISAL OF PROPERTY AT

HALL AVENUE

PIN # 022033

HATTIESBURG, MS

LIGHTSEY & ASSOCIATES

P.O. Box 15489
Hattiesburg, MS 39404
(601) 584-6260

April 23, 2020

Mr. Lamar Rutland
City of Hattiesburg
P.O. Box 1898
Hattiesburg, MS 39403

RE: Appraisal of property at Hall Avenue,
Hattiesburg, MS

Dear Mr. Rutland:

In accordance with the your request, I have made an inspection and investigation of the property located on Hall Avenue, Hattiesburg, Mississippi, for the purpose of forming an opinion of the Market Value, in fee simple, as of April 22, 2020, the effective date of the appraisal being the date the subject property was last inspected. The value opinion is both before and after the taking of a 1,029 square foot parcel (.02 acre) in conjunction with the Hall Avenue railroad overpass by the City of Hattiesburg and noting damages to the remainder, if any.

Market Value is defined as the most probable price in cash, terms equivalent to cash, or in other precisely revealed terms, for which the property will sell in an open and competitive market under all conditions requisite to a fair sale, with the buyer and seller each acting prudently, knowledgeably, and for self interest, and assuming that neither is under undue duress.

NEIGHBORHOOD DESCRIPTION

The subject area lies to the southeast of downtown Hattiesburg and is located east of Williams Street and the Canadian National Railway right of way. The general area contains a wide age range of properties that range from commercial/retail uses to single-family dwellings and multi-family dwellings. The subject is in relative close proximity to public schools, shopping and employment centers, and medical facilities. The new Hattiesburg Law Enforcement Complex is under construction on Hall Avenue at the southern end of Bay Street. The majority of properties in the area are in excess of fifty years old.

SITE DESCRIPTION

The subject site is located on the southerly side of Hall Avenue at the southeasterly corner of Hall Avenue and Sullivan Street. It has a frontage of 80 feet on Hall Avenue and extends to a uniform depth of 100 feet. The site is rectangular in shape and contains approximately 8,000 square feet. The site is at or above street grade, and appears to have adequate utility for use a single unit dwelling site. The property does appear to lie in a designated flood area, though this is subject to certification by a professional engineer or surveyor. All public utilities area connected or available to the site. A survey and plat map are included in the addenda of this report in order to assist the reader in visualizing the property. There were no adverse soil or subsoil conditions observed; however, no soil tests have been made as a part of this report. The property is zoned R-1C, Single Unit Residential, by the zoning authorities of the City of Hattiesburg. The City of Hattiesburg intends to take a 1,029 square foot rectangularly shaped parcel along Hall Avenue. Following the taking, the subject site will be effectively reduced in size to 6,971 square feet. Access and utility will remain essentially the same as in the before condition.

IMPROVEMENTS DESCRIPTIONS

There are no known improvements on the subject property.

PROPERTY HISTORY

The subject property appears to have been under the present ownership for in excess of five years. The subject property is not known to be listed for sale nor under contract.

TAXES

The total taxes for the subject property for 2019 are \$55.23. The total true value (tax value) of the property is \$2,020.00 with an assessed value of \$303.00.

HIGHEST AND BEST USE

In order to estimate the Highest and Best Use of the subject, the surrounding property uses as well as the four tests of Highest and Best Use were considered. These are 1)physically possible, 2)legally permissible, 3)financially feasible, and 4)maximally productive. After considering these factors, the Highest and Best Use of the site as vacant is estimated to be for a single unit house site, in both the before and after conditions.

INTENDED USE AND SCOPE OF THE APPRAISAL

This appraisal is intended to assist the client, Mr. Lamar Rutland of the City of Hattiesburg, in forming an opinion of value of the subject property both before and after the taking of a 391 square foot parcel by the City for road widening. In preparing this appraisal, the appraiser inspected the subject site; gathered information on comparable land sales and listings, confirmed and analyzed the data and applied the Sales Comparison Approach to value. As only the land was considered in this appraisal, this was the only approach deemed applicable to the subject's valuation.

APPRAISAL PROCESS

In good appraisal practice, three approaches to value are normally used to arrive at a value conclusion for a given property. These approaches are the Sales Comparison Approach, the Cost Approach, and the Income Approach. The Sales Comparison Approach is based on deriving a value indication by comparing properties that have been sold recently to the subject property and adjusting the sales price of the comparables for any basic differences. The Income Approach considers the present value of the future benefits of income and ownership. To estimate the income potential of the subject, comparable rents are obtained and reconciled to the subject, then a deduction is made for anticipated expenses. The resulting net income is then capitalized into value using a rate supported by market data. The Cost Approach provides a value indicator based on the cost to reproduce the improvements less any observed depreciation. The value estimate of the land developed through the Sales Comparison Approach is then added to the depreciated value estimate of the Improvements. As noted above, the appraiser has utilized the Sales Comparison Approach only as the land only is considered in this appraisal report.

LAND SALES

The following vacant land sales were utilized to arrive at opinion of value for the subject site.

LAND SALE NO. 1

Location: Walnut Street, Hattiesburg
Date: 04/07/2016
Price: \$20,000
Size: 18,270 sq ft
Price/SF: \$1.09
Zoning: R-1A, Single Unit Residential
Confirmation: MLS # 103560/Re/Max Real Estate
Comments: Located just south of Southern Avenue on Walnut Street.
Generally level vacant site.

LAND SALE NO. 2

Location: North 24th Avenue., Hattiesburg
Date: 04/07/2017
Price: \$22,000
Size: 36,940 sq ft
Price/SF: \$.60
Zoning: R-1B, Single Unit Residential
Confirmation: MLS # 107417/Coldwell Banker
Comments: Corner of North 24th and Quinn Street.
Vacant site purchased for future development.

LAND SALE NO. 3

Location: South 21st Avenue , Hattiesburg

Date: 06/30/2015

Price: \$10,000

Size: 15,000 sq ft

Price/SF: \$.67

Zoning: R-1A, Single Unit Residential

Confirmation: MLS # 101179/Realty Executives

Comments: Located just south of Hardy Street. Vacant site purchased for future development.

The above lot sales indicate an unadjusted range in value from \$.60 to \$1.09 per square foot. All are in the subject market segment. The subject area is virtually fully developed and there are very few vacant sites that are available for sale. Research of the market found these sales to be the most recent and relevant to the subject's valuation. Sale 1 was given the most reliance due to time and location. After considering time, size, location, topography, the subject's location in a flood zone, and other pertinent factors, the value opinion of the subject site is \$.80 per square foot. Thus the value of the subject is:

BEFORE VALUE

8,000 sf @ \$.80 = \$6,400.00

AFTER VALUE

6,971 sf @ \$.80 = \$5,577.00

Value Before Taking	\$6,400.00
Value After Taking	\$5,577.00
Damages	\$ -0-
Just Compensation Due Owner	\$ 823.00
Rounded	\$ 825.00

I appreciate the opportunity to prepare this appraisal report for you. Should you have any questions regarding this matter, please do not hesitate to contact me.

Sincerely

Stan Lightsey

Stan Lightsey
RA-16

ADDENDA

APPRAISER'S CERTIFICATION

I certify that, to the best of my knowledge and belief:

- the statements contained in this report are true and correct.**
- the reported analyses, opinions, and conclusions are limited only by the reporting assumptions and limiting conditions and are my personal, impartial, and unbiased professional analyses, opinions, and conclusions.**
- I have no present or prospective interest in the property that is the subject of this report, and I have no personal interest with respect to the parties involved unless otherwise stated.**
- I have no bias with respect to the property that is the subject of this report or to the parties involved with this assignment.**
- my engagement in this assignment was not contingent upon developing or reporting predetermined results.**
- My compensation for completing this assignment is not contingent upon the developing or reporting of a predetermined value or a direction in value that favors the cause of the client, the amount of the value opinion, the attainment of a stipulated result, or the occurrence of a subsequent event directly related to the intended use of this appraisal.**
- no one provided significant appraisal assistance to the person signing this appraisal unless otherwise noted.**
- unless otherwise noted, the person signing this report has not performed an appraisal or rendered any other service regarding the subject property in the past three years.**
- The Appraisal Institute conducts a voluntary re-certification process for its designated members. I am currently certified under this program.**

Stan Lightsey

**Stan Lightsey
RA-16**

UNDERLYING ASSUMPTIONS AND LIMITING CONDITIONS

This appraisal is subject to the following limiting conditions:

The legal description furnished is assumed to be correct.

No responsibility is assumed for matters of a legal character nor does the appraiser render any opinion as to title which is assumed to be good. All existing liens and encumbrances have been disregarded unless otherwise noted and the property is appraised as though free and clear and under responsible ownership and competent management.

The appraiser believes to be accurate the information provided by others; but assumes no responsibility for its accuracy.

Possession of this report, or a copy thereof, does not carry with it the right of publication, and neither all nor any part of the contents of this report may be disseminated to the public through media of any type nor may be used for any other purpose other than that specified in the engagement by the client without the previous written consent of the appraiser and client particularly as to the value conclusions, the identity of the appraiser or the firm with which he is employed, or to the SRA designation of The Appraisal Institute.

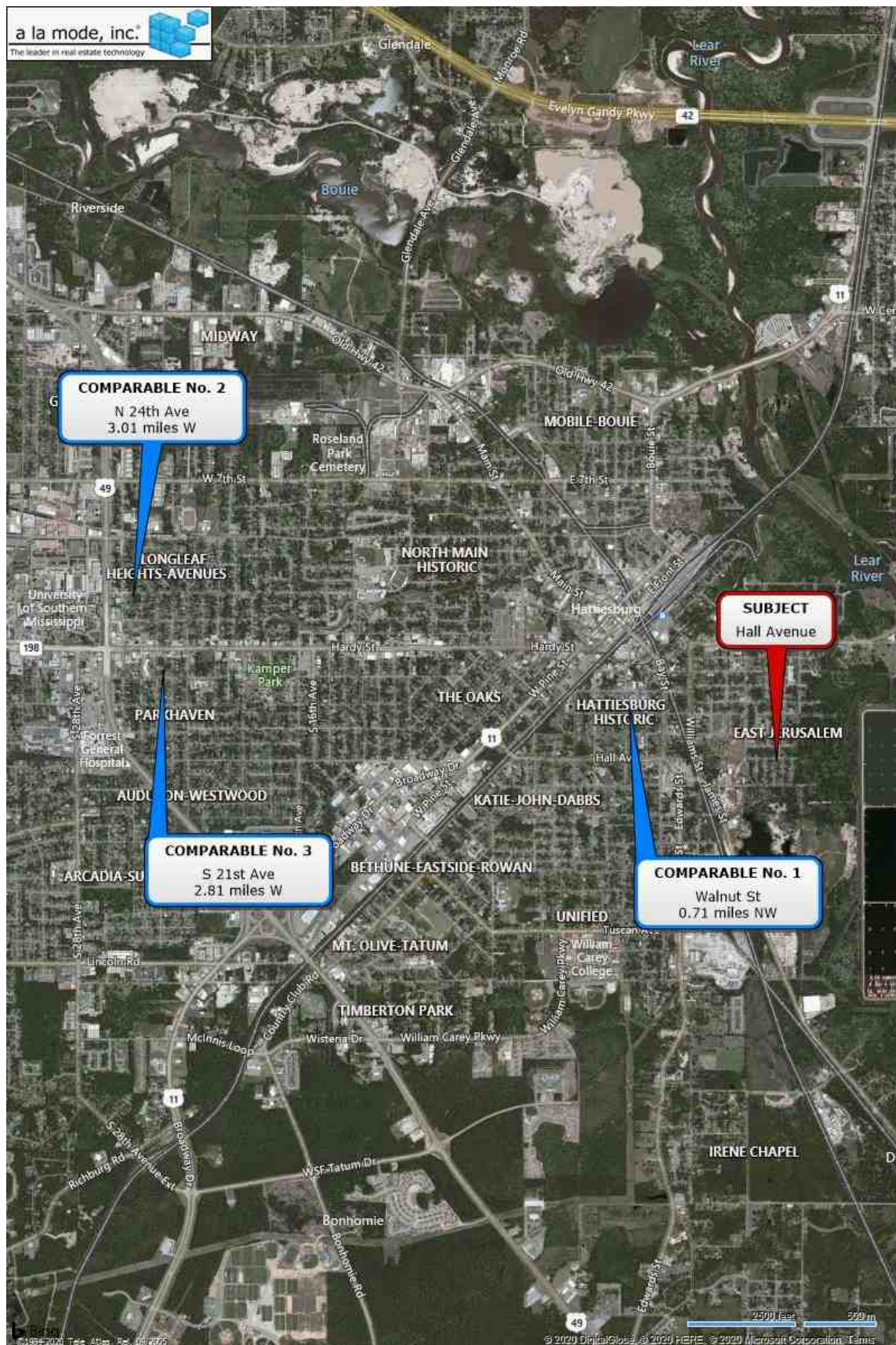
The appraiser will not be required to give testimony or appear in court by reason of this appraisal, with reference to the property in question, unless prior arrangements have been made.

The distribution of the total valuation in this report between land and improvements applies only under the existing program of utilization. The separate valuations for land and improvements must not be used in conjunction with any other appraisal and are invalid if so used.

Unless otherwise stated in this report, the existence of hazardous substances, including but not limited to asbestos, poly-chlorinated biphenyls, petroleum leakage, mold, or agricultural chemicals; which may or may not be present on the property, or other environmental conditions; were not called to the attention of nor did the appraiser become aware of such during the inspection of the property. The appraiser has no knowledge of the existence of such materials on or in the property unless otherwise stated. The appraiser is not an expert in the environmental field and is not qualified to test for such substances or conditions. If the presence of hazardous substances or environmental conditions may affect the value of the property, the value opinion is predicated on the assumption that there is no such condition in or on the property or in such proximity thereto that it would cause a loss in value. No responsibility is assumed for such conditions; nor for any expertise or knowledge required to discover them. The client is advised to retain an expert in the field of environmental impact on real estate if such conditions are suspected.

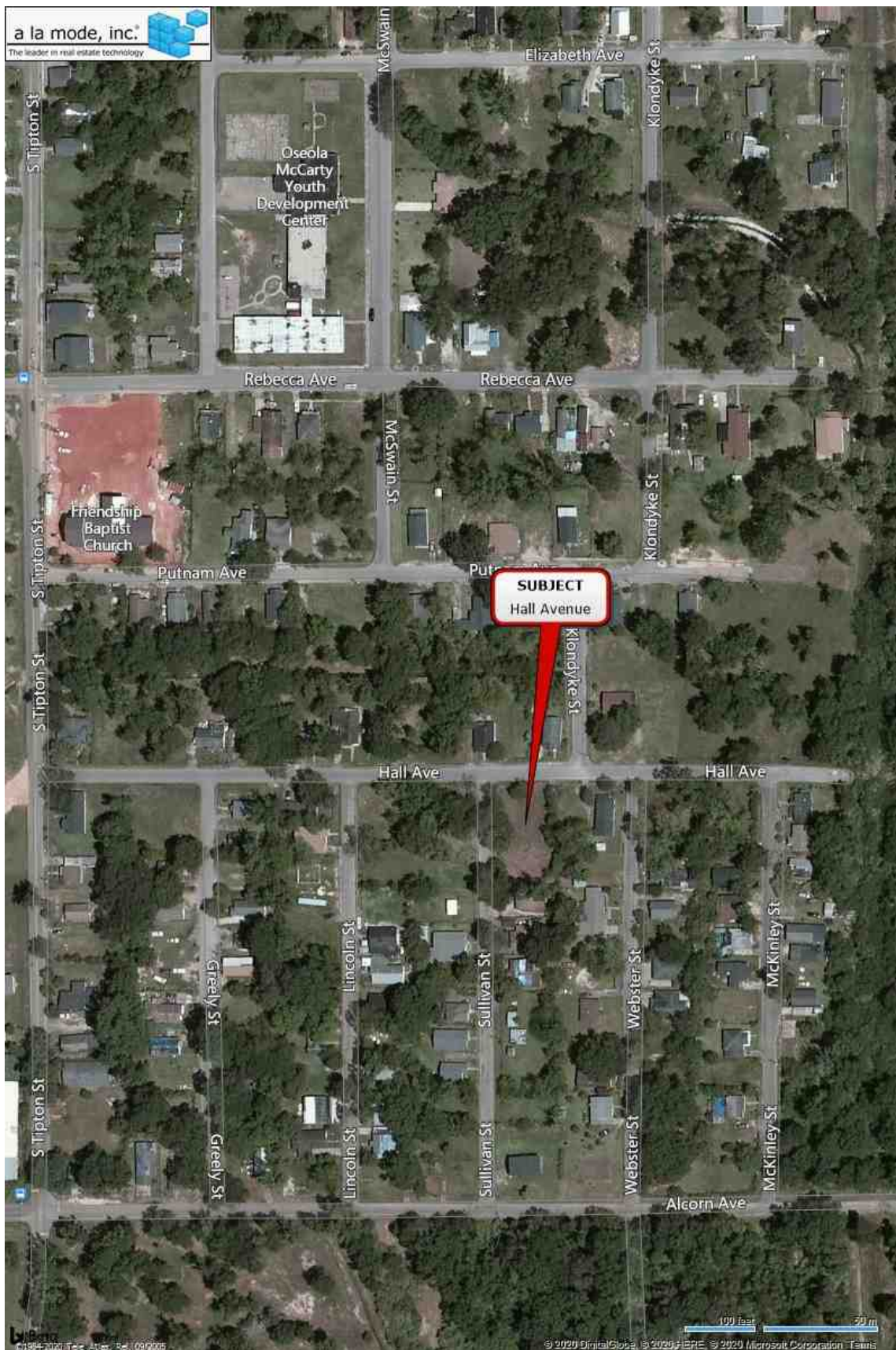
Location Map

Owner	Ruth Hyde					
Property Address	Hall Avenue					
City	Hattiesburg	County	Forrest	State	MS	Zip Code 39401
Client	City of Hattiesburg					



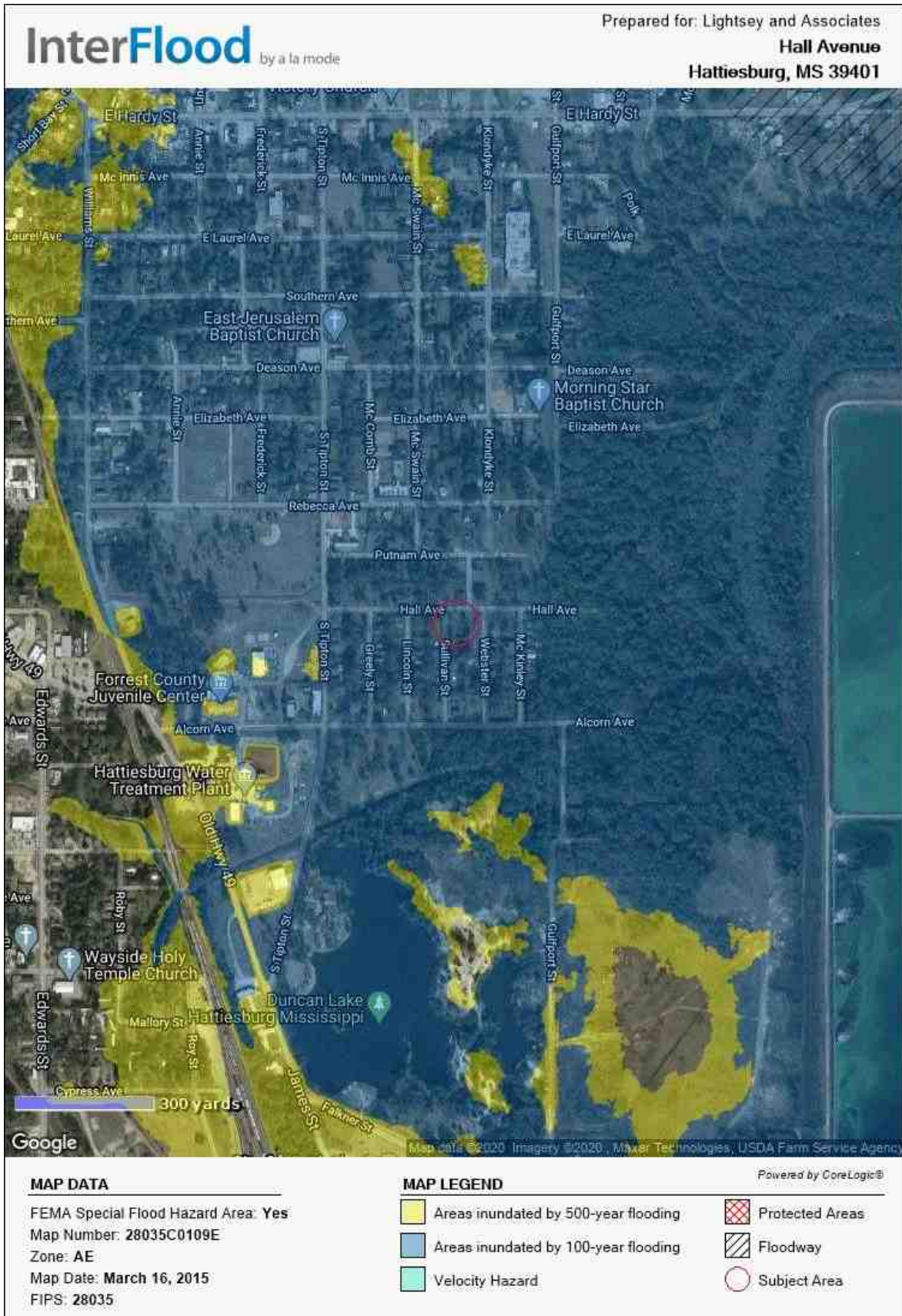
Location Map

Owner	Ruth Hyde					
Property Address	Hall Avenue					
City	Hattiesburg	County	Forrest	State	MS	Zip Code 39401
Client	City of Hattiesburg					

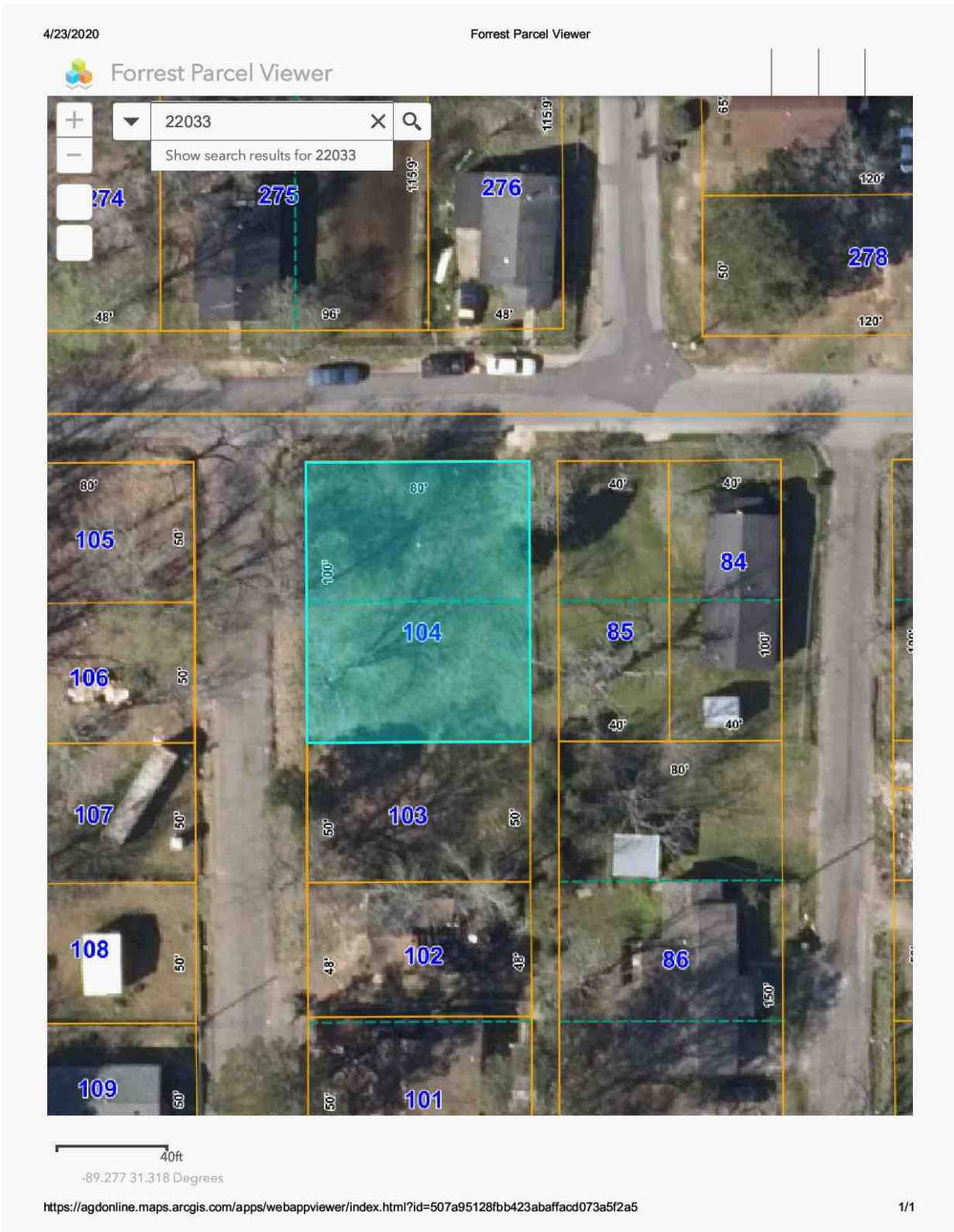


Flood Map

Owner	Ruth Hyde					
Property Address	Hall Avenue					
City	Hattiesburg	County	Forrest	State	MS	Zip Code 39401
Client	City of Hattiesburg					



Plat Map

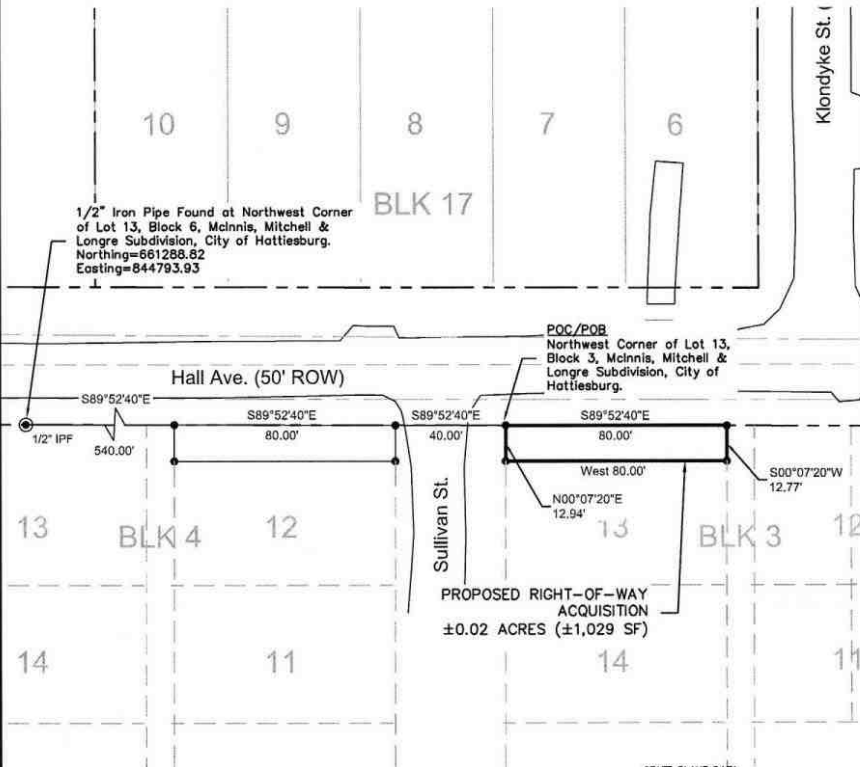


Survey

Ruth Hyde - ±0.02 Ac.

LEGAL DESCRIPTION (Proposed Right-of-Way Acquisition)

A parcel of land being part of Lot 13 of Block 3 of McInnis, Mitchell & Longre Subdivision, City of Hattiesburg, Forrest County, Mississippi, as per map or plat thereof on file in the office of Chancery Clerk of Forrest County, Mississippi, being more particularly described as follows:
Commencing at the Northwest Corner of Lot 13 of Block 3 of Said McInnis, Mitchell & Longre Subdivision, City of Hattiesburg, Mississippi, said point also being the Point of Beginning; thence run and along the southern right-of-way boundary of Hall Avenue South 89 degrees 52 minutes 40 seconds East for a distance of 80.00 feet to Northeast Corner of Said Lot 13 of Block 5; thence leaving said southern right-of-way boundary run South 00 degrees 07 minutes 20 seconds West along the eastern boundary of said Lot 13 for a distance of 12.77 feet; thence leaving said eastern boundary run, West for a distance of 80.00 feet to a point on the eastern right-of-way boundary of Sullivan Street; thence run and along said eastern right-of-way boundary North 00 degrees 07 minutes 20 seconds East for a distance of 12.94 feet back to the POINT OF BEGINNING. Said parcel contains 0.02 acres (1,029 square feet), more or less.



LEGEND:

- BOOK
- PG
- CTP
- MPF
- IPF
- SET 1" IRON REBAR
- POINT OF BEGINNING
- POINT OF COMMENCEMENT
- UTILITY POLE
- MONUMENT FOUND

PROPOSED RIGHT-OF-WAY
BOOK
PAGE
FOUND CRIMP-TOP PIPE
FOUND METAL PIPE
FOUND IRON ROD
SET 1" IRON REBAR
POINT OF BEGINNING
POINT OF COMMENCEMENT
UTILITY POLE
MONUMENT FOUND

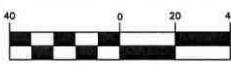
REFERENCE MATERIAL:

1. McInnis, Mitchell, & Longre Subdivision Plat in the City of Hattiesburg
2. Forrest County Tax Maps
3. Quitclaim Deed Bk 1081, PG 685

NOTES:

1. Class "B" Survey.
2. No Additional Record Search for Easements was Conducted.
3. Date of Field Survey: Nov. 5, 2019.
4. Orientation is based on GPS observation, Grid North, as referenced to MS State Plane Coordinate System, East Zone
5. Location of existing subdivision lines based upon monuments from on the interior of Omega Addition Subdivision.

GRAPHIC SCALE



(IN FEET)
1 inch = 40 ft.

STATE PLANE DATA

State Plane Zone: MS East-2301
Datum: NAD 1983
Combined Factor: 0.99997228
Convergence Angle: -0° 13' 55.65"
Reference Point: Northwest Corner of Lot 13, Block 6



PRELIMINARY - PINS NOT SET

Clearpoint
CONSULTING ENGINEERS, P.A.

6652 US Highway 98 | Hattiesburg, MS 39402
T 601.261.2609 | F 601.261.5573 | clearpointengineers.com



PREPARED FOR:	Right-of-Way Survey	CCE NO: 76242036
		SCALE: 1" = 40'
		DATE: 11/30/2019
		CHECKED: RTB
		DRAWN: JCR
		SHEET 1 OF 1

Ruth Hyde
PPIN: 22033

Drawing Location S:\76242036\dwg\PLAT8\76242036-PLAT8.dwg

Tax Data

4/23/2020

Delta Computer Systems

Forrest County Mississippi



Delta Computer Systems, Inc.

Property Link FORREST COUNTY, MS

Current Date 4/23/2020

Tax Year 2019

Records Last Updated 4/23/2020

PROPERTY DETAIL

OWNER HYDE RUTH
1213 REBECCA AVE
HATTIESBURG MS 39401

ACRES : **NA**
LAND VALUE : 2020
IMPROVEMENTS : **NA**
TOTAL VALUE: 2020
ASSESSED : 303

PARCEL 2-037D-14-104.00

ADDRESS 1313 HALL AVENUE

TAX INFORMATION

YEAR 2019	TAX DUE	PAID	BALANCE
COUNTY	19.71	19.71	0.00
CITY	16.10	16.10	0.00
SCHOOL	19.42	19.42	0.00
TOTAL	55.23	55.23	0.00

LAST PAYMENT DATE 1 / 21 / 2020

MISCELLANEOUS INFORMATION

EXEMPT CODE LEGAL LTS 13 & 14 BLK 3
HOMESTEAD CODE None PREV #:H0656-03-009
TAX DISTRICT 1110 MCINNIS, MITCHELL, & LONGRE
PPIN 022033
SECTION 14
TOWNSHIP 04N
RANGE 13W

Book **Page**

[PURCHASE COUNTY TAX SALE FILES](#)

TAX SALES HISTORY, FOR UNPAID TAXES

Year **Sold To** **Redeemed Date/By:**
NO TAX SALES FOUND

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Photograph Addendum

Owner	Ruth Hyde					
Property Address	Hall Avenue					
City	Hattiesburg	County	Forrest	State	MS	Zip Code 39401
Client	City of Hattiesburg					



View of Subject



View of Hall Avenue

Photograph Addendum

Owner	Ruth Hyde					
Property Address	Hall Avenue					
City	Hattiesburg	County	Forrest	State	MS	Zip Code 39401
Client	City of Hattiesburg					



View of Subject



Memorandum

To: Mayor Toby Barker and Members of City Council

From: Lamar Rutland

cc:

Date: Tuesday, August 18, 2020

Re: Authorize acquisition of a portion of a parcel of property identified as Forrest County Parcel No. 2-029P-10-302.00 (PPIN 019192) for the Hall Avenue Overpass Project: Acknowledge receipt of Appraisal Report; Determine the appraisal valuation of \$1,350.00 to be Just Compensation for the aforementioned portion of the parcel; Authorize Mayor to make a Fair Market Value Offer for the property of \$1,350.00; Authorize Mayor to execute any and all documents required to complete the transaction; Authorize issuance of a manual check in payment thereof upon closing of transaction.

File Number: 2020-585

Minute Book #

Summary

Authorize acquisition of a portion of a parcel of property identified as Forrest County Parcel No. 2-029P-10-302.00 (PPIN 019192) for the Hall Avenue Overpass Project: Acknowledge receipt of Appraisal Report; Determine the appraisal valuation of \$1,350.00 to be Just Compensation for the aforementioned portion of the parcel; Authorize Mayor to make a Fair Market Value Offer for the property of \$1,350.00; Authorize Mayor to execute any and all documents required to complete the transaction; Authorize issuance of a manual check in payment thereof upon closing of transaction.

Recommendation Statement

I recommend approval of this item.

Please place this on the August 18, 2020 City Council meeting for consideration.

Richard & Thomas, PLLC
Attorneys at Law

Stephen K. Thomas

132 Westover Drive
Hattiesburg, MS 39402
(601)602-2457 phone
(601)602-2458 fax

October 1, 2019

City of Hattiesburg
Attn: Lamar Rutland
P.O. Box 1898
Hattiesburg, MS 39403-1898

Re: Hall Avenue East Project (Property 2)

Lot 7 and Lot 8 and the North 15 feet of Lot 9, and all of Lot 11, less the South 100 feet of Lot 11, Block 122, Kamper & Whinnery Subdivision, Hattiesburg, Forrest County, Mississippi, as per the official map or plat thereof on file in the office of the Chancery Clerk of Forrest County, Mississippi.

Pursuant to your request, I have examined the land records on file in the office of the Chancery Clerk of Forrest County, Mississippi, relating to the above described real property for a period back of thirty-one years prior to this date, and find sufficient evidence that the above described property was conveyed by Warranty Deed to **RONNIE T. SMITH and SARAH N. SMITH**, dated April 7, 1988, and recorded in Land Deed Book 597 at Page 444. Based upon my examination for the aforesaid period and with the presumption that prior conveyances in chain of title are legal and valid, it is my opinion that the said Ronnie T. Smith and Sarah N. Smith, own a fee simple, merchantable in and to above described real property subject to the following liens, encumbrances and reservations;

RESERVATIONS

1. This opinion does not cover the oil, gas or other minerals lying on or under said property and no opinion is given thereon.
2. As no current survey is present, I do not certify as to the actual occupancy, nor to matters which should be revealed by an accurate survey of subject lands, nor do I certify rights of parties in possession, deficiency in the quantity of lands, boundary line disputes, roadways, unrecorded servitudes or easements, any matters not of proper record which would be disclosed by a true and accurate survey and inspection of the property, and easements or other uses of subject lands not so visible from the surface.

3. Title is subject to any liability or loss due to environmental contamination by past uses of the property as a toxic hazardous waste site, or due to violation of any environmental protection law of any governmental body.
4. Title is subject to instruments of record being properly filed and indexed in the office of the Chancery Clerk where the property is located.
5. This is not a guarantee of title and is not an insurance policy on said property, and this opinion is for the use and benefit of only the party or parties to whom it is addressed and may not be availed of or relied upon by any other person(s) or entity.
6. Title is subject to proof of death of Ronnie T. Smith and further determination of heirs of Ronnie T. Smith, as he held title with Sarah N. Smith as tenants in common.

ENCUMBRANCES

Deed of Trust from Sarah N. Smith, to Angie Delliger, Trustee, for Regions Bank, Beneficiary, dated September 1, 2017, securing \$10,000.00, and recorded in Land Deed of Trust Book 2141 at Page 574.

TAXES

Taxes assessed by Forrest County, Mississippi for 2019 are not due and owing but would constitute a lien against said property if not paid by January 31, 2020.

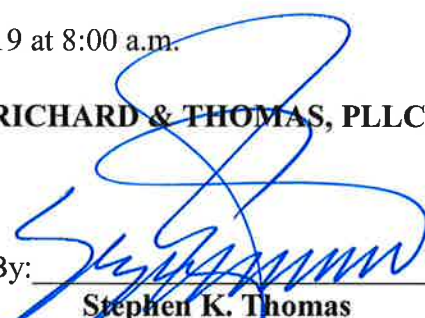
2018 Forrest County ad valorem taxes for Parcel No. 2-029P-10-302.00, PPIN 19192, are **paid** in the amount of \$1,249.05.

JUDGMENTS

This opinion reflects only those judgments recorded on the Judgment Rolls in the office of the Circuit Clerk of Forrest County, Mississippi. As of this date, no such judgments appear.

This, the 1st day of October, A.D., 2019 at 8:00 a.m.

RICHARD & THOMAS, PLLC

By: 

Stephen K. Thomas

APPRAISAL OF PROPERTY AT

612 BAY STREET

PPIN # 019192

HATTIESBURG, MS

LIGHTSEY & ASSOCIATES

P.O. Box 15489
Hattiesburg, MS 39404
(601) 584-6260

March 31, 2020

Mr. Lamar Rutland
City of Hattiesburg
P.O. Box 1898
Hattiesburg, MS 39403

RE: Appraisal of property at 612 Bay Street,
Hattiesburg, MS

Dear Mr. Rutland:

In accordance with the your request, I have made an inspection and investigation of the property located on 618 Bay Street, Hattiesburg, Mississippi, for the purpose of forming an opinion of the Market Value, in fee simple, as of March 31, 2020, the effective date of the appraisal being the date the subject property was last inspected. The value opinion is both before and after the taking of a 1,338 square foot parcel (.03 acre) in conjunction with the Hall Avenue railroad overpass by the City of Hattiesburg and noting damages to the remainder, if any.

Market Value is defined as the most probable price in cash, terms equivalent to cash, or in other precisely revealed terms, for which the property will sell in an open and competitive market under all conditions requisite to a fair sale, with the buyer and seller each acting prudently, knowledgeably, and for self interest, and assuming that neither is under undue duress.

NEIGHBORHOOD DESCRIPTION

The subject area lies to the southeast of downtown Hattiesburg and is located on the southern fringe of the Hattiesburg Historical Neighborhood district. The general area contains a wide age range of properties that range from commercial/retail uses to single-family dwellings and multi-family dwellings. The subject is in relative close proximity to public schools, shopping and employment centers, and medical facilities. Many single unit homes in the area have been refurbished in recent years. The new Hattiesburg Law Enforcement Complex is under construction on Hall Avenue at the southern end of Bay Street. The majority of properties in the area are in excess of fifty years old.

SITE DESCRIPTION

The subject site is located on the easterly side of Bay Street just north of Hall Avenue. It has a frontage of 115 feet on the easterly side of Bay Street and extends to a depth of 200 feet along its southerly lot line. There is also a contiguous 50 x 200 foot offset parcel at the rear of the site. The site is irregular in shape and contains approximately 33,000 square feet. The site is at or above street grade, and appears to have adequate utility for use a single unit dwelling site. The property does not appear to lie in a designated flood area, though this is subject to certification by a professional engineer or surveyor. All public utilities area connected or available to the site. A survey and plat map are included in the addenda of this report in order to assist the reader in visualizing the property. There were no adverse soil or subsoil conditions observed; however, no soil tests have been made as a part of this report. The property is zoned R-1A, Single Unit Residential, by the zoning authorities of the City of Hattiesburg. This zoning classification requires a minimum site size of 10,000 square feet. The City of Hattiesburg intends to take a 1,338 square foot irregularly shaped parcel along Bay Street. Following the taking, the subject site will be effectively reduced in size to 31,662 square feet. Access and utility will remain essentially the same as in the before condition.

IMPROVEMENTS DESCRIPTIONS

The site is improved with a one story single unit dwelling that was constructed in 1946 per tax assessor's records. The dwelling is well removed from the proposed take and will not, in the appraiser's opinion, suffer damages due to the take. Because of this, the improvements are given no consideration in this appraisal.

PROPERTY HISTORY

The subject property appears to have been under the present ownership for in excess of five years. The subject property is not known to be listed for sale nor under contract.

TAXES

The total taxes for the subject property for 2019 are \$1,256.07. The total true value (tax value) of the property is \$84,680.00 with an assessed value of \$8,468.00.

HIGHEST AND BEST USE

In order to estimate the Highest and Best Use of the subject, the surrounding property uses as well as the four tests of Highest and Best Use were considered. These are 1)physically possible, 2)legally permissible, 3)financially feasible, and 4)maximally productive. After considering these factors, the Highest and Best Use of the site as vacant is estimated to be for a single unit house site. The Highest and Best Use of the property as presently improved is estimated to be for use as a single unit dwelling. This applies in both the before and after conditions.

INTENDED USE AND SCOPE OF THE APPRAISAL

This appraisal is intended to assist the client, Mr. Lamar Rutland of the City of Hattiesburg, in forming an opinion of value of the subject property both before and after the taking of a 1,338 square foot parcel by the City for road widening. In preparing this appraisal, the appraiser inspected the subject site; gathered information on comparable land sales and listings, confirmed and analyzed the data and applied the Sales Comparison Approach to value. As only the land was considered in this appraisal, this was the only approach deemed applicable to the subject's valuation.

APPRAISAL PROCESS

In good appraisal practice, three approaches to value are normally used to arrive at a value conclusion for a given property. These approaches are the Sales Comparison Approach, the Cost Approach, and the Income Approach. The Sales Comparison Approach is based on deriving a value indication by comparing properties that have been sold recently to the subject property and adjusting the sales price of the comparables for any basic differences. The Income Approach considers the present value of the future benefits of income and ownership. To estimate the income potential of the subject, comparable rents are obtained and reconciled to the subject, then a deduction is made for anticipated expenses. The resulting net income is then capitalized into value using a rate supported by market data. The Cost Approach provides a value indicator based on the cost to reproduce the improvements less any observed depreciation. The value estimate of the land developed through the Sales Comparison Approach is then added to the depreciated value estimate of the Improvements. As noted above, the appraiser has utilized the Sales Comparison Approach only as the land only is considered in this appraisal report.

LAND SALES

The following vacant land sales were utilized to arrive at opinion of value for the subject site.

LAND SALE NO. 1

Location: Walnut Street, Hattiesburg
Date: 04/07/2016
Price: \$20,000
Size: 18,270 sq ft
Price/SF: \$1.09
Zoning: R-1A, Single Unit Residential
Confirmation: MLS # 103560/Re/Max Real Estate
Comments: Located just south of Southern Avenue on Walnut Street.
Generally level vacant site.

LAND SALE NO. 2

Location: North 24th Avenue., Hattiesburg
Date: 04/07/2017
Price: \$22,000
Size: 36,940 sq ft
Price/SF: \$.60
Zoning: R-1B, Single Unit Residential
Confirmation: MLS # 107417/Coldwell Banker
Comments: Corner of North 24th and Quinn Street.
Vacant site purchased for future development.

LAND SALE NO. 3

Location: South 21st Avenue , Hattiesburg

Date: 06/30/2015

Price: \$10,000

Size: 15,000 sq ft

Price/SF: \$.67

Zoning: R-1A, Single Unit Residential

Confirmation: MLS # 101179/Realty Executives

Comments: Located just south of Hardy Street. Vacant site purchased for future development.

The above lot sales indicate an unadjusted range in value from \$.60 to \$1.09 per square foot. All are in the subject market segment. The subject area is virtually fully developed and there are very few vacant sites that are available for sale. Research of the market found these sales to be the most recent and relevant to the subject's valuation. Sale 1 was given the most reliance due to time and location. After considering time, size, location, topography, and other pertinent factors, the value opinion of the subject site is \$1.00 per square foot. Thus the value of the subject is:

BEFORE VALUE

33,000 sf @ \$1.00 = \$33,000.00

AFTER VALUE

31,662 sf @ \$1.00 = \$31,662.00

Value Before Taking	\$33,000.00
Value After Taking	\$31,662.00
Damages	\$ -0-
Just Compensation Due Owner	\$ 1,338.00
Rounded	\$ 1,350.00

I appreciate the opportunity to prepare this appraisal report for you. Should you have any questions regarding this matter, please do not hesitate to contact me.

Sincerely

Stan Lightsey

Stan Lightsey
RA-16

ADDENDA

APPRAISER'S CERTIFICATION

I certify that, to the best of my knowledge and belief:

- the statements contained in this report are true and correct.**
- the reported analyses, opinions, and conclusions are limited only by the reporting assumptions and limiting conditions and are my personal, impartial, and unbiased professional analyses, opinions, and conclusions.**
- I have no present or prospective interest in the property that is the subject of this report, and I have no personal interest with respect to the parties involved unless otherwise stated.**
- I have no bias with respect to the property that is the subject of this report or to the parties involved with this assignment.**
- my engagement in this assignment was not contingent upon developing or reporting predetermined results.**
- My compensation for completing this assignment is not contingent upon the developing or reporting of a predetermined value or a direction in value that favors the cause of the client, the amount of the value opinion, the attainment of a stipulated result, or the occurrence of a subsequent event directly related to the intended use of this appraisal.**
- no one provided significant appraisal assistance to the person signing this appraisal unless otherwise noted.**
- unless otherwise noted, the person signing this report has not performed an appraisal or rendered any other service regarding the subject property in the past three years.**
- The Appraisal Institute conducts a voluntary re-certification process for its designated members. I am currently certified under this program.**

Stan Lightsey

**Stan Lightsey
RA-16**

UNDERLYING ASSUMPTIONS AND LIMITING CONDITIONS

This appraisal is subject to the following limiting conditions:

The legal description furnished is assumed to be correct.

No responsibility is assumed for matters of a legal character nor does the appraiser render any opinion as to title which is assumed to be good. All existing liens and encumbrances have been disregarded unless otherwise noted and the property is appraised as though free and clear and under responsible ownership and competent management.

The appraiser believes to be accurate the information provided by others; but assumes no responsibility for its accuracy.

Possession of this report, or a copy thereof, does not carry with it the right of publication, and neither all nor any part of the contents of this report may be disseminated to the public through media of any type nor may be used for any other purpose other than that specified in the engagement by the client without the previous written consent of the appraiser and client particularly as to the value conclusions, the identity of the appraiser or the firm with which he is employed, or to the SRA designation of The Appraisal Institute.

The appraiser will not be required to give testimony or appear in court by reason of this appraisal, with reference to the property in question, unless prior arrangements have been made.

The distribution of the total valuation in this report between land and improvements applies only under the existing program of utilization. The separate valuations for land and improvements must not be used in conjunction with any other appraisal and are invalid if so used.

Unless otherwise stated in this report, the existence of hazardous substances, including but not limited to asbestos, poly-chlorinated biphenyls, petroleum leakage, mold, or agricultural chemicals; which may or may not be present on the property, or other environmental conditions; were not called to the attention of nor did the appraiser become aware of such during the inspection of the property. The appraiser has no knowledge of the existence of such materials on or in the property unless otherwise stated. The appraiser is not an expert in the environmental field and is not qualified to test for such substances or conditions. If the presence of hazardous substances or environmental conditions may affect the value of the property, the value opinion is predicated on the assumption that there is no such condition in or on the property or in such proximity thereto that it would cause a loss in value. No responsibility is assumed for such conditions; nor for any expertise or knowledge required to discover them. The client is advised to retain an expert in the field of environmental impact on real estate if such conditions are suspected.

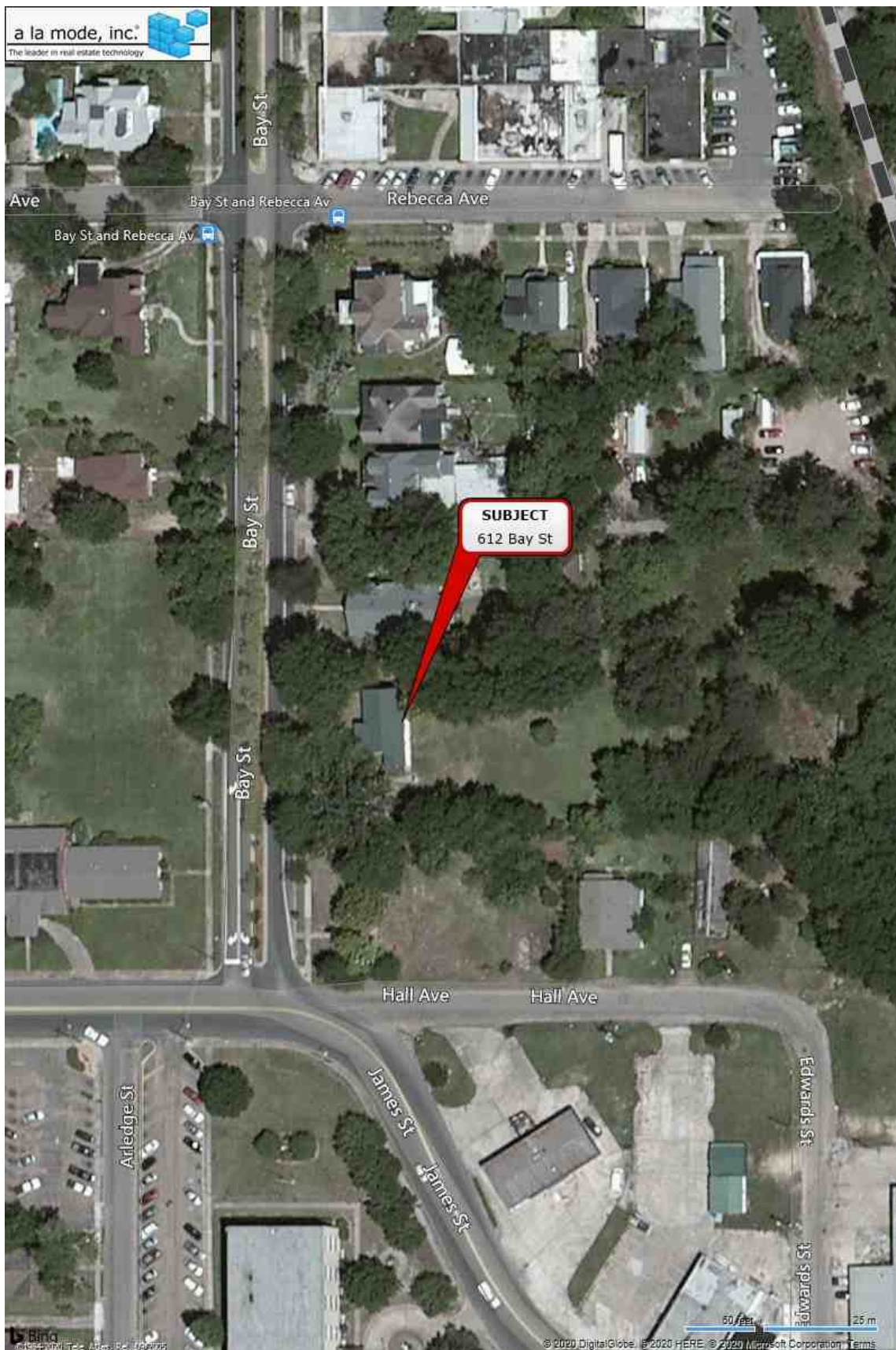
Location Map

Owner	Ronnie & Sarah Smith					
Property Address	612 Bay St					
City	Hattiesburg	County	Forrest	State	MS	Zip Code 39401
Client	City of Hattiesburg					



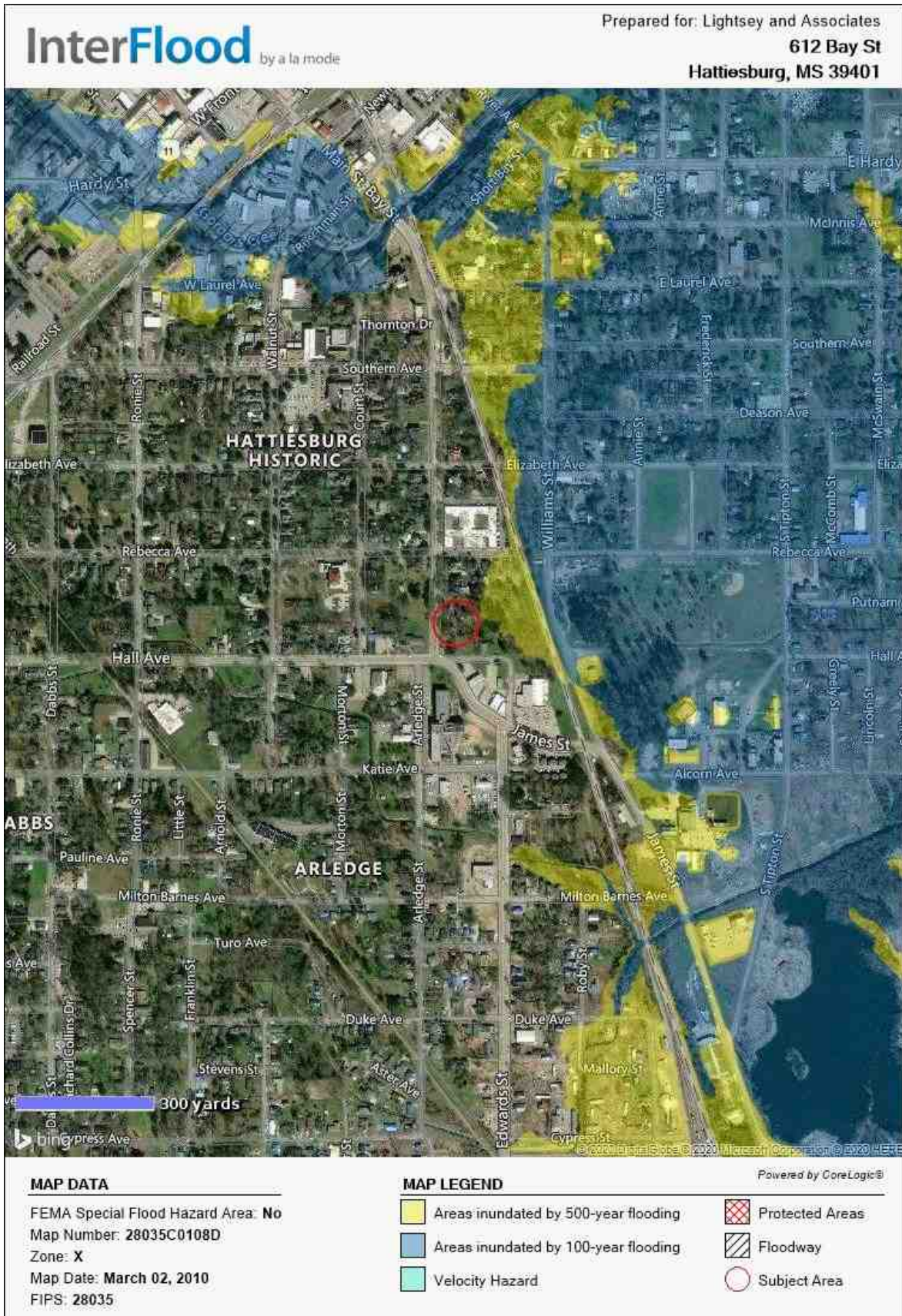
Location Map

Owner	Ronnie & Sarah Smith					
Property Address	612 Bay St					
City	Hattiesburg	County	Forrest	State	MS	Zip Code 39401
Client	City of Hattiesburg					



Flood Map

Owner	Ronnie & Sarah Smith					
Property Address	612 Bay St					
City	Hattiesburg	County	Forrest	State	MS	Zip Code 39401
Client	City of Hattiesburg					



Plat Map

3/31/2020

Forrest Parcel Viewer

+

▼

19192

×

Q

Show search results for 19192



40ft

-89.285 31.318 Degrees

<https://agdonline.maps.arcgis.com/apps/webappviewer/index.html?id=507a95128fbb423abaffacd073a5f2a5>

1/1

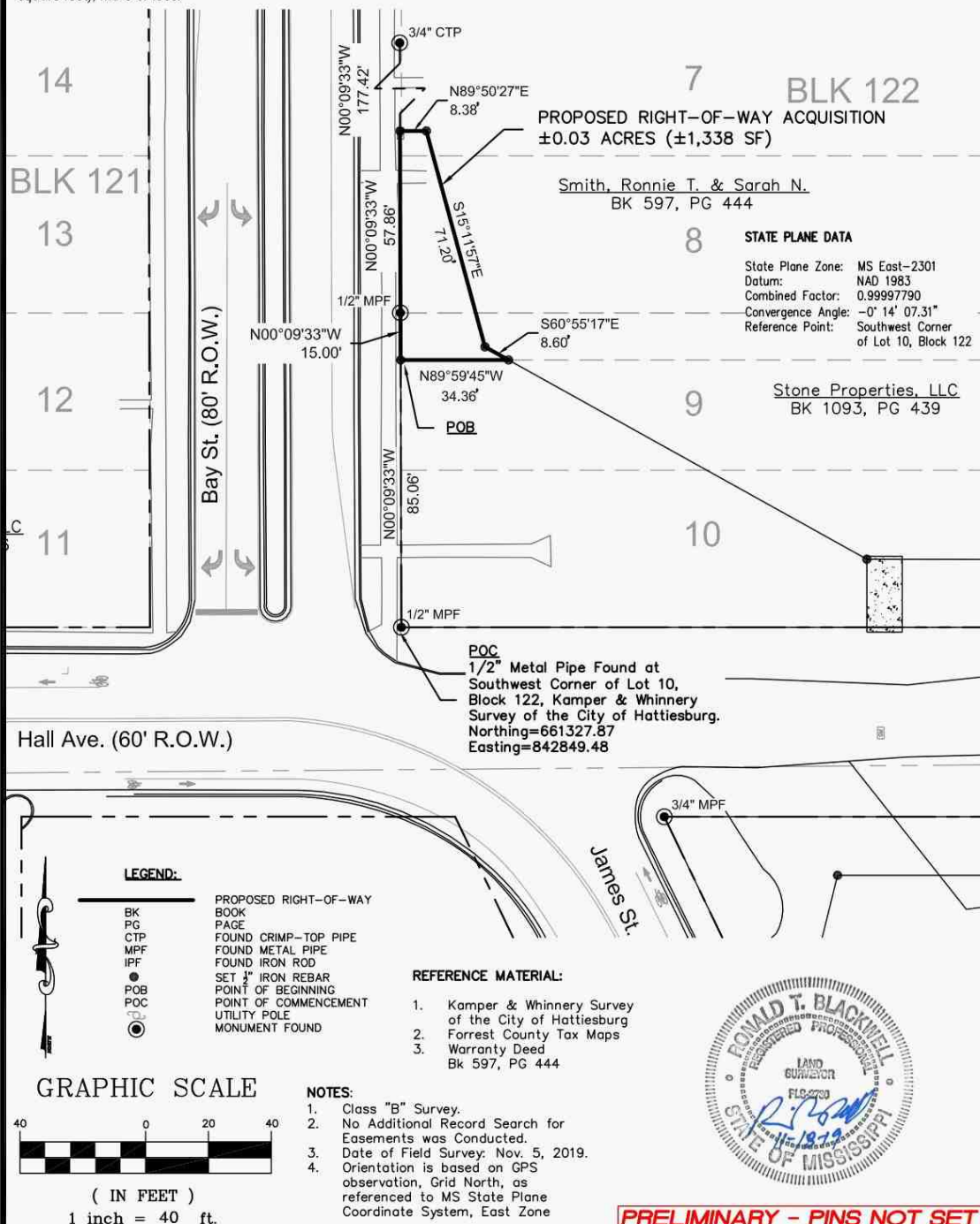
Survey

Ronnie and Sarah Smith - +/-0.03 Ac.

LEGAL DESCRIPTION (Proposed Right-of-Way Acquisition)

A parcel of land being part of Lot 7 and Lot 8 of Block 122 of Kamper and Whinnery Survey of the City of Hattiesburg, Forrest County, Mississippi, as per map or plat thereof on file in the office of Chancery Clerk of Forrest County, Mississippi, being more particularly described as follows:

Commencing at a 1/2" metal pipe at the Southwest Corner of Lot 10 of Block 122 of Said Kamper and Whinnery Survey of the City of Hattiesburg, Mississippi; said point also being a point on the eastern right-of-way boundary of Bay Street; thence run along said eastern right-of-way boundary North 00 degrees 09 minutes 33 seconds West for a distance of 85.06 feet to the Southwest Corner of a Parcel of Land being described in Deed Book 597, Page 444 on file in the office of Chancery Clerk of Forrest County, Mississippi; said point also being the POINT OF BEGINNING; thence continue along said eastern right-of-way boundary North 00 degrees 09 minutes 33 seconds West for a distance of 15.00 feet to a found 1/2" metal pipe; thence continue North 00 degrees 09 minutes 33 seconds West for a distance of 57.86 feet; thence leaving said eastern right-of-way boundary run North 89 degrees 50 minutes 27 seconds East for a distance of 8.38 feet; thence run South 15 degrees 11 minutes 57 seconds East for a distance of 71.20 feet; thence run South 60 degrees 55 minutes 17 seconds East for a distance of 8.60 feet to a point on the North Boundary of a Parcel of Land being described in Deed Book 1093, Page 439 on file in the office of Chancery Clerk of Forrest County, Mississippi; thence run along said North Boundary North 89 degrees 59 minutes 45 seconds West for a distance of 34.36 feet back to the POINT OF BEGINNING. Said parcel contains 0.03 acres (1,338 square feet), more or less.



Clearpoint
CONSULTING ENGINEERS, P.A.

6652 US Highway 98 | Hattiesburg, MS 39402
t 601.261.2609 | f 601.261.5573 | clearpointengineers.com



PREPARED FOR: **Right-of-Way Survey**

Ronnie and Sarah Smith
PPIN: 19192

CCE NO: 76242036

SCALE: 1" = 40'

DATE: 11/30/2019

CHECKED: RTB

DRAWN: JCR

SHEET 1 OF 1

Drawing Location: S:\76242036\chp\PLATS\76242036-PLATS.dwg

Tax Data

3/31/2020

Delta Computer Systems

Forrest County Mississippi



Delta Computer Systems, Inc.

