FLOOD INSURANCE STUDY

FEDERAL EMERGENCY MANAGEMENT AGENCY

VOLUME 1 OF 1

QUITMAN COUNTY, MISSISSIPPI

AND INCORPORATED AREAS

COMMUNITY NAME	COMMUNITY NUMBER
CROWDER, CITY OF	280128
FALCON, TOWN OF	280138
LAMBERT, TOWN OF	280139
MARKS, CITY OF	280140
QUITMAN COUNTY, UNINCORPORATED AREAS	280207
SLEDGE, TOWN OF	280141

FEMA

PRELIMINARY
11/14/2018

REVISED:

TBD

FLOOD INSURANCE STUDY NUMBER
28119CV000B

Version Number 2.5.3.6

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FLOOD INSURANCE STUDY REPORT
QUITMAN COUNTY, MISSISSIPPI

SECTION 1.0 – INTRODUCTION

1.1 The National Flood Insurance Program

The National Flood Insurance Program (NFIP) is a voluntary Federal program that enables property owners in participating communities to purchase insurance protection against losses from flooding. This insurance is designed to provide an alternative to disaster assistance to meet the escalating costs of repairing damage to buildings and their contents caused by floods.

For decades, the national response to flood disasters was generally limited to constructing flood-control works such as dams, levees, sea-walls, and the like, and providing disaster relief to flood victims. This approach did not reduce losses nor did it discourage unwise development. In some instances, it may have actually encouraged additional development. To compound the problem, the public generally could not buy flood coverage from insurance companies, and building techniques to reduce flood damage were often overlooked.

In the face of mounting flood losses and escalating costs of disaster relief to the general taxpayers, the U.S. Congress created the NFIP. The intent was to reduce future flood damage through community floodplain management ordinances, and provide protection for property owners against potential losses through an insurance mechanism that requires a premium to be paid for the protection.

The U.S. Congress established the NFIP on August 1, 1968, with the passage of the National Flood Insurance Act of 1968. The NFIP was broadened and modified with the passage of the Flood Disaster Protection Act of 1973 and other legislative measures. It was further modified by the National Flood Insurance Reform Act of 1994 and the Flood Insurance Reform Act of 2004. The NFIP is administered by the Federal Emergency Management Agency (FEMA), which is a component of the Department of Homeland Security (DHS).

Participation in the NFIP is based on an agreement between local communities and the Federal Government. If a community adopts and enforces floodplain management regulations to reduce future flood risks to new construction and substantially improved structures in Special Flood Hazard Areas (SFHAs), the Federal Government will make flood insurance available within the community as a financial protection against flood losses. The community's floodplain management regulations must meet or exceed criteria established in accordance with Title 44 Code of Federal Regulations (CFR) Part 60, *Criteria for Land Management and Use*.

SFHAs are delineated on the community's Flood Insurance Rate Maps (FIRMs). Under the NFIP, buildings that were built before the flood hazard was identified on the community's FIRMs are generally referred to as "Pre-FIRM" buildings. When the NFIP was created, the U.S. Congress recognized that insurance for Pre-FIRM buildings would be prohibitively expensive if the premiums were not subsidized by the federal

government. Congress also recognized that most of these floodprone buildings were built by individuals who did not have sufficient knowledge of the flood hazard to make informed decisions. The NFIP requires that full actuarial rates reflecting the complete flood risk be charged on all buildings constructed or substantially improved on or after the effective date of the initial FIRM for the community or after December 31, 1974, whichever is later. These buildings are generally referred to as “Post-FIRM” buildings.

1.2 Purpose of this Flood Insurance Study Report

This Flood Insurance Study (FIS) Report revises and updates information on the existence and severity of flood hazards for the study area. The studies described in this report developed flood hazard data that will be used to establish actuarial flood insurance rates and to assist communities in efforts to implement sound floodplain management.

In some states or communities, floodplain management criteria or regulations may exist that are more restrictive than the minimum federal requirements. Contact your State NFIP Coordinator to ensure that any higher State standards are included in the community’s regulations.

1.3 Jurisdictions Included in the Flood Insurance Study Project

This FIS Report covers the entire geographic area of Quitman County, Mississippi.

The jurisdictions that are included in this project area, along with the Community Identification Number (CID) for each community and the United States Geological Survey (USGS) 8-digit Hydrologic Unit Code (HUC-8) sub-basins affecting each, are shown in Table 1. The FIRM panel numbers that affect each community are listed. If the flood hazard data for the community is not included in this FIS Report, the location of that data is identified.

The location of flood hazard data for participating communities in multiple jurisdictions is also indicated in the table.

Table 1: Listing of NFIP Jurisdictions

Community	CID	HUC-8 Sub-Basin(s)	Located on FIRM Panel(s)	If Not Included, Location of Flood Hazard Data
Crenshaw, Town of	280127	08030204	28119C0040D, 28119C0105E	Panola County FIS Report, **TBD**
Crowder, City of	280128	08030202	28119C0267D	
Falcon, Town of	280138	08030204	28119C0095E, 28119C0115D	
Lambert, Town of	280139	08030202	28119C0233D, 28119C0234D	

Community	CID	HUC-8 Sub-Basin(s)	Located on FIRM Panel(s)	If Not Included, Location of Flood Hazard Data
Marks, City of	280140	08030202, 08030204	28119C0168D, 28119C0169D, 28119C0232D	
Quitman County, Unincorporated Areas	280207	08030202, 08030204	28119C0020E, 28119C0040D, 28119C0070E, 28119C0085E, 28119C0090E, 28119C0095E, 28119C0103D, 28119C0104E, 28119C0105E, 28119C0111D, 28119C0112D, 28119C0115D, 28119C0150E, 28119C0165D, 28119C0168D, 28119C0169D, 28119C0170D, 28119C0175E, 28119C0200D, 28119C0225D, 28119C0230D, 28119C0231D, 28119C0232D, 28119C0233D, 28119C0234D, 28119C0240D, 28119C0245D, 28119C0255D, 28119C0260D, 28119C0265D, 28119C0266D, 28119C0267D, 28119C0270D, 28119C0300D, 28119C0325D, 28119C0350D	
Sledge, Town of	280141	08030204	28119C0103D, 28119C0104E, 28119C0111D, 28119C0112D	

1.4 Considerations for using this Flood Insurance Study Report

The NFIP encourages state and local governments to implement sound floodplain management programs. To assist in this endeavor, each FIS Report provides floodplain data, which may include a combination of the following: 10-, 4-, 2-, 1-, and 0.2-percent

annual chance flood elevations (the 1-percent-annual-chance flood elevation is also referred to as the Base Flood Elevation (BFE)); delineations of the 1-percent-annual-chance and 0.2-percent-annual-chance floodplains; and 1-percent-annual-chance floodway. This information is presented on the FIRM and/or in many components of the FIS Report, including Flood Profiles, Floodway Data tables, Summary of Non-Coastal Stillwater Elevations tables, and Coastal Transect Parameters tables (not all components may be provided for a specific FIS).

This section presents important considerations for using the information contained in this FIS Report and the FIRM, including changes in format and content. Figures 1, 2, and 3 present information that applies to using the FIRM with the FIS Report.

- Part or all of this FIS Report may be revised and republished at any time. In addition, part of this FIS Report may be revised by a Letter of Map Revision (LOMR), which does not involve republication or redistribution of the FIS Report. Refer to Section 6.5 of this FIS Report for information about the process to revise the FIS Report and/or FIRM.

  It is, therefore, the responsibility of the user to consult with community officials by contacting the community repository to obtain the most current FIS Report components. Communities participating in the NFIP have established repositories of flood hazard data for floodplain management and flood insurance purposes. Community map repository addresses are provided in Table 31, "Map Repositories," within this FIS Report.

- New FIS Reports are frequently developed for multiple communities, such as entire counties. A countywide FIS Report incorporates previous FIS Reports for individual communities and the unincorporated area of the county (if not jurisdictional) into a single document and supersedes those documents for the purposes of the NFIP.

  The initial Countywide FIS Report for Quitman County became effective on May 16, 2017. Refer to Table 28 for information about subsequent revisions to the FIRMs.

- Selected FIRM panels for the community may contain information (such as floodways and cross sections) that was previously shown separately on the corresponding Flood Boundary and Floodway Map (FBFM) panels. In addition, former flood hazard zone designations have been changed as follows:

Old Zone	New Zone
A1 through A30	AE
C	X (unshaded)

- Previous FIS Reports and FIRMs may have included levees that were accredited as reducing the risk associated with the 1-percent-annual-chance flood based on the information available and the mapping standards of the NFIP at that time. For FEMA to continue to accredit the identified levees, the levees must meet the

criteria of the Code of Federal Regulations, Title 44, Section 65.10 (44 CFR 65.10), titled "Mapping of Areas Protected by Levee Systems."

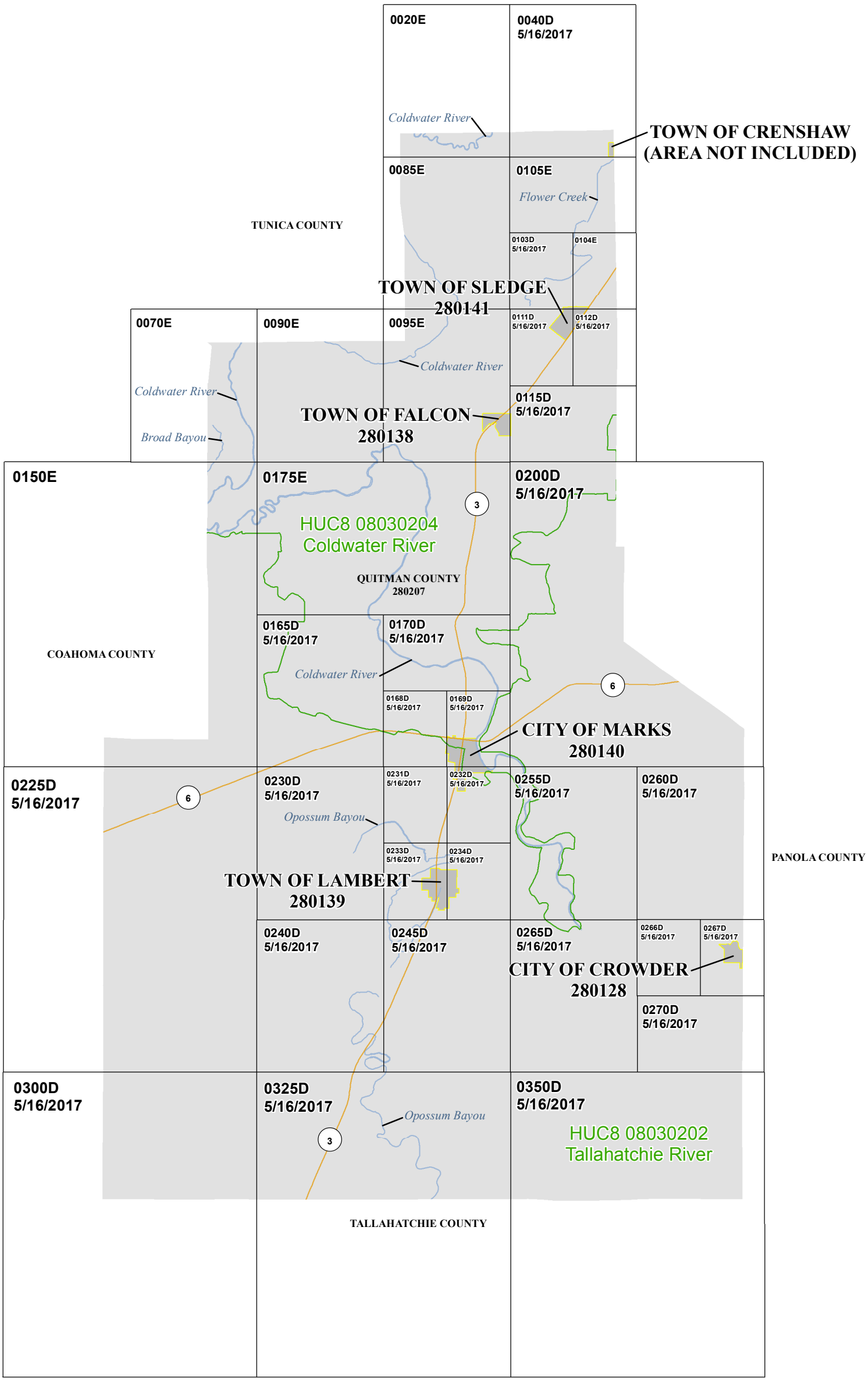
Since the status of levees is subject to change at any time, the user should contact the appropriate agency for the latest information regarding levees presented in Table 9 of this FIS Report. For levees owned or operated by the U.S. Army Corps of Engineers (USACE), information may be obtained from the USACE National Levee Database (**nld.usace.army.mil**). For all other levees, the user is encouraged to contact the appropriate local community.

