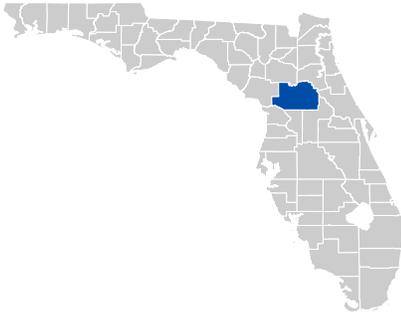


FLOOD INSURANCE STUDY

FEDERAL EMERGENCY MANAGEMENT AGENCY

VOLUME 1 OF 5



MARION COUNTY, FLORIDA AND INCORPORATED AREAS

COMMUNITY NAME	COMMUNITY NUMBER
BELLEVIEW, CITY OF	120383
DUNELLON, CITY OF	120574
MARION COUNTY, UNINCORPORATED AREAS	120160
MCINTOSH, TOWN OF	120575
OCALA, CITY OF	120330
REDDICK, TOWN OF*	120683

*No Special Flood Hazard Areas Identified



FEMA

EFFECTIVE:

REVISED PRELIMINARY JUNE 8, 2016

FLOOD INSURANCE STUDY NUMBER
12083CV001B

Version Number 2.3.3.2

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Rainbow River	01-03 P
Withlacoochee River	04-07 P

Volume 2
Exhibits

Appendix A: Summary of Discharges

Volume 3
Exhibits

Appendix A: Summary of Discharges (continued)

Volume 4
Exhibits

Appendix B : Summary of Non-Coastal Stillwater Elevations

Volume 5
Exhibits

Appendix B : Summary of Non-Coastal Stillwater Elevations (continued)

Published Separately

Flood Insurance Rate Map (FIRM)

FLOOD INSURANCE STUDY REPORT MARION COUNTY, FLORIDA

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 Marion County, Florida.

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.

Jurisdictions that have no identified SFHAs as of the effective date of this study are indicated in the table. Changed conditions in these communities (such as urbanization or annexation) or the availability of new scientific or technical data about flood hazards could make it necessary to determine SFHAs in these jurisdictions in the future.

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
Bellevue, City of	120383	03100208	12083C0729D 12083C0733D 12083C0737D 12083C0741D	
Dunnellon, City of	120574	03100208	12083C0655D 12083C0658D 12083C0661D 12083C0662D 12083C0666D 12083C0668D	
Marion County, Unincorporated Areas	120160	03080102 03110101 03080101 03100208	12083C0020D 12083C0040D 12083C0045D 12083C0065D 12083C0085D 12083C0095D 12083C0104D 12083C0105D 12083C0108D 12083C0109D 12083C0110D 12083C0112D 12083C0114D 12083C0115D 12083C0116D 12083C0117D 12083C0118D 12083C0119D 12083C0130D 12083C0138D 12083C0140D 12083C0145D 12083C0155D 12083C0160D 12083C0165D 12083C0170D 12083C0180D 12083C0185D 12083C0190D	

Table 1: Listing of NFIP Jurisdictions (continued)

Community	CID	HUC-8 Sub-Basin(s)	Located on FIRM Panel(s)	If Not Included, Location of Flood Hazard Data
Marion County, Unincorporated Areas	120160	03080102 03110101 03080101 03100208	12083C0195D 12083C0205D ² 12083C0210D 12083C0215D 12083C0220D 12083C0240D 12083C0257D 12083C0259D 12083C0267D 12083C0269D 12083C0276D 12083C0277D 12083C0278D 12083C0279D 12083C0281D 12083C0282D 12083C0283D 12083C0284D 12083C0286D 12083C0287D 12083C0288D 12083C0289E 12083C0291D 12083C0292D 12083C0293E 12083C0294D 12083C0301D 12083C0302D 12083C0303E 12083C0304E 12083C0310D 12083C0311E 12083C0312E 12083C0313E 12083C0314E 12083C0316E 12083C0317D ² 12083C0318E 12083C0319D ² 12083C0330D	

Table 1: Listing of NFIP Jurisdictions (continued)

Community	CID	HUC-8 Sub-Basin(s)	Located on FIRM Panel(s)	If Not Included, Location of Flood Hazard Data
Marion County, Unincorporated Areas	120160	03080102 03110101 03080101 03100208	12083C0335D 12083C0340D 12083C0345D 12083C0355D 12083C0360D 12083C0365D 12083C0370D 12083C0380D 12083C0385D 12083C0390D 12083C0395D ² 12083C0405D 12083C0410D 12083C0415D 12083C0420D 12083C0435D 12083C0445D 12083C0455D 12083C0460D 12083C0465D 12083C0470D 12083C0476E 12083C0477E 12083C0478E 12083C0479E 12083C0481E 12083C0482E 12083C0483E 12083C0484E 12083C0486E 12083C0487E 12083C0488D 12083C0489E 12083C0491E 12083C0492E 12083C0493E 12083C0494E 12083C0501E 12083C0502E 12083C0503E	

Table 1: Listing of NFIP Jurisdictions (continued)

Community	CID	HUC-8 Sub-Basin(s)	Located on FIRM Panel(s)	If Not Included, Location of Flood Hazard Data
Marion County, Unincorporated Areas	120160	03080102 03110101 03080101 03100208	12083C0504E 12083C0506E 12083C0507D 12083C0508E 12083C0509E 12083C0511E 12083C0512E 12083C0513E 12083C0514E 12083C0516E 12083C0517E 12083C0518E 12083C0519E 12083C0528E 12083C0529E 12083C0530E 12083C0535E 12083C0536D 12083C0537D 12083C0538D 12083C0539D 12083C0545D 12083C0555D 12083C0560D 12083C0565D 12083C0570D 12083C0580D 12083C0585D ² 12083C0590D 12083C0595D 12083C0605D 12083C0610D 12083C0615D 12083C0620D 12083C0635D 12083C0641D 12083C0642D 12083C0655D 12083C0656D 12083C0658D	

