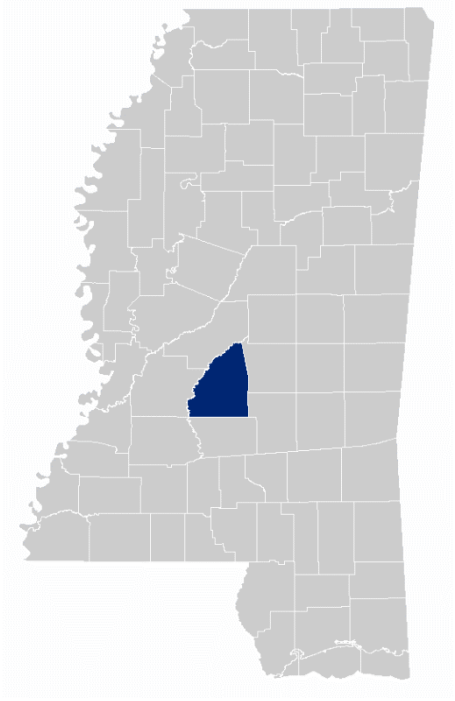
FLOOD INSURANCE STUDY

FEDERAL EMERGENCY MANAGEMENT AGENCY

VOLUME 1 OF 3



RANKIN COUNTY, MISSISSIPPI

AND INCORPORATED AREAS

COMMUNITY NAME	COMMUNITY NUMBER
BRANDON, CITY OF	280143
FLORENCE, CITY OF	280144
FLOWOOD, CITY OF	280289
JACKSON, CITY OF	280072
PEARL, CITY OF	280145
PEARL RIVER VALLEY WATER SUPPLY DISTRICT	280338
PELAHATCHIE, TOWN OF	280146
PUCKETT, TOWNSHIP OF	280147
RANKIN COUNTY, UNINCORPORATED AREAS	280142
RICHLAND, CITY OF	280299

FEMA

REVISED PRELIMINARY 11/18/2020

REVISED:

TBD

FLOOD INSURANCE STUDY NUMBER
28121CV001C
Version Number 2.3.3.3

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Exhibits

Published Separately

Flood Insurance Rate Map (FIRM)

FLOOD INSURANCE STUDY REPORT
RANKIN 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 insurance 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 60.3, *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 Rankin County, Mississippi.

The jurisdictions that are included in this project area, along with the Community Identification Number (CID) for each community and the 8-digit Hydrologic Unit Codes (HUC-8) sub-basins affecting each, are shown in Table 1. The Flood Insurance Rate Map (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
Brandon, City of	280143	3180002	28121C0183G 28121C0184G 28121C0191F 28121C0192F 28121C0193F 28121C0194G 28121C0205F 28121C0211F 28121C0215F 28121C0220F 28121C0335G 28121C0355G	
Florence, City of	280144	3180002	28121C0309F 28121C0317G 28121C0319G 28121C0320F 28121C0336F 28121C0338F 28121C0340F	
Flowood, City of	280289	03180002	28121C0065F 28121C0090F 28121C0159G 28121C0166F 28121C0167F 28121C0168F 28121C0169F 28121C0176F 28121C0177F 28121C0178G 28121C0179G 28121C0181G 28121C0182G 28121C0183G 28121C0184G 28121C0186G 28121C0187G 28121C0205F	

Table 1: Listing of NFP Jurisdictions Continued

Community	CID	HUC-8 Sub-Basin(s)	Located on FIRM Panel(s)	If Not Included, Location of Flood Hazard Data
Jackson, City of	280072	03180002	28121C0179G 28121C0183G 28121C0187G 28121C0191F	
Pearl, City of	280145	03180002	28121C0166F 28121C0167F 28121C0168F 28121C0169F 28121C0179G 28121C0183G 28121C0186G 28121C0187G 28121C0188F 28121C0189F 28121C0191F 28121C0193F 28121C0307F 28121C0326F 28121C0330F 28121C0335G	
Pear River Valley Water Supply District	280338	03180002	28121C0015F 28121C0020F 28121C0030F 28121C0035F 28121C0040F 28121C0060F[1] 28121C0065F 28121C0070G 28121C0080F 28121C0085F 28121C0090F 28121C0181G 28121C0182G 28121C0205F	

Table 1: Listing of NFP Jurisdictions Continued

Community	CID	HUC-8 Sub-Basin(s)	Located on FIRM Panel(s)	If Not Included, Location of Flood Hazard Data
Pelahatchie, Town of	280146	03180002	28121C0220F 28121C0230F 28121C0233F 28121C0234F 28121C0235F 28121C0240F 28121C0241F 28121C0242F 28121C0265F	
Puckett, Township of	280147	03180002	28121C0510F	

Table 1: Listing of NFP Jurisdictions Continued

Community	CID	HUC-8 Sub-Basin(s)	Located on FIRM Panel(s)	If Not Included, Location of Flood Hazard Data
Rankin County, Unincorporated Areas	280142	3180002	28121C0020F 28121C0030F 28121C0035F 28121C0040F 28121C0045F 28121C0065F 28121C0070G 28121C0080F 28121C0085F 28121C0090F 28121C0095F 28121C0105F 28121C0110F 28121C0115F 28121C0120F 28121C0140E[1] 28121C0164F 28121C0168F 28121C0176F 28121C0177F 28121C0181G 28121C0182G 28121C0183G 28121C0184G 28121C0189F 28121C0191F 28121C0193F 28121C0194G 28121C0205F	

Table 1: Listing of NFP Jurisdictions Continued

Rankin County, Unincorporated Areas	280142	3180002	28121C0210F 28121C0211F 28121C0215F 28121C0220F 28121C0230F 28121C0233F 28121C0234F 28121C0235F 28121C0240F 28121C0241F 28121C0242F 28121C0245F 28121C0255F 28121C0265F 28121C0295F 28121C0305F 28121C0306F 28121C0307F 28121C0308F 28121C0309F 28121C0315F 28121C0317G 28121C0319G 28121C0320F 28121C0326F 28121C0330F 28121C0335G 28121C0336F 28121C0338F 28121C0340F 28121C0345F 28121C0355G 28121C0360F 28121C0365F 28121C0370F 28121C0380F 28121C0385F 28121C0390F 28121C0395F 28121C0405G 28121C0415F	

Table 1: Listing of NFP Jurisdictions Continued

Community	CID	HUC-8 Sub-Basin(s)	Located on FIRM Panel(s)	If Not Included, Location of Flood Hazard Data
Rankin County, Unincorporated Areas	280142	3180002	28121C0430F 28121C0435F 28121C0440F 28121C0445E[1] 28121C0455F 28121C0460F 28121C0465E[1] 28121C0470F 28121C0480F 28121C0485F 28121C0490F 28121C0495F 28121C0505F 28121C0510F 28121C0515F 28121C0520F 28121C0530F 28121C0540F	
Richland, City of	280299	3180002	28121C0164F 28121C0168F 28121C0169F 28121C0306F 28121C0307F 28121C0308F 28121C0309F 28121C0317G 28121C0320F	

[1]Panels Not Printed

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% annual chance flood elevation is also referred to as the Base Flood Elevation (BFE)); delineations of the 1% annual chance and 0.2% annual chance floodplains; and 1% 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 30, "Map Repositories," within this FIS Report.

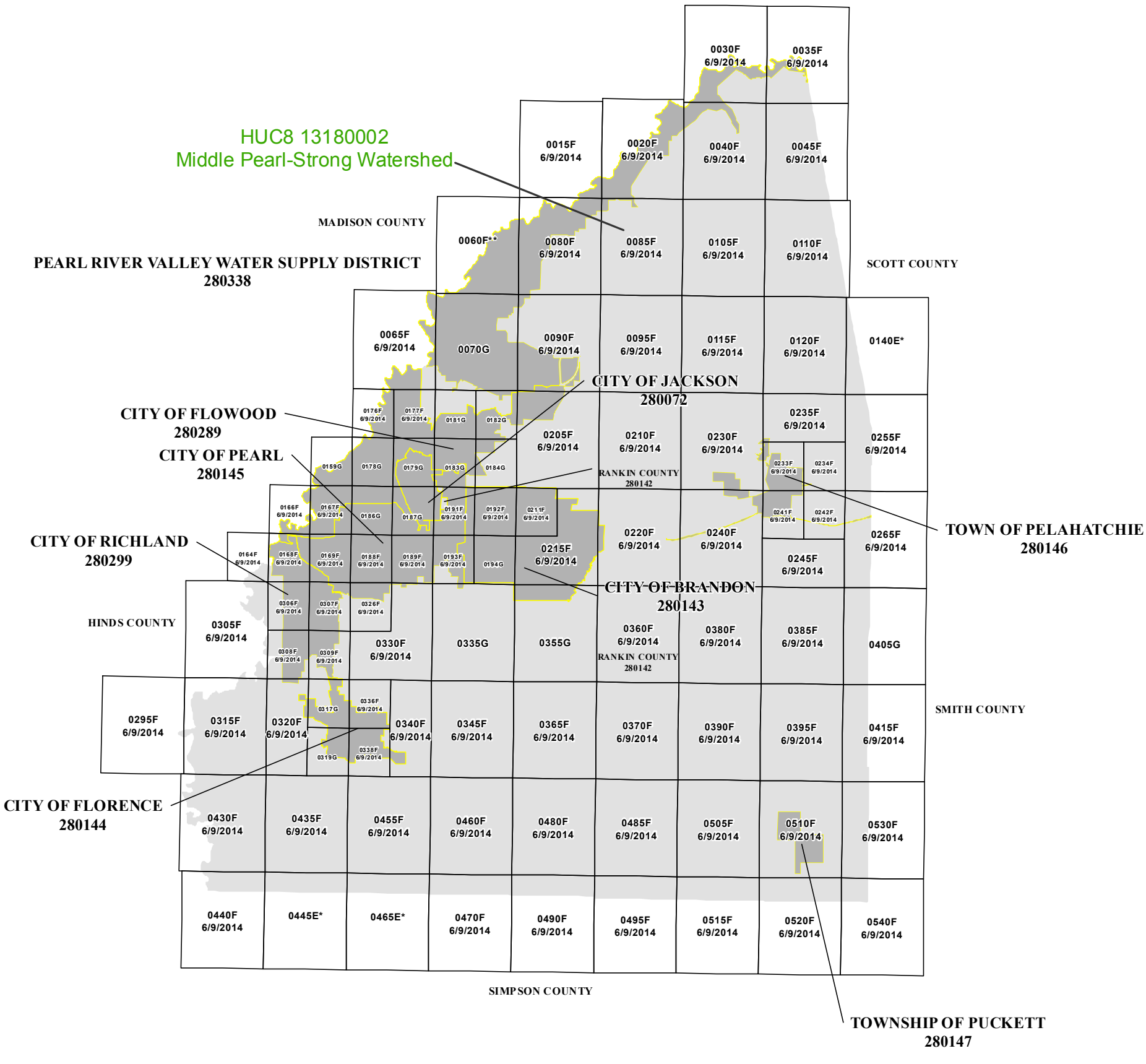
- New FIS Reports are frequently developed for multiple communities, such as entire counties. A countywide FIS Report incorporates previous FIS Reports for individual communities and the unincorporated area of the county (if not jurisdictional) into a single document and supersedes those documents for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

  The initial Countywide FIS Report for Rankin County became effective on April 15, 1994. Refer to Table 27 for information about subsequent revisions to the FIRMs.

- 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 http://www.fema.gov/online-tutorials.

The FIRM Index in Figure 1 shows the overall FIRM panel layout within Rankin 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 Panel 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 TBD.