Property Link FORREST COUNTY, MS

Current Date **3/31/2020** Tax Year **2019**
Records Last Updated **3/31/2020**

PROPERTY DETAIL

OWNER SMITH RONNIE T & SARAH N **ACRES** : **NA**
612 BAY ST **LAND VALUE** : 33520
IMPROVEMENTS : 51160
HATTIESBURG MS 39401-0000 **TOTAL VALUE** : 84680
ASSESSED : 8468

PARCEL 2-029P-10-302.00
ADDRESS 612 BAY STREET

	TAX INFORMATION		
YEAR 2019	TAX DUE	PAID	BALANCE
COUNTY	400.93	400.93	0.00
CITY	449.90	449.90	0.00
SCHOOL	392.80	392.80	0.00
PENALTY & OTHER	12.44	12.44	0.00
TOTAL	1256.07	1256.07	0.00

LAST PAYMENT DATE 2 / 27 / 2020

MISCELLANEOUS INFORMATION	
EXEMPT CODE	LEGAL
HOMESTEAD CODE REG	LT 7 & 8 & N 15FT OF 9 & N 200FT OF 11 BLK 122
TAX DISTRICT 1110	PREV #:H0444-55-006
PPIN 019192	KAMPER & WHINNERY 1ST
SECTION 10	
TOWNSHIP 03N	
RANGE 13W	

Book Page

[PURCHASE COUNTY TAX SALE FILES](#)

TAX SALES HISTORY, FOR UNPAID TAXES

Year	Sold To	Redeemed Date/By
NO TAX SALES FOUND		

[View Appraisal Record](#)

[Back](#)

[Forrest County Home](#) | [Chancery Court](#) | [Instrument Indexing](#) | [Online Property Tax Payments](#) | [Online Personal Property Tax Payments](#) | [Online Mobile Home Tax Payments](#) | [Online Car Tag Payments](#)
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Photograph Addendum

Owner	Ronnie & Sarah Smith					
Property Address	612 Bay St					
City	Hattiesburg	County	Forrest	State	MS	Zip Code 39401
Client	City of Hattiesburg					



View of Subject



View of Acquisition Area

Photograph Addendum

Owner	Ronnie & Sarah Smith					
Property Address	612 Bay St					
City	Hattiesburg	County	Forrest	State	MS	Zip Code 39401
Client	City of Hattiesburg					



View of Bay Street



Memorandum

To: Mayor Toby Barker and Members of City Council

From: Lamar Rutland

cc:

Date: Tuesday, August 18, 2020

Re: Authorize acquisition of a portion of a parcel of property identified as Forrest County Parcel No. 2-030M-11-018.00 (PPIN 026749) for the Hall Avenue Overpass Project: Acknowledge receipt of Appraisal Report; Determine the appraisal valuation of \$3,300.00 to be Just Compensation for the aforementioned portion of the parcel; Authorize Mayor to make a Fair Market Value Offer for the property of \$3,300.00; Authorize Mayor to execute any and all documents required to complete the transaction; Authorize issuance of a manual check in payment thereof upon closing of transaction.

File Number: 2020-586

Minute Book #

Summary

Authorize acquisition of a portion of a parcel of property identified as Forrest County Parcel No. 2-030M-11-018.00 (PPIN 026749) for the Hall Avenue Overpass Project: Acknowledge receipt of Appraisal Report; Determine the appraisal valuation of \$3,300.00 to be Just Compensation for the aforementioned portion of the parcel; Authorize Mayor to make a Fair Market Value Offer for the property of \$3,300.00; Authorize Mayor to execute any and all documents required to complete the transaction; Authorize issuance of a manual check in payment thereof upon closing of transaction.

Recommendation Statement

i recommend approval of this item.

Please place this on the August 18, 2020 City Council meeting for consideration.

Richard & Thomas, PLLC
Attorneys at Law

132 Westover Drive
Hattiesburg, MS 39402

Stephen K. Thomas

(601)602-2457 phone
(601)602-2458 fax

February 18, 2020

City of Hattiesburg
Attn: Lamar Rutland
P.O. Box 1898
Hattiesburg, MS 39403-1898

Re: Hall Avenue East Project (Property 17)

A part of the Northeast Quarter of the Southwest Quarter of Section 11, Township 4 North Range 13 West, Forrest County, Mississippi, and more particularly described as follows:
Commence at the Northwest corner of the Northeast Quarter of the Southwest Quarter of said Section, Township, and Range, and run South along the West line of said forty for a distance of 30 feet to the Point of Beginning; thence continue South along the West line of said forty for a distance of 100 feet; thence run East for a distance of 200 feet; run thence North 100 feet to the South line of Hardy Street; run thence thence West along the South line of Hardy Street for a distance of 200 feet back to the Point of Beginning.

Pursuant to your request, I have examined the land records on file in the office of the Chancery Clerk of Forrest County, Mississippi, relating to the above described real property for a period back of thirty-one years prior to this date, and find sufficient evidence that the above conveyed by Quitclaim Deed to **EAST HARDY MAGNOLIA, LLC, a Mississippi limited liability company**, dated July 22, 2013, and recorded in Land Deed Book 1157 at Pages 198. Based upon my examination for the aforesaid period and with the presumption that prior conveyances in chain of title are legal and valid, it is my opinion that the said East Hardy Magnolia, LLC, owns the fee simple, merchantable title in and to above described real property subject to the following liens, encumbrances and reservations;

RESERVATIONS

1. This opinion does not cover the oil, gas or other minerals lying on or under said property and no opinion is given thereon.
2. As no current survey is present, I do not certify as to the actual occupancy, nor to matters which should be revealed by an accurate survey of subject lands, nor do I certify rights of parties in possession, deficiency in the quantity of lands, boundary line disputes, roadways, unrecorded

servitudes or easements, any matters not of proper record which would be disclosed by a true and accurate survey and inspection of the property, and easements or other uses of subject lands not so visible from the surface.

3. Title is subject to any liability or loss due to environmental contamination by past uses of the property as a toxic hazardous waste site, or due to violation of any environmental protection law of any governmental body.

4. Title is subject to instruments of record being properly filed and indexed in the office of the Chancery Clerk where the property is located.

5. This is not a guarantee of title and is not an insurance policy on said property, and this opinion is for the use and benefit of only the party or parties to whom it is addressed and may not be availed of or relied upon by any other person(s) or entity.

ENCUMBRANCES

None.

TAXES

Taxes assessed by Forrest County, Mississippi for 2020 are not due and owing but would constitute a lien against said property if not paid by January 31, 2021.

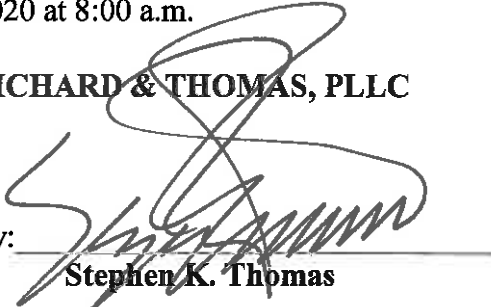
2019 Forrest County ad valorem taxes for Parcel No. 2-030M-11-018.00, PPIN 26749, are **paid** in the amount of \$982.00.

JUDGMENTS

This opinion reflects only those judgments recorded on the Judgment Rolls in the office of the Circuit Clerk of Forrest County, Mississippi. As of this date, no such judgments appear.

This, the 18th day of February, A.D., 2020 at 8:00 a.m.

RICHARD & THOMAS, PLLC

By: 

Stephen K. Thomas

APPRAISAL OF PROPERTY AT
1503 EAST HARDY STREET
HATTIESBURG, MS

LIGHTSEY & ASSOCIATES

P.O. Box 15489
Hattiesburg, MS 39404
(601) 584-6260

January 13, 2020

Mr. Lamar Rutland
City of Hattiesburg
P.O. Box 1898
Hattiesburg, MS 39403

RE: Appraisal of property at 1503 East Hardy Street,
Hattiesburg, MS

Dear Mr. Rutland:

In accordance with the your request, I have made an inspection and investigation of the property located on 1400 ½ East Hardy Street, Hattiesburg, Mississippi, for the purpose of forming an opinion of the Market Value, in fee simple, as of January 10, 2020, the effective date of the appraisal being the date the subject property was last inspected. The value opinion is both before and after the taking of a 2,243 square foot parcel (.05 acre) in conjunction with the Hall Avenue railroad overpass by the City of Hattiesburg and noting damages to the remainder, if any.

Market Value is defined as the most probable price in cash, terms equivalent to cash, or in other precisely revealed terms, for which the property will sell in an open and competitive market under all conditions requisite to a fair sale, with the buyer and seller each acting prudently, knowledgeably, and for self interest, and assuming that neither is under undue duress.

NEIGHBORHOOD DESCRIPTION

The subject area lies to the east of downtown Hattiesburg and is located between Williams Street and the Leaf River in what is known as East Hattiesburg. The general area contains a wide age range of properties that range from commercial/retail uses to single-family dwellings and multi-family dwellings. The subject is in relative close proximity to public schools, shopping and employment centers, and medical facilities. East Hardy Street is a major traffic artery between Hattiesburg and the City of Petal to the east, which is located just east of the Leaf River. The majority of properties in the area are in excess of fifty years old.

SITE DESCRIPTION

The subject site is located on the southerly side of East Hardy Street at the southeast corner of East Hardy and Gulfport Street. It has a frontage of 200 feet on the southerly side of East Hardy Street and extends to a depth of 100 feet along Gulfport Street. The site is generally rectangular in shape and contains approximately 20,000 square feet. The site is at or above street grade, and appears to have adequate utility for use a commercial site. The property appears to lie in a designated flood area, though this is subject to certification by a professional engineer or surveyor. All public utilities area connected or available to the site. A survey and plat map are included in the addenda of this report in order to assist the reader in visualizing the property. There were no adverse soil or subsoil conditions observed; however, no soil tests have been made as a part of this report. The property is zoned B-3 Community Business District, by the zoning authorities of the City of Hattiesburg. The City of Hattiesburg intends to take a 2,243 square foot irregularly shaped parcel in the northwesterly corner and along East Hardy Street for road widening purposes. Following the taking, the subject site will be effectively reduced in size to 17,757 square feet. Access and utility will remain essentially the same. It is the appraiser's opinion that there will be no damages to the remainder property.

IMPROVEMENTS DESCRIPTIONS

The subject property is presently improved with an office and shop building, some chain link fencing, and sheds. These improvements, other than some fencing are well removed from the proposed right of way and will not be affected by the take. The attached survey shows some fencing in the proposed take area. It is assumed that the City of Hattiesburg will replace this fencing upon completion of the project. It is the appraiser's opinion that the taking will have no effect on the improvements, thus they are given no consideration in this appraisal report.

PROPERTY HISTORY

The subject property appears to have been under the present ownership for in excess of five years. The subject property is not known to be listed for sale nor under contract.

TAXES

The total taxes for the subject property for 2019 are \$982.00. The total true value (tax value) of the property is \$35,91.00 with an assessed value of \$5,387.00.

HIGHEST AND BEST USE

In order to estimate the Highest and Best Use of the subject, the surrounding property uses as well as the four tests of Highest and Best Use were considered. These are 1)physically possible, 2)legally permissible, 3)financially feasible, and 4)maximally productive. After considering these factors, the Highest and Best Use of the site as vacant is estimated to be for commercial development. The Highest and Best Use of the property as presently improved is estimated to be for commercial use for a service related business.

INTENDED USE AND SCOPE OF THE APPRAISAL

This appraisal is intended to assist the client, Mr. Lamar Rutland of the City of Hattiesburg, in forming an opinion of value of the subject property both before and after the taking of a 2,243 square foot parcel by the City for road widening. In preparing this appraisal, the appraiser inspected the subject site; gathered information on comparable land sales and listings, confirmed and analyzed the data and applied the Sales Comparison Approach to value. As only the land was considered in this appraisal, this was the only approach deemed applicable to the subject's valuation.

APPRAISAL PROCESS

In good appraisal practice, three approaches to value are normally used to arrive at a value conclusion for a given property. These approaches are the Sales Comparison Approach, the Cost Approach, and the Income Approach. The Sales Comparison Approach is based on deriving a value indication by comparing properties that have been sold recently to the subject property and adjusting the sales price of the comparables for any basic differences. The Income Approach considers the present value of the future benefits of income and ownership. To estimate the income potential of the subject, comparable rents are obtained and reconciled to the subject, then a deduction is made for anticipated expenses. The resulting net income is then capitalized into value using a rate supported by market data. The Cost Approach provides a value indicator based on the cost to reproduce the improvements less any observed depreciation. The value estimate of the land developed through the Sales Comparison Approach is then added to the depreciated value estimate of the Improvements. As noted above, the appraiser has utilized the Sales Comparison Approach only as the land only is considered in this appraisal report.

LAND SALES

The following vacant land sales were utilized to arrive at opinion of value for the subject site.

LAND SALE NO. 1

Location: East Hardy Street, Hattiesburg
Date: 08/22/2018
Price: \$43,000
Size: 29,023 sq ft
Price/SF: \$1.48
Zoning: B-3, Community Business District
Confirmation: HUD Statement/Erik Lowrey
Comments: Located just west of Klondyke Street on East Hardy.
Vacant site at sale. Some chain link fencing.

LAND SALE NO. 2

Location: 305 Mobile Street., Hattiesburg
Date: 12/04/2008
Price: \$22,000
Size: 36,475 sq ft
Price/SF: \$.60
Zoning: B-5, Regional Business District
Confirmation: Assist 2 Sell Real Estate
Comments: Located just north of Main Street.
Vacant site purchased for future development.

LAND SALE NO. 3

Location: 221 Market Street , Hattiesburg
Date: 08/31/2017
Price: \$30,000
Size: 24,829 sq ft
Price/SF: \$1.21
Zoning: B-5, Regional Business District
Confirmation: Berkshire Hathaway
Comments: Located just north of Main Street. Vacant site purchased for future development.

LAND SALE NO. 4

Location: 702 West 7th Street, Hattiesburg
Date: 04/29/2009
Price: \$30,000
Size: 43,907 sq ft
Price/SF: \$.68
Zoning: B-2, Neighborhood Business District
Confirmation: J E Smith Realty
Comments: Located north of Hardy Street and west of downtown. Vacant site purchased for future development.

The above lot sales indicate an unadjusted range in value from \$.60 to \$1.48 per square foot. All are in the subject market segment. The subject area is virtually fully developed and there are very few vacant sites that are available for sale. Research of the market found these sales to be the most recent and relevant to the subject's valuation. Sale 1 was given the most reliance due to time and location. After considering time, size, location, topography, and other pertinent factors, the value opinion of the subject site is \$1.45 per square foot. Thus the value of the subject is:

BEFORE VALUE

20,000 sf @ \$1.45 = \$29,000.00

AFTER VALUE

17,757 sf @ \$1.45 = \$25,748.00

Value Before Taking	\$29,000.00
Value After Taking	25,748.00
Damages	-0-
Just Compensation Due Owner	\$ 3,252.00
Rounded	\$ 3,300.00

I appreciate the opportunity to prepare this appraisal report for you. Should you have any questions regarding this matter, please do not hesitate to contact me.

Sincerely

Stan Lightsey

Stan Lightsey, SRA
Appraisal Institute
RA-16

ADDENDA

APPRAISER'S CERTIFICATION

I certify that, to the best of my knowledge and belief:

- the statements contained in this report are true and correct.**
- the reported analyses, opinions, and conclusions are limited only by the reporting assumptions and limiting conditions and are my personal, impartial, and unbiased professional analyses, opinions, and conclusions.**
- I have no present or prospective interest in the property that is the subject of this report, and I have no personal interest with respect to the parties involved unless otherwise stated.**
- I have no bias with respect to the property that is the subject of this report or to the parties involved with this assignment.**
- my engagement in this assignment was not contingent upon developing or reporting predetermined results.**
- My compensation for completing this assignment is not contingent upon the developing or reporting of a predetermined value or a direction in value that favors the cause of the client, the amount of the value opinion, the attainment of a stipulated result, or the occurrence of a subsequent event directly related to the intended use of this appraisal.**
- no one provided significant appraisal assistance to the person signing this appraisal unless otherwise noted.**
- unless otherwise noted, the person signing this report has not performed an appraisal or rendered any other service regarding the subject property in the past three years.**
- The Appraisal Institute conducts a voluntary re-certification process for its designated members. I am currently certified under this program.**

Stan Lightsey

Stan Lightsey, SRA

UNDERLYING ASSUMPTIONS AND LIMITING CONDITIONS

This appraisal is subject to the following limiting conditions:

The legal description furnished is assumed to be correct.

No responsibility is assumed for matters of a legal character nor does the appraiser render any opinion as to title which is assumed to be good. All existing liens and encumbrances have been disregarded unless otherwise noted and the property is appraised as though free and clear and under responsible ownership and competent management.

The appraiser believes to be accurate the information provided by others; but assumes no responsibility for its accuracy.

Possession of this report, or a copy thereof, does not carry with it the right of publication, and neither all nor any part of the contents of this report may be disseminated to the public through media of any type nor may be used for any other purpose other than that specified in the engagement by the client without the previous written consent of the appraiser and client particularly as to the value conclusions, the identity of the appraiser or the firm with which he is employed, or to the SRA designation of The Appraisal Institute.

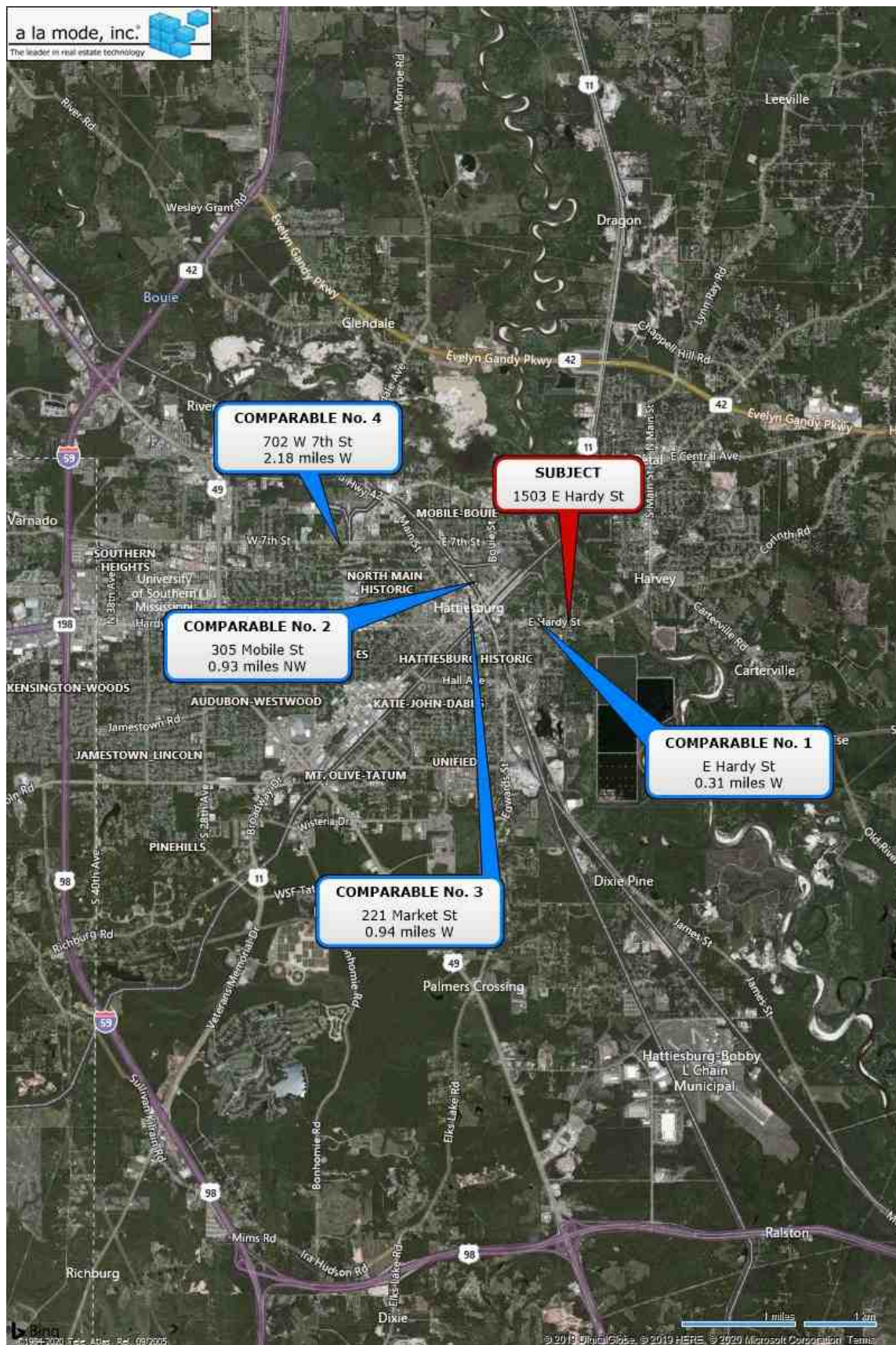
The appraiser will not be required to give testimony or appear in court by reason of this appraisal, with reference to the property in question, unless prior arrangements have been made.

The distribution of the total valuation in this report between land and improvements applies only under the existing program of utilization. The separate valuations for land and improvements must not be used in conjunction with any other appraisal and are invalid if so used.

Unless otherwise stated in this report, the existence of hazardous substances, including but not limited to asbestos, poly-chlorinated biphenyls, petroleum leakage, mold, or agricultural chemicals; which may or may not be present on the property, or other environmental conditions; were not called to the attention of nor did the appraiser become aware of such during the inspection of the property. The appraiser has no knowledge of the existence of such materials on or in the property unless otherwise stated. The appraiser is not an expert in the environmental field and is not qualified to test for such substances or conditions. If the presence of hazardous substances or environmental conditions may affect the value of the property, the value opinion is predicated on the assumption that there is no such condition in or on the property or in such proximity thereto that it would cause a loss in value. No responsibility is assumed for such conditions; nor for any expertise or knowledge required to discover them. The client is advised to retain an expert in the field of environmental impact on real estate if such conditions are suspected.

Location Map

Owner	East Hardy Magnolia, LLC					
Property Address	1503 E Hardy St					
City	Hattiesburg	County	Forrest	State	MS	Zip Code 39401
Client	City of Hattiesburg					



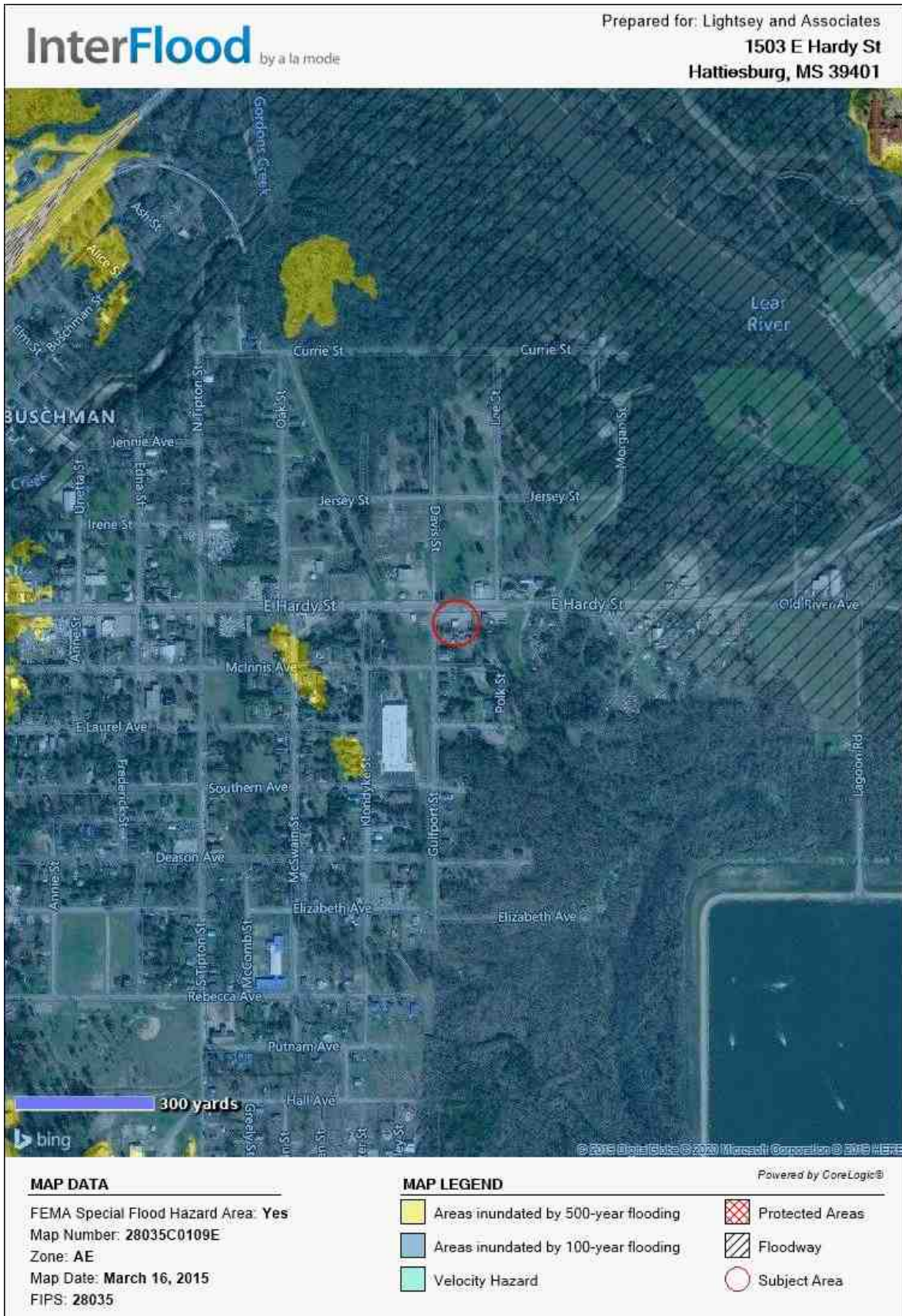
Location Map

Owner	East Hardy Magnolia, LLC					
Property Address	1503 E Hardy St					
City	Hattiesburg	County	Forrest	State	MS	Zip Code 39401
Client	City of Hattiesburg					



Flood Map

Owner	East Hardy Magnolia, LLC					
Property Address	1503 E Hardy St					
City	Hattiesburg	County	Forrest	State	MS	Zip Code 39401
Client	City of Hattiesburg					



Plat Map



Tax Data

1/13/2020

Delta Computer Systems

Forrest County Mississippi



Delta Computer Systems, Inc.

Property Link FORREST COUNTY, MS

Current Date 1/13/2020

Tax Year 2019
Records Last Updated 1/13/2020

PROPERTY DETAIL

OWNER EAST HARDY MAGNOLIA LLC **ACRES :** **NA**
16 PIN OAK POINT **LAND VALUE :** 19350
IMPROVEMENTS : 16560
PETAL MS 39465 **TOTAL VALUE:** 35910
ASSESSED : 5387

PARCEL 2-030M-11-018.00

ADDRESS 1503 E HARDY STREET

TAX INFORMATION

YEAR 2019	TAX DUE	PAID	BALANCE
COUNTY	350.48	0.00	350.48
CITY	286.21	0.00	286.21
SCHOOL	345.31	0.00	345.31
TOTAL	982.00	0.00	982.00

Pay Tax

LAST PAYMENT DATE **NA**

MISCELLANEOUS INFORMATION

EXEMPT CODE	LEGAL
HOMESTEAD CODE None	BG 30FT S NW/CR NE1/4 SW1/4 S
TAX DISTRICT 1110	100FTE 200FT N 100FT W 200FT
PPIN 026749	TO BG
SECTION 11	PREV #:H1020-00-021
TOWNSHIP 04N	B 1157 P 198 07/22/2013
RANGE 13W	

Book 1157 **Page** 198

[PURCHASE COUNTY TAX SALE FILES](#)

TAX SALES HISTORY, FOR UNPAID TAXES

Year	Sold To	Redeemed Date/By
NO TAX SALES FOUND		

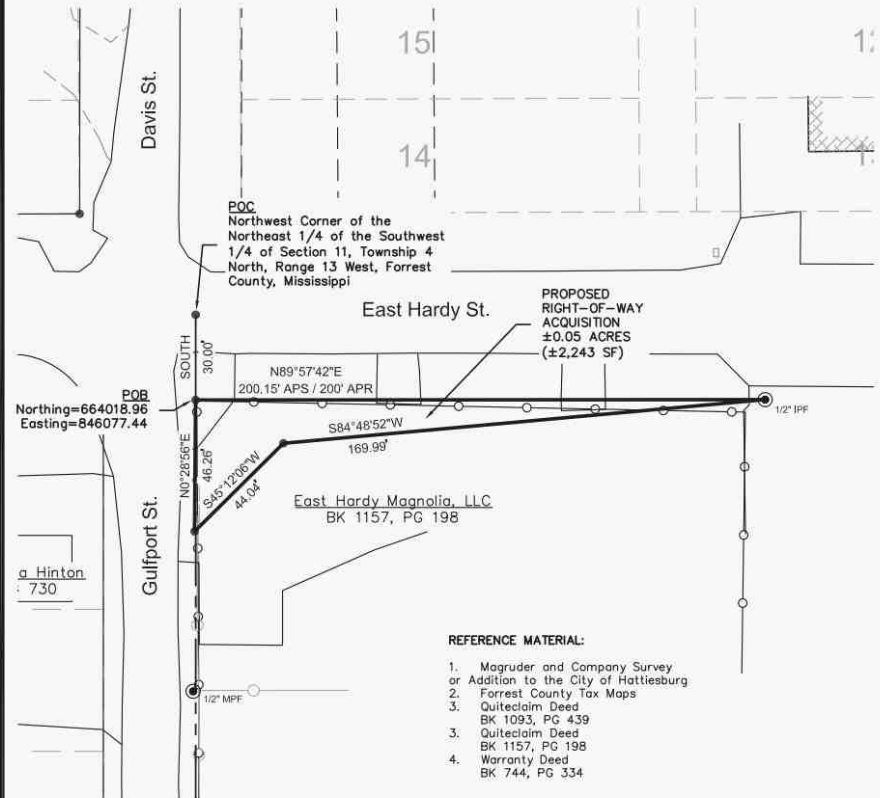
[View Appraisal Record](#)

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Survey

East Hardy Magnolia, LLC - ± 0.05 Ac.
LEGAL DESCRIPTION (Proposed Right-of-Way Acquisition)
 A parcel of land being located the Northeast $\frac{1}{4}$ of the Southwest $\frac{1}{4}$ of Section 11, Township 4 North, Range 13 West, Forrest County, Mississippi, being more particularly described as follows:
 Commencing at the Northwest Corner of said Northeast $\frac{1}{4}$ of the Southwest $\frac{1}{4}$ of Section 11; thence run South for a distance of 30.00 feet, said point being a point on the southern right-of-way boundary of East Hardy Street, said point also being Point of Beginning; thence run and along said southern right-of-way boundary North 89 degrees 57 minutes 42 seconds East for a distance of 200.15 feet to a $\frac{1}{2}$ " iron pin; thence leaving said right-of-way boundary South 84 degrees 48 minutes 52 seconds West for a distance of 169.99 feet; thence run South 45 degrees 12 minutes 06 seconds West for a distance of 44.04 feet to a point on the eastern right-of-way boundary of Gulfport Street; thence run and along said eastern right-of-way boundary North 00 degrees 28 minutes 56 seconds East for a distance of 46.26 feet back to the POINT OF BEGINNING. Said parcel contains 0.05 acres (2,243 square feet), more or less.



REFERENCE MATERIAL:

1. Magruder and Company Survey or Addition to the City of Hattiesburg
2. Forrest County Tax Maps
3. Quitclaim Deed BK 1093, PG. 439
4. Quitclaim Deed BK 1157, PG. 198
5. Warranty Deed BK 744, PG. 334

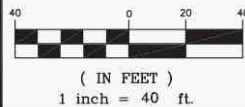
STATE PLANE DATA

State Plane Zone: MS East-2301
 Datum: NAD 1983
 Combined Factor: 0.99997790
 Convergence Angle: $-0^{\circ} 14' 07.31''$
 Reference Point: POB

LEGEND:

BK BOOK
 PG PAGE
 CTP CRIMP-TOP PIPE
 MPF FOUND METAL PIPE
 IPF FOUND IRON ROD
 SET 1/2" IRON REBAR
 POB POINT OF BEGINNING
 POC POINT OF COMMENCEMENT
 UTILITY POLE
 MONUMENT FOUND

GRAPHIC SCALE



NOTES:

1. Class "B" Survey.
2. No Additional Record Search for Easements was Conducted.
3. Date of Field Survey: Nov. 5, 2019.
4. Orientation is based on GPS observation, Grid North, as referenced to MS State Plane Coordinate System, East Zone

PRELIMINARY - PINS NOT SET

Clearpoint
 CONSULTING ENGINEERS, P.A.
 6652 US Highway 98 | Hattiesburg, MS 39402
 t 601.261.2609 | f 601.261.5573 | clearpointengineers.com



PREPARED FOR:
Right-of-Way Survey
East Hardy Magnolia, LLC
PPIN: 26749

CCE NO.: 76242036
 SCALE: 1" = 40'
 DATE: 11/30/2019
 CHECKED: RTB
 DRAWN: JCR
 SHEET 1 OF 1

Drawing Location S:\76242036\dwg\PLAT8\76242036-PLAT8.dwg

Photograph Addendum

Owner	East Hardy Magnolia, LLC				
Property Address	1503 E Hardy St				
City	Hattiesburg	County	Forrest	State	MS Zip Code 39401
Client	City of Hattiesburg				



View of Acquisition Area



View of Subject Building

Photograph Addendum

Owner	East Hardy Magnolia, LLC					
Property Address	1503 E Hardy St					
City	Hattiesburg	County	Forrest	State	MS	Zip Code 39401
Client	City of Hattiesburg					



View of East Hardy Street



View of Gulfport Street



Memorandum

To: Mayor Toby Barker and Members of City Council

From: Lamar Rutland

cc:

Date: Tuesday, August 18, 2020

Re: Authorize acquisition of a portion of a parcel of property identified as Forrest County Parcel No. 2-030M-11-023.00 (PPIN 021192) for the Hall Avenue Overpass Project: Acknowledge receipt of Appraisal Report; Determine the appraisal valuation of \$250.00 to be Just Compensation for the aforementioned portion of the parcel; Authorize Mayor to make a Fair Market Value Offer for the property of \$250.00; Authorize Mayor to execute any and all documents required to complete the transaction; Authorize issuance of a manual check in payment thereof upon closing of transaction.

File Number: 2020-587

Minute Book #

Summary

Authorize acquisition of a portion of a parcel of property identified as Forrest County Parcel No. 2-030M-11-023.00 (PPIN 021192) for the Hall Avenue Overpass Project: Acknowledge receipt of Appraisal Report; Determine the appraisal valuation of \$250.00 to be Just Compensation for the aforementioned portion of the parcel; Authorize Mayor to make a Fair Market Value Offer for the property of \$250.00; Authorize Mayor to execute any and all documents required to complete the transaction; Authorize issuance of a manual check in payment thereof upon closing of transaction.

Recommendation Statement

I recommend approval of this item.

Please place this on the August 18, 2020 City Council meeting for consideration.

Richard & Thomas, PLLC
Attorneys at Law

Stephen K. Thomas

132 Westover Drive
Hattiesburg, MS 39402
(601)602-2457 phone
(601)602-2458 fax

October 1, 2019

City of Hattiesburg
Attn: Lamar Rutland
P.O. Box 1898
Hattiesburg, MS 39403-1898

Re: Hall Avenue East Project (Property 15)

A part of Lots 8, 9, and 10, Block 1 of the D.D. McInnis 2nd Survey, Hattiesburg, Forrest County, Mississippi, and more particularly described as commencing at the Northeast corner of the above said Lot 10; thence West and along the South margin of East Hardy (River) Street 139.75 feet to the Point of Beginning; thence continue West and along the South margin line of East Hardy (River) Street 59 feet to the Easterly margin of the Illinois Central Railroad; thence at an interior angle of 68 degrees 44 minutes to the right run Southeasterly and along the Easterly margin of said railroad 133.08 feet; thence at an interior angle of 111 degrees 16 minutes to the right run East 7.55 feet; thence at an interior angle of 91 degrees 28 minutes to the right run Northerly 124.06 feet to the Point of Beginning.

Also referred to as:

Cm. NE/CR Lt 10 W 139.75 to POB S 124 W to RR NWLY to E Hardy St E to POB Blk 1 D D McInnis 2nd **1403 E Hardy St**

Subdivision: D.D. McInnis – 2nd Addition

Section 11, Township 4 N, Range 13W

Parcel No.: 2030M11023.00 PPIN: 21192

Forrest County, Mississippi

Pursuant to your request, I have examined the land records on file in the office of the Chancery Clerk of Forrest County, Mississippi, relating to the above described real property for a period back of thirty-one years prior to this date, and find sufficient evidence that the above described property was conveyed by Forfeited Tax Land Patent from the State of Mississippi to **HARVELL HARRIS, JR. and BELINDA F. HARRIS**, dated June 11, 2015, and recorded in Land Deed Book 1204 at Page 601. Based upon my examination for the aforesaid period and with the presumption that prior conveyances in chain of title are legal and valid, it is my opinion that the said Harvell Harris, Jr, and Belinda Harris, own a tax title in and to above described real property subject to the following liens, encumbrances and reservations;

RESERVATIONS

1. This opinion does not cover the oil, gas or other minerals lying on or under said property and no opinion is given thereon.
2. As no current survey is present, I do not certify as to the actual occupancy, nor to matters which should be revealed by an accurate survey of subject lands, nor do I certify rights of parties in possession, deficiency in the quantity of lands, boundary line disputes, roadways, unrecorded servitudes or easements, any matters not of proper record which would be disclosed by a true and accurate survey and inspection of the property, and easements or other uses of subject lands not so visible from the surface.
3. Title is subject to any liability or loss due to environmental contamination by past uses of the property as a toxic hazardous waste site, or due to violation of any environmental protection law of any governmental body.
4. Title is subject to instruments of record being properly filed and indexed in the office of the Chancery Clerk where the property is located.
5. This is not a guarantee of title and is not an insurance policy on said property, and this opinion is for the use and benefit of only the party or parties to whom it is addressed and may not be availed of or relied upon by any other person(s) or entity.
6. Title is subject to confirmation of the vesting Forfeited Tax Land Patent from the State of Mississippi, dated June 11, 2015, and recorded in Land Deed Book 1204 at Page 601.
7. Title is subject to that the interest of **Deborah Fay Weathers**, who is the last owner of the real property prior to the aforementioned tax sale matured to the State of Mississippi.
8. Title is subject to that certain Resolution of Condemnation of Dilapidated and Unsafe Property issued by the City of Hattiesburg, dated January 8, 2002, and recorded in Land Deed Book 878 at Page 505.
9. Title is subject to that certain Resolution of Condemnation of Dilapidated and Unsafe Property issued by the City of Hattiesburg, dated March 19, 2002, and recorded in Land Deed Book 884 at Page 481.

ENCUMBRANCES

None.

TAXES

Taxes assessed by Forrest County, Mississippi for 2019 are not due and owing but would constitute a lien against said property if not paid by January 31, 2020.

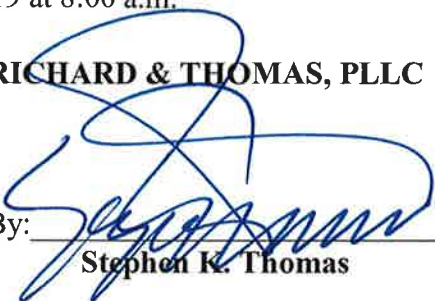
2018 Forrest County ad valorem taxes for Parcel No. 2-0030M-11-023.00, PPIN 21192, are **paid** in the amount of \$132.25.

JUDGMENTS

This opinion reflects only those judgments recorded on the Judgment Rolls in the office of the Circuit Clerk of Forrest County, Mississippi. As of this date, no such judgments appear.

This, the 1st day of October, A.D., 2019 at 8:00 a.m.

RICHARD & THOMAS, PLLC

By: 
Stephen K. Thomas

APPRAISAL OF PROPERTY AT
1405 EAST HARDY STREET
HATTIESBURG, MS

LIGHTSEY & ASSOCIATES

P.O. Box 15489
Hattiesburg, MS 39404
(601) 584-6260

January 16, 2020

Mr. Lamar Rutland
City of Hattiesburg
P.O. Box 1898
Hattiesburg, MS 39403

RE: Appraisal of property at 1405 East Hardy Street,
Hattiesburg, MS

Dear Mr. Rutland:

In accordance with the your request, I have made an inspection and investigation of the property located on 1405 East Hardy Street, Hattiesburg, Mississippi, for the purpose of forming an opinion of the Market Value, in fee simple, as of January 10, 2020, the effective date of the appraisal being the date the subject property was last inspected. The value opinion is both before and after the taking of a 169 square foot parcel (.004 acre) in conjunction with the Hall Avenue railroad overpass by the City of Hattiesburg and noting damages to the remainder, if any.

Market Value is defined as the most probable price in cash, terms equivalent to cash, or in other precisely revealed terms, for which the property will sell in an open and competitive market under all conditions requisite to a fair sale, with the buyer and seller each acting prudently, knowledgeably, and for self interest, and assuming that neither is under undue duress.

NEIGHBORHOOD DESCRIPTION

The subject area lies to the east of downtown Hattiesburg and is located between Williams Street and the Leaf River in what is known as East Hattiesburg. The general area contains a wide age range of properties that range from commercial/retail uses to single-family dwellings and multi-family dwellings. The subject is in relative close proximity to public schools, shopping and employment centers, and medical facilities. East Hardy Street is a major traffic artery between Hattiesburg and the City of Petal to the east, which is located just east of the Leaf River. The majority of properties in the area are in excess of fifty years old.

SITE DESCRIPTION

The subject site is located on the southerly side of East Hardy Street just west corner of East Hardy and Gulfport Street. It has a frontage of 62.6 feet on the southerly side of East Hardy Street and extends to a depth of 124 feet. The site is irregular in shape and contains approximately 4,783 square feet. The site is at or above street grade, and appears to have adequate utility for use a commercial site. The property appears to lie in a designated flood area, though this is subject to certification by a professional engineer or surveyor. All public utilities are connected or available to the site. A survey and plat map are included in the addenda of this report in order to assist the reader in visualizing the property. There were no adverse soil or subsoil conditions observed; however, no soil tests have been made as a part of this report. The property is zoned B-3 Community Business District, by the zoning authorities of the City of Hattiesburg. The City of Hattiesburg intends to take a 169 square foot parcel along East Hardy Street. Following the taking, the subject site will be effectively reduced in size to 4,614 square feet. Utility and access will remain essentially the same. In the appraiser's opinion, there will be no damages to the remainder property.

IMPROVEMENTS DESCRIPTIONS

There are no known improvements on the subject property.

PROPERTY HISTORY

The subject property appears to have been under the present ownership for in excess of five years. The subject property is not known to be listed for sale nor under contract.

TAXES

The total taxes for the subject property for 2019 are \$131.79. The total true value (tax value) of the property is \$4,820.00 with an assessed value of \$723.00.

HIGHEST AND BEST USE

In order to estimate the Highest and Best Use of the subject, the surrounding property uses as well as the four tests of Highest and Best Use were considered. These are 1)physically possible, 2)legally permissible, 3)financially feasible, and 4)maximally productive. After considering these factors, the Highest and Best Use of the site as vacant is estimated to be for commercial use.

INTENDED USE AND SCOPE OF THE APPRAISAL

This appraisal is intended to assist the client, Mr. Lamar Rutland of the City of Hattiesburg, in forming an opinion of value of the subject property both before and after the taking of a 169 square foot parcel by the City for road widening. In preparing this appraisal, the appraiser inspected the subject site; gathered information on comparable land sales and listings, confirmed and analyzed the data and applied the Sales Comparison Approach to value. As only the land was considered in this appraisal, this was the only approach deemed applicable to the subject's valuation.

APPRAISAL PROCESS

In good appraisal practice, three approaches to value are normally used to arrive at a value conclusion for a given property. These approaches are the Sales Comparison Approach, the Cost Approach, and the Income Approach. The Sales Comparison Approach is based on deriving a value indication by comparing properties that have been sold recently to the subject property and adjusting the sales price of the comparables for any basic differences. The Income Approach considers the present value of the future benefits of income and ownership. To estimate the income potential of the subject, comparable rents are obtained and reconciled to the subject, then a deduction is made for anticipated expenses. The resulting net income is then capitalized into value using a rate supported by market data. The Cost Approach provides a value indicator based on the cost to reproduce the improvements less any observed depreciation. The value estimate of the land developed through the Sales Comparison Approach is then added to the depreciated value estimate of the Improvements. As noted above, the appraiser has utilized the Sales Comparison Approach only as the land only is considered in this appraisal report.

LAND SALES

The following vacant land sales were utilized to arrive at opinion of value for the subject site.

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Date: 08/22/2018
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Size: 29,023 sq ft
Price/SF: \$1.48
Zoning: B-3, Community Business District
Confirmation: HUD Statement/Erik Lowrey
Comments: Located just west of Klondyke Street on East Hardy.
Vacant site at sale. Some chain link fencing.

LAND SALE NO. 2

Location: 305 Mobile Street., Hattiesburg
Date: 12/04/2008
Price: \$22,000
Size: 36,475 sq ft
Price/SF: \$.60
Zoning: B-5, Regional Business District
Confirmation: Assist 2 Sell Real Estate
Comments: Located just north of Main Street.
Vacant site purchased for future development.

LAND SALE NO. 3

Location: 221 Market Street , Hattiesburg
Date: 08/31/2017
Price: \$30,000
Size: 24,829 sq ft
Price/SF: \$1.21
Zoning: B-5, Regional Business District
Confirmation: Berkshire Hathaway
Comments: Located just north of Main Street. Vacant site purchased for future development.

LAND SALE NO. 4

Location: 702 West 7th Street, Hattiesburg
Date: 04/29/2009
Price: \$30,000
Size: 43,907 sq ft
Price/SF: \$.68
Zoning: B-2, Neighborhood Business District
Confirmation: J E Smith Realty
Comments: Located north of Hardy Street and west of downtown. Vacant site purchased for future development.

The above lot sales indicate an unadjusted range in value from \$.60 to \$1.48 per square foot. All are in the subject market segment. The subject area is virtually fully developed and there are very few vacant sites that are available for sale. Research of the market found these sales to be the most recent and relevant to the subject's valuation. Sale 1 was given the most reliance due to time and location. After considering time, size, location, topography, and other pertinent factors, the value opinion of the subject site is \$1.45 per square foot. Thus the value of the subject is:

BEFORE VALUE

4,783 sf @ \$1.45 = \$6,935.00

AFTER VALUE

4,614 sf @ \$1.45 = \$6,690.00

Value Before Taking	\$6,935.00
Value After Taking	\$6,690.00
Damages	\$ -0-
Just Compensation Due Owner	\$ 245.00
Rounded	\$ 250.00

I appreciate the opportunity to prepare this appraisal report for you. Should you have any questions regarding this matter, please do not hesitate to contact me.

Sincerely

Stan Lightsey

Stan Lightsey, SRA
Appraisal Institute
RA-16

ADDENDA

APPRAISER'S CERTIFICATION

I certify that, to the best of my knowledge and belief:

- the statements contained in this report are true and correct.**
- the reported analyses, opinions, and conclusions are limited only by the reporting assumptions and limiting conditions and are my personal, impartial, and unbiased professional analyses, opinions, and conclusions.**
- I have no present or prospective interest in the property that is the subject of this report, and I have no personal interest with respect to the parties involved unless otherwise stated.**
- I have no bias with respect to the property that is the subject of this report or to the parties involved with this assignment.**
- my engagement in this assignment was not contingent upon developing or reporting predetermined results.**
- My compensation for completing this assignment is not contingent upon the developing or reporting of a predetermined value or a direction in value that favors the cause of the client, the amount of the value opinion, the attainment of a stipulated result, or the occurrence of a subsequent event directly related to the intended use of this appraisal.**
- no one provided significant appraisal assistance to the person signing this appraisal unless otherwise noted.**
- unless otherwise noted, the person signing this report has not performed an appraisal or rendered any other service regarding the subject property in the past three years.**
- The Appraisal Institute conducts a voluntary re-certification process for its designated members. I am currently certified under this program.**

Stan Lightsey

Stan Lightsey, SRA

UNDERLYING ASSUMPTIONS AND LIMITING CONDITIONS

This appraisal is subject to the following limiting conditions:

The legal description furnished is assumed to be correct.

No responsibility is assumed for matters of a legal character nor does the appraiser render any opinion as to title which is assumed to be good. All existing liens and encumbrances have been disregarded unless otherwise noted and the property is appraised as though free and clear and under responsible ownership and competent management.

The appraiser believes to be accurate the information provided by others; but assumes no responsibility for its accuracy.

Possession of this report, or a copy thereof, does not carry with it the right of publication, and neither all nor any part of the contents of this report may be disseminated to the public through media of any type nor may be used for any other purpose other than that specified in the engagement by the client without the previous written consent of the appraiser and client particularly as to the value conclusions, the identity of the appraiser or the firm with which he is employed, or to the SRA designation of The Appraisal Institute.

The appraiser will not be required to give testimony or appear in court by reason of this appraisal, with reference to the property in question, unless prior arrangements have been made.

The distribution of the total valuation in this report between land and improvements applies only under the existing program of utilization. The separate valuations for land and improvements must not be used in conjunction with any other appraisal and are invalid if so used.

Unless otherwise stated in this report, the existence of hazardous substances, including but not limited to asbestos, poly-chlorinated biphenyls, petroleum leakage, mold, or agricultural chemicals; which may or may not be present on the property, or other environmental conditions; were not called to the attention of nor did the appraiser become aware of such during the inspection of the property. The appraiser has no knowledge of the existence of such materials on or in the property unless otherwise stated. The appraiser is not an expert in the environmental field and is not qualified to test for such substances or conditions. If the presence of hazardous substances or environmental conditions may affect the value of the property, the value opinion is predicated on the assumption that there is no such condition in or on the property or in such proximity thereto that it would cause a loss in value. No responsibility is assumed for such conditions; nor for any expertise or knowledge required to discover them. The client is advised to retain an expert in the field of environmental impact on real estate if such conditions are suspected.

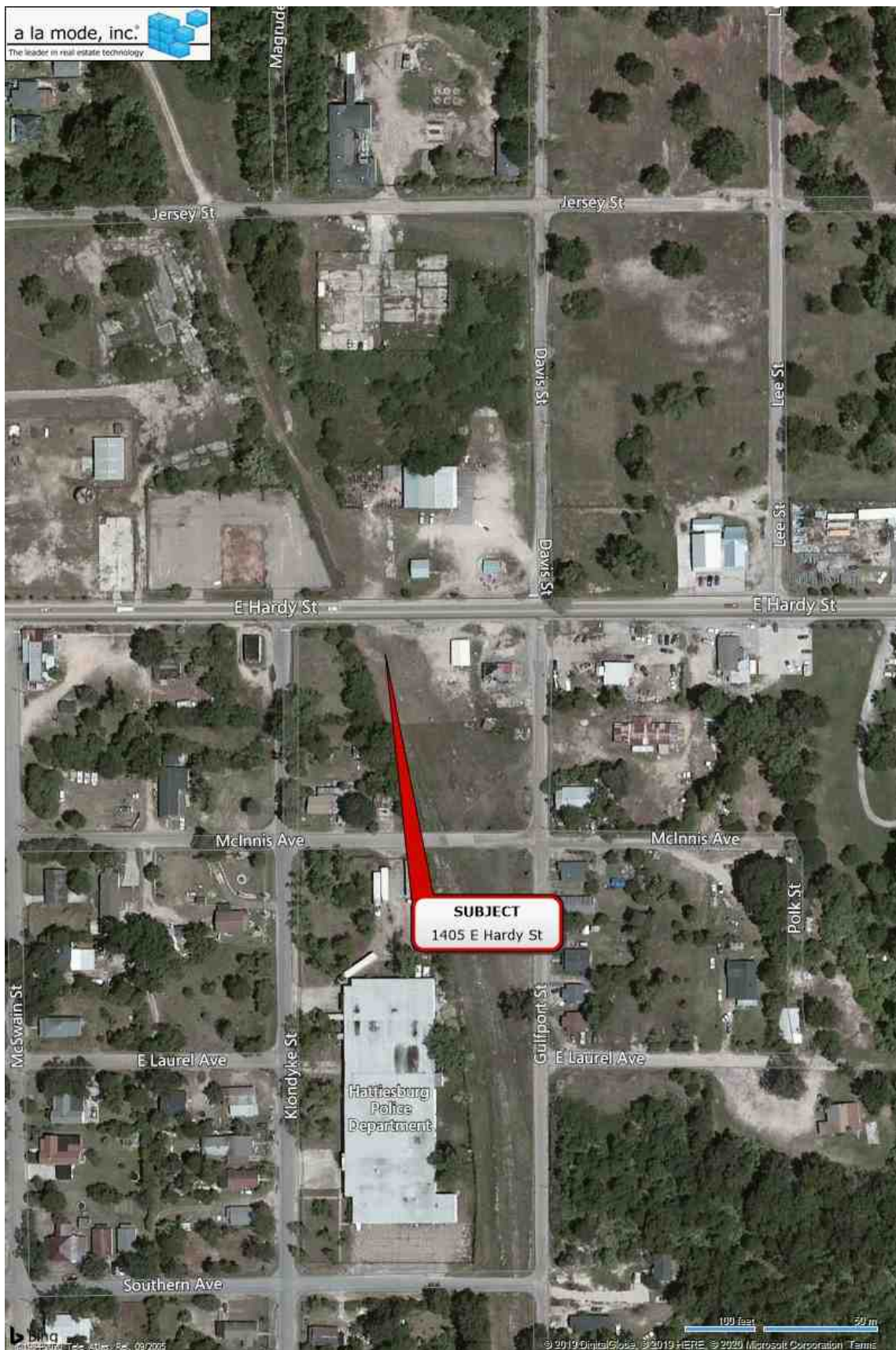
Location Map

Owner	Harris					
Property Address	1405 E Hardy St					
City	Hattiesburg	County	Forrest	State	MS	Zip Code 39401
Client	City of Hattiesburg					



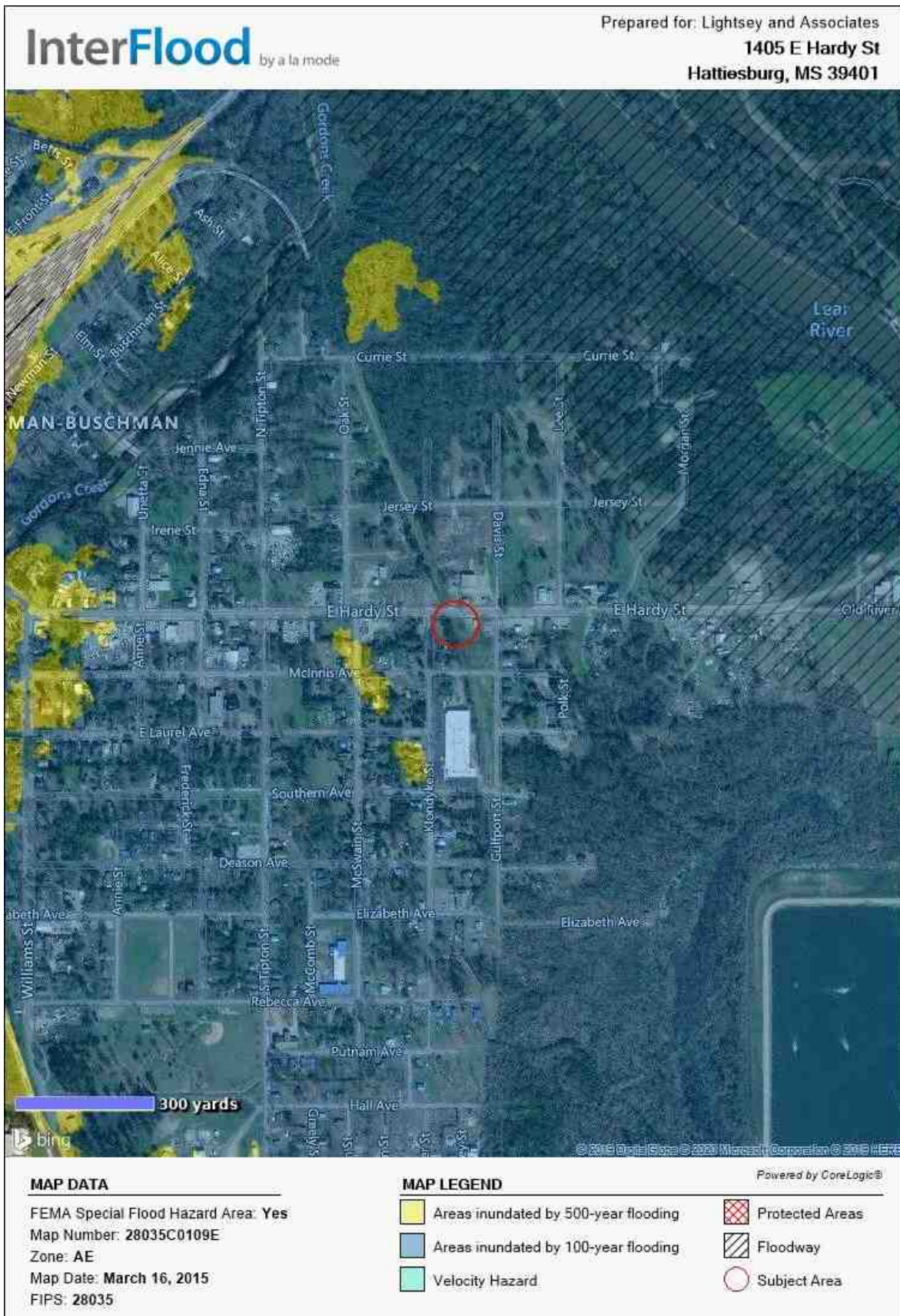
Location Map

Owner	Harris					
Property Address	1405 E Hardy St					
City	Hattiesburg	County	Forrest	State	MS	Zip Code 39401
Client	City of Hattiesburg					



Flood Map

Owner	Harris					
Property Address	1405 E Hardy St					
City	Hattiesburg	County	Forrest	State	MS	Zip Code 39401
Client	City of Hattiesburg					



Plat Map

Forrest County, MS



1/16/2020, 11:20:36 AM

Parcels LOTLINE
LANDHOOK_LN Imagery2015

1:564
0 0 0.01 0.02 mi
0 0.01 0.01 0.02 km

Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC, (c) OpenStreetMap contributors, and the GIS User Community

City of Hattiesburg, Esri, HERE, Garmin, INCREMENT P, NGA, USGS

Tax Data

1/16/2020

Delta Computer Systems

Forrest County Mississippi



Delta Computer Systems, Inc.

Property Link FORREST COUNTY, MS

Current Date 1/16/2020

Tax Year 2019
Records Last Updated 1/16/2020

PROPERTY DETAIL

OWNER HARRIS HARVELL JR & BELINDA F
107 HAZEL STREET
HATTIESBURG MS 39401

ACRES : **NA**
LAND VALUE : 4820
IMPROVEMENTS : **NA**
TOTAL VALUE: 4820
ASSESSED : 723

PARCEL 2-030M-11-023.00

ADDRESS 1403 E HARDY STREET

TAX INFORMATION

YEAR 2019	TAX DUE	PAID	BALANCE
COUNTY	47.04	0.00	47.04
CITY	38.41	0.00	38.41
SCHOOL	46.34	0.00	46.34
TOTAL	131.79	0.00	131.79

Pay Tax

LAST PAYMENT DATE **NA**

MISCELLANEOUS INFORMATION

EXEMPT CODE	LEGAL
HOMESTEAD CODE None	CM NE/CR LT 10 W 139.75 TO POB
TAX DISTRICT 1110	S 124 W TO RR NWLY TO E HARDY
PPIN 021192	ST E TOP0B BLK 1 D D MCINNIS
SECTION 11	2ND DB589 P372 10/87
TOWNSHIP 04N	BK 615 PG 658 04/28/1989
RANGE 13W	PREV #:H0624-01-003 B677-005
	8\92 712/168 5/94
	DB 744 PG 334 1/96

Book 1204

Page 601

[PURCHASE COUNTY TAX SALE FILES](#)

TAX SALES HISTORY, FOR UNPAID TAXES

Year	Sold To	Redeemed Date/By
NO TAX SALES FOUND		

[View Appraisal Record](#)

Back

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[Privacy Policy](#) | [Terms of Use](#) | [Contact Us](#) | [Help](#)

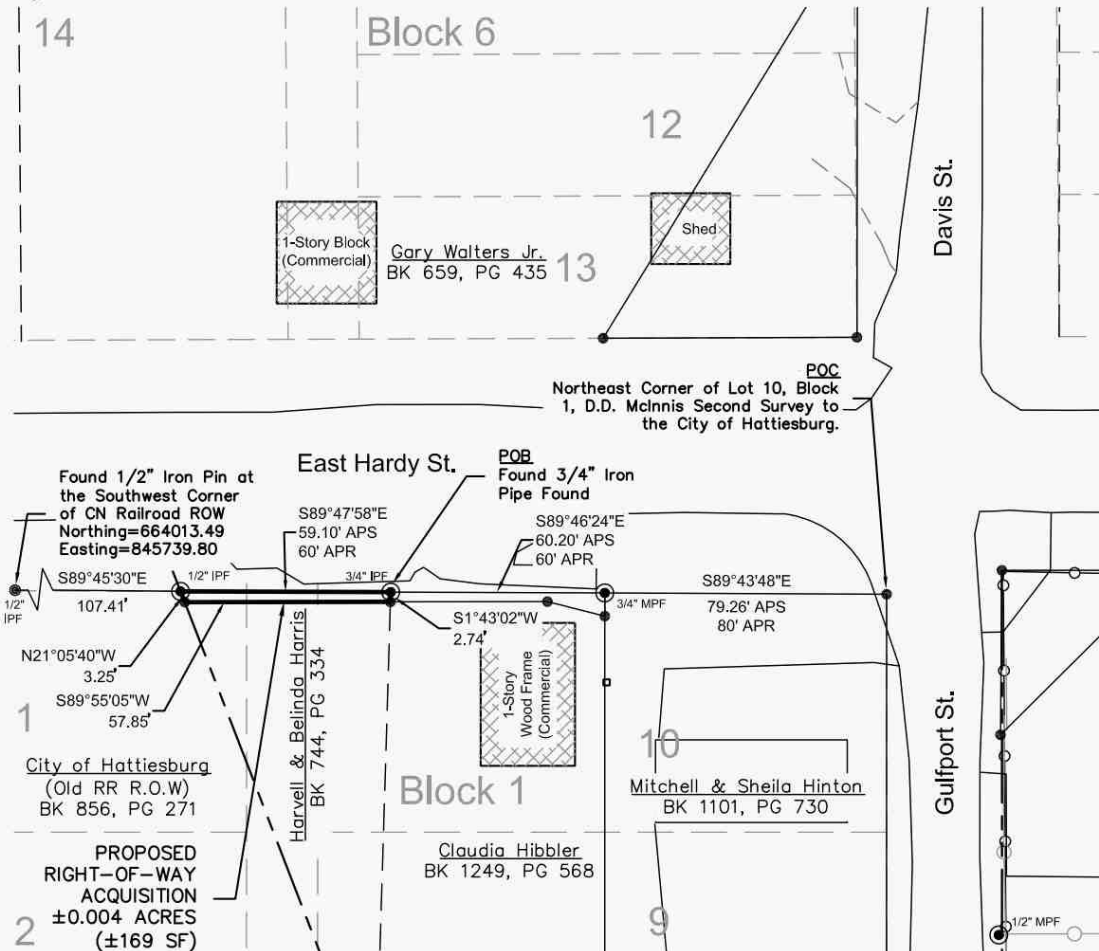
Survey

Harvell and Belinda Harris - +/-0.004 Ac.

LEGAL DESCRIPTION (Proposed Right-of-Way Acquisition)

A parcel of land being located in Lots 1 and 10 of Block 1 of D.D. McInnis Second Survey of the City of Hattiesburg, Forrest County, Mississippi, as per map or plat thereof on file in the office of Chancery Clerk of Forrest County, Mississippi, being more particularly described as follows:

Commencing at the Northeast Corner of Lot 10 of Block 1 of D.D. McInnis Second Survey of the City of Hattiesburg, Mississippi, said point also being a point on the southern right-of-way boundary of East Hardy Street; thence run and along said southern right-of-way boundary North 89 degrees 43 minutes 48 seconds West for a distance 79.26 feet to a 3/4" metal pipe at the Northwest Corner of a Parcel of Land being described in Deed Book 1101, Page 730 on file in the office of Chancery Clerk of Forrest County, Mississippi; thence run North 89 degrees 46 minutes 24 seconds East for a distance of 60.20 feet to a 3/4" iron pin at the Northwest Corner of a Parcel of Land being described in Deed Book 1249, Page 568 on file in the office of Chancery Clerk of Forrest County, Mississippi said point also being the Point of Beginning; thence leaving said right-of-way boundary run South 01 degree 43 minutes 02 seconds West for a distance of 2.74 feet; thence run South 89 degrees 55 minutes 05 seconds West for a distance of 57.85 feet to a point on the eastern boundary of a Parcel of Land being described in Deed Book 866, Page 270 on file in the office of Chancery Clerk of Forrest County, Mississippi; thence run North 21 degrees 05 minutes 40 seconds West and along said eastern boundary for a distance of 3.25 feet to a 1/2" iron pin said point also being a point on the southern right-of-way boundary of East Hardy Street; thence run and along said southern right-of-way boundary South 89 degrees 47 minutes 58 seconds East for a distance of 59.10 feet back to the POINT OF BEGINNING. Said parcel contains 0.004 acres (169 square feet), more or less.