Table 1: Listing of NFIP Jurisdictions (continued)

Community	CID	HUC-8 Sub-Basin(s)	Located on FIRM Panel(s)	If Not Included, Location of Flood Hazard Data
Marion County, Unincorporated Areas	120160	03080102 03110101 03080101 03100208	12083C0660D 12083C0661D 12083C0662D 12083C0666D 12083C0667D 12083C0668D 12083C0669D 12083C0676D ² 12083C0677E 12083C0678E 12083C0679E 12083C0681E 12083C0682E 12083C0683E 12083C0684E 12083C0686E 12083C0687E 12083C0688D 12083C0689D 12083C0691E 12083C0692E 12083C0695D 12083C0701E 12083C0702E 12083C0703E 12083C0704E 12083C0706E 12083C0708E 12083C0710D 12083C0711E 12083C0712E 12083C0715D 12083C0716E 12083C0720D 12083C0729D 12083C0730D 12083C0733D 12083C0735D 12083C0737D 12083C0740D	

Table 1: Listing of NFIP Jurisdictions (continued)

Community	CID	HUC-8 Sub-Basin(s)	Located on FIRM Panel(s)	If Not Included, Location of Flood Hazard Data
Marion County, Unincorporated Areas	120160	03080102 03110101 03080101 03100208	12083C0741D 12083C0745D 12083C0755D 12083C0760D 12083C0765D 12083C0770D 12083C0780D 12083C0785D 12083C0790D 12083C0795D 12083C0805D 12083C0810D 12083C0815D 12083C0820D 12083C0826D 12083C0827D 12083C0831D 12083C0833D 12083C0835D 12083C0855D 12083C0860D 12083C0880D 12083C0885D 12083C0905D 12083C0910D 12083C0930D 12083C0935D 12083C0955D 12083C0960D	
McIntosh, Town of	120575	03080102	12083C0130D	
Ocala, City of	120330	03080102 03100208	12083C0492E 12083C0494E 12083C0503E 12083C0504E 12083C0506E 12083C0507D 12083C0508E 12083C0509E 12083C0511E 12083C0512E	

Table 1: Listing of NFIP Jurisdictions (continued)

Community	CID	HUC-8 Sub-Basin(s)	Located on FIRM Panel(s)	If Not Included, Location of Flood Hazard Data
Ocala, City of	120330	03080102 03100208	12083C0513E 12083C0514E 12083C0516E 12083C0517E 12083C0518E 12083C0519E 12083C0528E 12083C0529E 12083C0530E 12083C0535E 12083C0536D 12083C0537D 12083C0538D 12083C0539D 12083C0545D 12083C0702E 12083C0706E	
Reddick, Town of ¹	120683	03080102	12083C0140D 12083C0302D	
US Naval Reservation ¹	OTHER	03080101 03080102	12083C0615D 12083C0805D	

¹ No Special Flood Hazard Areas Identified

² Panel 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 31, “Map Repositories,” within this FIS Report.

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

The initial Countywide FIS Report for Marion County became effective on August 28, 2008. Refer to Table 28 for information about subsequent revisions to the FIRMs.

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

<u>Old Zone</u>	<u>New Zone</u>
A1 through A30	AE
V1 through V30	VE
B	X (shaded)
C	X (unshaded)