REVISED PRELIMINARY 11/18/2020

1 in = 5 miles 1:335,000

N 0 2.75 5.5 11 Miles

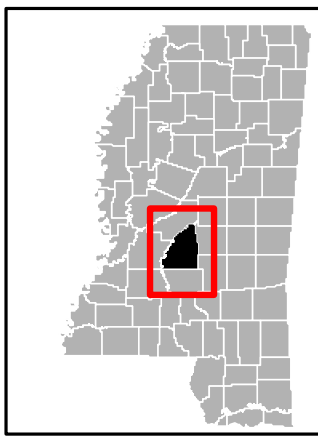
Map Projection:
State Plane Mississippi West, FIPS Zone 2302;
North American Datum 1983

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

*PANEL NOT PRINTED - NO SPECIAL FLOOD HAZARD AREAS
**PANEL NOT PRINTED - AREA ALL WITHIN ZONE AE (EL 300)



NATIONAL FLOOD INSURANCE PROGRAM
FLOOD INSURANCE RATE MAP INDEX

RANKIN COUNTY, MISSISSIPPI and Incorporated Areas

PANELS PRINTED:

0015, 0020, 0030, 0035, 0040, 0045, 0065, 0070, 0080, 0085, 0090, 0095, 0105, 0110, 0115, 0120, 0159, 0164, 0166, 0167, 0168, 0169, 0176, 0177, 0178, 0179, 0181, 0182, 0183, 0184, 0186, 0187, 0188, 0189, 0191, 0192, 0193, 0194, 0205, 0210, 0211, 0215, 0220, 0230, 0233, 0234, 0235, 0240, 0241, 0242, 0245, 0255, 0265, 0295, 0305, 0306, 0307, 0308, 0309, 0315, 0317, 0319, 0320, 0326, 0330, 0335, 0336, 0338, 0340, 0345, 0355, 0360, 0365, 0370, 0380, 0385, 0390, 0395, 0405, 0415, 0430, 0435, 0440, 0455, 0460, 0470, 0480, 0485, 0490, 0495, 0505, 0510, 0515, 0520, 0530, 0540

FEMA

MAP NUMBER
28121CIND0C

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 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 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 Map Service Center at the number listed above.

For community and countywide map dates, refer to Table 27 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 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 Mississippi State Plane West FIPS Zone 2302. The horizontal datum was NAD83, Western Hemisphere. 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 NAVD88. 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 http://www.ngs.noaa.gov/ or contact the National Geodetic Survey at the following address:

NGS Information Services
NOAA, N/NGS12
National Geodetic Survey
SSMC-3, #9202
1315 East-West Highway
Silver Spring, Maryland 20910-3282
(301) 713-3242

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 30 of this FIS Report.

BASE MAP INFORMATION: Base map information shown on the FIRM was provided in digital format by Mississippi Department of Environmental Quality, Automated Resource Information System, and the United States Department of Agriculture. Orthoimagery was originally produced by Fugro Earthdata in 2006 and has a 2- foot pixel resolution. Supplemental imagery was produced by National Agriculture Imagery Program (NAIP) in 2016 and has a 0.6 – meter ground sample distanced. 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.

Figure 2. FIRM Notes to Users

NOTES FOR FIRM INDEX

REVISIONS TO INDEX: As new studies are performed and FIRM panels are updated within Rankin County, MS, 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 27 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 based information available at the time of publication. As such, they may be more current than those shown on the FIRM panels issued before TBD.

SPECIAL NOTES FOR SPECIFIC FIRM PANELS

This Notes to Users section was created specifically for Rankin County, MS, effective TBD.

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.

Figure 3: Map Legend for FIRM

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 Rankin 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, either at cross section locations or as static whole-foot elevations that apply throughout the 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.

Figure 3: Map Legend for FIRM

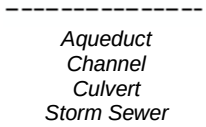
Zone VE	Zone VE is the flood insurance rate zone that corresponds to the 1% annual chance coastal floodplains that have additional hazards associated with storm waves. Base flood elevations derived from the coastal analyses are shown within this zone as static whole-foot elevations that apply throughout the zone.
	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 determined to be outside the 0.2% annual chance flood hazard
FLOOD HAZARD AND OTHER BOUNDARY LINES	
	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	
	Channel, Culvert, Aqueduct, or Storm Sewer

Figure 3: Map Legend for FIRM

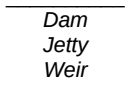
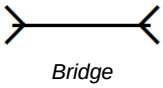
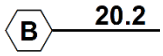
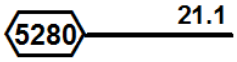
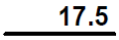
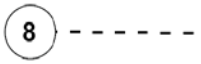
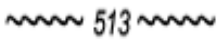
	Dam, Jetty, Weir
	Levee, Dike or Floodwall
	Bridge
REFERENCE MARKERS	
	River mile Markers
CROSS SECTION & TRANSECT INFORMATION	
	Lettered Cross Section with Regulatory Water Surface Elevation (BFE)
	Numbered Cross Section with Regulatory Water Surface Elevation (BFE)
	Unlettered Cross Section with Regulatory Water Surface Elevation (BFE)
	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.
	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
ZONE AO **(DEPTH 2)** **(VEL 15 FPS)**	Zone designation with Depth and Velocity
BASE MAP FEATURES	
	River, Stream or Other Hydrographic Feature
	Interstate Highway

Figure 3: Map Legend for FIRM

	U.S. Highway
	State Highway
	County Highway
	Street, Road, Avenue Name, or Private Drive if shown on Flood Profile
	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
$^{42}\mathbf{76}^{\mathbf{000m}}\mathbf{E}$	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% annual chance (100-year) flood has been adopted by FEMA as the base flood for floodplain management purposes. The 0.2% 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 Rankin 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% 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 22), study methodologies employed (Section 5.0), and flood risk, certain flooding sources may be mapped to show both the 1% and 0.2% 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% annual chance floodplain boundary on the FIRM, without published water surface elevations. In cases where the 1% and 0.2% annual chance floodplain boundaries are close together, only the 1% 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 Rankin 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 12. 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% annual chance floodplain corresponds to the SFHAs. The 0.2% 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.

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)	Area (mi^2) (estuaries or ponding)	Floodway (Y/N)	Zone shown on FIRM	Date of Analysis
All Zone A Streams Studied in the 2014 FIS	Rankin County and Incorporated Areas	Various	Various	03180002	Various		N	A	2011
All Zone A Streams Studied in the 2003 FIS	Rankin County and Incorporated Areas	Various	Various	03180002	Various		N	A	2000
Brush Branch	Rankin County Unincorporated Areas	Confluence with Brush Creek	Approximately 3,770 feet upstream of Lakeview Road	03180002	1.3		N	AE	2011
Brush Creek	Rankin County Unincorporated Areas	Approximately 9,870 feet upstream of the confluence with Pelahatchie Creek	Approximately 10,716 feet upstream Andrew Chapel Road	03180002	4.3		N	AE	2011
Butler Creek	Florence, City of	Confluence with Steen Creek	Approximately 11,318 feet upstream of U.S. Highway 49	03180002	2.6		Y	AE	2011
Butler Creek	Rankin County Unincorporated Areas	Approximately 11,318 feet upstream of U.S. Highway 49	Approximately 23,098 feet upstream of U.S. Highway 49	03180002	2.2		Y	AE	1979
Clark Creek	Rankin County Unincorporated Areas	Confluence with Pelahatchie Creek	Approximately 42,120 feet upstream of the confluence with Pelahatchie Creek	03180002	8.0		Y	AE	1980

Table 2: Flooding Sources Included in this FIS Report Continued

Flooding Source	Community	Downstream Limit	Upstream Limit	HUC-8 Sub-Basin(s)	Length (mi) (streams or coastlines)	Area (mi^2) (estuaries or ponding)	Floodway (Y/N)	Zone shown on FIRM	Date of Analysis
Clark Creek Tributary	Rankin County Unincorporated Areas	Confluence with Clark Creek	Approximately 13,500 feet upstream of the confluence with Clark Creek	03180002	2.6		Y	AE	1980
Conway Slough	Pearl, City of; Richland, City of	Confluence with Pearl River	Approximately 16,300 feet upstream of the confluence with Pearl River	03180002	3.1		Y	AE	1989
Conway Slough Tributary 1	Pearl, City of	Confluence with Conway Slough	Just downstream of Childre Road	03180002	0.5		Y	AE	1980
Conway Slough Tributary 1	Pearl, City of	Just downstream of Childre Road	Just downstream of South Pearson Road	03180002	1.2		Y	AE, AO	2011
Conway Slough Tributary 2	Pearl, City of	Confluence with Conway Slough	Approximately 6,850 feet upstream of the confluence with Conway Slough	03180002	1.3		Y	AE	1994
Eutacutachee Creek	Pelahatchie, Town of; Rankin County Unincorporated Areas	Confluence with Pelahatchie Creek	Approximately 55,300 feet upstream of the confluence with Pelahatchie Creek	03180002	10.5		Y	AE	2000

Table 2: Flooding Sources Included in this FIS Report Continued

Flooding Source	Community	Downstream Limit	Upstream Limit	HUC-8 Sub-Basin(s)	Length (mi) (streams or coastlines)	Area (mi^2) (estuaries or ponding)	Floodway (Y/N)	Zone shown on FIRM	Date of Analysis
Eutacutachee Creek Tributary 1	Rankin County Unincorporated Areas	Confluence with Eutacutachee Creek	Approximately 7,080 feet upstream of the confluence with Eutacutachee Creek	03180002	1.3		Y	AE	2000
Eutacutachee Creek Tributary 2	Rankin County Unincorporated Areas	Confluence with Eutacutachee Creek	Approximately 4,760 feet upstream of the confluence with Eutacutachee Creek	03180002	0.9		Y	AE	2000
Eutacutachee Creek Tributary 3	Rankin County Unincorporated Areas	Confluence with Eutacutachee Creek	Approximately 14,000 feet upstream of the confluence with Eutacutachee Creek	03180002	2.7		Y	AE	2000
Eutacutachee Creek Tributary 4	Rankin County Unincorporated Areas	Confluence with Eutacutachee Creek	Approximately 16,950 feet upstream of the confluence with Eutacutachee Creek	03180002	3.2		Y	AE	2000
Fox Run	Florence, City of; Rankin County Unincorporated Areas	Approximately 3,000 feet downstream of White Road	Approximately 740 feet upstream of White Road	03180002	0.8		N	A	2014

Table 2: Flooding Sources Included in this FIS Report Continued

Flooding Source	Community	Downstream Limit	Upstream Limit	HUC-8 Sub-Basin(s)	Length (mi) (streams or coastlines)	Area (mi^2) (estuaries or ponding)	Floodway (Y/N)	Zone shown on FIRM	Date of Analysis
Hog Creek	Flowood, City of; Jackson, City of; Pearl, City of; Rankin County	Confluence with Pearl River	Approximately 14,740 feet upstream of the confluence with Pearl River	03180002	2.8		Y	AE	2000
Hog Creek	Flowood, City of; Jackson, City of; Pearl, City of; Rankin County	Approximately 14,740 feet upstream of the confluence with Pearl River	Approximately 50,550 feet upstream of the confluence with Pearl River	03180002	6.8		Y	AE	2014
Hog Creek Tributary	Flowood, City of	Confluence with Hog Creek	Approximately 6,350 feet upstream of the confluence with Hog Creek	03180002	1.2		Y	AE	1980
Indian Creek	Florence, City of	Confluence with Steen Creek	Approximately 4,094 feet upstream of Crosspark Boulevard	03180002	2.8		Y	AE	2011
Indian Creek	Rankin County Unincorporated Areas	Approximately 4,094 feet upstream of Crosspark Boulevard	Approximately 15,080 feet upstream of Crosspark Boulevard	03180002	2.1		Y	AE	1980
Indian Creek Tributary 1	Florence, City of	Confluence with Indian Creek	Approximately 12,290 feet upstream of U.S. Highway 49	03180002	1.8		Y	AE	2011