LEGEND:

- BK PG
- CTP
- MPF
- IPF
- POB
- POC
- UTILITY POLE
- MONUMENT FOUND

PROPOSED RIGHT-OF-WAY BOOK PAGE

FOUND CRIMP-TOP PIPE

FOUND METAL PIPE

FOUND IRON ROD

SET 1/2" IRON REBAR

POINT OF BEGINNING

POINT OF COMMENCEMENT

UTILITY POLE

MONUMENT FOUND

REFERENCE MATERIAL:

1. D.D. McInnis Second Survey to the City of Hattiesburg
2. Forrest County Tax Maps
3. Quitclaim Deed BK 1093, PG 439
4. Quitclaim Deed BK 1157, PG 198
5. Warranty Deed BK 744, PG 334
6. Warranty Deed BK 1249, PG 568

STATE PLANE DATA

State Plane Zone: MS East-2301

Datum: NAD 1983

Combined Factor: 0.99997198

Convergence Angle: -0° 13' 50.23"

Reference Point: Southwest Corner of CN Railroad ROW

GRAPHIC SCALE

40 0 20 40

(IN FEET)

1 inch = 40 ft.

NOTES:

1. Class "B" Survey.
2. No Additional Record Search for Easements was Conducted.
3. Date of Field Survey: Nov. 5, 2019.
4. Orientation is based on GPS observation, Grid North, as referenced to MS State Plane Coordinate System, East Zone

PRELIMINARY - PINS NOT SET

Clearpoint

CONSULTING ENGINEERS, P.A.

6652 US Highway 98 | Hattiesburg, MS 39402

t 601.261.2609 | f 601.261.5573 | clearpointengineers.com

PREPARED FOR:

Right-of-Way Survey

Harvell and Belinda Harris

PPIN: 21192

CCE NO.: 76242036

SCALE: 1" = 40'

DATE: 11/30/2019

CHECKED: RTB

DRAWN: JCR

SHEET 1 OF 1

Drawing Location: S:\76242036\dwg\PLAT8\76242036-PLAT8.dwg

Photograph Addendum

Owner	Harris					
Property Address	1405 E Hardy St					
City	Hattiesburg	County	Forrest	State	MS	Zip Code 39401
Client	City of Hattiesburg					



View of Subject



View of East Hardy Street



Memorandum

To: Mayor Toby Barker and Members of City Council
From: Kermas Eaton, City Clerk
cc:
Date: Tuesday, August 18, 2020
Re: Extend state of emergency for an additional 30 days resulting from the pandemic event (COVID-19) that occurred on or about March 13, 2020.

File Number: 2020-590
Minute Book #MB 2020-160 / Extend

Summary

Extension of state of emergency for thirty (30) days.

Recommendation Statement

I recommend extending state of emergency.

Please place this on the August 18, 2020 City Council meeting for consideration.



Memorandum

To: Mayor Toby Barker and Members of City Council

From: Connie Everett, Interim CFO

cc:

Date: Tuesday, August 18, 2020

Re: Set a public hearing on the proposed budget and proposed tax levies for fiscal year 2021 for 5:30 p.m. on Tuesday, September 8, 2020, at the Jackie Dole Sherrill Community Center; authorize advertisement of Notice of Public Hearing.
File Number: 2020-571
Minute Book #

Summary

Set public hearing

Recommendation Statement

Tuesday, September 8, 2020 at 5:30 p.m.

Please place this on the August 18, 2020 City Council meeting for consideration.

**NOTICE OF A PUBLIC HEARING ON THE PROPOSED BUDGET AND
PROPOSED TAX LEVIES FOR FISCAL YEAR 2021 FOR THE CITY OF
HATTIESBURG, MS**

The City of Hattiesburg will hold a public hearing on its proposed budget and proposed tax levies for Fiscal year 2021 on Tuesday, September 8, 2020, at 5:30 p.m. in the Council Chambers at City Hall, 200 Forrest Street, Hattiesburg, MS.

The City of Hattiesburg, Hattiesburg Municipal Separate School District, and the Library of Hattiesburg, Petal, and Forrest County are now operating with a projected total budget revenue of \$214,441,260. Twenty-one (21%) or \$45,932,126 of such revenue is obtained through ad valorem taxes. For next fiscal year, the proposed budget has total projected revenue of \$204,186,471. Of that amount, 22%, or \$45,932,252 is proposed to be financed through a total ad valorem tax levy.

For the next fiscal year, the City of Hattiesburg plans to increase your ad valorem tax millage rate from the current 117.23 mills to 119.21 mills. This means that you may pay more in ad valorem taxes on your home, automobile tag, utilities, business fixtures and equipment and rental real property.

A millage rate of 53.13 will produce the same amount of revenue from ad valorem taxes for the City of Hattiesburg as was collected the prior year. The millage rate for the previous year was 53.13.

A millage rate of 66.08 will produce the same amount of revenue from ad valorem taxes for the Hattiesburg Separate School District as was collected the prior year. The millage rate for the previous year was 64.10.

Any citizen of the City of Hattiesburg is invited to attend this public hearing on the proposed budget and tax levies for Fiscal Year 2021 and will be allowed to speak for a reasonable amount of time and offer tangible evidence before any vote is taken.

Publish August 27, 2020 and September 3, 2020:

The advertisement shall be no less than ¼ page in size and the type used shall be no smaller than 18 point and surrounded by a ¼ inch solid black border. The advertisement may not be placed in that portion of the newspaper where legal notices and classified advertisements appear. (Run in retail section.)



Memorandum

To: Mayor Toby Barker and Members of City Council

From: Rick Taylor, Executive Director of the Hattiesburg Convention Commission

cc:

Date: Tuesday, August 18, 2020

Re: Acknowledge receipt of and approve the budget of the Hattiesburg Convention Commission for the fiscal year ending 2021 and amended budget for fiscal year ending 2020.
File Number: 2020-555
Minute Book #

Summary

The Hattiesburg Convention Commission has approved the annual budget and are now seeking approval by the City Council.

Recommendation Statement

I recommend acceptance and approval of the Hattiesburg Convention Commission budget proposal.

Please place this on the August 18, 2020 City Council meeting for consideration.

Hattiesburg Convention Commission Fiscal Year 2021 Budget Analysis		BUDGET
Classification	Category	FYE 2021 Totals
Income	Special Sales Tax (2% Food & Beverage Tax Revenue)	\$ 4,663,929
	Saenger Theater/ Convention Center / USO / Zoo Revenue	\$ 1,733,543
	F&B Revenue	\$ 828,715
	Interest	\$ 80,540
	Estimated Total Income	\$ 7,306,727
Expenditures <i>Convention Center</i> <i>Visitors Center</i> <i>Saenger Theater</i> <i>USO</i> <i>Eureka</i> <i>Zoo</i> <i>Oseola McCarty House</i>	Facilities Operations Electricity, Natural Gas, Telecommunications, Janitorial Supplies, Safety Equipment, Training, Contracted Services, Animal Feed	\$ 1,917,859
	Repairs, Refurbishment, Fixed Assets Refurbishment of Facilities/ Replacement of Equipment, Fixtures	\$ 313,975
	Insurance, Professional Services, Marketing Trustee Fees, Insurance, Surety Bonds, Audit, Legal Fees, Saenger Talent Buying, Marketing, Show Production, etc.	\$ 940,427
	Staffing Costs (including benefits) Full-time + benefits, Part-time & Event Based Staff	\$ 4,059,981
	Sub-total Estimated Expenditures	\$ 7,232,242
	Projected Funds On Hand	\$ 3,719,826
	<i>Bond Money on Hand</i>	
Project Expenses	<i>Bond Money - State and/or Local</i>	<i>(\$340,000)</i> *Restricted
	<i>State Zoo Donation</i>	<i>(\$500,000)</i> *Restricted
	<i>Special Projects Sponsorships</i>	<i>(\$15,000)</i> *Dedicated
	Sixth Street Museum District Development	\$ 790,000
	Saenger Theater Improvements	\$ 50,000
	Zoo Expansion/ Development	\$ 1,550,000 *Includes Restricted Funds
	Convention Center Improvements	\$ 130,000
Total Project Expenses		\$ 1,665,000
Designated Reserve Fund (All Facilities) and Estimated Residual		\$ 2,054,826

Hattiesburg Convention Commission Fiscal Year 2020 Budget Analysis			BUDGET	
Classification	Category	FYE 2020 Totals	FYE 2020A Totals	\$\$\$ Variation
Income	Special Sales Tax (2% Food & Beverage Tax Revenue)	\$ 5,486,975	\$ 4,706,109	-\$ 780,866
	Saenger Theater/ Convention Center / USO / Zoo Revenue	\$ 1,993,045	\$ 1,411,460	-\$ 581,585
	F&B Revenue	\$ 1,204,700	\$ 639,394	-\$ 565,306
	Interest	\$ 62,540	\$ 89,290	\$ 26,750
	Estimated Total Income	\$ 8,747,260	\$ 6,846,253	-\$ 1,901,007
Expenditures	Facilities Operations			
Convention Center	Electricity, Natural Gas, Telecommunications, Janitorial Supplies,	\$ 2,092,859	\$ 1,433,894	-\$ 658,965
Visitors Center	Safety Equipment, Training, Contracted Services, Animal Feed			
Saenger Theater				
USO	Repairs, Refurbishment, Fixed Assets			
Eureka	Refurbishment of Facilities/ Replacement of Equipment, Fixtures	\$ 411,756	\$ 116,720	-\$ 295,036
Zoo				
Oseola McCarty House	Insurance, Professional Services, Marketing			
	Trustee Fees, Insurance, Surety Bonds, Audit, Legal Fees, Saenger Talent Buying, Marketing, Show Production, etc.	\$ 924,450	\$ 641,817	-\$ 282,633
	Staffing Costs (including benefits)			
	Full-time + benefits, Part-time & Event Based Staff	\$ 4,588,482	\$ 3,553,416	-\$ 1,035,066
	Sub-total Estimated Expenditures	\$ 8,017,547	\$ 5,745,847	-\$ 2,271,700
Project Expenses	Projected Funds On Hand	\$ 6,717,004	\$ 7,010,341	NOTES:
	Bond Money on Hand			
	Bond Money - State and/or Local	(\$340,000)	(\$340,000)	
	Special Projects Sponsorships	(\$15,000)	(\$15,000)	*Restricted
				*Dedicated
	Historic USO Club Expansion & Repairs	\$ 20,000	\$ 7,000	
	Historic Eureka School Museum Development	\$ 360,000	\$ 0	*Postponed until 2021
	Interpretive Wall	\$ 140,000	\$ 140,000	
	Sixth Street Museum District Development	\$ 200,000	\$ 75,000	*Partial delay until 2021
	Saenger Theater Improvements	\$ 75,000	\$ 60,000	
	Zoo Development	\$ 2,150,000	\$ 2,850,000	
	Kamper Park Zoo Water Park	\$ 1,000,000	\$ 0	*Postponed until 2021
	Longleaf Trace to Museum Extension Match	\$ 200,000	\$ 0	*Postponed until 2021
	Zoo/ Science Expansion			
	Science Center Feasibility	\$ 60,000	\$ 0	*Postponed until 2021
	Zoo/ Science Connecting Bridge	\$ 340,000	\$ 340,000	*Restricted
Convention Center Improvements	\$ 150,000	\$ 10,000	*Partial delay until 2021	
City/ Zoo Improvements	\$ 200,000	\$ 203,000	*Zoo Fire Hydrants/ Concert St./ Zoo Entrance Improvements	
Oseola McCarty House	\$ 90,000	\$ 35,000	*Partial delay until 2021	
Designated Reserve Fund (All Facilities) and Estimated Residual		\$ 2,087,004	\$ 3,645,341	



Memorandum

To: Mayor Toby Barker and Members of City Council

From: Rick Taylor, Executive Director of Hattiesburg Convention Commission.

cc:

Date: Tuesday, August 18, 2020

Re: Acknowledge receipt of the FYE 2019 Annual Report of the Hattiesburg Convention Commission.
File Number: 2020-594
Minute Book #

Summary

The audit was presented to and accepted by the Commissioners in late July.

Recommendation Statement

Acknowledge of of FYE 2019 annual audit of the Hattiesburg Convention Commission.

Please place this on the August 18, 2020 City Council meeting for consideration.



HATTIESBURG
CONVENTION COMMISSION

2019

OCTOBER 2018 - SEPTEMBER 2019

FIRST - CLASS FACILITY MANAGEMENT

Our mission is to enhance the lives of our neighbors and grow the economy of Hattiesburg by creating and operating high-quality attractions that provide compelling experiences and create fans for life.



FIRST-CLASS FACILITY MANAGEMENT

HATTIESBURG
CONVENTION COMMISSION



COMMISSIONERS
CHARLES J. BROWN
CLYDE BRYANT
CHARLIE V. JONES
DR. AUBREY LUCAS
JENNIFER PAYNE
TRACI ROUSE
ANDY STETELMAN

EXECUTIVE DIRECTOR
RICK TAYLOR

LEGAL COUNSEL
CAREY VARNADO

ONE CONVENTION CENTER PLAZA • HATTIESBURG, MS 39401
601.268.3220 • HATTIESBURG.ORG

Mississippi's **PREMIER MEETING FACILITY**

Lake Terrace hosted over 191,000 guests
during 706 event days in fiscal year 2019.

The Convention Center was awarded the
“Best of the Best” for the fifteenth consecutive year
by readers of ConventionSouth Magazine for its
reputation for quality and excellent customer service.



LAKE TERRACE

CONVENTION CENTER

Our mission is to grow the economy of Hattiesburg by hosting exceptional meetings, conventions, and events that improve the quality of life of residents and visitors alike.





LAKE TERRACE

CONVENTION CENTER

- NASA'S STENNIS SPACE CENTER
- KOHLER
- MARSHALL UNIVERSITY FOOTBALL
- MAPE/PREPS 2019 PARTNERSHIP CONFERENCE
- NATIONAL GUARD YELLOW RIBBON 1st 155th CAB
- HUB CITY BEATDOWN III
- MEETING AND EVENTS INTERNATIONAL
PHARMACEUTICAL MEETING
- WORLD HARVEST MINISTRIES GLOBAL CONFERENCE
- BORDEN DAIRY
- iHeartMedia RADIO





HATTIESBURG ZOO

Our mission is to further our guests' appreciation, respect, and knowledge of nature through education, recreation, and unique events that improve our economy and quality of life.

Hattiesburg Zoo is **GROWING & LEADING BY EXAMPLE**

Hattiesburg Zoo remains in the elite club of zoos (11% worldwide) that are self-sustaining on their own earned income. The economic contribution of the Hattiesburg Zoo from visitor spending equates to a grand total of \$27.3 million dollars into the local economy for fiscal 2019.

Construction continues on a giraffe habitat, education pavilion, a new cantina and additional animal exhibits. This eventually will combine with the future development of a water-play area and new playground to complete Kamper Park as a major regional draw.

A close-up photograph of a zebra's head, partially obscured by a semi-transparent green overlay. The zebra's distinctive black and white stripes are visible through the green tint. The text 'HATTIESBURG ZOO' is superimposed in white on the right side of the image.

HATTIESBURG ZOO

- GROUNDBREAKING ON GIRAFFE EXHIBIT & ZOO EXPANSION
- ZOO DAY AT THE CAPITOL
- FIELD TRIPS
- SENSORY INCLUSIVE CERTIFICATION - KULTURE CITY
- RENAISSANCE FESTIVAL
- KID'S FITNESS FEST
- SLOTH-A-THON
- ZOOSTOCK
- ZOO BOO



The Vision of

CREATING A HISTORIC DOWNTOWN DISTRICT

Sixth Street welcomed the addition of Oseola McCarty's house and the acquisition of land needed for the Longleaf Trace museum spur.



Our mission is to enhance the lives of our neighbors and grow the economy of Hattiesburg by highlighting the rich history of our area's African-American community through preservation and interpretation of their contributions.





- CELEBRATED 10 YEAR ANNIVERSARY OF THE AFRICAN AMERICAN MILITARY HISTORY MUSEUM
- LATOYA NORMAN SERVED ON THE HOST COMMITTEE TO BRING THE ASSOCIATION OF THE AFRICAN AMERICAN MUSEUMS CONFERENCE TO MISSISSIPPI
- OSEOLA MCCARTY HOUSE WAS MOVED TO SIXTH STREET
- EUREKA RIBBON CUTTING
- AN EVENING WITH DR. STURKEY, AUTHOR OF *HATTIESBURG: AN AMERICAN CITY IN BLACK AND WHITE* EVENT AND BOOK SIGNING AT HISTORIC EUREKA SCHOOL



SAENGER

Our mission is to enhance the lives of our neighbors and grow the economy of downtown Hattiesburg by creating compelling performance experiences that draw residents and visitors.



The Theater saw an

EARNED INCOME GROWTH OF OVER 35%

This pushed the Saenger operations “into the black” for the first time in its history as a community performing arts venue.

The Saenger continues to work with professional promoters and agencies to bring nationally known entertainment to Hattiesburg, as well as hosting block parties to bring more people into the downtown area.



- HANNIBAL BURESS
- MOSCOW BALLET'S RUSSIAN NUTCRACKER
- TRAVIS TRITT
- DAN RATHER
- THE LUMINEERS
- RONNIE MILSAP
- KEB' MO'
- FRANK CALIENDO
- THE GLENN MILLER ORCHESTRA
- LUCINDA WILLIAMS
- BELA FLECK



HATTIESBURG CONVENTION COMMISSION

**FINANCIAL STATEMENTS AND
SUPPLEMENTARY INFORMATION**

Year Ended September 30, 2019

HATTIESBURG CONVENTION COMMISSION

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Management's Discussion and Analysis

This Fiscal Year report documents a period of time in which plans and approvals have been made to expand the capacity of the Commission's activities. Such expansion is needed and the reasons for that are reflected in this report. Three areas of work by the Commission need to expand in order to offer more value to the community as well as earn more income to continue the upward spiral of value to our community. The Hattiesburg Zoo is the most visible attraction of the Commission that is expanding to accommodate growing visitor demand, but the community interest and national notoriety of Hattiesburg's Sixth Street Museum District is driving a significant push to add new historical attractions in this area. The Saenger Theater's reputation as an intimate concert hall has put the venue on the national concert map, while its "block parties" are bringing strong crowds to pre-event festivities.

FACILITY HIGHLIGHTS

The Hattiesburg Zoo continues to remain in the elite club of zoos (11% worldwide) that are sustaining themselves on their own earned income. As a weather-dependent attraction, the Zoo battles with the vagaries of the climate while continuing its daily operations and special event programming. The 2019 fiscal year winter proved challenging for zoos throughout North America with rainy weather most weekends. Almost all zoos saw decreased winter attendance making it imperative to push visitation during the more temperate months. Hattiesburg Zoo was no exception and focused on its slate of special after-hours events to offset this tough start to the fiscal year. The Zoo was largely successful adding Zoostock 2019 to perennial favorites such as ZooBoo, Renaissance Festival, ZooLights, Pirate Days, Sloth-a-Thon and others. However, though adding in more events outside of normal operations, the capacity of the Zoo to accommodate and service guests is leveling due to space and facility limits, and as such, the Zoo's operating revenues were relatively flat from the prior fiscal year. The approximately 200,000 guests of the Zoo came from as far away as Canada, South Florida, and, of course, surrounding states such as Tennessee, Arkansas, Louisiana and Alabama. The good news is that ongoing construction and facility developments will solve this capacity problem and allow for more robust growth.

The Saenger Theater continues to showcase itself as a concert venue by hosting numerous internationally-famous performers including The Lumineers, Travis Tritt, the Glenn Miller Orchestra, Lucinda Williams, Hannibal Buress, Bela Fleck, Keb Mo, Frank Caliendo and others. It also continues to be a home for our friends and neighbors who enjoy Stagestruck productions, The Dance Place, FestivalSouth and Hattiesburg Concert Band performances. As a result of the efforts to add more nationally famous acts, the Saenger Theater saw earned income growth of over 35%. This growth pushed the Saenger Theater operations "into the black" for the first time in its history as a community performing arts venue.

The Sixth Street Museum District, which is home to the African American Military History Museum at the Historic USO Club and Historic Eureka School welcomed the addition of Oseola McCarty's house and the acquisition of the land needed for the Longleaf Trace Museum Spur. Both of these two additions will become important parts of the vision of creating a multi-faceted historic district in downtown Hattiesburg. All of these historic sites or museums are free to all, so earned income opportunities are limited. Nonetheless, the staff of the facilities of the district again sought creative ways to add ancillary income to support their primary efforts in presenting Hattiesburg's history to visitors and residents alike.

The Lake Terrace Convention Center hosted over 191,000 guests during 706 event days in the 2019 Fiscal Year. While these numbers keep the Convention Center in a leadership position with comparable facilities state-wide, there continues to be a leveling of demand which we have observed over the past three years. Changes in state gaming laws has increased the competitive appeal of coastal casinos, while competition amongst local event venues also contributed to a relatively flat year for the Center's earned income. Nonetheless, attendance at conventions and events at the Lake Terrace Convention Center brought many out-of-town delegates who spent over \$35 million in Hattiesburg during this fiscal year.

The Convention Center's reputation for quality and excellent customer service was recognized for the fifteenth year by readers of *ConventionSouth Magazine* with the Center being awarded the magazine's "Best of the Best" Readers' Choice Award. This award is nominated and selected by event planners from throughout the Southern United States. This recognition of exceptional service by the staff of the Convention Commission builds Hattiesburg's reputation for excellence.

FINANCIAL HIGHLIGHTS

Management of the Hattiesburg Convention Commission (including the Hattiesburg Zoo, African American Military History Museum at the Historic USO Club, Lake Terrace Convention Center, Historic Saenger Theater, the Historic Eureka School Museum project, Oseola McCarty Museum project and the Sixth Street Museum District) offers this narrative overview and analysis of the financial and operational activities of the Commission for the Fiscal Year Ended September 30, 2019. We encourage readers to consider the information presented here in conjunction with the Commission's financial statements, which follow.

The primary funding mechanism of the Commission is a special 2% sales tax collected by restaurants and alcoholic beverage package retailers. This 'convention promotion tax', as identified by the Legislature of the State of Mississippi, was authorized and enabled by Senate Bill 3367. During Fiscal Year 2019, this special sales tax grew by 3% over the prior year. Continuing national economic expansion and strong consumer confidence contributed to this growth. However, management believes this growth rate is under-reflective due to adjustments to the total special sales tax remittances reported by the MS Department of Revenue to correct mis-bookings from prior periods.

TABLE 1
CHANGES IN NET POSITION

	2019	2018
REVENUES		
Program Revenues:		
Charges for Services:		
Convention Center revenue	\$ 940,434	\$ 902,462
Saenger Theater revenue	302,180	223,378
USO revenue	6,578	11,699
Zoo revenue	1,813,700	1,800,827
Total program revenues	<u>3,062,892</u>	<u>2,938,366</u>
General Revenues:		
Sales tax revenue	5,505,101	5,387,604
Interest earned on deposits	78,860	51,646
Rental receipts	3,600	-
Total general revenues	<u>5,587,561</u>	<u>5,439,250</u>
Total revenues	<u>\$ 8,650,453</u>	<u>\$ 8,377,616</u>

(Table Continued on Next Page)

TABLE 1
CHANGES IN NET POSITION

	2019	2018
PROGRAM EXPENSES		
Culture and Recreation:		
Salaries, wages, and benefits	\$ 4,196,428	\$ 3,980,228
Food and beverage costs	274,744	301,509
Utilities	593,505	443,036
Other operating expenses	2,184,873	2,163,929
Transfer to City of Hattiesburg - capital improvements	498,201	127,849
Depreciation and amortization	497,300	484,723
Total program expenses	8,245,051	7,501,274
INCREASE IN NET POSITION	405,402	876,342
Net position - beginning of year	23,795,439	22,919,097
Net position - end of year	\$ 24,200,841	\$ 23,795,439

Program Revenues grew 4.2% on the whole with the Saenger Theater leading the way at a 35% growth rate.

Program Expenses are made up of Personnel, Food and Beverage Costs, Utilities, and General Operations. In addition, the transfer of assets from the Commission to the City of Hattiesburg (typically real property built by the Commission on City grounds) and general depreciation fall in this category. Since the Commission is an amalgamation of attractions and attraction staffs, as well as macro-departments (physical plant, accounting and administration, marketing, food and beverage, maintenance and housekeeping, IT/AV, et. al.) that serve all attractions, these categories consolidate the expenses of both facilities and supporting departments.

Across the span of these facilities, general operational expense remained flat for the 2019 Fiscal Year. Food and Beverage costs were lowered by 9%. Personnel costs increased by 5% as budgeted. Utility expenses showed the sharpest increase at 34% reflecting the startup and a full year's operation of the Historic Eureka School. In addition, Utility costs were impacted by behind-the-scenes expansion of various animal holding facilities at the Hattiesburg Zoo.

(See Table on Next Page)

TABLE 2
LIABILITIES AND NET POSITION

	Governmental Activities	
	2019	2018
LIABILITIES		
Other liabilities	\$ 658,641	\$ 532,026
DEFERRED INFLOWS OF RESOURCES		
Special events revenue	169,083	-
NET POSITION		
Net investment in capital assets	18,135,916	16,599,502
Restricted for:		
Capital projects	-	134,914
Unrestricted	6,064,925	7,061,023
Total net position	\$ 24,200,841	\$ 23,795,439

On September 30, 2019, the Commission had assets totaling \$25,028,565.

TABLE 3
ASSETS

	Governmental Activities	
	2019	2018
ASSETS		
Current and other assets	\$ 6,892,649	\$ 7,727,963
Capital assets:		
Land	1,445,386	1,422,886
Buildings and improvements, net	14,333,650	14,470,625
Furniture and fixtures, net	49,750	51,607
Equipment and vehicles, net	319,203	99,480
Construction in progress	1,987,927	554,904
Total assets	\$ 25,028,565	\$ 24,327,465

FISCAL YEAR 2020 BUDGET

With a continuing robust national economy, the Hattiesburg Convention Commission projects the special sales tax revenue to increase around \$250,000 during the 2020 Fiscal Year. Event bookings at the Convention Center, booked concerts and steady attendance figures at the Zoo lead us to project an increase of over \$100,000 in earned income for the 2020 Fiscal Year.

Though we are adding several new attractions with the Zoo expansion, USO outdoor exhibit, Oseola McCarty Museum, Eureka School Museum and other Sixth Street Museum District developments, we project Facilities Operations expenses to remain flat and Repair/Refurbishment to decline by \$67,000.

Our liability and property insurance costs continue to grow with our additions. This, plus our desire to increase shows at the Saenger, lead us to increase Insurance, Professional Services and Marketing by \$61,200.

Last year, we added two highly technical zoological positions at the Zoo in our efforts to become accredited by the Association of Zoos and Aquarium. As such, we plan to hold Personnel expense increases to only 2%.

The Commission has a substantial slate of projects for the 2020 Fiscal Year. As such, a great investment of time and money is needed to accomplish these additions and improvements that benefit our neighbors and visitors alike. Continued work on the Historic Eureka School Museum, the Sixth Street Museum District, and Oseola McCarty's House along with significant expansion at the Zoo, consisting of the Giraffe Exhibit, Cantina, Event/Education Pavilion, animal holdings, new Kamper Park playground and water play area and other improvements comprise the planned investment of \$5 million.

SUMMARY

The information in this report reflects the Commission's commitment to excellence, effective use of resources, and employment of professional staff to make this work produce meaningful results for all of Hattiesburg. From its inception, the Hattiesburg Convention Commission has enhanced the lives of our neighbors and grown the economy of Hattiesburg by creating and operating high-quality attractions that provide compelling experiences and create fans for life.



INDEPENDENT AUDITOR'S REPORT

To the Board of Commissioners
Hattiesburg Convention Commission
Hattiesburg, Mississippi

Report on the Financial Statements

We have audited the accompanying financial statements of the governmental activities and each major fund of the Hattiesburg Convention Commission (the Commission), as of and for the year ended September 30, 2019, and the related notes to the financial statements, which collectively comprise the Commission's basic financial statements as listed in the table of contents.

Management's Responsibility for the Financial Statements

The Commission's management is responsible for the preparation and fair presentation of these financial statements in accordance with accounting principles generally accepted in the United States of America; this includes the design, implementation, and maintenance of internal control relevant to the preparation and fair presentation of financial statements that are free from material misstatement, whether due to fraud or error.

Auditor's Responsibility

Our responsibility is to express opinions on these financial statements based on our audit. We conducted our audit in accordance with auditing standards generally accepted in the United States of America and the standards applicable to financial audits contained in *Government Auditing Standards*, issued by the Comptroller General of the United States. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditor's judgment, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the entity's preparation and fair presentation of the financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the

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Gulfport, MS 39502-1842

To the Board of Commissioners
Hattiesburg Convention Commission

purpose of expressing an opinion on the effectiveness of the entity's internal control. Accordingly, we express no such opinion. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluating the overall presentation of the financial statements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinions.

Opinions

In our opinion, the financial statements referred to above present fairly, in all material respects, the respective financial position of the governmental activities and each major fund of the Commission as of September 30, 2019, and the respective changes in financial position thereof for the year then ended in accordance with accounting principles generally accepted in the United States of America.

Other Matters

Required Supplementary Information

Accounting principles generally accepted in the United States of America require that management's discussion and analysis and budgetary comparison information on pages 1 through 5 and 26 through 27 be presented to supplement the basic financial statements. Such information, although not a part of the basic financial statements, is required by the Governmental Accounting Standards Board, who considers it to be an essential part of financial reporting for placing the basic financial statements in an appropriate operational, economic, or historical context. We have applied certain limited procedures to the required supplementary information in accordance with auditing standards generally accepted in the United States of America, which consisted of inquiries of management about the methods of preparing the information and comparing the information for consistency with management's responses to our inquiries, the basic financial statements, and other knowledge we obtained during our audit of the basic financial statements. We do not express an opinion or provide any assurance on the information because the limited procedures do not provide us with sufficient evidence to express an opinion or provide any assurance.

Other Information

Our audit was conducted for the purpose of forming opinions on the financial statements that collectively comprise the Commission's basic financial statements. The combining fund financial statements are presented for purposes of additional analysis and are not a required part of the basic financial statements.

To the Board of Commissioners
Hattiesburg Convention Commission

The combining fund financial statements are the responsibility of management and were derived from and relate directly to the underlying accounting and other records used to prepare the basic financial statements. Such information has been subjected to the auditing procedures applied in the audit of the basic financial statements and certain additional procedures, including comparing and reconciling such information directly to the underlying accounting and other records used to prepare the basic financial statements or to the basic financial statements themselves, and other additional procedures in accordance with auditing standards generally accepted in the United States of America. In our opinion, the combining fund financial statements are fairly stated, in all material respects, in relation to the basic financial statements as a whole.

Other Reporting Required by *Government Auditing Standards*

In accordance with *Government Auditing Standards*, we have also issued our report dated February 17, 2020, on our consideration of the Commission's internal control over financial reporting and on our tests of its compliance with certain provisions of laws, regulations, contracts and grant agreements and other matters. The purpose of that report is solely to describe the scope of our testing of internal control over financial reporting and compliance and the results of that testing, and not to provide an opinion on the effectiveness of internal control over financial reporting or on compliance. That report is an integral part of an audit performed in accordance with *Government Auditing Standards* in considering the Commission's internal control over financial reporting and compliance.

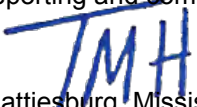

Hattiesburg, Mississippi
February 17, 2020

EXHIBIT A

HATTIESBURG CONVENTION COMMISSION

**STATEMENT OF NET POSITION
SEPTEMBER 30, 2019**

	Governmental Activities
ASSETS	
Cash and cash equivalents	\$ 944,935
Cash and cash equivalents - restricted	4,965,000
Special sales tax receivable	791,207
Accounts receivable	100,090
Inventory	91,417
Capital assets:	
Land and construction in progress	3,433,313
Other capital assets, net	14,702,603
Total assets	25,028,565
LIABILITIES	
Accounts payable	414,175
Accrued payroll liabilities	109,895
Compensated absences	134,571
Total liabilities	658,641
DEFERRED INFLOWS OF RESOURCES	
Special event revenue	169,083
NET POSITION	
Net investment in capital assets	18,135,916
Unrestricted	6,064,925
Total net position	\$ 24,200,841

The accompanying notes are an integral part of these financial statements.

EXHIBIT B

HATTIESBURG CONVENTION COMMISSION

**STATEMENT OF ACTIVITIES
YEAR ENDED SEPTEMBER 30, 2019**

	Governmental Activities
PROGRAM EXPENSES	
Culture and Recreation:	
Salaries, wages, and benefits	\$ 4,196,428
Food and beverage costs	274,744
Utilities	593,505
Other operating expenses	2,184,873
Transfer to City of Hattiesburg - capital improvements	498,201
Depreciation and amortization	497,300
Total program expenses	<u>8,245,051</u>
PROGRAM REVENUES	
Charges for Services:	
Convention Center revenue	940,434
Saenger Theater revenue	302,180
USO revenue	6,578
Zoo revenue	1,813,700
Total program revenues	<u>3,062,892</u>
Net program expense	<u>(5,182,159)</u>
GENERAL REVENUES	
Sales tax revenue	5,505,101
Interest earned on deposits	78,860
Rental receipts	3,600
Total general revenues	<u>5,587,561</u>
Change in net position	405,402
NET POSITION	
Beginning of year	<u>23,795,439</u>
End of year	<u>\$ 24,200,841</u>

The accompanying notes are an integral part of these financial statements.

EXHIBIT C

HATTIESBURG CONVENTION COMMISSION

**BALANCE SHEET
GOVERNMENTAL FUNDS
SEPTEMBER 30, 2019**

	General Fund	Capital Projects Fund	Total Governmental Funds
ASSETS			
Cash and cash equivalents	\$ 752,869	\$ 192,066	\$ 944,935
Cash and cash equivalents - restricted	4,965,000	-	4,965,000
Special sales tax receivable	791,207	-	791,207
Accounts receivable	100,090	-	100,090
Inventory	91,417	-	91,417
Total assets	\$ 6,700,583	\$ 192,066	\$ 6,892,649
LIABILITIES, DEFERRED INFLOWS AND FUND BALANCES			
Liabilities:			
Accounts payable	\$ 70,742	\$ 343,433	\$ 414,175
Accrued payroll liabilities	109,895	-	109,895
Total liabilities	180,637	343,433	524,070
Deferred Inflows of Resources:			
Special event revenue	169,083	-	169,083
Fund Balances:			
Nonspendable:			
Inventory	91,417	-	91,417
Committed	5,965,000	-	5,965,000
Unassigned	294,446	(151,367)	143,079
Total fund balances	6,350,863	(151,367)	6,199,496
Total liabilities, deferred inflows and fund balances	\$ 6,700,583	\$ 192,066	\$ 6,892,649

The accompanying notes are an integral part of these financial statements.

EXHIBIT C-1

HATTIESBURG CONVENTION COMMISSION

**RECONCILIATION OF THE BALANCE SHEET OF GOVERNMENTAL FUNDS
TO THE STATEMENT OF NET POSITION
SEPTEMBER 30, 2019**

Total fund balances for governmental funds (Exhibit C)	\$ 6,199,496
--	--------------

Total net assets reported for governmental activities in the statement of net position is different because:

Capital assets used in governmental activities are not financial resources and therefore are not reported in the funds, net of accumulated depreciation of \$10,663,166.	18,135,916
--	------------

Long-term liabilities applicable to the Commission's governmental activities are not due and payable in the current period and accordingly are not reported as fund liabilities. All liabilities, both current and long term, are reported in the statement of net position.	<u>(134,571)</u>
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<i>Total net position of governmental activities (Exhibit A)</i>	<u><u>\$ 24,200,841</u></u>
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EXHIBIT D

HATTIESBURG CONVENTION COMMISSION

**STATEMENT OF REVENUES, EXPENDITURES, AND CHANGES IN FUND BALANCES
GOVERNMENTAL FUNDS
YEAR ENDED SEPTEMBER 30, 2019**

	General Fund	Capital Projects Fund	Total Governmental Funds
REVENUES			
Sales tax revenue	\$ 5,505,101	\$ -	\$ 5,505,101
Interest earned on deposits	76,920	1,940	78,860
Convention Center revenue	940,434	-	940,434
Saenger Theater revenue	302,180	-	302,180
USO revenue	6,578	-	6,578
Zoo revenue	1,813,700	-	1,813,700
Total revenues	<u>8,644,913</u>	<u>1,940</u>	<u>8,646,853</u>
EXPENDITURES			
Salaries, wages, and benefits	4,188,263	-	4,188,263
Professional fees	81,703	-	81,703
Advertising and public relations	178,628	-	178,628
Miscellaneous operating costs and supplies	798,055	-	798,055
Food and beverage costs	274,744	-	274,744
Dues and subscriptions	8,685	-	8,685
Insurance costs	342,775	-	342,775
Repairs, maintenance and landscaping	292,211	-	292,211
Utilities	593,505	-	593,505
Office supplies and expense	219,071	-	219,071
Capital outlay	-	2,795,660	2,795,660
Total expenditures	<u>6,977,640</u>	<u>2,795,660</u>	<u>9,773,300</u>
Excess (deficiency) of revenues over expenditures	1,667,273	(2,793,720)	(1,126,447)

The accompanying notes are an integral part of these financial statements.

EXHIBIT D
PAGE TWO

HATTIESBURG CONVENTION COMMISSION

**STATEMENT OF REVENUES, EXPENDITURES, AND CHANGES IN FUND BALANCES
GOVERNMENTAL FUNDS
YEAR ENDED SEPTEMBER 30, 2019**

	General Fund	Capital Projects Fund	Total Governmental Funds
<i>OTHER FINANCING SOURCES (USES)</i>			
Rental receipts	\$ 3,600	\$ -	\$ 3,600
Transfers in	-	1,462,383	1,462,383
Transfers out	(1,462,383)	-	(1,462,383)
Total other financing sources (uses)	<u>(1,458,783)</u>	<u>1,462,383</u>	<u>3,600</u>
<i>Net changes in fund balances</i>	208,490	(1,331,337)	(1,122,847)
<i>FUND BALANCE</i>			
<i>Beginning of year</i>	<u>6,142,373</u>	<u>1,179,970</u>	<u>7,322,343</u>
<i>End of year</i>	<u><u>\$ 6,350,863</u></u>	<u><u>\$ (151,367)</u></u>	<u><u>\$ 6,199,496</u></u>

The accompanying notes are an integral part of these financial statements.

EXHIBIT D-1

HATTIESBURG CONVENTION COMMISSION

**RECONCILIATION OF THE STATEMENT OF REVENUES, EXPENDITURES, AND CHANGES
IN FUND BALANCES OF GOVERNMENTAL FUNDS
TO THE STATEMENT OF ACTIVITIES
YEAR ENDED SEPTEMBER 30, 2019**

Net changes in fund balances – total governmental funds \$ (1,122,847)
(Exhibit D)

The change in net assets reported for governmental activities
in the statement of activities is different because:

Governmental funds report capital outlays as expenditures.
However, in the statement of activities, the costs of those
assets are allocated over their estimated useful lives and
reported as depreciation expense. Thus, the change in net
position differs from the change in fund balances by the
amount that depreciation of \$497,300 did not exceed capital
outlays of \$2,033,714 in the current period. 1,536,414

Under the modified accrual basis of accounting used in the
governmental funds, expenditures for compensated
absences are not recognized for transactions that are not
normally paid with expendable available financial resources.
However, in the statement of activities, expenses and
liabilities are reported regardless of when financial resources
are available.

Compensated absences (8,165)

***Change in net position of governmental activities
(Exhibit B)***

\$ 405,402

NOTES TO FINANCIAL STATEMENTS

HATTIESBURG CONVENTION COMMISSION

NOTES TO FINANCIAL STATEMENTS YEAR ENDED SEPTEMBER 30, 2019

NOTE 1 - SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

The Hattiesburg Convention Commission (Commission) was established under House Bill No. 472, Local and Private Law of the State of Mississippi.

The Commission is presented as a component unit of the City of Hattiesburg and is composed of seven members who are appointed by the Council of the City of Hattiesburg. The purpose of the Commission is to promote conventions and tourism primarily in conjunction with the Hattiesburg Tourism Commission. The Commission has authority over all matters relating to the establishment, development, construction, furnishing and equipping of convention and tourism related facilities.

The Commission is primarily funded by a 2% sales tax on local food, beverage and alcoholic beverage package retailer permits. The sales tax is collected by the City of Hattiesburg and is remitted to the Commission monthly.

Government-Wide Accounting - The Commission implemented the reporting model required by the Governmental Accounting Standards Board (GASB) for financial reporting purposes. The following paragraphs describe the model used to prepare the financial statements.

The Statement of Net Position and the Statement of Activities display information about the Commission as a whole. They include all funds of the reporting entity except for fiduciary funds, if applicable. Governmental activities are generally financed through taxes, intergovernmental revenues, and charges for services. Government-wide accounting is designed to provide a more comprehensive view of the government's operations and financial position as a single economic entity.

The Statement of Net Position presents the financial condition of the governmental activities of the Commission at year-end. The Statement of Activities presents a comparison between direct expenses and program revenues for the Commission's governmental activities. Direct expenses are those that are specifically associated with a program or function. Program revenues include primarily fees and charges paid by the recipients of goods or services offered by the programs. Revenues that are not classified as program revenues are presented as general revenues.

Fund Accounting - The accounts of the Commission are organized on the basis of funds, each of which is considered a separate accounting entity. The operations of each fund are accounted for with a separate set of self-balancing accounts that comprise its assets, liabilities, fund balance, revenues and expenditures. Government resources are allocated to and accounted for in individual funds based upon the purpose for which they are to be spent and the means by which spending activities are controlled. The Commission reports the following major governmental funds:

HATTIESBURG CONVENTION COMMISSION

NOTES TO FINANCIAL STATEMENTS

PAGE TWO

YEAR ENDED SEPTEMBER 30, 2019

NOTE 1 - SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (Cont.)

General Fund - The General Fund is presented as the primary operating fund of the Commission. It is comprised of two funds internally maintained, the Operations and Maintenance (O & M) Fund and the Revenue Fund. It is used to account for all financial resources for which a separate fund has not been established.

Capital Projects Fund - This fund is used to account for and report financial resources that are restricted or committed to expenditure for capital outlays, including the acquisition or construction of capital facilities or other capital assets.

The Commission does not have any non-major funds.

Measurement Focus, Basis of Accounting - The government-wide financial statements are reported using the economic resources measurement focus and the accrual basis of accounting. Revenues are recognized when earned and expenses are recorded at the time liabilities are incurred, regardless of when the related cash flows take place. Shared revenues are recorded when the provider government recognizes the liability to the Commission.

Governmental funds are reported using the current financial resources measurement focus and the modified accrual basis of accounting. Under this method, revenues are recognized when measurable and available. The Commission considers all revenues reported in the governmental funds to be available if the revenues are collected within 60 days after year-end. Expenditures are recorded when the related fund liability is incurred, except for principal and interest on general long-term debt, which are recognized as expenditures to the extent they have matured. General capital asset acquisitions are reported as expenditures in governmental funds. Proceeds of general long-term debt and acquisitions under capital leases are reported as other financing sources.

Use of Estimates - The preparation of financial statements in conformity with generally accepted accounting principles requires management to make estimates and assumptions. This will affect the reported amounts of assets and liabilities, disclosure of contingent assets and liabilities at the date of the financial statements, and the reported amounts of revenues and expenses during the reporting period. Actual results could differ from these estimates.

Cash and Cash Equivalents - The Commission deposits excess funds in the financial institutions selected by the Commissioners. State statutes specify how these depositories are to be selected.

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HATTIESBURG CONVENTION COMMISSION

NOTES TO FINANCIAL STATEMENTS

PAGE THREE

YEAR ENDED SEPTEMBER 30, 2019

NOTE 1 - SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (Cont.)

Receivables - All accounts receivable items are considered collectible by management; therefore, no allowance has been made for these receivables.

Inventory - Inventory consists of purchased food, supplies, and gift shop merchandise which is valued at the lower of cost and net realizable value using the first-in/first-out (FIFO) method.

Restricted Assets - This component consists of amounts that have constraints placed on them either externally by third-parties (creditors, grantors, contributors, or laws or regulations of other governments) or by law through constitutional provisions or enabling legislation. Enabling legislation is a legally enforceable requirement (compelled by external parties) that these resources be used only for specific purposes as stipulated in the legislation.

Capital Assets - Capital assets are reported at actual or estimated historical cost based on appraisals or deflated current replacement cost. Contributed assets are reported at estimated fair value at the time received.

Capitalization thresholds (dollar value above which asset acquisitions are added to the capital asset accounts) and estimated useful lives of capital assets are reported in the government-wide statements. Depreciation is calculated on the straight-line basis for all depreciable capital assets. Amortization of capital assets is included with depreciation expense. The following schedule details capitalization thresholds.

	Capitalization Policy	Estimated Useful Life
Buildings	\$ 50,000	5 - 40 years
Building improvements	25,000	20 years
Improvements other than buildings	25,000	20 years
Equipment and vehicles	5,000	3 - 15 years
Furniture and fixtures	5,000	5 - 7 years
Assets acquired under capital leases	*	*

(*) The threshold amount will correspond with the amounts for the asset classifications, if applicable.

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HATTIESBURG CONVENTION COMMISSION

NOTES TO FINANCIAL STATEMENTS

PAGE FOUR

YEAR ENDED SEPTEMBER 30, 2019

NOTE 1 - SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (Cont.)

Interfund Transactions and Balances - Interfund transactions and balances are the result of timing differences between the date expenditures occur and the date payments are made.

Short-term (due within one year) interfund loan receivables, if any, are reported as "due from other funds" and are considered available expendable resources.

Transfers are used to (a) move revenues to the fund that statute or budget requires to collect the funds or the fund that statute or budget requires to expend them and (b) to use unrestricted revenues collected in the general fund to finance various programs accounted for in other funds in accordance with budgetary authorizations.

Interfund receivables and payables between the funds within governmental activities are eliminated in the Statement of Net Position. See Note 4 for details on interfund transactions.

Compensated Absences - The Commission has adopted a policy of compensation for accumulated unpaid employee personal leave, up to 240 hours. Accounting principles generally accepted in the United States of America require accrual of accumulated unpaid employee benefits as long-term liabilities in the government-wide financial statements. In the fund financial statements, governmental funds report a compensated absences liability only if the payable has matured, for example, an employee resigns or retires.

Deferred Inflows of Resources - In addition to liabilities, the Commission reports a separate financial statement element that represents an acquisition of net position or fund balance that applies to a future period and so will not be recognized as an inflow of resources (revenue) until that time. Both the government-wide statements and governmental funds report unavailable revenues from special events. These amounts are deferred and recognized as an inflow of resources in the period that the event occurs.

Equity Classifications:

Government-Wide Financial Statements:

Equity is classified as net position and displayed in three components:

- Net investment in capital assets - Consists of capital assets including restricted capital assets, net of accumulated depreciation and reduced by the outstanding balances of any bonds, mortgages, notes, or other borrowings that are attributable to the acquisition, construction, or improvements of those assets.

HATTIESBURG CONVENTION COMMISSION

NOTES TO FINANCIAL STATEMENTS

PAGE FIVE

YEAR ENDED SEPTEMBER 30, 2019

NOTE 1 - SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (Cont.)

- Restricted net position - Consists of net assets with constraints placed on the use with or by (1) external groups such as creditors, grantors, contributors, or laws or regulations of other governments; or (2) law through constitutional provisions or enabling legislation. The Commission has no restricted assets at September 30, 2019.
- Unrestricted net position - All other net assets that do not meet the definition of "restricted" or "net investment in capital assets".

When both restricted and unrestricted resources are available for use, it is the Commission's policy to use restricted resources first, then unrestricted resources as they are needed.

Fund Financial Statements:

In accordance with GASB Statement 54, *Fund Balance Reporting and Governmental Fund Type Definitions*, the following classifications are used by the Commission and describe the relative strength of the spending constraints placed on the purposes for which resources can be used:

- Nonspendable fund balance - amounts that are not in spendable form, such as inventories and prepaid items, or legally or contractually required to remain intact.
- Restricted fund balance - amounts constrained to specific purposes by their providers (such as grantors, bondholders, and higher levels of government) through constitutional provisions, or by enabling legislation.
- Committed fund balance - amounts that can only be used for the specific purpose determined by a resolution from the Board of Commissioners.
- Unassigned fund balance - residual amounts that are available for any purpose.

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HATTIESBURG CONVENTION COMMISSION

NOTES TO FINANCIAL STATEMENTS

PAGE SIX

YEAR ENDED SEPTEMBER 30, 2019

NOTE 1 - SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (Cont.)

Recent Accounting Pronouncements

In May 2014, the Financial Accounting Standards Board (FASB) issued Accounting Standards Update (ASU) 2014-09, *Revenue from Contracts with Customers (Topic 606)*, which, when effective, will supersede the guidance in former ASC 605, *Revenue Recognition*. The new guidance requires entities to recognize revenue based on the transfer of promised goods or services to customers in an amount that reflects the consideration to which the entity expects to be entitled in exchange for those goods or services. Application of the new standard may result in significant changes to current practice. In August 2015, the FASB issued ASU 2015-14, *Revenue from Contracts with Customers (Topic 606): Deferral of Effective Date*, which provides an optional one-year deferral of the effective date. Therefore, this standard is effective for the year ending September 30, 2020. The Commission is evaluating the effect the guidance will have on their financial statements.

In June 2017, the Government Accounting Standards Board (GASB) issued Statement No. 87, *Leases (GASB-87)*, which when effective will require organizations to recognize assets and liabilities on the balance sheet for the rights and obligations created by the leases. A lessee will be required to recognize assets and liabilities for leases with terms that exceed twelve months. The standard will also require disclosures to help financial statement users better understand the amount, timing and uncertainty of cash flows arising from leases. The disclosures include qualitative and quantitative requirements, providing additional information about the amounts recorded in the financial statements. The guidance is effective for the year ending September 30, 2021, and early adoption is permitted. The Commission is evaluating the effect the guidance will have on their financial statements.

NOTE 2 - CASH AND CASH EQUIVALENTS

Cash and Cash Equivalents - The collateral for public entities' deposits in financial institutions is held in the name of the State Treasurer under a program established by the Mississippi State Legislature and is governed by Section 27-105-5, Miss. Code Ann. (1972). Under this program, the Commission's funds are protected through a collateral pool administered by the State Treasurer. Financial institutions holding deposits of public funds must pledge securities as collateral against those deposits. In the event of failure of a financial institution, securities pledged by that institution would be liquidated by the State Treasurer to replace the public deposits not covered by the Federal Depository Insurance Corporation (FDIC).

The carrying amount of the Commission's deposits with financial institutions was \$5,871,599 and the bank balance was \$5,883,594.

HATTIESBURG CONVENTION COMMISSION

NOTES TO FINANCIAL STATEMENTS

PAGE SEVEN

YEAR ENDED SEPTEMBER 30, 2019

NOTE 2 - CASH AND CASH EQUIVALENTS (Cont.)

Custodial Credit Risk - Deposits - Custodial credit risk is defined as the risk that, in the event of a financial institutions failure, the Commission's deposits may not be returned to it. The Commission does not have a deposit policy for custodial credit risk. As of September 30, 2019, the Commission's bank balance was not exposed to custodial credit risk.

Interest Rate Risk - The Commission does not have a formal investment policy that limits investment maturities as a means of managing its exposure to fair value losses arising from increasing interest rates.

Credit Risk - State law limits investments to those prescribed in Sections 27-105-33(d) and 27-105-33(e), Miss. Code Ann. (1972). The Commission does not have a formal investment policy that would further limit its investment choices or one that addresses credit risk.

NOTE 3 - RESTRICTED CASH

The Commission has \$4,965,000 in restricted cash for amounts committed for expenditure in the acquisition or construction of noncurrent assets.

NOTE 4 - INTERFUND TRANSFERS

The following is a summary of interfund transfers for the year ended September 30, 2019:

	<u>Transfers In</u>	<u>Transfers Out</u>
General fund	\$ -	\$ 1,462,383
Capital projects fund	<u>1,462,383</u>	<u>-</u>
Total transfers in/out	<u>\$ 1,462,383</u>	<u>\$ 1,462,383</u>

Transfers out from the General Fund were for ongoing capital projects.

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HATTIESBURG CONVENTION COMMISSION

NOTES TO FINANCIAL STATEMENTS PAGE EIGHT YEAR ENDED SEPTEMBER 30, 2019

NOTE 5 - CAPITAL ASSETS

Capital asset activity for the year ended September 30, 2019, was as follows:

	<u>Beginning Balances</u>	<u>Additions</u>	<u>Retirements</u>	<u>Ending Balances</u>
<i>Governmental activities:</i>				
Non-depreciable capital assets:				
Land	\$ 1,422,886	\$ 22,500	\$ -	\$ 1,445,386
Construction in progress - Zoo projects	494,812	1,991,316	(498,201)	1,987,927
Construction in progress - Oseola McCarty House Museum	60,092	33,228	(93,320)	-
Total non-depreciable capital assets	<u>1,977,790</u>	<u>2,047,044</u>	<u>(591,521)</u>	<u>3,433,313</u>
Depreciable capital assets:				
Buildings and improvements	22,645,373	335,066	-	22,980,439
Furniture and fixtures	487,942	-	-	487,942
Equipment and vehicles	1,619,526	243,125	-	1,862,651
Assets acquired under capital lease	34,737	-	-	34,737
Total depreciable capital assets	<u>24,787,578</u>	<u>578,191</u>	<u>-</u>	<u>25,365,769</u>
Less accumulated depreciation for:				
Buildings and improvements	8,174,748	472,041	-	8,646,789
Furniture and fixtures	436,335	1,857	-	438,192
Equipment and vehicles	1,520,046	23,402	-	1,543,448
Assets acquired under capital lease	34,737	-	-	34,737
Total accumulated depreciated	<u>10,165,866</u>	<u>497,300</u>	<u>-</u>	<u>10,663,166</u>
Total depreciable capital assets, net	<u>14,621,712</u>	<u>80,891</u>	<u>-</u>	<u>14,702,603</u>
<i>Governmental activity capital assets, net</i>	<u><u>\$ 16,599,502</u></u>	<u><u>\$ 2,127,935</u></u>	<u><u>\$ (591,521)</u></u>	<u><u>\$ 18,135,916</u></u>

Depreciation expense is charged as a program expense in the amount of \$497,300.

HATTIESBURG CONVENTION COMMISSION

NOTES TO FINANCIAL STATEMENTS

PAGE NINE

YEAR ENDED SEPTEMBER 30, 2019

NOTE 6 - LONG-TERM LIABILITIES

The following is a summary of changes in long-term liabilities for the year ended September 30, 2019:

	<u>Balance</u> <u>Oct. 1, 2018</u>	<u>Additions</u>	<u>Reductions</u>	<u>Balance</u> <u>Sep. 30, 2019</u>
Compensated absences	\$ 126,406	\$ 8,165	\$ -	\$ 134,571

Compensated absences will be paid from the fund from which the employees' salaries were paid, which is generally the General Fund.

NOTE 7 - COMMITTED FUND BALANCE

Committed fund balance is available for the following purposes:

Operating Reserve	\$ 1,000,000
Zoo Development	2,150,000
Eureka Museum Components	500,000
Sixth Street Museum District Development	200,000
Saenger Theater Improvements	75,000
Long-leaf Trace to Museum Extension Match	200,000
Kamper Park Zoo Water Park	1,000,000
Science Exploration Center Project	400,000
City/Facility Improvement Partnership	200,000
Oseola McCarty Home Museum	90,000
Convention Center Improvements	150,000
Total committed fund balance	<u><u>\$ 5,965,000</u></u>

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HATTIESBURG CONVENTION COMMISSION

NOTES TO FINANCIAL STATEMENTS

PAGE TEN

YEAR ENDED SEPTEMBER 30, 2019

NOTE 8 - HATTIESBURG ZOO

The Commission executed a contract in 2010 with the City of Hattiesburg and Hattiesburg Tourism Commission for the management of the Hattiesburg Zoo at Kamper Park. In May 2012, a new agreement was entered into by the City of Hattiesburg and the Commission where the Commission agreed to accept full financial responsibility for any subsidy requirement necessary for operations of the Hattiesburg Zoo. This agreement was renewed in August 2015. Pursuant to the agreement, all parties have agreed to review the financial status of the Zoo operations six months prior to the end date of the contract, currently September 30, 2020, in which a new financial plan will be negotiated as necessary.

NOTE 9 - SUBSEQUENT EVENT

Subsequent Events - Management of the Commission has evaluated subsequent events as of February 17, 2020, which is the date the financial statements were available to be issued.

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REQUIRED SUPPLEMENTARY INFORMATION

HATTIESBURG CONVENTION COMMISSION

SCHEDULE 1

BUDGETARY COMPARISON SCHEDULE - COMPREHENSIVE BUDGET ALL FUNDS
YEAR ENDED SEPTEMBER 30, 2019

	Budget		Actual	Variance
	Original	Final		Favorable (Unfavorable)
REVENUES				
Special sales tax (2% food and beverage tax revenue)	\$ 5,225,691	\$ 5,225,691	\$ 5,614,060	\$ 388,369
Saenger Theater, Convention Center, USO, Zoo revenue	1,888,045	1,888,045	2,003,997	115,952
Food and beverage revenue	1,180,500	1,180,500	1,063,397	(117,103)
Interest earned	52,215	52,215	78,859	26,644
Total revenues	8,346,451	8,346,451	8,760,313	413,862
EXPENDITURES				
Facilities Operations (Convention Center, Visitors Center, Saenger Theater, USO, Eureka, Zoo)				
Utilities, telecommunications, janitorial supplies, safety equipment, training, contracted services, paper products	2,088,209	2,088,209	1,980,673	107,536
Repairs, Refurbishment, and Fixed Assets				
Refurbishment of facilities, replacement of equipment, fixtures	478,756	478,756	234,676	244,080
Insurance, Professional Services, and Marketing				
Trustee fees, insurance, surety bonds, audit and legal fees, marketing materials, etc.	863,250	863,250	755,504	107,746
Staffing Costs (including benefits)	4,482,213	4,482,213	4,185,874	296,339
Total expenditures	7,912,428	7,912,428	7,156,727	755,701
Special Projects				
Special Projects Grants Income (Zoo & Eureka)	15,000	15,000	-	(15,000)
Historic USO Club & Museum Development	(20,000)	(20,000)	(17,217)	2,783
Historic Eureka School Museum Development	(500,000)	(500,000)	(37,871)	462,129
Saenger Theater Repairs	(50,000)	(50,000)	(36,855)	13,145
Zoo Giraffe Barn	(800,000)	(800,000)	(800,000)	-
Zoo Completion	(1,600,000)	(1,600,000)	(1,115,686)	484,314
Trolleys	-	-	(406)	(406)
Zoo Premier Exhibit	-	-	(301,280)	(301,280)
Longleaf Trace to Museum Extension Match	(200,000)	(200,000)	(50,000)	150,000
Science Exploration Center Project	(200,000)	(200,000)	-	200,000
City Partnership for Hwy 49 Landscaping Improvements	(25,000)	(25,000)	-	25,000
City/facility partnership	(200,000)	(200,000)	-	200,000
Oseola McCarty House	(60,000)	(60,000)	(31,565)	28,435
Total special projects, net of projected funding sources	(3,640,000)	(3,640,000)	(2,390,880)	1,249,120
Total expenditures and special projects	(11,552,428)	(11,552,428)	(9,547,607)	2,004,821
EXCESS (DEFICIENCY) OF REVENUES OVER EXPENDITURES	(3,205,977)	(3,205,977)	(787,294)	2,418,683
NET CHANGE IN FUND BALANCES	\$ (3,205,977)	\$ (3,205,977)	(787,294)	\$ 2,418,683
ADJUSTMENTS				
Adjustments for accrued receivables and payables			(335,553)	
FUND BALANCE				
Beginning of year			7,322,343	
End of year			\$ 6,199,496	

The accompanying notes are an integral part of this schedule.

HATTIESBURG CONVENTION COMMISSION

NOTES TO THE REQUIRED SUPPLEMENTARY INFORMATION YEAR ENDED SEPTEMBER 30, 2019

NOTE 1 - BASIS OF PRESENTATION

The Budgetary Comparison Schedule presents the original legally adopted budget, the final legally adopted budget, the actual data on the budgetary cash basis, and variances between the final budget and the actual data.

NOTE 2 - BUDGET AMENDMENTS AND REVISIONS

The budget is adopted by the Board of Commissioners and approved by the Hattiesburg City Council. Amendments can be made on the approval of the Council. A comprehensive budget including all funds is presented for budgetary comparison consistent with accounting principles generally accepted in the United States of America.

NOTE 3 - SPECIAL PROJECTS

The budget for special projects is approved in total and may be used as needed between the projects. Budgetary performance for individual projects should be evaluated based on total expenditures for special projects rather than by each individual project. In total, for fiscal year 2019, there is a favorable variance in the special projects category due to a decrease in projected expenditures.

NOTE 4 - BUDGET/GAAP RECONCILIATION

The major differences between the budgetary basis and GAAP basis are:

- Revenues are recorded when received in cash (budgetary) as opposed to when susceptible to accrual (GAAP).
- Expenditures are recorded when paid in cash (budgetary) as opposed to when susceptible to accrual (GAAP).

The budget to GAAP reconciliation is shown at the bottom of Schedule 1.

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SUPPLEMENTARY INFORMATION

SCHEDULE 2

HATTIESBURG CONVENTION COMMISSION

COMBINING BALANCE SHEET
GOVERNMENTAL FUNDS
September 30, 2019

	O & M Fund	Revenue Fund	Total General Fund (Exhibit C)	Capital Projects Fund	Total Governmental Funds (Exhibit C)
ASSETS					
Cash and cash equivalents	\$ 743,290	\$ 9,579	\$ 752,869	\$ 192,066	\$ 944,935
Cash and cash equivalents - restricted	4,965,000	-	4,965,000	-	4,965,000
Special sales tax receivable	-	791,207	791,207	-	791,207
Accounts receivable	100,090	-	100,090	-	100,090
Inventory	91,417	-	91,417	-	91,417
Total assets	\$ 5,899,797	\$ 800,786	\$ 6,700,583	\$ 192,066	\$ 6,892,649
LIABILITIES, DEFERRED INFLOWS AND FUND BALANCES					
Liabilities:					
Accounts payable	\$ 70,742	\$ -	\$ 70,742	\$ 343,433	\$ 414,175
Accrued payroll liabilities	109,895	-	109,895	-	109,895
Total liabilities	180,637	-	180,637	343,433	524,070
Deferred Inflows of Resources:					
Special event revenue	169,083	-	169,083	-	169,083
Fund Balances:					
Nonspendable:					
Inventory	91,417	-	91,417	-	91,417
Committed	5,965,000	-	5,965,000	-	5,965,000
Unassigned	(506,340)	800,786	294,446	(151,367)	143,079
Total fund balances	5,550,077	800,786	6,350,863	(151,367)	6,199,496
Total liabilities, deferred inflows and fund balances	\$ 5,899,797	\$ 800,786	\$ 6,700,583	\$ 192,066	\$ 6,892,649

The accompanying notes are an integral part of this schedule.

SCHEDULE 3

HATTIESBURG CONVENTION COMMISSION

**COMBINING STATEMENT OF REVENUES, EXPENDITURES, AND CHANGES IN FUND BALANCES
GOVERNMENTAL FUNDS
YEAR ENDED SEPTEMBER 30, 2019**

	O & M Fund	Revenue Fund	Total General Fund (Exhibit D)	Capital Projects Fund	Total Governmental Funds (Exhibit D)
REVENUES					
Sales tax revenue	\$ -	\$ 5,505,101	\$ 5,505,101	\$ -	\$ 5,505,101
Interest earned on deposits	76,803	117	76,920	1,940	78,860
Convention Center revenue	940,434	-	940,434	-	940,434
Saenger Theater revenue	302,180	-	302,180	-	302,180
USO revenue	6,578	-	6,578	-	6,578
Zoo revenue	1,813,700	-	1,813,700	-	1,813,700
Total revenues	<u>3,139,695</u>	<u>5,505,218</u>	<u>8,644,913</u>	<u>1,940</u>	<u>8,646,853</u>
EXPENDITURES					
Salaries, wages, and benefits	4,188,263	-	4,188,263	-	4,188,263
Professional fees	81,703	-	81,703	-	81,703
Advertising and public relations	178,628	-	178,628	-	178,628
Miscellaneous operating costs and supplies	798,055	-	798,055	-	798,055
Food and beverage costs	274,744	-	274,744	-	274,744
Dues and subscriptions	8,685	-	8,685	-	8,685
Insurance costs	342,775	-	342,775	-	342,775
Repairs, maintenance and landscaping	292,211	-	292,211	-	292,211
Utilities	593,505	-	593,505	-	593,505
Office supplies and expense	219,071	-	219,071	-	219,071
Capital outlay	-	-	-	2,795,660	2,795,660
Total expenditures	<u>6,977,640</u>	<u>-</u>	<u>6,977,640</u>	<u>2,795,660</u>	<u>9,773,300</u>
Excess (deficiency) of revenues over expenditures	(3,837,945)	5,505,218	1,667,273	(2,793,720)	(1,126,447)

The accompanying notes are an integral part of this schedule.