Please also note that FEMA has identified one or more levees in this jurisdiction that have not been demonstrated by the community or levee owner to meet the requirements of 44 CFR 65.10, of the NFIP regulations as it relates to the levee's capacity to provide 1-percent-annual-chance flood protection. As such, there are temporary actions are being taken until such time as FEMA is able to initiate a new flood risk project to apply new levee analysis and mapping procedures to leveed areas. These temporary actions involve using the flood hazard data shown on the previous effective FIRM exactly as shown on that prior FIRM and identifying the area with bounding lines and special map notes. If a vertical datum conversion was executed for the county, then the Base Flood Elevations shown on the FIRM will now reflect elevations referenced to the North American Vertical Datum of 1988 (NAVD88). These levees are on FIRM panel(s) 28119C0020E, 28119C0040D, 28119C0085E, 28119C0095E, 28119C0105E, 28119C0175E, on the Pompey Ditch, and are identified on FIRM panels as potential areas of flood hazard data changes based on further review. Please refer to Section 4.4 of this FIS Report for more information.

- FEMA has developed a *Guide to Flood Maps* (FEMA 258) and online tutorials to assist users in accessing the information contained on the FIRM. These include how to read panels and step-by-step instructions to obtain specific information. To obtain this guide and other assistance in using the FIRM, visit the FEMA Web site at www.fema.gov/online-tutorials.

The FIRM Index in Figure 1 shows the overall FIRM panel layout within Quitman County, and also displays the panel number and effective date for each FIRM panel in the county. Other information shown on the FIRM Index includes community boundaries, flooding sources, watershed boundaries, and USGS HUC-8 codes.

Figure 1: FIRM Index



ATTENTION: The corporate limits shown on this FIRM Index are based on the best information available at the time of publication. As such, they may be more current than those shown on FIRM panels issued before MONTH DAY, YEAR.

PRELIMINARY
11/14/2018

N

1 inch = 16,667 feet 1:200,000

Feet
0 4,600 9,200 18,400 27,600 36,800

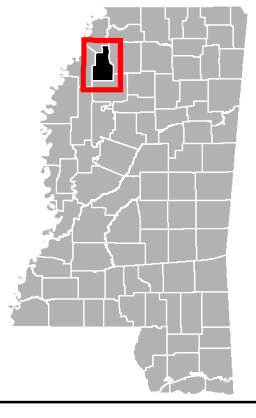
Map Projection:
State Plane Coordinate System
Mississippi West, FIPS Zone 2302

THE INFORMATION DEPICTED ON THIS MAP AND SUPPORTING DOCUMENTATION ARE ALSO AVAILABLE IN DIGITAL FORMAT AT

HTTP://MSC.FEMA.GOV

SEE FLOOD INSURANCE STUDY FOR ADDITIONAL INFORMATION

COUNTY LOCATOR



NATIONAL FLOOD INSURANCE PROGRAM

FLOOD INSURANCE RATE MAP INDEX

QUITMAN COUNTY, MISSISSIPPI and Incorporated Areas

PANELS PRINTED:

0020, 0040, 0070, 0085, 0090, 0095, 0103, 0104, 0105, 0111, 0112, 0115, 0150, 0165, 0168, 0169, 0170, 0175, 0200, 0225, 0230, 0231, 0232, 0233, 0234, 0240, 0245, 0255, 0260, 0265, 0266, 0267, 0270, 0300, 0325, 0350

FEMA

MAP NUMBER
28119CIND0B

MAP REVISED

Each FIRM panel may contain specific notes to the user that provide additional information regarding the flood hazard data shown on that map. However, the FIRM panel does not contain enough space to show all the notes that may be relevant in helping to better understand the information on the panel. Figure 2 contains the full list of these notes.

Figure 2: FIRM Notes to Users

NOTES TO USERS

For information and questions about this map, available products associated with this FIRM including historic versions of this FIRM, how to order products, or the National Flood Insurance Program in general, please call the FEMA Map Information eXchange at 1-877-FEMA-MAP (1-877-336-2627) or visit the FEMA Flood Map Service Center website at msc.fema.gov. Available products may include previously issued Letters of Map Change, a Flood Insurance Study Report, and/or digital versions of this map. Many of these products can be ordered or obtained directly from the website. Users may determine the current map date for each FIRM panel by visiting the FEMA Flood Map Service Center website or by calling the FEMA Map Information eXchange.

Communities annexing land on adjacent FIRM panels must obtain a current copy of the adjacent panel as well as the current FIRM Index. These may be ordered directly from the Flood Map Service Center at the number listed above.

For community and countywide map dates, refer to Table 28 in this FIS Report.

To determine if flood insurance is available in the community, contact your insurance agent or call the National Flood Insurance Program at 1-800-638-6620.

PRELIMINARY FIS REPORT: FEMA maintains information about map features, such as street locations and names, in or near designated flood hazard areas. Requests to revise information in or near designated flood hazard areas may be provided to FEMA during the community review period, at the final Consultation Coordination Officer's meeting, or during the statutory 90-day appeal period. Approved requests for changes will be shown on the final printed FIRM.

The map is for use in administering the NFIP. It may not identify all areas subject to flooding, particularly from local drainage sources of small size. Consult the community map repository to find updated or additional flood hazard information.

BASE FLOOD ELEVATIONS: For more detailed information in areas where Base Flood Elevations (BFEs) and/or floodways have been determined, consult the Flood Profiles and Floodway Data and/or Summary of Non-Coastal Stillwater Elevations tables within this FIS Report. Use the flood elevation data within the FIS Report in conjunction with the FIRM for construction and/or floodplain management.

FLOODWAY INFORMATION: Boundaries of the floodways were computed at cross sections and interpolated between cross sections. The floodways were based on hydraulic considerations with regard to requirements of the National Flood Insurance Program. Floodway widths and other pertinent floodway data are provided in the FIS Report for this jurisdiction.

Figure 2. FIRM Notes to Users

FLOOD CONTROL STRUCTURE INFORMATION: Certain areas not in Special Flood Hazard Areas may be protected by flood control structures. Refer to Section 4.3 "Non-Levee Flood Protection Measures" of this FIS Report for information on flood control structures for this jurisdiction.

PROJECTION INFORMATION: The projection used in the preparation of the map was State Plane Transverse Mercator Mississippi West FIPS Zone 2302**.** The horizontal datum was the North American Datum of 1983 NAD83. Differences in datum, spheroid, projection or State Plane zones used in the production of FIRMs for adjacent jurisdictions may result in slight positional differences in map features across jurisdiction boundaries. These differences do not affect the accuracy of the FIRM.

ELEVATION DATUM: Flood elevations on the FIRM are referenced to the North American Vertical Datum of 1988**.** These flood elevations must be compared to structure and ground elevations referenced to the same vertical datum. For information regarding conversion between the National Geodetic Vertical Datum of 1929 and the North American Vertical Datum of 1988**,** visit the National Geodetic Survey website at www.ngs.noaa.gov.

Local vertical monuments may have been used to create the map. To obtain current monument information, please contact the appropriate local community listed in Table 31 of this FIS Report.

BASE MAP INFORMATION: Base map information shown on the FIRM was provided by the State of Mississippi, City of Batesville, and the U.S. Census Bureau at a scale of 1:400. The following panels used base map information provided by the U.S. Geological Survey at a scale of 1:12,000: 0020, 0070, 0085, 0090, 0095, 0104, 0105, 0150 and 175. For information about base maps, refer to Section 6.2 “Base Map” in this FIS Report.

The map reflects more detailed and up-to-date stream channel configurations than those shown on the previous FIRM for this jurisdiction. The floodplains and floodways that were transferred from the previous FIRM may have been adjusted to conform to these new stream channel configurations. As a result, the Flood Profiles and Floodway Data tables may reflect stream channel distances that differ from what is shown on the map.

Corporate limits shown on the map are based on the best data available at the time of publication. Because changes due to annexations or de-annexations may have occurred after the map was published, map users should contact appropriate community officials to verify current corporate limit locations.

NOTES FOR FIRM INDEX

REVISIONS TO INDEX: As new studies are performed and FIRM panels are updated within Quitman County, Mississippi, corresponding revisions to the FIRM Index will be incorporated within the FIS Report to reflect the effective dates of those panels. Please refer to Table 28 of this FIS Report to determine the most recent FIRM revision date for each community. The most recent FIRM panel effective date will correspond to the most recent index date.

ATTENTION: The corporate limits shown on this FIRM Index are based on the best information available at the time of publication. As such, they may be more current than those shown on FIRM panels issued before **TBD.**

SPECIAL NOTES FOR SPECIFIC FIRM PANELS

This Notes to Users section was created specifically for Quitman County, Mississippi**,** effective **TBD.**

Figure 2. FIRM Notes to Users

ACCREDITED LEVEE: Check with your local community to obtain more information, such as the estimated level of protection provided (which may exceed the 1-percent-annual-chance level) and Emergency Action Plan, on the Mississippi River East levee system(s) shown as providing protection for areas on this panel. To mitigate flood risk in residual risk areas, property owners and residents are encouraged to consider flood insurance and floodproofing or other protective measures. For more information on flood insurance, interested parties should visit **www.fema.gov/national-flood-insurance-program.**

FLOOD RISK REPORT: A Flood Risk Report (FRR) may be available for many of the flooding sources and communities referenced in this FIS Report. The FRR is provided to increase public awareness of flood risk by helping communities identify the areas within their jurisdictions that have the greatest risks. Although non-regulatory, the information provided within the FRR can assist communities in assessing and evaluating mitigation opportunities to reduce these risks. It can also be used by communities developing or updating flood risk mitigation plans. These plans allow communities to identify and evaluate opportunities to reduce potential loss of life and property. However, the FRR is not intended to be the final authoritative source of all flood risk data for a project area; rather, it should be used with other data sources to paint a comprehensive picture of flood risk.

Each FIRM panel contains an abbreviated legend for the features shown on the maps. However, the FIRM panel does not contain enough space to show the legend for all map features. Figure 3 shows the full legend of all map features. Note that not all of these features may appear on the FIRM panels in Quitman County.

Figure 3: Map Legend for FIRM

SPECIAL FLOOD HAZARD AREAS: *The 1% annual chance flood, also known as the base flood or 100-year flood, has a 1% chance of happening or being exceeded each year. Special Flood Hazard Areas are subject to flooding by the 1% annual chance flood. The Base Flood Elevation is the water surface elevation of the 1% annual chance flood. The floodway is the channel of a stream plus any adjacent floodplain areas that must be kept free of encroachment so that the 1% annual chance flood can be carried without substantial increases in flood heights. See note for specific types. If the floodway is too narrow to be shown, a note is shown.*

	Special Flood Hazard Areas subject to inundation by the 1% annual chance flood (Zones A, AE, AH, AO, AR, A99, V and VE)
Zone A	The flood insurance rate zone that corresponds to the 1% annual chance floodplains. No base (1% annual chance) flood elevations (BFEs) or depths are shown within this zone.
Zone AE	The flood insurance rate zone that corresponds to the 1% annual chance floodplains. Base flood elevations derived from the hydraulic analyses are shown within this zone.
Zone AH	The flood insurance rate zone that corresponds to the areas of 1% annual chance shallow flooding (usually areas of ponding) where average depths are between 1 and 3 feet. Whole-foot BFEs derived from the hydraulic analyses are shown at selected intervals within this zone.
Zone AO	The flood insurance rate zone that corresponds to the areas of 1% annual chance shallow flooding (usually sheet flow on sloping terrain) where average depths are between 1 and 3 feet. Average whole-foot depths derived from the hydraulic analyses are shown within this zone.
Zone AR	The flood insurance rate zone that corresponds to areas that were formerly protected from the 1% annual chance flood by a flood control system that was subsequently decertified. Zone AR indicates that the former flood control system is being restored to provide protection from the 1% annual chance or greater flood.
Zone A99	The flood insurance rate zone that corresponds to areas of the 1% annual chance floodplain that will be protected by a Federal flood protection system where construction has reached specified statutory milestones. No base flood elevations or flood depths are shown within this zone.
Zone V	The flood insurance rate zone that corresponds to the 1% annual chance coastal floodplains that have additional hazards associated with storm waves. Base flood elevations are not shown within this zone.
Zone VE	Zone VE is the flood insurance rate zone that corresponds to the 1% annual chance coastal floodplains that have additional hazards associated with storm waves. Base flood elevations derived from the coastal analyses are shown within this zone as static whole-foot elevations that apply throughout the zone.