Table 2: Flooding Sources Included in this FIS Report Continued

Flooding Source	Community	Downstream Limit	Upstream Limit	HUC-8 Sub-Basin(s)	Length (mi) (streams or coastlines)	Area (mi^2) (estuaries or ponding)	Floodway (Y/N)	Zone shown on FIRM	Date of Analysis
Indian Creek Tributary 1	Florence, City of; Richland, City of; Rankin County Unincorporated Areas	Approximately 12,290 feet upstream of U.S. Highway 49	Approximately 21,080 feet upstream of U.S. Highway 49	03180002	1.7		Y	AE	1980
Mill Creek	Pearl River Valley Water Supply District; Rankin County Unincorporated Areas	Confluence with Ross Barnett Reservoir	State Highway 25	03180002	1.2		Y	AE	1980
Mill Creek	Flowood, City of; Rankin County Unincorporated Areas	State Highway 25	State Highway 471	03180002	3.8		Y	AE	2011
Mill Creek Tributary	Flowood, City of; Rankin County Unincorporated Areas	Confluence with Mill Creek	Approximately 5,810 feet upstream of the confluence with Mill Creek	03180002	1.1		Y	AE	1980
Neely Creek	Flowood, City of	Confluence with Old Pearl River	Approximately 6,900 feet upstream of the confluence with Old Pearl River	03180002	1.3		Y	AE	1980
Neely Creek (Left Channel)	Flowood, City of; Pearl, City of	Confluence with Neely Creek	Approximately 16,450 feet upstream of the confluence with Neely Creek	03180002	3.1		Y	AE	1994

Table 2: Flooding Sources Included in this FIS Report Continued

Flooding Source	Community	Downstream Limit	Upstream Limit	HUC-8 Sub-Basin(s)	Length (mi) (streams or coastlines)	Area (mi^2) (estuaries or ponding)	Floodway (Y/N)	Zone shown on FIRM	Date of Analysis
Neely Creek (Right Channel)	Flowood, City of	Confluence with Neely Creek	Approximately 7,180 feet upstream of the confluence with Neely Creek	03180002	1.4		Y	AE	1980
Neely Creek (Right Channel)	Flowood, City of; Pearl, City of	Approximately 2,640 feet downstream of Flynn Drive	Approximately 791 feet upstream of Harle Street	03180002	1.4		Y	AE	2011
Neely Creek Tributary 2	Flowood, City of; Pearl, City of	Confluence with Neely Creek	Approximately 11,080 feet upstream of the confluence with Neely Creek	03180002	2.1		Y	AE	1994
Park Creek	Pelahatchie, Town of; Rankin County Unincorporated Areas	Confluence with Pelahatchie Creek	Approximately 5,571 feet upstream of Lake Road	03180002	2.8		N	AE	2011
Pearl River	Flowood, City of; Jackson, City of; Richland, City of; Pearl, City of; Pearl River Valley Water Supply District; Rankin County Unincorporated Areas	County Boundary	Ross Barnett Reservoir Dam	03180002	47.0	n/a	Y	AE	1994

Table 2: Flooding Sources Included in this FIS Report Continued

Flooding Source	Community	Downstream Limit	Upstream Limit	HUC-8 Sub-Basin(s)	Length (mi) (streams or coastlines)	Area (mi^2) (estuaries or ponding)	Floodway (Y/N)	Zone shown on FIRM	Date of Analysis
Pearl River	Flowood, City of; Jackson, City of; Richland, City of; Pearl, City of; Pearl River Valley Water Supply District; Rankin County Unincorporated Areas	County Boundary	Ross Barnett Reservoir Dam	03180002	47.0	n/a	Y	AE	1993
Pearl River	Flowood, City of; Jackson, City of; Richland, City of; Pearl, City of; Pearl River Valley Water Supply District; Rankin County Unincorporated Areas	County Boundary	Ross Barnett Reservoir Dam	03180002	47.0	n/a	Y	AE	1980
Pearl River Tributary 1	Richland, City of; Rankin County Unincorporated Areas	Richland corporate limits	Approximately 8,660 feet upstream of Richland corporate limits	03180002	1.6	n/a	Y	AE	1980
Pearl River Tributary 2	Richland, City of; Rankin County Unincorporated Areas	Richland corporate limits	Approximately 5,850 feet upstream of Richland corporate limits	03180002	1.1	n/a	Y	AE	2000

Table 2: Flooding Sources Included in this FIS Report Continued

Flooding Source	Community	Downstream Limit	Upstream Limit	HUC-8 Sub-Basin(s)	Length (mi) (streams or coastlines)	Area (mi^2) (estuaries or ponding)	Floodway (Y/N)	Zone shown on FIRM	Date of Analysis
Pearl River Tributary 3	Flowood, City of	Confluence with Hog Creek	Approximately 7,200 feet upstream of the confluence with Hog Creek	03180002	1.4	n/a	Y	AE	2000
Pelahatchie Bay Unnamed Tributary	Pearl River Valley Water Supply District; Rankin County Unincorporated Areas	Pearl River Valley Water Supply District corporate limits	Approximately 510 feet upstream of Pearl River Valley Water Supply District corporate limits	03180002	0.1	n/a	Y	AE	2000
Pelahatchie Creek (Lower Reach)	Pearl River Valley Water Supply District; Rankin County Unincorporated Areas	Confluence with Ross Barnett Reservoir	Approximately 29,400 feet upstream of the confluence with Ross Barnett Reservoir	03180002	5.6	n/a	Y	AE	1980
Pelahatchie Creek (Upper Reach)	Rankin County Unincorporated Areas	Confluence of Eutachtachee Creek	Approximately 800 feet downstream of U.S. Highway 80	03180002	3.6		N	AE	2011
Pelahatchie Creek (Upper Reach)	Pelahatchie, Town of; Rankin County Unincorporated Areas	Approximately 800 feet downstream of U.S. Highway 80	Approximately 16,630 feet upstream of U.S. Highway 80	03180002	3.3		Y	AE	1978
Pelahatchie Creek Tributary	Pearl River Valley Water Supply District; Rankin County Unincorporated Areas	Confluence with Pelahatchie Creek (Lower Reach)	Approximately 8,500 feet upstream of the confluence with Pelahatchie Creek (Lower Reach)	03180002	1.6		Y	AE	1980

Table 2: Flooding Sources Included in this FIS Report Continued

Flooding Source	Community	Downstream Limit	Upstream Limit	HUC-8 Sub-Basin(s)	Length (mi) (streams or coastlines)	Area (mi^2) (estuaries or ponding)	Floodway (Y/N)	Zone shown on FIRM	Date of Analysis
Pelahatchie Creek Tributary 1	Pelahatchie, Town of	Confluence with Pelahatchie Creek (Upper Reach)	Approximately 8,890 feet upstream of the confluence with Pelahatchie Creek (Upper Reach)	03180002	1.7		Y	AE	2000
Pierce Creek	Pelahatchie, Town of; Rankin County Unincorporated Areas	Confluence with Pelahatchie Creek (Upper Reach)	Approximately 21,200 feet upstream of the confluence with Pelahatchie Creek (Upper Reach)	03180002	4.0		Y	AE	1978
Plummer Slough	Pearl River Valley Water Supply District; Rankin County Unincorporated Areas	Confluence with Pelahatchie Creek (Lower Reach)	Approximately 17,800 feet upstream of the confluence with Pelahatchie Creek (Lower Reach)	03180002	3.4		Y	AE	1980
Prairie Branch Canal	Flowood, City of; Pearl, City of	Confluence with Pearl River	Approximately 25,280 feet upstream of the confluence with Pearl River	03180002	4.8		Y	AE	2014
Prairie Branch Canal Tributary 1	Flowood, City of	Confluence with Prairie Branch Canal	Approximately 9,300 feet upstream of the confluence with Pearl River	03180002	1.8		Y	AE	2000

Table 2: Flooding Sources Included in this FIS Report Continued

Flooding Source	Community	Downstream Limit	Upstream Limit	HUC-8 Sub-Basin(s)	Length (mi) (streams or coastlines)	Area (mi^2) (estuaries or ponding)	Floodway (Y/N)	Zone shown on FIRM	Date of Analysis
Raspberry Creek	Rankin County, Unincorporated Areas	County boundary	Approximately 5,400 feet upstream of the County boundary	03180002	1.0		N	A	2014
Richland Creek	Brandon, City of; Pearl, City of; Richland, City of; Rankin County Unincorporated Areas	Confluence with Pearl River	Just downstream of McDonald Lane	03180002	33.1		Y	AE	2000
Richland Creek	Brandon, City of; Rankin County Unincorporated Areas	Just downstream of McDonald Lane	Approximately 2,637 feet upstream of Tiffany Drive	03180002	0.6		N	AE	2011
Richland Creek Tributary 1	Pearl, City of; Rankin County Unincorporated Areas	Confluence with Richland Creek	Approximately 14,630 feet upstream of the confluence with Richland Creek	03180002	2.8		Y	AE	1980
Richland Creek Tributary 2	Brandon, City of; Rankin County Unincorporated Areas	Confluence with Richland Creek	Approximately 3,565 feet upstream of Kennedy Farm Parkway	03180002	2.2		N	AE	2011
Richland Creek Tributary 3	Brandon, City of	Confluence with Richland Creek	Approximately 4,420 feet upstream of Trickhambridge Road	03180002	2.0		N	AE	2011

Table 2: Flooding Sources Included in this FIS Report Continued

Flooding Source	Community	Downstream Limit	Upstream Limit	HUC-8 Sub-Basin(s)	Length (mi) (streams or coastlines)	Area (mi^2) (estuaries or ponding)	Floodway (Y/N)	Zone shown on FIRM	Date of Analysis
Richland Creek Tributary 4	Brandon, City of; Rankin County Incorporated Areas	Confluence with Richland Creek	Approximately 18,430 feet upstream of the confluence with Richland Creek	03180002	3.5		N	A	2014
Ross Barnett Reservoir	Pearl River Valley Water Supply District	Ross Barnett Reservoir Dam	Approximately 55,350 feet downstream of the County boundary	03180002	33.0		N	AE	2000
Spring Branch	Pearl River Valley Water Supply District ; Rankin County Incorporated Areas	Confluence with Pelahatchie Creek	Approximately 14,600 feet upstream of the confluence with Pelahatchie Creek	03180002	2.8		Y	AE	1980
Squirrel Branch	Richland, City of; Rankin County Unincorporated Areas	Richland corporate limits	Approximately 8,670 feet upstream of Richland corporate limits	03180002	1.6		Y	AE	1980
Steen Creek	Florence, City of; Rankin County Unincorporated Areas	Approximately 1,013 feet downstream of South Church Street	R. T. Braddy Road	03180002	8.2		Y	AE	1979
Steen Creek	Florence, City of, Rankin County Unincorporated Areas	Approximately 10,340 feet downstream of U.S. Highway 49	Approximately 33,020 feet upstream of U.S. Highway 49	03180002	1.0		Y	AE	2011