SCHEDULE 3
PAGE TWO

HATTIESBURG CONVENTION COMMISSION

**COMBINING STATEMENT OF REVENUES, EXPENDITURES, AND CHANGES IN FUND BALANCES
GOVERNMENTAL FUNDS
YEAR ENDED SEPTEMBER 30, 2019**

	O & M Fund	Revenue Fund	Total General Fund (Exhibit D)	Capital Projects Fund	Total Governmental Funds (Exhibit D)
OTHER FINANCING SOURCES (USES)					
Rental receipts	\$ 3,600	\$ -	\$ 3,600	\$ -	\$ 3,600
Transfers in	6,438,192	-	6,438,192	2,286,515	8,724,707
Transfers out	(2,286,515)	(5,614,060)	(7,900,575)	(824,132)	(8,724,707)
Total other financing sources (uses)	<u>4,155,277</u>	<u>(5,614,060)</u>	<u>(1,458,783)</u>	<u>1,462,383</u>	<u>3,600</u>
Net changes in fund balance	317,332	(108,842)	208,490	(1,331,337)	(1,122,847)
FUND BALANCE					
Beginning of year	<u>5,232,745</u>	<u>909,628</u>	<u>6,142,373</u>	<u>1,179,970</u>	<u>7,322,343</u>
End of year	<u>\$ 5,550,077</u>	<u>\$ 800,786</u>	<u>\$ 6,350,863</u>	<u>\$ (151,367)</u>	<u>\$ 6,199,496</u>

* Net amounts are shown for General Fund transfers on Exhibit D.



**INDEPENDENT AUDITOR'S REPORT ON INTERNAL CONTROL
OVER FINANCIAL REPORTING AND ON COMPLIANCE
AND OTHER MATTERS BASED ON AN AUDIT OF
FINANCIAL STATEMENTS PERFORMED IN ACCORDANCE
WITH GOVERNMENT AUDITING STANDARDS**

To the Board of Commissioners
Hattiesburg Convention Commission
Hattiesburg, Mississippi

We have audited, in accordance with auditing standards generally accepted in the United States of America and the standards applicable to financial audits contained in *Government Auditing Standards* issued by the Comptroller General of the United States, the financial statements of the governmental activities and each major fund of the Hattiesburg Convention Commission (the Commission) as of and for the year ended September 30, 2019, and the related notes to the financial statements, which collectively comprise the Commission's basic financial statements, and have issued our report thereon dated February 17, 2020.

Internal Control Over Financial Reporting

In planning and performing our audit of the financial statements, we considered the Commission's internal control over financial reporting (internal control) to determine the audit procedures that are appropriate in the circumstances for the purpose of expressing our opinions on the financial statements, but not for the purpose of expressing an opinion on the effectiveness of the Commission's internal control. Accordingly, we do not express an opinion on the effectiveness of the Commission's internal control.

A *deficiency in internal control* exists when the design or operation of a control does not allow management or employees, in the normal course of performing their assigned functions, to prevent, or detect and correct, misstatements on a timely basis. A *material weakness* is a deficiency, or a combination of deficiencies, in internal control, such that there is a reasonable possibility that a material misstatement of the entity's financial statements will not be prevented, or detected and corrected on a timely basis. A *significant deficiency* is a deficiency, or a combination of deficiencies, in internal control that is less severe than a material weakness, yet important enough to merit attention by those charged with governance.

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Gulfport, MS 39502-1842

To the Board of Commissioners
Hattiesburg Convention Commission

Our consideration of internal control was for the limited purpose described in the first paragraph of this section and was not designed to identify all deficiencies in internal control that might be material weaknesses or significant deficiencies. Given these limitations, during our audit we did not identify any deficiencies in internal control that we consider to be material weaknesses. However, material weaknesses may exist that have not been identified.

Compliance and Other Matters

As part of obtaining reasonable assurance about whether the Commission's financial statements are free from material misstatement, we performed tests of its compliance with certain provisions of laws, regulations, contracts, and grant agreements, noncompliance with which could have a direct and material effect on the determination of financial statement amounts. However, providing an opinion on compliance with those provisions was not an objective of our audit and, accordingly, we do not express such an opinion. The results of our tests disclosed no instances of noncompliance or other matters that are required to be reported under *Government Auditing Standards*.

Purpose of this Report

The purpose of this report is solely to describe the scope of our testing of internal control and compliance and the results of that testing, and not to provide an opinion on the effectiveness of the entity's internal control or on compliance. This report is an integral part of an audit performed in accordance with *Government Auditing Standards* in considering the entity's internal control and compliance. Accordingly, this communication is not suitable for any other purpose.


Hattiesburg, Mississippi
February 17, 2020

SCHEDULE 4

HATTIESBURG CONVENTION COMMISSION

**SCHEDULE OF FINDINGS
YEAR ENDED SEPTEMBER 30, 2019**

Section I - Summary of Auditor's Results

Financial Statements

- | | |
|--|---------------|
| 1. Type of auditor's report issued: | Unmodified |
| 2. Internal control over financial reporting: | |
| a. Material weakness identified? | No |
| b. Significant deficiency identified not considered to be a material weakness? | None reported |
| 3. Noncompliance material to financial statements noted? | No |

Section II - Financial Statement Findings

The results of our tests did not disclose any findings related to the financial statements that are required to be reported by *Government Auditing Standards*.

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Memorandum

To: Mayor Toby Barker and Members of City Council

From:

cc:

Date: Tuesday, August 18, 2020

Re: Acknowledge receipt of the Audited Financial Statements of the City of Hattiesburg Combined Water and Sewer System for the Fiscal year ending September 30, 2019, from Topp McWhorter Harvey PLLC.
File Number: 2020-589
Minute Book #

Summary

Acknowledge receipt of the Audited Financial Statements of the City of Hattiesburg Combined Water and Sewer System for the Fiscal year ending September 30, 2019, from Topp McWhorter Harvey PLLC.

Recommendation Statement

Please place this on the August 18, 2020 City Council meeting for consideration.



CPA & Consulting Firm

**CITY OF HATTIESBURG, MISSISSIPPI
COMBINED WATER AND SEWER SYSTEM**

FINANCIAL STATEMENTS

Year Ended September 30, 2019

**CITY OF HATTIESBURG, MISSISSIPPI
COMBINED WATER AND SEWER SYSTEM**

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INDEPENDENT AUDITOR'S REPORT

To the Honorable Mayor and City Council
City of Hattiesburg, Mississippi
Hattiesburg, Mississippi

We have audited the accompanying financial statements of the City of Hattiesburg, Mississippi Combined Water and Sewer System (the System), the proprietary fund included in the basic financial statements of the City, as of and for the year ended September 30, 2019, and the related notes to the financial statements, which collectively comprise the System's basic financial statements as listed in the table of contents.

Management's Responsibility for the Financial Statements

Management is responsible for the preparation and fair presentation of these financial statements in accordance with accounting principles generally accepted in the United States of America; this includes the design, implementation, and maintenance of internal control relevant to the preparation and fair presentation of financial statements that are free from material misstatement, whether due to fraud or error.

Auditor's Responsibility

Our responsibility is to express an opinion on these financial statements based on our audit. We conducted our audit in accordance with auditing standards generally accepted in the United States of America. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditor's judgment, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those



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Gulfport, MS 39502-1842

To the Honorable Mayor and City Council
City of Hattiesburg, Mississippi

risk assessments, the auditor considers internal control relevant to the System's preparation and fair presentation of the financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the System's internal control. Accordingly, we express no such opinion. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluating the overall presentation of the financial statements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

Opinion

In our opinion the financial statements referred to above present fairly, in all material respects, the respective financial position of the System as of September 30, 2019, and the results of its operations and its cash flows for the year then ended in accordance with accounting principles generally accepted in the United States of America.


Hattiesburg, Mississippi
June 24, 2020

EXHIBIT A
PAGE 1 OF 2

**CITY OF HATTIESBURG, MISSISSIPPI
COMBINED WATER AND SEWER SYSTEM**

**STATEMENT OF NET POSITION
SEPTEMBER 30, 2019**

CURRENT ASSETS

Cash and cash equivalents	\$ 10,866,180
Cash with fiscal agent	11,639,122
Accounts receivable - trade (net of allowance for doubtful accounts of \$3,499,832)	1,166,149
Total current assets	<u>23,671,451</u>

NONCURRENT ASSETS

Capital assets	
Land	321,243
Construction in progress	12,801,994
Infrastructure, net	100,663,510
Buildings and improvements, net	159,593
Machinery and equipment, net	431,163
Total noncurrent assets	<u>114,377,503</u>

<i>Total assets</i>	<u>138,048,954</u>
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DEFERRED OUTFLOWS OF RESOURCES

Related to pension	497,182
Related to OPEB	154,068
Prepaid bond insurance	104,817

<i>Total deferred outflows</i>	<u>756,067</u>
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CURRENT LIABILITIES

Due to governmental funds	173,822
Sales tax payable	18,626
Accounts payable	2,109,440
Accrued wages and benefits	71,672
Accrued interest	502,256
Unamortized bond premium - current	45,384
Revenue bonds - current	3,155,000
General obligation bonds - current	2,206,000
Compensated absences - current	23,039
Total current liabilities	<u>8,305,239</u>

The accompanying notes are an integral part of these financial statements.

EXHIBIT A
PAGE 2 of 2

**CITY OF HATTIESBURG, MISSISSIPPI
COMBINED WATER AND SEWER SYSTEM**

**STATEMENT OF NET POSITION
SEPTEMBER 30, 2019**

NON-CURRENT LIABILITIES

Revenue bonds	\$ 51,780,000
General obligation bonds	5,935,000
Unamortized bond premium	256,265
Compensated absences	130,553
Net pension liability	4,997,542
Net OPEB liability	826,448
Customer meter deposits	1,694,132
Total non-current liabilities	<u>65,619,940</u>
<i>Total liabilities</i>	<u>73,925,179</u>

DEFERRED INFLOWS OF RESOURCES

Related to pension	43,877
Deferred revenues	<u>507,109</u>
<i>Total deferred inflows</i>	<u>550,986</u>

NET POSITION

Net investment in capital assets	50,999,854
Restricted for debt service	8,094,960
Unrestricted	<u>5,234,042</u>
<i>Total net position</i>	<u>\$ 64,328,856</u>

EXHIBIT B

**CITY OF HATTIESBURG, MISSISSIPPI
COMBINED WATER AND SEWER SYSTEM**

**STATEMENT OF REVENUES, EXPENSES, AND CHANGES IN NET POSITION
YEAR ENDED SEPTEMBER 30, 2019**

OPERATING REVENUES

Water charges	\$ 11,184,398
Sewer charges	10,524,565
Sewer connections	84,995
Turn-on fees	53,350
Taps	100,184
Total operating revenues	<u>21,947,492</u>

OPERATING EXPENSES

Personnel services	3,000,789
Other services and charges	9,639,461
Supplies and expenses	1,075,601
Depreciation	3,866,545
Other operating expenses	133,365
Total operating expenses	<u>17,715,761</u>

OPERATING INCOME

4,231,731

NON-OPERATING REVENUES (EXPENSES)

Interest revenue	413,039
Interest expense	(2,296,933)
Other revenues	120,506
Total non-operating revenues (expenses)	<u>(1,763,388)</u>

CHANGE IN NET POSITION

2,468,343

NET POSITION - beginning

61,860,513

NET POSITION - ending

\$ 64,328,856

EXHIBIT C
PAGE 1 OF 2

**CITY OF HATTIESBURG, MISSISSIPPI
COMBINED WATER AND SEWER SYSTEM**

**STATEMENT OF CASH FLOWS
YEAR ENDED SEPTEMBER 30, 2019**

CASH FLOWS FROM OPERATING ACTIVITIES

Receipts from customers	\$ 22,376,310
Payments to suppliers and service providers	(10,465,896)
Payments to employees for salaries and benefits	(2,752,005)
Net cash provided by operating activities	<u>9,158,409</u>

***CASH FLOWS FROM CAPITAL AND RELATED
FINANCING ACTIVITIES***

Principal payments - bonds and notes	(5,193,683)
Acquisition and construction of capital assets	(9,794,820)
Other receipts	120,506
Interest paid on capital debt	(2,362,911)
Net cash used by capital and related financing activities	<u>(17,230,908)</u>

CASH FLOWS FROM INVESTING ACTIVITIES

Interest Income	<u>413,039</u>
Net cash provided by investing activities	<u>413,039</u>

NET DECREASE IN CASH AND CASH EQUIVALENTS (7,659,460)

CASH AND CASH EQUIVALENTS - Beginning 30,164,762

CASH AND CASH EQUIVALENTS - Ending \$ 22,505,302

Displayed on Exhibit A as:

Cash and cash equivalents	\$ 10,866,180
Cash with fiscal agent	<u>11,639,122</u>
	<u><u>\$ 22,505,302</u></u>

EXHIBIT C
PAGE 2 OF 2

**CITY OF HATTIESBURG, MISSISSIPPI
COMBINED WATER AND SEWER SYSTEM**

**STATEMENT OF CASH FLOWS
YEAR ENDED SEPTEMBER 30, 2019**

**RECONCILIATION OF OPERATING INCOME TO NET
CASH PROVIDED BY OPERATING ACTIVITIES:**

OPERATING INCOME	\$	4,231,731
ADJUSTMENTS TO RECONCILE OPERATING INCOME TO NET CASH PROVIDED BY OPERATING ACTIVITIES:		
Depreciation expense		3,866,545
Changes in assets and liabilities:		
Decrease in accounts receivable - trade		348,847
Decrease in prepaid insurance - bonds		41,781
(Increase) in deferred outflows relating to pension		(103,788)
(Increase) in deferred outflows related to OPEB		(152,818)
Increase in accounts payable		368,564
Increase in wages and benefits payable		16,757
Increase in customer meter deposits		134,043
Increase in sales tax payable		968
(Decrease) in due from/to other governmental funds		(27,814)
Increase in compensated absences		297
Increase in net pension obligation		303,272
Increase in OPEB obligation		222,879
(Decrease) in deferred inflows related to pension		(37,815)
(Decrease) in deferred revenues		(55,040)
Total adjustments		<u>4,926,678</u>
NET CASH PROVIDED BY OPERATING ACTIVITIES	\$	<u>9,158,409</u>

NOTES TO FINANCIAL STATEMENTS

**CITY OF HATTIESBURG, MISSISSIPPI
COMBINED WATER AND SEWER SYSTEM**

**NOTES TO FINANCIAL STATEMENTS
YEAR ENDED SEPTEMBER 30, 2019**

NOTE 1 - SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

The summary of significant accounting policies of the City of Hattiesburg Combined Water and Sewer System (the System) is presented to assist in the understanding of the financial statements. The financial statements and notes are representations of the System's management, which is responsible for their integrity and objectivity.

Reporting Entity - These financial statements present only the activity of the System, which is a department of the City of Hattiesburg, and consists of all departmental accounting funds and activities that comprise the System. These financial statements do not include financial data for the City of Hattiesburg as a whole or its other departments and activities.

The System includes the sewage treatment plant, sewage pumping stations and collection systems, and the water distribution system. It is operated as an enterprise fund of the City of Hattiesburg (the City) and is therefore included in the City's annual financial statements. Enterprise fund types are proprietary funds used to account for operations that are financed and operated in a manner similar to private business enterprises. Enterprise funds are utilized when the intent of the governing body is that the costs (expenses, including depreciation) of providing goods or services to the general public on a continuing basis be financed or recovered primarily through user charges. Enterprise funds are also utilized where the governing body has decided the periodic determination of revenues earned, expenses incurred, and net income is appropriate for capital maintenance, public policy, management control, accountability or other purposes.

Measurement Focus, Basis of Accounting, and Financial Statement Presentation - The System's financial statements are reported using the accrual basis of accounting. Revenues are recorded when earned and expenses are recorded when a liability is incurred, regardless of the timing of the related cash flows. Grants and similar items are recognized as revenue as soon as all eligibility requirements imposed by the provider have been met.

The System uses internal accounting funds for budgetary and management purposes and to distinguish accounts by function or activity. These internal funds do not represent accounting funds as defined under U.S. generally accepted accounting principles, but instead are departments within the enterprise fund, which includes all System accounts. As a general rule, the effect of the System's interfund activity has been eliminated.

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**CITY OF HATTIESBURG, MISSISSIPPI
COMBINED WATER AND SEWER SYSTEM**

**NOTES TO FINANCIAL STATEMENTS
PAGE TWO
YEAR ENDED SEPTEMBER 30, 2019**

NOTE 1 - SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (Cont.)

Operating revenues and expenses are distinguished from nonoperating items. Operating revenues and expenses generally result from providing services and producing and delivering goods or services in connection with an enterprise fund's principal ongoing operations. The principal operating revenues of the System are charges to customers for sales and services. The System also recognizes as operating revenue the portion of tap fees intended to recover the cost of connecting new customers to the System. Operating expenses include the cost of sales and services, administrative expenses, and depreciation on capital assets. All revenues and expenses not meeting this definition are reported as nonoperating revenues and expenses.

When both restricted and unrestricted resources are available for use, it is the System's policy to use restricted resources first, then unrestricted resources as they are needed.

Cash and Cash Equivalents - For purposes of the statement of cash flows, all highly liquid investments with original maturities of one year or less when purchased are considered to be cash equivalents.

Receivables - Trade accounts receivable are attributable to customers' unpaid balances at year-end for charges for services. The System estimates the allowance for doubtful water and sewer account balances based upon a review of balances and status of customer accounts and upon consideration of historical collection trends and other factors.

Prepaid Items - Any payments to vendors that reflect costs applicable to future accounting periods are presented as prepaid items in the statement of net position.

Capital Assets - Capital assets, including land, buildings, equipment, and infrastructure assets, that are purchased or constructed are recorded at historical cost. Donated capital assets are recorded at estimated fair market value at the date of donation.

A capitalization threshold of \$5,000 is used for all capital assets with an estimated useful life in excess of two years. The costs of normal maintenance and repairs that do not add to the value of an asset or materially extend assets' lives are not capitalized. Major outlays for capital assets and improvements are capitalized as projects are constructed. Interest incurred during the construction phase of capital asset additions or renovations is capitalized into construction in progress while the projects are in progress and included as part of the capitalized value of the relevant assets upon project completion.

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**CITY OF HATTIESBURG, MISSISSIPPI
COMBINED WATER AND SEWER SYSTEM**

**NOTES TO FINANCIAL STATEMENTS
PAGE THREE
YEAR ENDED SEPTEMBER 30, 2019**

NOTE 1 - SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (Cont.)

Property, plant, and equipment are depreciated using the straight line method over the following estimated useful lives:

Water and sewer systems	18 - 50 years
Buildings and improvements	20 - 50 years
Machinery and equipment	5 - 10 years

Deferred Outflows of Resources - In addition to assets, the statement of net position reports a separate section for deferred outflows of resources. This separate financial statement element represents a consumption of net position that applies to a future period and will not be recognized as an outflow of resources (expense) until then. The System reports prepaid insurance on the Water and Sewer Revenue Bonds as a deferred outflow of resources. In addition, the System reports certain amounts related to pensions, including contributions to the employee pension plan subsequent to the measurement date of the actuarial valuation for the plan and OPEB, as deferred outflows of resources.

Deferred Inflows of Resources - In addition to liabilities, the statement of net position reports a separate section for deferred inflows of resources. This separate financial statement element represents an acquisition of net position that applies to a future period and will not be recognized as an inflow of resources (revenue) until that time. The System reports pension related items resulting from the difference between estimated and actual return on pension plan investments, which are being amortized over a five year period using the straight-line method, as deferred inflows of resources. The System also reports prepaid revenues from cell tower contracts, which are being amortized over a fifteen year period using the straight-line method, as deferred inflows of resources.

Long-term Bonds - Bonds payable are reported net of applicable bond premiums or discounts. Such discounts and premiums are amortized over the life of the related bonds. Bond issuance costs, other than prepaid insurance costs, are recognized as expenses in the period incurred. Prepaid insurance costs are reported as an asset and are recognized as expenses over the duration of the related debt.

Net Pension Liability - For purposes of measuring the net pension liability, deferred outflows of resources related to pensions, deferred inflows of resources related to pensions, and pension expense, information about the fiduciary net position of the Public Employees' Retirement System of Mississippi (PERS) and additions to/deductions from PERS' fiduciary net position have been determined on the same basis as they are reported by PERS. For this purpose, benefit payments (including refunds of employee contributions) are recognized when due and payable in accordance with the benefit terms. Investments are reported at fair value.

**CITY OF HATTIESBURG, MISSISSIPPI
COMBINED WATER AND SEWER SYSTEM**

**NOTES TO FINANCIAL STATEMENTS
PAGE FOUR
YEAR ENDED SEPTEMBER 30, 2019**

NOTE 1 - SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (Cont.)

Compensated Absences - It is the City's policy to permit employees to accumulate earned but unused vacation, sick pay, overtime, and holiday pay benefits. There is no liability for unpaid accumulated sick leave since the City does not have a policy to pay any amounts when employees separate from service with the government. All vacation, overtime, and holiday pay is accrued when incurred.

Net Position - The System's statement of net position presents financial information on all of the System's assets, liabilities and deferred inflows and outflows of resources, with the difference reported as net position. Net position invested in capital assets is presented net of related debt and consists of capital assets net of accumulated depreciation, reduced by the outstanding balances (excluding unspent proceeds) of any borrowing used for the acquisition, construction or improvement of those assets. Net position is reported as restricted when there are limitations imposed on its use either through enabling legislation, laws or regulations of other governments, or by external groups such as creditors, grantors, or contributors. It is the System's policy to first apply restricted resources then unrestricted resources when an expense is incurred for purposes where both restricted and unrestricted net positions are available. The residual component of net position is reported as unrestricted.

Budgets and Budgetary Accounting - The System's annual budget is included in the legally adopted budget of the City. The City's Chief Financial Officer is authorized to transfer budgeted amounts within departments within the published expense categories; however, any revisions that alter the total expenses of any budgeted fund must be approved by the City Council. Cumulative increases to departmental expenses in excess of 10% must also be published in the local newspaper.

Each internal accounting fund's appropriated budget is prepared on a detailed line item basis. Revenues are budgeted by source. Pursuant to the Mississippi State Department of Audit's prescribed format, expenses are budgeted by department and class as follows: personal services, supplies, other services and charges, capital outlays, transfers, and debt service. This constitutes the legal level of control. Expenses may not exceed appropriations at this level.

Encumbrances arise from the issuance of purchase orders, which must be within the adopted budgetary limits. Encumbrances are recorded when purchase orders are issued but are not considered expenses until liabilities for payments are incurred upon receipt of goods or services. Encumbrances do not lapse at the close of the fiscal year but are carried forward. (If necessary, subsequent year budgets are amended to cover prior year encumbrances.)

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**CITY OF HATTIESBURG, MISSISSIPPI
COMBINED WATER AND SEWER SYSTEM**

**NOTES TO FINANCIAL STATEMENTS
PAGE FIVE
YEAR ENDED SEPTEMBER 30, 2019**

NOTE 1 - SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (Cont.)

Use of Estimates - The preparation of financial statements in conformity with U.S. generally accepted accounting principles requires management to make estimates and assumptions. This will affect the reported amounts of assets and liabilities, disclosure of contingent assets and liabilities at the date of the financial statements, and the reported amounts of revenues and expenses recognized during the reporting period. Actual results could differ from these estimates.

NOTE 2 - DEPOSITS

Deposits - Pursuant to City policy, the City maintains System depository accounts in financial institutions which are approved as public depositories under the Mississippi Statewide Public Funds Collateral Program. Under this program, which is administered by the Office of the State Treasurer, financial institutions holding deposits of public funds must pledge securities as collateral against those deposits, and such collateral is held in the name of the State Treasurer under provision of Section 27-105-5, Miss. Code Ann. (1972). In the event of failure of a financial institution, securities pledged by that institution would be liquidated by the State Treasurer to replace the public deposits not covered by the Federal Depository Insurance Corporation (FDIC). Through the Statewide Public Funds Collateral Program, the System's funds are protected from custodial credit risk that, in the event of a financial institution's failure, the System's deposits may not be returned to it. As of September 30, 2019, the System's deposits in financial institutions were not exposed to custodial credit risk because all deposits were in financial institutions approved under the State Treasurer's collateral pool program.

The carrying amount of the System's deposits with financial institutions was \$10,866,180 as of September 30, 2019, including \$1,694,132 held for customer meter deposits.

Custodial Credit Risk - Deposits - Custodial credit risk is defined as the risk that, in the event of a financial institution's failure, the government's deposits may not be returned to it. The City does not have a deposit policy for custodial credit risk. As of September 30, 2019, the System's bank balance was not exposed to custodial credit risk.

Cash With Fiscal Agents - The System maintains balances in fiscal agent accounts held at approved State depositories. These balances represent amounts set aside for payment of debt service and related fees and expenses on revenue bonds, along with balance of unexpended proceeds of such bonds set aside for project construction under terms of underlying debt agreements. The carrying amount of the System's cash with fiscal agents at September 30, 2019 totaled \$11,639,122.

**CITY OF HATTIESBURG, MISSISSIPPI
COMBINED WATER AND SEWER SYSTEM**

NOTES TO FINANCIAL STATEMENTS

PAGE SIX

YEAR ENDED SEPTEMBER 30, 2019

NOTE 3 - CAPITAL ASSETS

Capital asset activity for the System for the year ended September 30, 2019, was as follows:

	Beginning Balance	Additions	Retirements	Ending Balance
Capital assets not being depreciated:				
Land	\$ 321,243	\$ -	\$ -	\$ 321,243
Construction in progress	7,288,558	9,056,850	(3,543,414)	12,801,994
Total capital assets not being depreciated	<u>7,609,801</u>	<u>9,056,850</u>	<u>(3,543,414)</u>	<u>13,123,237</u>
Capital assets being depreciated:				
Buildings and improvements	478,071	-	-	478,071
Machinery and equipment	9,097,649	213,915	(7,800)	9,303,764
Infrastructure	134,607,816	4,067,469	-	138,675,285
Total capital assets being depreciated	<u>144,183,536</u>	<u>4,281,384</u>	<u>(7,800)</u>	<u>148,457,120</u>
Less accumulated depreciation for:				
Buildings and improvements	309,738	8,740	-	318,478
Machinery and equipment	8,705,799	174,602	(7,800)	8,872,601
Infrastructure	34,328,572	3,683,203	-	38,011,775
Total accumulated depreciation	<u>43,344,109</u>	<u>3,866,545</u>	<u>(7,800)</u>	<u>47,202,854</u>
Total capital assets being depreciated, net	<u>100,839,427</u>	<u>414,839</u>	<u>-</u>	<u>101,254,266</u>
Capital assets, net	<u>\$ 108,449,228</u>	<u>\$ 9,471,689</u>	<u>\$ (3,543,414)</u>	<u>\$ 114,377,503</u>

**CITY OF HATTIESBURG, MISSISSIPPI
COMBINED WATER AND SEWER SYSTEM**

**NOTES TO FINANCIAL STATEMENTS
PAGE SEVEN
YEAR ENDED SEPTEMBER 30, 2019**

NOTE 4 - INTERFUND RECEIVABLES, PAYABLES, AND TRANSFERS

Balances due from the System to governmental funds of the City at September 30, 2019, consisted of the following:

<u>\$ 173,822</u>	Due to the City's General Fund for trash and recycling fees
<u><u>\$ 173,822</u></u>	Total Due to Governmental Funds

The outstanding balances between System funds and other funds of the City result from the time lag between the dates that interfund goods and services are provided or reimbursable expenses occur and the dates that payments between funds are made. These interfund balances are generally settled within one year of the date incurred.

NOTE 5 - LONG-TERM LIABILITIES

General Obligation Bonds

The City issues general obligation bonds to provide funds for the acquisition and construction of major System capital facilities. Although such general obligation bonds are backed by the full faith and credit of the City, this debt is expected to be repaid from System funds and is thus reported in the System's statement of net position in accordance with U.S. generally accepted accounting principles. General obligation bonds are generally issued as serial bonds with essentially level principal and interest payments maturing each year with maturities that range from 5 to 20 years. General obligation bonds outstanding for the System at September 30, 2019, were as follows:

<u>General Obligation Bonds</u>	<u>Sale Date</u>	<u>Original Borrowing</u>	<u>Interest Rates to Maturity</u>	<u>Final Maturity</u>	<u>Outstanding 9/30/2019</u>
Public Improvements	2010	\$ 3,600,000	2.75 - 3.80% *	2030	\$ 2,360,000
Public Improvements	2015	4,605,000	2.00 - 3.00% *	2024	2,865,000
Public Improvements	2016	7,125,000	1.60%	2021	<u>2,916,000</u>
Total					<u><u>\$ 8,141,000</u></u>

* Interest rates vary by maturity block of bonds.

**CITY OF HATTIESBURG, MISSISSIPPI
COMBINED WATER AND SEWER SYSTEM**

**NOTES TO FINANCIAL STATEMENTS
PAGE EIGHT
YEAR ENDED SEPTEMBER 30, 2019**

NOTE 5 - LONG-TERM LIABILITIES (Cont.)

Revenue Bonds

The City issues revenue bonds to provide funds for the acquisition and construction of System infrastructure and related improvements and system rehabilitation. These bonds are secured by System operating revenues and are subject to the requirements of the respective revenue bond documents. These bond documents include important parity debt requirements with the issuance of each new series of revenue bonds and require annual net revenue tests to be performed in accordance with the prescribed calculations.

Bonds are generally issued as serial bonds with essentially level principal and interest payments maturing each year with maturities that range from 10 to 25 years. Revenue bonds outstanding at September 30, 2019, were as follows:

Revenue Bonds	Sale Date	Original Borrowing	Interest Rates to Maturity	Final Maturity	Outstanding 9/30/19
W&S Revenue Project, Series 2012	2012	\$ 12,500,000	2.50 - 5.00% *	2032	\$ 9,010,000
W&S Refunding Bonds, Series 2013	2014	28,000,000	3.00 - 4.78% *	2039	27,650,000
W&S Refunding Bonds, Series 2016	2016	25,000,000	3.03%	2026	18,275,000
Total					\$ 54,935,000

* Interest rates vary by maturity block of bonds.

Compensated Absences

The System accrues vested or accumulated vacation leave, holiday leave, and accrued overtime. The portion of such accrued compensated absences that is expected to be paid after one year is included in noncurrent liabilities. In accordance with the provisions of applicable accounting standards, no liability is recorded for nonvesting accumulating rights to receive sick pay benefits.

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**CITY OF HATTIESBURG, MISSISSIPPI
COMBINED WATER AND SEWER SYSTEM**

**NOTES TO FINANCIAL STATEMENTS
PAGE NINE
YEAR ENDED SEPTEMBER 30, 2019**

NOTE 5 - LONG-TERM LIABILITIES (Cont.)

Accrued compensated absences at September 30, 2019, consisted of the following:

Accrued vacation pay	\$ 151,897
Accrued overtime pay	<u>1,695</u>
<i>Total compensated absences</i>	<u><u>\$ 153,592</u></u>

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**CITY OF HATTIESBURG, MISSISSIPPI
COMBINED WATER AND SEWER SYSTEM**

NOTES TO FINANCIAL STATEMENTS

PAGE TEN

YEAR ENDED SEPTEMBER 30, 2019

NOTE 5 - LONG-TERM LIABILITIES (Cont.)

Changes in Long-Term Liabilities

Changes in the System's long-term liabilities for the year ended September 30, 2019, were as follows:

	Balance 9/30/2018	Additions	Reductions	Balance 9/30/2019	Due Within One Year
Bonds and notes payable:					
General obligation bonds and notes	\$ 10,300,000	\$ -	\$ (2,159,000)	\$ 8,141,000	\$ 2,206,000
Revenue bonds	57,945,000	-	(3,010,000)	54,935,000	3,155,000
State revolving loan funds	24,683	-	(24,683)	-	-
Unamortized premium on bonds	347,033	-	(45,384)	301,649	45,384
Total bonds and notes payable	68,616,716	-	(5,239,067)	63,377,649	5,406,384
Compensated absences	153,295	297	-	153,592	23,039
Long-term liabilities	\$ 68,770,011	\$ 297	\$ (5,239,067)	\$ 63,531,241	\$ 5,429,423

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**CITY OF HATTIESBURG, MISSISSIPPI
COMBINED WATER AND SEWER SYSTEM**

**NOTES TO FINANCIAL STATEMENTS
PAGE ELEVEN
YEAR ENDED SEPTEMBER 30, 2019**

NOTE 5 - LONG-TERM LIABILITIES (Cont.)

The debt service requirements for the System's bonds and notes are as follows:

Year Ending September 30,	G.O. Bonds and Notes		Revenue Bonds	
	Principal	Interest	Principal	Interest
2020	\$ 2,206,000	\$ 184,665	\$ 3,155,000	\$ 2,032,550
2021	2,260,000	145,109	3,240,000	1,936,961
2022	815,000	101,359	3,535,000	1,836,225
2023	850,000	77,089	4,325,000	1,719,190
2024	585,000	56,104	4,425,000	1,587,671
2025-2029	1,160,000	155,378	15,470,000	5,841,372
2030-2034	265,000	8,612	10,535,000	3,510,335
2035-2039			10,250,000	1,271,631
Total	\$ 8,141,000	\$ 728,316	\$ 54,935,000	\$ 19,735,935

Year Ending September 30,	Total Bonds and Notes	
	Principal	Interest
2020	\$ 5,361,000	\$ 2,217,215
2021	\$ 5,500,000	\$ 2,082,070
2022	\$ 4,350,000	\$ 1,937,584
2023	\$ 5,175,000	\$ 1,796,279
2024	\$ 5,010,000	\$ 1,643,775
2025-2029	\$ 16,630,000	\$ 5,996,750
2030-2034	\$ 10,800,000	\$ 3,518,947
2035-2039	10,250,000	1,271,631
Total	\$ 63,076,000	\$ 20,464,251

During the year ended September 30, 2019, interest expense paid for the System's long-term liabilities totaled \$2,296,933.

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**CITY OF HATTIESBURG, MISSISSIPPI
COMBINED WATER AND SEWER SYSTEM**

**NOTES TO FINANCIAL STATEMENTS
PAGE TWELVE
YEAR ENDED SEPTEMBER 30, 2019**

NOTE 6 - COMMITMENTS AND CONTINGENCIES

At September 30, 2019, the balance outstanding on construction projects in progress was as follows:

Water and sewer projects	<u>\$ 7,252,597</u>
--------------------------	---------------------

USA Yeast Facility - During fiscal year 2015, the City completed construction of a wastewater pretreatment facility, or evaporator plant for a manufacturing facility located within the City. Project costs were funded with CDBG Economic Development Grant funds along with private funds provided by the manufacturer. Under the terms of the grant agreement, the City has title to assets constructed with grant funds, and the manufacturing company owns the assets constructed with its funds. Pursuant to an agreement between the City and the company and to terms stated in the CDBG grant agreement, title to the facility, equipment and components will transfer to the company upon expiration of the agreement on December 31, 2021. In conjunction with this project, the City has a ground lease for company property on which the evaporator plant is located. This lease requires payment of \$1 per year and expires December 31, 2021.

Litigation - The City is party to various legal proceedings which normally occur in governmental operations. While the City cannot predict the results of any litigation, legal counsel for the City believes that it has meritorious defenses for those actions, proceedings and claims, or they are without merit or are of such kind, or involve such amounts, that unfavorable dispositions not covered by insurance resulting from such litigation would not materially affect the financial statements of the City. The City includes anticipated attorney fees for ongoing matters in its annual budget for the year in which such fees are incurred.

In 2015, the City began the process to annex properties located West and North of the current city limits. The discovery process was completed in the fall of 2019, and the City is scheduled to go to trial in August 2020.

Federal Grants - In the normal course of operations, the City receives grant funds from various Federal and State agencies. The grant programs are subject to audit by agents of the granting authority, the purpose of which is to ensure compliance with conditions precedent to the granting of funds. Any liability for reimbursement which may arise as the result of these audits is not believed to be material.

Group Insurance Programs - The City obtains its workers' compensation, general and automobile liability insurance through certain group insurance programs of the Mississippi Municipal Service Company. Under these programs and pursuant to State of Mississippi regulations, participants are jointly and severally liable for claims incurred; however, the City has experienced no loss under such provisions and cannot reasonably estimate the amount or possibility of losses under these programs.

**CITY OF HATTIESBURG, MISSISSIPPI
COMBINED WATER AND SEWER SYSTEM**

**NOTES TO FINANCIAL STATEMENTS
PAGE THIRTEEN
YEAR ENDED SEPTEMBER 30, 2019**

NOTE 6 - COMMITMENTS AND CONTINGENCIES (Cont.)

Self-Funded Health Insurance Program - The City provides health insurance to its employees under a self-insured program, as previously described. The City obtains reinsurance to protect against significant loss; however, under the terms of such reinsurance policies, the City is ultimately responsible for covered claims. While the City estimates and recognizes expected claims liabilities related to this program, the amount or possibility of any additional loss cannot be reasonably estimated.

NOTE 7 - OTHER POSTEMPLOYMENT BENEFITS

Plan Description - The System provides health insurance coverage to participating retirees and their spouses through the City's single employer defined benefit healthcare plan, which is a self-funded plan administered by United Healthcare, who meet the plan's eligibility requirements. Retirees who elect coverage are automatically provided a \$20,000 life insurance benefit at no cost to retiree. Employees are eligible for these benefits upon attaining age 60 with 8 years of service or any age with 25 years of service. Since retirees may obtain health insurance by participating in a group with active employees and consequently receive a health insurance premium rate differential, such postemployment healthcare benefits are reportable by the System under GASB Statement 75 as a single employer defined benefit health care plan. The portion of the plan attributable to retirees represents other postemployment benefits for financial reporting purposes. Although the System expects the City to continue the plan indefinitely, the City has the right to discontinue, alter, or modify the plan in whole or in part at any time and for any reason, at its sole determination. The City Council has the sole authority to approve any changes to the plan provisions. The plan does not issue a stand-alone financial report. Instead, accounts of the plan are included in the financial statements of the System. No assets are accumulated in a trust that meet the criteria in paragraph 4 of GASB Statement 75.

Funding Policy - Benefits of the plan are self-insured by the City and therefore the System. The City maintains an account for the purpose of paying claims and administrative costs of its self-funded health insurance plan. The account requires that a minimum balance be maintained, and the City deposits additional funds for claims incurred and anticipated payments on a pay-as-you-go basis. Balances in the account belong to the City. Amounts contributed to this account are earmarked for plan expenses but may be revoked at the City's discretion. Therefore, balances are reported in assets of the general fund, and employer contributions are not recognized until payment of claims by the administrator to retirees or their beneficiaries. No assets have been segregate and restricted to provide for postretirement benefits. The City has allocated \$826,448 of its total OPEB liability and \$154,068 in deferred outflows of resources related to OPEB to the System as of September 30, 2019, based on proportionate health insurance program activity.

Additional disclosures related to the OPEB plan are presented in the City's 2019 Comprehensive Annual Report dated June 24, 2020.

**CITY OF HATTIESBURG, MISSISSIPPI
COMBINED WATER AND SEWER SYSTEM**

**NOTES TO FINANCIAL STATEMENTS
PAGE FOURTEEN
YEAR ENDED SEPTEMBER 30, 2019**

NOTE 8 - DEFINED BENEFIT PENSION PLAN

Plan Description

System personnel are employees of the city and, as such, participate in the Public Employees' Retirement System of Mississippi (PERS), a cost-sharing, multiple-employer defined benefit pension plan (the Cost-Sharing Plan), which covers all eligible employees. The PERS plan provides retirement benefits, annual cost-of-living adjustments, and death benefits to plan members and beneficiaries. Benefit provisions for the PERS plan are established by State law and may be amended only by the State of Mississippi Legislature. The Plans' provisions and the Board of Trustees' authority to determine contribution rates are established by Miss. Code Ann. § 25-11-1 et seq. (1972, as amended), and may be amended only by the Mississippi Legislature. PERS issues a publicly available financial report that includes financial statements and required supplementary information. That information may be obtained by writing to Public Employees' Retirement System, PERS Building, 429 Mississippi Street, Jackson, MS 39201-1005 or by calling 1-800-444-PERS.

Cost-Sharing Plan Benefits Provided

Membership in PERS is a condition of employment granted upon hiring for qualifying employees and officials of the State of Mississippi, state universities, community and junior colleges, and teachers and employees of the public school districts. For those persons employed by political subdivisions and instrumentalities of the State of Mississippi, membership is contingent upon approval of the entity's participation in PERS by the PERS' Board of Trustees. If approved, membership for the entity's employees is a condition of employment and eligibility is granted to those who qualify upon hiring. Participating members who are vested and retire at or after age 60 or those who retire regardless of age with at least 30 years of creditable service (25 years of creditable service for employees who became members of the Cost-Sharing Plan before July 1, 2011) are entitled, upon application, to an annual retirement allowance payable monthly for life in an amount equal to 2.0% of their average compensation for each year of creditable service up to and including 30 years (25 years for those who became members of the Cost-Sharing Plan before July 1, 2011), plus 2.5% for each additional year of creditable service with an actuarial reduction in the benefit for each year of creditable service below 30 years or the number of years in age that the member is below 65, whichever is less (the actuarial reduction for less than 30 years or below age 65 apply only to those who became members on or after July 1, 2011). Average compensation is the average of the employee's earnings during the four highest compensated years of creditable service. Benefits vest upon completion of eight years of membership service (four years of membership service for those who became members of the Cost-Sharing Plan before July 1, 2007). The

**CITY OF HATTIESBURG, MISSISSIPPI
COMBINED WATER AND SEWER SYSTEM**

**NOTES TO FINANCIAL STATEMENTS
PAGE FIFTEEN
YEAR ENDED SEPTEMBER 30, 2019**

NOTE 8 - DEFINED BENEFIT PENSION PLAN (Cont.)

Cost-Sharing Plan also provides certain death and disability benefits. A Cost-of-Living Adjustment (COLA) payment is made to eligible retirees and beneficiaries. The COLA is equal to 3.0% of the annual retirement allowance for each full fiscal year of retirement up to the year in which the retired member reaches age 60 (55 for those who became members of the Cost-Sharing Plan before July 1, 2011), with 3.0% compounded for each fiscal year thereafter. Plan provisions are established and may be amended only by the State of Mississippi Legislature.

Cost-Sharing Plan Contributions

At September 30, 2019, PERS members were required to contribute 9% of their annual covered salary. The employer's rate at September 30, 2019 was 17.40% of annual covered payroll. This rate increased as of July 1, 2019 from 15.75%. The contribution requirements of PERS members are established and may be amended only by the State of Mississippi Legislature. The System's allocated share of the City's contributions to PERS for the year ended September 30, 2019, totaled \$293,222. As of September 30, 2019, \$9,982 was payable to PERS for current employer contributions, to be remitted in the following month.

Pension Liability and Pension Expense

At September 30, 2019, the City has allocated \$4,997,542 of its proportionate share of the collective net pension liability of the Cost-Sharing Plan to the System based on the System's proportionate share of pension costs. The pension expense recognized by the System for the year ended September 30, 2019, totaled \$161,668.

Deferred Outflows and Inflows of Resources Related to Pensions

At September 30, 2019, the System reported \$497,182 of deferred outflows and \$43,877 of deferred inflows of resources related to pensions, as its proportionate share of the City's total deferred items related to pensions. These amounts will be recognized as a reduction of the net pension liability in the year ending September 30, 2019. Other amounts reported as deferred outflows of resources and deferred inflows of resources related to pensions will be recognized as an addition to or (reduction of) pension expense over the next 4 years.

Additional disclosures related to the City's Defined Benefit Pension Plan are presented in the City's 2019 Comprehensive Annual Report dated June 24, 2020.

**CITY OF HATTIESBURG, MISSISSIPPI
COMBINED WATER AND SEWER SYSTEM**

**NOTES TO FINANCIAL STATEMENTS
PAGE SIXTEEN
YEAR ENDED SEPTEMBER 30, 2019**

NOTE 9 - ASSET RETIREMENT OBLIGATION

The System has determined that based on the highly unlikely scenario of sewer services no longer being required across its service area and the numerous variables that would be involved with completely abandoning its plant facilities and waste water lagoon it is unable to feasibly determine the calculation of this liability as of September 30, 2019.

NOTE 10 - SUBSEQUENT EVENTS

In preparing the financial statements, management has evaluated and disclosed all material subsequent events through June 24, 2020, which is the date the financial statements were available to be issued.

The spread of a novel strain of coronavirus (COVID-19) in the United States of America has caused economic uncertainties which are likely to negatively impact the City's operational and financial performance. While the disruption is currently expected to be temporary, there is considerable uncertainty around the duration. Therefore, while the City expects this matter to negatively impact its operating results, the related financial impact and duration cannot be reasonably estimated at this time.

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Memorandum

To: Mayor Toby Barker and Members of City Council

From: Andrew Ellard, Director

cc:

Date: Tuesday, August 18, 2020

Re: Acknowledge Federal Transit Administration award amendment MS-2016-007-03, incorporating an additional \$10,022 in Section 5339 federal funds for bus shelters and bus stop access improvements.
File Number: 2020-558
Minute Book #

Summary

This grant amendment incorporates an additional \$10,022 in federal funds from FTA that was otherwise due to lapse in the coming months.

Recommendation Statement

I recommend approving this item on the next city council agenda.

Please place this on the August 18, 2020 City Council meeting for consideration.

DOT

FTA

U.S. Department of Transportation

Federal Transit Administration

Award

Federal Award Identification Number (FAIN)	MS-2016-007-03
Temporary Application Number	1108-2016-2
Award Name	(5339) FY2015 Hattiesburg Transit Facility Renovation and Upgrade
Award Status	Active (Executed)
Award Budget Number	0

Period of Performance Start Date	9/8/2016	
Original Period of Performance End Date	N/A	
Current Period of Performance End Date	3/30/2024	Revision #: 3

Part 1: Recipient Information

Name: Hattiesburg, City Of

Recipient ID	Recipient OST Type	Recipient Alias	Recipient DUNS
1108	City	CITY OF HATTIESBURG	079448130

Location Type	Address	City	State	Zip
Headquarters	200 FORREST ST	HATTIESBURG	MS	394013451
Physical Address	200 FORREST ST	HATTIESBURG	MS	39401

Mailing Address

PO BOX 1898

HATTIESBURG

MS

39403

Union Information

Union Name	NO UNIONS
Address 1	N/A
Address 2	
City	N/A
State	
Zipcode	
Contact Name	N/A
Telephone	000-000-00
Fax	
E-mail	
Website	

Part 2: Award Information

Title: (5339) FY2015 Hattiesburg Transit Facility Renovation and Upgrade

FAIN	Award Status	Award Type	Date Created	Last Updated Date	From TEAM?
MS-2016-007-03	Active (Executed)	Grant	7/10/2020	7/10/2020	No

Award Executive Summary

AMENDMENT #3 MS-2016-007-03

This third amendment to this grant will seek to incorporate an additional \$10,022 in FFY 2017 funds that are otherwise soon to lapse. The original grant and the first amendment incorporated Section 5339 funds from FY 2013 through 2017 (2013, \$162,131; 2014, \$165, 161; 2015, \$165,161; 2016, \$152,302; and 2017, \$87,341). Following the completion of the original project as amended, \$58,780 in Federal funds attributed to FY 2017 still remain, which will be revised for another purpose at a later date. Two (2) split apportionment letters are attached,

which were also attached to the original grant and the previous amendment applications. Those grant numbers are MS-2016-007-00, MS-2016-007-01, and MS-2016-007-02, respectively.

Local match will come from city receipts.

This project is programmed in 2019-2022 TIP for the HPFL-MPO, as amended and approved on January 22, 2020. See attached TIP page 50, describing bus stop amenities, which are to be funded in some instances with Section 5307 funds, and this instance in FY 2020 with Section 5339 funds, which are the subject of this amendment.

NOTE: This Amendment entails a change in the original scope. Following the completion of the facility included in the original scope and prior amendment, \$58,780 in federal funds remain unused. This amendment seeks to use the remaining \$58,780 and incorporate an additional \$10,002 federal funds, and the associated local match for the placement of bus stop shelters and bus stop access improvements at various stops.

This amendment seeks to utilize the remaining funds to create bus stop shelters at up to 6 bus stop sites. Actual number of sites completed will depend on the complexity of the sites and whether the job can be accomplished using city labor or if it will have to be professionally engineered and contracted.

This amendment will fund:

1. Engineering & Design – if deemed necessary by the complexity of each site selected
2. Construction - concrete bases and curb/sidewalk connectivity in the vicinity of the sites
3. Purchase of pre-fabricated shelter units and related amenities
4. Assembly and placement of shelter units and amenities

Notes:

- a. Overall Start Date -07/10/2017 End Date extended to 09/30/2021
 - b. Is request is for Research and Development? No
 - c. The City of Hattiesburg will not apply an “INDIRECT Cost” rate.
 - d. The City of Hattiesburg is the Direct Recipient for grant funds. Documentation is attached in TrAMS.
- The City of Hattiesburg will follow all 3rd party procurement policies as defined in C4220.1F (Third Party Contracting Guidance).

The City of Hattiesburg will ensure contractors procured will not be on the FTA Suspension and Debarment List.

Delinquent Federal Debt

No, my organization does not have delinquent federal debt.

Requires E.O. 12372 Review

No.

Subject to Pre-Award Authority

Yes, this application is subject to Pre-Award Authority.

AMENDMENT #2 MS-2016-007-02

This second amendment to this grant will seek to reprogram the remaining Section 5339 Bus and Bus Facilities Program- FY17 Funds for a total \$73,475 (\$58,780 Federal and \$14,695 Local match). The original grant and the first amendment incorporated Section 5339 funds from FY 2013 through 2017 (2013, \$162,131; 2014, \$165, 161; 2015, \$165,161; 2016, \$152,302; and 2017, \$87,341). Following the completion of the original project as amended, \$58,780 in Federal funds attributed to FY 2017 still remain. This amendment seeks to reprogram those funds for the construction of bus stop shelters. Two (2) split apportionment letters are attached, which were also attached to the original grant and the 1st amendment applications. Those grant numbers are MS-2016-007-00 and MS-2016-007-01, respectively.

Local match will come from city receipts.

This project is programmed in 2019-2022 TIP for the HPFL-MPO, as amended and approved on January 22, 2020. See attached TIP page 50, describing bus stop amenities, which are to be funded in some instances with Section 5307 funds, and this instance in FY 2020 with Section 5339 funds, which are the subject of this amendment.

NOTE: This Amendment entails a change in the original scope. Following the completion of the facility included in the original scope and prior amendment, \$58,780 in federal funds remain unused. This amendment seeks to use those remaining funds and the associated local match for the placement of bus stop shelters at various stops.

This amendment seeks to utilize the remaining funds to create bus stop shelters at up to 6 bus stop sites. Actual number of sites completed will depend on the complexity of the sites and whether the job can be accomplished using city labor or if it will have to be professionally engineered and contracted.

This amendment will fund:

1. Engineering & Design – if deemed necessary by the complexity of each site selected
2. Construction - concrete bases and curb/sidewalk connectivity in the vicinity of the sites
3. Purchase of pre-fabricated shelter units and related amenities
4. Assembly and placement of shelter units and amenities

Notes:

- a. Overall Start Date -07/10/2017 End Date extended to 09/30/2020
 - b. Is request is for Research and Development? No
 - c. The City of Hattiesburg will not apply an "INDIRECT Cost" rate.
 - d. The City of Hattiesburg is the Direct Recipient for grant funds. Documentation is attached in TrAMS.
- The City of Hattiesburg will follow all 3rd party procurement policies as defined in C4220.1F (Third Party Contracting Guidance).

The City of Hattiesburg will ensure contractors procured will not be on the FTA Suspension and Debarment List.

Delinquent Federal Debt

No, my organization does not have delinquent federal debt.

Requires E.O. 12372 Review

No.

Subject to Pre-Award Authority

Yes, this application is subject to Pre-Award Authority.

AMENDMENT #1 MS-2016-007-01

This grant will use Section 5339 Bus and Bus Facilities Program- FY16 and 7/12 of the FY 17 Funds for a total \$299,592 (\$239,673 Federal and \$59,919 Local match). It will use FY16 total \$190,378 (\$152,302 Federal and \$38,076 Local match) and 7/12 of FY17 total \$109,214 (\$87,371 Federal and \$21,843 Local match).

Local match will come from city receipts.

This project is programmed in 2017-2020 STIP for MS approved on October 1, 2016, and approved for Hattiesburg on January 11, 2017. Amended for Hattiesburg on April 26, 2017. See attached STIP pages.

NOTE: This Amendment entails a change in the original scope. The original grant, MS 2016-007-00 was for minor renovations to the transit admin and maint facility. However, on January 21, 2017, it was destroyed by a tornado. This grant will consist of rebuilding the complete administrative/ maintenance facility. These funds are added to the total of the Original grant of \$615,566.25 (\$492,453.00 Federal and \$123,113.25 local match). These funds were never used or disbursed. The total amount of this grant with FY13, FY14, FY15, FY16 and 7/12 of FY17 is for \$915,158 (\$732,126 federal and \$183,032 local match).

This grant application will fund (1) Project: Reconstruction of the Hub City Transit Administrative and Maintenance Facility that was destroyed in the January 21, 2017 tornado. The existing destroyed facility will be demolished and a new facility will be constructed in the existing facility's footprint. (Demolition will not be completed with FTA funds.)

This grant will fund: P1

1. Engineering & Design – Administrative/maintenance facility
2. Construction - Administrative/maintenance facility

Notes:

- a. Overall Start Date -07/10/2017 End Date 09/30/2019

- b. Is request is for Research and Development? No
 - c. The City of Hattiesburg will not apply an "INDIRECT Cost" rate.
 - d. The City of Hattiesburg is the Direct Recipient for grant funds. Documentation is attached in TrAMS.
- The City of Hattiesburg will follow all 3rd party procurement policies as defined in C4220.1F (Third Party Contracting Guidance).

The City of Hattiesburg will ensure contractors procured will not be on the FTA Suspension and Debarment List.

Delinquent Federal Debt

No, my organization does not have delinquent federal debt.

Requires E.O. 12372 Review

No.

Subject to Pre-Award Authority

Yes, this application is subject to Pre-Award Authority.

Original Grant – MS-2016-007-00

This grant is for a total of Total of \$615,566.25 (\$492,453.00 Federal Share and the City of Hattiesburg will provide a general fund \$123,113.25 local match). It will use FY 2015 Section 5339 MAP 21 funds for transit facility rehabilitation.

These project is programmed in the 2015-2019 Mississippi TIP, approved on 6/1/2016. (a copy is attached).

This grant application will fund (1) Project

1. Rehabilitation of the equipment and administration facility for administration space, energy efficiency and to make it ADA compliant.

Notes:

- a. Overall Start Date -08/01/2016 End Date 07/31/2018
- b. Is request is not for Research and Development?
- c. Hattiesburg will not apply a "INDIRECT Cost" rate.
- d. City of Hattiesburg is the Direct Recipient for grant funds. Documentation is attached in TrAMS.

City of Hattiesburg will follow all 3rd party procurement policies as defined in C4220.1F (Third Party Contracting Guidance).

City of Hattiesburg will ensure contractors procured will not be on the FTA Suspension and Debarment List.

Delinquent Federal Debt

No, my organization does not have delinquent federal debt.

Requires E.O. 12372 Review

No.

Subject to Pre-Award Authority

Yes, this application is subject to Pre-Award Authority.

Project Benefits

Reconstruction of the Hub City Administrative and Maintenance Transit Facility will allow Hub City Transit to operate at full capacity again, thereby further serving the public's needs. Operations will run much more smoothly and efficiently with the reconstructed facility as well as the fleet's performance will be improved. This reconstruction project will also bring the facility into ADA compliance.

Project Locations

Site is at intersection of Old Highway 49 and S. Tipton Street in Hattiesburg, Forrest County, Mississippi. Property is zoned industrial (I-1), has been in continuous public use.

Frequency of Milestone Progress Reports (MPR)

Quarterly

Frequency of Federal Financial Reports (FFR)

Quarterly

Does this application include funds for research and/or development activities?

This award does not include research and development activities.

Pre-Award Authority

This award is using Pre-Award Authority.

Does this application include suballocation funds?

Recipient organization is directly allocated these funds and is eligible to apply for and receive these funds directly.

Will this Grant be using Lapsing Funds?

Yes, this Grant will use Lapsing Funds.

Will indirect costs be applied to this application?

This award does not include an indirect cost rate.

Indirect Rate Details: N/A

Requires E.O. 12372 Review

No, this application does not require E.O. 12372 Review.

Delinquent Federal Debt

No, my organization does not have delinquent federal debt.

Award Point of Contact Information

First Name	Last Name	Title	E-mail Address	Phone
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Andrew Ellard	Urban Development Director	aellard@hattiesburgms.com	601-545-4609
layana.george@dot.gov	General Engineer		
andres.ramirez@dot.gov	General Engineer		

Award Budget Control Totals

Funding Source	Section of Statute	CFDA Number	Amount
49 USC 5339 - (MAP 21) Bus and Bus Facilities Formula (FY2013 & Fwd)	5339-1	20526	\$800,928
Local			\$200,233
Local/In-Kind			\$0
State			\$0
State/In-Kind			\$0
Other Federal			\$0
Transportation Development Credit			\$0
Adjustment			\$0
Total Eligible Cost			\$1,001,161

Award Budget

Project Number	Budget Item	FTA Amount	Non-FTA Amount	Total Eligible Amount	Quantity
MS-2016-007-02-03	114-00 (114-A2) BUS: SUPPORT EQUIP AND FACILITIES	\$239,673.00	\$59,919.00	\$299,592.00	2
MS-2016-007-02-03	11.41.03 ENG/DESIGN - ADMIN/MAINTENANCE FACILITY	\$80,000.00	\$20,000.00	\$100,000.00	1
MS-2016-007-02-03	11.43.03 CONSTRUCT - ADMIN/MAINT FACILITY	\$159,673.00	\$39,919.00	\$199,592.00	1

MS-2016-007-01-03	114-00 (114-A1)	BUS: SUPPORT EQUIP AND FACILITIES	\$492,453.00	\$123,113.00	\$615,566.00	1
MS-2016-007-01-03		11.44.03 REHAB/RENOVATE - ADMIN/MAINT FACILITY	\$492,453.00	\$123,113.00	\$615,566.00	1
MS-2016-007-03-03	119-00 (119-A3)	Bus Associated Transit Improvements	\$68,802.00	\$17,201.00	\$86,003.00	5
MS-2016-007-03-03		11.93.02 CONSTRUCTION - BUS SHELTERS	\$68,802.00	\$17,201.00	\$86,003.00	5

Discretionary Allocations

This application does not contain discretionary allocations.

Sources of Federal Financial Assistance

PO Number	Project Number	Scope Name	Scope Number	Scope Suffix	UZA Code	Area Name	Account Class Code	FPC	Description	Amendment Amount	Cumulative Amount
MS-34-X002	MS-2016-007-01-03	BUS: SUPPORT EQUIP AND FACILITIES	114-00 (114)	A1	280000	Mississippi	2013.25.34.BF.2	00	Bus Form - Formula Alloc	\$0	\$162,131
MS-34-X002	MS-2016-007-01-03	BUS: SUPPORT EQUIP AND FACILITIES	114-00 (114)	A1	280000	Mississippi	2014.25.34.BF.2	00	Bus Form - Formula Alloc	\$0	\$165,161
MS-34-X002	MS-2016-007-01-03	BUS: SUPPORT EQUIP AND FACILITIES	114-00 (114)	A1	280000	Mississippi	2015.25.34.BF.2	00	Bus Form - Formula Alloc	\$0	\$165,161
MS-34-X002	MS-2016-007-02-03	BUS: SUPPORT EQUIP AND FACILITIES	114-00 (114)	A2	280000	Mississippi	2016.25.34.BF.2	00	Bus Form - Formula Alloc	\$0	\$152,302

MS-34-X002	MS-2016-007-02-03	BUS: SUPPORT EQUIP AND FACILITIES	114-00 (114)	A2	280000	Mississippi	2017.25.34.BF.2	00	Bus Form - Formula Alloc	\$0	\$87,371
MS-34-X002	MS-2016-007-03-03	Bus Associated Transit Improvements	119-00 (119)	A3	280000	Mississippi	2017.25.34.BF.2	00	Bus Form - Formula Alloc	\$10,022	\$68,802

Part 3: Project Information

Project Title: Section 5339 Hub City Transit Admin/Maint Facility Construction

Project Number	Temporary Project Number	Date Created	Start Date	End Date
MS-2016-007-02-03	MS-2016-007-01-P3	7/10/2020	7/10/2017	9/30/2019

Project Description

AMENDMENT #1 MS-2016-007-01

This grant will use Section 5339 Bus and Bus Facilities Program- FY16 and 7/12 of the FY 17 Funds for a total \$299,592 (\$239,673 Federal and \$59,919 Local match). It will use FY16 total \$190,378 (\$152,302 Federal and \$38,076 Local match) and 7/12 of FY17 total \$109,214 (\$87,371 Federal and \$21,843 Local match). Local match will come from city receipts.

This project is programmed in 2017-2020 STIP for MS approved on October 1, 2016, and approved for Hattiesburg on January 11, 2017. Amended for Hattiesburg on XXX. See attached STIP pages.

This grant application will fund (1) Project:

1. Reconstruction of the Hub City Transit Administrative and Maintenance Facility that was destroyed in the January 21, 2017 tornado. The existing destroyed facility will be demolished and a new facility will be constructed in the existing facility's footprint. (Demolition will not be completed with FTA funds.)

The following items will be funded thru this grant:

1. Engineering & Design – Administrative/maintenance facility
2. Construction - Administrative/maintenance facility

NOTE: This Amendment entails a change in the original scope. The original grant, MS 2016-007-00 was for minor renovations to the transit

admin and maint facility. However, on January 21, 2017, it was destroyed by a tornado. This grant will consist of rebuilding the complete administrative/ maintenance facility.

These funds are added to the total of the Original grant of \$615,566.25 (\$492,453.00 Federal and \$123,113.25 local match). These funds were never used or disbursed. The total amount of this grant with FY13, FY14, FY15, FY16 and 7/12 of FY17 is for \$915,158 (\$732,126 federal and \$183,032 local match).

Notes:

- a. Overall Start Date -07/10/2017 End Date 09/30/2019
 - b. Is request is for Research and Development? No
 - c. The City of Hattiesburg will not apply an "INDIRECT Cost" rate.
 - d. The City of Hattiesburg is the Direct Recipient for grant funds. Documentation is attached in TrAMS.
- The City of Hattiesburg will follow all 3rd party procurement policies as defined in C4220.1F (Third Party Contracting Guidance).
The City of Hattiesburg will ensure contractors procured will not be on the FTA Suspension and Debarment List.

Delinquent Federal Debt

No, my organization does not have delinquent federal debt.

Requires E.O. 12372 Review

No.

Subject to Pre-Award Authority

Yes, this application is subject to Pre-Award Authority.

Original Grant – MS-2016-007-00

This grant is for a total of Total of \$615,566.25 (\$492,453.00 Federal Share and the City of Hattiesburg will provide a general fund \$123,113.25 local match). It will use FY 2015 Section 5339 MAP 21 funds for transit facility rehabilitation.

These project is programmed in the 2015-2019 Mississippi TIP, approved on 6/1/2016. (a copy is attached).

This grant application will fund (1) Project

1. Rehabilitation of the equipment and administration facility for administration space, energy efficiency and to make it ADA compliant.

Notes:

- a. Overall Start Date -08/01/2016 End Date 07/31/2018

- b. Is request is not for Research and Development?
- c. Hattiesburg will not apply a "INDIRECT Cost" rate.
- d. City of Hattiesburg is the Direct Recipient for grant funds. Documentation is attached in TrAMS.

City of Hattiesburg will follow all 3rd party procurement policies as defined in C4220.1F (Third Party Contracting Guidance).

City of Hattiesburg will ensure contractors procured will not be on the FTA Suspension and Debarment List.

Delinquent Federal Debt

No, my organization does not have delinquent federal debt.

Requires E.O. 12372 Review

No.

Subject to Pre-Award Authority

Yes, this application is subject to Pre-Award Authority.

Project Benefits

Reconstruction of the Hub City Administrative and Maintenance Transit Facility will allow Hub City Transit to operate at full capacity again, thereby further serving the public's needs. Operations will run much more smoothly and efficiently with the reconstructed facility as well as the fleet's performance will be improved. This reconstruction project will also bring the facility into ADA compliance.

Project Locations

Site is at intersection of Old Highway 49 and S. Tipton Street in Hattiesburg, Forrest County, Mississippi. Property is zoned industrial (I-1), has been in continuous public use.