Figure 3: Map Legend for FIRM

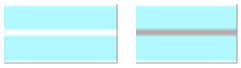
	Regulatory Floodway determined in Zone AE.
OTHER AREAS OF FLOOD HAZARD	
	Shaded Zone X: Areas of 0.2% annual chance flood hazards and areas of 1% annual chance flood hazards with average depths of less than 1 foot or with drainage areas less than 1 square mile.
	Future Conditions 1% Annual Chance Flood Hazard – Zone X: The flood insurance rate zone that corresponds to the 1% annual chance floodplains that are determined based on future-conditions hydrology. No base flood elevations or flood depths are shown within this zone.
	Area with Reduced Flood Risk due to Levee: Areas where an accredited levee, dike, or other flood control structure has reduced the flood risk from the 1% annual chance flood. See Notes to Users for important information.
	Area with Flood Risk due to Levee: Areas where a non-accredited levee, dike, or other flood control structure is shown as providing protection to less than the 1% annual chance flood.
OTHER AREAS	
	Zone D (Areas of Undetermined Flood Hazard): The flood insurance rate zone that corresponds to unstudied areas where flood hazards are undetermined, but possible.
	Unshaded Zone X: Areas of minimal flood hazard.
FLOOD HAZARD AND OTHER BOUNDARY LINES	
 (ortho) (vector)	Flood Zone Boundary (white line on ortho-photography-based mapping; gray line on vector-based mapping)
	Limit of Study
	Jurisdiction Boundary
	Limit of Moderate Wave Action (LiMWA): Indicates the inland limit of the area affected by waves greater than 1.5 feet
GENERAL STRUCTURES	
Aqueduct *Channel* *Culvert* *Storm Sewer*	Channel, Culvert, Aqueduct, or Storm Sewer
Dam *Jetty* *Weir*	Dam, Jetty, Weir

Figure 3: Map Legend for FIRM

	Levee, Dike, or Floodwall
Bridge	Bridge
COASTAL BARRIER RESOURCES SYSTEM (CBRS) AND OTHERWISE PROTECTED AREAS (OPA): *CBRS areas and OPAs are normally located within or adjacent to Special Flood Hazard Areas.*	
CBRS AREA 09/30/2009	Coastal Barrier Resources System Area: Labels are shown to clarify where this area shares a boundary with an incorporated area or overlaps with the floodway.
OTHERWISE PROTECTED AREA 09/30/2009	Otherwise Protected Area
REFERENCE MARKERS	
22.0	River mile Markers
CROSS SECTION & TRANSECT INFORMATION	
B 20.2	Lettered Cross Section with Regulatory Water Surface Elevation (BFE)
5280 21.1	Numbered Cross Section with Regulatory Water Surface Elevation (BFE)
17.5	Unlettered Cross Section with Regulatory Water Surface Elevation (BFE)
8	Coastal Transect
	Profile Baseline: Indicates the modeled flow path of a stream and is shown on FIRM panels for all valid studies with profiles or otherwise established base flood elevation.
	Coastal Transect Baseline: Used in the coastal flood hazard model to represent the 0.0-foot elevation contour and the starting point for the transect and the measuring point for the coastal mapping.
513	Base Flood Elevation Line
ZONE AE (EL 16)	Static Base Flood Elevation value (shown under zone label)
ZONE AO (DEPTH 2)	Zone designation with Depth

Figure 3: Map Legend for FIRM

ZONE AO (DEPTH 2) (VEL 15 FPS)	Zone designation with Depth and Velocity
BASE MAP FEATURES	
Missouri Creek	River, Stream or Other Hydrographic Feature
234	Interstate Highway
234	U.S. Highway
234	State Highway
234	County Highway
MAPLE LANE	Street, Road, Avenue Name, or Private Drive if shown on Flood Profile
RAILROAD	Railroad
	Horizontal Reference Grid Line
	Horizontal Reference Grid Ticks
+	Secondary Grid Crosshairs
Land Grant	Name of Land Grant
7	Section Number
R. 43 W. T. 22 N.	Range, Township Number
$^{42}76^{000m}$E	Horizontal Reference Grid Coordinates (UTM)
365000 FT	Horizontal Reference Grid Coordinates (State Plane)
80° 16' 52.5"	Corner Coordinates (Latitude, Longitude)

SECTION 2.0 – FLOODPLAIN MANAGEMENT APPLICATIONS

2.1 Floodplain Boundaries

To provide a national standard without regional discrimination, the 1-percent-annual-chance (100-year) flood has been adopted by FEMA as the base flood for floodplain management purposes. The 0.2-percent-annual-chance (500-year) flood is employed to indicate additional areas of flood hazard in the community.

Each flooding source included in the project scope has been studied and mapped using professional engineering and mapping methodologies that were agreed upon by FEMA and Quitman County as appropriate to the risk level. Flood risk is evaluated based on factors such as known flood hazards and projected impact on the built environment. Engineering analyses were performed for each studied flooding source to calculate its 1-percent-annual-chance flood elevations; elevations corresponding to other floods (e.g. 10-, 4-, 2-, 0.2-percent annual chance, etc.) may have also been computed for certain flooding sources. Engineering models and methods are described in detail in Section 5.0 of this FIS Report. The modeled elevations at cross sections were used to delineate the floodplain boundaries on the FIRM; between cross sections, the boundaries were interpolated using elevation data from various sources. More information on specific mapping methods is provided in Section 6.0 of this FIS Report.

Depending on the accuracy of available topographic data (Table 23), study methodologies employed (Section 5.0), and flood risk, certain flooding sources may be mapped to show both the 1- and 0.2-percent-annual-chance floodplain boundaries, regulatory water surface elevations (BFEs), and/or a regulatory floodway. Similarly, other flooding sources may be mapped to show only the 1-percent-annual-chance floodplain boundary on the FIRM, without published water surface elevations. In cases where the 1- and 0.2-percent-annual-chance floodplain boundaries are close together, only the 1-percent-annual-chance floodplain boundary is shown on the FIRM. Figure 3, “Map Legend for FIRM”, describes the flood zones that are used on the FIRMs to account for the varying levels of flood risk that exist along flooding sources within the project area. Table 2 and Table 3 indicate the flood zone designations for each flooding source and each community within Quitman County, respectively.

Table 2, “Flooding Sources Included in this FIS Report,” lists each flooding source, including its study limits, affected communities, mapped zone on the FIRM, and the completion date of its engineering analysis from which the flood elevations on the FIRM and in the FIS Report were derived. Descriptions and dates for the latest hydrologic and hydraulic analyses of the flooding sources are shown in Table 13. Floodplain boundaries for these flooding sources are shown on the FIRM (published separately) using the symbology described in Figure 3. On the map, the 1-percent-annual-chance floodplain corresponds to the SFHAs. The 0.2-percent-annual-chance floodplain shows areas that, although out of the regulatory floodplain, are still subject to flood hazards.

Small areas within the floodplain boundaries may lie above the flood elevations but cannot be shown due to limitations of the map scale and/or lack of detailed topographic

data. The procedures to remove these areas from the SFHA are described in Section 6.5 of this FIS Report.

Within this jurisdiction, there are one or more levees that have not been demonstrated by the communities or levee owners to meet the requirements of the Code of Federal Regulations, Title 44, Section 65.10 (44 CFR 65.10) as it relates to the levee's capacity to provide 1-percent-annual-chance flood protection. As such, the floodplain boundaries in this area are subject to change. Please refer to Section 4.4 of this FIS Report for more information on how this may affect the floodplain boundaries shown on this FIRM.

Table 2: Flooding Sources Included in this FIS Report

Flooding Source	Community	Downstream Limit	Upstream Limit	HUC-8 Sub-Basin(s)	Length (mi) (streams or coastlines)	Floodway (Y/N)	Zone shown on FIRM	Date of Analysis
Broad Bayou	Quitman County, Unincorporated Areas	Approximately 1.2 miles upstream of confluence with White Oak Bayou	Approximately 2.9 miles upstream of confluence with White Oak Bayou	08030204	1.7	N	A	2018
Burrell Bayou	Falcon, Town of; Quitman County, Unincorporated Areas	Approximately 0.5 mile downstream of Third Street	Approximately 0.4 mile upstream of Third Street	08030204	0.9	N	A	2010
Fowler Creek	Quitman County, Unincorporated Areas	Holder Road	County Boundary with Panola	08030204	0.9	N	A	2018
Hope Bayou	Quitman County, Unincorporated Areas; Sledge, Town of	The confluence with Pecan Baqyou	Approximately 1,500 feet upstream of Main Street	08030204	1.1	N	A	2010
Muddy Bayou	Quitman County, Unincorporated Areas	The confluence with White Oak Bayou	County Boundary with Tunica	08030204	1.0	N	A	2018
Old Yocona River	Crowder, City of; Quitman County, Unincorporated Areas	Approximately 1,350 feet downstream of Quitman Avenue	Approximately 1,700 feet upstream of Quitman Avenue	08030202	0.7	N	A	2010
Opossum Bayou Tributary	Lambert, Town of; Quitman County, Unincorporated Areas	The confluence with Opossum Bayou	Approximately 350 feet upstream of Johnson Avenue	08030202	1.3	Y	AE	2010
Pecan Bayou	Quitman County, Unincorporated Areas; Sledge, Town of	The confluence with Burrell Bayou	Approximately 800 feet upstream of the confluence of Hope Bayou	08030204	2.3	N	A	2010
White Oak Bayou	Quitman County, Unincorporated Areas	Approximately 2.8 miles upstream of Mills Road	Approximately 1.3 miles upstream of 400 Road	08030204	31.1	N	A	2018
Yazoo Pass	Quitman County, Unincorporated Areas	The confluence with White Oak Bayou	County Boundary with Coahoma	08030204	0.8	N	A	2018

Flooding Source	Community	Downstream Limit	Upstream Limit	HUC-8 Sub-Basin(s)	Length (mi) (streams or coastlines)	Floodway (Y/N)	Zone shown on FIRM	Date of Analysis
Yellow Lake Bayou	Quitman County, Unincorporated Areas	Approximately 0.9 miles downstream of the county boundary with Panola	County Boundary with Panola	08030204	0.9	N	A	2018