Table 2: Flooding Sources Included in this FIS Report Continued

Flooding Source	Community	Downstream Limit	Upstream Limit	HUC-8 Sub-Basin(s)	Length (mi) (streams or coastlines)	Area (mi^2) (estuaries or ponding)	Floodway (Y/N)	Zone shown on FIRM	Date of Analysis
Steen Creek Tributary 1	Florence, City of; Rankin County, Unincorporated Areas	Approximately 3,000 feet downstream of White Road	Approximately 740 feet upstream of White Road	03180002	0.7		N	A	2014
Terrapin Skin Creek	Brandon, City of; Pearl, City of; Rankin County Unincorporated Areas	Confluence with Richland Creek	Approximately 59,380 feet upstream of the confluence with Richland Creek	03180002	11.2		Y	AE	2000
Terrapin Skin Creek Tributary 1	Brandon, City of	Confluence with Terrapin Skin Creek	Approximately 6,190 feet upstream of the confluence with Terrapin Skin Creek	03180002	1.2		Y	AE	1979
Terrapin Skin Creek Tributary 2	Brandon, City of	Confluence with Terrapin Skin Creek	Approximately 7,680 feet upstream of the confluence with Terrapin Skin Creek	03180002	1.5		Y	AE	1986
Town Branch	Florence, City of	Confluence with Steen Creek	Approximately 15,960 feet upstream of the confluence with Steen Creek	03180002	3.0		Y	AE	2014

Table 2: Flooding Sources Included in this FIS Report Continued

Flooding Source	Community	Downstream Limit	Upstream Limit	HUC-8 Sub-Basin(s)	Length (mi) (streams or coastlines)	Area (mi^2) (estuaries or ponding)	Floodway (Y/N)	Zone shown on FIRM	Date of Analysis
Turtle Creek	Pearl River Valley Water Supply District ; Rankin County Incorporated Areas	Confluence with Ross Barnett Reservoir	Approximately 7,380 feet upstream of the confluence with Ross Barnett Reservoir	03180002	1.4		Y	AE	2014
Unnamed Tributary to Richland Creek	Brandon, City of; Rankin County Unincorporated Areas	Confluence with Richland Creek	Approximately 18,430 feet upstream of the confluence with Richland Creek	03180002	2.9		N	A	2014
Woodrun Creek	Brandon, City of; Pearl, City of	Greenville Road	Interstate 20	03180002	1.6		Y	AE	2011
Woodrun Creek	Pearl, City of	Interstate 20	Approximately 4,850 feet upstream of Interstate 20	03180002	0.9		Y	AE	2000

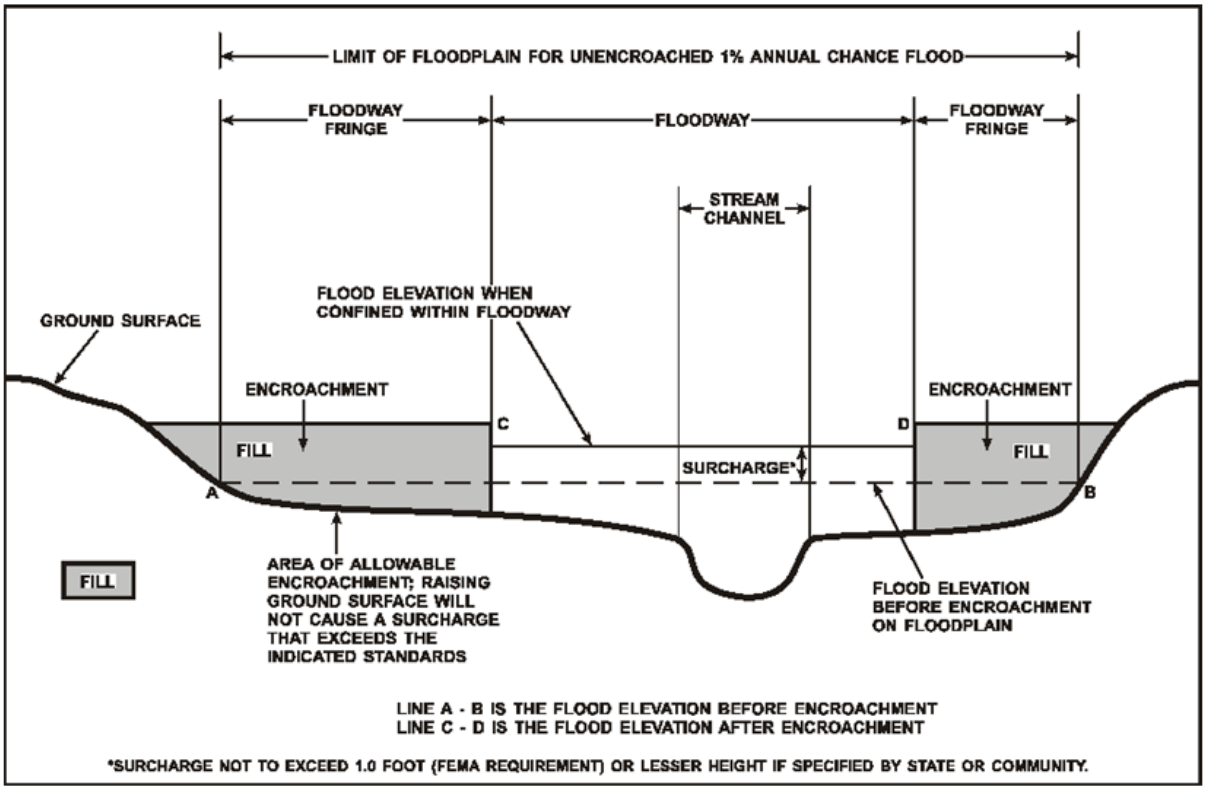
2.2 Floodways

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% 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% annual chance flood. The floodway fringe is the area between the floodway and the 1% 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% 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 23, "Floodway Data."

All floodways that were developed for this Flood Risk Project are shown on the FIRM using the symbology described in 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 Rankin County.
Figure 3. In cases where the floodway and 1% 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% 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.

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. BFEs 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.

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 FIS 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

This section is not applicable to this Flood Risk Project.

Figure 6: Coastal Transect Schematic

[Not applicable to this FIS 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 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 Rankin County.
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% 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% annual chance floodplain boundary corresponds to the boundary of areas of additional flood hazards.

Table 3 lists the flood insurance zones in Rankin County.

Table 3: Flood Zone Designations by Community

Community	Flood Zone(s)
Brandon, City of	A, AE, X
Florence, City of	A, AE, X
Flowood, City of	A, AE, X
Jackson, City of	A, AE, X
Pearl, City of	A, AE, AO, X
Pearl River Valley Water Supply District	A, AE, X
Pelahatchie, Town of	A, AE, X
Puckett, Township of	A, X

Table 3: Flood Zone Designations by Community Continued

Community	Flood Zone(s)
Rankin County (Unincorporated Areas)	A, AE, X
Richland, City of	A, AE, X

SECTION 4.0 – AREA STUDIED

4.1 Basin Description

Table 4 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 4: Basin Characteristics

HUC-8 Sub-Basin Name	HUC-8 Sub-Basin Number	Primary Flooding Source	Description of Affected Area	Drainage Area (**square miles**)
Middle Pearl-Strong	03180002	Pearl River and various streams	Encompasses the entire county	1,977

4.2 Principal Flood Problems

Table 5 contains a description of the principal flood problems that have been noted for Rankin County by flooding source.

Table 5: Principal Flood Problems

Flooding Source	Description of Flood Problems
Various Sources	Intense seasonal rains and occasional tropical storms or hurricanes are the cause of periodic flooding in Rankin County. The principal flood problems arise from the overflow into the relatively flat, developed overbanks along the rivers and streams in the county.
Pearl River	Extensive flooding along the reach of the Pearl River occurs periodically, The greatest known flood on the Pearl River occurred on April 17, 1979, when the floodwaters were estimated to have reached an elevation of 276.9 feet (NAVD88) at U.S. Route 80. Other severe floods were the floods of April 1874, December 1880, April 1900, March 1902, and December 1961.

Table 6 contains information about historic flood elevations in the communities within Rankin County.

Table 6: Historic Flooding Elevations

Flooding Source	Location	Historic Peak (Feet NAVD88)	Event Date	Approximate Recurrence Interval (years)	Source of Data
Pearl River	Pearl River at Jackson	43.28	4/17/1979	Unknown	USGS gage

4.3 Non-Levee Flood Protection Measures

Table 7 contains information about non-levee flood protection measures within Rankin County such as dams, jetties, and or dikes. Levees are addressed in Section 4.4 of this FIS Report.

Table 7: Non-Levee Flood Protection Measures

Flooding Source	Structure Name	Type of Measure	Location	Description of Measure
Pearl River	Ross Barnett Reservoir	Reservoir	Rankin County and Incorporated Areas	In 1958, the Mississippi legislature passed enabling legislation to create the Pearl River Valley Water Supply District (PRVWSD), an autonomous state agency empowered to construct, operate, and maintain a reservoir on the Pearl River. In 1964, construction was completed on the Ross Barnett Reservoir approximately 15 miles upstream from the City of Jackson. The reservoir, with storage approximately 310,000 acre feet, ensures approximately 150 million gallons per day for water supply and provides a 30,000 acre lake for recreation. The relatively shallow reservoir contains no designated storage for flood control and has been operated on an emergency basis to provide limited regulation during major floods at the City of Jackson (USACE, 1985)

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 8. If the required information for a PAL is not submitted within the required timeframe, or if information indicates that a levee system no 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 Rankin County. Table 8, "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 8 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 30.

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 panel(s) and the area has been clearly identified on the FIRM panel with notes and bounding lines. This has been done to inform users that a temporary mapping

action has been put in place until such time as FEMA is able to initiate a new flood risk project to apply new flood hazard mapping procedures for leveed areas. These levees occur on FIRM panel(s) 28121C0307F and 28121C0326F, on Richland Creek, and are identified on the FIRM panel(s) as potential areas of flood hazard data changes based on further review. Levees and their accreditation status are listed in Table 8 of this FIS Report.

Table 8: Levees

Community	Flooding Source	Levee Location	Levee Owner	USACE Levee	Levee ID	Covered Under PL84-99 Program?	FIRM Panel(s)
Brandon, City of; Flowood, City of; Pearl, City of; Richland, City of; Rankin County Unincorporated Areas	Pearl River	Left Bank	Rankin-Hinds Pearl River Flood and Drainage Control District	No	5904000010	Unknown	28121C0159G, 28121C0166F, 28121C0167F, 28121C0168F, 28121C0169F, 28121C0178G, 28121C0186G, 28121C0188F, 28121C0306F, 28121C0307F, 28121C0326F
Pearl, City of	Richland Creek	Right Bank	Rankin-Hinds Pearl River Flood and Drainage Control District	No	1404000080	Unknown	28121C0307F, 28121C0326F

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% 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.

The engineering analyses described here incorporate the results of previously issued Letters of Map Change (LOMCs) listed in Table 27, "Incorporated Letters of Map Change", which include Letters of Map Revision (LOMRs). For more information about LOMRs, refer to Section 6.5, "FIRM Revisions."

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 9. A summary of stillwater elevations developed for non-coastal flooding sources is provided in Table 10. Stream gage information is provided in Table 11.