Project Benefits

Reconstruction of the Hub City Administrative and Maintenance Transit Facility will allow Hub City Transit to operate at full capacity again, thereby further serving the public's needs. Operations will run much more smoothly and efficiently with the reconstructed facility as well as the fleet's performance will be improved. This reconstruction project will also bring the facility into ADA compliance.

Additional Information

The EF-3 tornado that came through Hattiesburg on January 21, 2017 dismantled Hub City Transit. The tornado destroyed the transit facility and each of the buses sustained significant damage. HCT is has being housed at the Hattiesburg Intermodal Facility since a tornado destroyed the Administrative and Maintenance Facility. Later this month, HCT will move into a temporary facility, an old car dealership, while the HCT Administrative and Maintenance Facility is being rebuilt.

Location Description

Site is at intersection of Old Highway 49 and S. Tipton Street in Hattiesburg, Forrest County, Mississippi. Property is zoned industrial (I-1), has been in continuous public use.

Project Location (Urbanized Areas)

UZA Code	Area Name
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283380	Hattiesburg, MS
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Congressional District Information

State	District	Representative
Mississippi	4	Steven M Palazzo

Program Plan Information

STIP/TIP

Date: 10/26/2016

Description: This document will be added after approval from MDOT/FTA.

UPWP

Date: 7/7/2016

Description: See page 9, 10, 22, 23, 24.

Long Range Plan

Date: 12/1/2015

Description: See page 9-6.

Project Control Totals

Funding Source	Section of Statute	CFDA Number	Amount
49 USC 5339 - (MAP 21) Bus and Bus Facilities Formula (FY2013 & Fwd)	5339-1	20526	\$239,673
Local			\$59,919
Local/In-Kind			\$0
State			\$0
State/In-Kind			\$0
Other Federal			\$0
Transportation Development Credit			\$0

Adjustment			\$0
Total Eligible Cost			\$299,592

Project Budget

Project Number	Budget Item	FTA Amount	Non-FTA Amount	Total Eligible Amount	Quantity
MS-2016-007-02-03	114-00 (114-A2) BUS: SUPPORT EQUIP AND FACILITIES	\$239,673.00	\$59,919.00	\$299,592.00	2
MS-2016-007-02-03	11.41.03 ENG/DESIGN - ADMIN/MAINTENANCE FACILITY	\$80,000.00	\$20,000.00	\$100,000.00	1
MS-2016-007-02-03	11.43.03 CONSTRUCT - ADMIN/MAINT FACILITY	\$159,673.00	\$39,919.00	\$199,592.00	1

Project Budget Activity Line Items

Budget Activity Line Item: 11.43.03 - CONSTRUCT - ADMIN/MAINT FACILITY

Scope Name / Code	Line Item #	Line Item Name	Activity	Quantity
BUS: SUPPORT EQUIP AND FACILITIES (114-00)	11.43.03	CONSTRUCT - ADMIN/MAINT FACILITY	CONSTRUCTION OF BUS SUPPORT EQUIP/FACIL	1

Extended Budget Description

Amendment #3 - July 2020

Amendment #3 does not impact this ALI, and it remains the same since Amendment #1, which is copied below. This facility had no FTA interest that needed to be settled in the course of its reconstruction.

Amendment #1 -

Construction to rebuild the existing Hub City Administrative and Maintenance Transit Facility destroyed in the January 21, 2017 tornado. The existing destroyed facility will be demolished and a new facility will be constructed in the existing facility's footprint. (Demolition will not be completed with FTA funds.) The existing slab will not be demolished.

A new facility of approx. 9,600 square feet will be constructed. This facility will include offices, dispatch area, storage and ADA restrooms on the first floor of approx. 6,400 square feet; offices, storage and a restroom on the second floor of approx. 3,200 square feet and a service bay for buses and equipment. One open service bay for the buses and equipment of approx. 2,000 square feet will be constructed. (see attached supplemental documentation of the project)

This grant will fund the construction which will consist of:

-Construction Funding: The City of Hattiesburg anticipates completing all construction in one phase, as the Mass Transit Department is being housed in a temporary facility and the City of Hattiesburg wants the construction of the Mass Transit Admin/Maint Facility to be completed as soon as possible.

The reconstruction of the Administrative and Maintenance Transit Facility has been reviewed by the Environmental Specialists in the Regional Office and has been determined a Categorical Exclusion C(8). See attached memo.

Will 3rd Party contractors be used to fulfill this activity line item?

Yes, 3rd Party Contractors will be used for this line item.

Funding Source	Section of Statute	CFDA Number	Amount
49 USC 5339 - (MAP 21) Bus and Bus Facilities Formula (FY2013 & Fwd)	5339-1	20526	\$159,673
Local			\$39,919
Local/In-Kind			\$0
State			\$0
State/In-Kind			\$0
Other Federal			\$0
Transportation Development Credit			\$0
Adjustment			\$0
Total Eligible Cost			\$199,592

Milestone Name	Est. Completion Date	Description
RFP/IFB Issued	7/10/2017	RFP/IFB Issued

Contract Awarded	10/10/2017	Contract Awarded. Construction Begins.
Contract Complete	7/1/2019	Contract Complete. Construction Complete.
Project Closeout	9/30/2019	Project Closeout.

Budget Activity Line Item: 11.41.03 - ENG/DESIGN - ADMIN/MAINTENANCE FACILITY

Scope Name / Code	Line Item #	Line Item Name	Activity	Quantity
BUS: SUPPORT EQUIP AND FACILITIES (114-00)	11.41.03	ENG/DESIGN - ADMIN/MAINTENANCE FACILITY	ENGINEERING & DESIGN - BUS SUPPORT EQUIP/FACIL	1

Extended Budget Description

Amendment #1 -

Architect fees for developing the reconstruction of the Hub City Administrative and Maintenance Transit Facility destroyed in the January 21, 2017 tornado.

Project Administration will be provided by City administration and will be a part of the Engineering and Design.

A new facility of approx. 9,600 square feet will be constructed. This facility will include offices, dispatch area, storage and ADA restrooms on the first floor of approx. 6,400 square feet; offices, storage and a restroom on the second floor of approx. 3,200 square feet and a service bay for buses and equipment. One open service bay for the buses and equipment of approx. 2,000 square feet will be constructed.

The reconstruction of the Administrative and Maintenance Transit Facility has been reviewed by the Environmental Specialists in the Regional Office and has been determined a Categorical Exclusion C(8). See attached memo.

Will 3rd Party contractors be used to fulfill this activity line item?

Yes, 3rd Party Contractors will be used for this line item.

Funding Source	Section of Statute	CFDA Number	Amount
49 USC 5339 - (MAP 21) Bus and Bus Facilities Formula (FY2013 & Fwd)	5339-1	20526	\$80,000
Local			\$20,000
Local/In-Kind			\$0
State			\$0
State/In-Kind			\$0
Other Federal			\$0

Transportation Development Credit			\$0
Adjustment			\$0
Total Eligible Cost			\$100,000

Milestone Name	Est. Completion Date	Description
RFP/IFB Issued	7/10/2017	RFP/IFB Issued
Contract Awarded	10/10/2017	Contract Awarded. Construction Begins.
Contract Complete.	7/1/2019	Contract Complete. Construction Complete.
Project Closeout	9/30/2019	Project Closeout.

Project Environmental Findings

Finding: Class II(c) - Categorical Exclusions (C-List)

Class Level Description

Class II(c) consists of projects called categorical exclusions (CEs) which are known not to have, either individually or cumulatively, a significant environmental impact on the human or natural environment and are therefore categorically excluded from the requirement to prepare an environmental assessment or an environmental impact statement. Class II(c) does not require documentation.

Categorical Exclusion Description

Type 08: Maintenance, rehabilitation, and reconstruction of facilities that occupy substantially the same geographic footprint and do not result in a change in functional use, such as: improvements to bridges, tunnels, storage yards, buildings, stations, and terminals; construction of platform extensions, passing track, and retaining walls; and improvements to tracks and railbeds.

Date Description	Date
Class IIc CE Approved	5/19/2017

Project Title: (5339) FY 2015 Hattiesburg Transit Facility Renovation and Upgrade

Project Number	Temporary Project Number	Date Created	Start Date	End Date
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MS-2016-007-01-03

1108-2016-2-P2

7/10/2020

9/1/2016

8/31/2018

Project Description

This grant is for a total of Total of \$615,566.25 (\$492,453.00 Federal Share and the City of Hattiesburg will provide a general fund \$123,113.25 local match). It will use FY 2015 Section 5339 MAP 21 funds for transit facility rehabilitation.

These project is programmed in the 2015-2019 Mississippi TIP, approved on 6/1/2016. (a copy is attached).

This grant application will fund (1) Project

1. Rehabilitation of the equipment and administration facility for administration space, energy efficiency and to make it ADA compliant.

Notes:

- a. Overall Start Date -08/01/2016 End Date 07/31/2018
- b. Is request is not for Research and Development?
- c. Hattiesburg will not apply a "INDIRECT Cost" rate.
- d. City of Hattiesburg is the Direct Recipient for grant funds. Documentation is attached in TrAMS.

City of Hattiesburg will follow all 3rd party procurement policies as defined in C4220.1F (Third Party Contracting Guidance).

City of Hattiesburg will ensure contractors procured will not be on the FTA Suspension and Debarment List.

Delinquent Federal Debt

No, my organization does not have delinquent federal debt.

Requires E.O. 12372 Review

No.

Subject to Pre-Award Authority

Yes, this application is subject to Pre-Award Authority.

Project Benefits

Renovation of existing facility to bring into ADA compliance and make it more efficient for administrative staff, customers and transit vehicle maintenance staff.

Additional Information

Will result in increased connectivity options for public.

Location Description

Site is at intersection of Old Highway 49 and S. Tipton Street in Hattiesburg, Forrest County, Mississippi. Property is zoned industrial (I-1), has been in continuous public use and has no known NEPA disqualifications.

Project Location (Urbanized Areas)

UZA Code	Area Name
280000	Mississippi
283380	Hattiesburg, MS

Congressional District Information

State	District	Representative
Mississippi	4	Steven M Palazzo

Program Plan Information

STIP/TIP

Date: N/A

Description: N/A

UPWP

Date: N/A

Description: N/A

Long Range Plan

Date: N/A

Description: N/A

Project Control Totals

Funding Source	Section of Statute	CFDA Number	Amount
49 USC 5339 - (MAP 21) Bus and Bus Facilities Formula (FY2013 & Fwd)	5339-1	20526	\$492,453
Local			\$123,113
Local/In-Kind			\$0
State			\$0

State/In-Kind			\$0
Other Federal			\$0
Transportation Development Credit			\$0
Adjustment			\$0
Total Eligible Cost			\$615,566

Project Budget

Project Number	Budget Item	FTA Amount	Non-FTA Amount	Total Eligible Amount	Quantity
MS-2016-007-01-03	114-00 (114-A1) BUS: SUPPORT EQUIP AND FACILITIES	\$492,453.00	\$123,113.00	\$615,566.00	1
MS-2016-007-01-03	11.44.03 REHAB/RENOVATE - ADMIN/MAINT FACILITY	\$492,453.00	\$123,113.00	\$615,566.00	1

Project Budget Activity Line Items

Budget Activity Line Item: 11.44.03 - REHAB/RENOVATE - ADMIN/MAINT FACILITY				
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Scope Name / Code	Line Item #	Line Item Name	Activity	Quantity
BUS: SUPPORT EQUIP AND FACILITIES (114-00)	11.44.03	REHAB/RENOVATE - ADMIN/MAINT FACILITY	REHAB/RENOVATE BUS SUPPORT FACIL/EQUIP	1

Extended Budget Description

Amendment #3 - July 2020

Amendment #3 does not seek to alter the project except to clarify and correct at FTA's request that the useful life of the facility, and particularly the bus bays, should be corrected to 40 years per FTA guidance (rather than the 50 years previously listed).

Original Extended Budget Description:

This grant is for a total of Total of \$615,566.25 (\$492,453.00 Federal Share and the City of Hattiesburg will provide a general fund \$123,113.25 local match). It will use FY 2015 Section 5339 MAP 21 funds for transit facility rehabilitation.

These project is programmed in the 2015-2019 Mississippi TIP, approved on 6/1/2016. (a copy is attached).

This grant application will fund (1) Project

1. Rehabilitation of the administration facility for administration space, energy efficiency and to make it ADA compliant.

The project will upgrade restrooms to be ADA compliant.

Enclose exterior shop bay.

Add additional open shop bay.

Renovate downstairs existing offices.

Renovate upstairs area to add additional office space.

1) The proposed project will take place at the current city-owned property and operated facility. The city-owned property has been in continuous operation as the city's transit facility since the 1970's.

2) Hattiesburg will continue to own, operate and maintain the physical plant throughout the facility's lifespan.

3) Construction management and oversight for preliminary engineering, procurement, contract management and inspection will be performed by the Director of Federal and State Programs and City Engineer. They will accompanied by the resources of the managers of HUB City Transit, Metropolitan Planning Organization and Grant Coordinator.

4) The City will insure that all aspects of Circular 5010.1B requirements (Force Account) are met should any portion of the project in excess of \$100,000 be done "in-house."

5) As a Federal Entitlement city Hattiesburg follows Generally Accepted Accounting Principles (GAAP). It adheres to all federal and state accounting rules including OMB Circular A-133. Hattiesburg will follow established local and state purchasing and bid requirements for projects of this size. 6) Hattiesburg certifies an independent cost estimate will be prepared and available on file with the corresponding cost/price analysis for the scope of work of the project.

Hattiesburg will make bid ready documents available for review by necessary parties as is appropriate prior to construction.

Items over \$5,000 are expected: Useful Life

Office Carpet Floor: 15 years

Restroom Tile Floor: 25 years

Bus Bay renovation/addition: 50 years

This project was reviewed by the FTA NEPA specialists and they provided clearance for a Categorical Exclusion (CE) See attached email.

Will 3rd Party contractors be used to fulfill this activity line item?

Yes, 3rd Party Contractors will be used for this line item.

Funding Source	Section of Statute	CFDA Number	Amount
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49 USC 5339 - (MAP 21) Bus and Bus Facilities Formula (FY2013 & Fwd)	5339-1	20526	\$492,453
Local			\$123,113
Local/In-Kind			\$0
State			\$0
State/In-Kind			\$0
Other Federal			\$0
Transportation Development Credit			\$0
Adjustment			\$0
Total Eligible Cost			\$615,566

Milestone Name	Est. Completion Date	Description
Start Date	9/1/2016	Begin Project. Evaluate and finalize design and any changes with design firm. Initiate contractor bidding process.
End Date	8/31/2018	Final walkthrough with city engineer. Certify completion. Closeout grant.

Project Environmental Findings

Finding: Class II(c) - Categorical Exclusions (C-List)

Class Level Description

Class II(c) consists of projects called categorical exclusions (CEs) which are known not to have, either individually or cumulatively, a significant environmental impact on the human or natural environment and are therefore categorically excluded from the requirement to prepare an environmental assessment or an environmental impact statement. Class II(c) does not require documentation.

Categorical Exclusion Description

Type 05: Activities, including repairs, replacements, and rehabilitations, designed to promote transportation safety, security, accessibility and effective communication within or adjacent to existing right-of-way, such as: the deployment of Intelligent Transportation Systems and components; installation and improvement of safety and communications equipment, including hazard elimination and mitigation; installation of passenger amenities and traffic signals; and retrofitting existing transportation vehicles, facilities or structures, or upgrading to current standards.

Date Description	Date
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Class IIc CE Approved

Project Title: Bus Shelters and Bus Stop Improvements
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Project Number	Temporary Project Number	Date Created	Start Date	End Date
MS-2016-007-03-03	MS-2016-007-02-P4	7/10/2020	1/1/2020	12/31/2020

Project Description

This project exists to install new bus shelters at various bus stops and to improve bus stop access.

Project Benefits

This project serves to provide additional amenities to patrons of the fixed route system, more specifically to improve access to bus stop locations and to create shelters so that riders have shade on hot days and shelter from rain and other inclement weather.

Additional Information

None provided.

Location Description

Exact sites are to be determined, but will be along the existing fixed route transit system.

Project Location (Urbanized Areas)

UZA Code	Area Name
283380	Hattiesburg, MS

Congressional District Information

State	District	Representative
Mississippi	4	Steven M Palazzo

Program Plan Information

STIP/TIP

Date: N/A
Description: N/A

UPWP

Date: N/A
Description: N/A

Long Range Plan

Date: N/A
Description: N/A

Project Control Totals

Funding Source	Section of Statute	CFDA Number	Amount
49 USC 5339 - (MAP 21) Bus and Bus Facilities Formula (FY2013 & Fwd)	5339-1	20526	\$68,802
Local			\$17,201
Local/In-Kind			\$0
State			\$0
State/In-Kind			\$0
Other Federal			\$0
Transportation Development Credit			\$0
Adjustment			\$0
Total Eligible Cost			\$86,003

Project Budget

Project Number		Budget Item	FTA Amount	Non-FTA Amount	Total Eligible Amount	Quantity
MS-2016-007-03-03	119-00 (119-A3)	Bus Associated Transit Improvements	\$68,802.00	\$17,201.00	\$86,003.00	5

MS-2016-007-03-03	11.93.02	CONSTRUCTION - BUS SHELTERS	\$68,802.00	\$17,201.00	\$86,003.00	5
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Project Budget Activity Line Items

Budget Activity Line Item: 11.93.02 - CONSTRUCTION - BUS SHELTERS
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Scope Name / Code	Line Item #	Line Item Name	Activity	Quantity
Bus Associated Transit Improvements (119-00)	11.93.02	CONSTRUCTION - BUS SHELTERS	CONSTRUCTION	5

Extended Budget Description

Amendment No 3 - July 10, 2020

Funds are intended for the purchase and installation of shelter units and related amenities, including the improvement of accessibility where warranted, which may include ADA accessibility improvements and sidewalk where none exists. It is most likely that the city will utilize its public works department to construct the sites. If sites chosen are complex, design/engineering and a 3rd party contractor may be secured, which would likely, in turn reduce the number of sites to be completed with the available funds.

Estimated cost per site is \$14,695. Quantity is not being revised in this amendment as the cost per site is limited to the shelter site only while the additional funds will be necessary for the accessibility improvements. Should conditions and cost allow, additional sites may be added. Useful life of the facilities will be 15 years. One potential vendor/manufacture suggested that useful life in "perfect conditions" was estimated at 25 years, but based on the fact that there are no perfect conditions and consideration of the building materials, the city has arrived at 15 years as a reasonable expected useful life for each shelter. Sites will consist of concrete pad base and metal, bolted in place shelter, bench, and amenities. The exact quantity is estimated based on this approximated cost, but will depend upon the simplicity or complexity of each site. Fewer will be completed if the costs run high, and more will be completed if costs run low. If it is needed, a zero-dollar revision will be completed to reflect the actual quantity once known.

Amendment No 2 - January 22, 2020

Funds are intended for the purchase and installation of shelter units and related amenities. It is most likely that the city will utilize its public works department to construct the sites. If sites chosen are complex, design/engineering and a 3rd party contractor may be secured, which would likely, in turn reduce the number of sites to be completed with the available funds.

Estimated cost per site is \$14,695. Useful life of the facilities will be 15 years. One potential vendor/manufacture suggested that useful life in "perfect conditions" was estimated at 25 years, but based on the fact that there are no perfect conditions and consideration of the building materials, the city has arrived at 15 years as a reasonable expected useful life for each shelter. Sites will consist of concrete pad base and metal, bolted in place shelter, bench, and amenities. The exact quantity is estimated based on this approximated cost, but will depend upon the simplicity or complexity of each site. Fewer will be completed if the costs run high, and more will be completed if costs run low. If it is needed, a zero-dollar revision will be completed to reflect the actual quantity once known.

Will 3rd Party contractors be used to fulfill this activity line item?

No, 3rd Party Contractors will not be used for this line item.

Funding Source	Section of Statute	CFDA Number	Amount
49 USC 5339 - (MAP 21) Bus and Bus Facilities Formula (FY2013 & Fwd)	5339-1	20526	\$68,802
Local			\$17,201
Local/In-Kind			\$0
State			\$0
State/In-Kind			\$0
Other Federal			\$0
Transportation Development Credit			\$0
Adjustment			\$0
Total Eligible Cost			\$86,003

Milestone Name	Est. Completion Date	Description
Start Date	1/1/2020	
End Date	12/31/2020	

Project Environmental Findings

Finding: Class II(c) - Categorical Exclusions (C-List)**Class Level Description**

Class II(c) consists of projects called categorical exclusions (CEs) which are known not to have, either individually or cumulatively, a significant environmental impact on the human or natural environment and are therefore categorically excluded from the requirement to prepare an environmental assessment or an environmental impact statement. Class II(c) does not require documentation.

Categorical Exclusion Description

Type 09: Assembly or construction of facilities that is consistent with existing land use and zoning requirements (including floodplain regulations) and uses primarily land disturbed for transportation use, such as: buildings and associated structures; bus transfer stations or intermodal centers; busways and streetcar lines or other transit investments within areas of the right-of-way occupied by the physical footprint of the existing facility or otherwise maintained or used for transportation operations; and parking facilities.

Date	Description	Date
	Class IIc CE Approved	

Part 4: Fleet Details

No fleet data exists for this application.

Part 5: FTA Review Comments

Application Review Comments

Comment By	Andres Ramirez
Comment Type	FTA Post Review Comments for Grantee
Date	7/16/2020
Comment	To make the process faster and reduce confusion, my recommendation would be to process this amendment to only add the new lapsing funding of \$10,022 to ALI 11.93.02. Once this amendment is awarded you can easily move the \$58k to ALI 11.93.02 with a budget revision.

Comment By	Andres Ramirez
Comment Type	FTA Post Review Comments for Grantee
Date	7/28/2020
Comment	11.43.03 CONSTRUCT - ADMIN/MAINT FACILITY On the facility being replaced that was destroyed in the 2017 tornado. Was there any FTA participation? If so, is there any remaining FTA interest that may need to be settled in this reconstruction and new application? In the extended budget description, please add the title "Amendment No. 3 <<DATE>>" and a short narrative clarifying these questions. 11.44.03 REHAB/RENOVATE - ADMIN/MAINT FACILITY EBD states bus bay useful life 50 yrs. Please verify – is the bus bay concrete work, shelters or canopies? 50 yrs seems high. In the extended budget description, please add the title "Amendment No. 3 <<DATE>>" and a short narrative with the revised used life.

Part 6: Agreement

**UNITED STATES OF AMERICA
DEPARTMENT OF TRANSPORTATION
FEDERAL TRANSIT ADMINISTRATION**

**GRANT AGREEMENT
(FTA G-26, October 1, 2019)**

On the date the authorized U.S. Department of Transportation, Federal Transit Administration (FTA) official signs this Grant Agreement, FTA has obligated and awarded federal assistance as provided below. Upon execution of this Grant Agreement by the Recipient named below, the Recipient affirms this FTA Award, enters into this Grant Agreement with FTA, and binds its compliance with the terms of this Grant Agreement.

The following documents are incorporated by reference and made part of this Grant Agreement:

- (1) "Federal Transit Administration Master Agreement," FTA MA(26), October 1, 2019, <http://www.transit.dot.gov>,
- (2) The Certifications and Assurances applicable to the FTA Award that the Recipient has selected and provided to FTA, and
- (3) Any Award notification containing special conditions or requirements, if issued.

WHEN THE TERM "FTA AWARD" OR "AWARD" IS USED, EITHER IN THIS GRANT AGREEMENT OR THE APPLICABLE MASTER AGREEMENT, "AWARD" ALSO INCLUDES ALL TERMS AND CONDITIONS SET FORTH IN THIS GRANT AGREEMENT.

FTA OR THE FEDERAL GOVERNMENT MAY WITHDRAW ITS OBLIGATION TO PROVIDE FEDERAL ASSISTANCE IF THE RECIPIENT DOES NOT EXECUTE THIS GRANT AGREEMENT WITHIN 90 DAYS FOLLOWING FTA's AWARD DATE SET FORTH HEREIN.

FTA AWARD

Federal Transit Administration (FTA) hereby awards a Federal Grant as follows:

Recipient Information

Recipient Name: Hattiesburg, City Of

Recipient ID: 1108

DUNS No: 079448130

Award Information

Federal Award Identification Number: MS-2016-007-03

Award Name: (5339) FY2015 Hattiesburg Transit Facility Renovation and Upgrade

Award Start Date: 9/8/2016

Original Award End Date: N/A

Current Award End Date: 3/30/2024

Award Executive Summary: AMENDMENT #3 MS-2016-007-03

This third amendment to this grant will seek to incorporate an additional \$10,022 in FFY 2017 funds that are otherwise soon to lapse. The original grant and the first amendment incorporated Section 5339 funds from FY 2013 through 2017 (2013, \$162,131; 2014, \$165, 161; 2015, \$165,161; 2016, \$152,302; and 2017, \$87,341). Following the completion of the original project as amended, \$58,780 in Federal funds attributed to FY 2017 still remain, which will be revised for another purpose at a later date. Two (2) split apportionment letters are attached, which were also attached to the original grant and the previous amendment applications. Those grant numbers are MS-2016-007-00, MS-2016-007-01, and MS-2016-007-02, respectively.

Local match will come from city receipts.

This project is programmed in 2019-2022 TIP for the HPFL-MPO, as amended and approved on January 22, 2020. See attached TIP page 50, describing bus stop amenities, which are to be funded in some instances with Section 5307 funds, and this instance in FY 2020 with Section 5339 funds, which are the subject of this amendment.

NOTE: This Amendment entails a change in the original scope. Following the completion of the facility included in the original scope and prior amendment, \$58,780 in federal funds remain unused. This amendment seeks to use the remaining \$58,780 and incorporate an additional \$10,002 federal funds, and the associated local match for the placement of bus stop shelters and bus stop access improvements at various stops.

This amendment seeks to utilize the remaining funds to create bus stop shelters at up to 6 bus stop sites. Actual number of sites completed will depend on the complexity of the sites and whether the job can be accomplished using city labor or if it will have to be professionally engineered and contracted.

This amendment will fund:

1. Engineering & Design – if deemed necessary by the complexity of each site selected
2. Construction - concrete bases and curb/sidewalk connectivity in the vicinity of the sites

3. Purchase of pre-fabricated shelter units and related amenities
4. Assembly and placement of shelter units and amenities

Notes:

- a. Overall Start Date -07/10/2017 End Date extended to 09/30/2021
 - b. Is request is for Research and Development? No
 - c. The City of Hattiesburg will not apply an "INDIRECT Cost" rate.
 - d. The City of Hattiesburg is the Direct Recipient for grant funds. Documentation is attached in TrAMS.
- The City of Hattiesburg will follow all 3rd party procurement policies as defined in C4220.1F (Third Party Contracting Guidance).

The City of Hattiesburg will ensure contractors procured will not be on the FTA Suspension and Debarment List.

Delinquent Federal Debt

No, my organization does not have delinquent federal debt.

Requires E.O. 12372 Review

No.

Subject to Pre-Award Authority

Yes, this application is subject to Pre-Award Authority.

AMENDMENT #2 MS-2016-007-02

This second amendment to this grant will seek to reprogram the remaining Section 5339 Bus and Bus Facilities Program- FY17 Funds for a total \$73,475 (\$58,780 Federal and \$14,695 Local match). The original grant and the first amendment incorporated Section 5339 funds from FY 2013 through 2017 (2013, \$162,131; 2014, \$165, 161; 2015, \$165,161; 2016, \$152,302; and 2017, \$87,341). Following the completion of the original project as amended, \$58,780 in Federal funds attributed to FY 2017 still remain. This amendment seeks to reprogram those funds for the construction of bus stop shelters. Two (2) split apportionment letters are attached, which were also attached to the original grant and the 1st amendment applications. Those grant numbers are MS-2016-007-00 and MS-2016-007-01, respectively.

Local match will come from city receipts.

This project is programmed in 2019-2022 TIP for the HPFL-MPO, as amended and approved on January 22, 2020. See attached TIP page 50, describing bus stop amenities, which are to be funded in some instances with Section 5307 funds, and this instance in FY 2020 with Section 5339 funds, which are the subject of this amendment.

NOTE: This Amendment entails a change in the original scope. Following the completion of the facility included in the original scope and prior amendment, \$58,780 in federal funds remain unused. This amendment seeks to use those remaining funds and the associated local match for the placement of bus stop shelters at various stops.

This amendment seeks to utilize the remaining funds to create bus stop shelters at up to 6 bus stop sites. Actual number of sites completed will depend on the complexity of the sites and whether the job can be accomplished using city labor or if it will have to be professionally engineered and contracted.

This amendment will fund:

1. Engineering & Design – if deemed necessary by the complexity of each site selected
2. Construction - concrete bases and curb/sidewalk connectivity in the vicinity of the sites
3. Purchase of pre-fabricated shelter units and related amenities
4. Assembly and placement of shelter units and amenities

Notes:

- a. Overall Start Date -07/10/2017 End Date extended to 09/30/2020
 - b. Is request is for Research and Development? No
 - c. The City of Hattiesburg will not apply an “INDIRECT Cost” rate.
 - d. The City of Hattiesburg is the Direct Recipient for grant funds. Documentation is attached in TrAMS.
- The City of Hattiesburg will follow all 3rd party procurement policies as defined in C4220.1F (Third Party Contracting Guidance).

The City of Hattiesburg will ensure contractors procured will not be on the FTA Suspension and Debarment List.

Delinquent Federal Debt

No, my organization does not have delinquent federal debt.

Requires E.O. 12372 Review

No.

Subject to Pre-Award Authority

Yes, this application is subject to Pre-Award Authority.

AMENDMENT #1 MS-2016-007-01

This grant will use Section 5339 Bus and Bus Facilities Program- FY16 and 7/12 of the FY 17 Funds for a total \$299,592 (\$239,673 Federal and \$59,919 Local match). It will use FY16 total \$190,378 (\$152,302 Federal and \$38,076 Local match) and 7/12 of FY17 total \$109,214 (\$87,371 Federal and \$21,843 Local match).

Local match will come from city receipts.

This project is programmed in 2017-2020 STIP for MS approved on October 1, 2016, and approved for Hattiesburg on January 11, 2017. Amended for Hattiesburg on April 26, 2017. See attached STIP pages.

NOTE: This Amendment entails a change in the original scope. The original grant, MS 2016-007-00 was for minor renovations to the transit admin and maint facility. However, on January 21, 2017, it was destroyed by a tornado. This grant will consist of rebuilding the complete administrative/ maintenance facility. These funds are added to the total of the Original grant of \$615,566.25 (\$492,453.00 Federal and \$123,113.25 local match). These funds were never used or disbursed. The total amount of this grant with FY13, FY14, FY15, FY16 and 7/12 of FY17 is for \$915,158 (\$732,126 federal and \$183,032 local match).

This grant application will fund (1) Project: Reconstruction of the Hub City Transit Administrative and Maintenance Facility that was destroyed in the January 21, 2017 tornado. The existing destroyed facility will be demolished and a new facility will be constructed in the existing facility's footprint. (Demolition will not be completed with FTA funds.)

This grant will fund: P1

1. Engineering & Design – Administrative/maintenance facility
2. Construction - Administrative/maintenance facility

Notes:

- a. Overall Start Date -07/10/2017 End Date 09/30/2019
 - b. Is request is for Research and Development? No
 - c. The City of Hattiesburg will not apply an "INDIRECT Cost" rate.
 - d. The City of Hattiesburg is the Direct Recipient for grant funds. Documentation is attached in TrAMS.
- The City of Hattiesburg will follow all 3rd party procurement policies as defined in C4220.1F (Third Party Contracting Guidance).

The City of Hattiesburg will ensure contractors procured will not be on the FTA Suspension and Debarment List.

Delinquent Federal Debt

No, my organization does not have delinquent federal debt.

Requires E.O. 12372 Review

No.

Subject to Pre-Award Authority

Yes, this application is subject to Pre-Award Authority.

Original Grant – MS-2016-007-00

This grant is for a total of Total of \$615,566.25 (\$492,453.00 Federal Share and the City of Hattiesburg will provide a general fund \$123,113.25 local match). It will use FY 2015 Section 5339 MAP 21 funds for transit facility rehabilitation.

These project is programmed in the 2015-2019 Mississippi TIP, approved on 6/1/2016. (a copy is attached).

This grant application will fund (1) Project

1. Rehabilitation of the equipment and administration facility for administration space, energy efficiency and to make it ADA compliant.

Notes:

- a. Overall Start Date -08/01/2016 End Date 07/31/2018
- b. Is request is not for Research and Development?
- c. Hattiesburg will not apply a "INDIRECT Cost" rate.
- d. City of Hattiesburg is the Direct Recipient for grant funds. Documentation is attached in TrAMS.

City of Hattiesburg will follow all 3rd party procurement policies as defined in C4220.1F (Third Party Contracting Guidance).

City of Hattiesburg will ensure contractors procured will not be on the FTA Suspension and Debarment List.

Delinquent Federal Debt

No, my organization does not have delinquent federal debt.

Requires E.O. 12372 Review

No.

Subject to Pre-Award Authority

Yes, this application is subject to Pre-Award Authority.

Project Benefits

Reconstruction of the Hub City Administrative and Maintenance Transit Facility will allow Hub City Transit to operate at full capacity again, thereby further serving the public's needs. Operations will run much more smoothly and efficiently with the reconstructed facility as well as the fleet's performance will be improved. This reconstruction project will also bring the facility into ADA compliance.

Project Locations

Site is at intersection of Old Highway 49 and S. Tipton Street in Hattiesburg, Forrest County, Mississippi. Property is zoned industrial (I-1), has been in continuous public use.

Research and Development: This award does not include research and development activities.

Indirect Costs: This award does not include an indirect cost rate.

Suballocation Funds: Recipient organization is directly allocated these funds and is eligible to apply for and receive these funds directly.

Pre-Award Authority: This award is using Pre-Award Authority.

Award Budget

Total Award Budget: \$1,001,161.00

Amount of Federal Assistance Obligated for This FTA Action (in U.S. Dollars): \$10,022.00

Amount of Non-Federal Funds Committed to This FTA Action (in U.S. Dollars): \$2,506.00

Total FTA Amount Awarded and Obligated (in U.S. Dollars): \$800,928.00

Total Non-Federal Funds Committed to the Overall Award (in U.S. Dollars): \$200,233.00

Award Budget Control Totals

(The Budget includes the individual Project Budgets (Scopes and Activity Line Items) or as attached)

Funding Source	Section of Statute	CFDA Number	Amount
49 USC 5339 - (MAP 21) Bus and Bus Facilities Formula (FY2013 & Fwd)	5339-1	20526	\$800,928
Local			\$200,233
Local/In-Kind			\$0
State			\$0
State/In-Kind			\$0
Other Federal			\$0
Transportation Development Credit			\$0
Adjustment			\$0
Total Eligible Cost			\$1,001,161

(The Transportation Development Credits are not added to the amount of the Total Award Budget.)

U.S. Department of Labor Certification of Public Transportation Employee Protective Arrangements:

Review Decision: DOL Concurs - Certified

Original Certification Date: 9/8/2016

Review Decision: DOL Concurs - Certified
Amendment 1 Certification Date: 6/21/2017

;

Review Decision: DOL Concurs - Certified
Amendment 2 Certification Date: 5/13/2020

;

Review Decision: DOL Concurs - Certified
Amendment 3 Certification Date: 8/5/2020

Special Conditions

There are no special conditions.

FINDINGS AND DETERMINATIONS

By signing this Award on behalf of FTA, I am making all the determinations and findings required by federal law and regulations before this Award may be made.

FTA AWARD OF THE GRANT AGREEMENT

Awarded By:
Yvette Taylor
Regional Administrator
FEDERAL TRANSIT ADMINISTRATION
U.S. DEPARTMENT OF TRANSPORTATION
Contact Info: yvette.taylor@dot.gov
Award Date: 8/7/2020

EXECUTION OF THE GRANT AGREEMENT

Upon full execution of this Grant Agreement by the Recipient, the Effective Date will be the date FTA or the Federal Government awarded Federal assistance for this Grant Agreement.

By executing this Grant Agreement, the Recipient intends to enter into a legally binding agreement in which the Recipient:

- (1) Affirms this FTA Award,
- (2) Adopts and ratifies all of the following information it has submitted to FTA:

- (a) Statements,
 - (b) Representations,
 - (c) Warranties,
 - (d) Covenants, and
 - (e) Materials,
- (3) Consents to comply with the requirements of this FTA Award, and
- (4) Agrees to all terms and conditions set forth in this Grant Agreement.

Executed By:
Toby Barker
Mayor
Hattiesburg, City Of
8/7/2020



Memorandum

To: Mayor Toby Barker and Members of City Council

From: Lamar Rutland

cc:

Date: Tuesday, August 18, 2020

Re: Acknowledge receipt of a warranty deed from Forrest County for a parcel of land being part of the Northeast 1/4 of Section 15, and the Southeast 1/4 of Section 10 Township 4 North, Range 13 West, Forrest County, Mississippi, and further described in the attached deed, as required for the Hall Avenue Overpass Project.
File Number: 2020-566
Minute Book #

Summary

Acknowledge receipt of a warranty deed from Forrest County for a parcel of land being part of the Northeast 1/4 of Section 15, and the Southeast 1/4 of Section 10 Township 4 North, Range 13 West, Forrest County, Mississippi, and further described in the attached deed, as required for the Hall Avenue Overpass Project.

Recommendation Statement

I recommend approval of this item.

Please place this on the August 18, 2020 City Council meeting for consideration.

FORREST COUNTY, MISSISSIPPI
FACT SHEET AND BOARD ORDER

AGENDA ITEM NO. 3A. DATE: July 29, 2020

INTRODUCED BY Betty Carlisle, County Administrator

BRIEF TITLE City Right-of-Way Deed
Hall Avenue Overpass Project

EXHIBITS FOR REVIEW Warranty Deed

RECOMMENDATION (exact wording for Agenda)

Authorize Board President to sign City Right-of-Way Deed from Forrest County to the City of
Hattiesburg, A parcel of land being part of the Northeast 1/4 of Section 15, and the Southeast
1/4 of Section 10 Township 4, North, Range 13, West, Forrest County, Mississippi.

BOARD ACTION

☒	Approved	☐	Rejected
☐	Information only	☐	No Action

Amend to read as follows:

MOTION MADE BY Roderick Woullard SECONDED BY Sharon Thompson

MEMBERS VOTED

DAVID HOGAN	☒	YES	☐	NO	☐	ABSTAIN	☐	ABSENT
SHARON THOMPSON	☒	YES	☐	NO	☐	ABSTAIN	☐	ABSENT
BURKETT ROSS	☒	YES	☐	NO	☐	ABSTAIN	☐	ABSENT
RODERICK WOULLARD	☒	YES	☐	NO	☐	ABSTAIN	☐	ABSENT
CHRIS BOWEN	☒	YES	☐	NO	☐	ABSTAIN	☐	ABSENT

SO ORDERED AND APPROVED On this the 29th day of July, 2020

Prepared by:

City of Hattiesburg
Engineering Department
Post Office Box 1898
Hattiesburg, MS 39403-1898
(601) 545-4540

Return to:

City of Hattiesburg
Engineering Department
Post Office Box 1898
Hattiesburg MS 39403-1898
(601) 545-4540

INDEXING INSTRUCTIONS:

A parcel of land being part of the Northeast ¼ of the Northeast ¼ of Section 15, and the Southeast ¼ of the Southeast ¼ of Section 10 of Township 4 North, Range 13 West, Forrest County, Mississippi

STATE OF MISSISSIPPI

COUNTY OF FORREST

WARRANTY DEED

FOR AND IN CONSIDERATION of the sum of Ten Dollars, (\$10.00), cash in hand paid, and other good and valuable considerations, the receipt and sufficiency of which are hereby acknowledged, that we,

**FORREST COUNTY, MISSISSIPPI, A POLITICAL
SUBDIVISION OF THE STATE OF MISSISSIPPI**

**641 N. Main St.
P.O. Box 1310
Hattiesburg, MS 39403-1310
Telephone (601) 545-6000**

Grantor, does hereby grant, bargain, sell, convey and warrant unto the

**CITY OF HATTIESBURG, MISSISSIPPI,
A MUNICIPAL CORPORATION**

**200 Forrest Street
Post Office Box 1898
Hattiesburg, MS 39403-1898
Telephone (601) 545-4540**

Grantee, the following described property lying and being situated in Hattiesburg, Forrest County, Mississippi, and more particularly described on Exhibit A attached hereto:

(SEE EXHIBIT "A")

Said property is not a part of the homestead of the grantor.

The property is conveyed subject to all easements, roadways, servitudes, restrictive covenants and oil, gas and other mineral reservations, exceptions, conveyances, leases and other matters of record.

It is further understood and agreed that this instrument constitutes the entire agreement between the Grantor and the Grantee, there being no oral agreements or representations of any kind.

WITNESS OUR SIGNATURES on this 6th day of August, 2020.

FORREST COUNTY, MISSISSIPPI

By: [Signature]
David Hogan, President, Forrest County, Mississippi
Board of Supervisors

ATTEST:

[Signature]
Lance C. Reid, Chancery Clerk

STATE OF MISSISSIPPI

COUNTY OF FORREST

Personally appeared before me, the undersigned authority in and for the said county and state, on this 6th day of August, 2020, within my jurisdiction, the within named David Hogan and Lance C. Reid, who acknowledged that they are President of the Forrest County Board of Supervisors and Chancery Clerk of Forrest County, respectively, and that in said representative capacities they executed the above and foregoing instrument, after first having been duly authorized so to do.

[Signature]
NOTARY PUBLIC

My Commission Expires: 10/7/2022



EXHIBIT "A"

LEGAL DESCRIPTION

A parcel of land being part of the Northeast $\frac{1}{4}$ of the Northeast $\frac{1}{4}$ of Section 15, and the Southeast $\frac{1}{4}$ of the Southeast $\frac{1}{4}$ of Section 10 of Township 4 North, Range 13 West, Forrest County, Mississippi and being comprised of part of that portion of Hall Avenue vacated by Ordinance 646, Municipal Minute Book "H" Page 401, and also Lot 1 of Share 1 and Lot 1 of Share 2 of the William Burkett Estate, being more particularly described as follows:

Commencing at a found railroad iron at the Northwest Corner of said Northeast $\frac{1}{4}$, of the Northeast $\frac{1}{4}$, of Section 15; said point also being the Northeast Corner of Lot 2 of Block 1 of J.E. Arledge Survey of the City of Hattiesburg, Mississippi; thence run South 89 degrees 53 minutes 04 seconds East and along the northern boundary of said Northeast $\frac{1}{4}$, of said Northeast $\frac{1}{4}$, for a distance of 15.87 feet to a $\frac{1}{2}$ " iron pin, said point also being a point on the western right-of-way boundary of CN Railroad; thence continue South 89 degrees 53 minutes 04 seconds East for a distance of 141.34 feet to a found railroad iron on the eastern right-of-way boundary of Williams Street, said point also being the Point of Beginning; thence leaving said northern boundary of the Northeast $\frac{1}{4}$, run and along said eastern right-of-way boundary North 17 degrees 39 minutes 02 seconds West for a distance of 78.20 feet; thence leaving said eastern right-of-way boundary run East for a distance of 1,198.92 feet to a point on the eastern boundary of said Southeast $\frac{1}{4}$, of the Southeast $\frac{1}{4}$, of Section 10; thence run and along said eastern boundary South 00 degrees 07 minutes 20 seconds West for a distance of 195.06 feet; thence leaving said eastern boundary run South 89 degrees 53 minutes 16 seconds West for a distance of 104.21 feet; thence run North for a distance of 70.26 feet; thence run West for a distance of 321.89 feet, to a point on the boundary of a parcel of land being described in Deed Book 1,240, Page 373 on file in the office of Chancery Clerk of Forrest County, Mississippi; thence run and along said boundary for the following three (3) calls: North 00 degrees 07 minutes 20 seconds East for a distance of 49.33 feet; thence run North 89 degrees 54 minutes 43 seconds West for a distance of 15.83 feet; thence run South 44 degrees 53 minutes 33 seconds West for a distance 69.67 feet; thence leaving said parcel boundary run West for a distance of 540.25 feet; thence run North for a distance of 14.40 feet; thence run West for a distance of 75.00 feet; thence South for a distance of 14.40 feet; thence run West for a distance of 52.49 feet to a point on said eastern right-of-way boundary of Williams Street; thence run and along said eastern right-of-way boundary North 17 degrees 39 minutes 02 seconds West for a distance of 52.98 feet back to the POINT OF BEGINNING. Said parcel contains 3.48 acres (151,612 square feet), more or less.

Forrest County, Mississippi - ±3.48 Ac.

LEGAL DESCRIPTION (Proposed Right-of-Way Acquisition)

A parcel of land being part of the Northeast ¼ of the Northeast ¼ of Section 15, and the Southeast ¼ of the Southeast ¼ of Section 10 of Township 4 North, Range 13 West, Forrest County, Mississippi, and being comprised of part of that portion of Hali Avenue vacated by Ordinance 645, Municipal Minute Book "H" Page 401, and also Lot 1 of Share 1 and Lot 1 of Share 2 of the William Burkett Estate, being more particularly described as follows:

Commencing at a found railroad iron at the Northwest Corner of said Northeast ¼ of the Northeast ¼ of Section 15, said point also being the Northeast Corner of Lot 2 of Block 1 of J.E. Aledge Survey of the City of Hattiesburg, Mississippi, thence run South 89 degrees 53 minutes 04 seconds East and along the northern boundary of said Northeast ¼ of said Northeast ¼, for a distance of 15.97 feet to a 1/2" iron pin, said point also being a point on the western right-of-way boundary of CN Railroad, thence continue South 89 degrees 53 minutes 04 seconds East for a distance of 141.34 feet to a found railroad iron on the eastern right-of-way boundary of Williams Street, said point also being the Point of Beginning, thence leaving said northern boundary of the Northeast ¼, run and along said eastern right-of-way boundary North 17 degrees 39 minutes 02 seconds West for a distance of 78.20 feet; thence leaving said eastern right-of-way boundary run East for a distance of 1,198.92 feet to a point on the eastern boundary of said Southeast ¼ of the Southeast ¼ of Section 10, thence run and along said eastern boundary South 00 degrees 07 minutes 20 seconds West for a distance of 195.06 feet; thence leaving said eastern boundary run South 89 degrees 53 minutes 15 seconds West for a distance of 104.21 feet; thence run North for a distance of 70.25 feet; thence run West for a distance of 321.89 feet, to a point on the boundary of a parcel of land being described in Deed Book 1,240, Page 373 on file in the office of the County Clerk of Forrest County, Mississippi, thence run and along said boundary for the following three (3) calls: North 00 degrees 07 minutes 20 seconds East for a distance of 49.33 feet; thence run North 89 degrees 54 minutes 43 seconds West for a distance of 15.83 feet; thence run South 44 degrees 53 minutes 33 seconds West for a distance of 69.67 feet; thence leaving said parcel boundary run West for a distance of 540.25 feet; Thence run North for a distance of 14.40 feet; thence run West for a distance of 75.00 feet; thence South for a distance of 14.40 feet; thence run West for a distance of 52.49 feet to a point on said eastern right-of-way boundary of Williams Street; thence run and along said eastern right-of-way boundary North 17 degrees 39 minutes 02 seconds West for a distance of 52.98 feet back to the POINT OF BEGINNING. Said parcel contains 3.48 acres (151,612 square feet), more or less.

Parcel Line Table

Line #	Length	Direction
L1	15.87	S89° 53' 04"E
L2	141.34	S89° 53' 04"E
L3	78.20	N17° 39' 02"W
L4	195.06	S0° 07' 20"W
L5	104.21	S89° 53' 16"W
L6	70.25	NORTH
L7	49.33	N0° 07' 20"E
L8	15.83	N89° 54' 43"W
L9	69.67	S44° 53' 33"W
L10	14.40	NORTH
L11	75.00	WEST
L12	14.40	SOUTH
L13	52.49	WEST
L14	52.98	N17° 39' 02"W

STATE PLANE DATA

State Plane Zone: MS East-2301
Datum: NAD 1983
Combined Factor: 0.99997202
Convergence Angle: -0° 13' 50.86"
Reference Point: POC

LEGEND:

BK
PC
CTP
MPF
IPF
POB
POC
RRIF

PROPOSED RIGHT-OF-WAY
BOOK
PAGE
FOUND CRIMP-TOP PIPE
FOUND METAL PIPE
FOUND IRON ROD
SET 1" IRON REBAR
POINT OF BEGINNING
POINT OF COMMENCEMENT
UTILITY POLE
MONUMENT FOUND
RAILROAD IRON FOUND

NOTES:

1. Class "B" Survey.
2. No Additional Record Search for Easements was Conducted.
3. Date of Field Survey: Nov. 21, 2019.
4. Orientation is based on GPS observation, Grid North, as referenced to MS State Plane Coordinate System, East Zone

GRAPHIC SCALE



(IN FEET)
1 inch = 40 ft.

**TITLE RECORD
SEARCH PENDING**

REFERENCE MATERIAL:

1. Kampert & Whinnery No. 2 Addition to the City of Hattiesburg
2. Forrest County Tax Maps
3. Warranty Deed Bk 50, PG 224
4. Warranty Deed Bk 1240, PG 373
5. Field Notes by N.E. Clark-Surveyor of William Burkett Estate dated 02/23/1904

PRELIMINARY - PINS NOT SET

Clearpoint
CONSULTING ENGINEERS, P.A.

6652 US Highway 98 | Hattiesburg, MS 39402
t 601.261.2609 | f 601.261.5573 | clearpointengineers.com

PREPARED FOR:



Right-of-Way Survey

Forrest County, Mississippi
PPIN: 19206, 19207, 19208,
26829 and 26831

CCE NO.: 76242036

SCALE: 1" = 100'

DATE: 11/30/2019

CHECKED: RTB

DRAWN: JCR

SHEET 1 OF 1

Drawing Location: S:\76242036\01\PLAT\76242036-PLAT3.dwg



Memorandum

To: Mayor Toby Barker and Members of City Council

From: Lamar Rutland

cc:

Date: Tuesday, August 18, 2020

Re: Acknowledge receipt of corrected Certified Bid Tabulation from Neel-Schaffer, Inc. for the Hardy Street and Concart Street Drainage and Sidewalk Improvements project.
File Number: 2020-572
Minute Book #

Summary

Acknowledge receipt of corrected Certified Bid Tabulation from Neel-Schaffer, Inc. for the Hardy Street and Concart Street Drainage and Sidewalk Improvements project.

Recommendation Statement

I recommend approval of this item.

Please place this on the August 18, 2020 City Council meeting for consideration.



MAYOR
Toby Barker

COUNCIL - WARD ONE
Jeffrey George

COUNCIL - WARD TWO
Deborah Denard Delgado

COUNCIL - WARD THREE
Carter Carroll

COUNCIL - WARD FOUR
Mary Dryden

COUNCIL - WARD FIVE
Nicholas Brown

Memorandum

To: Mayor Toby Barker and Members of the City Council

From: Lamar Rutland, Engineering Director

Date: August 10, 2020

Re: Hardy Street and Concart Drainage Project

On the previous City Council Agenda for August 4, 2020, Item No. 2020-518 was to award the Hardy Street and Concart Drainage Project to Gulf South Construction for \$355,925.80. Unfortunately, in performing the calculation for the bid tabulation, an error was made by the engineers, and the value they utilized for the mobilization was \$3,400 for the mobilization cost when in actuality the value the contractor had for mobilization was \$34,000.

Thank you.

LR/kmh

engineers
planners
surveyors
environmental
scientists
landscape
architects

August 10, 2020
N-S Project No. 15360.000

Lamar Rutland, P.E.
Director of Engineering
City of Hattiesburg
P.O. Box 1898
Hattiesburg, Mississippi 39403

REFERENCE: Hardy Street and Concart Street Drainage and Sidewalk Improvements

Dear Mr. Rutland:

Please find enclosed the Certified Bid Tabulation of the bids received for the referenced project which were opened and read aloud at the bid opening on July 23, 2020. Of the two (2) bids received, Gulf South Construction of Hattiesburg, MS submitted the lowest bid in the amount of \$386,525.80 including a base bid amount of \$348,649.55 and an additive alternate bid of \$37,876.25. The other bid received was from Pavecon Ltd. Co. DBA Pavecon of Grand Prairie, TX in the amount of \$643,759.00 including a base bid amount of \$590,368.54 and an additive alternate bid of \$53,390.46. Based on the bids received, we recommend award to the low bidder, Gulf South Construction, Inc. in the amount of their total proposal (base + add alternate), \$386,525.80.

If the City concurs in our recommendation, let us know how the contract is to be awarded, i.e. base only or base plus add. alternate and we'll prepare the Notice of Award.

If you have any questions regarding this information, give me a call.

Sincerely,
NEEL-SCHAFFER, INC.


Geoffrey Crosby, P.E.
Senior Project Manager

Encl.

CITY OF HATTIESBURG
Hardy Street & Concart Street Drainage & Sidewalk Improvements

				Gulf South Construction P O Box 16105 Hattiesburg, MS 39404		Pavecon 3022 Ray Orr Blvd Grand Prairie, TX 75050	
Pay Item	Pay Item Description	Unit	Estimated Quantity	Unit Price	Item Total	Unit Price	Item Total
202-B	Removal of Pavement, All Types and Depths	SY	1015	\$4.00	\$4,060.00	\$13.23	\$13,428.45
202-B	Removal of Concrete Sidewalk	SY	261	\$5.00	\$1,305.00	\$9.36	\$2,442.96
202-B	Removal of Curb &/or Curb and Gutter, All Types	LF	285	\$7.50	\$2,137.50	\$11.70	\$3,334.50
202-B	Removal of Inlets, All Sizes	EA	4	\$550.00	\$2,200.00	\$4,682.00	\$18,728.00
202-B	Removal of Pipe, 8" And Above	LF	24	\$10.00	\$240.00	\$45.85	\$1,095.60
202-B	Removal of Traffic Stripe, All Types	LF	160	\$7.20	\$1,152.00	\$7.02	\$1,123.20
211-B	Topsoil for Slope Treatment, Contractor Furnished	CY	9	\$20.00	\$180.00	\$46.62	\$421.38
211-C	Topsoil for Plant Holes, Contractor Furnished	CY	32	\$68.50	\$2,192.00	\$40.97	\$1,311.04
216-B	Solid Sodding, Centipede	SY	165	\$6.55	\$1,080.75	\$5.27	\$869.55
219-A	Watering	KGAL	30	\$20.00	\$600.00	\$20.00	\$600.00
230-A	Shrub Planting, Daylily	EA	250	\$9.00	\$2,250.00	\$11.70	\$2,925.00
230-A	Shrub Planting, Parsons Juniper	EA	170	\$9.00	\$1,530.00	\$10.53	\$1,790.10
230-A	Shrub Planting, Dwarf Rose, "Peach"	EA	90	\$30.00	\$2,700.00	\$17.56	\$1,580.40
230-B	Tree Planting, Live Oak	EA	6	\$131.75	\$790.50	\$409.65	\$2,457.90
230-B	Tree Planting, "Slender Silhouette" Sweetgum	EA	8	\$131.75	\$1,054.00	\$228.23	\$1,825.84
230-B	Tree Planting, Crape Myrtle, "Tonto"	EA	12	\$131.75	\$1,581.00	\$239.94	\$2,879.28
230-D	Bed Preparation	SF	2850	\$0.80	\$2,280.00	\$2.28	\$6,498.00
232-A	Fertilizer for Woody Plant Material, Tablet, 21 G	K	1	\$250.00	\$250.00	\$29.26	\$29.26
233-A	Tree Bark Mulch, Type III	CY	22	\$30.00	\$660.00	\$30.43	\$669.46
233-A	Tree Bark Mulch, Type V	CY	50	\$60.00	\$3,000.00	\$25.02	\$1,251.00
907-258-PP	Herbicide Treatment, Per Plans	SF	2850	\$0.15	\$427.50	\$1.11	\$3,163.50
234-A	Temporary Silt Fence	LF	570	\$3.50	\$1,995.00	\$3.86	\$2,200.20
237-A	Wattles, 12"	LF	130	\$8.00	\$1,040.00	\$6.48	\$842.40
907-242-PP	Construction of Raised Crosswalk, Per Plans	LS	1	\$15,550.00	\$15,550.00	\$13,480.00	\$13,480.00
246-A	Sandbags	EA	25	\$15.00	\$375.00	\$7.19	\$179.75
304-G	Size 610 Crushed Stone Base, AEA	CY	35	\$110.00	\$3,850.00	\$126.41	\$4,424.35
403-A	12.5-mm, MT, Asphalt Pavement	TON	6	\$360.00	\$2,160.00	\$248.48	\$1,890.88
403-A	9.5-mm, MT, Asphalt Pavement	TON	5	\$360.00	\$1,800.00	\$361.51	\$1,807.55
601-B	Class "B" Structural Concrete, Minor Structures	CY	38	\$1,340.00	\$50,920.00	\$2,900.25	\$110,209.50
602-A	Reinforcing Steel	LBS	2800	\$3.60	\$10,080.00	\$1.76	\$4,928.00
603-CA	18" Reinforced Concrete Pipe, Class III, Rubber Type Gaskets	LF	158	\$45.00	\$7,110.00	\$46.23	\$7,304.34
603-CA	24" Reinforced Concrete Pipe, Class III, Rubber Type Gaskets	LF	180	\$55.00	\$9,900.00	\$57.94	\$10,429.20
603-CE	22"x13" Concrete Arch Pipe, Class III A, Flexible Type Gaskets	LF	22	\$52.00	\$1,144.00	\$53.84	\$1,184.48
604-A	Castings	LBS	1286	\$3.50	\$4,501.00	\$6.44	\$8,281.84
604-B	Gratings	LBS	482	\$4.00	\$1,928.00	\$6.44	\$3,104.08
907-607-PP	Steel Fence and Post, Per Plans	LF	240	\$63.00	\$15,120.00	\$140.45	\$33,708.00
608-A	Concrete Sidewalk, Without Reinforcement	SY	1004	\$72.00	\$72,288.00	\$95.51	\$95,892.04
608-B	Concrete Sidewalk, With Reinforcement	SY	20	\$80.00	\$1,600.00	\$95.35	\$1,907.00
907-608-E	Asphalt Pavement Texturing	SF	600	\$7.50	\$4,500.00	\$8.78	\$5,268.00
609-B	Concrete Curb, Header	LF	175	\$30.00	\$5,250.00	\$53.57	\$9,374.75
609-D	Combination Concrete Curb and Gutter Type 1 Modified	LF	434	\$27.50	\$11,935.00	\$39.00	\$16,926.00
614-B	Concrete Driveway, With Reinforcement, 6 Inch Thickness	SY	17	\$95.00	\$1,615.00	\$97.25	\$1,653.25
618-A	Maintenance of Traffic	LS	1	\$24,000.00	\$24,000.00	\$14,045.00	\$14,045.00
618-B	Additional Construction Signs	SF	1	\$10.00	\$10.00	\$10.00	\$10.00
620-A	Mobilization	LS	1	\$34,000.00	\$34,000.00	\$149,415.60	\$149,415.60
626-G	Thermoplastic Detail Stripe, White	LF	45	\$6.00	\$270.00	\$5.85	\$263.25
626-H	Thermoplastic Legend Stripe, White, 6" Equivalent	LF	620	\$7.20	\$4,464.00	\$8.19	\$5,077.80
626-H	Thermoplastic Legend Stripe, White	SF	11	\$91.00	\$1,001.00	\$87.78	\$965.58
628-E	6" Cold Plastic Detail Stripe, White	LF	105	\$12.00	\$1,260.00	\$11.70	\$1,228.50
628-E	6" Cold Plastic Detail Stripe, Yellow	LF	35	\$12.00	\$420.00	\$11.70	\$409.50
630-A	Standard Roadside Signs, Sheet Aluminum, 0.080" Thickness	SF	18	\$50.00	\$900.00	\$11.55	\$207.90
630-C	Steel U-Section Posts, 3.0 to 3.5 lb/ft	LF	28	\$11.10	\$310.80	\$8.48	\$237.44
647-PP	Electric Pullbox, Per Plans	EA	2	\$675.00	\$1,350.00	\$658.36	\$1,316.72
668-B	Traffic Signal Conduit, Underground Drilled or Jacked, Rolled Pipe, 2"	LF	270	\$19.50	\$5,265.00	\$19.02	\$5,135.40
682-A	Underground Branch Circuit, 1" Conduit	LF	475	\$7.90	\$3,752.50	\$7.72	\$3,667.00
682-B	Underground Branch Circuit, Jack Or Bored, 1" Conduit	LF	40	\$19.50	\$780.00	\$19.02	\$760.80
682-D	Pull Box, Flush Mounted	EA	11	\$165.00	\$1,815.00	\$160.93	\$1,770.23
699-A	Roadway Construction Stakes	LS	1	\$12,000.00	\$12,000.00	\$2,340.83	\$2,340.83
Total Base Bid =					\$346,849.55		\$590,388.54

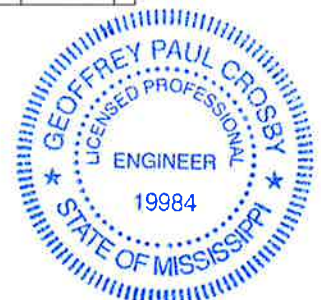
Additive Alternate No. 1

Pay Item	Pay Item Description	Unit	Estimated Quantity	Unit Price	Item Total	Unit Price	Item Total
682-A	Underground Branch Circuit Awg 10, 3 Conductor	LF	515	\$3.75	\$1,931.25	\$3.66	\$1,884.90
907-683-PP	Lighting Assembly, Low Mast, Type 16-1-0-52, Per Plans	EA	11	\$2,595.00	\$28,545.00	\$4,024.76	\$44,272.36
682-F	Secondary Power Controller	EA	1	\$7,400.00	\$7,400.00	\$7,233.20	\$7,233.20
Total Additive Alternate No. 1 Bid =					\$37,876.25		\$53,390.46

Total Base Bid + Additive Alternate No. 1 Bid =					\$386,525.80		\$643,758.00
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I certify this to be a true & accurate Bid Tabulation of bids received @ 2:00p.m., Thursday, July 23rd, 2020 for the City of Hattiesburg - Hardy Street & Concart Street Drainage & Sidewalk Improvements Project.

Geoffrey Paul Crosby
 Geoffrey Paul Crosby, P.E.
 Mississippi Registration No. 19984



July 27, 2020
N-S Project No. 15360.000

Lamar Rutland, P.E.
Director of Engineering
City of Hattiesburg
P.O. Box 1898
Hattiesburg, Mississippi 39403

REFERENCE: Hardy Street and Concart Street Drainage and Sidewalk Improvements

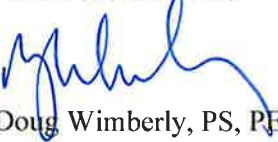
Dear Mr. Rutland:

Please find enclosed the Certified Bid Tabulation of the bids received for the referenced project which were opened and read aloud at the bid opening on July 23, 2020. Of the two (2) bids received, Gulf South Construction of Hattiesburg, MS submitted the lowest bid in the amount of \$355,925.80 including a base bid amount of \$318,049.55 and an additive alternate bid of \$37,876.25. The other bid received was from Pavecon Ltd. Co. DBA Pavecon of Grand Prairie, TX in the amount of \$643,759.00 including a base bid amount of \$590,368.54 and an additive alternate bid of \$53,390.46. Based on the bids received, we recommend award to the low bidder, Gulf South Construction, Inc. in the amount of their total proposal (base + add alternate), \$355,925.80.

If the City concurs in our recommendation, let us know how the contract is to be awarded, i.e. base only or base plus add. alternate and we'll prepare the Notice of Award.

If you have any questions regarding this information, give me a call.

Sincerely,
NEEL-SCHAFFER, INC.



Doug Wimberly, PS, PE
Vice President

Encl.