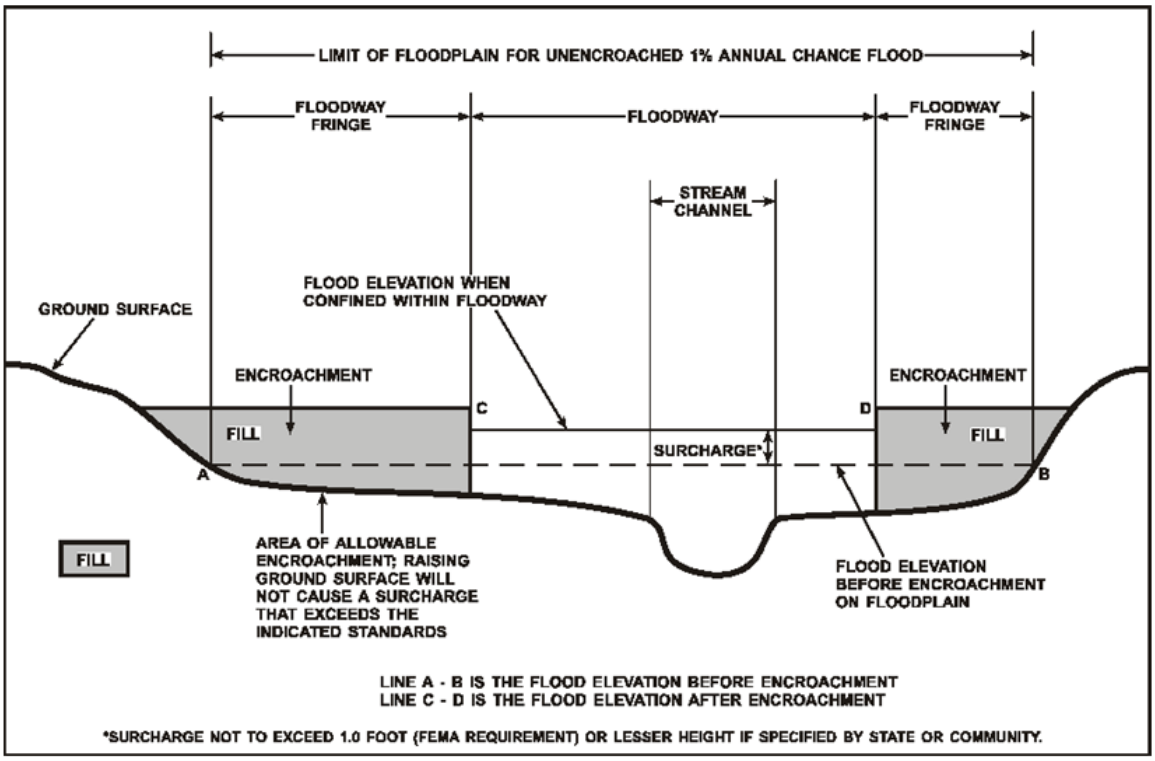
2.2 Floodways

Encroachment on floodplains, such as structures and fill, reduces flood-carrying capacity, increases flood heights and velocities, and increases flood hazards in areas beyond the encroachment itself. One aspect of floodplain management involves balancing the economic gain from floodplain development against the resulting increase in flood hazard.

For purposes of the NFIP, a floodway is used as a tool to assist local communities in balancing floodplain development against increasing flood hazard. With this approach, the area of the 1-percent-annual-chance floodplain on a river is divided into a floodway and a floodway fringe based on hydraulic modeling. The floodway is the channel of a stream, plus any adjacent floodplain areas, that must be kept free of encroachment in order to carry the 1-percent-annual-chance flood. The floodway fringe is the area between the floodway and the 1-percent-annual-chance floodplain boundaries where encroachment is permitted. The floodway must be wide enough so that the floodway fringe could be completely obstructed without increasing the water surface elevation of the 1-percent-annual-chance flood more than 1 foot at any point. Typical relationships between the floodway and the floodway fringe and their significance to floodplain development are shown in Figure 4.

To participate in the NFIP, Federal regulations require communities to limit increases caused by encroachment to 1.0 foot, provided that hazardous velocities are not produced. The floodways in this project are presented to local agencies as minimum standards that can be adopted directly or that can be used as a basis for additional floodway projects.

Figure 4: Floodway Schematic



Floodway widths presented in this FIS Report and on the FIRM were computed at cross sections. Between cross sections, the floodway boundaries were interpolated. For certain stream segments, floodways were adjusted so that the amount of floodwaters conveyed on each side of the floodplain would be reduced equally. The results of the floodway computations have been tabulated for selected cross sections and are shown in Table 24, “Floodway Data.”

All floodways that were developed for this Flood Risk Project are shown on the FIRM using the symbology described in Figure 3. In cases where the floodway and 1-percent-annual-chance floodplain boundaries are either close together or collinear, only the floodway boundary has been shown on the FIRM. For information about the delineation of floodways on the FIRM, refer to Section 6.3.

2.3 Base Flood Elevations

The hydraulic characteristics of flooding sources were analyzed to provide estimates of the elevations of floods of the selected recurrence intervals. The Base Flood Elevation (BFE) is the elevation of the 1-percent-annual-chance flood. These BFEs are most commonly rounded to the whole foot, as shown on the FIRM, but in certain circumstances or locations they may be rounded to 0.1 foot. Cross section lines shown on the FIRM may also be labeled with the BFE rounded to 0.1 foot. Whole-foot BFEs derived from engineering analyses that apply to coastal areas, areas of ponding, or other static areas with little elevation change may also be shown at selected intervals on the FIRM.

BFEs are primarily intended for flood insurance rating purposes. Cross sections with BFEs shown on the FIRM correspond to the cross sections shown in the Floodway Data table and Flood Profiles in this FIS Report. For construction and/or floodplain management purposes, users are cautioned to use the flood elevation data presented in this FIS Report in conjunction with the data shown on the FIRM. For example, the user may use the FIRM to determine the stream station of a location of interest and then use the profile to determine the 1-percent-annual-chance elevation at that location. Because only selected cross sections may be shown on the FIRM for riverine areas, the profile should be used to obtain the flood elevation between mapped cross sections. Additionally, for riverine areas, whole-foot elevations shown on the FIRM may not exactly reflect the elevations derived from the hydraulic analyses; therefore, elevations obtained from the profile may more accurately reflect the results of the hydraulic analysis.

2.4 Non-Encroachment Zones

This section is not applicable to this Flood Risk Project.

2.5 Coastal Flood Hazard Areas

This section is not applicable to this Flood Risk Project.

2.5.1 Water Elevations and the Effects of Waves

This section is not applicable to this Flood Risk Project.

Figure 5: Wave Runup Transect Schematic
[Not Applicable to this Flood Risk Project]

2.5.2 Floodplain Boundaries and BFEs for Coastal Areas

This section is not applicable to this Flood Risk Project.

2.5.3 Coastal High Hazard Areas

Figure 6: Coastal Transect Schematic
[Not Applicable to this Flood Risk Project]

2.5.4 Limit of Moderate Wave Action

This section is not applicable to this Flood Risk Project.

SECTION 3.0 – INSURANCE APPLICATIONS

3.1 National Flood Insurance Program Insurance Zones

For flood insurance applications, the FIRM designates flood insurance rate zones as described in Figure 3, "Map Legend for FIRM." Flood insurance zone designations are assigned to flooding sources based on the results of the hydraulic or coastal analyses. Insurance agents use the zones shown on the FIRM and depths and base flood elevations in this FIS Report in conjunction with information on structures and their contents to assign premium rates for flood insurance policies.

The 1-percent-annual-chance floodplain boundary corresponds to the boundary of the areas of special flood hazards (e.g. Zones A, AE, V, VE, etc.), and the 0.2-percent-annual-chance floodplain boundary corresponds to the boundary of areas of additional flood hazards.

Table 3 lists the flood insurance zones in Quitman County.

Table 3: Flood Zone Designations by Community

Community	Flood Zone(s)
Crowder, City of	A, X
Falcon, Town of	A, X
Lambert, Town of	A, AE, X
Marks, City of	A, X
Quitman County, Unincorporated Areas	A, AE, X
Sledge, Town of	A, X

3.2 Coastal Barrier Resources System

This section is not applicable to this Flood Risk Project.

Table 4: Coastal Barrier Resources System Information

[Not Applicable to this Flood Risk Project]

SECTION 4.0 – AREA STUDIED

4.1 Basin Description

Table 5 contains a description of the characteristics of the HUC-8 sub-basins within which each community falls. The table includes the main flooding sources within each basin, a brief description of the basin, and its drainage area.

Table 5: Basin Characteristics

HUC-8 Sub-Basin Name	HUC-8 Sub-Basin Number	Primary Flooding Source	Description of Affected Area	Drainage Area (square miles)
Coldwater	08030204	Coldwater River	The watershed is approximately 75 miles long and about 30 miles wide and is aligned generally in a northeast to southwest orientation. Coldwater covers the northern half of Quitman County.	1,861
Tallahatchie	08030202	Tallahatchie River	The watershed falls mostly within the Delta or Yazoo-Mississippi Basin physiographic regions of Mississippi. The Tallahatchie watershed covers the southern half of Quitman County.	1,051

4.2 Principal Flood Problems

Table 6 contains a description of the principal flood problems that have been noted for Quitman County by flooding source.

Table 6: Principal Flood Problems

Flooding Source	Description of Flood Problems
N/A	In December 2001, many roads in the county were under water. The October 2002 storm required evacuation of several homes in Marks. In May 2003, fifty homes in Marks were damaged by flooding with damages of $50,000.

Table 7 contains information about historic flood elevations in the communities within Quitman County.

Table 7: Historic Flooding Elevations

[Not Applicable to this Flood Risk Project]

4.3 Non-Levee Flood Protection Measures

Table 8 contains information about non-levee flood protection measures within Quitman County such as dams, jetties, and or dikes. Levees are addressed in Section 4.4 of this FIS Report.

Table 8: Non-Levee Flood Protection Measures

Flooding Source	Structure Name	Type of Measure	Location	Description of Measure
Panola-Quitman Floodway Channel	Panola-Quitman Floodway	Channel	The floodway begins in the delta section of Panola County, north of State Highway 6 near the intersection of the Little Tallahatchie River and the McIvor Canal and extends in a southerly direction to a point near the city of Crowder where it intercepts the Yocona River. From this point it flows south to a confluence with the Big Tallahatchie River about seven miles west of Charleston, Mississippi.	Located in Panola and Quitman Counties, affords protection for the eastern portion of Quitman County and parts of Panola and Tallahatchie Counties from the runoff from the hill sections of the Little Tallahatchie and Yocona Rivers. Constructed by USACE in the late 1960's. A system of levees, tied into the hills, was constructed on both sides of the floodway.

4.4 Levees

For purposes of the NFIP, FEMA only recognizes levee systems that meet, and continue to meet, minimum design, operation, and maintenance standards that are consistent with comprehensive floodplain management criteria. The Code of Federal Regulations, Title 44, Section 65.10 (44 CFR 65.10) describes the information needed for FEMA to determine if a levee system reduces the risk from the 1-percent-annual-chance flood. This information must be supplied to FEMA by the community or other party when a flood risk study or restudy is conducted, when FIRMs are revised, or upon FEMA request. FEMA reviews the information for the purpose of establishing the appropriate FIRM flood zone.

Levee systems that are determined to reduce the risk from the 1-percent-annual-chance flood are accredited by FEMA. FEMA can also grant provisional accreditation to a levee system that was previously accredited on an effective FIRM and for which FEMA is awaiting data and/or documentation to demonstrate compliance with Section 65.10. These levee systems are referred to as Provisionally Accredited Levees, or PALs.

Provisional accreditation provides communities and levee owners with a specified timeframe to obtain the necessary data to confirm the levee's certification status. Accredited levee systems and PALs are shown on the FIRM using the symbology shown in Figure 3 and in Table 9. If the required information for a PAL is not submitted within the required timeframe, or if information indicates that a levee system not longer meets Section 65.10, FEMA will de-accredit the levee system and issue an effective FIRM showing the levee-impacted area as a SFHA.

FEMA coordinates its programs with USACE, who may inspect, maintain, and repair levee systems. The USACE has authority under Public Law 84-99 to supplement local efforts to repair flood control projects that are damaged by floods. Like FEMA, the USACE provides a program to allow public sponsors or operators to address levee system maintenance deficiencies. Failure to do so within the required timeframe results in the levee system being placed in an inactive status in the USACE Rehabilitation and Inspection Program. Levee systems in an inactive status are ineligible for rehabilitation assistance under Public Law 84-99.

FEMA coordinated with the USACE, the local communities, and other organizations to compile a list of levees that exist within Quitman County. Table 9, "Levees," lists all accredited levees, PALs, and de-accredited levees shown on the FIRM for this FIS Report. Other categories of levees may also be included in the table. The Levee ID shown in this table may not match numbers based on other identification systems that were listed in previous FIS Reports. Levees identified as PALs in the table are labeled on the FIRM to indicate their provisional status.

Please note that the information presented in Table 9 is subject to change at any time. For that reason, the latest information regarding any USACE structure presented in the table should be obtained by contacting USACE and accessing the USACE National Levee Database. For levees owned and/or operated by someone other than the USACE, contact the local community shown in Table 31.