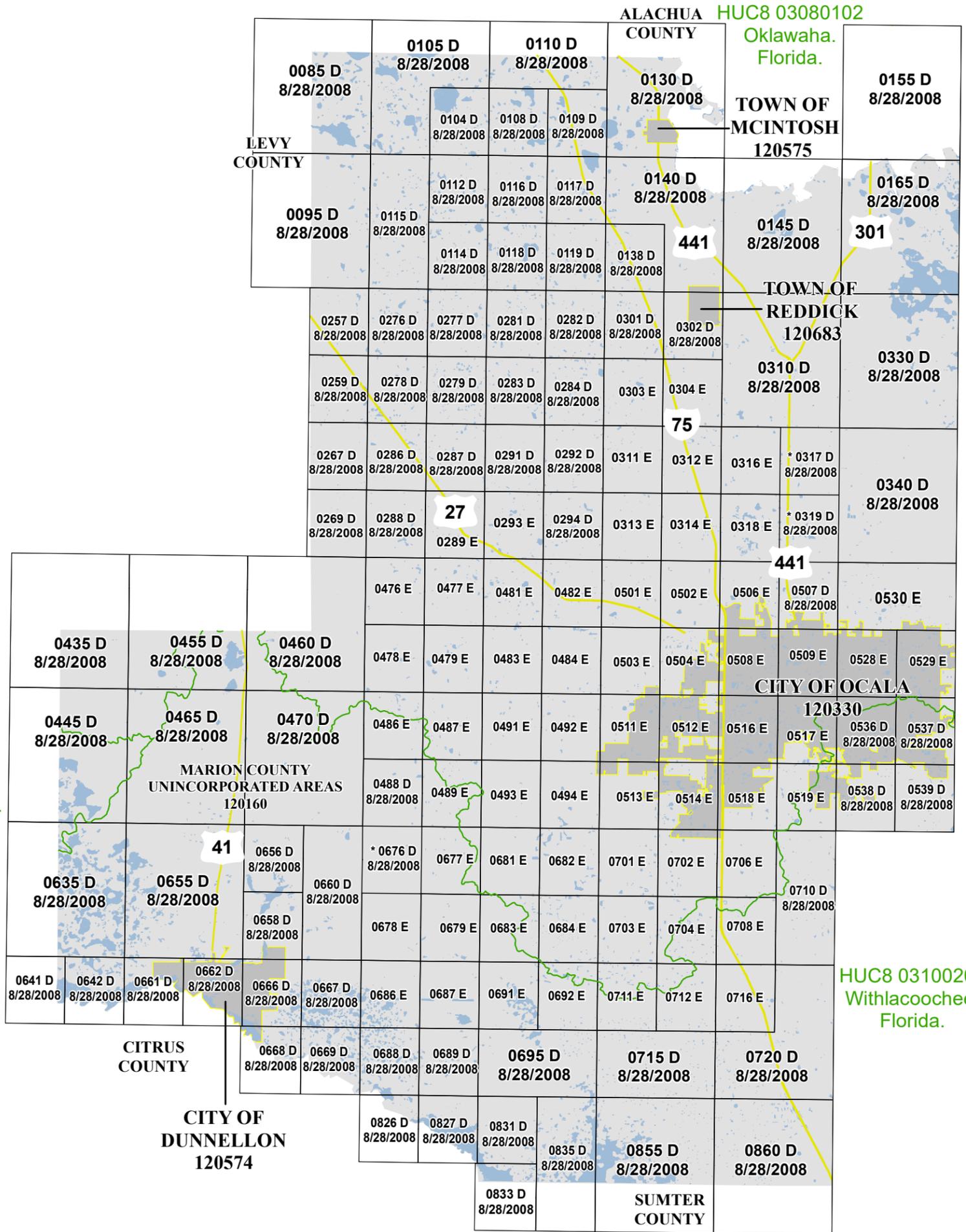
- FEMA does not impose floodplain management requirements or special insurance ratings based on Limit of Moderate Wave Action (LiMWA) delineations at this time. The LiMWA represents the approximate landward limit of the 1.5-foot breaking wave. If the LiMWA is shown on the FIRM, it is being provided by FEMA as information only. For communities that do adopt Zone VE building standards in the area defined by the LiMWA, additional Community Rating System (CRS) credits are available. Refer to Section 2.5.4 for additional information about the LiMWA.

The CRS is a voluntary incentive program that recognizes and encourages community floodplain management activities that exceed the minimum NFIP requirements. Visit the FEMA Web site at <http://www.fema.gov> or contact your appropriate FEMA Regional Office for more information about this program.

- Previous FIS Reports and FIRMs may have included levees that were accredited as reducing the risk associated with the 1% annual chance flood based on the information available and the mapping standards of the NFIP at that time. For FEMA to continue to accredit the identified levees, the levees must meet the criteria of the Code of Federal Regulations, Title 44, Section 65.10 (44 CFR 65.10), titled “Mapping of Areas Protected by Levee Systems.”

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

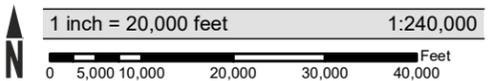
- FEMA has developed a *Guide to Flood Maps* (FEMA 258) and online tutorials to assist users in accessing the information contained on the FIRM. These include how to read panels and step-by-step instructions to obtain specific information. To obtain this guide and other assistance in using the FIRM,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



HUC8
03110101
Waccasassa.
Florida.

LEVY
COUNTY

HUC8 03100208
Withlacoochee.
Florida.



Map Projection:
State Plane HARN Florida West; North American Datum 1983

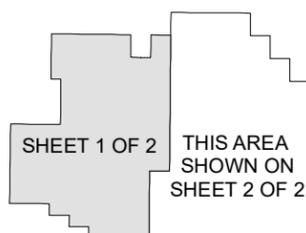
THE INFORMATION DEPICTED ON THIS MAP AND SUPPORTING DOCUMENTATION ARE ALSO AVAILABLE IN DIGITAL FORMAT AT

[HTTP://MSC.FEMA.GOV](http://MSC.FEMA.GOV)