CITY OF HATTIESBURG
Hardy Street & Concart Street Drainage & Sidewalk Improvements

				Gulf South Construction P O Box 16105 Hattiesburg, MS 39404		Pavecon 3022 Ray Orr Blvd Grand Prairie, TX 75050	
Pay Item	Pay Item Description	Unit	Estimated Quantity	Unit Price	Item Total	Unit Price	Item Total
202-B	Removal of Pavement, All Types and Depths	SY	1015	\$4.00	\$4,060.00	\$13.23	\$13,428.45
202-B	Removal of Concrete Sidewalk	SY	261	\$5.00	\$1,305.00	\$9.36	\$2,442.96
202-B	Removal of Curb &/or Curb and Gutter, All Types	LF	285	\$7.50	\$2,137.50	\$11.70	\$3,334.50
202-B	Removal of Inlets, All Sizes	EA	4	\$550.00	\$2,200.00	\$4,682.00	\$18,728.00
202-B	Removal of Pipe, 8" And Above	LF	24	\$10.00	\$240.00	\$45.65	\$1,095.60
202-B	Removal of Traffic Stripe, All Types	LF	160	\$7.20	\$1,152.00	\$7.02	\$1,123.20
211-B	Topsoil for Slope Treatment, Contractor Furnished	CY	9	\$20.00	\$180.00	\$46.82	\$421.38
211-C	Topsoil for Plant Holes, Contractor Furnished	CY	32	\$68.50	\$2,192.00	\$40.97	\$1,311.04
216-B	Solid Sodding, Centipede	SY	165	\$6.55	\$1,080.75	\$5.27	\$869.55
219-A	Watering	KGAL	30	\$20.00	\$600.00	\$20.00	\$600.00
230-A	Shrub Planting, Daylily	EA	250	\$9.00	\$2,250.00	\$11.70	\$2,925.00
230-A	Shrub Planting, Parsons Juniper	EA	170	\$9.00	\$1,530.00	\$10.53	\$1,790.10
230-A	Shrub Planting, Drift Rose, "Peach"	EA	90	\$30.00	\$2,700.00	\$17.56	\$1,580.40
230-B	Tree Planting, Live Oak	EA	6	\$131.75	\$790.50	\$409.65	\$2,457.90
230-B	Tree Planting, "Slender Silhouette" Sweetgum	EA	8	\$131.75	\$1,054.00	\$228.23	\$1,825.84
230-B	Tree Planting, Crape Myrtle, "Tonto"	EA	12	\$131.75	\$1,581.00	\$239.94	\$2,879.28
230-D	Bed Preparation	SF	2650	\$0.80	\$2,280.00	\$2.28	\$6,498.00
232-A	Fertilizer for Woody Plant Material, Tablet, 21 G	K	1	\$250.00	\$250.00	\$29.26	\$29.26
233-A	Tree Bark Mulch, Type III	CY	22	\$30.00	\$660.00	\$30.43	\$669.46
233-A	Tree Bark Mulch, Type V	CY	50	\$60.00	\$3,000.00	\$25.02	\$1,251.00
907-258-PP	Herbicide Treatment, Per Plans	SF	2650	\$0.15	\$427.50	\$1.11	\$3,163.50
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237-A	Wattles, 12"	LF	130	\$8.00	\$1,040.00	\$6.48	\$842.40
907-242-PP	Construction of Raised Crosswalk, Per Plans	LS	1	\$15,550.00	\$15,550.00	\$13,480.00	\$13,480.00
246-A	Sandbags	EA	25	\$15.00	\$375.00	\$7.19	\$179.75
304-G	Size 610 Crushed Stone Base, AEA	CY	35	\$110.00	\$3,850.00	\$126.41	\$4,424.35
403-A	12.5-mm, MT, Asphalt Pavement	TON	8	\$360.00	\$2,880.00	\$246.46	\$1,987.84
403-A	9.5-mm, MT, Asphalt Pavement	TON	5	\$360.00	\$1,800.00	\$361.51	\$1,807.55
601-B	Class "B" Structural Concrete, Minor Structures	CY	38	\$1,340.00	\$50,920.00	\$2,900.25	\$110,209.50
602-A	Reinforcing Steel	LBS	2800	\$3.60	\$10,080.00	\$1.76	\$4,928.00
603-CA	18" Reinforced Concrete Pipe, Class III, Rubber Type Gaskets	LF	158	\$45.00	\$7,110.00	\$46.23	\$7,304.34
603-CA	24" Reinforced Concrete Pipe, Class III, Rubber Type Gaskets	LF	180	\$55.00	\$9,900.00	\$57.94	\$10,429.20
603-CE	22"X13" Concrete Arch Pipe, Class III A, Flexible Type Gaskets	LF	22	\$52.00	\$1,144.00	\$53.84	\$1,184.48
604-A	Castings	LBS	1286	\$3.50	\$4,501.00	\$6.44	\$8,281.84
604-B	Gratings	LBS	482	\$4.00	\$1,928.00	\$6.44	\$3,104.08
907-607-PP	Steel Fence and Post, Per Plans	LF	240	\$63.00	\$15,120.00	\$140.45	\$33,708.00
608-A	Concrete Sidewalk, Without Reinforcement	SY	1004	\$72.00	\$72,288.00	\$95.51	\$95,892.04
608-B	Concrete Sidewalk, With Reinforcement	SY	20	\$80.00	\$1,600.00	\$95.35	\$1,907.00
907-608-E	Asphalt Pavement Texturing	SF	600	\$7.50	\$4,500.00	\$8.78	\$5,268.00
609-B	Concrete Curb, Header	LF	175	\$30.00	\$5,250.00	\$53.57	\$9,374.75
609-D	Combination Concrete Curb and Gutter Type 1 Modified	LF	434	\$27.50	\$11,935.00	\$39.00	\$16,926.00
614-B	Concrete Driveway, With Reinforcement, 6 Inch Thickness	SY	17	\$95.00	\$1,615.00	\$97.25	\$1,653.25
618-A	Maintenance of Traffic	LS	1	\$24,000.00	\$24,000.00	\$14,045.00	\$14,045.00
618-B	Additional Construction Signs	SF	1	\$10.00	\$10.00	\$10.00	\$10.00
620-A	Mobilization	LS	1	\$3,400.00	\$3,400.00	\$149,415.60	\$149,415.60
626-G	Thermoplastic Detail Stripe, White	LF	45	\$6.00	\$270.00	\$5.85	\$263.25
626-H	Thermoplastic Legend Stripe, White, 6" Equivalent	LF	620	\$7.20	\$4,464.00	\$8.19	\$5,077.80
626-H	Thermoplastic Legend Stripe, White	SF	11	\$91.00	\$1,001.00	\$87.78	\$965.58
628-E	6" Cold Plastic Detail Stripe, White	LF	105	\$12.00	\$1,260.00	\$11.70	\$1,228.50
628-E	6" Cold Plastic Detail Stripe, Yellow	LF	35	\$12.00	\$420.00	\$11.70	\$409.50
630-A	Standard Roadside Signs, Sheet Aluminum, 0.080" Thickness	SF	18	\$50.00	\$900.00	\$11.55	\$207.90
630-C	Steel U-Section Posts, 3.0 to 3.5 lb/ft	LF	28	\$11.10	\$310.80	\$8.48	\$237.44
647-PP	Electric Pullbox, Per Plans	EA	2	\$675.00	\$1,350.00	\$658.36	\$1,316.72
668-B	Traffic Signal Conduit, Underground Drilled or Jacked, Rolled Pipe, 2"	LF	270	\$19.50	\$5,265.00	\$19.02	\$5,135.40
682-A	Underground Branch Circuit, 1" Conduit	LF	475	\$7.90	\$3,752.50	\$7.72	\$3,667.00
682-B	Underground Branch Circuit, Jack Or Bored, 1" Conduit	LF	40	\$19.50	\$780.00	\$19.02	\$760.80
682-D	Pull Box, Flush Mounted	EA	11	\$165.00	\$1,815.00	\$160.93	\$1,770.23
699-A	Roadway Construction Stakes	LS	1	\$12,000.00	\$12,000.00	\$2,340.83	\$2,340.83
Total Base Bid =					\$318,049.55	#1	\$580,368.54

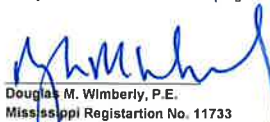
Additive Alternate No. 1

Pay Item	Pay Item Description	Unit	Estimated Quantity	Unit Price	Item Total	Unit Price	Item Total
682-A	Underground Branch Circuit Awg 10, 3 Conductor	LF	515	\$3.75	\$1,931.25	\$3.66	\$1,884.90
907-683-PP	Lighting Assembly, Low Mast, Type 16-1.0-52, Per Plans	EA	11	\$2,595.00	\$28,545.00	\$4,024.76	\$44,272.36
682-F	Secondary Power Controller	EA	1	\$7,400.00	\$7,400.00	\$7,233.20	\$7,233.20
Total Additive Alternate No. 1 Bid =					\$37,876.25		\$53,390.46

Total Base Bid + Additive Alternate No. 1 Bid =					\$355,925.80		\$643,759.00
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#1 - Incorrect Total Base Bid - Bid proposal reflected \$348,649.55

I certify this to be a true & accurate Bid Tabulation of bids received @ 2:00p.m., Thursday, July 23rd, 2020 for the City of Hattiesburg - Hardy Street & Concart Street Drainage & Sidewalk Improvements Project.


Douglas M. Wimberly, P.E.
Mississippi Registration No. 11733





NEEL-SCHAFER
P.O. Box 1487 / 704 Hardy Street (39401)
Hattiesburg, MS 39403-1487
Telephone: (601) 545-1565 / Fax: (601) 545-2267

Copy

Date: July 14, 2020
To: Plan Holders
Company:
Project No.: NS 2-15360.000
From: Geoffrey Crosby, P.E.
Subject: ADDENDUM NO. 1
Hardy Street and Concart Street Drainage and Sidewalk Improvements
City of Hattiesburg

Attached is Addendum No. 1 for the above referenced project.

**Plan Holders are reminded that this Addendum must be acknowledged on
Page 00300-9 of the Bid Proposal.**

***Replace the Contract Documents and Technical Specifications in it's entirety with the attached
Contract Documents and Technical Specifications***

Please acknowledge receipt of this Addendum by signing in the space provided below and return this page by facsimile to: Neel-Schaffer, Inc., Fax Number: (601) 545-2267, or e-mail your acknowledgment to jennifer.nobles@neel-schaffer.com before 5:00 P.M., Wednesday, July 15, 2020.

NAME: Blake Williamson DATE: 7/17/20 TIME: 4:50 P.M.

COMPANY (Please Print): Gulf South Construction LLC

**** ADDENDUM NO. 1 ****

You should receive (148) pages including this cover sheet. Please notify us if the message is incomplete or unclear. Thank you.

Kermas Baton By: Cecilia G. Jones DCC

City of Hattiesburg, Mississippi

BIDDER'S PROPOSAL

**HARDY STREET AND CONCAR STREET DRAINAGE AND SIDEWALK IMPROVEMENTS
CITY OF HATTIESBURG, MISSISSIPPI**

DATE: July 23, 2020

PROPOSAL OF Gulf South Construction LLC
(Name of Bidder)

P.O. Box 16105, Hattiesburg, MS. 39404
(Address of Bidder)

for construction of the Hardy Street and Concar Street Drainage and Sidewalk Improvements.

The documents on which this Proposal is based include the Instructions to Bidders, Bid Forms, General Conditions, Supplementary Conditions, Supplemental General Conditions, Technical Specifications, Contract Drawings, and all supplements, amendments and addenda for this Project and are made a part hereof by reference.

**TO: CITY OF HATTIESBURG
200 FORREST STREET
HATTIESBURG, MISSISSIPPI 39401**

Gentlemen:

The following Proposal is submitted on behalf of the undersigned Bidder(s) and no others. Evidence of my (our) authority to submit the Proposal is hereby furnished. The Proposal is submitted without collusion on the part of any person, firm or corporation.

I (We), the undersigned Bidder(s), certify that I (we) have carefully examined the Instructions to Bidders, Bid Forms, General Conditions, Supplemental Conditions, Technical Specifications, Contract Drawings and any and all Addenda thereof.

I (We) further certify that I, (we) have visited and carefully examined the site of the proposed Work and have inspected the location and condition of all public utilities and existing structures or other facilities on the site or adjacent thereto which may be affected by the proposed construction and fully understand all conditions relative to construction difficulties, hazards, labor, transportation and all other factors affecting the prosecution of the work covered by this Proposal.

I (We) understand that the quantities mentioned below are approximate only and are subject to either increase or decrease, and hereby propose to perform any increased or decreased quantities of work at the unit prices bid. No increase in quantities of work shall be performed until a written change order is duly executed in advance and approved in the public minutes of the Owner.

In accordance with the requirements of the Instructions to Bidders, Bid Forms, Federal Supplement to Bidder's Proposal, Technical Specifications, General Conditions, Supplementary Conditions, Contract

Drawings, and any Addenda, I (we) propose to furnish all necessary materials, equipment, labor, tools and other means of construction and will do all Work called for by the Contract Documents within the specified Contract Time. The following is my (our) itemized proposal for the project:

Prices Bid and Approximate Quantities - Base Bid

Pay Item	Pay Item Description	Unit	Estimated Quantity	Unit Price	Item Total
202-B	Removal of Pavement, All Types and Depths	SY	1015	\$ 4.00	\$ 4060.00
202-B	Removal of Concrete Sidewalk	SY	261	\$ 5.00	\$ 1305.00
202-B	Removal of Curb &/or Curb and Gutter, All Types	LF	285	\$ 7.50	\$ 2137.50
202-B	Removal of Inlets, All Sizes	EA	4	\$ 550.00	\$ 2200.00
202-B	Removal of Pipe, 8" And Above	LF	24	\$ 10.00	\$ 240.00
202-B	Removal of Traffic Stripe, All Types	LF	160	\$ 7.20	\$ 1152.00
211-B	Topsoil for Slope Treatment, Contractor Furnished	CY	9	\$ 20.00	\$ 180.00
211-C	Topsoil for Plant Holes, Contractor Furnished	CY	32	\$ 68.50	\$ 2192.00
216-B	Solid Sodding, Centipede	SY	165	\$ 6.55	\$ 1080.75
219-A	Watering	KGAL	30	\$20.00	\$600.00
230-A	Shrub Planting, Daylily	EA	250	\$ 9.00	\$ 2250.00
230-A	Shrub Planting, Parsons Juniper	EA	170	\$ 9.00	\$ 1530.00
230-A	Shrub Planting, Drift Rose, "Peach"	EA	90	\$ 30.00	\$ 2700.00
230-B	Tree Planting, Live Oak	EA	6	\$ 131.75	\$ 790.50
230-B	Tree Planting, "Slender Silhouette" Sweetgum	EA	8	\$ 131.75	\$ 1054.00

230-B	Tree Planting, Crape Myrtle, "Tonto"	EA	12	\$ 131.75	\$ 1581.00
230-D	Bed Preparation	SF	2850	\$.80	\$ 2280.00
232-A	Fertilizer for Woody Plant Material, Tablet, 21 G	K	1	\$ 250.00	\$ 250.00
233-A	Tree Bark Mulch, Type III	CY	22	\$ 30.00	\$ 660.00
233-A	Tree Bark Mulch, Type V	CY	50	\$ 60.00	\$ 3000.00
907-258-PP	Herbicide Treatment, Per Plans	SF	2850	\$.15	\$ 427.50
234-A	Temporary Silt Fence	LF	570	\$ 3.50	\$ 1995.00
237-A	Wattles, 12"	LF	130	\$ 8.00	\$ 1040.00
907-242-PP	Construction of Raised Crosswalk, Per Plans	LS	1	\$ 15550.00	\$ 15550.00
246-A	Sandbags	EA	25	\$ 15.00	\$ 375.00
304-G	Size 610 Crushed Stone Base, AEA	CY	35	\$ 110.00	\$ 3850.00
403-A	12.5-mm, MT, Asphalt Pavement	TON	8	\$ 360.00	\$ 2880.00
403-A	9.5-mm, MT, Asphalt Pavement	TON	5	\$ 360.00	\$ 1800.00
601-B	Class "B" Structural Concrete, Minor Structures	CY	38	\$ 1340.00	\$ 50920.00
602-A	Reinforcing Steel	LBS	2800	\$ 3.60	\$ 10080.00
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603-CA	24" Reinforced Concrete Pipe, Class III, Rubber Type Gaskets	LF	180	\$ 55.00	\$ 9900.00
603-CE	22"X13" Concrete Arch Pipe, Class III A, Flexible Type Gaskets	LF	22	\$ 52.00	\$ 1144.00
604-A	Castings	LBS	1286	\$ 3.50	\$ 4501.00

604-B	Gratings	LBS	482	\$ 4.00	\$ 1928.00
907-607-PP	Steel Fence and Post, Per Plans	LF	240	\$ 63.00	\$ 15120.00
608-A	Concrete Sidewalk, Without Reinforcement	SY	1004	\$ 72.00	\$ 72288.00
608-B	Concrete Sidewalk, With Reinforcement	SY	20	\$ 80.00	\$ 1600.00
907-608-E	Asphalt Pavement Texturing	SF	600	\$ 7.50	\$ 4500.00
609-B	Concrete Curb, Header	LF	175	\$ 30.00	\$ 5250.00
609-D	Combination Concrete Curb and Gutter Type 1 Modified	LF	434	\$ 27.50	\$ 11935.00
614-B	Concrete Driveway, With Reinforcement, 6 Inch Thickness	SY	17	\$ 95.00	\$ 1615.00
618-A	Maintenance of Traffic	LS	1	XXXX	\$ 24000.00
618-B	Additional Construction Signs	SF	1	\$10.00	\$10.00
620-A	Mobilization	LS	1	XXXX	\$ 34000.00
626-G	Thermoplastic Detail Stripe, White	LF	45	\$ 6.00	\$ 270.00
626-H	Thermoplastic Legend Stripe, White, 6" Equivalent	LF	620	\$ 7.20	\$ 4464.00
626-H	Thermoplastic Legend Stripe, White	SF	11	\$ 91.00	\$ 1001.00
628-E	6" Cold Plastic Detail Stripe, White	LF	105	\$ 12.00	\$ 1260.00
628-E	6" Cold Plastic Detail Stripe, Yellow	LF	35	\$ 12.00	\$ 420.00
630-A	Standard Roadside Signs, Sheet Aluminum, 0.080" Thickness	SF	18	\$ 50.00	\$ 900.00
630-C	Steel U-Section Posts, 3.0 to 3.5 lb/ft	LF	28	\$ 11.10	\$ 310.80

647-PP	Electric Pullbox, Per Plans	EA	2	\$ 675.00	\$ 1350.00
668-B	Traffic Signal Conduit, Underground Drilled or Jacked, Rolled Pipe, 2"	LF	270	\$ 19.50	\$ 5265.00
682-A	Underground Branch Circuit, 1" Conduit	LF	475	\$ 7.90	\$ 3752.50
682-B	Underground Branch Circuit, Jack Or Bored, 1" Conduit	LF	40	\$ 19.50	\$ 780.00
682-D	Pull Box, Flush Mounted	EA	11	\$ 165.00	\$ 1815.00
699-A	Roadway Construction Stakes	LS	1	XXXX	\$ 12000.00
Total Base Bid =					\$ 348649.55

Prices Bid and Approximate Quantities - Additive Alternate No. 1

Pay Item	Pay Item Description	Unit	Estimated Quantity	Unit Price	Item Total
682-A	Underground Branch Circuit Awg 10, 3 Conductor	LF	515	\$ 3.75	\$ 1931.25
907-683-PP	Lighting Assembly, Low Mast, Type 16-1-0-52, Per Plans	EA	11	\$ 2595.00	\$ 28545.00
682-F	Secondary Power Controller	EA	1	\$ 7400.00	\$ 7400.00
Total Additive Alternate No. 1 Bid =					\$ 37876.25

THE BIDDER'S TOTAL ABOVE IS HIS TOTAL BID BASED ON HIS UNIT PRICES AND LUMP SUM PRICES AND THE ESTIMATED QUANTITIES. THIS FIGURE IS FOR INFORMATION ONLY AT THE TIME OF OPENING BIDS. THE OWNER WILL MAKE THE BID TABULATION FROM THE UNIT PRICES AND LUMP SUM PRICES BID. IF THERE IS AN ERROR IN THE TOTAL BY THE BIDDER, IT SHALL BE CHANGED AS ONLY THE UNIT PRICES AND LUMP SUM PRICES SHALL GOVERN.

NOTE: FAILURE OF BIDDER TO INCLUDE PRICES FOR THE ALTERNATE BID ITEMS MAY RENDER HIS PROPOSAL NON-RESPONSIVE.

NOTE: Bids shall include sales tax and all other applicable taxes and fees.

I (We) further propose to execute the Contract Agreement as bound herein within ten working days after receipt of Contract Forms from the Owner and to complete the work within the contract time. I (We) agree to pay as liquidated damages the actual costs, expenses and other losses reasonably incurred by Owner for each consecutive calendar day beyond the specified Contract Time.

I (We) also propose to execute a Performance Bond and a Payment Bond, as shown in the Specifications, each in an amount of not less than one hundred percent (100%) of the total of my (our) Bid. These Bonds shall not only serve to guarantee the completion of the Work on my (our) part, but also to guarantee the excellence of both workmanship and materials until the Work is finally accepted.

I (We) enclose a Bid Bond or Certified Check for 5 percent of Three Hundred Forty Eight Thousand Six Hundred Forty Nine DOLLARS (\$ 348649.55)
(Base Bid Amount) and five cents

and hereby agree that in case of my (our) failure to execute the Contract and furnish the Bonds within ten calendar days after delivery of the Notice of Award, the amount of this check (Bid Bond) will be forfeited to the Owner as liquidated damages arising out of my (our) failure to execute the Contract as proposed.

It is understood that in case I (we) am (are) not awarded the Work, the Certified Check or Bid Bond submitted as Bid security will be returned as stipulated in the Contract Documents.

Bidder acknowledges receipt of the following Addenda:

No. <u>1</u>	Dated <u>7/17/20</u>	No. _____	Dated _____
No. _____	Dated _____	No. _____	Dated _____
No. _____	Dated _____	No. _____	Dated _____
No. _____	Dated _____	No. _____	Dated _____

Respectfully Submitted,

Gulf South Construction LLC

Contractor(s)

By: [Signature]

Title Estimator / Project Manager

P.O. Box 16105

Hattiesburg, MS. 39404

Address

BIDDER'S CORPORATE DECLARATION

(TO BE FILLED IN IF BIDDER IS A CORPORATION)

Date: July 23, 2020

Our corporation is chartered under the Laws of the state of Mississippi and the names, titles and business addresses of the executives are as follows:

Russell Miller
President

Jody Link
Secretary

P.O. Box 16105

P.O. Box 16105

Hattiesburg, MS. 39404

Hattiesburg, MS. 39404

Treasurer

Jody Link

P.O. Box 16105

Hattiesburg, MS. 39404

DECLARATION OF PARTNERSHIP

(To be filled in if a Bidder is a Partnership)

Our Partnership is composed of the following individuals:

Address

Address

NON-COLLUSION AFFIDAVIT

HARDY STREET AND CONCERT STREET DRAINAGE AND SIDEWALK IMPROVEMENTS
CITY OF HATTIESBURG, MISSISSIPPI

(THIS AFFIDAVIT MUST BE EXECUTED FOR THE BID TO BE CONSIDERED) /

STATE OF Mississippi)

COUNTY OF Lamar) ss.

Blake Williamson being first duly sworn,
(Person)
deposes and says that he is _____

Manager
(Sole owner, a partner, president, secretary, etc.)

of Gulf South Construction LLC the party making the foregoing Proposal or Bid;
(Name of Firm)

that such Bid is genuine and not collusive; that said Bidder is not financially interested in, or otherwise affiliated in a business way with any other bidder on the same contract; that said Bidder has not colluded, conspired, connived, or agreed, directly or indirectly, with any bidder or person, to put in a sham bid, or that such other person shall refrain from bidding, and has not in any manner, directly or indirectly sought by agreement or collusion, or communication or conference, with any person, to fix the bid price of affiant or any other bidder, or to fix any overhead, profit or cost element of said bid price, or of that of any other bidder, or to secure any advantage against the Owner or any person or persons interested in the proposed contract; and that all statements contained in said Proposal or Bid are true; and further, that such Bidder has not, directly or indirectly submitted his Bid, or the contents thereof, or divulged information or data relative thereto to any association or to any member or agent thereof.

Blake Williamson
Affiant

Sworn to and subscribed before me this 23rd day of July, 2020

Kimberly C. Simmons
Notary Public in and for

Lamar County,



My Commission Expires October 29, 2021

AIA Document A310™ – 2010

Bid Bond

CONTRACTOR:

(Name, legal status and address)

Gulf South Construction, LLC

P.O. Box 16105

Hattiesburg, MS 39404

SURETY:

(Name, legal status and principal place of business)

Westfield Insurance Company

P.O. Box 5001

Westfield Center, OH 44251-5001

OWNER:

(Name, legal status and address)

City of Hattiesburg

200 Forrest St.

Hattiesburg, MS 39401

This document has important legal consequences.

Consultation with an attorney is encouraged with respect to its completion or modification.

Any singular reference to Contractor, Surety, Owner or other party shall be considered plural where applicable.

BOND AMOUNT: Five Percent (5%) of the Amount Bid-----

PROJECT:

(Name, location or address, and Project number, if any)

Hardy Street and Concart Street Drainage and Sidewalk Improvements

Hattiesburg, MS

The Contractor and Surety are bound to the Owner in the amount set forth above, for the payment of which the Contractor and Surety bind themselves, their heirs, executors, administrators, successors and assigns, jointly and severally, as provided herein. The conditions of this Bond are such that if the Owner accepts the bid of the Contractor within the time specified in the bid documents, or within such time period as may be agreed to by the Owner and Contractor, and the Contractor either (1) enters into a contract with the Owner in accordance with the terms of such bid, and gives such bond or bonds as may be specified in the bidding or Contract Documents, with a surety admitted in the jurisdiction of the Project and otherwise acceptable to the Owner, for the faithful performance of such Contract and for the prompt payment of labor and material furnished in the prosecution thereof; or (2) pays to the Owner the difference, not to exceed the amount of this Bond, between the amount specified in said bid and such larger amount for which the Owner may in good faith contract with another party to perform the work covered by said bid, then this obligation shall be null and void, otherwise to remain in full force and effect. The Surety hereby waives any notice of an agreement between the Owner and Contractor to extend the time in which the Owner may accept the bid. Waiver of notice by the Surety shall not apply to any extension exceeding sixty (60) days in the aggregate beyond the time for acceptance of bids specified in the bid documents, and the Owner and Contractor shall obtain the Surety's consent for an extension beyond sixty (60) days.

If this Bond is issued in connection with a subcontractor's bid to a Contractor, the term Contractor in this Bond shall be deemed to be Subcontractor and the term Owner shall be deemed to be Contractor.

When this Bond has been furnished to comply with a statutory or other legal requirement in the location of the Project, any provision in this Bond conflicting with said statutory or legal requirement shall be deemed deleted herefrom and provisions conforming to such statutory or other legal requirement shall be deemed incorporated herein. When so furnished, the intent is that this Bond shall be construed as a statutory bond and not as a common law bond.

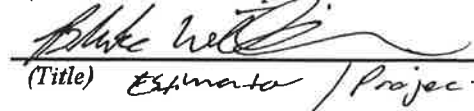
Signed and sealed this **23rd** day of **July** , 2020

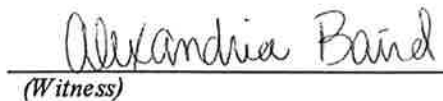

(Witness)

Gulf South Construction, LLC

(Contractor as Principal)

(Seal)

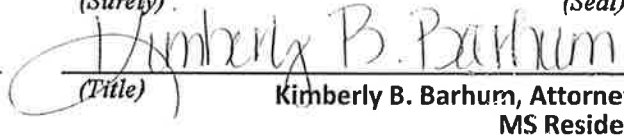

(Title) *Estimator / Project Manager*


(Witness)

Westfield Insurance Company

(Surety)

(Seal)


(Title) **Kimberly B. Barhum, Attorney-In-Fact**
MS Resident Agent

General
Power
of Attorney

Westfield Insurance Co.
Westfield National Insurance Co.
Ohio Farmers Insurance Co.
Westfield Center, Ohio

CERTIFIED COPY

Know All Men by These Presents, That WESTFIELD INSURANCE COMPANY, WESTFIELD NATIONAL INSURANCE COMPANY and OHIO FARMERS INSURANCE COMPANY, corporations, hereinafter referred to individually as a "Company" and collectively as "Companies," duly organized and existing under the laws of the State of Ohio, and having its principal office in Westfield Center, Medina County, Ohio, do by these presents make, constitute and appoint

DAVID R. FORTENBERRY, RICHARD T. JONES, MARY J. NORVAL, KIMBERLY B. BARHUM, JOINTLY OR SEVERALLY

of HATTIESBURG and State of MS its true and lawful Attorney(s)-in-Fact, with full power and authority hereby conferred in its name, place and stead, to execute, acknowledge and deliver any and all bonds, recognizances, undertakings, or other instruments or contracts of suretyship.

LIMITATION: THIS POWER OF ATTORNEY CANNOT BE USED TO EXECUTE NOTE GUARANTEE, MORTGAGE DEFICIENCY, MORTGAGE GUARANTEE, OR BANK DEPOSITORY BONDS.

and to bind any of the Companies thereby as fully and to the same extent as if such bonds were signed by the President, sealed with the corporate seal of the applicable Company and duly attested by its Secretary, hereby ratifying and confirming all that the said Attorney(s)-in-Fact may do in the premises. Said appointment is made under and by authority of the following resolution adopted by the Board of Directors of each of the WESTFIELD INSURANCE COMPANY, WESTFIELD NATIONAL INSURANCE COMPANY and OHIO FARMERS INSURANCE COMPANY:

"Be It Resolved, that the President, any Senior Executive, any Secretary or any Fidelity & Surety Operations Executive or other Executive shall be and is hereby vested with full power and authority to appoint any one or more suitable persons as Attorney(s)-in-Fact to represent and act for and on behalf of the Company subject to the following provisions:

The Attorney-in-Fact may be given full power and authority for and in the name of and on behalf of the Company, to execute, acknowledge and deliver, any and all bonds, recognizances, contracts, agreements of indemnity and other conditional or obligatory undertakings and any and all notices and documents canceling or terminating the Company's liability thereunder, and any such instruments so executed by any such Attorney-in-Fact shall be as binding upon the Company as if signed by the President and sealed and attested by the Corporate Secretary."

"Be It Further Resolved, that the signature of any such designated person and the seal of the Company heretofore or hereafter affixed to any power of attorney or any certificate relating thereto by facsimile, and any power of attorney or certificate bearing facsimile signatures or facsimile seal shall be valid and binding upon the Company with respect to any bond or undertaking to which it is attached." (Each adopted at a meeting held on February 8, 2000).

In Witness Whereof, WESTFIELD INSURANCE COMPANY, WESTFIELD NATIONAL INSURANCE COMPANY and OHIO FARMERS INSURANCE COMPANY have caused these presents to be signed by their National Surety Leader and Senior Executive and their corporate seals to be hereto affixed this 29th day of MARCH A.D., 2016.

Corporate
Seals
Affixed



WESTFIELD INSURANCE COMPANY
WESTFIELD NATIONAL INSURANCE COMPANY
OHIO FARMERS INSURANCE COMPANY

Dennis P. Baus

By: *Dennis P. Baus*
Dennis P. Baus, National Surety Leader and Senior Executive

State of Ohio
County of Medina ss.:

On this 29th day of MARCH A.D., 2016, before me personally came Dennis P. Baus to me known, who, being by me duly sworn, did depose and say, that he resides in Wooster, Ohio; that he is National Surety Leader and Senior Executive of WESTFIELD INSURANCE COMPANY, WESTFIELD NATIONAL INSURANCE COMPANY and OHIO FARMERS INSURANCE COMPANY, the companies described in and which executed the above instrument; that he knows the seals of said Companies; that the seals affixed to said instrument are such corporate seals; that they were so affixed by order of the Boards of Directors of said Companies; and that he signed his name thereto by like order.

Notarial
Seal
Affixed



David A. Kotnik

David A. Kotnik, Attorney at Law, Notary Public
My Commission Does Not Expire (Sec. 147.03 Ohio Revised Code)

State of Ohio
County of Medina ss.:

I, Frank A. Carrino, Secretary of WESTFIELD INSURANCE COMPANY, WESTFIELD NATIONAL INSURANCE COMPANY and OHIO FARMERS INSURANCE COMPANY, do hereby certify that the above and foregoing is a true and correct copy of a Power of Attorney, executed by said Companies, which is still in full force and effect; and furthermore, the resolutions of the Boards of Directors, set out in the Power of Attorney are in full force and effect.

In Witness Whereof, I have hereunto set my hand and affixed the seals of said Companies at Westfield Center, Ohio, this 23rd day of July A.D., 2020



Frank A. Carrino
Frank A. Carrino, Secretary

PROPOSED SUBCONTRACTORS

HARDY STREET AND CONCERT STREET DRAINAGE AND SIDEWALK IMPROVEMENTS
CITY OF HATTIESBURG, MISSISSIPPI

The names and addresses of all persons and parties who will be utilized for subcontract Work in the foregoing Bidder's Proposal are listed below. (The Contractor must list all Subcontractors to be utilized on the Work. Failure to list Subcontractors may cause the Bidder's Proposal to be rejected by the Owner as non-responsive.) If the Bidder does not propose Subcontractors, so state.

NAME

ADDRESS

Laney Electric Inc

13015 Shivers Blvd.

Biloxi, MS. 39532

Traffic Control Products

P.O. Box 820

Brandon, MS. 39043

Southern Fencing

211 Enochs Dr.

Tylertown, MS. 39667

L.E.I Concrete Services

356 Elks Lake Rd.

Hattiesburg, MS. 39401

Graves Landscaping

617 Albert Graves Rd.

Sumrall, MS. 39482



Memorandum

To: Mayor Toby Barker and Members of City Council

From: Andrew Ellard, Director

cc:

Date: Tuesday, August 18, 2020

Re: Authorize and approve publication setting a Public Comment Period for the City's 2019 Hazard Mitigation Grant Program application.
File Number: 2020-551
Minute Book #

Summary

2019 Hazard Mitigation Grant Program Application Public Comment Period

Recommendation Statement

I recommend authorization and approval of publication setting a Public Comment Period for the City's 2019 Hazard Mitigation Grant Program application.

Please place this on the August 18, 2020 City Council meeting for consideration.

**NOTICE OF PUBLIC COMMENT PERIOD
FOR THE 2019 HAZARD MITIGATION GRANT
FROM THE FEDERAL EMERGENCY MANAGEMENT AGENCY**

On April 23, 2019, a major disaster declaration was issued by President Trump following severe storms, tornadoes, straight-line winds, and flooding that occurred between February 22, 2019 and August 23, 2019. Hazard Mitigation Grant Program (HMGP) funds were made available to provide resources to assist states, tribal governments, territories and local communities in their efforts to reduce or eliminate the risk of repetitive flood damage to buildings and structures insurable under the National Flood Insurance Program (NFIP) as authorized by the National Flood Insurance Act of 1968, as amended. This funding is implemented under the authority of the Robert T. Stafford Disaster Relief and Emergency Assistance Act, 42 U.S.C. §§ 5121-5207.

The City of Hattiesburg proposes to purchase and demolish (3) flood prone single-family residential dwellings in the City of Hattiesburg, Forrest County, Mississippi. Upon successful offer, acceptance and sale, the City of Hattiesburg will inspect, abate any hazardous conditions, and then demolish the structure within 90 days of purchase. The site will then be restored and deed restricted as open space consistent with 44 CFR Part 80 in perpetuity, in order to restore and/or conserve the natural floodplain functions. The City of Hattiesburg will take ownership and be responsible for post-project site maintenance and inspections. This project conforms to applicable state and local floodplain protection standards.

Project Alternatives:

Alternative #1 (no action alternative): Considering the history of these properties, the structures will continue to flood during each heavy rainfall event as long as the structures remain on the properties if no mitigation efforts are done.

Alternative #2: Structural elevation was considered. This alternative would be cost-prohibitive and an elevated structure would still have residual risk exposure.

Acquiring and demolishing the structure is the only permanent solution to mitigate the risk of flooding. The properties selected for this mitigation effort are detailed below:

3422 West Adeline Street, Hattiesburg, MS 39402. Latitude: 31.317183, Longitude: - 89.3433465

718A Grace Avenue, Hattiesburg, MS 39401. Latitude: 31.3364693, Longitude: - 89.3264732

2807 Hillside Drive, Hattiesburg, MS 39401. Latitude: 31.3389652, Longitude: - 89.3320993

Further information, including a map showing locations of the properties, can be obtained by contacting Jennifer Shows at (601) 545-4544 or jshows@hattiesburgms.com.

**NOTICE OF PUBLIC COMMENT PERIOD
FOR THE 2019 HAZARD MITIGATION GRANT
FROM THE FEDERAL EMERGENCY MANAGEMENT AGENCY**

PUBLIC COMMENTS

Any individual, group, or agency wishing to comment on the proposed project may submit written comments to FEMA Regional Environmental Officer, 3003 Chamblee Tucker Road, Atlanta, GA 30341. All comments received by September 14, 2020 will be considered by the FEMA REO.

CITY OF HATTIESBURG, MISSISSIPPI

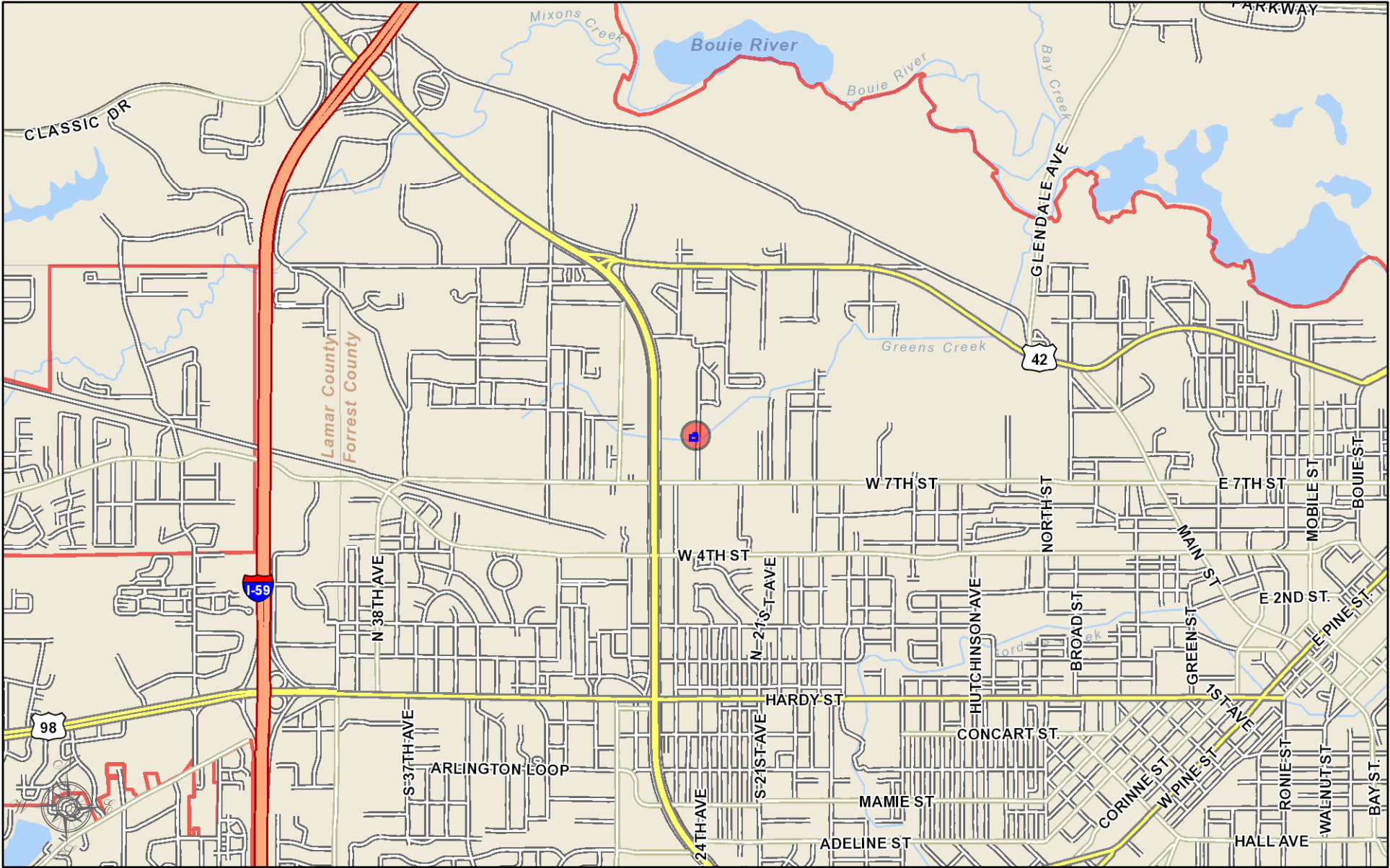
BY: _____
CITY CLERK

(SEAL)

Toby Barker, Mayor

PUBLISH Once in the Non-Legal Section of the Hattiesburg Post: Thursday, August 20, 2020.

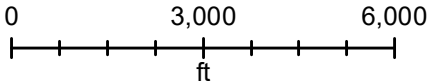
718A Grace Ave.



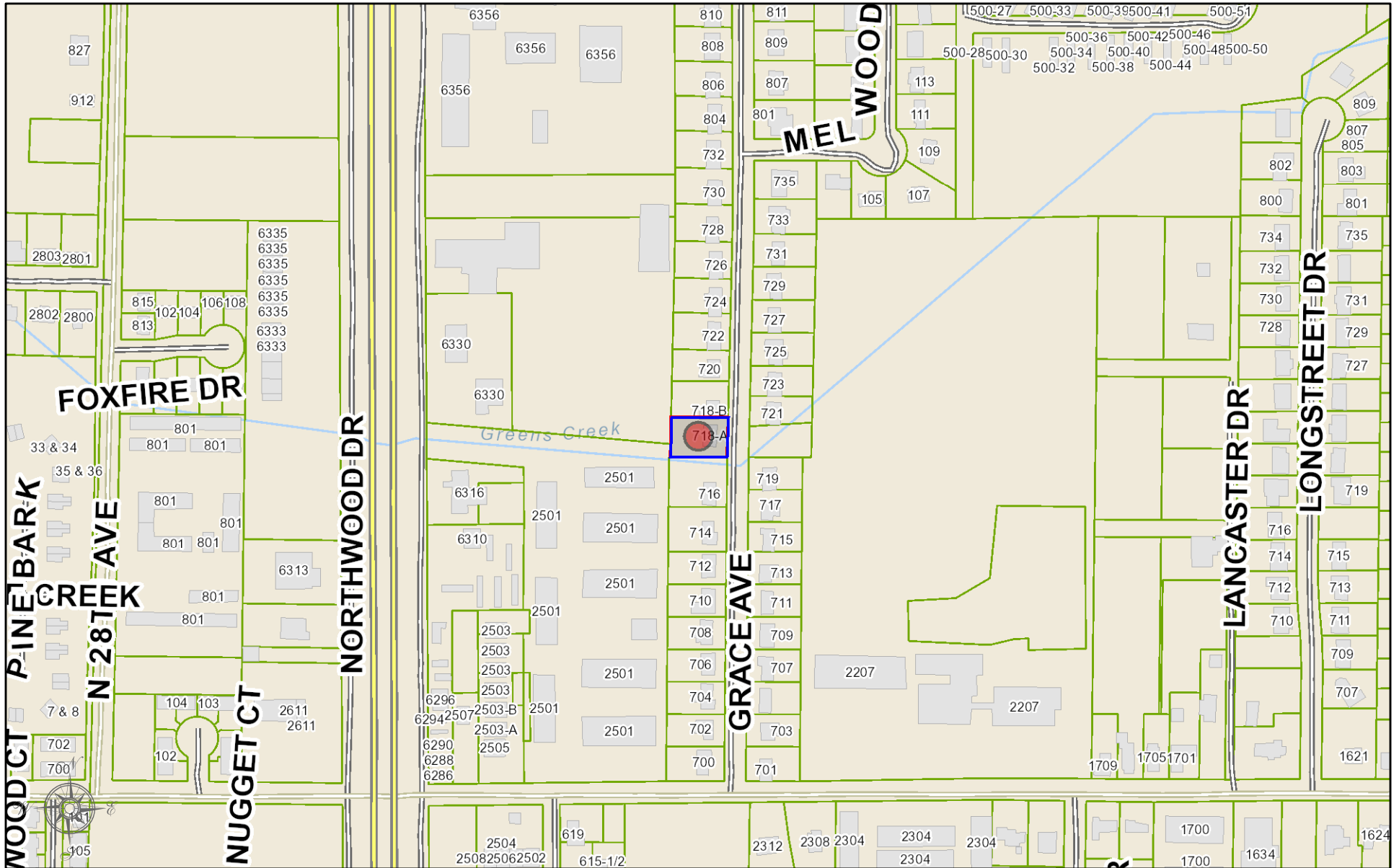
City of Hattiesburg, MS

DISCLAIMER: This map is ONLY FOR REFERENCE. There is NO WARRANTY of the accuracy of data. This information CANNOT be used as a substitute for legal, business, tax or other professional advice.

MAP DATE: June 1, 2020



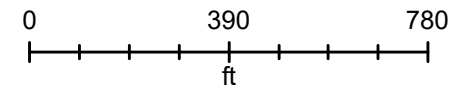
718A Grace Ave.



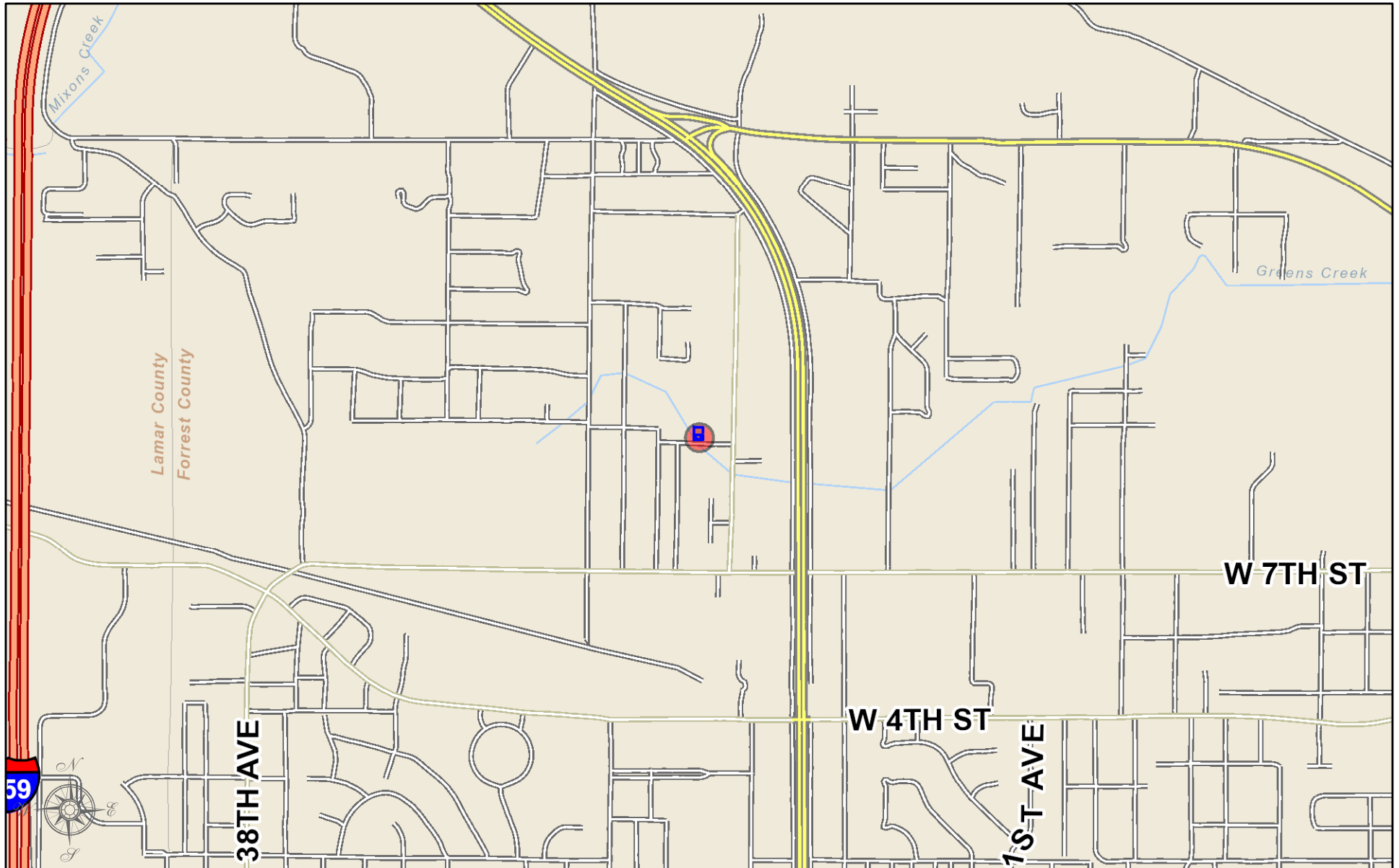
City of Hattiesburg, MS

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MAP DATE: September 4, 2019



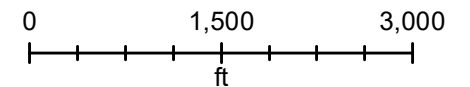
2807 Hillside Dr.



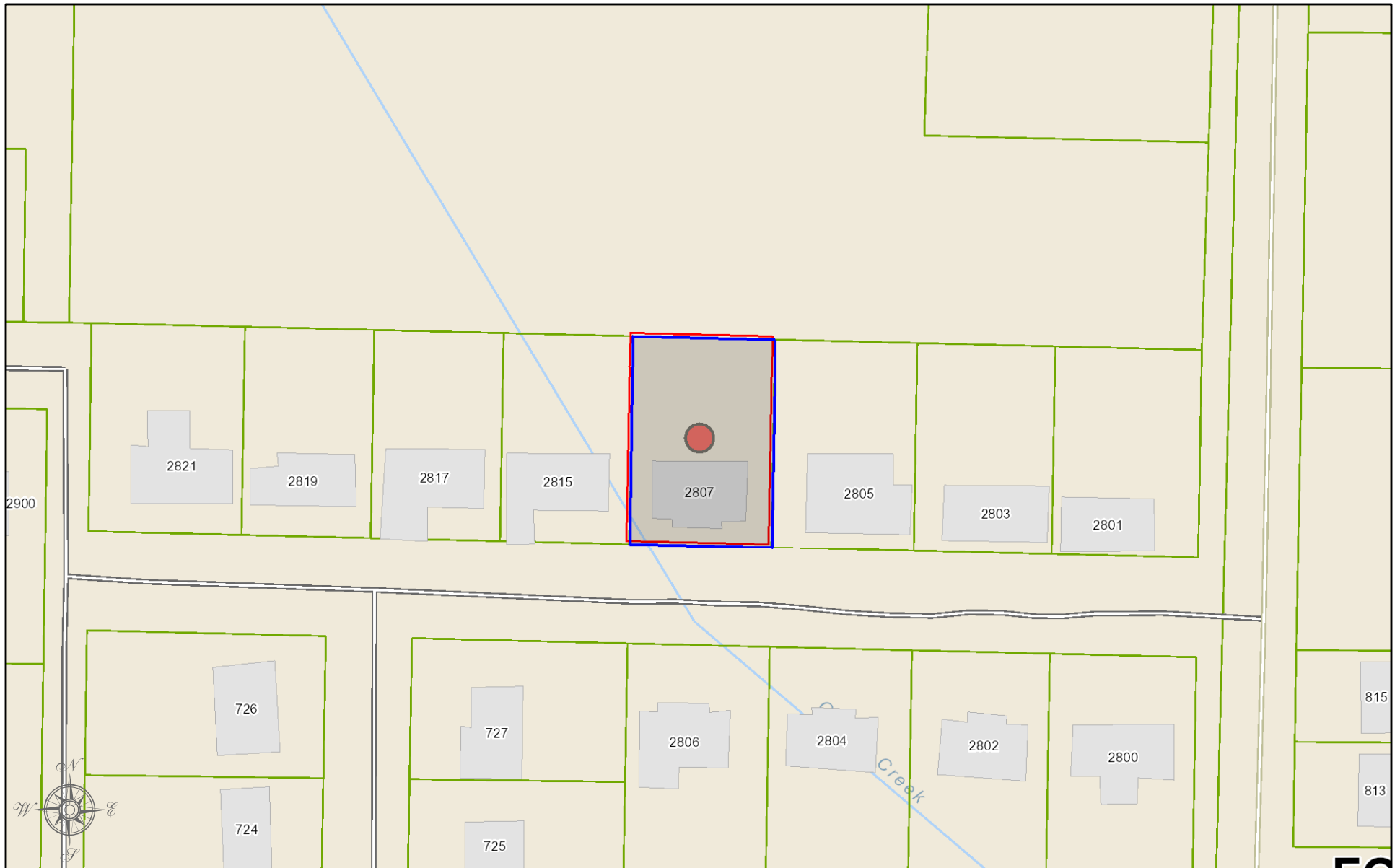
City of Hattiesburg, MS

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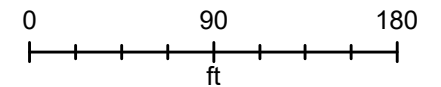
2807 Hillside Dr.



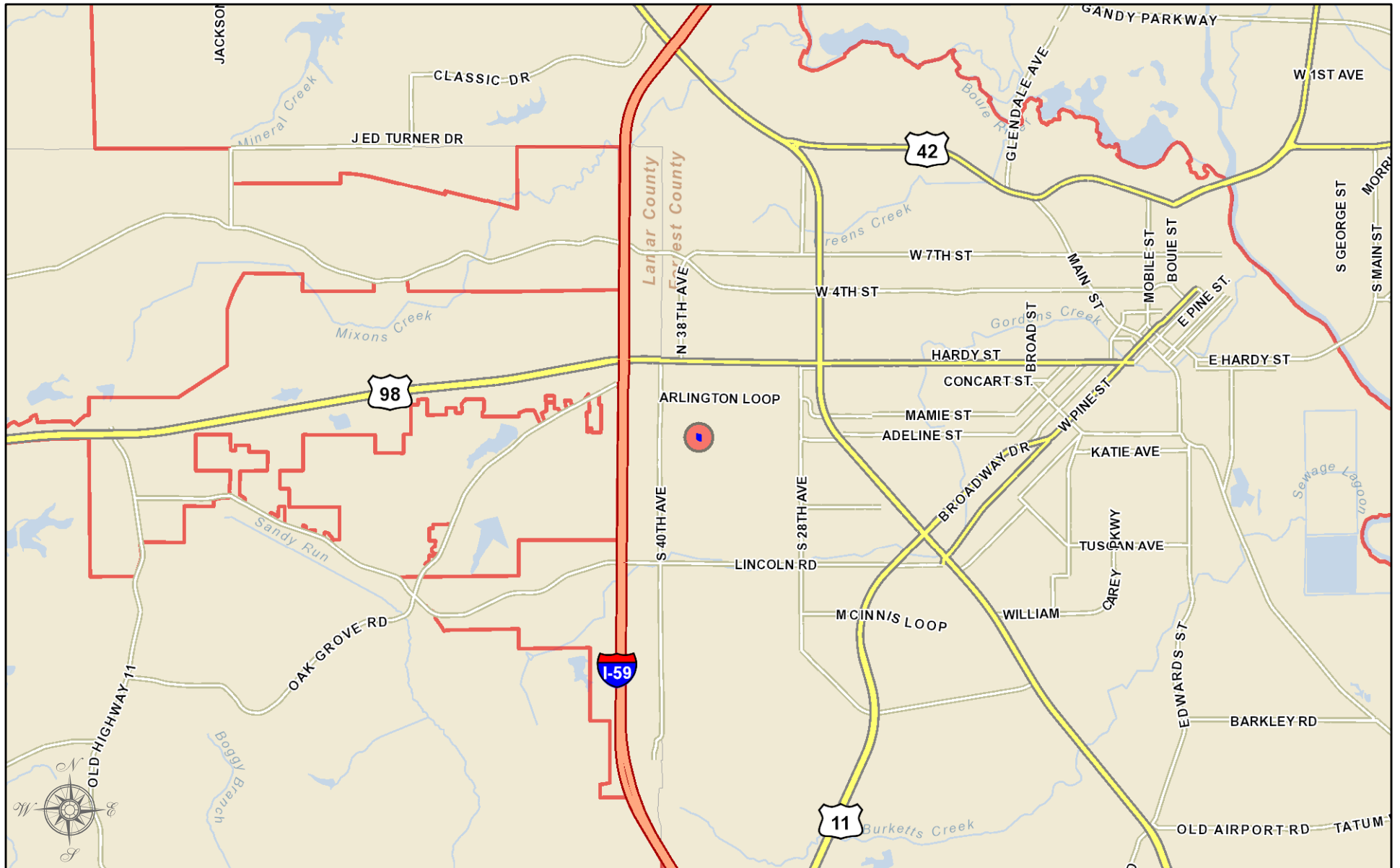
City of Hattiesburg, MS

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MAP DATE: September 4, 2019



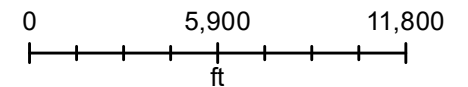
3422 W Adeline St.



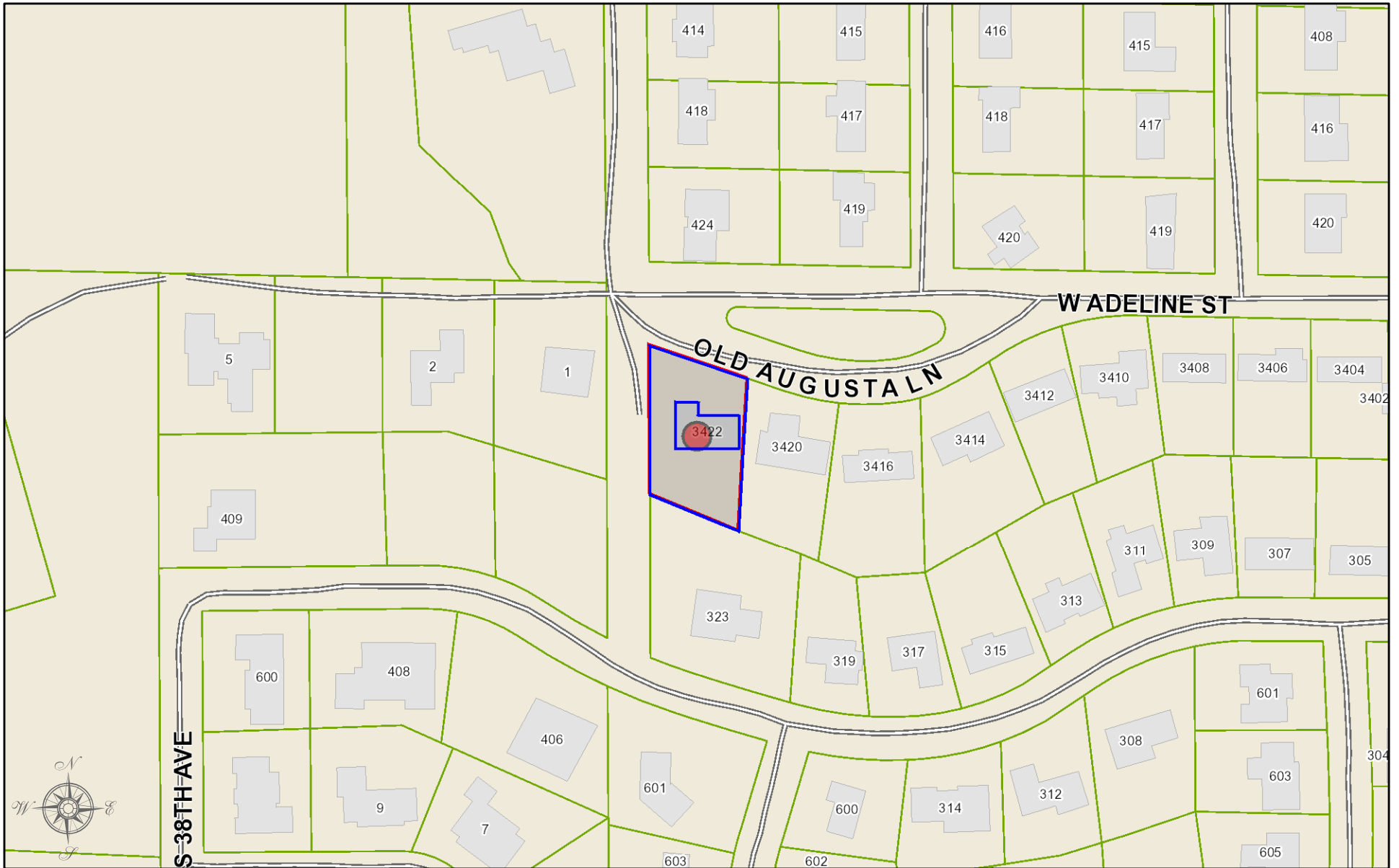
City of Hattiesburg, MS

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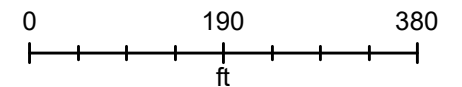
3422 W Adeline St.



City of Hattiesburg, MS

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MAP DATE: September 4, 2019





Memorandum

To: Mayor Toby Barker and Members of City Council

From: Chris McGee, Director of Parks and Recreation

cc:

Date: Tuesday, August 18, 2020

Re: Approve the sale of grave spaces, per attached Memo's, Receipts, and Deeds.
File Number: 2020-544
Minute Book #

Summary

Approve the sale of grave spaces, per attached Memo's, Receipts, and Deeds.

Recommendation Statement

I am recommending approval of Requisition NO. 2020-544, Approve the sale of grave spaces.

Please place this on the August 18, 2020 City Council meeting for consideration.

To: CITY COUNCIL

From: Deborah Bourne, Assistant Division Manager of Cemeteries

Date: August 4, 2020

The following represents the grave spaces sold on August 4, 2020.

Rebecca, Charles, Jeffrey & Kevin Poston

(1) Space \$ 175.00 (Debit Card)

South Half (S ½) of the Southwest Quarter (SW ¼)

Lot 126, Section 39, Highland Cemetery

Sherry Felts

(1) Space \$ 175.00

North Half (N ½) of the Northwest Quarter (NW ¼)

Lot 1, Section 28, Highland Cemetery

Patricia Stokes Hayes

(1) Space \$ 150.00

North Half (N ½) of the Southeast Quarter (SE ¼)

Lot 86, Section 2, South Hill Cemetery

James Hill

(2) Spaces \$ 350.00

Southwest Quarter (SW ¼)

Lot 122, Section 38, Highland Cemetery

Maggie Gilbert

(1) Space \$ 175.00

South Half (S ½) of the Northeast Quarter (NE ¼)

Lot 43, Section 34, Highland Cemetery

Tia Marie Hinton

(1) Space \$ 175.00

North Half (N ½) of the Southwest Quarter (SW ¼)

Lot 72, Section 38, Highland Cemetery

John Hibbler

(1) Space \$ 175.00 (Debit Card)

North Half (N ½) of the Southeast Quarter (SE ¼)

Lot 2, Section 34, Highland Cemetery

John Hibbler

(1) Space \$ 175.00

North Half (N ½) of the Southwest Quarter (SW ¼)

Lot 2, Section 34, Highland Cemetery

John Hibbler

(2) Spaces \$ 350.00

Northwest Quarter (NW ¼)

Lot 2, Section 34, Highland Cemetery

John Hibbler

(2) Spaces \$ 350.00

Northeast Quarter (NE ¼)

Lot 2, Section 34, Highland Cemetery

John Hibbler

(4) Spaces \$ 700.00

West Half (W ½)

Lot 3, Section 34, Highland Cemetery

**CITY OF HATTIESBURG
PURCHASE OF CEMETERY GRAVE SPACES**

Hattiesburg, Miss., 07-27 2020

SOLD TO:

Mr. Mrs. Miss Rebecca, Charles, Jeffrey + Kevin Deason

ADDRESS 308 Beverly Lane, Hattiesburg, MS 39402

desires to purchase the grave space described below, subject to Cemetery regulations.

S $\frac{1}{2}$ SW $\frac{1}{4}$ Lot No. 126 Section No. 33 in Hillcrest Cemetery

Number of grave spaces 1 Price per grave space \$ 175.00

Price Received \$ 175.00

Credit Card

CITY OF HATTIESBURG, MISSISSIPPI

By [Signature]
Supt. of City Cemeteries

**CITY OF HATTIESBURG
PURCHASE OF CEMETERY GRAVE SPACES**

Hattiesburg, Miss., 07-27 2020

SOLD TO:

☒ Mr. Mrs. Miss John Hibbler

ADDRESS 2016 Steeplebrook Dr Cordova TN 38016-5075

desires to purchase the grave space described below, subject to Cemetery regulations.

N $\frac{1}{2}$ SE $\frac{1}{4}$ Lot No. 2 Section No. 34 in Hillcrest Cemetery

Number of grave spaces 1 Price per grave space \$ 175.00

Price Received \$ 175.00

CC

CITY OF HATTIESBURG, MISSISSIPPI

By [Signature]
Supt. of City Cemeteries

**CITY OF HATTIESBURG
PURCHASE OF CEMETERY GRAVE SPACES**

Hattiesburg, Miss., 07-27 2020

SOLD TO:

☒ Mr. Mrs. Miss John Hibbler

ADDRESS 2016 Steeplebrook Dr Cordova TN 38016-5075

desires to purchase the grave space described below, subject to Cemetery regulations.