Please note that FEMA has identified levees in this jurisdiction that have not been demonstrated by the community or levee owner to meet the requirements of 44 CFR 65.10 of the NFIP regulations as it relates to the levee's capacity to provide 1-percent-annual-chance flood protection. As such, the existing flood hazard analysis in the affected areas has been carried forward from the previously-printed effective FIRM panels. These levees occur on FIRM panel(s) 28119C0020E, 28119C0040D, 28119C0085E, 28119C0095E, 28119C0105E, 28119C0175E, on the Pompey Ditch. Levees and their accreditation status are listed in Table 9 of this FIS Report.

The levee system that is shown as providing protection from the 1-percent-annual-chance or greater flood hazard is located along the left bank of the Mississippi River as a functional part of the Mississippi River Levee System and is not physically located within this County. This levee was built and is maintained by the USACE.

Table 9: Levees

Community	Flooding Source	Levee Location	Levee Owner	USACE Levee	Levee ID	Covered Under PL84-99 Program?	FIRM Panel(s)
Quitman County, Unincorporated Areas	Pompey Ditch[1]	Left Bank	U.S. Army Corps of Engineers	Yes	5905000011	N/A	28119C0040D, 28119C0085E, 28119C0095E, 28119C0105E, 28119C0175E
Quitman County, Unincorporated Areas	Pompey Ditch[1]	Right Bank	U.S. Army Corps of Engineers	Yes	5905000007	N/A	28119C0020E, 28119C0040D, 28119C0085E, 28119C0095E, 28119C0175E
Bolivar County, Unincorporated Areas; Coahoma County, Unincorporated Areas; Desoto County, Unincorporated Areas; Friar's Point, Town of; Greenville, City of; Gunnison, Town of; Issaquena County, Unincorporated Areas; Rosedale, City of; Tunica County, Unincorporated Areas; Warren County, Unincorporated Areas; Washington County, Unincorporated Areas	Mississippi River[2]	Left Bank	U.S. Army Corps of Engineers	Yes	5905000021	N/A	N/A

[1]Levee is not accredited.
[2]Mississippi River East Levee is located outside of Quitman County

SECTION 5.0 – ENGINEERING METHODS

For the flooding sources in the community, standard hydrologic and hydraulic study methods were used to determine the flood hazard data required for this study. Flood events of a magnitude that are expected to be equaled or exceeded at least once on the average during any 10-, 25-, 50-, 100-, or 500-year period (recurrence interval) have been selected as having special significance for floodplain management and for flood insurance rates. These events, commonly termed the 10-, 25-, 50-, 100-, and 500-year floods, have a 10-, 4-, 2-, 1-, and 0.2-percent-annual-chance, respectively, of being equaled or exceeded during any year.

Although the recurrence interval represents the long-term, average period between floods of a specific magnitude, rare floods could occur at short intervals or even within the same year. The risk of experiencing a rare flood increases when periods greater than 1 year are considered. For example, the risk of having a flood that equals or exceeds the 100-year flood (1-percent chance of annual exceedance) during the term of a 30-year mortgage is approximately 26 percent (about 3 in 10); for any 90-year period, the risk increases to approximately 60 percent (6 in 10). The analyses reported herein reflect flooding potentials based on conditions existing in the community at the time of completion of this study. Maps and flood elevations will be amended periodically to reflect future changes.

5.1 Hydrologic Analyses

Hydrologic analyses were carried out to establish the peak elevation-frequency relationships for floods of the selected recurrence intervals for each flooding source studied. Hydrologic analyses are typically performed at the watershed level. Depending on factors such as watershed size and shape, land use and urbanization, and natural or man-made storage, various models or methodologies may be applied. A summary of the hydrologic methods applied to develop the discharges used in the hydraulic analyses for each stream is provided in Table 13. Greater detail (including assumptions, analysis, and results) is available in the archived project documentation.

A summary of the discharges is provided in Table 10.

Table 10: Summary of Discharges

Flooding Source	Location	Drainage Area (Square Miles)	Peak Discharge (cfs)				
			10% Annual Chance	4% Annual Chance	2% Annual Chance	1% Annual Chance	0.2% Annual Chance
Burrell Bayou	Approximately 0.5 mile downstream of Third Street	37.5	*	*	*	1,289	*
Hope Bayou	The Confluence with Pecan Bayou	0.5	*	*	*	157	*
Hope Bayou	Approximately 250 feet upstream of Main Street	0.3	*	*	*	147	*
Old Yocona River	Approximately 1,350 feet downstream of Quitman Avenue	1.1	*	*	*	95	*
Opossum Bayou Tributary	The confluence with Opossum Bayou	1.57	285	*	377	407	452
Opossum Bayou Tributary	Approximately 400 feet upstream of Mississippi Highway 3	1.35	283	*	364	393	433
Opossum Bayou Tributary	Approximately 1,000 feet upstream of Mississippi Highway 3	0.26	75	*	92	97	106
Opossum Bayou Tributary	Approximately 1,800 feet downstream of Riverside Avenue	0.13	46	*	54	57	62
Pecan Bayou	The confluence with Burrell Bayou	13.0	*	*	*	813	*
Pecan Bayou	Approximately 50 feet upstream of the confluence of Hope Bayou	11.4	*	*	*	801	*

*Not calculated for this Flood Risk Project

Figure 7: Frequency Discharge-Drainage Area Curves

[Not Applicable to this Flood Risk Project]

Table 11: Summary of Non-Coastal Stillwater Elevations

[Not Applicable to this Flood Risk Project]

Table 12: Stream Gage Information used to Determine Discharges

[Not Applicable to this Flood Risk Project]

5.2 Hydraulic Analyses

Analyses of the hydraulic characteristics of flooding from the sources studied were carried out to provide estimates of the elevations of floods of the selected recurrence intervals. Base flood elevations on the FIRM represent the elevations shown on the Flood Profiles and in the Floodway Data tables in the FIS Report. Rounded whole-foot elevations may be shown on the FIRM in coastal areas, areas of ponding, and other areas with static base flood elevations. These whole-foot elevations may not exactly reflect the elevations derived from the hydraulic analyses. Flood elevations shown on the FIRM are primarily intended for flood insurance rating purposes. For construction and/or floodplain management purposes, users are cautioned to use the flood elevation data presented in this FIS Report in conjunction with the data shown on the FIRM. The hydraulic analyses for this FIS were based on unobstructed flow. The flood elevations shown on the profiles are thus considered valid only if hydraulic structures remain unobstructed, operate properly, and do not fail.

For streams for which hydraulic analyses were based on cross sections, locations of selected cross sections are shown on the Flood Profiles (Exhibit 1). For stream segments for which a floodway was computed (Section 6.3), selected cross sections are also listed in Table 24, “Floodway Data.”

A summary of the methods used in hydraulic analyses performed for this project is provided in Table 13. Roughness coefficients are provided in Table 14. Roughness coefficients are values representing the frictional resistance water experiences when passing overland or through a channel. They are used in the calculations to determine water surface elevations. Greater detail (including assumptions, analysis, and results) is available in the archived project documentation.

Table 13: Summary of Hydrologic and Hydraulic Analyses

Flooding Source	Study Limits Downstream Limit	Study Limits Upstream Limit	Hydrologic Model or Method Used	Hydraulic Model or Method Used	Date Analyses Completed	Flood Zone on FIRM	Special Considerations
Broad Bayou	Approximately 1.2 miles upstream of confluence with White Oak Bayou	Approximately 2.9 miles upstream of confluence with White Oak Bayou	1991 MS Regression Equations	HEC-RAS 5.0.3	2/23/2018	A	
Burrell Bayou	Approximately 0.5 mile downstream of Third Street	Approximately 0.4 mile upstream of Third Street	1991 MS Regression Equations	HEC-RAS 4.0.0	7/2010	A	Discharges for the 1-percent-annual-chance recurrence interval were determined using the Rural-East Region USGS regression equations for Mississippi as described in the USGS Water-Resources Investigations report 91-4037.
Fowler Creek	Holder Road	County Boundary with Panola	1991 MS Regression Equations	HEC-RAS 5.0.3	2/23/2018	A	
Hope Bayou	The confluence with Pecan Bayou	Approximately 1,500 feet upstream of Main Street	1991 MS Regression Equations	HEC-RAS 4.0.0	7/2010	A	Discharges for the 1-percent-annual-chance recurrence interval were determined using the Rural-East Region USGS regression equations for Mississippi as described in the USGS Water-Resources Investigations report 91-4037.
Muddy Bayou	The confluence with White Oak Bayou	County Boundary with Tunica	1991 MS Regression Equations	HEC-RAS 5.0.3	2/23/2018	A	
Old Yocona River	Approximately 1,350 feet downstream of Quitman Avenue	Approximately 1,700 feet upstream of Quitman Avenue	1991 MS Regression Equations	HEC-RAS 4.0.0	7/2010	A	Discharges for the 1-percent-annual-chance recurrence interval were determined using the Rural-East Region USGS regression equations for Mississippi as described in the USGS Water-Resources Investigations report 91-4037.

Flooding Source	Study Limits Downstream Limit	Study Limits Upstream Limit	Hydrologic Model or Method Used	Hydraulic Model or Method Used	Date Analyses Completed	Flood Zone on FIRM	Special Considerations
Opossum Bayou Tributary	The confluence with Opossum Bayou	Approximately 350 feet upstream of Johnson Avenue	1991 MS Regression Equations	HEC-RAS 4.0.0	7/2010	AE w/ Floodway	Discharges for the 1-percent-annual-chance recurrence interval were determined using the Rural-East Region USGS regression equations for Mississippi as described in the USGS Water-Resources Investigations report 91-4037. Adjustments for urbanization were made along Opossum Bayou Tributary according to the methodology presented by the USGS in "Flood Characteristics or Urban Watersheds in the United States".
Pecan Bayou	The confluence with Burrell Bayou	Approximately 800 feet upstream of the confluence of Hope Bayou	1991 MS Regression Equations	HEC-RAS 4.0.0	7/2010	A	Discharges for the 1-percent-annual-chance recurrence interval were determined using the Rural-East Region USGS regression equations for Mississippi as described in the USGS Water-Resources Investigations report 91-4037.
White Oak Bayou	Approximately 2.8 miles upstream of Mills Road	Approximately 1.3 miles upstream of 400 Road	1991 MS Regression Equations	HEC-RAS 5.0.3	2/23/2018	A	
Yazoo Pass	The confluence with White Oak Bayou	County Boundary with Coahoma	1991 MS Regression Equations	HEC-RAS 5.0.3	2/23/2018	A	
Yellow Lake Bayou	Approximately 0.9 miles downstream of the county boundary with Panola	County Boundary with Panola	1991 MS Regression Equations	HEC-RAS 5.0.3	2/23/2018	A	

Table 14: Roughness Coefficients

Flooding Source	Channel "n"	Overbank "n"
Broad Bayou	0.035 – 0.05	0.03 – 0.1
Burrell Bayou	0.04	0.07-0.12
Fowler Creek	0.05	0.12
Hope Bayou	0.04	0.07 – 0.12
Muddy Bayou	0.045	0.03 – 0.1
Old Yocona River	0.04	0.07 – 0.11
Opossum Bayou Tributary	0.04	0.07 – 0.12
Pecan Bayou	0.04	0.07 – 0.12
White Oak Bayou	0.05	0.1 – 0.15
Yazoo Pass	0.045	0.03 – 0.1
Yellow Lake Bayou	0.06	0.03 – 0.06

5.3 Coastal Analyses

This section is not applicable to this Flood Risk Project.

Table 15: Summary of Coastal Analyses
[Not Applicable to this Flood Risk Project]

5.3.1 Total Stillwater Elevations

This section is not applicable to this Flood Risk Project.

Figure 8: 1-Percent-Annual-Chance Total Stillwater Elevations for Coastal Areas
[Not Applicable to this Flood Risk Project]

Table 16: Tide Gage Analysis Specifics
[Not Applicable to this Flood Risk Project]

5.3.2 Waves

This section is not applicable to this Flood Risk Project.

5.3.3 Coastal Erosion

This section is not applicable to this Flood Risk Project.

5.3.4 Wave Hazard Analyses

This section is not applicable to this Flood Risk Project.

Table 17: Coastal Transect Parameters
[Not Applicable to this Flood Risk Project]

Figure 9: Transect Location Map
[Not applicable to this Flood Risk Project]

5.4 Alluvial Fan Analyses

This section is not applicable to this Flood Risk Project.