SEE FLOOD INSURANCE STUDY FOR ADDITIONAL INFORMATION

* PANEL NOT PRINTED - NO SPECIAL FLOOD HAZARD AREAS

MARION COUNTY, FL
INDEX LOCATOR DIAGRAM



NATIONAL FLOOD INSURANCE PROGRAM
FLOOD INSURANCE RATE MAP INDEX

MARION COUNTY, FLORIDA and Incorporated Areas
SHEET 1 OF 2

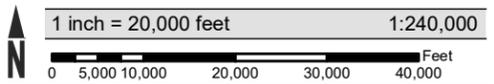
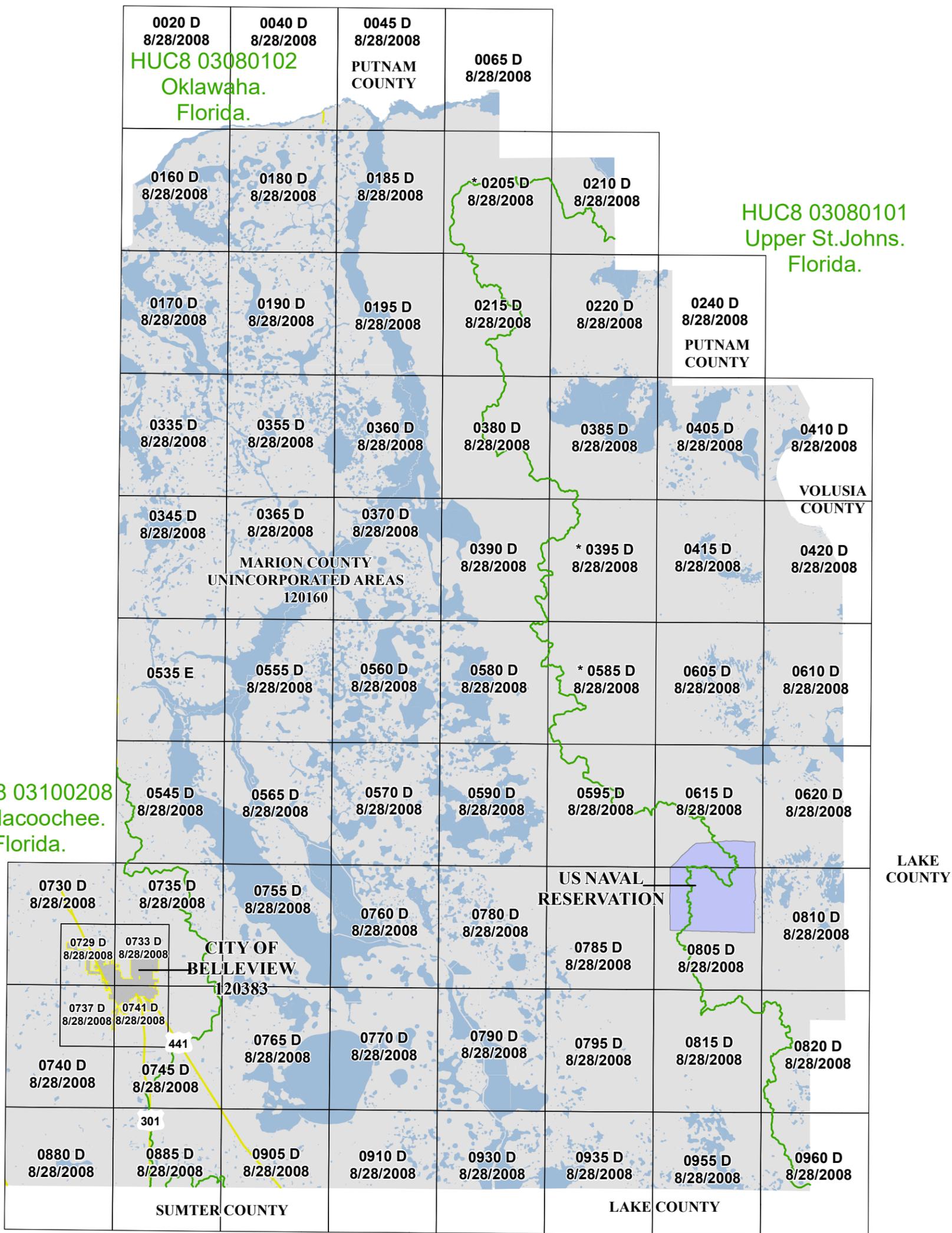
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REVISED PRELIMINARY
06/08/2016



FEMA
REVISED PRELIMINARY
MAP NUMBER 12083CIND1B
MAP REVISED



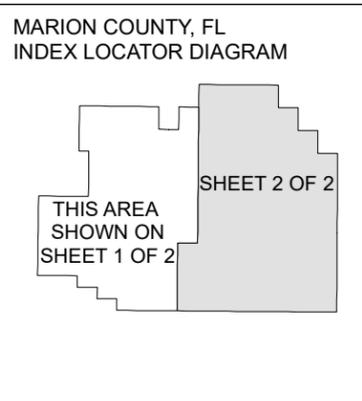
Map Projection:
State Plane HARN Florida West; North American Datum 1983

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

[HTTP://MSC.FEMA.GOV](http://MSC.FEMA.GOV)

SEE FLOOD INSURANCE STUDY FOR ADDITIONAL INFORMATION

* PANEL NOT PRINTED - NO SPECIAL FLOOD HAZARD AREAS



NATIONAL FLOOD INSURANCE PROGRAM
FLOOD INSURANCE RATE MAP INDEX

MARION COUNTY, FLORIDA and Incorporated Areas
SHEET 2 OF 2

PANELS PRINTED:

0020,0040,0045,0065,0160,0170,0180,0185,0190,0195,0205,0210,0215,0220,0240,0335,0345,0355,0360,0365,0370,0380,0385,0390,0395,0405,0410,0415,0420,0535,0545,0555,0560,0565,0570,0580,0585,0590,0595,0605,0610,0615,0620,0729,0730,0733,0735,0737,0740,0741,0745,0755,0760,0765,0770,0780,0785,0790,0795,0805,0810,0815,0820,0880,0885,0905,0910,0930,0935,0955,0960

REVISED PRELIMINARY
06/08/2016



FEMA
REVISED PRELIMINARY
MAP NUMBER
12083CIND2B
MAP REVISED

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 <http://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 28 in this FIS Report.

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

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

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

BASE FLOOD ELEVATIONS: For more detailed information in areas where Base Flood Elevations (BFEs) and/or floodways have been determined, consult the Flood Profiles and Floodway Data and/or Summary of 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.

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.

Figure 2. FIRM Notes to Users

PROJECTION INFORMATION: The projection used in the preparation of the map was Florida State Plane HARN, FIPZONE 902. The horizontal datum was North American Datum of 1983, GRS 80 spheroid. Differences in datum, spheroid, projection or State Plane zones used in the production of FIRMs for adjacent jurisdictions may result in slight positional differences in map features across jurisdiction boundaries. These differences do not affect the accuracy of the FIRM.