N $\frac{1}{2}$ SW $\frac{1}{4}$ Lot No. 2 Section No. 34 in Hillcrest Cemetery

Number of grave spaces 1 Price per grave space \$ 175.00

Price Received \$ 175.00

CC

CITY OF HATTIESBURG, MISSISSIPPI

By [Signature]
Supt. of City Cemeteries

**CITY OF HATTIESBURG
PURCHASE OF CEMETERY GRAVE SPACES**

Hattiesburg, Miss., July 31 20 20

SOLD TO:

Mr. Mrs. Miss

Sherry Felts

ADDRESS

1207 W. Pine St. Hattiesburg, MS 39401

desires to purchase the grave space described below, subject to Cemetery regulations.

N $\frac{1}{2}$ NW $\frac{1}{4}$ Lot No. 1 Section No. 22 in Trinity Hill Cemetery

Number of grave spaces 1 Price per grave space \$ 175.00

Price Received \$ 175.00

ck # 5206

CITY OF HATTIESBURG, MISSISSIPPI

By

Supt. of City Cemeteries

**CITY OF HATTIESBURG
PURCHASE OF CEMETERY GRAVE SPACES**

Hattiesburg, Miss., July 31 20 20

SOLD TO:

Mr. ☒ Mrs. Miss

Patricia Stokes Hughes

ADDRESS

2403 Trinity Court Madison, MS 39111

desires to purchase the grave space described below, subject to Cemetery regulations.

N $\frac{1}{2}$ SE $\frac{1}{4}$ Lot No. 810 Section No. 2 in Trinity Hill Cemetery

Number of grave spaces 1 Price per grave space \$ 150.00

Price Received \$ 150.00

ck # 201

CITY OF HATTIESBURG, MISSISSIPPI

By

Supt. of City Cemeteries

**CITY OF HATTIESBURG
PURCHASE OF CEMETERY GRAVE SPACES**

Hattiesburg, Miss., July 31 20 20

SOLD TO:

Mr. Mrs. Miss

JAMES HILL

ADDRESS

1021 SES HOBSON RD, HATTIESBURG, MS 39401

desires to purchase the grave space described below, subject to Cemetery regulations.

SW $\frac{1}{2}$ $\frac{1}{4}$ Lot No. 122 Section No. 38 in Trinity Hill Cemetery

Number of grave spaces 2 Price per grave space \$ 175.00

Price Received \$ 350.00

CITY OF HATTIESBURG, MISSISSIPPI

By

Supt. of City Cemeteries

✓
CITY OF HATTIESBURG
PURCHASE OF CEMETERY GRAVE SPACES

Hattiesburg, Miss., 3-3- 2020

SOLD TO:

Mr. Mrs. Miss Maggie Gilbert
ADDRESS 2 Pickens ~~ave~~ Cave

desires to purchase the grave space described below, subject to Cemetery regulations.

S 1/2 NE 1/4 Lot No. 43 Section No. 14 in holland Cemetery

Number of grave spaces 1 Price per grave space \$ 175.00

Price Received \$ 175.00

CITY OF HATTIESBURG, MISSISSIPPI

By [Signature]
Supt. of City Cemeteries

cash

✓
CITY OF HATTIESBURG
PURCHASE OF CEMETERY GRAVE SPACES

Hattiesburg, Miss., 5-3- 2020

SOLD TO:

Mr. (Mrs) Miss Tia Marie Hinton
ADDRESS P.O. Box 245 Hattiesburg MS 39403-0245

desires to purchase the grave space described below, subject to Cemetery regulations.

N 1/2 SW 1/4 Lot No. 72 Section No. 38 in Holland Cemetery

Number of grave spaces 1 Price per grave space \$ 175.00

Price Received \$ 175.00

CITY OF HATTIESBURG, MISSISSIPPI

By [Signature]
Supt. of City Cemeteries

CX# 9426 A3A

✓
CITY OF HATTIESBURG
PURCHASE OF CEMETERY GRAVE SPACES

Hattiesburg, Miss., 5-3- 2020

SOLD TO:

Mr. Mrs. Miss John Hibbler
ADDRESS 2016 Stumpbrook Dr

desires to purchase the grave space described below, subject to Cemetery regulations.

1/2 NW 1/4 Lot No. 2 Section No. 4 in holland Cemetery

Number of grave spaces 2 Price per grave space \$ 350.00

Price Received \$ 350.00

CITY OF HATTIESBURG, MISSISSIPPI

By [Signature]
Supt. of City Cemeteries

**CITY OF HATTIESBURG
PURCHASE OF CEMETERY GRAVE SPACES**

Hattiesburg, Miss., _____ 20__

SOLD TO:

Mr. Mrs. Miss John Hibbler

ADDRESS 2016 Steeplebrook Dr. Ocean Springs, AL 36567

desires to purchase the grave space described below, subject to Cemetery regulations.

1/2 NE 1/4 Lot No. 2 Section No. _____ in _____ Cemetery

Number of grave spaces 2 Price per grave space \$ _____

Price Received \$ 350.⁰⁰

CITY OF HATTIESBURG, MISSISSIPPI

By _____
Supt. of City Cemeteries

**CITY OF HATTIESBURG
PURCHASE OF CEMETERY GRAVE SPACES**

Hattiesburg, Miss., _____ 20__

SOLD TO:

Mr. Mrs. Miss John Hibbler

ADDRESS 2016 Steeplebrook Dr. Ocean Springs, AL 36567

desires to purchase the grave space described below, subject to Cemetery regulations.

W 1/2 _____ 1/4 Lot No. 2 Section No. 34 in Hughes Cemetery

Number of grave spaces 4 Price per grave space \$ _____

Price Received \$ 700.⁰⁰

CITY OF HATTIESBURG, MISSISSIPPI

By _____
Supt. of City Cemeteries

STATE OF MISSISSIPPI
COUNTY OF FORREST/LAMAR
CITY OF HATTIESBURG
HATTIESBURG, MS

**DEED TO CEMETERY LOT
HIGHLAND CEMETERY**

For and in consideration of the sum of ONE HUNDRED SEVENTY-FIVE AND NO/100 Dollars (\$175.00), cash in hand paid to the City of Hattiesburg, Mississippi, the City of Hattiesburg, Mississippi acting by and through its duly authorized Mayor and City Clerk does hereby bargain, sell and convey unto Rebecca, Charles, Jeffrey, & Kevin Poston, subject to the reservations and restrictions hereinafter set out and subject to rules and regulations now or hereafter adopted, the following described grave spaces:

South Half (S½) of the Southwest Quarter (SW¼)

Lot 126 Section 39

according to the Cemetery Survey of the City of Hattiesburg, Mississippi known as Highland Cemetery, and containing

One (1) Grave space (s).

SAID Lot shall be used for burial purposes only and all graves therein must be checked and laid out by the Cemetery sexton before the same is dug and must be at least 4 feet deep and shall be, when completed, level with the ground. No shrubbery, vines or trees shall be planted in the Cemetery Lot and there shall be nothing left above the ground except markers which may be erected to meet all City regulations and requirements. All burials in the grave space(s) herein conveyed shall comply with applicable State and Federal laws governing human burial and with City rules and regulations pertaining thereto. If boxes or vaults are used they shall be at least 10 inches below the ground level.

GRANTEE herein shall not sell or convey this lot without a written permit from the Mayor and Council of the City of Hattiesburg, Mississippi.

WITNESS the signature and seal of the City of Hattiesburg, Mississippi, a Municipal Corporation, acting, by and through its duly authorized Mayor and City Clerk, on this, the 18th day of August, 2020.

ATTEST:

CITY OF HATTIESBURG, MISSISSIPPI

CITY CLERK

MAYOR

(S E A L)

STATE OF MISSISSIPPI
COUNTY OF FORREST/LAMAR

Personally, appeared before me, the undersigned authority in and for said County and State, Toby Barker and Kermas Eaton, Mayor and City Clerk, respectively, of the City of Hattiesburg, Mississippi, a municipal corporation, each of whom acknowledged before me that they signed, executed and delivered the above and foregoing Cemetery Deed on the day and year therein mentioned as the act and deed of the City of Hattiesburg after having first been authorized so to do.

Given under my hand and official seal of office on this, the 18th day of August 2020.

My Commission Expires:

NOTARY PUBLIC

STATE OF MISSISSIPPI
COUNTY OF FORREST/LAMAR
CITY OF HATTIESBURG
HATTIESBURG, MS

**DEED TO CEMETERY LOT
HIGHLAND CEMETERY**

For and in consideration of the sum of ONE HUNDRED SEVENTY-FIVE AND NO/100 Dollars (\$175.00), cash in hand paid to the City of Hattiesburg, Mississippi, the City of Hattiesburg, Mississippi acting by and through its duly authorized Mayor and City Clerk does hereby bargain, sell and convey unto Sherry Felts, subject to the reservations and restrictions hereinafter set out and subject to rules and regulations now or hereafter adopted, the following described grave spaces:

North Half (N½) of the Northwest Quarter (NW¼)

Lot 1 Section 28

according to the Cemetery Survey of the City of Hattiesburg, Mississippi known as Highland Cemetery, and containing

One (1) Grave space (s).

SAID Lot shall be used for burial purposes only and all graves therein must be checked and laid out by the Cemetery sexton before the same is dug and must be at least 4 feet deep and shall be, when completed, level with the ground. No shrubbery, vines or trees shall be planted in the Cemetery Lot and there shall be nothing left above the ground except markers which may be erected to meet all City regulations and requirements. All burials in the grave space(s) herein conveyed shall comply with applicable State and Federal laws governing human burial and with City rules and regulations pertaining thereto. If boxes or vaults are used they shall be at least 10 inches below the ground level.

GRANTEE herein shall not sell or convey this lot without a written permit from the Mayor and Council of the City of Hattiesburg, Mississippi.

WITNESS the signature and seal of the City of Hattiesburg, Mississippi, a Municipal Corporation, acting, by and through its duly authorized Mayor and City Clerk, on this, the 18th day of August, 2020.

ATTEST:

CITY OF HATTIESBURG, MISSISSIPPI

CITY CLERK

MAYOR

(S E A L)

STATE OF MISSISSIPPI
COUNTY OF FORREST/LAMAR

Personally, appeared before me, the undersigned authority in and for said County and State, Toby Barker and Kermas Eaton, Mayor and City Clerk, respectively, of the City of Hattiesburg, Mississippi, a municipal corporation, each of whom acknowledged before me that they signed, executed and delivered the above and foregoing Cemetery Deed on the day and year therein mentioned as the act and deed of the City of Hattiesburg after having first been authorized so to do.

Given under my hand and official seal of office on this, the 18th day of August 2020.

My Commission Expires:

NOTARY PUBLIC

STATE OF MISSISSIPPI
COUNTY OF FORREST/LAMAR
CITY OF HATTIESBURG
HATTIESBURG, MS

**DEED TO CEMETERY LOT
SOUTH HILL CEMETERY**

For and in consideration of the sum of ONE HUNDRED FIFTY AND NO/100 Dollars (\$150.00), cash in hand paid to the City of Hattiesburg, Mississippi, the City of Hattiesburg, Mississippi acting by and through its duly authorized Mayor and City Clerk does hereby bargain, sell and convey unto Patricia Stokes Hayes, subject to the reservations and restrictions hereinafter set out and subject to rules and regulations now or hereafter adopted, the following described grave spaces:

North Half (N½) of the Southeast Quarter (SE¼)

Lot Number: 86 Section Number: 2

according to the Cemetery Survey of the City of Hattiesburg, Mississippi known as South Hill Cemetery, and containing

One (1) Grave space (s).

SAID Lot shall be used for burial purposes only and all graves therein must be checked and laid out by the Cemetery sexton before the same is dug and must be at least 4 feet deep and shall be, when completed, level with the ground. No shrubbery, vines or trees shall be planted in the Cemetery Lot and there shall be nothing left above the ground except markers which may be erected to meet all City regulations and requirements. All burials in the grave space(s) herein conveyed shall comply with applicable State and Federal laws governing human burial and with City rules and regulations pertaining thereto. If boxes or vaults are used they shall be at least 10 inches below the ground level.

GRANTEE herein shall not sell or convey this lot without a written permit from the Mayor and Council of the City of Hattiesburg, Mississippi.

WITNESS the signature and seal of the City of Hattiesburg, Mississippi, a Municipal Corporation, acting, by and through its duly authorized Mayor and City Clerk, on this, the 18th day of August, 2020.

ATTEST:

CITY OF HATTIESBURG, MISSISSIPPI

CITY CLERK
(S E A L)

MAYOR

STATE OF MISSISSIPPI
COUNTY OF FORREST/LAMAR

Personally, appeared before me, the undersigned authority in and for said County and State, Toby Barker and Kermas Eaton, Mayor and Deputy City Clerk, respectively, of the City of Hattiesburg, Mississippi, a municipal corporation, each of whom acknowledged before me that they signed, executed and delivered the above and foregoing Cemetery Deed on the day and year therein mentioned as the act and deed of the City of Hattiesburg after having first been authorized so to do.

Given under my hand and official seal of office on this, the 18th day of August, 2020.

My Commission Expires:

NOTARY PUBLIC

STATE OF MISSISSIPPI
COUNTY OF FORREST/LAMAR
CITY OF HATTIESBURG
HATTIESBURG, MS

**DEED TO CEMETERY LOT
HIGHLAND CEMETERY**

For and in consideration of the sum of THREE HUNDRED FIFTY AND NO/100 Dollars (\$350.00), cash in hand paid to the City of Hattiesburg, Mississippi, the City of Hattiesburg, Mississippi acting by and through its duly authorized Mayor and City Clerk does hereby bargain, sell and convey unto, James Hill, subject to the reservations and restrictions hereinafter set out and subject to rules and regulations now or hereafter adopted, the following described grave spaces:

Southwest Quarter (SW¼)

Lot Number 122 Section Number 38

according to the Cemetery Survey of the City of Hattiesburg, Mississippi known as Highland Cemetery, and containing

Two Grave space (s).

SAID Lot shall be used for burial purposes only and all graves therein must be checked and laid out by the Cemetery sexton before the same is dug and must be at least 4 feet deep and shall be, when completed, level with the ground. No shrubbery, vines or trees shall be planted in the Cemetery Lot and there shall be nothing left above the ground except markers which may be erected to meet all City regulations and requirements. All burials in the grave space(s) herein conveyed shall comply with applicable State and Federal laws governing human burial and with City rules and regulations pertaining thereto. If boxes or vaults are used they shall be at least 10 inches below the ground level.

GRANTEE herein shall not sell or convey this lot without a written permit from the Mayor and Council of the City of Hattiesburg, Mississippi.

WITNESS the signature and seal of the City of Hattiesburg, Mississippi, a Municipal Corporation, acting, by and through its duly authorized Mayor and City Clerk, on this, the 18th day August, 2020.

ATTEST:

CITY OF HATTIESBURG, MISSISSIPPI

CITY CLERK

MAYOR

(S E A L)

STATE OF MISSISSIPPI
COUNTY OF FORREST/LAMAR

Personally appeared before me, the undersigned authority in and for said County and State, Toby Barker and Kermas Eaton, Mayor and City Clerk, respectively, of the City of Hattiesburg, Mississippi, a municipal corporation, each of whom acknowledged before me that they signed, executed and delivered the above and foregoing Cemetery Deed on the day and year therein mentioned as the act and deed of the City of Hattiesburg after having first been authorized so to do.

Given under my hand and official seal of office on this, the 18th day of August, 2020

My Commission Expires:

NOTARY PUBLIC

STATE OF MISSISSIPPI
COUNTY OF FORREST/LAMAR
CITY OF HATTIESBURG
HATTIESBURG, MS

**DEED TO CEMETERY LOT
HIGHLAND CEMETERY**

For and in consideration of the sum of ONE HUNDRED SEVENTY-FIVE AND NO/100 Dollars (\$175.00), cash in hand paid to the City of Hattiesburg, Mississippi, the City of Hattiesburg, Mississippi acting by and through its duly authorized Mayor and City Clerk does hereby bargain, sell and convey unto Maggie Gilbert, subject to the reservations and restrictions hereinafter set out and subject to rules and regulations now or hereafter adopted, the following described grave spaces:

South Half (S½) of the Northeast Quarter (NE¼)

Lot 43 Section 34

according to the Cemetery Survey of the City of Hattiesburg, Mississippi known as Highland Cemetery, and containing

One (1) Grave space (s).

SAID Lot shall be used for burial purposes only and all graves therein must be checked and laid out by the Cemetery sexton before the same is dug and must be at least 4 feet deep and shall be, when completed, level with the ground. No shrubbery, vines or trees shall be planted in the Cemetery Lot and there shall be nothing left above the ground except markers which may be erected to meet all City regulations and requirements. All burials in the grave space(s) herein conveyed shall comply with applicable State and Federal laws governing human burial and with City rules and regulations pertaining thereto. If boxes or vaults are used they shall be at least 10 inches below the ground level.

GRANTEE herein shall not sell or convey this lot without a written permit from the Mayor and Council of the City of Hattiesburg, Mississippi.

WITNESS the signature and seal of the City of Hattiesburg, Mississippi, a Municipal Corporation, acting, by and through its duly authorized Mayor and City Clerk, on this, the 18th day of August, 2020.

ATTEST:

CITY OF HATTIESBURG, MISSISSIPPI

CITY CLERK

MAYOR

(S E A L)

STATE OF MISSISSIPPI
COUNTY OF FORREST/LAMAR

Personally, appeared before me, the undersigned authority in and for said County and State, Toby Barker and Kermas Eaton, Mayor and City Clerk, respectively, of the City of Hattiesburg, Mississippi, a municipal corporation, each of whom acknowledged before me that they signed, executed and delivered the above and foregoing Cemetery Deed on the day and year therein mentioned as the act and deed of the City of Hattiesburg after having first been authorized so to do.

Given under my hand and official seal of office on this, the 18th day of August 2020.

My Commission Expires:

NOTARY PUBLIC

STATE OF MISSISSIPPI
COUNTY OF FORREST/LAMAR
CITY OF HATTIESBURG
HATTIESBURG, MS

**DEED TO CEMETERY LOT
HIGHLAND CEMETERY**

For and in consideration of the sum of ONE HUNDRED SEVENTY-FIVE AND NO/100 Dollars (\$175.00), cash in hand paid to the City of Hattiesburg, Mississippi, the City of Hattiesburg, Mississippi acting by and through its duly authorized Mayor and City Clerk does hereby bargain, sell and convey unto Tia Marie Hinton, subject to the reservations and restrictions hereinafter set out and subject to rules and regulations now or hereafter adopted, the following described grave spaces:

North Half (N½) of the Southwest Quarter (SW¼)

Lot 72 Section 38

according to the Cemetery Survey of the City of Hattiesburg, Mississippi known as Highland Cemetery, and containing

One (1) Grave space (s).

SAID Lot shall be used for burial purposes only and all graves therein must be checked and laid out by the Cemetery sexton before the same is dug and must be at least 4 feet deep and shall be, when completed, level with the ground. No shrubbery, vines or trees shall be planted in the Cemetery Lot and there shall be nothing left above the ground except markers which may be erected to meet all City regulations and requirements. All burials in the grave space(s) herein conveyed shall comply with applicable State and Federal laws governing human burial and with City rules and regulations pertaining thereto. If boxes or vaults are used they shall be at least 10 inches below the ground level.

GRANTEE herein shall not sell or convey this lot without a written permit from the Mayor and Council of the City of Hattiesburg, Mississippi.

WITNESS the signature and seal of the City of Hattiesburg, Mississippi, a Municipal Corporation, acting, by and through its duly authorized Mayor and City Clerk, on this, the 18th day of August, 2020.

ATTEST:

CITY OF HATTIESBURG, MISSISSIPPI

CITY CLERK

MAYOR

(S E A L)

STATE OF MISSISSIPPI
COUNTY OF FORREST/LAMAR

Personally, appeared before me, the undersigned authority in and for said County and State, Toby Barker and Kermas Eaton, Mayor and City Clerk, respectively, of the City of Hattiesburg, Mississippi, a municipal corporation, each of whom acknowledged before me that they signed, executed and delivered the above and foregoing Cemetery Deed on the day and year therein mentioned as the act and deed of the City of Hattiesburg after having first been authorized so to do.

Given under my hand and official seal of office on this, the 18th day of August 2020.

My Commission Expires:

NOTARY PUBLIC

STATE OF MISSISSIPPI
COUNTY OF FORREST/LAMAR
CITY OF HATTIESBURG
HATTIESBURG, MS

**DEED TO CEMETERY LOT
HIGHLAND CEMETERY**

For and in consideration of the sum of ONE HUNDRED SEVENTY-FIVE AND NO/100 Dollars (\$175.00), cash in hand paid to the City of Hattiesburg, Mississippi, the City of Hattiesburg, Mississippi acting by and through its duly authorized Mayor and City Clerk does hereby bargain, sell and convey unto John Hibbler, subject to the reservations and restrictions hereinafter set out and subject to rules and regulations now or hereafter adopted, the following described grave spaces:

North Half (N½) of the Southeast Quarter (SE¼)

Lot 2 Section 34

according to the Cemetery Survey of the City of Hattiesburg, Mississippi known as Highland Cemetery, and containing

One (1) Grave space (s).

SAID Lot shall be used for burial purposes only and all graves therein must be checked and laid out by the Cemetery sexton before the same is dug and must be at least 4 feet deep and shall be, when completed, level with the ground. No shrubbery, vines or trees shall be planted in the Cemetery Lot and there shall be nothing left above the ground except markers which may be erected to meet all City regulations and requirements. All burials in the grave space(s) herein conveyed shall comply with applicable State and Federal laws governing human burial and with City rules and regulations pertaining thereto. If boxes or vaults are used they shall be at least 10 inches below the ground level.

GRANTEE herein shall not sell or convey this lot without a written permit from the Mayor and Council of the City of Hattiesburg, Mississippi.

WITNESS the signature and seal of the City of Hattiesburg, Mississippi, a Municipal Corporation, acting, by and through its duly authorized Mayor and City Clerk, on this, the 18th day of August, 2020.

ATTEST:

CITY OF HATTIESBURG, MISSISSIPPI

CITY CLERK

MAYOR

(S E A L)

STATE OF MISSISSIPPI
COUNTY OF FORREST/LAMAR

Personally, appeared before me, the undersigned authority in and for said County and State, Toby Barker and Kermas Eaton, Mayor and City Clerk, respectively, of the City of Hattiesburg, Mississippi, a municipal corporation, each of whom acknowledged before me that they signed, executed and delivered the above and foregoing Cemetery Deed on the day and year therein mentioned as the act and deed of the City of Hattiesburg after having first been authorized so to do.

Given under my hand and official seal of office on this, the 18th day of August 2020.

My Commission Expires:

NOTARY PUBLIC

STATE OF MISSISSIPPI
COUNTY OF FORREST/LAMAR
CITY OF HATTIESBURG
HATTIESBURG, MS

**DEED TO CEMETERY LOT
HIGHLAND CEMETERY**

For and in consideration of the sum of ONE HUNDRED SEVENTY-FIVE AND NO/100 Dollars (\$175.00), cash in hand paid to the City of Hattiesburg, Mississippi, the City of Hattiesburg, Mississippi acting by and through its duly authorized Mayor and City Clerk does hereby bargain, sell and convey unto John Hibbler, subject to the reservations and restrictions hereinafter set out and subject to rules and regulations now or hereafter adopted, the following described grave spaces:

North Half (N½) of the Southwest Quarter (SW¼)

Lot 2 Section 34

according to the Cemetery Survey of the City of Hattiesburg, Mississippi known as Highland Cemetery, and containing

One (1) Grave space (s).

SAID Lot shall be used for burial purposes only and all graves therein must be checked and laid out by the Cemetery sexton before the same is dug and must be at least 4 feet deep and shall be, when completed, level with the ground. No shrubbery, vines or trees shall be planted in the Cemetery Lot and there shall be nothing left above the ground except markers which may be erected to meet all City regulations and requirements. All burials in the grave space(s) herein conveyed shall comply with applicable State and Federal laws governing human burial and with City rules and regulations pertaining thereto. If boxes or vaults are used they shall be at least 10 inches below the ground level.

GRANTEE herein shall not sell or convey this lot without a written permit from the Mayor and Council of the City of Hattiesburg, Mississippi.

WITNESS the signature and seal of the City of Hattiesburg, Mississippi, a Municipal Corporation, acting, by and through its duly authorized Mayor and City Clerk, on this, the 18th day of August, 2020.

ATTEST:

CITY OF HATTIESBURG, MISSISSIPPI

CITY CLERK

MAYOR

(S E A L)

STATE OF MISSISSIPPI
COUNTY OF FORREST/LAMAR

Personally, appeared before me, the undersigned authority in and for said County and State, Toby Barker and Kermas Eaton, Mayor and City Clerk, respectively, of the City of Hattiesburg, Mississippi, a municipal corporation, each of whom acknowledged before me that they signed, executed and delivered the above and foregoing Cemetery Deed on the day and year therein mentioned as the act and deed of the City of Hattiesburg after having first been authorized so to do.

Given under my hand and official seal of office on this, the 18th day of August 2020.

My Commission Expires:

NOTARY PUBLIC

STATE OF MISSISSIPPI
COUNTY OF FORREST/LAMAR
CITY OF HATTIESBURG
HATTIESBURG, MS

**DEED TO CEMETERY LOT
HIGHLAND CEMETERY**

For and in consideration of the sum of THREE HUNDRED FIFTY AND NO/100 Dollars (\$350.00), cash in hand paid to the City of Hattiesburg, Mississippi, the City of Hattiesburg, Mississippi acting by and through its duly authorized Mayor and City Clerk does hereby bargain, sell and convey unto, John Hibbler, subject to the reservations and restrictions hereinafter set out and subject to rules and regulations now or hereafter adopted, the following described grave spaces:

Northwest Quarter (NW¼)

Lot Number 2 Section Number 34

according to the Cemetery Survey of the City of Hattiesburg, Mississippi known as Highland Cemetery, and containing

Two Grave space (s).

SAID Lot shall be used for burial purposes only and all graves therein must be checked and laid out by the Cemetery sexton before the same is dug and must be at least 4 feet deep and shall be, when completed, level with the ground. No shrubbery, vines or trees shall be planted in the Cemetery Lot and there shall be nothing left above the ground except markers which may be erected to meet all City regulations and requirements. All burials in the grave space(s) herein conveyed shall comply with applicable State and Federal laws governing human burial and with City rules and regulations pertaining thereto. If boxes or vaults are used they shall be at least 10 inches below the ground level.

GRANTEE herein shall not sell or convey this lot without a written permit from the Mayor and Council of the City of Hattiesburg, Mississippi.

WITNESS the signature and seal of the City of Hattiesburg, Mississippi, a Municipal Corporation, acting, by and through its duly authorized Mayor and City Clerk, on this, the 18th day August, 2020.

ATTEST:

CITY OF HATTIESBURG, MISSISSIPPI

CITY CLERK

MAYOR

(S E A L)

STATE OF MISSISSIPPI
COUNTY OF FORREST/LAMAR

Personally appeared before me, the undersigned authority in and for said County and State, Toby Barker and Kermas Eaton, Mayor and City Clerk, respectively, of the City of Hattiesburg, Mississippi, a municipal corporation, each of whom acknowledged before me that they signed, executed and delivered the above and foregoing Cemetery Deed on the day and year therein mentioned as the act and deed of the City of Hattiesburg after having first been authorized so to do.

Given under my hand and official seal of office on this, the 18th day of August, 2020

My Commission Expires:

NOTARY PUBLIC

STATE OF MISSISSIPPI
COUNTY OF FORREST/LAMAR
CITY OF HATTIESBURG
HATTIESBURG, MS

**DEED TO CEMETERY LOT
HIGHLAND CEMETERY**

For and in consideration of the sum of THREE HUNDRED FIFTY AND NO/100 Dollars (\$350.00), cash in hand paid to the City of Hattiesburg, Mississippi, the City of Hattiesburg, Mississippi acting by and through its duly authorized Mayor and City Clerk does hereby bargain, sell and convey unto, John Hibbler, subject to the reservations and restrictions hereinafter set out and subject to rules and regulations now or hereafter adopted, the following described grave spaces:

Northeast Quarter (NE¼)

Lot Number 2 Section Number 34

according to the Cemetery Survey of the City of Hattiesburg, Mississippi known as Highland Cemetery, and containing

Two Grave space (s).

SAID Lot shall be used for burial purposes only and all graves therein must be checked and laid out by the Cemetery sexton before the same is dug and must be at least 4 feet deep and shall be, when completed, level with the ground. No shrubbery, vines or trees shall be planted in the Cemetery Lot and there shall be nothing left above the ground except markers which may be erected to meet all City regulations and requirements. All burials in the grave space(s) herein conveyed shall comply with applicable State and Federal laws governing human burial and with City rules and regulations pertaining thereto. If boxes or vaults are used they shall be at least 10 inches below the ground level.

GRANTEE herein shall not sell or convey this lot without a written permit from the Mayor and Council of the City of Hattiesburg, Mississippi.

WITNESS the signature and seal of the City of Hattiesburg, Mississippi, a Municipal Corporation, acting, by and through its duly authorized Mayor and City Clerk, on this, the 18th day August, 2020.

ATTEST:

CITY OF HATTIESBURG, MISSISSIPPI

CITY CLERK

MAYOR

(S E A L)

STATE OF MISSISSIPPI
COUNTY OF FORREST/LAMAR

Personally appeared before me, the undersigned authority in and for said County and State, Toby Barker and Kermas Eaton, Mayor and City Clerk, respectively, of the City of Hattiesburg, Mississippi, a municipal corporation, each of whom acknowledged before me that they signed, executed and delivered the above and foregoing Cemetery Deed on the day and year therein mentioned as the act and deed of the City of Hattiesburg after having first been authorized so to do.

Given under my hand and official seal of office on this, the 18th day of August, 2020

My Commission Expires:

NOTARY PUBLIC

STATE OF MISSISSIPPI
COUNTY OF FORREST/LAMAR
CITY OF HATTIESBURG
HATTIESBURG, MS

**DEED TO CEMETERY LOT
HIGHLAND CEMETERY**

For and in consideration of the sum of SEVEN HUNDRED AND NO/100 Dollars (\$700.00), cash in hand paid to the City of Hattiesburg, Mississippi, the City of Hattiesburg, Mississippi acting by and through its duly authorized Mayor and City Clerk does hereby bargain, sell and convey unto John Hibbler, subject to the reservations and restrictions hereinafter set out and subject to rules and regulations now or hereafter adopted, the following described grave spaces:

West Half (W½)

Lot Number 3

Section Number: 34

according to the Cemetery Survey of the City of Hattiesburg, Mississippi known as Highland Cemetery, and containing Four (4) Grave space (s).

SAID Lot shall be used for burial purposes only and all graves therein must be checked and laid out by the Cemetery sexton before the same is dug and must be at least 4 feet deep and shall be, when completed, level with the ground. No shrubbery, vines or trees shall be planted in the Cemetery Lot and there shall be nothing left above the ground except markers which may be erected to meet all City regulations and requirements. All burials in the grave space(s) herein conveyed shall comply with applicable State and Federal laws governing human burial and with City rules and regulations pertaining thereto. If boxes or vaults are used they shall be at least 10 inches below the ground level.

GRANTEE herein shall not sell or convey this lot without a written permit from the Mayor and Council of the City of Hattiesburg, Mississippi.

WITNESS the signature and seal of the City of Hattiesburg, Mississippi, a Municipal Corporation, acting, by and through its duly authorized Mayor and City Clerk, on this, the 18th day of August, 2020.

ATTEST:

CITY OF HATTIESBURG, MISSISSIPPI

CITY CLERK

MAYOR

(S E A L)

STATE OF MISSISSIPPI
COUNTY OF FORREST/LAMAR

Personally, appeared before me, the undersigned authority in and for said County and State, Toby Barker and Kermas Eaton, Mayor and City Clerk, respectively, of the City of Hattiesburg, Mississippi, a municipal corporation, each of whom acknowledged before me that they signed, executed and delivered the above and foregoing Cemetery Deed on the day and year therein mentioned as the act and deed of the City of Hattiesburg after having first been authorized so to do.

Given under my hand and official seal of office on this, the 18th day of August, 2020.

My Commission Expires:

NOTARY PUBLIC



Memorandum

To: Mayor Toby Barker and Members of City Council

From:

cc:

Date: Tuesday, August 18, 2020

Re: Approve claims docket for the period ending August 14, 2020.
File Number: 2020-569
Minute Book #

Summary

Approve claims docket for the period ending August 14, 2020.

Recommendation Statement

I recommend approval of the claims docket.

Please place this on the August 18, 2020 City Council meeting for consideration.

00001 AUTO ARMATURE SERVICE IN 21844	00200971 19006443 BATTERY U#19449 M/ADM	08/14/20	278241	174.95-
00001 AUTO ARMATURE SERVICE IN 21848	00200970 19006457 BATTERIES U#12956 PUB WORKS	08/14/20	278241	500.85-
00001 AUTO ARMATURE SERVICE IN 21995	00201268 19006669 BATTERY U#19702 POLICE	08/14/20	278241	185.95-

AUTO ARMATURE SERVICE IN				
Sum				861.75-
00001 AUTOMOTIVE GLASS SPECIAL I237721	00200220 19006552 WINDSHIELD U#18203 POLICE	08/14/20	278242	384.79-
00001 AUTOMOTIVE GLASS SPECIAL I238219	00200825 19006556 WINDSHIELD U#20370 POLICE	08/14/20	278242	275.00-
00001 AUTOMOTIVE GLASS SPECIAL I238297	00200895 19006557 GLASS REPR U#20370 FIRE DEPT	08/14/20	278242	265.00-
00001 AUTOMOTIVE GLASS SPECIAL I238372	00201012 19006567 WINDSHIELD U#16722 HEALTH DIV	08/14/20	278242	275.00-

AUTOMOTIVE GLASS SPECIAL				
Sum				1,199.79-
00001 BIG IRON DIESEL REPAIR L RO4164	00201175 19006705 SERV CALL/REPR U#19755 SANIT	08/14/20	278247	441.18-
00001 BIG IRON DIESEL REPAIR L RO4165	00201175 19006706 SERV CALL/REPR U#19887 SANIT	08/14/20	278247	190.00-

BIG IRON DIESEL REPAIR L				
Sum				631.18-
00001 BOURNE BROTHERS PRINTING 75453	00201095 19006727 VEHICLE MAINT LOG BOOKS	08/14/20	278253	285.00-

BOURNE BROTHERS PRINTING				
Sum				285.00-
00001 BRACKMAN MOWER WAREHOUSE 56024	00201065 19006648 LAWNMOWER TIRES PUBLIC WORKS	08/14/20	278254	350.00-

BRACKMAN MOWER WAREHOUSE				
Sum				350.00-
00001 C D W GOVERNMENT ZMQ4375	00200844 19006484 HDMI CABLES INFO TECH	08/14/20	278258	206.17-
00001 C D W GOVERNMENT ZNW6551	00201008 19006701 COMPUTER SUPP INFO TECH	08/14/20	278258	192.20-

C D W GOVERNMENT				
Sum				398.37-
00001 C SPIRE (MEGAGATE) 1555699	00201339 19006708 NETWORK/INTERNET INFO TECH	08/14/20	278259	16,251.28-
00001 C SPIRE (MEGAGATE) 1558638	00201339 19006709 NETWORK/INTERNET INFO TECH	08/14/20	278259	883.49-

C SPIRE (MEGAGATE)				
Sum				17,134.77-
00001 C SPIRE BUSINESS (FORMER HM279261	00201302 19006656 TELECONFERENCE FEE 7/20 COURT	08/14/20	278260	28.95-

C SPIRE BUSINESS (FORMER				
Sum				28.95-
00001 CAFOLLA, BRENDA (REFUND) RESTITUTION	02020736 19006472 RESTITUTION PYMT	08/14/20	278261	124.73-

CAFOLLA, BRENDA (REFUND)				
Sum				124.73-
00001 CARQUEST AUTO PARTS STOR 14758-145466	00201075 19006504 REPR PTS U#19701 POLICE	08/14/20	278264	195.59-
00001 CARQUEST AUTO PARTS STOR 14758-145467	00201075 19006505 REPR PTS POLICE STOCK	08/14/20	278264	24.24-
00001 CARQUEST AUTO PARTS STOR 14758-145468	00201075 19006506 REPR PTS U#16754 POLICE	08/14/20	278264	251.25-
00001 CARQUEST AUTO PARTS STOR 14758-145469	00201075 19006507 REPR PTS U#18316 POLICE	08/14/20	278264	146.99-
00001 CARQUEST AUTO PARTS STOR 14758-145470	00201075 19006508 REPR PTS U#18316 POLICE	08/14/20	278264	195.59-
00001 CARQUEST AUTO PARTS STOR 14758-145471	00201075 19006509 REPR PTS U#18316 POLICE	08/14/20	278264	67.67-
00001 CARQUEST AUTO PARTS STOR 14758-144869	00200841 19006540 REPR PTS/SUPP P/W SHOP	08/14/20	278264	90.28-
00001 CARQUEST AUTO PARTS STOR 14758-145474	00200845 19006541 TAPE SUPP P/W SHOP	08/14/20	278264	22.78-

00001	CARQUEST	AUTO	PARTS	STOR	14758-145630	00201144	19006564	REFRIGERANT P/W SHOP	08/14/20	278264	109.99-
00001	CARQUEST	AUTO	PARTS	STOR	14758-144952	00200874	19006569	DECK SPINDLES CEMETERY	08/14/20	278264	302.76-
00001	CARQUEST	AUTO	PARTS	STOR	14758-145654	00201146	19006570	BATTERY U#14808 CEMETERY	08/14/20	278264	124.99-
00001	CARQUEST	AUTO	PARTS	STOR	14758-145563	00201124	19006571	BATTERY U#18337 CEMETERY	08/14/20	278264	94.99-
00001	CARQUEST	AUTO	PARTS	STOR	14758-145709	00201180	19006584	STARTER ROPE P/W SHOP	08/14/20	278264	78.00-
00001	CARQUEST	AUTO	PARTS	STOR	14758-144773	00200777	19006590	REPR PTS U#14714 PUBLIC WORKS	08/14/20	278264	12.17-
00001	CARQUEST	AUTO	PARTS	STOR	14758-144772	00200777	19006591	REPR PTS U#14715 PUBLIC WORKS	08/14/20	278264	100.04-
00001	CARQUEST	AUTO	PARTS	STOR	14758-144770	00200777	19006592	REPR PTS PUBLIC WORKS	08/14/20	278264	17.22-
00001	CARQUEST	AUTO	PARTS	STOR	14758-144787	00200821	19006596	TRAILER LIGHTS U#14714 HEALTH	08/14/20	278264	19.59-
00001	CARQUEST	AUTO	PARTS	STOR	14758-144837	00200821	19006597	TRAILER ADAPTER U#14714 HLTH	08/14/20	278264	12.06-
00001	CARQUEST	AUTO	PARTS	STOR	14758-144859	00200836	19006649	DOOR REPR PTS U#16240 CONSTR	08/14/20	278264	34.79-
00001	CARQUEST	AUTO	PARTS	STOR	14758-145908	00201280	19006722	REPR PTS U#19700 POLICE	08/14/20	278264	143.76-
00001	CARQUEST	AUTO	PARTS	STOR	14758-145909	00201280	19006723	REPR PTS U#19706 POLICE	08/14/20	278264	469.98-
00001	CARQUEST	AUTO	PARTS	STOR	14758-145910	00201280	19006724	REPR PTS U#19750 POLICE	08/14/20	278264	191.40-
00001	CARQUEST	AUTO	PARTS	STOR	14758-145911	00201280	19006725	REPR PTS U#20849 POLICE	08/14/20	278264	193.72-
00001	CARQUEST	AUTO	PARTS	STOR	14758-145912	00201280	19006726	BRAKE CLEANER SHOP STOCK	08/14/20	278264	62.64-
00001	CARQUEST	AUTO	PARTS	STOR	14758-145905	00201278	19006729	HAND TOOLS FIRE DEP MECH SHOP	08/14/20	278264	79.90-
00001	CARQUEST	AUTO	PARTS	STOR	14758-145972	00201244	19006733	REPR PTS U#14715 PUBLIC WORKS	08/14/20	278264	127.10-
00001	CARQUEST	AUTO	PARTS	STOR	14758-145913	00201281	19006741	AGRI EQUIP FILTERS CEMETERY	08/14/20	278264	80.25-

CARQUEST AUTO PARTS STOR

Sum											3,249.74-
00001	CERTIFIED LABORATORIES	7041580		00200788	19006464	WEED KILLER DITCHES HEALTH	08/14/20	278266			4,936.25-
00001	CERTIFIED LABORATORIES	7047452		00201013	19006595	DEGREASER SANIT DEPT	08/14/20	278266			1,686.30-

CERTIFIED LABORATORIES

Sum											6,622.55-
00001	CHEM-AQUA	7028276		00201241	19006608	COOL TOWERS TRTMT CITY HALL	08/14/20	278268			583.33-

CHEM-AQUA

Sum											583.33-
00001	CINTAS CORPORATION	#J66	4057573231	00201079	19006515	UNIFORMS 8/03 TRAFFIC	08/14/20	278273			25.00-
00001	CINTAS CORPORATION	#J66	4057572838	00201079	19006516	MOP/MAT 8/3 TRAFFIC	08/14/20	278273			6.36-
00001	CINTAS CORPORATION	#J66	4057573126	00201053	19006518	UNIFORMS 8/03 P/W SHOP	08/14/20	278273			31.82-
00001	CINTAS CORPORATION	#J66	4057572938	00201053	19006519	UNIFORMS 8/03 CONSTR	08/14/20	278273			55.11-
00001	CINTAS CORPORATION	#J66	4057573284	00201111	19006534	UNIFORMS 8/04 PUBLIC WORKS	08/14/20	278273			23.22-
00001	CINTAS CORPORATION	#J66	4057573256	00201111	19006535	UNIFORMS 8/03 PUBLIC WORKS	08/14/20	278273			61.62-
00001	CINTAS CORPORATION	#J66	4057573267	00201111	19006536	UNIFORMS 8/03 PUBLIC WORKS	08/14/20	278273			51.38-
00001	CINTAS CORPORATION	#J66	4057573130	00201111	19006537	UNIFORMS 8/03 PUBLIC WORKS	08/14/20	278273			91.33-
00001	CINTAS CORPORATION	#J66	4057573042	00201111	19006538	UNIFORMS 8/03 PUBLIC WORKS	08/14/20	278273			27.75-
00001	CINTAS CORPORATION	#J66	4057572900	00201111	19006539	UNIFORMS 8/03 PUBLIC WORKS	08/14/20	278273			76.69-
00001	CINTAS CORPORATION	#J66	4057573230	00201143	19006566	UNIFORMS 8/03 SANIT	08/14/20	278273			152.14-
00001	CINTAS CORPORATION	#J66	4058212128	00201225	19006613	UNIFORMS 8/10 PUBLIC WORKS	08/14/20	278273			27.75-
00001	CINTAS CORPORATION	#J66	4058282268	00201225	19006614	UNIFORMS 8/10 PUBLIC WORKS	08/14/20	278273			51.38-
00001	CINTAS CORPORATION	#J66	4058211931	00201225	19006615	UNIFORMS 8/10 PUBLIC WORKS	08/14/20	278273			76.69-
00001	CINTAS CORPORATION	#J66	4058212550	00201225	19006616	UNIFORMS 8/10 PUBLIC WORKS	08/14/20	278273			149.95-
00001	CINTAS CORPORATION	#J66	4058212327	00201225	19006617	MOP/MAT 8/10 GO&FS	08/14/20	278273			23.22-
00001	CINTAS CORPORATION	#J66	4058212291	00201225	19006618	MOP/MAT 8/10 GO&FS	08/14/20	278273			66.27-
00001	CINTAS CORPORATION	#J66	4058212206	00201247	19006621	UNIFORMS 8/10 P/W SHOP	08/14/20	278273			46.97-

00001	CINTAS CORPORATION	#J66	4058211981	00201247	19006622	UNIFORMS 8/10 CONSTR	08/14/20	278273	55.11-
00001	CINTAS CORPORATION	#J66	4058212308	00201266	19006675	UNIFORMS 8/10 TRAFFIC	08/14/20	278273	25.00-
00001	CINTAS CORPORATION	#J66	4058211866	00201266	19006676	MOP/MAT 8/10 TRAFFIC	08/14/20	278273	6.36-
00001	CINTAS CORPORATION	#J66	4058212474	00201270	19006679	UNIFORMS 8/10 SANIT	08/14/20	278273	152.14-

CINTAS CORPORATION #J66									
Sum									
00001	CITY OF HATTIESBURG FUND	TRF 1ST 8/20	02020755	19006652	TRF 1ST 8/20 PAYROLL	08/12/20	10099	1,079,646.47-	1,283.26-

CITY OF HATTIESBURG FUND									
Sum									
00001	COCA COLA BOTTLING COMPA	19873209527	00201054	19006501	BOTTLED WATER MAYOR'S OFFICE	08/14/20	278277	210.00-	1,079,646.47-

COCA COLA BOTTLING COMPA									
Sum									
00001	COMCAST CABLEVISION OF H	839641073092	00201169	19006551	COVERTER BOX 8/2020 POLICE	08/14/20	278278	114.62-	210.00-
00001	COMCAST CABLEVISION OF H	839641073047	00201192	19006578	CABLE 7/30-8/29 EMP CLINIC	08/14/20	278279	149.88-	
00001	COMCAST CABLEVISION OF H	839641073073	00201334	19006715	CABLE 8/1-8/31 TRAFF/CONSTR	08/14/20	278280	6.27-	

COMCAST CABLEVISION OF H									
Sum									
00001	COMSOUTH	195512	00200521	19006650	RADIO REPAIR CONSTR DEPT	08/14/20	278281	174.00-	270.77-

COMSOUTH									
Sum									
00001	COURT PROGRAMS INC	3164836	00201202	19006575	DRUG TESTS HEALTH COURT GRANT	08/14/20	278282	165.00-	174.00-
00001	COURT PROGRAMS INC	INVOICE #71	00201303	19006654	ANKLE MONITORING MUN COURT	08/14/20	278282	6,690.00-	

COURT PROGRAMS INC									
Sum									
00001	COURTNEY'S RESTAURANT EQ	13559	00201181	19006546	ICE MACHINE REPR TRAIN DEPOT	08/14/20	278284	548.20-	6,855.00-
00001	COURTNEY'S RESTAURANT EQ	13566	00201231	19006611	ICE MACHINE REPR POLICE DEPT	08/14/20	278284	300.00-	

COURTNEY'S RESTAURANT EQ									
Sum									
00001	CUSTOM AUTO CREATIONS	409	00199918	19006452	SEAT REPAIR VARI FIRE UNITS	08/14/20	278288	1,650.00-	848.20-

CUSTOM AUTO CREATIONS									
Sum									
00001	DELK'S TIRE SALES AND SE	32162	00201271	19006730	TIRES U#11353 FIRE DEPT	08/14/20	278290	520.00-	1,650.00-

DELK'S TIRE SALES AND SE									
Sum									
00001	DOLEAC ELECTRIC CO INC	GEN-H23566	00199531	19006623	GENERATOR REPR #5 FIRE STA	08/14/20	278293	222.82-	520.00-
00001	DOLEAC ELECTRIC CO INC	GEN-H23666	00199531	19006624	GENERATOR REPR #6 FIRE STA	08/14/20	278293	425.00-	
00001	DOLEAC ELECTRIC CO INC	GEN-H23567	00199531	19006625	GENERATOR REPR #6 FIRE STA	08/14/20	278293	196.00-	

DOLEAC ELECTRIC CO INC									
Sum									
									843.82-

00001	EATON, ALVIN K (PETTY CA	PETTY CASH 7	00201046	19006442	PETTY CASH 7/2020 VARI DEPTS	08/14/20	278301	425.10-
00001	EATON, ALVIN K (PETTY CA	PETTY CASH 7	00201051	19006458	PETTY CASH 7/20 SANIT DEPT	08/14/20	278302	26.75-
00001	EATON, ALVIN K (PETTY CA	PETTY CASH 7	00201050	19006459	PETTY CASH 7/20 SANIT DEPT	08/14/20	278303	12.95-

EATON, ALVIN K (PETTY CA								
Sum								464.80-
00001	ECONOMY SUPPLY CO	038037	00200911	19006520	DEADBOLT LOCKS TWIN FORKS	08/14/20	278304	58.90-
00001	ECONOMY SUPPLY CO	038485	00201122	19006647	REPAIR SIGNS PUBLIC WORKS	08/14/20	278304	49.99-

ECONOMY SUPPLY CO								
Sum								108.89-
00001	EMPIRE TRUCK SALES (H'BU	CE006167982:	00200818	19006736	REPR PTS ALL GARBAGE TRUCKS	08/14/20	278306	208.74-
00001	EMPIRE TRUCK SALES (H'BU	CE006168022:	00200856	19006737	REPR PTS U#19887 SANIT	08/14/20	278306	323.19-
00001	EMPIRE TRUCK SALES (H'BU	CE006168801:	00201265	19006738	REPR PTS U#20068 SANIT	08/14/20	278306	72.52-

EMPIRE TRUCK SALES (H'BU								
Sum								604.45-
00001	GERMBUSTERS SANITIZE & S	1004	00201093	19006589	DISINFECT CITY HALL COVID-19	08/14/20	278314	1,980.51-

GERMBUSTERS SANITIZE & S								
Sum								1,980.51-
00001	GILLILANDS ELECTRONICS S	72388	00200917	19006467	SECURITY CAMERA SERV CEMETERY	08/14/20	278315	455.87-
00001	GILLILANDS ELECTRONICS S	72332	00201301	19006660	FIRE ALARM 8/20-8/21 COURT	08/14/20	278315	420.00-
00001	GILLILANDS ELECTRONICS S	72333	00201301	19006661	MNTHLY PHONE RENT MUN COURT	08/14/20	278315	261.99-

GILLILANDS ELECTRONICS S								
Sum								1,137.86-
00001	H'BURG CLINIC PA (ACCT#2	92724	00201284	19006670	MEDICAL RECORD REQUEST POLICE	08/14/20	278317	25.00-

H'BURG CLINIC PA (ACCT#2								
Sum								25.00-
00001	H'BURG COCA COLA BOTTLIN	17319205412	00201188	19006598	POWERADE CEMETERY CREW	08/14/20	278318	150.00-

H'BURG COCA COLA BOTTLIN								
Sum								150.00-
00001	HATTIESBURG HYDRAULICS I	84979	00200946	19006460	REPRS U#14408 SANIT	08/14/20	278320	163.27-

HATTIESBURG HYDRAULICS I								
Sum								163.27-
00001	HAVARD PEST CONTROL INC	1631908	00020209	19006686	QTRLY SRV POLICE COMPLEX	08/14/20	278322	125.00-
00001	HAVARD PEST CONTROL INC	1631909	00020209	19006687	QTRLY SRV POLICE SUB-STA	08/14/20	278322	40.00-
00001	HAVARD PEST CONTROL INC	1631910	00020209	19006688	QTRLY SRV #1 FIRE STA	08/14/20	278322	50.00-
00001	HAVARD PEST CONTROL INC	1631913	00020209	19006689	QTRLY SRV #5 FIRE STA	08/14/20	278322	48.00-
00001	HAVARD PEST CONTROL INC	1631914	00020209	19006690	QTRLY SRV #6 FIRE STA	08/14/20	278322	48.00-
00001	HAVARD PEST CONTROL INC	1631915	00020209	19006691	QTRLY SRV #7 FIRE STA	08/14/20	278322	48.00-
00001	HAVARD PEST CONTROL INC	1631935	00020209	19006692	QTRLY SRV FIRE ADM	08/14/20	278322	48.00-
00001	HAVARD PEST CONTROL INC	1631921	00020209	19006693	QTRLY SRV CITY HALL	08/14/20	278322	65.00-
00001	HAVARD PEST CONTROL INC	1631938	00020209	19006694	QTRLY SRV EMP MED CENTER	08/14/20	278322	48.00-
00001	HAVARD PEST CONTROL INC	1631929	00020209	19006695	QTRLY SRV ENGR OFFICE	08/14/20	278322	55.00-
00001	HAVARD PEST CONTROL INC	1631930	00020209	19006696	QTRLY SRV TRAFFIC BLDG	08/14/20	278322	45.00-
00001	HAVARD PEST CONTROL INC	1631934	00020209	19006697	QTRLY SRV CITY BARN	08/14/20	278322	235.00-
00001	HAVARD PEST CONTROL INC	1631936	00020209	19006698	QTRLY SRV CHAIN AIRPORT	08/14/20	278322	45.00-

00001 HAVARD PEST CONTROL INC	1631937	00020209 19006699 QTRLY SRV AIRPORT MAINT	08/14/20	278322	45.00-
00001 HAVARD PEST CONTROL INC	1631946	00020209 19006700 QTRLY SRV HILND CEMETERY	08/14/20	278322	40.00-

HAVARD PEST CONTROL INC					
Sum					985.00-
00001 HICKS LAW FIRM, LLC	9588	00201253 19006609 SERVS PRECISION CONST VS CITY	08/14/20	278324	10,917.34-

HICKS LAW FIRM, LLC					
Sum					10,917.34-
00001 HOL-MAC CORPORATION	368525	00201020 19006739 REPR PTS U#15893 SANIT	08/14/20	278328	916.50-

HOL-MAC CORPORATION					
Sum					916.50-
00001 HOLLAND VETERINARY HOSPI	ACCT#85 3662	00201148 19006549 SERVS OTTER POLICE K-9	08/14/20	278329	124.10-
00001 HOLLAND VETERINARY HOSPI	ACCT#85 3744	00201148 19006550 SERVS VODOO POLICE K-9	08/14/20	278329	58.00-

HOLLAND VETERINARY HOSPI					
Sum					182.10-
00001 HONDA SPORTS CENTER	92502	00201084 19006599 TIE DOWN ROPES CEMETERY	08/14/20	278330	33.90-

HONDA SPORTS CENTER					
Sum					33.90-
00001 HUB CITY SPOKES	96408 (A)	00201219 19006605 CITY WIDE ADS AND NOTICES	08/14/20	278332	207.26-

HUB CITY SPOKES					
Sum					207.26-
00001 HUGHES SUPPLY	S159233277.0	00200838 19006455 A/C SUPP TRAFF/CONST OFFICE	08/14/20	278333	98.75-

HUGHES SUPPLY					
Sum					98.75-
00001 INTERFACE SECURITY SYSTE	19758266	00201017 19006465 SECURITY 8/20 HILND CEMETERY	08/14/20	278335	34.34-
00001 INTERFACE SECURITY SYSTE	19763643	00201017 19006466 SECURITY 8/20 SOUTH HILL CEM	08/14/20	278335	31.15-

INTERFACE SECURITY SYSTE					
Sum					65.49-
00001 INTERPRETERS & TRANSLATO	137363	00200863 19006641 INTERPRETING SET UP FEE U DEV	08/14/20	278337	350.00-

INTERPRETERS & TRANSLATO					
Sum					350.00-
00001 JANI-KING OF SOUTH EAST	SEM07200249	00200763 19006548 DISINFECT PD/DISPATCH COVID19	08/14/20	278340	3,255.00-

JANI-KING OF SOUTH EAST					
Sum					3,255.00-
00001 JEFCOAT FENCE OF HATTIES	0022222	00199709 19006593 REPR GATES 706 WOODHAVEN DR	08/14/20	278341	650.00-

JEFCOAT FENCE OF HATTIES					
Sum					650.00-
00001 JOHNNY'S WRECKER SERVICE	40765	00201345 19006720 TOWING U#20070 SANIT	08/14/20	278343	350.00-

JOHNNY'S WRECKER SERVICE					
Sum					350.00-

00001 KEITHCO PETROLEUM	041516	00201061	19006585	DIESEL FOR P/W FUEL STATION	08/14/20	278346	4,091.29-

KEITHCO PETROLEUM							
Sum							4,091.29-
00001 KONE INC (MONTGOMERY KON	959478910	CI	00201294	19006666	YEARLY MNT 2020 CITY HALL	08/14/20	278348 2,369.91-
00001 KONE INC (MONTGOMERY KON	959478910	PI	00201294	19006667	YEARLY MNT 2020 PINE ST GARG	08/14/20	278348 2,369.91-

KONE INC (MONTGOMERY KON							
Sum							4,739.82-
00001 KRONOS INCORPORATED	11637513		00201255	19006664	SOFTWARE SUPPORT 6/2020	08/14/20	278349 9,451.52-
00001 KRONOS INCORPORATED	11637514		00201255	19006665	SOFTWARE LICENSES 7/2020	08/14/20	278349 130.00-

KRONOS INCORPORATED							
Sum							9,581.52-
00001 LAMAR CTY SHERIFF	JAIL 6/2020		00201094	19006532	INMATE HOUSING 6/2020	08/14/20	278351 60.00-

LAMAR CTY SHERIFF							
Sum							60.00-
00001 LANCASTER'S MACHINE & WE	024545		00201134	19006563	REPRS U#20067 PUBLIC WORKS	08/14/20	278352 250.00-

LANCASTER'S MACHINE & WE							
Sum							250.00-
00001 LARD OIL COMPANY	1049804-IN		00201165	19006645	MOTOR OIL/LUBE SUPP FIRE DEPT	08/14/20	278353 489.35-

LARD OIL COMPANY							
Sum							489.35-
00001 LAWRENCE PRINTING CO INC	49007		00200886	19006444	SPECIAL TAX ELECTION BALLOTS	08/14/20	278355 559.61-

LAWRENCE PRINTING CO INC							
Sum							559.61-
00001 LIGHTSEY & ASSOCIATES	25TH AVENUE		00201322	19006714	APPRAISAL 7TH & 25TH DRNGE	08/14/20	278357 2,250.00-

LIGHTSEY & ASSOCIATES							
Sum							2,250.00-
00001 LINEBARGER GOGGAN BLAIR	7/15/2020		02020740	19006523	POLICE FINES COLL.FEE	08/14/20	278358 670.90-
00001 LINEBARGER GOGGAN BLAIR	7/31/2020		02020757	19006707	POLICE FINES COLL.FEE	08/14/20	278358 287.50-

LINEBARGER GOGGAN BLAIR							
Sum							958.40-
00001 LOWE'S OF HATTIESBURG IN	936462-FHAQV		00200406	19006489	WATER COOLERS TRAFFIC DEPT	08/14/20	278360 94.92-
00001 LOWE'S OF HATTIESBURG IN	967907-FFYWA		00200321	19006491	BLINDS PUB WORKS BREAKROOM	08/14/20	278360 139.59-
00001 LOWE'S OF HATTIESBURG IN	977479-FHQGC		00200597	19006492	BREAKROOM APPLIANCES P/WORKS	08/14/20	278360 550.05-
00001 LOWE'S OF HATTIESBURG IN	967772-FHJQV		00200545	19006495	DOOR KEYPADS SANIT FRONT DOOR	08/14/20	278360 245.10-
00001 LOWE'S OF HATTIESBURG IN	936047-FGJAB		00200397	19006497	POWER TOOLS CEMETERY MECHANIC	08/14/20	278360 556.70-
00001 LOWE'S OF HATTIESBURG IN	953785-FGJAA		00200392	19006498	DEAD BOLT LOCK CEM MECH SHOP	08/14/20	278360 48.44-
00001 LOWE'S OF HATTIESBURG IN	924834-FITPY		00200750	19006499	BLDG MATLS/SUPP CEMETERY	08/14/20	278360 59.32-
00001 LOWE'S OF HATTIESBURG IN	611659-FFNNJ		00200173	19006500	WALL BLOCKS HIGHLAND CEMETERY	08/14/20	278360 263.20-

LOWE'S OF HATTIESBURG IN							
Sum							1,957.32-

00001 MAPLES GAS COMPANY	183061	00200904 19006440 GAS FOR P/W FUEL STATION	08/14/20	278363	8,374.63-
00001 MAPLES GAS COMPANY	183730	00201059 19006544 GAS FOR P/W FUEL STATION	08/14/20	278363	7,427.25-

MAPLES GAS COMPANY					
Sum					15,801.88-
00001 MCELHANEY PLUMBING INC	286158	00200959 19006517 PLUMB SUPP P/W ICE MACHINE	08/14/20	278366	59.58-
00001 MCELHANEY PLUMBING INC	286195	00201163 19006704 PLUMB SUPP #5 FIRE STA	08/14/20	278366	118.65-

MCELHANEY PLUMBING INC					
Sum					178.23-
00001 MCKESSON MEDICAL-SURGICA	17000283	00200730 19006447 COVID-19 HAND SANITIZER ACDMY	08/14/20	278368	139.00-

MCKESSON MEDICAL-SURGICA					
Sum					139.00-
00001 MEDICAL ANALYSIS-GHV	10538	00201297 19006668 EMP CLINIC FEES 8/2020	08/14/20	278373	30,275.52-

MEDICAL ANALYSIS-GHV					
Sum					30,275.52-
00001 METRO CRIMESTOPPERS INC	7/2020	02020731 19006468 CITY COURT COSTS 7/20	08/04/20	10095	711.84-

METRO CRIMESTOPPERS INC					
Sum					711.84-
00001 MILLS & SCANLON, P.A.	1292-0012M S	00201229 19006610 SRVS 2016 ANNEXATION	08/14/20	278374	8,078.08-

MILLS & SCANLON, P.A.					
Sum					8,078.08-
00001 MOLLY MAID	SERVS 8/2020	00201119 19006572 SERVS 8/2020 HILND CEMETERY	08/14/20	278376	245.00-

MOLLY MAID					
Sum					245.00-
00001 MORENO, JESSA	DAMAGE DEP R	02020747 19006628 DAMAGE DEPOSIT REFUND	08/14/20	278377	600.00-

MORENO, JESSA					
Sum					600.00-
00001 MS CITY/COUNTY MGMT ASSN	MBRSH P ELLAR	00201286 19006663 MBRSH P DUES ELLARD URBAN DEV	08/14/20	278378	50.00-

MS CITY/COUNTY MGMT ASSN					
Sum					50.00-
00001 MS DEPT OF PUBLIC SFTY/C	7/2020	02020733 19006483 7/20 FINE COLLECTIONS	08/04/20	10096	1,378.75-

MS DEPT OF PUBLIC SFTY/C					
Sum					1,378.75-
00001 MS FIRE & SAFETY OF HBUR	71953	00201308 19006653 INSTALL EMER LIGHT MUN COURT	08/14/20	278379	289.00-

MS FIRE & SAFETY OF HBUR					
Sum					289.00-
00001 MS POWER COMPANY	8/20 GENERAL	00202021 19006682 MNTHLY ELEC-GENERAL	08/14/20	278380	12,969.78-

MS POWER COMPANY					
Sum					12,969.78-

00001 MS STATE/TREASURER/FINAN 7/20	02020732 19006474 7/20 FINE COLLECTIONS	08/04/20	10097	30,165.50-
00001 MS STATE/TREASURER/FINAN 7/20	02020732 19006475 7/20 FINE COLLECTIONS	08/04/20	10097	3,408.65-
00001 MS STATE/TREASURER/FINAN 7/20	02020732 19006476 7/20 FINE COLLECTIONS	08/04/20	10097	3,313.42-
00001 MS STATE/TREASURER/FINAN 7/20	02020732 19006477 7/20 FINE COLLECTIONS	08/04/20	10097	626.51-
00001 MS STATE/TREASURER/FINAN 7/20	02020732 19006478 7/20 FINE COLLECTIONS	08/04/20	10097	185.27-
00001 MS STATE/TREASURER/FINAN 7/20	02020732 19006479 7/20 FINE COLLECTIONS	08/04/20	10097	172.22-
00001 MS STATE/TREASURER/FINAN 7/20	02020732 19006480 7/20 FINE COLLECTIONS	08/04/20	10097	1,309.83-
00001 MS STATE/TREASURER/FINAN 7/20	02020732 19006481 7/20 FINE COLLECTIONS	08/04/20	10097	243.43-
00001 MS STATE/TREASURER/FINAN 7/20	02020732 19006482 7/20 FINE COLLECTIONS	08/04/20	10097	9,599.25-

MS STATE/TREASURER/FINAN				
Sum				49,024.08-
00001 MS TURF 261583	00201026 19006543 GRASS SOD FOR CEMETERIES	08/14/20	278383	115.00-

MS TURF				
Sum				115.00-
00001 N & H ELECTRONIC DISTRIB 93780	00201033 19006547 ZIP TIES FOR EVIDENCE	08/14/20	278385	86.67-