Table 18: Summary of Alluvial Fan Analyses
[Not applicable to this Flood Risk Project]

Table 19: Results of Alluvial Fan Analyses
[Not applicable to this Flood Risk Project]

SECTION 6.0 – MAPPING METHODS

6.1 Vertical and Horizontal Control

All FIS Reports and FIRMs are referenced to a specific vertical datum. The vertical datum provides a starting point against which flood, ground, and structure elevations can be referenced and compared. Until recently, the standard vertical datum used for newly created or revised FIS Reports and FIRMs was the National Geodetic Vertical Datum of 1929 (NGVD29). With the completion of the North American Vertical Datum of 1988 (NAVD88), many FIS Reports and FIRMs are now prepared using NAVD88 as the referenced vertical datum.

Flood elevations shown in this FIS Report and on the FIRMs are referenced to NAVD88. These flood elevations must be compared to structure and ground elevations referenced to the same vertical datum. For information regarding conversion between NGVD29 and NAVD88 or other datum conversion, visit the National Geodetic Survey website at www.ngs.noaa.gov.

Temporary vertical monuments are often established during the preparation of a flood hazard analysis for the purpose of establishing local vertical control. Although these monuments are not shown on the FIRM, they may be found in the archived project

documentation associated with the FIS Report and the FIRMs for this community. Interested individuals may contact FEMA to access these data.

To obtain current elevation, description, and/or location information for benchmarks in the area, please visit the NGS website at www.ngs.noaa.gov.

The datum conversion locations and values that were calculated for Quitman County are provided in Table 20.

Table 20: Countywide Vertical Datum Conversion

Quadrangle Name	Quadrangle Corner	Latitude	Longitude	Conversion from NGVD29 to NAVD88 (feet)
Average Conversion from NGVD29 to NAVD88 = -0.12 feet				

Table 21: Stream-Based Vertical Datum Conversion

[Not applicable to this Flood Risk Project]

6.2 Base Map

The FIRMs and FIS Report for this project have been produced in a digital format. The flood hazard information was converted to a Geographic Information System (GIS) format that meets FEMA's FIRM Database specifications and geographic information standards. This information is provided in a digital format so that it can be incorporated into a local GIS and be accessed more easily by the community. The FIRM Database includes most of the tabular information contained in the FIS Report in such a way that the data can be associated with pertinent spatial features. For example, the information contained in the Floodway Data table and Flood Profiles can be linked to the cross sections that are shown on the FIRMs. Additional information about the FIRM Database and its contents can be found in FEMA's *Guidelines and Standards for Flood Risk Analysis and Mapping*, www.fema.gov/guidelines-and-standards-flood-risk-analysis-and-mapping.

Base map information shown on the FIRM was derived from the sources described in Table 22.

Table 22: Base Map Sources

Data Type	Data Provider	Data Date	Data Scale	Data Description
Digital Orthophoto	U.S. Department of Agriculture-Farm Service Agency Aerial Photography Field Office	2016	0.6 meter GSD	NAIP color orthoimagery

Data Type	Data Provider	Data Date	Data Scale	Data Description
HUC 8 Basins	U.S. Geological Survey and National Resources Conservation Service State Offices	2017	1:24,000	USGS Watersheds delineated to a HUC 8 level.
Levees	U.S. Army Corps of Engineers	2018	N/A	Levee centerlines
Political Boundaries	Mississippi Automated Resource Information System	2015	1:24,000	County boundary
Political Boundaries	Mississippi Automated Resource Information System	2010	N/A	Municipal boundaries
Public Land Survey System (PLSS)	Mississippi Automated Resource Information System	2010	1:5,000	PLSS data were digitized from USGS quadrangles
Surface Water Features	National Hydrography Dataset	2010	N/A	Streams, rivers, and lakes were derived from NHD data
Transportation Features	Mississippi Department of Transportation	2017	1:5,000	Local Roads were collected by digitizing the linework from the MDEM 2006 Imagery. State Maintained routes were aligned and modified using the MDEM 2006 Imagery.
Transportation Features	U.S. Department of Commerce, U.S. Census Bureau, Geography Division	2010	N/A	Railroads

6.3 Floodplain and Floodway Delineation

The FIRM shows tints, screens, and symbols to indicate floodplains and floodways as well as the locations of selected cross sections used in the hydraulic analyses and floodway computations.

For riverine flooding sources, the mapped floodplain boundaries shown on the FIRM have been delineated using the flood elevations determined at each cross section; between cross sections, the boundaries were interpolated using the topographic elevation data described in Table 23.

In cases where the 1- and 0.2-percent-annual-chance floodplain boundaries are close together, only the 1-percent-annual-chance floodplain boundary has been shown. Small areas within the floodplain boundaries may lie above the flood elevations but cannot be shown due to limitations of the map scale and/or lack of detailed topographic data.

The floodway widths presented in this FIS Report and on the FIRM were computed for certain stream segments on the basis of equal conveyance reduction from each side of the floodplain. Floodway widths were computed at cross sections. Between cross sections, the floodway boundaries were interpolated. Table 2 indicates the flooding sources for which floodways have been determined. The results of the floodway computations for those flooding sources have been tabulated for selected cross sections and are shown in Table 24, "Floodway Data."

Table 23: Summary of Topographic Elevation Data used in Mapping

Community	Flooding Source	Source for Topographic Elevation Data			
		Description	Vertical Accuracy	Horizontal Accuracy	Citation
Quitman County, Unincorporated Areas	Broad Bayou, Fowler Creek, Muddy Bayou, White Oak Bayou, Yazoo Pass, Yellow Lake Bayou	Light Detection and Ranging data (LiDAR)	9 cm RMSEz	1.0 Meters	USACE 2010
Lambert, Town of; Quitman County, Unincorporated Areas	Opossum Bayou Tributary	10 Meter Digital Elevation Models (DEMs)	N/A	N/A	MARIS 2007
Crowder, City of; Falcon, Town of; Quitman County, Unincorporated Areas; Sledge, Town of	Burrell Bayou, Hope Bayou, Old Yocona River, Pecan Bayou	Light Detection and Ranging data (LiDAR)	18 cm RMSEz	0.8 Meters	USACE 2004 LIDAR

BFEs shown at cross sections on the FIRM represent the 1-percent-annual-chance water surface elevations shown on the Flood Profiles and in the Floodway Data tables in the FIS Report.

Table 24: Floodway Data

LOCATION		FLOODWAY			1% ANNUAL CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD88)			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQ. FEET)	MEAN VELOCITY (FEET/ SEC)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
A	76	56	238	1.7	152.7	152.7	153.6	0.9
B	1,011	82	567	0.7	155.2	155.2	156.2	1.0
C	1,650	105	757	0.5	155.2	155.2	156.2	1.0
D	2,715	100	556	0.7	156.4	156.4	157.3	0.9
E	3,630	95	588	0.2	156.4	156.4	157.3	0.9
F	4,792	65	513	0.1	156.4	156.4	157.3	0.9
G	5,420	55	430	0.1	156.4	156.4	157.3	0.9
H	6,143	80	380	0.2	156.4	156.4	157.4	1.0
I	6,784	55	162	0.4	156.4	156.4	157.4	1.0

[1]Feet above mouth

TABLE 24

FEDERAL EMERGENCY MANAGEMENT AGENCY

QUITMAN COUNTY, MISSISSIPPI

AND INCORPORATED AREAS

FLOODWAY DATA

FLOODING SOURCE: OPOSSUM BAYOU TRIBUTARY

Table 25: Flood Hazard and Non-Encroachment Data for Selected Streams

[Not applicable to this Flood Risk Project]

6.4 Coastal Flood Hazard Mapping

This section is not applicable to this Flood Risk Project.

Table 26: Summary of Coastal Transect Mapping Considerations

[Not applicable to this Flood Risk Project]

6.5 FIRM Revisions

This FIS Report and the FIRM are based on the most up-to-date information available to FEMA at the time of its publication; however, flood hazard conditions change over time. Communities or private parties may request flood map revisions at any time. Certain types of requests require submission of supporting data. FEMA may also initiate a revision. Revisions may take several forms, including Letters of Map Amendment (LOMAs), Letters of Map Revision Based on Fill (LOMR-Fs), Letters of Map Revision (LOMRs) (referred to collectively as Letters of Map Change (LOMCs)), Physical Map Revisions (PMRs), and FEMA-contracted restudies. These types of revisions are further described below. Some of these types of revisions do not result in the republishing of the FIS Report. To assure that any user is aware of all revisions, it is advisable to contact the community repository of flood-hazard data (shown in Table 31, "Map Repositories").

6.5.1 Letters of Map Amendment

A LOMA is an official revision by letter to an effective NFIP map. A LOMA results from an administrative process that involves the review of scientific or technical data submitted by the owner or lessee of property who believes the property has incorrectly been included in a designated SFHA. A LOMA amends the currently effective FEMA map and establishes that a specific property is not located in a SFHA.

To obtain an application for a LOMA, visit www.fema.gov/floodplain-management/letter-map-amendment-loma and download the form "MT-1 Application Forms and Instructions for Conditional and Final Letters of Map Amendment and Letters of Map Revision Based on Fill". Visit the "Flood Map-Related Fees" section to determine the cost, if any, of applying for a LOMA.

FEMA offers a tutorial on how to apply for a LOMA. The LOMA Tutorial Series can be accessed at www.fema.gov/online-tutorials.

For more information about how to apply for a LOMA, call the FEMA Map Information eXchange; toll free, at 1-877-FEMA MAP (1-877-336-2627).

6.5.2 Letters of Map Revision Based on Fill

A LOMR-F is an official revision by letter to an effective NFIP map. A LOMR-F states FEMA's determination concerning whether a structure or parcel has been elevated on fill above the base flood elevation and is, therefore, excluded from the SFHA.

Information about obtaining an application for a LOMR-F can be obtained in the same manner as that for a LOMA, by visiting www.fema.gov/floodplain-management/letter-map-amendment-loma for the "MT-1 Application Forms and Instructions for Conditional and Final Letters of Map Amendment and Letters of Map Revision Based on Fill" or by calling the FEMA Map Information eXchange, toll free, at 1-877-FEMA MAP (1-877-336-2627). Fees for applying for a LOMR-F, if any, are listed in the "Flood Map-Related Fees" section.

A tutorial for LOMR-F is available at www.fema.gov/online-tutorials.

6.5.3 Letters of Map Revision

A LOMR is an official revision to the currently effective FEMA map. It is used to change flood zones, floodplain and floodway delineations, flood elevations and planimetric features. All requests for LOMRs should be made to FEMA through the chief executive officer of the community, since it is the community that must adopt any changes and revisions to the map. If the request for a LOMR is not submitted through the chief executive officer of the community, evidence must be submitted that the community has been notified of the request.

To obtain an application for a LOMR, visit www.fema.gov/media-library/assets/documents/1343 and download the form "MT-2 Application Forms and Instructions for Conditional Letters of Map Revision and Letters of Map Revision". Visit the "Flood Map-Related Fees" section to determine the cost of applying for a LOMR. For more information about how to apply for a LOMR, call the FEMA Map Information eXchange; toll free, at 1-877-FEMA MAP (1-877-336-2627) to speak to a Map Specialist.

Previously issued mappable LOMCs (including LOMRs) that have been incorporated into the Quitman County FIRM are listed in Table 27. Please note that this table only includes LOMCs that have been issued on the FIRM panels updated by this map revision. For all other areas within this county, users should be aware that revisions to the FIS Report made by prior LOMRs may not be reflected herein and users will need to continue to use the previously issued LOMRs to obtain the most current data.

Table 27: Incorporated Letters of Map Change

[Not applicable to this Flood Risk Project]

6.5.4 Physical Map Revisions

A Physical Map Revisions (PMR) is an official republication of a community's NFIP map to effect changes to base flood elevations, floodplain boundary delineations, regulatory floodways and planimetric features. These changes typically occur as a result of structural works or improvements, annexations resulting in additional flood hazard areas or correction to base flood elevations or SFHAs.

The community's chief executive officer must submit scientific and technical data to FEMA to support the request for a PMR. The data will be analyzed and the map will be revised if warranted. The community is provided with copies of the revised information and is afforded a review period. When the base flood elevations are changed, a 90-day appeal period is provided. A 6-month adoption period for formal approval of the revised map(s) is also provided.