ELEVATION DATUM: Flood elevations on the FIRM are referenced to the North American Vertical Datum of 1988. These flood elevations must be compared to structure and ground elevations referenced to the same vertical datum. For information regarding conversion between the National Geodetic Vertical Datum of 1929 and the North American Vertical Datum of 1988, visit the National Geodetic Survey website at <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 31 of this FIS Report.

BASE MAP INFORMATION: Base map information shown on the FIRM was provided by Marion County Engineering Department, City of Ocala, USGS, Florida Department of Transportation (FDOT), and the Southwest Florida Water Management District (SWFWMD). Marion County and the City of Ocala data are at a scale of 1:12,000. USGS and SWFWMD data are at a scale of 1:24,000. All panels use basemap information provided by FDOT at a scale of 1:6000. For information about base maps, refer to Section 6.2 “Base Map” in this FIS Report.

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

NOTES FOR FIRM INDEX

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

SPECIAL NOTES FOR SPECIFIC FIRM PANELS

This Notes to Users section was created specifically for Marion County, Florida, revised preliminary June 8, 2016.

Figure 2. FIRM Notes to Users

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

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



Special Flood Hazard Areas subject to inundation by the 1% annual chance flood (Zones A, AE, AH, AO, AR, A99, V and VE)

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



Regulatory Floodway determined in Zone AE.

Figure 3: Map Legend for FIRM

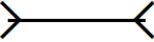
OTHER AREAS OF FLOOD HAZARD	
	Shaded Zone X: Areas of 0.2% annual chance flood hazards and areas of 1% annual chance flood hazards with average depths of less than 1 foot or with drainage areas less than 1 square mile.
	Future Conditions 1% Annual Chance Flood Hazard – Zone X: The flood insurance rate 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.
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.
	NO SCREEN Unshaded Zone X: Areas of minimal flood hazard.
FLOOD HAZARD AND OTHER BOUNDARY LINES	
 (ortho) (vector)	Flood Zone Boundary (white line on ortho-photography-based mapping; gray line on vector-based mapping)
	Limit of Study
	Jurisdiction Boundary
	Limit of Moderate Wave Action (LiMWA): Indicates the inland limit of the area affected by waves greater than 1.5 feet
GENERAL STRUCTURES	
 <i>Aqueduct Channel Culvert Storm Sewer</i>	Channel, Culvert, Aqueduct, or Storm Sewer
 <i>Dam Jetty Weir</i>	Dam, Jetty, Weir
	Levee, Dike, or Floodwall
 <i>Bridge</i>	Bridge

Figure 3: Map Legend for FIRM

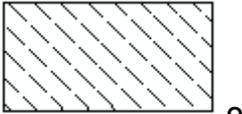
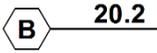
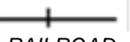
<p>COASTAL BARRIER RESOURCES SYSTEM (CBRS) AND OTHERWISE PROTECTED AREAS (OPA): <i>CBRS areas and OPAs are normally located within or adjacent to Special Flood Hazard Areas. See Notes to Users for important information.</i></p>	
 CBRS AREA 09/30/2009	<p>Coastal Barrier Resources System Area: Labels are shown to clarify where this area shares a boundary with an incorporated area or overlaps with the floodway.</p>
 OTHERWISE PROTECTED AREA 09/30/2009	<p>Otherwise Protected Area</p>
<p>REFERENCE MARKERS</p>	
 22.0	<p>River mile Markers</p>
<p>CROSS SECTION & TRANSECT INFORMATION</p>	
	<p>Lettered Cross Section with Regulatory Water Surface Elevation (BFE)</p>
	<p>Numbered Cross Section with Regulatory Water Surface Elevation (BFE)</p>
	<p>Unlettered Cross Section with Regulatory Water Surface Elevation (BFE)</p>
	<p>Coastal Transect</p>
 	<p>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.</p> <p>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.</p>
	<p>Base Flood Elevation Line</p>
<p>ZONE AE (EL 16)</p> <p>ZONE AO (DEPTH 2)</p> <p>ZONE AO (DEPTH 2) (VEL 15 FPS)</p>	<p>Static Base Flood Elevation value (shown under zone label)</p> <p>Zone designation with Depth</p> <p>Zone designation with Depth and Velocity</p>

Figure 3: Map Legend for FIRM

BASE MAP FEATURES

 <i>Missouri Creek</i>	River, Stream or Other Hydrographic Feature
	Interstate Highway
	U.S. Highway
	State Highway
	County Highway
MAPLE LANE 	Street, Road, Avenue Name, or Private Drive if shown on Flood Profile
 <i>RAILROAD</i>	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
⁴²76⁰⁰⁰mE	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 Marion 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 23), 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 Marion County, Florida, respectively.

Table 2, “Flooding Sources Included in this FIS Report,” lists each flooding source, including its study limits, affected communities, mapped zone on the FIRM, and the completion date of its engineering analysis from which the flood elevations on the FIRM and in the FIS Report were derived. Descriptions and dates for the latest hydrologic and hydraulic analyses of the flooding sources are shown in Table 13. Floodplain boundaries for these flooding sources are shown on the FIRM (published separately) using the symbology described in Figure 3. On the map, the 1% 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
Ponding Area 1	City of Ocala	Approximately 700 feet south-west of the intersection of US Highway 301 and Railroad		03080102	N/A	0.037	N	AE	6/12/2009
Ponding Area 2	City of Ocala	Approximately 2,000 feet south-west of the intersection of US Highway 301 and Railroad		03080102	N/A	0.013	N	AE	6/12/2009
Rainbow River	Marion County, Unincorporated Areas	Confluence with Withlacoochee River	5.9 miles upstream of confluence of Withlacoochee River	03100208	5.9	N/A	N	AE	1976
Unnamed Pond 1	City of Ocala	Approximately 1,000 feet north and approximately 50 feet west of the intersection of SW 19th Avenue Rd. and SW 24th Ave.		03080102	N/A	0.002	N	AE	9/15/2009
Unnamed Pond 2	City of Ocala	Approximately 500 feet north and approximately 1,000 feet east of the intersection of SW 19th Avenue Rd. and SW 24th Ave.		03080102	N/A	0.082	N	AE	9/15/2009