Table 9: 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
Brush Branch	At confluence with Brush Creek	2.00	*	*	*	1,114	*
Brush Creek	At confluence with Pelahatchie Creek	7.70	*	*	*	2,943	*
Brush Creek	At confluence with Brush Branch	4.03	*	*	*	2,211	*
Brush Creek	Approximately 1,119 feet upstream of dam	2.02	*	*	*	1,474	*
Brush Creek	At cross-section H	1.04	*	*	*	896	*
Butler Creek	At confluence with Steen Creek	5.74	2,559	*	2,169	3,574	3,100
Butler Creek	Approximately 3,140 feet downstream of Williams Road	4.30	1,470	*	3,326	2,415	4,194
Butler Creek	At Williams Road	2.96	1,317	*	1,995	2,335	3,517
Clark Creek	At confluence with Pelahatchie Creek	12.47	2,750	*	4,550	5,410	7,700

Table 9: Summary of Discharges Continued

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
Clark Creek	Just downstream of Clark Creek Road	11.10	2,650	*	4,260	5,200	7,400
Clark Creek	Approximately 2,900 feet upstream of Holly Bush Road	7.22	2,040	*	3,300	3,940	5,560
Clark Creek	Approximately 1.1 miles upstream of Mount Helen Road	5.68	1,950	*	3,100	3,680	5,200
Clark Creek	Approximately 2.0 miles upstream of Mount Helen Road	4.30	1,540	*	2,470	2,900	4,100
Clark Creek Tributary	At Holly Bush Road	2.51	860	*	1,340	1,610	2,500
Clark Creek Tributary	Approximately 3,800 feet upstream of Holly Bush Road	0.85	630	*	970	1,170	1,760
Conway Slough	At East Jackson Pumping Station	7.54	3,502	*	4,435	4,925	6,966

Table 9: Summary of Discharges Continued

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
Conway Slough	At Railroad	4.16	2,334	*	2,948	3,265	4,427
Conway Slough Tributary 1	At Interstate 20	1.64	1,346	*	1,711	1,790	2,143
Conway Slough Tributary 1	Approximately 1,576 feet upstream of White Boulevard	0.42	606	*	764	813	943
Conway Slough Tributary 2	At confluence with Conway Slough	1.01	584	*	833	932	1,159
Conway Slough Tributary 2	Upstream of Pearson Road	0.76	495	*	709	790	980
Conway Slough Tributary 2	Downstream of Lloyd Street	0.54	383	*	547	608	751
Conway Slough Tributary 2	Downstream of Pine Park Drive	0.51	366	*	525	583	721
Conway Slough Tributary 2	At Pine Circle Drive	0.32	262	*	374	413	507

Table 9: Summary of Discharges Continued

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
Eutacutachee Creek	At confluence of Pelahatchie Creek	27.93	4,128	*	6,232	7,063	9,254
Eutacutachee Creek	At confluence with Eutacutachee Creek Tributary 4	19.56	3,984	*	5,996	6,755	8,809
Eutacutachee Creek	Just upstream of confluence of Eutacutachee Creek Tributary 4	15.26	3,227	*	4,856	5,471	7,134
Eutacutachee Creek	Just upstream of confluence of Eutacutachee Creek Tributary 3	6.84	1,709	*	2,563	2,883	3,751
Eutacutachee Creek	At confluence of Eutacutachee Creek Tributary 2	5.03	1,477	*	2,210	2,480	3,218
Eutacutachee Creek	Just upstream of confluence of Eutacutachee Creek Tributary 2	2.90	924	*	1,383	1,552	2,014

Table 9: Summary of Discharges Continued

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
Eutacutachee Creek Tributary 1	At confluence with Eutacutachee Creek	1.13	556	*	817	910	1,165
Eutacutachee Creek Tributary 1	At U.S. Highway 80	0.24	249	*	354	388	486
Eutacutachee Creek Tributary 2	At confluence with Eutacutachee Creek	2.13	883	*	1,305	1,456	1,872
Eutacutachee Creek Tributary 2	At Rankin Road	0.91	49	*	697	775	986
Eutacutachee Creek Tributary 3	At confluence with Eutacutachee Creek	7.34	1,937	*	2,902	3,261	4,237
Eutacutachee Creek Tributary 3	Approximately 1,500 feet downstream of Rankin Road	6.04	1,939	*	2,890	3,234	4,184
Eutacutachee Creek Tributary 3	Approximately 1 mile upstream of Rankin Road	1.76	816	*	1,206	1,343	1,726

Table 9: Summary of Discharges Continued

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
Eutacutachee Creek Tributary 4	At confluence with Eutacutachee Creek	4.30	1,211	*	1,793	2,013	2,599
Eutacutachee Creek Tributary 4	At Gulde-Shiloh Road	1.91	911	*	1,333	1,482	1,894
Eutacutachee Creek Tributary 4	Approximately 1 miles upstream of its confluence with Pearl River (which is the confluence of a small diversion channel)	12.05	2,377	*	3,638	4,239	5,204
Eutacutachee Creek Tributary 4	Just upstream of confluence of small diversion channel	11.81	2,329	*	3,567	4,157	5,103
Eutacutachee Creek Tributary 4	At State Highway 468/Flowood Drive	10.84	2,297	*	3,446	3,885	5,060
Eutacutachee Creek Tributary 4	Approximately 2.9 miles upstream of Railroad	7.75	2,760	*	4,420	5,180	7,140

Table 9: Summary of Discharges Continued

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
Eutacutachee Creek Tributary 4	Approximately 3.5 miles upstream of Railroad	4.13	1,580	*	2,440	2,920	4,250
Eutacutachee Creek Tributary 4	Approximately 4.6 miles upstream of Railroad	2.62	1,140	*	1,720	2,070	3,000
Eutacutachee Creek Tributary 4	Just upstream of Luckney Road	1.42	690	*	1,020	1,220	1,800
Hog Creek	Approximately 1 mile upstream of its confluence with Pearl River (which is the confluence of a small diversion channel)	12.05	2,377	*	3,638	4,239	5,204
Hog Creek	Just upstream of confluence of small diversion channel	11.81	2,329	*	3,567	4,157	5,103
Hog Creek	At State Highway 468/Flowood Drive	11.09	2,962	3,795	4,562	5,277	6,636

Table 9: Summary of Discharges Continued

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
Hog Creek	Approximately 2,300 feet upstream of East Metro Parkway	7.69	1,927	2,472	2,994	3,442	4,331
Hog Creek	Approximately 3,300 feet upstream of Cooper Road	3.74	1,168	1,480	1,735	1,945	2,514
Hog Creek	Approximately 3,800 feet downstream of Luckney Road	2.35	908	1,145	1,341	1,497	1,926
Hog Creek	Just upstream of Luckney Road	1.09	587	762	943	1,066	1,354
Hog Creek Tributary	At confluence with Hog Creek	1.83	870	*	1,300	1,530	2,100
Hog Creek Tributary	Approximately 2,000 feet upstream of confluence with Hog Creek	1.12	650	*	940	1,090	1,500
Indian Creek	At confluence with Steen Creek	9.61	2,237	*	3,334	3,751	4,865

Table 9: Summary of Discharges Continued

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
Indian Creek	Just upstream of Confluence with Indian Creek Tributary 1	4.98	1,520	*	2,237	2,504	3,218
Indian Creek	At Gunter Road	2.65	1,111	*	1,685	2,013	3,052
Indian Creek Tributary 1	At confluence with Indian Creek	4.20	2,021	*	2,595	2,794	3,287
Indian Creek Tributary 1	At cross-section I	3.16	1,820	*	2,322	2,493	2,920
Indian Creek Tributary 1	At U.S. Route 49	1.01	526	*	769	908	1,330
Mill Creek	At Spillway Road	11.21	3,340	*	5,520	7,600	8,600
Mill Creek	Approximately 2,150 feet downstream of State Highway 25	9.39	3,378	*	5,014	5,403	6,384
Mill Creek	Approximately 1,185 feet upstream of Castlewoods Boulevard	6.05	2,959	*	3,818	4,108	4,845
Mill Creek	At cross-section I	4.57	1,564	*	2,367	2,652	3,459

Table 9: Summary of Discharges Continued

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
Mill Creek	Approximately 300 feet downstream of Highway 471	2.42	1,100	*	1,628	1,813	2,330
Mill Creek Tributary	Approximately 3,100 feet above confluence with Mill Creek	1.22	770	*	1,180	1,400	1,920
Mill Creek Tributary	Approximately 1.0 mile above confluence with Mill Creek	0.96	690	*	1,060	1,240	1,670
Neely Creek	At State Highway 468	5.46	2,617	*	3,323	3,678	5,201
Neely Creek	At confluence of Neely Creek (Right Channel)	5.46	2,617	*	3,323	3,678	5,201
Neely Creek	At confluence of Neely Creek Tributary 2	1.71	902	*	1,316	1,529	2,223
Neely Creek (Left Channel)	At confluence with Neely Creek and Neely Creek Tributary 2	1.71	902	*	1,316	1,529	2,223

Table 9: Summary of Discharges Continued

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
Neely Creek (Left Channel)	At U.S. Highway 80	1.29	813	*	1,161	1,333	1,895
Neely Creek (Right Channel)	Approximately 2,800 feet downstream of Flynn Drive	0.28	292	*	360	383	440
Neely Creek Tributary 2	At confluence with Neely Creek	1.86	798	*	1,184	1,431	2,135
Neely Creek Tributary 2	Upstream of confluence of Neely Creek	1.49	323	*	467	517	654
Neely Creek Tributary 2	Upstream of confluence of Neely Creek Tributary 4	0.15	207	*	274	350	437
Park Creek	At confluence with Pelahatchie Creek (Upper Reach)	2.31	*	*	*	1,320	*
Pearl River	At Old Brandon Road (Jackson gaging station)	3171	56,800	*	90,000	106,000	148,000

Table 9: Summary of Discharges Continued

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
Pearl River Tributary 1	At City of Richland Corporate Limits	1.69	1,118	*	1,584	1,833	2,594
Pearl River Tributary 1	At cross-section B	1.44	971	*	1,373	1,582	2,232
Pearl River Tributary 1	At cross-section C	0.89	635	*	892	1,016	1,421
Pearl River Tributary 1	At Old U.S. Route 49	0.67	494	*	692	782	1,089
Pearl River Tributary 1	At U.S. Route 49	0.26	214	*	296	327	447
Pearl River Tributary 2	At City of Richland corporate limits	0.83	400	*	579	702	1,025
Pearl River Tributary 2	At Railroad	0.62	305	*	440	533	776
Pearl River Tributary 3	At confluence with Hog Creek	1.07	480	*	716	814	988
Pearl River Tributary 3	At State Route 468/Flowood Drive	0.78	374	*	560	635	766

Table 9: Summary of Discharges Continued

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
Pelahatchie Bay Unnamed Tributary	At confluence with Pelahatchie Bay/Ross Barnett Reservoir	1.64	699	*	1,021	1,139	1,456
Pelahatchie Creek (Lower Reach)	At State Route 471	205	17,900	*	29,600	36,000	51,400
Pelahatchie Creek (Lower Reach)	Approximately 2.4 miles upstream of State Route 25	189	16,900	*	28,000	33,600	48,900
Pelahatchie Creek (Upper Reach)	At confluence with Eutacutachee Creek	72.64	*	*	*	12,882	*
Pelahatchie Creek (Upper Reach)	At Railroad	67.39	6,699	*	11,198	14,111	23,649
Pelahatchie Creek Tributary	At confluence with Pelahatchie Creek (Lower Reach)	1.60	710	*	1,130	1,350	1,900
Pelahatchie Creek Tributary	At Holly Bush Road	1.14	620	*	970	1,160	1,500

Table 9: Summary of Discharges Continued

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
Pelahatchie Creek Tributary 1	At confluence with Pelahatchie Creek (Upper Reach)	1.05	585	*	868	983	1,206
Pelahatchie Creek Tributary 1	At Ragan Street	0.38	306	*	441	486	614
Pierce Creek	At confluence with Pelahatchie Creek	4.85	1,409	*	2,210	2,679	4,201
Pierce Creek	At Heslip Street	4.69	1,390	*	2,177	2,634	47,122
Pierce Creek	At Railroad	4.30	1,343	*	2,093	2,522	3,926
Pierce Creek	At cross-section K	3.50	1,238	*	1,908	2,276	3,498
Pierce Creek	At Lockwood Street	2.33	1,053	*	1,588	1,857	2,784
Plummer Slough	At State Route 25	4.10	1,420	*	2,300	2,800	3,800
Plummer Slough	Approximately 0.8 mile upstream of State Route 25	3.00	1,220	*	1,940	2,380	3,400