For more information about the PMR process, please visit www.fema.gov and visit the "Flood Map Revision Processes" section.

6.5.5 Contracted Restudies

The NFIP provides for a periodic review and restudy of flood hazards within a given community. FEMA accomplishes this through a national watershed-based mapping needs assessment strategy, known as the Coordinated Needs Management Strategy (CNMS). The CNMS is used by FEMA to assign priorities and allocate funding for new flood hazard analyses used to update the FIS Report and FIRM. The goal of CNMS is to define the validity of the engineering study data within a mapped inventory. The CNMS is used to track the assessment process, document engineering gaps and their resolution, and aid in prioritization for using flood risk as a key factor for areas identified for flood map updates. Visit www.fema.gov to learn more about the CNMS or contact the FEMA Regional Office listed in Section 8 of this FIS Report.

6.5.6 Community Map History

The current FIRM presents flooding information for the entire geographic area of Quitman County. Previously, separate FIRMs, Flood Hazard Boundary Maps (FHBMs) and/or Flood Boundary and Floodway Maps (FBFMs) may have been prepared for the incorporated communities and the unincorporated areas in the county that had identified SFHAs. Current and historical data relating to the maps prepared for the project area are presented in Table 28, "Community Map History." A description of each of the column headings and the source of the date is also listed below.

- *Community Name* includes communities falling within the geographic area shown on the FIRM, including those that fall on the boundary line, nonparticipating communities, and communities with maps that have been rescinded. Communities with No Special Flood Hazards are indicated by a footnote. If all maps (FHBM, FBFM, and FIRM) were rescinded for a community, it is not listed in this table unless SFHAs have been identified in this community.

- *Initial Identification Date (First NFIP Map Published)* is the date of the first NFIP map that identified flood hazards in the community. If the FHBM has been converted to a FIRM, the initial FHBM date is shown. If the community has never been mapped, the upcoming effective date or "pending" (for Preliminary FIS Reports) is shown. If the community is listed in Table 28 but not identified on the map, the community is treated as if it were unmapped.

- *Initial FHBM Effective Date* is the effective date of the first FHBM. This date may be the same date as the Initial NFIP Map Date.

- *FHBM Revision Date(s)* is the date(s) that the FHBM was revised, if applicable.

- *Initial FIRM Effective Date* is the date of the first effective FIRM for the community.

- *FIRM Revision Date(s)* is the date(s) the FIRM was revised, if applicable. This is the revised date that is shown on the FIRM panel, if applicable. As countywide studies are completed or revised, each community listed should have its FIRM dates updated accordingly to reflect the date of the countywide study. Once the FIRMs exist in countywide format, as PMRs of FIRM panels within the county are completed, the FIRM Revision Dates in the table for each community affected by the PMR are updated with the date of the PMR, even if the PMR did not revise all the panels within that community.

The initial effective date for the Quitman County FIRMs in countywide format was 05/16/2017.

Table 28: Community Map History

Community Name	Initial Identification Date	Initial FHBM Effective Date	FHBM Revision Date(s)	Initial FIRM Effective Date	FIRM Revision Date(s)
Crowder, City of	06/07/1974	06/07/1974	07/16/1976	08/01/1986	05/16/2017
Falcon, Town of	08/29/1975	08/29/1975	08/11/1978	08/19/1985	**TBD** 05/16/2017
Lambert, Town of	06/07/1974	06/07/1974	02/08/1980 06/18/1976	09/04/1985	05/16/2017
Marks, City of	06/07/1974	06/07/1974	02/08/1980 06/18/1976	09/04/1985	05/16/2017
Quitman County, Unincorporated Areas	09/02/1977	09/02/1977	N/A	09/04/1985	**TBD** 05/16/2017
Sledge, Town of	06/07/1974	06/07/1974	02/29/1980 07/09/1976	09/04/1985	**TBD** 05/16/2017

SECTION 7.0 – CONTRACTED STUDIES AND COMMUNITY COORDINATION

7.1 Contracted Studies

Table 29 provides a summary of the contracted studies, by flooding source, that are included in this FIS Report.

Table 29: Summary of Contracted Studies Included in this FIS Report

Flooding Source	FIS Report Dated	Contractor	Number	Work Completed Date	Affected Communities
Broad Bayou	TBD	State of Mississippi	EMA-2014-CA-00187-S01	February 2018	Quitman County, Unincorporated Areas
Burrell Bayou	05/16/2017	State of Mississippi	EMA-2008-CA-58	July 2010	Falcon, Town of; Quitman County, Unincorporated Areas
Fowler Creek	TBD	State of Mississippi	EMA-2014-CA-00187-S01	February 2018	Quitman County, Unincorporated Areas
Hope Bayou	05/16/2017	State of Mississippi	EMA-2008-CA-58	July 2010	Quitman County, Unincorporated Areas; Sledge, Town of
Muddy Bayou	TBD	State of Mississippi	EMA-2014-CA-00187-S01	February 2018	Quitman County, Unincorporated Areas
Old Yocona River	05/16/2017	State of Mississippi	EMA-2008-CA-58	July 2010	Crowder, City of; Quitman County, Unincorporated Areas
Opossum Bayou Tributary	05/16/2017	State of Mississippi	EMA-2008-CA-58	July 2010	Lambert, Town of; Quitman County, Unincorporated Areas
Pecan Bayou	05/16/2017	State of Mississippi	EMA-2008-CA-58	July 2010	Quitman County, Unincorporated Areas; Sledge, Town of
White Oak Bayou	TBD	State of Mississippi	EMA-2014-CA-00187-S01	February 2018	Quitman County, Unincorporated Areas
Yazoo Pass	TBD	State of Mississippi	EMA-2014-CA-00187-S01	February 2018	Quitman County, Unincorporated Areas
Yellow Lake Bayou	TBD	State of Mississippi	EMA-2014-CA-00187-S01	February 2018	Quitman County, Unincorporated Areas

7.2 Community Meetings

The dates of the community meetings held for this Flood Risk Project and previous Flood Risk Projects are shown in Table 30. These meetings may have previously been referred to by a variety of names (Community Coordination Officer (CCO), Scoping,

Discovery, etc.), but all meetings represent opportunities for FEMA, community officials, study contractors, and other invited guests to discuss the planning for and results of the project.

Table 30: Community Meetings

Community	FIS Report Dated	Date of Meeting	Meeting Type	Attended By
Crowder, City of	TBD	03/26/2014	Discovery	FEMA, MEMA, MDEQ, MGI, MDOT Bridge, Michael Baker, Tetra Tech, USACE – Memphis District, USDA NRCS, Yazoo Mississippi Delta Levee Board
Falcon, Town of	TBD	03/26/2014	Discovery	FEMA, MEMA, MDEQ, MGI, MDOT Bridge, Michael Baker, Tetra Tech, USACE – Memphis District, USDA NRCS, Yazoo Mississippi Delta Levee Board
		09/06/2018	Flood Risk Review	MEMA, MDEQ, MGI
Lambert, Town of	TBD	03/26/2014	Discovery	FEMA, MEMA, MDEQ, MGI, MDOT Bridge, Michael Baker, Tetra Tech, USACE – Memphis District, USDA NRCS, Yazoo Mississippi Delta Levee Board
Marks, City of	TBD	03/26/2014	Discovery	FEMA, MEMA, MDEQ, MGI, MDOT Bridge, Michael Baker, Tetra Tech, USACE – Memphis District, USDA NRCS, Yazoo Mississippi Delta Levee Board, and the Community
Quitman County, Unincorporated Areas	TBD	03/26/2014	Discovery	FEMA, MEMA, MDEQ, MGI, MDOT Bridge, Michael Baker, Tetra Tech, USACE – Memphis District, USDA NRCS, Yazoo Mississippi Delta Levee Board, and the Community
		09/06/2018	Flood Risk Review	MEMA, MDEQ, MGI
Sledge, Town	TBD	03/26/2014	Discovery	FEMA, MEMA, MDEQ, MGI, MDOT Bridge, Michael Baker, Tetra Tech, USACE – Memphis District, USDA NRCS, Yazoo Mississippi Delta Levee Board
		09/06/2018	Flood Risk Review	MEMA, MDEQ, MGI

SECTION 8.0 – ADDITIONAL INFORMATION

Information concerning the pertinent data used in the preparation of this FIS Report can be obtained by submitting an order with any required payment to the FEMA Engineering Library. For more information on this process, see www.fema.gov.

The additional data that was used for this project includes the FIS Report and FIRM that were previously prepared for the City of Crensahw, Panola and Quitman Counties, (FEMA 1979); Panola County and Incorporated Areas, (FEMA 2017); Tallahatchie County, Unincorporated Areas (FEMA 1990); Coahoma County, Unincorporated Areas (FEMA 1995); and Quitman County and Incorporated Areas (FEMA 2017).

Table 31 is a list of the locations where FIRMs for Quitman County can be viewed. Please note that the maps at these locations are for reference only and are not for distribution. Also, please note that only the maps for the community listed in the table are available at that particular repository. A user may need to visit another repository to view maps from an adjacent community.

Table 31: Map Repositories

Community	Address	City	State	Zip Code
Crowder, City of	Quitman County Courthouse 220 Chestnut Street, Suite 3	Marks	MS	38646
Falcon, Town of	Quitman County Courthouse 220 Chestnut Street, Suite 3	Marks	MS	38646
Lambert, Town of	Quitman County Courthouse 220 Chestnut Street, Suite 3	Marks	MS	38646
Marks, City of	Quitman County Courthouse 220 Chestnut Street, Suite 3	Marks	MS	38646
Quitman County, Unincorporated Areas	Quitman County Courthouse 220 Chestnut Street, Suite 3	Marks	MS	38646
Sledge, Town of	Quitman County Courthouse 220 Chestnut Street, Suite 3	Marks	MS	38646

The National Flood Hazard Layer (NFHL) dataset is a compilation of effective FIRM Databases and LOMCs. Together they create a GIS data layer for a state or territory. The NFHL is updated as studies become effective and extracts are made available to the public monthly. NFHL data can be viewed or ordered from the website shown in Table 32.

Table 32 contains useful contact information regarding the FIS Report, the FIRM, and other relevant flood hazard and GIS data. In addition, information about the State NFIP Coordinator and GIS Coordinator is shown in this table. At the request of FEMA, each Governor has designated an agency of State or territorial government to coordinate that state's or territory's NFIP activities. These agencies often assist communities in

developing and adopting necessary floodplain management measures. State GIS Coordinators are knowledgeable about the availability and location of state and local GIS data in their state.

Table 32: Additional Information

FEMA and the NFIP	
FEMA and FEMA Engineering Library website	www.fema.gov/national-flood-insurance-program-flood-hazard-mapping/engineering-library
NFIP website	www.fema.gov/national-flood-insurance-program
NFHL Dataset	msc.fema.gov
FEMA Region IV	Federal Emergency Management Agency 3003 Chamblee Tucker Road Atlanta, GA 30341 (770) 220-5200
Other Federal Agencies	
USGS website	www.usgs.gov
Hydraulic Engineering Center website	www.hec.usace.army.mil
State Agencies and Organizations	
State NFIP Coordinator	Stacy D. Ricks, CFM Mississippi Emergency Management Agency P.O. Box 5644 Pearl, MS 39208 Office: (601) 933-6605 Fax: (601) 933-6805 sricks@mema.ms.gov
State GIS Coordinator	Jim Steil Director, MARIS 3825 Ridgewood Road Jackson, MS 39211 Phone (601) 432-6357 jsteil@ihl.state.ms.us
Statewide Regulatory Coordinator	Stephen D. Champlin, R.P.G. Geospatial Resources Division/Flood Mapping Office of Geology Mississippi Department of Environmental Quality P.O. Box 2279 Jackson, Mississippi 39225 (601) 961-5506 Stephen_Champlin@deq.state.ms.us

SECTION 9.0 – BIBLIOGRAPHY AND REFERENCES

Table 33 includes sources used in the preparation of and cited in this FIS Report as well as additional studies that have been conducted in the study area.