N & H ELECTRONIC DISTRIB				
Sum				86.67-
00001 NAFECO-NORTH AMERICA FIR 1047663	00200461 19006486 PIKE POLES VARI FIRE UNITS	08/14/20	278386	398.87-
00001 NAFECO-NORTH AMERICA FIR 1047936	00200952 19006512 THERMAL CAMERA KITS FIRE DEPT	08/14/20	278386	1,218.00-

NAFECO-NORTH AMERICA FIR				
Sum				1,616.87-
00001 NEWELL PAPER COMPANY 4088010	00200848 19006485 JANIT SUPP POLICE DEPT	08/14/20	278389	868.09-
00001 NEWELL PAPER COMPANY 4087843	00200794 19006490 BREAKROOM SUPP/COPY PAPER P/W	08/14/20	278389	601.99-
00001 NEWELL PAPER COMPANY 4088650	00200889 19006646 COPY PAPER TRAFF/CONSTR DEPT	08/14/20	278389	244.64-

NEWELL PAPER COMPANY				
Sum				1,714.72-
00001 NICK'S HANDYMAN SERVICE PO#200626 8/	00200626 19006511 ROOF REPAIR P/F ACADEMY	08/14/20	278391	4,200.00-

NICK'S HANDYMAN SERVICE				
Sum				4,200.00-
00001 NORTH AMERICAN RESCUE HO IN458199	00201044 19006728 MEDICAL SUPP P/F ACADEMY	08/14/20	278392	626.16-

NORTH AMERICAN RESCUE HO				
Sum				626.16-
00001 O'REILLY AUTO PARTS 0943-304144	00199537 19006513 REPR PTS U#15064 FIRE DEPT	08/14/20	278393	66.84-

O'REILLY AUTO PARTS				
Sum				66.84-
00001 OFFICE DEPOT INC 104157008001	00200399 19006602 OFFICE SUPP CITY COUNCIL	08/14/20	278394	29.98-
00001 OFFICE DEPOT INC 104157009001	00200399 19006603 OFFICE SUPP CITY COUNCIL	08/14/20	278394	104.99-
00001 OFFICE DEPOT INC 104157012001	00200399 19006604 OFFICE SUPP CITY COUNCIL	08/14/20	278394	37.39-
00001 OFFICE DEPOT INC 512445565001	00199702 19006639 THERMOMETER COURT OFFICE	08/14/20	278394	59.99-
00001 OFFICE DEPOT INC 512445565001	00199701 19006640 OFFICE CHAIR BHC/DRUG COURT	08/14/20	278394	99.99-

OFFICE DEPOT INC				
Sum				332.34-

00001 OFFICE PRODUCTS PLUS	911194-0	00201167 19006644 OFFICE SUPP FIRE DEPT	08/14/20	278395	372.76-

OFFICE PRODUCTS PLUS					
Sum					372.76-
00001 OVERHEAD DOOR CO OF HBUR 109671		00200812 19006488 BAY DOOR REPR #1 FIRE STA	08/14/20	278398	644.01-

OVERHEAD DOOR CO OF HBUR					
Sum					644.01-
00001 OWENS BUSINESS MACHINES 403285		00201193 19006583 COPIER 8/2020-8/2021 PUB WRKS	08/14/20	278399	630.00-

OWENS BUSINESS MACHINES					
Sum					630.00-
00001 PARISH TRACTOR (HATTIESB 02-130998		00200609 19006561 REPR PTS U#16722/16733 P/W	08/14/20	278400	991.83-
00001 PARISH TRACTOR (HATTIESB 02-1279656		00200734 19006562 REPR PTS U#20373 PUBLIC WORKS	08/14/20	278400	251.12-

PARISH TRACTOR (HATTIESB					
Sum					1,242.95-
00001 PATTERSON AUTO ELECTRIC 80632		00200908 19006553 REPRS U#18316 POLICE	08/14/20	278402	229.00-
00001 PATTERSON AUTO ELECTRIC 80633		00200927 19006554 REPRS U#19347 POLICE	08/14/20	278402	112.50-

PATTERSON AUTO ELECTRIC					
Sum					341.50-
00001 PEANUTS TOWING SERVICE 94507		00201264 19006671 TOWING U#17315 POLICE	08/14/20	278403	65.00-

PEANUTS TOWING SERVICE					
Sum					65.00-
00001 PEARL RIVER VALLEY EPA (8/20 GENERAL		00202021 19006683 MNTHLY 8/20 PUBLIC SERVICES	08/14/20	278404	5,329.01-

PEARL RIVER VALLEY EPA (					
Sum					5,329.01-
00001 PINE BELT CDJR, INC (MCM 56301		00201252 19006703 REPR PTS U#20052 TRAFFIC	08/14/20	278407	47.80-

PINE BELT CDJR, INC (MCM					
Sum					47.80-
00001 PINE BELT INDUSTRIAL SUP 4181497-01		00200196 19006493 REPR PTS U#20067/MOWERS	08/14/20	278408	288.00-
00001 PINE BELT INDUSTRIAL SUP 4181519-01		00200223 19006496 MOWER REPR PTS HEALTH DIV	08/14/20	278408	26.00-

PINE BELT INDUSTRIAL SUP					
Sum					314.00-
00001 PINE BELT OIL COMPANY IN 10697261		00200903 19006441 DIESEL FOR P/W FUEL STATION	08/14/20	278409	4,707.19-
00001 PINE BELT OIL COMPANY IN POLICE 6/1-6		00201087 19006527 MINIT MART FUEL CHGS 6/2020	08/14/20	278409	1,261.34-
00001 PINE BELT OIL COMPANY IN FIRE 6/1-6/3		00201087 19006528 MINIT MART FUEL CHGS 6/2020	08/14/20	278409	1,286.56-
00001 PINE BELT OIL COMPANY IN CONSTR 6/1-6		00201087 19006529 MINIT MART FUEL CHGS 6/2020	08/14/20	278409	44.22-
00001 PINE BELT OIL COMPANY IN POLICE 7/1-7		00201088 19006530 MINIT MART FUEL CHGS 7/2020	08/14/20	278409	342.76-
00001 PINE BELT OIL COMPANY IN FIRE 7/1-7/3		00201088 19006531 MINIT MART FUEL CHGS 7/2020	08/14/20	278409	1,279.10-
00001 PINE BELT OIL COMPANY IN 1463665		00201137 19006565 GAS GALLON FEE PUBLIC WORKS	08/14/20	278409	436.46-

PINE BELT OIL COMPANY IN					
Sum					9,357.63-

00001	PINE BELT REGIONAL	SOLID	100006	6/202	00201282	19006680	SHORTAGE FOR 7/2020 BILLING	08/14/20	278410	.30-	
00001	PINE BELT REGIONAL	SOLID	100006	7/202	00201282	19006681	RUBBISH DISPOSAL 7/2020 SANIT	08/14/20	278410	42,339.94-	

PINE BELT REGIONAL SOLID											
Sum										42,340.24-	
00001	REGIONS	CARDHOLDER	SERVI	7079	7/31/20	00200610	19006629	MS ECO DEV MBRSHP DELGADO	08/14/20	278418	225.00-
00001	REGIONS	CARDHOLDER	SERVI	7079	7/31/20	00200563	19006630	OFFICE CHAIR ENGR DEPT	08/14/20	278418	320.99-
00001	REGIONS	CARDHOLDER	SERVI	7079	7/31/20	00201238	19006631	AD/DOMAIN SITE RIGHTS	08/14/20	278418	292.19-
00001	REGIONS	CARDHOLDER	SERVI	7079	7/31/20	00201239	19006632	ZOOM VIDEO CONF SERV 7/2020	08/14/20	278418	53.04-
00001	REGIONS	CARDHOLDER	SERVI	7079	7/31/20	00201179	19006633	LATE PAYMENT FEE	08/14/20	278418	67.16-
00001	REGIONS	CARDHOLDER	SERVI	7079	7/31/20	00200993	19006634	IPAD MOUNTS FIRE DEPT	08/14/20	278418	2,591.77-
00001	REGIONS	CARDHOLDER	SERVI	7079	7/31/20	00200188	19006635	ONLINE EXAM FEE JOHNSON LDC	08/14/20	278418	219.00-
00001	REGIONS	CARDHOLDER	SERVI	7079	7/31/20	00200381	19006636	WEBINARS JOHNSON LAND CODE	08/14/20	278418	245.00-
00001	REGIONS	CARDHOLDER	SERVI	7079	7/31/20	00200428	19006637	LAND RCORDS SUBSCRIPT LDC	08/14/20	278418	910.80-

REGIONS CARDHOLDER SERVI											
Sum										4,924.95-	
00001	RESCUE SOURCE			22786		00199898	19006579	WATER RESCUE EQUIP P/F ACDMY	08/14/20	278420	3,251.30-

RESCUE SOURCE											
Sum										3,251.30-	
00001	RICOH CORP			9028434004		00201014	19006449	COPIER 6/20 FIRE ADM	08/14/20	278423	192.00-
00001	RICOH CORP			5059467136		00201014	19006450	COPIER OVERAGES 4/20 FIRE ADM	08/14/20	278423	8.82-
00001	RICOH CORP			5059685608		00201014	19006451	COPIER OVERAGES 5/20 FIRE ADM	08/14/20	278423	28.43-
00001	RICOH CORP			5060082814	G	00201117	19006526	PRODUCTION PRINTER CHARGES	08/14/20	278423	77.91-
00001	RICOH CORP			5060135391		00201201	19006576	COPIER 7/2020 PLANNING DEPT	08/14/20	278423	145.16-
00001	RICOH CORP			9028520391		00201201	19006577	COPIER 8/2020 PLANNING DEPT	08/14/20	278423	232.90-
00001	RICOH CORP			33764497		00201200	19006582	COPIER 8/2020 LAND CODE	08/14/20	278423	110.00-
00001	RICOH CORP			5060135320		00201226	19006606	COPIER 7/1-31/2020 HUMAN RES	08/14/20	278423	139.02-
00001	RICOH CORP			33765732		00201305	19006657	COPIER 8/2020 MUN COURT	08/14/20	278423	287.51-
00001	RICOH CORP			5060135422		00201305	19006658	COPIER 7/2020 MUN COURT	08/14/20	278423	218.63-
00001	RICOH CORP			5060135398		00201295	19006673	COPIER 7/2020 LAND CODE	08/14/20	278423	203.17-
00001	RICOH CORP			5060135357		00201331	19006710	COPIER 7/20 FIRE ADM/PREV	08/14/20	278423	26.36-

RICOH CORP											
Sum										1,669.91-	
00001	RJ YOUNG COMPANY			INV3773618		00201157	19006555	COPIER 6/28-7/27 DETECTIVES	08/14/20	278424	487.60-
00001	RJ YOUNG COMPANY			INV3763990		00201304	19006659	COPIER 6/24-7/23 MUN COURT	08/14/20	278424	168.00-
00001	RJ YOUNG COMPANY			INV3787004		00201263	19006662	COPIER 7/5-8/4 CITY CLERK	08/14/20	278424	204.00-

RJ YOUNG COMPANY											
Sum										859.60-	
00001	RODCO, LLC			1658		00201288	19006672	PLAN REVIEWS 8/20 LAND CODE	08/14/20	278427	1,262.60-

RODCO, LLC											
Sum										1,262.60-	
00001	ROGERS, KEVIN			TITLE OPINIO		00201236	19006612	(4) TITLE OPINIONS LAND CODE	08/14/20	278430	1,000.00-

ROGERS, KEVIN											
Sum										1,000.00-	

00001 SANSOM EQUIPMENT CO	62637	00199641 19006461 REPRS U#20072 SANIT	08/14/20	278432	255.00-
00001 SANSOM EQUIPMENT CO	P00129	00200410 19006462 REPR PTS U#20091 SANIT	08/14/20	278432	174.35-
00001 SANSOM EQUIPMENT CO	62475	00199098 19006463 REPR PTS U#20090/20072 SANIT	08/14/20	278432	2,775.10-
00001 SANSOM EQUIPMENT CO	P00153	00200933 19006521 CAMERAS VARI SANIT UNITS	08/14/20	278432	1,025.00-
00001 SANSOM EQUIPMENT CO	P00181	00200359 19006522 REPR PTS U#20071 SANIT	08/14/20	278432	553.88-

SANSOM EQUIPMENT CO					
Sum					4,783.33-
00001 SCOTTS HYDRAULIC SERVICE	42039	00200388 19006740 REPRS U#15893 SANIT	08/14/20	278434	1,523.02-

SCOTTS HYDRAULIC SERVICE					
Sum					1,523.02-
00001 SEMACONNECT INC	NWS-2007536	00201321 19006713 NETWORK SERV RNWL ENGR DEPT	08/14/20	278435	480.00-

SEMACONNECT INC					
Sum					480.00-
00001 SEMPPE, MICHAEL J PLLC	INVOICE #13	00201309 19006655 PROTEM SERVS 7/22/2020	08/14/20	278437	125.00-

SEMPPE, MICHAEL J PLLC					
Sum					125.00-
00001 SHOWS DEARMAN & WAITS IN	21576	00201311 19006677 SRVS 105 SHADY LANE DRAINAGE	08/14/20	278439	845.00-
00001 SHOWS DEARMAN & WAITS IN	21554	00201314 19006678 SRVS 402 N 21ST DRAINAGE	08/14/20	278439	4,497.50-

SHOWS DEARMAN & WAITS IN					
Sum					5,342.50-
00001 SMITH, JIM SERVICES	90565	00200526 19006643 A/C REPAIR POLICE ADM AREA	08/14/20	278441	3,067.22-

SMITH, JIM SERVICES					
Sum					3,067.22-
00001 SOLAR SUPPLY INC	3431537	00201007 19006651 A/C REPAIR PARTS AIRPORT	08/14/20	278442	28.24-

SOLAR SUPPLY INC					
Sum					28.24-
00001 SOUTHERN FINANCIAL SYSTE	CMCHAT3 7/16	002020738 19006524 POLICE FINES COLL.FEE	08/14/20	278444	917.92-
00001 SOUTHERN FINANCIAL SYSTE	CMCHAT2 7/16	002020739 19006525 POLICE FINES COLL.FEE	08/14/20	278444	148.70-

SOUTHERN FINANCIAL SYSTE					
Sum					1,066.62-
00001 SOUTHERN MS PINE STRAW	12194	00200442 19006502 PINE STRAW CITY HALL GRNDS	08/14/20	278445	165.00-
00001 SOUTHERN MS PINE STRAW	12193	00200444 19006503 PINE STRAW TRAIN DEPOT GRNDS	08/14/20	278445	275.00-

SOUTHERN MS PINE STRAW					
Sum					440.00-
00001 SOUTHERN PINE ELECTRIC P	8/20 GENERAL	00202020 19006684 MNTHLY 8/20 PUBLIC SERVICES	08/14/20	278448	1,306.70-

SOUTHERN PINE ELECTRIC P					
Sum					1,306.70-

00001 SOUTHERN TIRE MART LLC (2520040920	00201072 19006542 TIRES VARI SANIT UNITS	08/14/20	278449	2,599.20-
00001 SOUTHERN TIRE MART LLC (2520041404	00201248 19006734 TRAILER TIRES PUBLIC WORKS	08/14/20	278449	2,122.00-
00001 SOUTHERN TIRE MART LLC (2520040790	00200689 19006735 TIRE REPR SUPP P/W SHOP	08/14/20	278449	237.84-

SOUTHERN TIRE MART LLC (				
Sum				4,959.04-
00001 SPEEDY PRINTING & SIGNS 27997	00200775 19006453 STREET SIGNS TRAFFIC DEPT	08/14/20	278451	412.00-
00001 SPEEDY PRINTING & SIGNS 28005	00200793 19006454 STREET MARKERS TRAFFIC DEPT	08/14/20	278451	60.00-
00001 SPEEDY PRINTING & SIGNS 28035	00200987 19006514 STREET MARKERS TRAFFIC DEPT	08/14/20	278451	188.00-
00001 SPEEDY PRINTING & SIGNS 28043	00201021 19006559 STREET MARKERS TRAFFIC DEPT	08/14/20	278451	1,248.00-
00001 SPEEDY PRINTING & SIGNS 28095	00201237 19006731 STREET MARKERS TRAFFIC DEPT	08/14/20	278451	516.00-

SPEEDY PRINTING & SIGNS				
Sum				2,424.00-
00001 SPIRE ENERGY 8/20 GENERAL	00202021 19006685 MNTHLY GAS-GENERAL	08/14/20	278452	889.43-

SPIRE ENERGY				
Sum				889.43-
00001 STANDARD OFFICE SUPPLY C 5202050-0	00200905 19006586 OFFICE SUPP CITY CLERK/TAX	08/14/20	278454	98.33-
00001 STANDARD OFFICE SUPPLY C 5202050-1	00200905 19006587 OFFICE SUPP CITY CLERK/TAX	08/14/20	278454	230.83-
00001 STANDARD OFFICE SUPPLY C 5202052-0	00200905 19006588 OFFICE SUPP CITY CLERK/TAX	08/14/20	278454	10.90-

STANDARD OFFICE SUPPLY C				
Sum				340.06-
00001 STATE FIRE ACADEMY 28281	00201042 19006448 HFD CPAT TESTS NEW RECRUITS	08/14/20	278455	920.00-

STATE FIRE ACADEMY				
Sum				920.00-
00001 TAYLOR RENTAL CENTER 1-315402-05	00200027 19006445 COVID-19 TEST SITE TENT RENTL	08/14/20	278457	2,006.40-

TAYLOR RENTAL CENTER				
Sum				2,006.40-
00001 TEMPLE INC INV0196713 F	00201298 19006674 FREIGHT CHARGE PO#195473	08/14/20	278458	254.75-

TEMPLE INC				
Sum				254.75-
00001 TRAFFIC SAFETY WAREHOUSE 76961A FRT	00201121 19006560 FREIGHT CHARGE PO#200660	08/14/20	278460	1,250.00-

TRAFFIC SAFETY WAREHOUSE				
Sum				1,250.00-
00001 TRUCKPRO LLC 039-0682365	00200579 19006487 BRAKE REPR PTS VARI FIRE UNITS	08/14/20	278461	384.92-

TRUCKPRO LLC				
Sum				384.92-
00001 TURNER SUPPLY COMPANY (H 3089549-00	00200796 19006494 CHOP SAW P/W SHOP	08/14/20	278462	206.35-

TURNER SUPPLY COMPANY (H				
Sum				206.35-

00001 UNIVERSITY TIRE & SERVIC INV157611	00201023 19006456 AIR COMPRESSOR TIRE TRAFF DEP	08/14/20	278463	41.61-
00001 UNIVERSITY TIRE & SERVIC INV158000	00201142 19006558 TIRES/REPRS U#14638 LAND CODE	08/14/20	278463	1,226.86-

UNIVERSITY TIRE & SERVIC				
Sum				
00001 V F W OF THE US	PARKING SPAC 00201240 19006626 PARKING SPACES 8/2020	08/14/20	278464	1,268.47-

V F W OF THE US				
Sum				
00001 WAGE HOUR ASSESSMENTS AN CH 020-01	00201032 19006446 EMPLOYEE HANDBOOK REVIEW	08/14/20	278465	75.00-

WAGE HOUR ASSESSMENTS AN				
Sum				
00001 WASTE MANAGEMENT OF SOUT 0012266-2526	00201342 19006719 RUBBISH DISPOSAL 7/16-31 SANI	08/14/20	278468	2,681.25-

WASTE MANAGEMENT OF SOUT				
Sum				
00001 WASTE OIL COLLECTORS INC 0023979	00201018 19006573 WASTE OIL REMOVAL HILND CEM	08/14/20	278469	1,957.78-

WASTE OIL COLLECTORS INC				
Sum				
00001 WATCH GUARD VIDEO	ACCINV002651 00200948 19006642 SLIDE LATCHES POLICE DEPT	08/14/20	278470	250.00-
00001 WATCH GUARD VIDEO	ADVREP193737 00200722 19006702 REPAIR VISTA CAMERA POLICE	08/14/20	278470	134.50-

WATCH GUARD VIDEO				
Sum				
00001 WATER FLOW PRODUCTIONS I 21465 PO#200	00200105 19006594 DRAINAGE REPR 706 WOODHAVEN	08/14/20	278471	809.50-

WATER FLOW PRODUCTIONS I				
Sum				
00001 98 WASTE LLC	2821 00201327 19006718 RUBBISH DISPOSAL 7/1-31 SANIT	08/14/20	278479	9,760.00-

98 WASTE LLC				
Sum				

Sum				

1,479,190.46-				

CITY OF HATTIESBURG

DOCKET OF CLAIMS

PERIOD ENDING AUGUST 14, 2020

Date - 08/12/20

Vendor	Invoice Number	Purchase Order	Claims Number	Item Description	Check Date	Check No.	Check Amount
PARKS & RECREATION FUND							
00002 A & R FARM AND GARDEN	349831	00200939	19001493	CHEMICALS GRNDS MAINT	08/14/20	278220	188.00-

A & R FARM AND GARDEN							
Sum							188.00-
00002 AIRGAS USA LLC (NORDAN S	9972603763	00201262	19001528	CYLINDER RENT GRNDS MAINT	08/14/20	278224	55.70-

AIRGAS USA LLC (NORDAN S							
Sum							55.70-
00002 ALLBRITTON CHAIN SAW & L	73430	00200943	19001496	WEEDEATER STRAPS GRNDS MAINT	08/14/20	278225	89.70-

ALLBRITTON CHAIN SAW & L							
Sum							89.70-
00002 AMERICAN APPLIANCE & SUP	4997	00201131	19001523	HANDLE SET TATUM REC OFFICE	08/14/20	278228	40.08-

AMERICAN APPLIANCE & SUP							
Sum							40.08-
00002 AUTOMOTIVE GLASS SPECIAL	I238248	00200857	19001505	WINDOW REPR U#18558 TRUCK	08/14/20	278242	348.00-

AUTOMOTIVE GLASS SPECIAL							
Sum							348.00-
00002 BLUE DOLPHIN POOLS	40182	00201120	19001506	FOUNTAIN MAINT VARI LOC	08/14/20	278251	600.00-

BLUE DOLPHIN POOLS							
Sum							600.00-
00002 BRACKMAN MOWER WAREHOUSE	55688	00200511	19001481	MOWER TIRE GRNDS MAINT	08/14/20	278254	190.00-
00002 BRACKMAN MOWER WAREHOUSE	55677	00200811	19001482	REPRS U#20232 MOWER	08/14/20	278254	709.24-
00002 BRACKMAN MOWER WAREHOUSE	55680	00200814	19001483	REPRS U#20323 MOWER	08/14/20	278254	225.00-
00002 BRACKMAN MOWER WAREHOUSE	55678	00200815	19001484	MOWER RPLCMNT BELT	08/14/20	278254	110.00-
00002 BRACKMAN MOWER WAREHOUSE	55580	00200879	19001485	REPRS U#19303 MOWER	08/14/20	278254	104.00-
00002 BRACKMAN MOWER WAREHOUSE	55684	00200880	19001486	REPRS U#21096 MOWER	08/14/20	278254	305.00-
00002 BRACKMAN MOWER WAREHOUSE	55675	00200941	19001487	WEEDEATER REPR PTS/SUPP	08/14/20	278254	305.00-
00002 BRACKMAN MOWER WAREHOUSE	55933	00201037	19001501	REPRS U#20234 MOWER	08/14/20	278254	302.73-
00002 BRACKMAN MOWER WAREHOUSE	55934	00201056	19001502	REPRS U#19303 MOWER	08/14/20	278254	109.00-
00002 BRACKMAN MOWER WAREHOUSE	55983	00201126	19001508	LUBRICANTS/WEEDEATER SUPP	08/14/20	278254	1,042.00-

BRACKMAN MOWER WAREHOUSE							
Sum							3,401.97-
00002 CINTAS CORPORATION #J66	4056684934	00201184	19001510	MOP/MAT 7/23 GRNDS MAINT	08/14/20	278273	19.51-
00002 CINTAS CORPORATION #J66	4057356435	00201184	19001511	MOP/MAT 7/30 GRNDS MAINT	08/14/20	278273	19.51-
00002 CINTAS CORPORATION #J66	4057967132	00201184	19001512	MOP/MAT 8/06 GRNDS MAINT	08/14/20	278273	19.51-

00002 CINTAS CORPORATION #J66	4056685129	00201184 19001513 UNIFORMS 7/23 GRNDS MAINT	08/14/20	278273	129.55-
00002 CINTAS CORPORATION #J66	4057356478	00201184 19001514 UNIFORMS 7/30 GRNDS MAINT	08/14/20	278273	129.93-
00002 CINTAS CORPORATION #J66	4057967485	00201184 19001515 UNIFORMS 8/06 GRNDS MAINT	08/14/20	278273	129.93-

CINTAS CORPORATION #J66					
Sum					447.94-
00002 CITY OF HATTIESBURG FUND TRF 1ST 8/20	02020755 19001527 TRF 1ST 8/20 PAYROLL	08/12/20	20023	61,221.61-	

CITY OF HATTIESBURG FUND					
Sum					61,221.61-
00002 CLEMTS HARDWARE	125690	00200938 19001497 TIE DOWN STRAPS GRNDS MAINT	08/14/20	278276	80.97-

CLEMTS HARDWARE					
Sum					80.97-
00002 COURTNEY'S RESTAURANT EQ 13553	00201182 19001509 WTR LEAK REPR CAMERON FIELD	08/14/20	278284	90.00-	

COURTNEY'S RESTAURANT EQ					
Sum					90.00-
00002 CROSSROADS DECORATIVE PA 290	00200177 19001519 CROSSWALK REHAB MAIN & PINE	08/14/20	278286	4,850.75-	

CROSSROADS DECORATIVE PA					
Sum					4,850.75-
00002 EATON, ALVIN K (PETTY CA PETTY CASH 7	00201048 19001478 PETTY CASH 7/20 PKS/REC	08/14/20	278300	29.95-	

EATON, ALVIN K (PETTY CA					
Sum					29.95-
00002 ECONOMY SUPPLY CO	038529	00201055 19001524 BLDG MATLS TATUM TENNIS	08/14/20	278304	230.45-

ECONOMY SUPPLY CO					
Sum					230.45-
00002 EXCEL INDUSTRIES INC	2301254	00200510 19001533 LAWNMOWER GRNDS MAINT	08/14/20	278309	11,999.00-

EXCEL INDUSTRIES INC					
Sum					11,999.00-
00002 HAVARD PEST CONTROL INC	1631917	00020209 19001532 QTRLY SRV DAHMER POOL	08/14/20	278322	48.00-

HAVARD PEST CONTROL INC					
Sum					48.00-
00002 JERRY'S AUTOMOTIVE REPAI	20676	00200808 19001479 REPRS U#8937 TRUCK	08/14/20	278342	159.85-
00002 JERRY'S AUTOMOTIVE REPAI	20694	00201113 19001517 REPRS U#8937 TRUCK	08/14/20	278342	111.50-

JERRY'S AUTOMOTIVE REPAI					
Sum					271.35-
00002 KEELING COMPANY (HATTIES	S3807648.001	00200705 19001504 PLUMB SUPP GRNDS MAINT	08/14/20	278345	275.16-

KEELING COMPANY (HATTIES					
Sum					275.16-
00002 KINSEY WELDING	5188	00201273 19001529 REPR TATUM SOCCER GOALS	08/14/20	278347	740.00-

KINSEY WELDING					
Sum					740.00-

00002 LANCASTER'S MACHINE & WE	024525	00200989 19001499 REPRS U#6785 TRAILER	08/14/20	278352	125.00-

LANCASTER'S MACHINE & WE					
Sum					125.00-
00002 MCELHANEY PLUMBING INC	283852	00201216 19001525 PLUMB SUPP CHAIN PARK	08/14/20	278366	83.05-

MCELHANEY PLUMBING INC					
Sum					83.05-
00002 MS POWER COMPANY	8/20 PKS/REC	00202021 19001530 MNTHLY ELEC-PARKS & REC	08/14/20	278380	1,167.38-

MS POWER COMPANY					
Sum					1,167.38-
00002 NEWELL PAPER COMPANY	4088571	00201034 19001526 FACE SHIELDS COMM CENTERS	08/14/20	278389	51.70-

NEWELL PAPER COMPANY					
Sum					51.70-
00002 PHILLIPS BARK PROCESSING	140539	00200919 19001503 MULCH SUPP CITY FLOWER BEDS	08/14/20	278405	1,435.00-

PHILLIPS BARK PROCESSING					
Sum					1,435.00-
00002 PIERCE PLUMBING INC	604916	00201123 19001518 WTR HEATER REPR TATUM TENNIS	08/14/20	278406	1,208.46-

PIERCE PLUMBING INC					
Sum					1,208.46-
00002 REGIONS CARDHOLDER SERVI	7079 7/31/20	00200764 19001522 PKS/REC CREDIT CARD FEES	08/14/20	278418	189.80-

REGIONS CARDHOLDER SERVI					
Sum					189.80-
00002 RJM MCQUEEN CONTRACTING	2203	00200176 19001520 CROSSWALK REHAB MAIN & PINE	08/14/20	278425	10,436.80-
00002 RJM MCQUEEN CONTRACTING	2204	00200343 19001521 SAENGER THEATER ALLEY STAMPNG	08/14/20	278425	18,000.40-

RJM MCQUEEN CONTRACTING					
Sum					28,437.20-
00002 SOUTHERN MS PINE STRAW	12461	00201090 19001516 PINE STRAW GRNDS MAINT	08/14/20	278445	500.00-

SOUTHERN MS PINE STRAW					
Sum					500.00-
00002 SOUTHERN ON SITE STORAGE	69766	00196105 19001492 PORTALETTS/HANDWASH STATIONS	08/14/20	278447	1,131.00-

SOUTHERN ON SITE STORAGE					
Sum					1,131.00-
00002 SOUTHERN TIRE MART LLC (	2520039060	00200584 19001480 TIRE/REPRS U#18558 TRUCK	08/14/20	278449	757.31-
00002 SOUTHERN TIRE MART LLC (	2520039434	00200990 19001488 TIRES U#21097 MOWER	08/14/20	278449	35.00-
00002 SOUTHERN TIRE MART LLC (	2520038887	00200990 19001489 TIRE REPR U#21097 MOWER	08/14/20	278449	12.00-
00002 SOUTHERN TIRE MART LLC (	2520040138	00200992 19001490 TIRES U#18561 MOWER	08/14/20	278449	106.00-
00002 SOUTHERN TIRE MART LLC (	2520038590	00200991 19001491 FLAT REPR U#21153 TRUCK	08/14/20	278449	19.95-
00002 SOUTHERN TIRE MART LLC (	2520038073(A	00200230 19001494 TIRE/ALIGN U#14127 TRUCK	08/14/20	278449	267.40-
00002 SOUTHERN TIRE MART LLC (	2520039345	00200728 19001495 BRAKE REPR PTS U#16048 TRUCK	08/14/20	278449	474.99-
00002 SOUTHERN TIRE MART LLC (	2520038073	00201060 19001498 ADDL AMT DUE PO#200230	08/14/20	278449	987.93-

SOUTHERN TIRE MART LLC (					
Sum					2,660.58-

00002 SPIRE ENERGY	8/20 PKS/REC 00202021 19001531 MNTHLY GAS-PARKS & REC	08/14/20	278452	20.00-

SPIRE ENERGY				
Sum				20.00-
00002 WATER FLOW PRODUCTIONS I 11488	00201118 19001507 IRRIGATION REPR TATUM PARK	08/14/20	278471	918.70-

WATER FLOW PRODUCTIONS I				
Sum				918.70-

Sum				122,936.50-

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HATT.MUNICIPAL FIRE PROTECTION

00005	TRUSTMARK NATIONAL BANK/	NOTE	22568	02020737	19000031	FIRE TRK LEASE PYMT	8/2020	08/04/20	50013	16,377.44-
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TRUSTMARK NATIONAL BANK/

Sum	16,377.44-
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Sum	16,377.44-
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CITY OF HATTIESBURG

DOCKET OF CLAIMS

Date - 08/12/20

PERIOD ENDING AUGUST 14, 2020

Vendor	Invoice Number	Purchase Order	Claims Number	Item Description	Check Date	Check No.	Check Amount
WATER & SEWER OPERATION/MAINT.							
00009 ALLBRITTON CHAIN SAW & L	73270	00200973	19001685	MOWER PTS/REPRS WTR PLANT	08/14/20	278225	237.38-
00009 ALLBRITTON CHAIN SAW & L	73271	00200973	19001686	MOWER PTS/REPRS WTR PLANT	08/14/20	278225	224.08-
00009 ALLBRITTON CHAIN SAW & L	73273	00200973	19001687	MOWER PTS/REPRS WTR PLANT	08/14/20	278225	248.29-
00009 ALLBRITTON CHAIN SAW & L	73272	00200973	19001688	MOWER BLADES WTR PLANT	08/14/20	278225	432.00-

ALLBRITTON CHAIN SAW & L							1,141.75-
Sum							
00009 ALLIED UNIVERSAL CORP	I1645497	00200831	19001704	CHEMICALS NORTH LAGOON	08/14/20	278226	2,691.45-
00009 ALLIED UNIVERSAL CORP	I1645498	00200831	19001705	CHEMICALS SOUTH LAGOON	08/14/20	278226	6,068.60-

ALLIED UNIVERSAL CORP							8,760.05-
Sum							
00009 BLOSSMAN GAS INC	10722720	00201261	19001746	PROPANE PLANT FORKLIFT	08/14/20	278250	104.00-

BLOSSMAN GAS INC							104.00-
Sum							
00009 BONNER ANALYTICAL TESTIN	72144	00201215	19001714	COLIFORM TESTS S 22ND AVE	08/14/20	278252	106.00-
00009 BONNER ANALYTICAL TESTIN	72156	00201243	19001725	NPDES MONITORING 7/2020 LGNS	08/14/20	278252	1,845.83-
00009 BONNER ANALYTICAL TESTIN	72173	00201336	19001744	COLIFORM TEST RIDGEWAY/21ST	08/14/20	278252	53.00-

BONNER ANALYTICAL TESTIN							2,004.83-
Sum							
00009 CARQUEST AUTO PARTS STOR	14758-145473	00201069	19001711	REPR PTS U#18587 SEWER	08/14/20	278264	15.06-
00009 CARQUEST AUTO PARTS STOR	14758-145509	00201092	19001731	REPR PTS U#20056 WTR PLANT	08/14/20	278264	129.40-
00009 CARQUEST AUTO PARTS STOR	14758-145854	00201242	19001743	REPR PTS U#14712 PLANT	08/14/20	278264	201.96-
00009 CARQUEST AUTO PARTS STOR	14758-148918	00201189	19001747	REPR PTS U#19778 LAGOON	08/14/20	278264	394.34-

CARQUEST AUTO PARTS STOR							740.76-
Sum							
00009 CENTRAL PIPE SUPPLY INC	S100224322.0	00200833	19001684	BADGER METER PTS WTR BILLING	08/14/20	278265	345.00-
00009 CENTRAL PIPE SUPPLY INC	S100223262.0	00200832	19001690	METER BOX LIDS WTR TRANS	08/14/20	278265	1,798.20-
00009 CENTRAL PIPE SUPPLY INC	S100224398.0	00200893	19001691	PLUMB SUPP TRANS STOCK	08/14/20	278265	7,113.60-

CENTRAL PIPE SUPPLY INC							9,256.80-
Sum							
00009 CINTAS CORPORATION #J66	4057574626	00201074	19001699	UNIFORMS 8/03 PLANT	08/14/20	278273	88.27-
00009 CINTAS CORPORATION #J66	4057574626	00201074	19001700	UNIFORMS 8/03 SEWER	08/14/20	278273	28.80-
00009 CINTAS CORPORATION #J66	4057574626	00201074	19001701	UNIFORMS 8/03 SEWER	08/14/20	278273	104.85-
00009 CINTAS CORPORATION #J66	4057574626	00201074	19001702	UNIFORMS 8/03 LAGOON	08/14/20	278273	19.36-
00009 CINTAS CORPORATION #J66	4057574349	00201076	19001703	MOP/MAT 8/03 PLANT	08/14/20	278273	21.88-
00009 CINTAS CORPORATION #J66	4058214296	00201250	19001719	UNIFORMS 8/10 PLANT	08/14/20	278273	46.27-
00009 CINTAS CORPORATION #J66	4058214296	00201250	19001720	UNIFORMS 8/10 SEWER	08/14/20	278273	28.80-
00009 CINTAS CORPORATION #J66	4058214296	00201250	19001721	UNIFORMS 8/10 SEWER	08/14/20	278273	104.85-
00009 CINTAS CORPORATION #J66	4058214296	00201250	19001722	UNIFORMS 8/10 LAGOON	08/14/20	278273	19.36-
00009 CINTAS CORPORATION #J66	4058213780	00201249	19001723	MOP/MAT 8/10 PLANT	08/14/20	278273	21.88-

00009 CINTAS CORPORATION #J66	4057574951	00201279 19001733 UNIFORMS 8/03 WTR SERVICE MEN	08/14/20	278273	75.92-
00009 CINTAS CORPORATION #J66	4058214626	00201279 19001734 UNIFORMS 8/10 WTR SERVICE MEN	08/14/20	278273	47.92-

CINTAS CORPORATION #J66					
Sum					608.16-
00009 CITY OF HATTIESBURG FUND TRF 1ST 8/20	02020755 19001732 TRF 1ST 8/20 PAYROLL	08/12/20	90024	100,788.84-	

CITY OF HATTIESBURG FUND					
Sum					100,788.84-
00009 COURTNEY'S RESTAURANT EQ 13405	00201224 19001717 ICE MACH MAINT WTR BILLING	08/14/20	278284	236.89-	

COURTNEY'S RESTAURANT EQ					
Sum					236.89-
00009 HAVARD PEST CONTROL INC 1631922	00020209 19001739 QTRLY SRV WATER OFFICE	08/14/20	278322	45.00-	
00009 HAVARD PEST CONTROL INC 1631941	00020209 19001740 QTRLY SRV WTR WRKS JAMES	08/14/20	278322	50.00-	
00009 HAVARD PEST CONTROL INC 1631943	00020209 19001741 QTRLY SRV E LAUREL SWR	08/14/20	278322	40.00-	

HAVARD PEST CONTROL INC					
Sum					135.00-
00009 L & A CONTRACTING CO 483-165	00201116 19001712 AERATOR MNT 7/13-26 LAGOONS	08/14/20	278350	54,243.96-	

L & A CONTRACTING CO					
Sum					54,243.96-
00009 LOWE'S OF HATTIESBURG IN 936543-FFJBH	00200237 19001692 UTILITY CORD WTR PLANT	08/14/20	278360	63.63-	

LOWE'S OF HATTIESBURG IN					
Sum					63.63-
00009 MCELHANEY PLUMBING INC 285767	00200674 19001706 WATER COOLERS LAGOONS CREW	08/14/20	278366	209.45-	

MCELHANEY PLUMBING INC					
Sum					209.45-
00009 MILLS & SCANLON, P.A. 1292-0011M S	00201230 19001724 SERVS SEWER CONTRACTS	08/14/20	278374	28.00-	

MILLS & SCANLON, P.A.					
Sum					28.00-
00009 MS POWER COMPANY 8/20 W&SO&M	00202021 19001735 MNTHLY ELEC-W&SO&M	08/14/20	278380	36,825.24-	

MS POWER COMPANY					
Sum					36,825.24-
00009 MS STATE/DEPT OF HEALTH MS0180008 7/	00201214 19001715 ANNUAL WTR QUAL ANALYSIS FEE	08/14/20	278381	40,000.00-	

MS STATE/DEPT OF HEALTH					
Sum					40,000.00-
00009 MS STATE/TAX COMM/TAX EX PO#201245 8/	00201245 19001718 TAGS U#21592 & #21593 WTR PLT	08/14/20	278382	24.00-	

MS STATE/TAX COMM/TAX EX					
Sum					24.00-
00009 NEWELL PAPER COMPANY 4088042	00200926 19001689 JANIT SUPP/PAPER WTR BILLING	08/14/20	278389	518.32-	

NEWELL PAPER COMPANY					
Sum					518.32-

00009 SUNSET CHRYSLER DODGE JE WH2239	00201080 19001745 DELIVERY CHG TWO NEW TRUCKS	08/14/20	278456	598.50-

SUNSET CHRYSLER DODGE JE				598.50-
Sum				394.91-
00009 UNIVERSITY TIRE & SERVIC INV158320	00201185 19001742 TIRES U#21416 WTR BILLING	08/14/20	278463	394.91-

UNIVERSITY TIRE & SERVIC				394.91-
Sum				-----
Sum				344,653.03-

Date - 08/12/20

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Claims
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Check
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WATER & SEWER B & I

00010 TRUSTMARK NATIONAL BANK 200801-28808 02020741 19000013 PAYING AGENT FEES

08/05/20

100002

1,500.00-

TRUSTMARK NATIONAL BANK

Sum

1,500.00-

Sum

1,500.00-

00011 BLACKWELL, RODNEY HAYS	METER DEP RF 02020751 19000770	METER DEPOSIT REFUND	08/14/20	278249	75.00-

BLACKWELL, RODNEY HAYS					75.00-
Sum					75.00-
00011 BRASS APPLE HOLDINGS 804	METER DEP RF 02020751 19000758	METER DEPOSIT REFUND	08/14/20	278255	75.00-

BRASS APPLE HOLDINGS 804					75.00-
Sum					2.20-
00011 BREAD, SHANNON	METER DEP RF 02020751 19000751	METER DEPOSIT REFUND	08/14/20	278256	2.20-

BREAD, SHANNON					2.20-
Sum					75.00-
00011 BRYAN WHITE AGENCY	METER DEP RF 02020751 19000719	METER DEPOSIT REFUND	08/14/20	278257	75.00-

BRYAN WHITE AGENCY					75.00-
Sum					300.00-
00011 CITIZENS BANK	METER DEP RF 02020751 19000764	METER DEPOSIT REFUND	08/14/20	278274	300.00-

CITIZENS BANK					300.00-
Sum					91,667.00-
00011 CITY OF HATTIESBURG FUND 010000.0160.	02020730 19000700	7/20 WATER DIST AUGUST	08/04/20	110050	91,667.00-

CITY OF HATTIESBURG FUND					91,667.00-
Sum					228,000.00-
00011 CITY OF HATTIESBURG FUND 010000.0160.	02020730 19000701	7/20 WATER DIST AUGUST	08/04/20	110051	228,000.00-

CITY OF HATTIESBURG FUND					228,000.00-
Sum					299,503.74-
00011 CITY OF HATTIESBURG FUND 075000.0160	02020729 19000699	7/20 WATER DIST AUGUST	08/04/20	110052	299,503.74-

CITY OF HATTIESBURG FUND					299,503.74-
Sum					349.20-
00011 CREEL, AMBER	WTR OVRPYMT 02020727 19000698	WATER OVERPAYMENT REFUND	08/14/20	278285	349.20-

CREEL, AMBER					40.00-
Sum					75.00-
00011 CURRY, WES	METER DEP RF 02020751 19000714	METER DEPOSIT REFUND	08/14/20	278287	75.00-

CURRY, WES					40.00-
Sum					75.00-
00011 DEDEAUX, DOROTHY HUDSON	METER DEP RF 02020751 19000725	METER DEPOSIT REFUND	08/14/20	278289	75.00-

DEDEAUX, DOROTHY HUDSON					75.00-
Sum					75.00-
00011 DEUS, ALLISON	METER DEP RF 02020751 19000776	METER DEPOSIT REFUND	08/14/20	278291	75.00-

DEUS, ALLISON					20.96-
Sum					20.96-
00011 DICKENS,TERESA	METER DEP RF 02020751 19000727	METER DEPOSIT REFUND	08/14/20	278292	20.96-

DICKENS,TERESA					20.96-
Sum					20.96-

00011 DOLEAC, JOSHUA	METER DEP RF 02020751 19000736 METER DEPOSIT REFUND	08/14/20	278294	75.00-

DOLEAC, JOSHUA				
Sum				75.00-
00011 DR MARTIN H BAKER	WTR OVRPMT R 02020750 19000704 WATER OVERPAYMENT REFUND	08/14/20	278295	516.17-
00011 DR MARTIN H BAKER	METER DEP RF 02020751 19000707 METER DEPOSIT REFUND	08/14/20	278295	100.00-

DR MARTIN H BAKER				
Sum				616.17-
00011 DUPRE, BLAIR	METER DEP RF 02020751 19000757 METER DEPOSIT REFUND	08/14/20	278296	75.00-

DUPRE, BLAIR				
Sum				75.00-
00011 EASTERLING, CLAUDE	METER DEP RF 02020751 19000748 METER DEPOSIT REFUND	08/14/20	278297	75.00-

EASTERLING, CLAUDE				
Sum				75.00-
00011 ENGLISH STEPHEN HOUSE	METER DEP RF 02020751 19000723 METER DEPOSIT REFUND	08/14/20	278307	20.96-

ENGLISH STEPHEN HOUSE				
Sum				20.96-
00011 FENDLEY, SETH	METER DEP RF 02020751 19000724 METER DEPOSIT REFUND	08/14/20	278310	20.96-

FENDLEY, SETH				
Sum				20.96-
00011 GAINES, LAJOYIA	METER DEP RF 02020751 19000737 METER DEPOSIT REFUND	08/14/20	278313	2.20-

GAINES, LAJOYIA				
Sum				2.20-
00011 GUGLANI, LAURA	METER DEP RF 02020751 19000721 METER DEPOSIT REFUND	08/14/20	278316	75.00-

GUGLANI, LAURA				
Sum				75.00-
00011 HARRIS, CAROLYN	METER DEP RF 02020751 19000778 METER DEPOSIT REFUND	08/14/20	278319	75.00-

HARRIS, CAROLYN				
Sum				75.00-
00011 HERSKOVITS, ROBERT	METER DEP RF 02020751 19000739 METER DEPOSIT REFUND	08/14/20	278323	14.96-

HERSKOVITS, ROBERT				
Sum				14.96-
00011 HOATARD, RENEE	METER DEP RF 02020751 19000741 METER DEPOSIT REFUND	08/14/20	278325	20.96-

HOATARD, RENEE				
Sum				20.96-
00011 HOBGOOD, CYNTHIA M	METER DEP RF 02020751 19000732 METER DEPOSIT REFUND	08/14/20	278326	75.00-

HOBGOOD, CYNTHIA M				
Sum				75.00-

00011 HODA, E J	METER DEP RF 02020751 19000711 METER DEPOSIT REFUND	08/14/20	278327	10.00-

HODA, E J				10.00-
Sum				20.96-
00011 HOWARD, JACKSON	METER DEP RF 02020751 19000729 METER DEPOSIT REFUND	08/14/20	278331	20.96-

HOWARD, JACKSON				20.96-
Sum				20.96-
00011 HUNT, MARIA 912	METER DEP RF 02020751 19000760 METER DEPOSIT REFUND	08/14/20	278334	20.96-

HUNT, MARIA 912				20.96-
Sum				20.96-
00011 JACKSON, ARNOLD J	METER DEP RF 02020751 19000709 METER DEPOSIT REFUND	08/14/20	278338	6.00-

JACKSON, ARNOLD J				6.00-
Sum				40.00-
00011 JAMES, R N	METER DEP RF 02020751 19000708 METER DEPOSIT REFUND	08/14/20	278339	40.00-

JAMES, R N				40.00-
Sum				30.00-
00011 JONES, LYNELLE C	METER DEP RF 02020751 19000712 METER DEPOSIT REFUND	08/14/20	278344	30.00-

JONES, LYNELLE C				30.00-
Sum				20.96-
00011 LATADY, CHARLES	METER DEP RF 02020751 19000763 METER DEPOSIT REFUND	08/14/20	278354	20.96-

LATADY, CHARLES				20.96-
Sum				20.96-
00011 LEAR, JOANNE41	METER DEP RF 02020751 19000726 METER DEPOSIT REFUND	08/14/20	278356	20.96-

LEAR, JOANNE41				20.96-
Sum				20.96-
00011 LOAN MAX	METER DEP RF 02020751 19000716 METER DEPOSIT REFUND	08/14/20	278359	1.66-

LOAN MAX				1.66-
Sum				75.00-
00011 M & R INVESTMENTS 7TH A	METER DEP RF 02020751 19000761 METER DEPOSIT REFUND	08/14/20	278361	75.00-

M & R INVESTMENTS 7TH A				75.00-
Sum				75.00-
00011 MANLEY, DAVIS	METER DEP RF 02020751 19000767 METER DEPOSIT REFUND	08/14/20	278362	75.00-

MANLEY, DAVIS				75.00-
Sum				20.96-
00011 MCCARTY, MICHAEL	METER DEP RF 02020751 19000765 METER DEPOSIT REFUND	08/14/20	278364	20.96-

MCCARTY, MICHAEL				20.96-
Sum				75.00-
00011 MCDONALD, CAROLYN	METER DEP RF 02020751 19000762 METER DEPOSIT REFUND	08/14/20	278365	75.00-

MCDONALD, CAROLYN				75.00-
Sum				75.00-

00011 MCGUINNESS, REBECCA G	METER DEP RF 02020751 19000756 METER DEPOSIT REFUND	08/14/20	278367	75.00-

MCGUINNESS, REBECCA G				75.00-
Sum				75.00-
00011 MCMAHAN REALTY2	METER DEP RF 02020751 19000734 METER DEPOSIT REFUND	08/14/20	278369	75.00-

MCMAHAN REALTY2				75.00-
Sum				40.00-
00011 MCNAIR, MALIAKA	METER DEP RF 02020751 19000715 METER DEPOSIT REFUND	08/14/20	278370	40.00-

MCNAIR, MALIAKA				40.00-
Sum				20.96-
00011 MCQUEEN, ANGELLE	METER DEP RF 02020751 19000773 METER DEPOSIT REFUND	08/14/20	278371	20.96-

MCQUEEN, ANGELLE				20.96-
Sum				14.96-
00011 MEAD, CAROLYN	METER DEP RF 02020751 19000735 METER DEPOSIT REFUND	08/14/20	278372	14.96-

MEAD, CAROLYN				14.96-
Sum				20.92-
00011 MURPHY, NATLIE J	METER DEP RF 02020751 19000772 METER DEPOSIT REFUND	08/14/20	278384	20.92-

MURPHY, NATLIE J				20.92-
Sum				20.96-
00011 NAYLOR, KIZZY T	METER DEP RF 02020751 19000777 METER DEPOSIT REFUND	08/14/20	278387	20.96-

NAYLOR, KIZZY T				20.96-
Sum				20.96-
00011 NEWSOME LELA I	METER DEP RF 02020751 19000722 METER DEPOSIT REFUND	08/14/20	278390	20.96-

NEWSOME LELA I				20.96-
Sum				75.00-
00011 OHEN 1810 PROPERTIES 181	METER DEP RF 02020751 19000745 METER DEPOSIT REFUND	08/14/20	278396	75.00-

OHEN 1810 PROPERTIES 181				75.00-
Sum				20.96-
00011 OTT, DAVID	METER DEP RF 02020751 19000766 METER DEPOSIT REFUND	08/14/20	278397	20.96-

OTT, DAVID				20.96-
Sum				40.00-
00011 PASCALE, TONY	METER DEP RF 02020751 19000713 METER DEPOSIT REFUND	08/14/20	278401	40.00-

PASCALE, TONY				40.00-
Sum				75.00-
00011 RAMKO PROPERTIES LLC OFE	METER DEP RF 02020751 19000731 METER DEPOSIT REFUND	08/14/20	278415	75.00-

RAMKO PROPERTIES LLC OFE				75.00-
Sum				20.96-
00011 RAMKO PROPERTIES 2410	METER DEP RF 02020751 19000769 METER DEPOSIT REFUND	08/14/20	278416	20.96-

RAMKO PROPERTIES 2410				20.96-
Sum				

00011 RAYMOND, KAITLIN	METER DEP RF 02020751 19000744 METER DEPOSIT REFUND	08/14/20	278417	75.00-

RAYMOND, KAITLIN				75.00-
Sum				20.96-
00011 RENO, SHARRA	METER DEP RF 02020751 19000771 METER DEPOSIT REFUND	08/14/20	278419	20.96-

RENO, SHARRA				20.96-
Sum				14.96-
00011 RICHARDS, PATRICK	METER DEP RF 02020751 19000718 METER DEPOSIT REFUND	08/14/20	278421	14.96-

RICHARDS, PATRICK				14.96-
Sum				75.00-
00011 ROBERTS, KATHRYN	METER DEP RF 02020751 19000759 METER DEPOSIT REFUND	08/14/20	278426	75.00-

ROBERTS, KATHRYN				75.00-
Sum				20.96-
00011 RODRIGUEZ, TAYLOR	METER DEP RF 02020751 19000746 METER DEPOSIT REFUND	08/14/20	278428	20.96-

RODRIGUEZ, TAYLOR				20.96-
Sum				75.00-
00011 ROGERS, KATIE	METER DEP RF 02020751 19000755 METER DEPOSIT REFUND	08/14/20	278429	75.00-

ROGERS, KATIE				75.00-
Sum				20.96-
00011 SAMEL, MICHAEL	METER DEP RF 02020751 19000768 METER DEPOSIT REFUND	08/14/20	278431	20.96-

SAMEL, MICHAEL				20.96-
Sum				20.96-
00011 SCOTT, NOAH	METER DEP RF 02020751 19000753 METER DEPOSIT REFUND	08/14/20	278433	20.96-

SCOTT, NOAH				20.96-
Sum				42.32-
00011 SHELTON, CONNIE	WTR OVRPMT R 02020750 19000703 WATER OVERPAYMENT REFUND	08/14/20	278436	42.32-
00011 SHELTON, CONNIE	METER DEP RF 02020751 19000720 METER DEPOSIT REFUND	08/14/20	278436	75.00-

SHELTON, CONNIE				117.32-
Sum				465.31-
00011 SOUTH TRUST BANK	WTR OVRPMT R 02020750 19000705 WATER OVERPAYMENT REFUND	08/14/20	278443	465.31-

SOUTH TRUST BANK				465.31-
Sum				20.96-
00011 STAM PROPERTIES LLC 1	METER DEP RF 02020751 19000774 METER DEPOSIT REFUND	08/14/20	278453	20.96-

STAM PROPERTIES LLC 1				20.96-
Sum				20.96-
00011 THORNTON, JENNIFER	METER DEP RF 02020751 19000728 METER DEPOSIT REFUND	08/14/20	278459	20.96-

THORNTON, JENNIFER				20.96-
Sum				

00011 WEARY, JESSICA M	METER DEP RF 02020704 19000702 METER DEPOSIT REFUND	08/11/20	110053	75.00-

WEARY, JESSICA M				
Sum				75.00-
00011 WILLIAMS, CHARLES W	METER DEP RF 02020751 19000706 METER DEPOSIT REFUND	08/14/20	278474	20.00-

WILLIAMS, CHARLES W				
Sum				20.00-
00011 WINTERS, SUSAN	METER DEP RF 02020751 19000717 METER DEPOSIT REFUND	08/14/20	278475	75.00-

WINTERS, SUSAN				
Sum				75.00-
00011 WORLEY, AUSTIN	METER DEP RF 02020751 19000738 METER DEPOSIT REFUND	08/14/20	278476	20.96-

WORLEY, AUSTIN				
Sum				20.96-
00011 WRIGHT, DOMINICK	METER DEP RF 02020751 19000730 METER DEPOSIT REFUND	08/14/20	278477	75.00-

WRIGHT, DOMINICK				
Sum				75.00-
00011 4A PROPERTY SOLUTIONS,LL	METER DEP RF 02020751 19000747 METER DEPOSIT REFUND	08/14/20	278478	20.96-

4A PROPERTY SOLUTIONS,LL				
Sum				20.96-

Sum				624,768.63-

PERIOD ENDING AUGUST 14, 2020

Date - 08/12/20

Vendor

Invoice
Number

Purchase Order

Claims
Number

Item	Description
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Check
Date

Check
No.

Check
Amount

2002 TIF B&I-SOUTHERN POINTE

00020 TRUSTMARK NATIONAL BANK 7/1/20

02020742 19000004 DEBT SERVICE PAYMENT

08/05/20

200002

42,922.50-

TRUSTMARK NATIONAL BANK

Sum

42,922.50-

Sum

42,922.50-

Date - 08/12/20

Vendor

Invoice
Number

Purchase Order

Claims
Number

Item	Description
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Check
Date

Check
No.

Check
Amount

2006 TIF B&I-TURTLE CROSSING

00023 TRUSTMARK NATIONAL BANK 200801-28808 02020743 19000006 PAYING AGENT FEES

08/05/20

230004

2,500.00-

TRUSTMARK NATIONAL BANK

Sum

2,500.00-

Sum

2,500.00-

CITY OF HATTIESBURG

DOCKET OF CLAIMS

Date

- 08/12/20

PERIOD ENDING AUGUST 14, 2020

Vendor

Invoice
NumberPurchase
OrderClaims
NumberItem
DescriptionCheck
DateCheck
No.Check
Amount

TAX COLLECTOR'S FUND

00027 LIBRARY, THE

7/2020 MILLA 02020728 19000103 7/20 MILLAGE DIST AUGUST

08/04/20

270042

17,615.99-

LIBRARY, THE

Sum

17,615.99-

Sum

17,615.99-

PERIOD ENDING AUGUST 14, 2020

Date - 08/12/20

Vendor

Invoice
Number

Purchase Order

Claims
Number

Item	Description
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Check
Date

Check
No.

Check
Amount

AIRPORT IMPROVEMENT FUND
00039 ARE CONSULTANTS INC

1807121

00201328

19000053

SRVS AIRPT APRON RESTORA PT 1

08/14/20

278234

1,431.03-

ARE CONSULTANTS INC
Sum

1,431.03-

Sum

1,431.03-

CITY OF HATTIESBURG

DOCKET OF CLAIMS

Date - 08/12/20

PERIOD ENDING AUGUST 14, 2020

Vendor	Invoice Number	Purchase Order	Claims Number	Item Description	Check Date	Check No.	Check Amount
MASS TRANSIT FUND							
00073 CARQUEST AUTO PARTS STOR	14758-144929	00200873	19000417	REPR PTS VARI BUSES	08/14/20	278264	315.92-
00073 CARQUEST AUTO PARTS STOR	14758-142312	00199687	19000429	REPR PTS VARI BUSES	08/14/20	278264	2,322.47-

CARQUEST AUTO PARTS STOR							2,638.39-
Sum							
00073 CINTAS CORPORATION #J66	4054966328	00201196	19000422	UNIFORMS 7/06 MECH/DRIVERS	08/14/20	278273	156.61-
00073 CINTAS CORPORATION #J66	4055644895	00201196	19000423	UNIFORMS 7/13 MECH/DRIVERS	08/14/20	278273	151.04-
00073 CINTAS CORPORATION #J66	4056280422	00201196	19000424	UNIFORMS 7/20 MECH/DRIVERS	08/14/20	278273	191.99-
00073 CINTAS CORPORATION #J66	4056925461	00201196	19000425	UNIFORMS 7/27 MECH/DRIVERS	08/14/20	278273	156.99-

CINTAS CORPORATION #J66							656.63-
Sum							
00073 CITY OF HATTIESBURG FUND	TRF 1ST 8/20	02020755	19000426	TRF 1ST 8/20 PAYROLL	08/12/20	730023	39,361.36-

CITY OF HATTIESBURG FUND							39,361.36-
Sum							
00073 COURTESY MOTORS INC	270853	00200782	19000418	BRAKE REPR U#19535 BUS	08/14/20	278283	392.53-
00073 COURTESY MOTORS INC	269264	00200475	19000419	TRANSMISSION REPR U#19535	08/14/20	278283	6,234.60-

COURTESY MOTORS INC							6,627.13-
Sum							
00073 HAVARD PEST CONTROL INC	1631945	00020209	19000427	QTRLY SRV MASS TRANSIT	08/14/20	278322	48.00-

HAVARD PEST CONTROL INC							48.00-
Sum							
00073 MOBILITY SYSTEMS INC	8297	00200284	19000420	REPAIRS U#20585 BUS	08/14/20	278375	770.00-

MOBILITY SYSTEMS INC							770.00-
Sum							
00073 UNIVERSITY TIRE & SERVIC	INV156771	00200672	19000430	TIRES U#21120 BUS	08/14/20	278463	1,791.79-

UNIVERSITY TIRE & SERVIC							1,791.79-
Sum							
00073 WARING OIL CO (GULFPORT)	001880677	00200670	19000428	MOTOR OIL FOR BUSES	08/14/20	278467	1,258.50-

WARING OIL CO (GULFPORT)							1,258.50-
Sum							
00073 WHEELER'S JANITORIAL SUP	07638	00200725	19000431	JANIT SUPP HCT DEPT	08/14/20	278473	244.50-

WHEELER'S JANITORIAL SUP							244.50-
Sum							

Sum							53,396.30-

CITY OF HATTIESBURG

DOCKET OF CLAIMS

Date - 08/12/20

PERIOD ENDING AUGUST 14, 2020

Vendor	Invoice Number	Purchase Order	Claims Number	Item Description	Check Date	Check No.	Check Amount
WATER&SEWER CONSTRUCTION FUND							
00075 SHOWS DEARMAN & WAITS IN	21585	00201110	19000114	SRVS AUDUBON/WWOOD/LWOOD WTR	08/14/20	278439	8,982.50-
00075 SHOWS DEARMAN & WAITS IN	21587	00201310	19000117	SERVS MLK INFRASTRUCTURE	08/14/20	278439	3,042.50-
00075 SHOWS DEARMAN & WAITS IN	21575	00201312	19000118	SRVS DEARBORNE WTR EASEMENT	08/14/20	278439	1,567.50-
00075 SHOWS DEARMAN & WAITS IN	21572	00201313	19000119	SRVS HI-SPEED SANIT SWR TRANS	08/14/20	278439	3,675.00-
00075 SHOWS DEARMAN & WAITS IN	21588	00201315	19000120	SRVS LOCATE WTR/SWR IMPRVMNTS	08/14/20	278439	115.00-
00075 SHOWS DEARMAN & WAITS IN	21589	00201316	19000121	SRVS GENERAL ENGR & RESEARCH	08/14/20	278439	2,577.50-
00075 SHOWS DEARMAN & WAITS IN	21586	00201317	19000122	SRVS INFRASTRUCTURE MGMT PH 1	08/14/20	278439	8,200.00-
00075 SHOWS DEARMAN & WAITS IN	21581	00201318	19000123	SRVS WTR PLANT #1 REHAB	08/14/20	278439	350.00-
00075 SHOWS DEARMAN & WAITS IN	21560	00201105	19000124	SRVS C CLUB RD WTR UPGRADES	08/14/20	278439	1,620.00-

SHOWS DEARMAN & WAITS IN							
Sum							30,130.00-
00075 SOUTHERN MS PLANNING & D	12106	00201319	19000125	LAMAR BLVD GRANT ASSISTANCE	08/14/20	278446	1,056.65-

SOUTHERN MS PLANNING & D							
Sum							1,056.65-
00075 WALKER CONSTRUCTION	EST #4 C CLU	00201102	19000116	SRVS C CLUB RD WTR UPGRADES	08/14/20	278466	70,985.04-

WALKER CONSTRUCTION							
Sum							70,985.04-

Sum							102,171.69-

00077 MS POWER COMPANY	8/20 COMM CN 00202021 19000380 MNTHLY ELEC-COMM CENTERS	08/14/20	278380	3,273.03-

MS POWER COMPANY				
Sum				3,273.03-
00077 PRIDE SOLUTIONS, LLC	2020-0806 00201178 19000372 JANIT SUPP COMM CENTERS	08/14/20	278412	360.00-

PRIDE SOLUTIONS, LLC				
Sum				360.00-
00077 PRIEST CREEK MB CHURCH	SHERRILL CEN 02020746 19000374 DAMAGE DEPOSIT REFUND	08/14/20	278413	250.00-

PRIEST CREEK MB CHURCH				
Sum				250.00-
00077 SIMMONS, VALENTINA	SHERRILL CEN 02020746 19000375 DAMAGE DEPOSIT REFUND	08/14/20	278440	125.00-

SIMMONS, VALENTINA				
Sum				125.00-
00077 SOLAR SUPPLY INC	3431765 00201058 19000366 A/C FILTERS CULTURAL CENTER	08/14/20	278442	51.36-

SOLAR SUPPLY INC				
Sum				51.36-
00077 SOUTHERN MS PINE STRAW	12195 00200441 19000365 PINE STRAW COMM CENTERS	08/14/20	278445	220.00-

SOUTHERN MS PINE STRAW				
Sum				220.00-
00077 SPIRE ENERGY	8/20 COMM CN 00202021 19000381 MNTHLY GAS-COMM CENTERS	08/14/20	278452	137.26-

SPIRE ENERGY				
Sum				137.26-

Sum				29,932.62-

Date - 08/12/20

Check
Amount

Sum	3,382,757.72
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