Table 9: Summary of Discharges Continued

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
Plummer Slough	Approximately 1.4 miles upstream of State Route 25	2.38	1,080	*	1,710	2,070	2,900
Plummer Slough	Just downstream of Oakdale Drive	1.57	850	*	1,340	1,600	2,200
Plummer Slough	Approximately 0.6 mile upstream of Oakdale Drive	0.80	540	*	850	1,000	1,400
Prairie Branch Canal	At confluence with Pearl River	9.92	3,108	3,917	4,680	5,404	6,723
Prairie Branch Canal	Approximately 1,380 feet upstream of Railroad	5.78	2,380	2,980	3,560	4,092	5,076
Prairie Branch Canal	At divergence of Prairie Branch Canal	1.87	1,225	1,513	1,811	2,060	2,549
Prairie Branch Canal	At Old Brandon Road	1.28	931	1,146	1,374	1,557	1,925
Prairie Branch Canal Tributary 1	At Magnum Road	2.24	986	*	1,482	1,696	2,076

Table 9: Summary of Discharges Continued

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
Prairie Branch Canal Tributary 1	Just upstream of unnamed tributary	1.37	706	*	1,050	1,195	1,464
Prairie Branch Canal Tributary 1	At Thompson Field, Jackson Airport Property	0.78	604	*	889	1,005	1,233
Richland Creek	At western corporate limits of the City of Richland	126.16	9,535	*	15,794	19,075	31,356
Richland Creek	At U.S. Route 49	125.42	9,506	*	15,744	19,017	31,260
Richland Creek	At eastern corporate limits of the City of Richland	124.32	9,462	*	15,670	18,930	31,117
Richland Creek	At State Route 469	79.76	7,500	*	12,369	15,053	24,697
Richland Creek	At State Highway 18	20.61	3,996	*	6,039	7,062	8,606
Richland Creek	Approximately 500 feet downstream of Shiloh Road	16.22	3,477	*	5,276	6,155	7,511

Table 9: Summary of Discharges Continued

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
Richland Creek	At Interstate Route 20	5.67	1,852	*	2,821	3,252	4,010
Richland Creek	At Railroad	2.64	1,175	*	1,784	2,040	2,507
Richland Creek	At cross-section AY	2.53	*	*	*	1,852	*
Richland Creek	Approximately 1,000 feet downstream of Tiffany Drive	1.25	*	*	*	1,066	*
Richland Creek	At Tiffany Drive	0.95	*	*	*	892	*
Richland Creek Tributary 1	At confluence with Richland Creek	2.85	921	*	1,423	1,715	2,649
Richland Creek Tributary 1	At Railroad	2.20	800	*	1,221	1,464	2,233
Richland Creek Tributary 1	At southwest corporate limits of the City of Pearl	1.07	542	*	797	943	1,388
Richland Creek Tributary 2	At confluence with Richland Creek	3.84	*	*	*	2,233	*

Table 9: Summary of Discharges Continued

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
Richland Creek Tributary 2	Approximately 2,200 feet upstream of Kennedy Farm Parkway	1.09	*	*	*	1,488	*
Richland Creek Tributary 3	At confluence with Richland Creek	1.93	*	*	*	1,900	*
Spring Branch	At mouth	2.80	980	*	1,560	1,900	2,900
Spring Branch	Approximately 0.9 mile upstream of Fannin Landing Road	1.98	780	*	1,230	1,470	2,270
Spring Branch	Approximately 1.2 miles upstream of Fannin Landing Road	1.30	540	*	830	1,000	1,550
Spring Branch	Just upstream of Church Road	1.11	480	*	730	880	1,360
Squirrel Branch	At U.S. Highway 49	1.93	906	*	1,337	1,548	2,272

Table 9: Summary of Discharges Continued

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
Squirrel Branch	At Lowe Circle	1.35	668	*	994	1,145	1,690
Steen Creek	Approximately 950 feet downstream of South Church Street	37.25	5,177	*	7,765	8,799	11,489
Steen Creek	At downstream limit of study	38.11	5,239	*	8,636	10,477	17,169
Steen Creek	At confluence of Indian Creek	25.18	3,901	*	5,850	6,621	8,640
Steen Creek	Approximately 3,290 feet upstream of U.S. Highway 49	17.44	3,130	*	4,676	5,277	6,862
Steen Creek	Approximately 12,363 feet upsteam of U.S. Interstate 20	13.17	2,548	*	3,801	4,288	5,571
Steen Creek	At cross-section O	11.41	2,323	*	3,434	3,869	5,000
Terrapin Skin Creek	At confluence with Richland Creek	21.33	3,683	*	5,992	7,221	11,676

Table 9: Summary of Discharges Continued

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
Terrapin Skin Creek	At State Route 468/Flowood Drive	18.90	3,483	*	5,653	6,821	11,010
Terrapin Skin Creek	At southern corporate limits of the City of Brandon	6.05	1,869	*	2,931	3,552	5,568
Terrapin Skin Creek	At confluence of Terrapin Skin Creek Tributary 2	5.77	1,814	*	2,838	3,436	5,375
Terrapin Skin Creek	At State Highway 471	2.64	1,105	*	1,672	1,989	3,007
Terrapin Skin Creek	At northern corporate limits of the City of Brandon	0.98	541	*	796	885	1,133
Terrapin Skin Creek Tributary 1	At confluence with Terrapin Skin Creek	1.60	635	*	958	1,167	1,770
Terrapin Skin Creek Tributary 1	At cross-section D	0.59	174	*	254	286	406
Terrapin Skin Creek Tributary 1	At cross-section F	0.13	97	*	132	151	206

Table 9: Summary of Discharges Continued

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
Terrapin Skin Creek Tributary 2	At confluence with Terrapin Skin Creek	0.83	367	*	542	652	968
Terrapin Skin Creek Tributary 2	At cross-section H	0.46	278	*	396	463	659
Town Branch	At confluence with Steen Creek	1.36	693	874	1,060	1,204	1,510
Town Branch	Approximately 0.5 mile upstream of West Main Street	0.97	555	700	855	963	1,203
Town Branch	Approximately 1,450 feet upstream of Shadow Creek Drive	0.45	320	397	496	556	706
Turtle Creek	At Pinebrook Circle	1.13	1,057	1,293	1,546	1,748	2,144
Turtle Creek	At Farmington Station Boulevard	0.75	671	833	1,012	1,140	1,418
Woodrun Creek	At confluence with Terrapin Skin Creek	2.92	*	*	*	2,569	*

Table 9: Summary of Discharges Continued

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
Woodrun Creek	Approximately 1,800 feet downstream of U.S. Interstate 20	1.79	*	*	*	1,860	*
Woodrun Creek	Approximately 900 feet downstream of U.S. Interstate 20	0.68	*	*	*	994	*
Woodrun Creek	At Interstate Route 20	0.63	420	*	662	704	850
Woodrun Creek	Approximately 2,000 feet upstream of Interstate Route 20	0.52	364	*	540	610	732
Woodrun Creek	At Oak Ridge Drive	0.07	134	*	197	218	264

*Not calculated for this FIS project

Figure 7: Frequency Discharge-Drainage Area Curves

[Not applicable to this FIS project]

Table 10: Summary of Non-Coastal Stillwater Elevations

Flooding Source	Location	Elevations (feet NAVD88)				
		10% Annual Chance	4% Annual Chance	2% Annual Chance	1% Annual Chance	0.2% Annual Chance
Old Pearl River	U.S. Highway 80	259.4	*	261.7	262.5	266.2
Richland Creek	Behind Pearson Levee	*	*	*	280.1	*
Ross Barnett Reservoir	From Ross Barnett Reservoir to State Route 43	*	*	*	299.8	*
Ross Barnett Reservoir	Upstream to State Route 43	*	*	*	301.3	*

*Not calculated for this Flood Risk Project

Table 11: 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 on Table 23, “Floodway Data.”

A summary of the methods used in hydraulic analyses performed for this project is provided in Table 12. Roughness coefficients are provided in Table 13. 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 12: Summary of Hydrologic and Hydraulic Analyses

Flooding Source	Study Limits		Hydrologic Model or Method Used	Hydraulic Model or Method Used	Date Analyses Completed	Flood Zone on FIRM	Special Considerations
	Downstream Limit	Upstream Limit					
All Zone A Streams Studied in the 2014 FIS	Various	Various	Unknown	Unknown	09/01/2007	A	
All Zone A Streams Studied in the 2003 FIS	Various	Various	Unknown	Unknown	02/01/2000	A	
Brush Branch	Confluence with Brush Creek	Approximately 3,770 feet upstream of Lakeview Road	Regression Equations (1991)	HEC-RAS 4.1.0	08/01/2011	AE	
Brush Creek	Approximately 9,870 feet upstream of the confluence with Pelahatchie Creek	Approximately 10,716 feet upstream Andrew Chapel Road	Regression Equations (1991)	HEC-RAS 4.1.0	08/01/2011	AE	
Butler Creek	Confluence with Steen Creek	Approximately 11,318 feet upstream of U.S. Highway 49	Regression Equations (1991)	HEC-RAS 4.1.0	08/01/2011	AE w/ Floodway	
Butler Creek	Approximately 11,318 feet upstream of U.S. Highway 49	Approximately 23,098 feet upstream of U.S. Highway 49	Regression Equations (1976)	HEC-2	02/01/1979	AE w/ Floodway	
Clark Creek	Confluence with Pelahatchie Creek	Approximately 42,120 feet upstream of the confluence with Pelahatchie Creek	Regression Equations (1976)	HEC-2	05/01/1980	AE w/ Floodway	

Table 12: Summary of Hydrologic and Hydraulic Analyses Continued

Flooding Source	Study Limits		Hydrologic Model or Method Used	Hydraulic Model or Method Used	Date Analyses Completed	Flood Zone on FIRM	Special Considerations
	Downstream Limit	Upstream Limit					
Clark Creek Tributary	Confluence with Clark Creek	Approximately 13,500 feet upstream of the confluence with Clark Creek	Regression Equations (1976)	HEC-2	05/01/1980	AE w/ Floodway	
Conway Slough	Confluence with Pearl River	Approximately 16,300 feet upstream of the confluence with Pearl River	HEC-1 (1991)	HEC-2	01/01/1989	AE w/ Floodway	
Conway Slough Tributary 1	Confluence with Conway Slough	Just downstream of Childre Road	Regression Equations (1976)	HEC-2	04/01/1980	AE w/ Floodway	
Conway Slough Tributary 1	Just downstream of Childre Road	Just downstream of South Pearson Road	Regression Equations (1991)	HEC-RAS 4.1.0	08/01/2011	AE w/ Floodway, AO	LOMR Case # 08-04-5000P was incorporated as part of the 2014 FIS.
Conway Slough Tributary 2	Confluence with Conway Slough	Approximately 6,850 feet upstream of the confluence with Conway Slough	Regression Equations (1991)	HEC-2	02/01/1994	AE w/ Floodway	
Eutacutachee Creek	Confluence with Pelahatchie Creek	Approximately 55,300 feet upstream of the confluence with Pelahatchie Creek	Regression Equations (1991)	HEC-2	02/01/2000	AE w/ Floodway	