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
Unnamed Pond 3	City of Ocala	Approximately 1,850 feet east of the intersection of SW 19th Avenue Rd. and SW 24th Ave.		03080102	N/A	0.006	N	AE	9/15/2009
Unnamed Pond 4	City of Ocala	Approximately 1,000 feet north and approximately 1,900 feet east of the intersection of SW 19th Avenue Rd. and SW 24th Ave.		03080102	N/A	0.035	N	AE	9/15/2009
Unnamed Pond 5	City of Ocala	Approximately 2,200 feet north and approximately 2,300 feet east of the intersection of SW 19th Avenue Rd. and SW 24th Ave.		03080102	N/A	0.002	N	AE	9/15/2009
Unnamed Ponding Areas	Marion County, Unincorporated Areas	Approximately 420 feet west and 120 feet north of the intersection of NW 82nd Ct. and NW 46th St. to approximately 6,460 feet west and 660 feet south of the intersection of NW 29th Street Rd. and NW 80th Ave.		03080102	N/A	0.245	N	AE	8/28/2008
Unnamed Ponding Areas	City of Ocala	City of Ocala Drainage Area		03080102	N/A	4.153	N	A	2013

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
Unnamed Ponding Areas	Marion County, Unincorporated Areas	Blichton Watershed		03080102	N/A	0.97	N	AE	2015
Unnamed Ponding Areas	Marion County, Unincorporated Areas	Cotton Plant 1 Watershed		3080102	N/A	0.544	N	AE	2015
Unnamed Ponding Areas	Marion County, Unincorporated Areas	Cotton Plant 2 Watershed		3080102	N/A	0.603	N	AE	2015
Unnamed Ponding Areas	Marion County, Unincorporated Areas	Cotton Plant 3 Watershed		3080102	N/A	0.243	N	AE	2015
Unnamed Ponding Areas	Marion County, Unincorporated Areas	Martel Watershed		3080102	N/A	0.456	N	AE	2015

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
Unnamed Ponding Areas	Marion County, Unincorporated Areas	NW Ocala Watershed		3080102	N/A	1.322	N	AE	2015
Unnamed Ponding Areas	Marion County, Unincorporated Areas	SR 200 Watershed Drainage Area		3080102	N/A	0.68	N	AE	2015
Unnamed Ponding Areas	Marion County, Unincorporated Areas	Hog Prairie Watershed		03080102	N/A	2.267	N	AE	2015
Unnamed Ponding Areas	Marion County, Unincorporated Areas	Withlacoochee Watershed		03100208	N/A	0.52	N	AE	2015
Unnamed Ponding Areas	Marion County, Unincorporated Areas and the City of Ocala	West Ocala Watershed		03080102	N/A	0.18	N	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
Unnamed Ponding Areas	Marion County, Unincorporated Areas and the City of Ocala	Florida Ridge Watershed		03080102, 03100208	N/A	1.34	N	AE	2014
Unnamed Ponding Areas	Marion County, Unincorporated Areas and the City of Ocala	Marshall Swamp Watershed		03080102	N/A	0.10	N	AE	2012
Unnamed Stream 1A	Marion County, Unincorporated Areas	1,450 feet west of the intersection of SW 38 th St. and SW 121 st Ter.	600 feet west of the intersection SW 38 th St. and SW 121 st Ter.	03080102	0.224	N/A	N	AE	2015
Unnamed Stream 1B	Marion County, Unincorporated Areas	1,210 feet north north-west of the intersection SW 125 th Ave. and 31 st St.	2,890 feet south-west of the intersection SW 125 th Ave. and SW 23 rd Ln.	03080102	0.542	N/A	N	AE	2015
Unnamed Stream 1C	Marion County, Unincorporated Areas	3,550 feet north north-west of the intersection of SW 121 st Ter. and SW 38 th St.	2,000 feet north north-west of the intersection SW 117 th Ct. and SW 38 th St.	03080102	0.704	N/A	N	AE	2015

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
Unnamed Stream 1D	Marion County, Unincorporated Areas	250 feet north-east of the intersection SW 12 th St. Rd. and SW 132 nd Ter.	1,920 feet east of the intersection SW 6 th Ln. and SW 132 nd Ter.	03080102	0.506	N/A	N	AE	2015
Unnamed Stream 2A	Marion County, Unincorporated Areas	720 feet west of the intersection NW Highway 464B and NW 110 th Ave.	2,170 feet north-east of the intersection NW 42 nd St. and NW 110 th Ave.	03080102	0.858	N/A	N	AE	2015
Unnamed Stream 2B	Marion County, Unincorporated Areas	3,130 feet south south-west of the intersection N US Hwy 27 and NW 95 th Ave. Rd.	3,090 feet north-east of the intersection NW 28 th Pl. and NW 100 th Ave.	03080102	0.264	N/A	N	AE	2015
Unnamed Stream 2C	Marion County, Unincorporated Areas	3,340 feet south-west of the intersection NW 90 th Ave. and N US Hwy 27	4,340 feet south south-west of the intersection NW 95 th Ave. Rd. and N US Hwy 27	03080102	0.177	N/A	N	AE	2015
Unnamed Stream 2D	Marion County, Unincorporated Areas	2,780 feet north-east of the intersection NW 28 th Pl. and NW 100 th Ave.	2,550 feet east north-east of the intersection NW 28 th Pl. and NW 100 th Ave.	03080102	0.340	N/A	N	AE	2015