Table 33: Bibliography and References

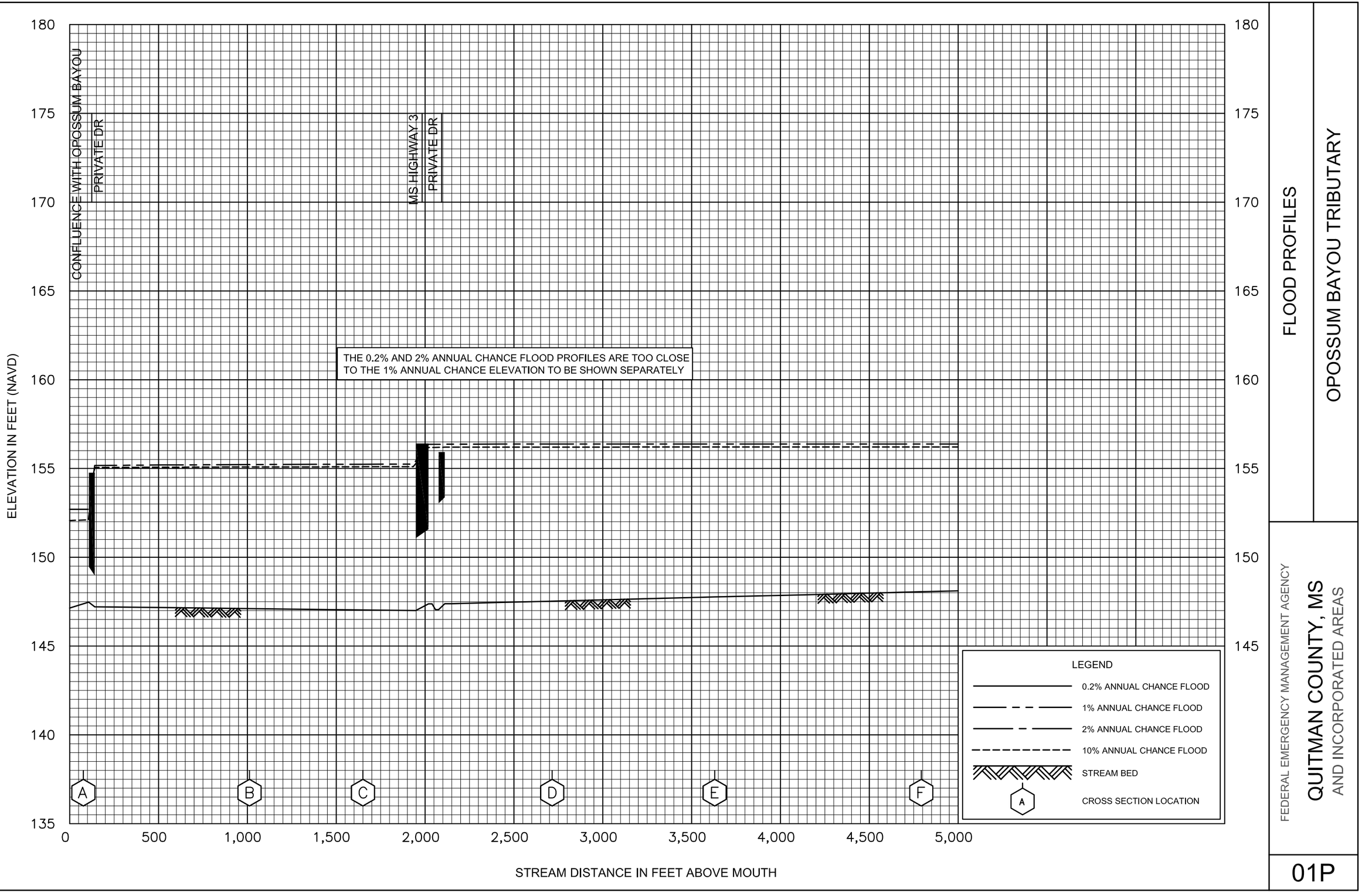
Citation in this FIS	Publisher/ Issuer	*Publication Title,* "Article," Volume, Number, etc.	Author/Editor	Place of Publication	Publication Date/ Date of Issuance	Link
ESRI 2016	Environmental Systems Research Institue	*ArcMap, Version 10.5*		Redlands, CA	2016	
FEMA 1979	Federal Emergency Management Agency	*Flood Insurance Study, City of Crenshaw, Panola and Quitman Counties, Mississippi*		Washington, D.C.	March 1979	FEMA Flood Map Service Center msc.fema.gov
FEMA 1988	Federal Emergency Management Agency	*Converting the National Flood Insurance Program to the North American Vertical Datum of 1988 – Guidelines for Community Officials, Engineers, and Surveyors, 3-0170*			June 1, 1992	
FEMA 1990	Federal Emergency Management Agency	*Flood Insurance Study, Tallahatchie County, Mississippi, and Unincorporated Areas*		Washington, D.C.	December 15, 1990	FEMA Flood Map Service Center msc.fema.gov
FEMA 1995	Federal Emergency Management Agency	*Flood Insurance Study, Coahoma County, Mississippi, and Unincorporated Areas*		Washington, D.C.	April 17, 1995	FEMA Flood Map Service Center msc.fema.gov
FEMA 2017 Delta	Federal Emergency Management Agency	*Mississippi River Delta Region Levee Zone X Study, Case No. 14-04-0030S*		Washington, D.C.	November 20, 2017	
FEMA 2017 Panola	Federal Emergency Management Agency	*Flood Insurance Study, Panola County, Mississippi, and Incorporated Areas*		Washington, D.C.	May 16, 2017	FEMA Flood Map Service Center msc.fema.gov

Citation in this FIS	Publisher/ Issuer	*Publication Title,* "Article," Volume, Number, etc.	Author/Editor	Place of Publication	Publication Date/ Date of Issuance	Link
FEMA 2017 Quitman	Federal Emergency Management Agency	*Flood Insurance Study, Quitman County, Mississippi, and Incorporated Areas*		Washington, D.C.	May 16, 2017	FEMA Flood Map Service Center msc.fema.gov
MARIS 2007	Mississippi Automated Resource Information System	*DEMs 2007*			2007	MARIS www.maris.state.ms.us/HTM/DownloadData/DEM.html
MARIS 2010 PLSS	Mississippi Automated Resource Information System	*PLSS Reference Grid*	U.S. Geological Survey	Jackson, MS	2010	MARIS www.maris.state.ms.us
MARIS 2010 POL	Mississippi Automated Resource Information System	*MS Census Designated Places 2010*	U.S. Department of Commerce, U.S. Census Bureau, Geography Division	Washington, D.C.	2010	MARIS www.maris.state.ms.us
MARIS 2015	Mississippi Automated Resource Information System	*County Boundaries for Mississippi*		Jackson, MS	May 20, 2015	MARIS www.maris.state.ms.us
MDOT 2017	Mississippi Department of Transportation	*MDOT Linear Referencing Method*		Jackson, MS	May 1, 2017	
MSC 2010	Mississippi State Climatologist	*Office of the Mississippi State Climatologist*			July 15, 2010	http://geosciences.msstate.edu/stateclimatologist.htm

Citation in this FIS	Publisher/ Issuer	*Publication Title,* "Article," Volume, Number, etc.	Author/Editor	Place of Publication	Publication Date/ Date of Issuance	Link
USACE 1973	U.S. Department of the Army, Corps of Engineers, Hydrologic Engineering Center	*HEC-2 Water-Surface Profiles, Generalized Computer Program*		Davis, CA	October 1973	
USACE 2004 HECRAS	U.S. Department of the Army, Corps of Engineers, Hydrologic Engineering Center	*HEC-RAS River Analysis System, Version 3.1.2*		Davis, CA	2004	
USACE 2004 LIDAR	U.S. Army Corps of Engineers	*Coldwater LiDAR Acquisition, Flood Feasibility/GIS Project, Tunica, Quitman, Tate, Coahoma, Panola, and Desoto Counties, MS. Task Order No. 0016, s.1; Contract No. DACW38-02-D-0002.*	MD Atlantic Technologies, Inc. and Sea Systems, Inc.		February 2004	
USACE 2010	U.S. Army Corps of Engineers	*Mississippi River Delta Project – LiDAR*	Photo Science, Inc.	Lexington, KY	August 2, 2010	
USACE 2016	U.S. Army Corps of Engineers, Hydrologic Engineering Center	*HEC-RAS River Analysis System, User's Manual, version 5.0.3*		Davis, CA	September 2016	
USACE 2017	U.S. Army Corps of Engineers	*National Levee Database*			July 12, 2018	https://levees.sec.usace.army.mil/
USDA 2010	U.S. Department of Agriculture, Natural Resources Conservation Service	*Land Resource Regions and Major Land Resource Areas of the United States, the Caribbean and the Pacific Basin: MLRA Explorer Custom Report*			January 14, 2010	

Citation in this FIS	Publisher/ Issuer	*Publication Title,* "Article," Volume, Number, etc.	Author/Editor	Place of Publication	Publication Date/ Date of Issuance	Link
USDA 2016	U.S. Department of Agriculture, Farm Service Agency Aerial Photography Field Office	*Quitman County MS 2016 NAIP*		Salt Lake City, UT	July 14, 2016	
USDC 2010	U.S. Department of Commerce, National Oceanic and Atmospheric Administration, National Climate Data Center	*Storm Events*			July 15, 2010	www.ncdc.noaa.gov
USDC 2010 Census	U.S. Department of Commerce, Bureau of the Census	*State & County Quickfacts, Mississippi Quicklinks*			July 15, 2010	www.census.gov/census2000/states/ms.html
USDC 2010 NOAA	U.S. Department of Commerce, National Oceanic and Atmospheric Administration	*1971-2000 NCDC Monthly Normals, NOAA Southern Regional Climate Center*			July 15, 2010	www.srcc.lsu.edu/climateNormals/
USDC 2010 TIGER	U.S. Department of Commerce, U.S. Census Bureau, Geography Division	*TIGER/Line Shapefile, 2010, MS, Railroads County-based Shapefile*		Washington, D.C.	2010	www.census.gov/geo/www/tiger
USDI 1983	U.S. Department of the Interior, Geological Survey	*Water Supply Paper 2207: Flood Characteristics of Urban Watershed in the United States*			1983	
USDI 1991	U.S. Department of the Interior, Geological Survey	*Water Resources Investigations Report 91-4037. Flood Characteristics of Mississippi*		Jackson, MS	1991	

Citation in this FIS	Publisher/ Issuer	*Publication Title,* "Article," Volume, Number, etc.	Author/Editor	Place of Publication	Publication Date/ Date of Issuance	Link
USGS 2010	U.S. Geological Survey	*National Hydrography Dataset*			August 26, 2010	
USGS 2017	U.S. Geological Survey and National Resources Conservation Service State Offices	*Watershed Boundary Data – Hydrologic Unit 8*			September 21, 2017	https://nhd.usgs.gov/data.html
WSC 2008	Watershed Concepts, a Division of Hayes, Seay, Mattern & Mattern	*Watershed Information System (WISE) Computer Software, v. 4.1.0 beta*			2008	



FLOOD PROFILES

OPOSSUM BAYOU TRIBUTARY

FEDERAL EMERGENCY MANAGEMENT AGENCY

QUITMAN COUNTY, MS
AND INCORPORATED AREAS

01P

ELEVATION IN FEET (NAVD)

185
180
175
170
165
160
155
150
145
140

RIVERSIDE AVE
PRIVATE DR
CUTRER AVE
PRIVATE DR
JOHNSON AVE
LIMIT OF STUDY

THE 0.2% AND 2% ANNUAL CHANCE FLOOD PROFILES ARE TOO CLOSE TO THE 1% ANNUAL CHANCE ELEVATION TO BE SHOWN SEPARATELY

G
H
I

5,000
5,500
6,000
6,500
7,000
7,500

STREAM DISTANCE IN FEET ABOVE MOUTH

LEGEND

- 0.2% ANNUAL CHANCE FLOOD
- 1% ANNUAL CHANCE FLOOD
- 2% ANNUAL CHANCE FLOOD
- 10% ANNUAL CHANCE FLOOD
- STREAM BED
- A — CROSS SECTION LOCATION

FLOOD PROFILES

OPOSSUM BAYOU TRIBUTARY

FEDERAL EMERGENCY MANAGEMENT AGENCY

QUITMAN COUNTY, MS
AND INCORPORATED AREAS

02P