Table 12: Summary of Hydrologic and Hydraulic Analyses Continued

Flooding Source	Study Limits		Hydrologic Model or Method Used	Hydraulic Model or Method Used	Date Analyses Completed	Flood Zone on FIRM	Special Considerations
	Downstream Limit	Upstream Limit					
Eutacutachee Creek Tributary 1	Confluence with Eutacutachee Creek	Approximately 7,080 feet upstream of the confluence with Eutacutachee Creek	Regression Equations (1991)	HEC-2	02/01/2000	AE w/ Floodway	
Eutacutachee Creek Tributary 2	Confluence with Eutacutachee Creek	Approximately 4,760 feet upstream of the confluence with Eutacutachee Creek	Regression Equations (1991)	HEC-2	02/01/2000	AE w/ Floodway	
Eutacutachee Creek Tributary 3	Confluence with Eutacutachee Creek	Approximately 14,000 feet upstream of the confluence with Eutacutachee Creek	Regression Equations (1991)	HEC-2	02/01/2000	AE w/ Floodway	
Eutacutachee Creek Tributary 4	Confluence with Eutacutachee Creek	Approximately 16,950 feet upstream of the confluence with Eutacutachee Creek	Regression Equations (1991)	HEC-2	02/01/2000	AE w/ Floodway	
Fox Run	Approximately 3,000 feet downstream of White Road	Approximately 740 feet upstream of White Road	Regression Equations (1991)	HEC-RAS 4.1.0	09/01/2014	A	

Table 12: Summary of Hydrologic and Hydraulic Analyses Continued

Flooding Source	Study Limits		Hydrologic Model or Method Used	Hydraulic Model or Method Used	Date Analyses Completed	Flood Zone on FIRM	Special Considerations
	Downstream Limit	Upstream Limit					
Hog Creek	Confluence with Pearl River	Approximately 14,740 feet upstream of the confluence with Pearl River	Regression Equations (1983)	HEC-2	02/01/2000	AE w/ Floodway	
Hog Creek	Approximately 14,740 feet upstream of the confluence with Pearl River	Approximately 50,550 feet upstream of the confluence with Pearl River	Regression Equations (1991)	HEC-RAS 4.1.0	09/01/2014	AE w/ Floodway	
Hog Creek Tributary	Confluence with Hog Creek	Approximately 6,350 feet upstream of the confluence with Hog Creek	Regression Equations (1976)	HEC-2	03/01/1980	AE w/ Floodway	
Indian Creek	Confluence with Steen Creek	Approximately 4,094 feet upstream of Crosspark Boulevard	Regression Equations (1991)	HEC-RAS 4.1.0	08/01/2011	AE w/ Floodway	
Indian Creek	Approximately 4,094 feet upstream of Crosspark Boulevard	Approximately 15,080 feet upstream of Crosspark Boulevard	Regression Equations (1976)	HEC-2	02/01/1980	AE w/ Floodway	
Indian Creek Tributary 1	Confluence with Indian Creek	Approximately 12,290 feet upstream of U.S. Highway 49	Regression Equations (1991)	HEC-RAS 4.1.0	08/01/2011	AE w/ Floodway	LOMR Case # 09-04-2764P was incorporated as part of the 2014 FIS.

Table 12: Summary of Hydrologic and Hydraulic Analyses Continued

Flooding Source	Study Limits		Hydrologic Model or Method Used	Hydraulic Model or Method Used	Date Analyses Completed	Flood Zone on FIRM	Special Considerations
	Downstream Limit	Upstream Limit					
Indian Creek Tributary 1	Approximately 12,290 feet upstream of U.S. Highway 49	Approximately 21,080 feet upstream of U.S. Highway 49	Regression Equations (1976)	HEC-2	01/01/1980	AE w/ Floodway	
Mill Creek	Confluence with Ross Barnett Reservoir	State Highway 25	Regression Equations (1976)	HEC-2	03/01/1980	AE w/ Floodway	
Mill Creek	State Highway 25	State Highway 471	Regression Equations (1991)	HEC-RAS 4.1.0	08/01/2011	AE w/ Floodway	LOMR Case # 06-04-BN09P was incorporated as part of the 2014 FIS.
Mill Creek Tributary	Confluence with Mill Creek	Approximately 5,810 feet upstream of the confluence with Mill Creek	Regression Equations (1976)	HEC-2	03/01/1980	AE w/ Floodway	
Neely Creek	Confluence with Old Pearl River	Approximately 6,900 feet upstream of the confluence with Old Pearl River	HEC-1 (1991)	HEC-2	03/01/1980	AE w/ Floodway	
Neely Creek (Left Channel)	Confluence with Neely Creek	Approximately 16,450 feet upstream of the confluence with Neely Creek	Regression Equations (1991)	HEC-2	02/01/1994	AE w/ Floodway	
Neely Creek (Right Channel)	Confluence with Neely Creek	Approximately 7,180 feet upstream of the confluence with Neely Creek	Regression Equations (1976)	HEC-2	03/01/1980	AE w/ Floodway	

Table 12: Summary of Hydrologic and Hydraulic Analyses Continued

Flooding Source	Study Limits		Hydrologic Model or Method Used	Hydraulic Model or Method Used	Date Analyses Completed	Flood Zone on FIRM	Special Considerations
	Downstream Limit	Upstream Limit					
Neely Creek (Right Channel)	Approximately 2,640 feet downstream of Flynn Drive	Approximately 791 feet upstream of Harle Street	Regression Equations (1991)	HEC-RAS 4.1.0	08/01/2011	AE w/ Floodway	
Neely Creek Tributary 2	Confluence with Neely Creek	Approximately 11,080 feet upstream of the confluence with Neely Creek	Regression Equations (1991)	HEC-2	02/01/1994	AE w/ Floodway	
Park Creek	Confluence with Pelahatchie Creek	Approximately 5,571 feet upstream of Lake Road	Regression Equations (1991)	HEC-RAS 4.1.0	08/01/2011	AE	LOMR Cases # 07-04-2653P, 07-04-5839P, and 10-04-5433P were incorporated as part of the 2014 FIS.
Pearl River	County Boundary	Ross Barnett Reservoir Dam	Statistical Analysis of gage data	HEC-2	03/10/1994	AE w/ Floodway	
Pearl River	County Boundary	Ross Barnett Reservoir Dam	Statistical Analysis of gage data	HEC-2	06/01/1993	AE w/ Floodway	
Pearl River	County Boundary	Ross Barnett Reservoir Dam	Statistical Analysis of gage data	HEC-2	05/01/1980	AE w/ Floodway	
Pearl River Tributary 1	Richland corporate limits	Approximately 8,660 feet upstream of Richland corporate limits	Regression Equations (1991)	HEC-2	01/01/1980	AE w/ Floodway	

Table 12: Summary of Hydrologic and Hydraulic Analyses Continued

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
Pearl River Tributary 2	Richland corporate limits	Approximately 5,850 feet upstream of Richland corporate limits	Regression Equations (1991)	HEC-2	02/01/2000	AE w/ Floodway	
Pearl River Tributary 3	Confluence with Hog Creek	Approximately 7,200 feet upstream of the confluence with Hog Creek	Regression Equations (1991)	HEC-2	02/01/2000	AE w/ Floodway	
Pelahatchie Bay Unnamed Tributary	Pearl River Valley Water Supply District corporate limits	Approximately 510 feet upstream of Pearl River Valley Water Supply District corporate limits	Regression Equations (1991)	HEC-2	02/01/2000	AE w/ Floodway	
Pelahatchie Creek (Lower Reach)	Confluence with Ross Barnett Reservoir	Approximately 29,400 feet upstream of the confluence with Ross Barnett Reservoir	Statistical Analysis of gage data	HEC-2	05/01/1980	AE w/ Floodway	
Pelahatchie Creek (Upper Reach)	Confluence of Eutachtachee Creek	Approximately 800 feet downstream of U.S. Highway 80	Regression Equations (1991)	HEC-RAS 4.1.0	08/01/2011	AE w/ Floodway	
Pelahatchie Creek (Upper Reach)	Approximately 800 feet downstream of U.S. Highway 80	Approximately 16,630 feet upstream of U.S. Highway 80	Regression Equations (1976)	HEC-2	12/01/1978	AE w/ Floodway	

Table 12: Summary of Hydrologic and Hydraulic Analyses Continued

Flooding Source	Study Limits		Hydrologic Model or Method Used	Hydraulic Model or Method Used	Date Analyses Completed	Flood Zone on FIRM	Special Considerations
	Downstream Limit	Upstream Limit					
Pelahatchie Creek Tributary	Confluence with Pelahatchie Creek (Lower Reach)	Approximately 8,500 feet upstream of the confluence with Pelahatchie Creek (Lower Reach)	Regression Equations (1976)	HEC-2	05/01/1980	AE w/ Floodway	LOMR Case # 04-04-093P was incorporated as part of the 2014 FIS.
Pelahatchie Creek Tributary 1	Confluence with Pelahatchie Creek (Upper Reach)	Approximately 8,890 feet upstream of the confluence with Pelahatchie Creek (Upper Reach)	Regression Equations (1991)	HEC-2	02/01/2000	AE w/ Floodway	
Pierce Creek	Confluence with Pelahatchie Creek (Upper Reach)	Approximately 21,200 feet upstream of the confluence with Pelahatchie Creek (Upper Reach)	Regression Equations (1976)	HEC-2	12/01/1978	AE w/ Floodway	
Plummer Slough	Confluence with Pelahatchie Creek (Lower Reach)	Approximately 17,800 feet upstream of the confluence with Pelahatchie Creek (Lower Reach)	Regression Equations (1976)	HEC-2	05/01/1980	AE w/ Floodway	
Prairie Branch Canal	Confluence with Pearl River	Approximately 25,280 feet upstream of the confluence with Pearl River	Regression Equations (1991)	HEC-RAS 4.1.0	09/01/2014	AE w/ Floodway	

Table 12: Summary of Hydrologic and Hydraulic Analyses Continued

Flooding Source	Study Limits		Hydrologic Model or Method Used	Hydraulic Model or Method Used	Date Analyses Completed	Flood Zone on FIRM	Special Considerations
	Downstream Limit	Upstream Limit					
Prairie Branch Canal Tributary 1	Confluence with Prairie Branch Canal	Approximately 9,300 feet upstream of the confluence with Pearl River	Regression Equations (1991)	HEC-2	02/01/2000	AE w/ Floodway	LOMR Cases # 06-04-C397P, 08-04-5371P, and 09-04-6879P were incorporated as part of the 2014 FIS.
Raspberry Creek	County boundary	Approximately 5,400 feet upstream of the County boundary	Regression Equations (1991)	HEC-RAS 4.1.0	09/01/2014	A	
Richland Creek	Confluence with Pearl River	Just downstream of McDonald Lane	Regression Equations (1991)	HEC-2	02/01/2000	AE w/ Floodway	
Richland Creek	Just downstream of McDonald Lane	Approximately 2,637 feet upstream of Tiffany Drive	Regression Equations (1991)	HEC-RAS 4.1.0	08/01/2011	AE w/ Floodway	
Richland Creek Tributary 1	Confluence with Richland Creek	Approximately 14,630 feet upstream of the confluence with Richland Creek	Regression Equations (1976)	HEC-2	04/01/1980	AE w/ Floodway	
Richland Creek Tributary 2	Confluence with Richland Creek	Approximately 3,565 feet upstream of Kennedy Farm Parkway	Regression Equations (1991)	HEC-RAS 4.1.0	08/01/2011	AE	
Richland Creek Tributary 3	Confluence with Richland Creek	Approximately 4,420 feet upstream of Trickhambridge Road	Regression Equations (1991)	HEC-RAS 4.1.0	08/01/2011	AE	