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
Unnamed Stream 2E	Marion County, Unincorporated Areas	2,770 feet south-east of the intersection NW 28 th Pl. and NW 100 th Ave.	3,480 feet north-east of the intersection NW 21 st St. and NW 100 th Ave.	03080102	0.246	N/A	N	AE	2015
Unnamed Stream 5A	Marion County, Unincorporated Areas	1,660 feet west north-west of the intersection NW 110 th Ave. and NW Highway 464B	690 feet north north-west of the intersection NW 115 th Ave. and NW 39 th St.	03080102	2.107	N/A	N	AE	2015
Unnamed Stream 5B	Marion County, Unincorporated Areas	350 feet north-west of the intersection NW 115 th Ave. and NW Highway 464B	420 feet west of the intersection of NW 115 th Ave. and NW 50 th Ln.	03080102	0.605	N/A	N	AE	2015
Unnamed Stream 5C	Marion County, Unincorporated Areas	2,690 feet west north-west of the intersection NW 50 th Ln. and NW 115 th Ave.	Confluence with Unnamed Stream 5A	03080102	0.545	N/A	N	AE	2015
Unnamed Stream 5D	Marion County, Unincorporated Areas	2,440 feet east south-east of the intersection NW 115 th Ave. and NW 50 th Ln.	1,380 feet north north-west of the intersection NW 110 th Ave. and NW 42 nd St.	03080102	0.520	N/A	N	AE	2015

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
Unnamed Stream 5E	Marion County, Unincorporated Areas	430 feet south-east of the intersection NW 115 th Ave. and NW 39 th St.	2,830 feet west north-west of the intersection of NW 110 th Ave. and NW 28 th Pl.	03080102	0.819	N/A	N	AE	2015
Unnamed Stream 5F	Marion County, Unincorporated Areas	2,010 feet west north-west of the intersection NW 110 th Ave. and NW 28 th Pl.	Confluence with Unnamed Stream 5E	03080102	0.229	N/A	N	AE	2015
Unnamed Stream 5G	Marion County, Unincorporated Areas	2,570 feet north north-east of the intersection NW 116 th Ter. and NW 21 st St.	1,370 feet north-west of the intersection NW 120 th Ave. and NW 21 st St.	03080102	0.988	N/A	N	AE	2015
Unnamed Stream 5H	Marion County, Unincorporated Areas	4,260 feet north-west of the intersection NW Highway 464B and NW 115 th Ave.	2,790 feet east north-east of the intersection NW 130 th Ave. and NW Highway 464B	03080102	1.003	N/A	N	AE	2015
Unnamed Stream 5I	Marion County, Unincorporated Areas	1,790 feet west north-west of the intersection NW 110 th Ave. and NW 28 th Pl.	Confluence with Unnamed Stream 5E	03080102	0.450	N/A	N	AE	2015

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
Unnamed Stream 6F	Marion County, Unincorporated Areas	40 feet south-east of the intersection of NW 14 th St. and NW 73 rd Ter.	310 feet north north-east of the intersection of NW 73 rd Ter. and NW 11 th St.	03080102	0.189	N/A	N	AE	2015
Unnamed Stream 7A	Marion County, Unincorporated Areas	1,680 feet west north-west of the intersection of NW HWY 225A and NW 60 th St.	NW 60 th St. to 900 feet south west of the intersection of NW HWY 225A and NW 60 th St.	03080102	0.308	N/A	N	AE	2015
Unnamed Stream 7B	Marion County, Unincorporated Areas	1,000 feet east of the intersection of NW HWY 225A and NW 44 th Ln.	1,015 feet east north-east of the intersection of NW HWY 225A and NW 44 th Ln.	03080102	0.030	N/A	N	AE	2015
Unnamed Stream 7C	Marion County, Unincorporated Areas	1,050 feet east north-east of the intersection of NW HWY 225A and NW 44 th Ln.	1,375 feet north north-east of the intersection of NW 225A and NW 44 th Ln.	03080102	0.161	N/A	N	AE	2015
Unnamed Stream 7D	Marion County, Unincorporated Areas	1,415 feet north of the intersection of NW 60 th Ave. and NW 90 th St.	1,360 feet north-east of the intersection of NW 60 th Ave. and NW 90 th St.	03080102	0.354	N/A	N	AE	2015

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
Unnamed Stream 7E	Marion County, Unincorporated Areas	1,980 feet south-west of the intersection of NW Gainesville Rd. and NW 95 th St.	1,820 feet south-west of the intersection of NW Gainesville Rd. and NW 95 th St.	03080102	0.066	N/A	N	AE	2015
Unnamed Stream 7F	Marion County, Unincorporated Areas	2,300 feet north-west of the intersection of NW 60 th Ave. and NW 100 th St.	3,020 feet south south-east of the intersection of NW 60 th Ave. and 110 th St.	03080102	0.159	N/A	N	AE	2015
Unnamed Stream 7G	Marion County, Unincorporated Areas	1,300 feet north of the intersection of NW 60 th Ave. and NW 110 th St.	1,800 feet east north-east of the intersection of NW 60 th Ave. and NW 110 th St.	03080102	0.446	N/A	N	AE	2015
Unnamed Stream 7H	Marion County, Unincorporated Areas	1,915 feet east north-east of the intersection of NW 71 st Ct. and NW 125 th St. Rd.	2,500 feet west south-west of the intersection of NW 55 th Ct. Rd. and NW 125 th St. Rd.	03080102	0.130	N/A	N	AE	2015
Unnamed Stream 7I	Marion County, Unincorporated Areas	2,440 feet west south-west of the intersection of NW 55 th Ct. Rd. and NW 125 th St. Rd.	2,500 feet west south-west of the intersection of NW 55 th Ct. Rd. and NW 125 th St. Rd.	03080102	0.058	N/A	N	AE	2015