Table 12: Summary of Hydrologic and Hydraulic Analyses Continued

Flooding Source	Study Limits		Hydrologic Model or Method Used	Hydraulic Model or Method Used	Date Analyses Completed	Flood Zone on FIRM	Special Considerations
	Downstream Limit	Upstream Limit					
Richland Creek Tributary 4	Confluence with Richland Creek	Approximately 18,430 feet upstream of the confluence with Richland Creek	Regression Equations (1991)	HEC-RAS 4.1.0	09/01/2014	A	
Ross Barnett Reservoir	Ross Barnett Reservoir Dam	Approximately 55,350 feet downstream of the County boundary	HEC-1, HEC-5 (1985)	Reservoir operating rules and past flood history	03/01/1985	AE	
Spring Branch	Confluence with Pelahatchie Creek	Approximately 14,600 feet upstream of the confluence with Pelahatchie Creek	Regression Equations (1976)	HEC-2	05/01/1980	AE w/ Floodway	
Squirrel Branch	Richland corporate limits	Approximately 8,670 feet upstream of Richland corporate limits	Regression Equations (1976)	HEC-2	01/01/1980	AE w/ Floodway	
Steen Creek	Approximately 10,340 feet downstream of U.S. Highway 49	Approximately 33,020 feet upstream of U.S. Highway 49	Regression Equations (1991)	HEC-RAS 4.1.0	08/01/2011	AE w/ Floodway	
Steen Creek	Approximately 1,013 feet downstream of South Church Street	R. T. Braddy Road	Regression Equations (1976)	HEC-2	02/01/1979	AE w/ Floodway	

Table 12: Summary of Hydrologic and Hydraulic Analyses Continued

Flooding Source	Study Limits		Hydrologic Model or Method Used	Hydraulic Model or Method Used	Date Analyses Completed	Flood Zone on FIRM	Special Considerations
	Downstream Limit	Upstream Limit					
Steen Creek Tributary 1	Approximately 3,000 feet downstream of White Road	Approximately 740 feet upstream of White Road	Regression Equations (1991)	HEC-RAS 4.1.0	09/01/2014	A	
Terrapin Skin Creek	Confluence with Richland Creek	Approximately 59,380 feet upstream of the confluence with Richland Creek	Regression Equations (1991)	HEC-2	02/01/2000	AE w/ Floodway	LOMR Cases # 05-04-A391P, 06-04-B977P, and 07-04-3666P were incorporated as part of the 2014 FIS.
Terrapin Skin Creek Tributary 1	Confluence with Terrapin Skin Creek	Approximately 6,190 feet upstream of the confluence with Terrapin Skin Creek	Regression Equations (1976)	HEC-2	02/01/1979	AE w/ Floodway	LOMR Case # 06-04-B977P was incorporated as part of the 2014 FIS.
Terrapin Skin Creek Tributary 2	Confluence with Terrapin Skin Creek	Approximately 7,680 feet upstream of the confluence with Terrapin Skin Creek	Regression Equations (1976)	HEC-2	09/01/1986	AE w/ Floodway	LOMR Case # 06-04-B977P was incorporated as part of the 2014 FIS.
Town Branch	Confluence with Steen Creek	Approximately 15,960 feet upstream of the confluence with Steen Creek	Regression Equations (1991)	HEC-RAS 4.1.0	09/01/2014	AE w/ Floodway	
Turtle Creek	Confluence with Ross Barnett Reservoir	Approximately 7,380 feet upstream of the confluence with Ross Barnett Reservoir	Regression Equations (1991)	HEC-RAS 4.1.0	09/01/2014	AE w/ Floodway	

Table 12: Summary of Hydrologic and Hydraulic Analyses Continued

Flooding Source	Study Limits		Hydrologic Model or Method Used	Hydraulic Model or Method Used	Date Analyses Completed	Flood Zone on FIRM	Special Considerations
	Downstream Limit	Upstream Limit					
Unnamed Tributary to Richland Creek	Confluence with Richland Creek	Approximately 18,430 feet upstream of the confluence with Richland Creek	Regression Equations (1991)	HEC-RAS 4.1.0	09/01/2014	A	
Woodrun Creek	Greenville Road	Interstate 20	Regression Equations (1991)	HEC-RAS 4.1.0	08/01/2011	AE w/ Floodway	
Woodrun Creek	Interstate 20	Approximately 4,850 feet upstream of Interstate 20	Regression Equations	HEC-2	02/01/2000	AE w/ Floodway	

Table 13: Roughness Coefficients

Flooding Source	Channel “n”	Overbank “n”
Brush Branch	0.050	0.150
Brush Creek	0.050	0.150
Butler Creek	0.050-0.060	0.080-0.150
Clark Creek	*	*
Clark Creek Tributary	0.013-0.070	0.055-0.023
Conway Slough	0.013-0.070	0.100-0.150
Conway Slough Tributary 1	0.050	0.150
Conway Slough Tributary 2	0.013-0.070	0.100-0.150
Eutacutachee Creek	0.030-0.055	0.040-0.085
Eutacutachee Creek Tributary 1	0.045	0.040-0.075
Eutacutachee Creek Tributary 2	0.045	0.055
Eutacutachee Creek Tributary 3	0.030-0.055	0.040-0.085
Eutacutachee Creek Tributary 4	0.030-0.045	0.040-0.095
Hog Creek	0.025-0.060	0.050-0.120
Hog Creek Tributary	0.028-0.060	0.055-0.020
Indian Creek	0.050	0.150-0.20
Indian Creek Tributary 1	0.050	0.120-0.15
Mill Creek	0.030-0.040	0.100
Mill Creek Tributary	0.013-0.070	0.055-0.023
Neely Creek	0.013-0.070	0.100-0.150
Neely Creek (Left Channel)	*	*
Neely Creek (Right Channel)	0.030-0.050	0.120-0.150
Neely Creek Tributary 2	0.013-0.060	0.110-0.150
Park Creek	0.050	0.150
Pearl River	0.013-0.065	0.055-0.020
Pearl River Tributary 1	0.030-0.045	0.050-0.060
Pearl River Tributary 2	0.035-0.045	0.055-0.140
Pearl River Tributary 3	0.030-0.045	0.050-0.060
Pelahatchie Unnamed Tributary	0.045	0.060
Pelahatchie Creek (Lower Reach)	0.013-0.065	0.050-0.020
Pelahatchie Creek (Upper Reach)	0.013-0.065	0.050-0.150
Pelahatchie Creek Tributary	*	*

Table 13: Roughness Coefficients Continued

Flooding Source	Channel “n”	Overbank “n”
Pelahatchie Creek Tributary 1	0.028-0.050	0.050-0.085
Pierce Creek	0.013-0.065	0.050-0.170
Plummer Slough	0.013-0.070	0.055-0.023
Prairie Branch Canal	0.013-0.070	0.100-0.150
Prairie Branch Canal Tributary 1	0.030-0.015	0.045-0.300
Richland Creek	0.025-0.045	0.050-0.080
Richland Creek Tribuatry 1	0.013-0.070	0.045-0.300
Richland Creek Tributary 2	0.050	0.150
Richland Creek Tributary 3	0.050	0.150
Spring Branch	0.013-0.070	0.055-0.023
Squirrel Branch	0.013-0.065	0.100-0.150
Steen Creek	0.050	0.120
Terrapin Skin Creek	0.050	0.090-0.150
Terrapin Skin Creek Tributary 1	0.013-0.045	0.120-0.150
Terrapin Skin Creek Tributary 2	0.013-0.045	0.120-0.150
Town Branch	0.013-0.070	0.080-0.150
Turtle Creek	0.013-0.070	0.055-0.023
Woodrun Creek	0.027-0.050	0.045-0.150

5.3 Coastal Analyses

This section is not applicable to this Flood Risk Project.

Table 14: Summary of Coastal Analyses

[Not applicable to this FIS project]

5.3.1 Total Stillwater Elevations

This section is not applicable to this Flood Risk Project.

Figure 8: 1% Annual Chance Total Stillwater Elevations for Coastal Areas

[Not applicable to this FIS project]

Table 15: Tide Gage Analysis Specifics

[Not applicable to this FIS 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 16: Coastal Transect Parameters

[Not applicable to this FIS project]

Figure 9: Transect Location Map

[Not applicable to this FIS project]

5.4 Alluvial Fan Analyses

This section is not applicable to this Flood Risk Project.

Table 17: Summary of Alluvial Fan Analyses

[Not applicable to this FIS project]

Table 18: Results of Alluvial Fan Analyses

[Not applicable to this FIS 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 contact information services Branch of the NGS at (301) 713-3242, or visit their website at www.ngs.noaa.gov.

The datum conversion locations and values that were calculated for Rankin County were not available. The NGVD to NAVD conversion factor given in the FIS dated March 17, 2010, for Rankin County is -0.15 feet.

Table 19: Countywide Vertical Datum Conversion

Quadrangle Name	Quadrangle Corner	Latitude	Longitude	Conversion from NGVD29 to NAVD88 (feet)
Average Conversion from NGVD29 to NAVD88 = -0.184 feet				

Table 20: Stream-by-Stream Vertical Datum Conversion

[Not applicable to this FIS 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 21.

Table 21: Base Map Sources

Data Type	Data Provider	Data Date	Data Scale	Data Description
County Boundary	Mississippi Department of Environmental Quality	01/01/2007	N/A	S_Pol_Ar - County Boundary.
Community Boundary	U.S. Department of Commerce, U.S. Census Bureau, Geography Division	01/01/2010	N/A	S_Pol_Ar - Municipal Boundaries.
Digital Orthophoto	USDA--National Agriculture Imagery Program	11/14/2014	N/A	S_Base_Index Orthophotography S_Base_Index table contains information about the raster data used as a base map for the study area.
Digital Orthophoto	USDA--National Agriculture Imagery Program	09/2010	N/A	S_Base_Index Orthophotography S_Base_Index table contains information about the raster data used as a base map for the study area.
Transportation Features	Mississippi Department of Environmental Quality, Office of Geology	12/08/2009	N/A	S_Trnsport_Ln – Roads.
Water Surface Features	Mississippi Automated Resource Information System (MARIS)	01/01/2005	N/A	S_Wtr_Ar. Water areas within the study area.

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 22.
In cases where the 1% and 0.2% annual chance floodplain boundaries are close together, only the

1% 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 23, "Floodway Data."

Certain flooding sources may have been studied that do not have published BFEs on the FIRMs, or for which there is a need to report the 1% annual chance flood elevations at selected cross sections because a published Flood Profile does not exist in this FIS Report. These streams may have also been studied using methods to determine non-encroachment zones rather than floodways. For these flooding sources, the 1% annual chance floodplain boundaries 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 22. All topographic data used for modeling or mapping has been converted as necessary to NAVD88. The 1% annual chance elevations for selected cross sections along these flooding sources, along with their non-encroachment widths, if calculated, are shown in Table 24, "Flood Hazard and Non-Encroachment Data for Selected Streams."

Table 22: Summary of Topographic Elevation Data used in Mapping

Community	Flooding Source	Source for Topographic Elevation Data			
		Description	Scale	Contour Interval	Citation
Eastern areas of Rankin County	Most Zone A streams studied in the 2014 FIS	5-foot elevation contour		5-foot	State of MS, 2006
Western areas of Rankin County	Most Zone AE streams studied in the 2014 FIS	Elevation contour developed from LiDAR	Unknown	1-foot	WRMWSA, 2001
Rankin County and Incorporated Areas	All streams studied in the TBD FIS Report	Bare-earth LiDAR	USGS level 2	N/A	State of MS, 2013

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