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
Unnamed Stream 8A	Marion County, Unincorporated Areas	290 feet east north-east of the intersection of SW 57 th Ct. and SW 57 th Pl.	825 feet east south- east of the intersection of SW 57 th Ct. and SW 57 th Pl.	03080102	0.122	N/A	N	AE	2015
Unnamed Stream 8B	City of Ocala	660 feet south- east of the intersection of SR 200 N. and Tartan Rd.	800 feet south-east of the intersection of SR 200 N. and Tartan Rd.	03080102	0.060	N/A	N	AE	2015
Withlacoochee River	Marion County, Unincorporated Areas	Levy County Boundary	Sumter County Boundary	03100208	23.600	N/A	N	AE	2015

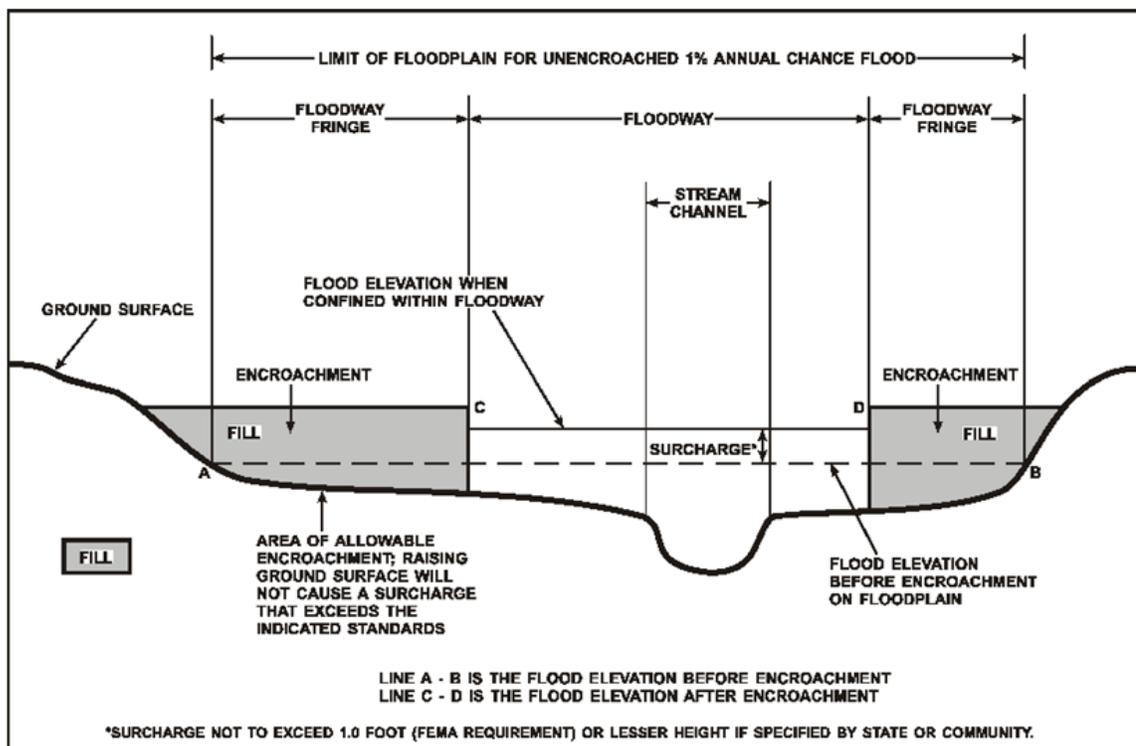
2.2 Floodways

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



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 Flood Risk Project]

2.5.2 Floodplain Boundaries and BFEs for Coastal Areas

This section is not applicable to this Flood Risk Project.

2.5.3 Coastal High Hazard Areas

This section is not applicable to this Flood Risk Project.

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

2.5.4 Limit of Moderate Wave Action

This section is not applicable to this Flood Risk Project.

SECTION 3.0 – INSURANCE APPLICATIONS

3.1 National Flood Insurance Program Insurance Zones

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

The 1% 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 the unincorporated and incorporated areas of Marion County.

Table 3: Flood Zone Designations by Community

Community	Flood Zone(s)
Bellevue, City of	A, AE, X
Dunnellon, City of	A, AE, X
Marion County, Unincorporated Areas	A, AE, AH, X
Ocala, City of	A, AE, AH, X
McIntosh, Town of	AE, X
Reddick, Town of	X

3.2 Coastal Barrier Resources System

This section is not applicable to this Flood Risk Project.

**Table 4: Coastal Barrier Resources System Information
[Not Applicable to this Flood Risk Project]**

SECTION 4.0 – AREA STUDIED

4.1 Basin Description

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

Table 5: Basin Characteristics

HUC-8 Sub-Basin Name	HUC-8 Sub-Basin Number	Primary Flooding Source	Description of Affected Area	Drainage Area (square miles)
Oklawaha	03080102	Lake Apopka	Largest watershed within Marion County, encompassing roughly two thirds of Marion County	2,842
Upper St. Johns River	03080101	St. Johns River	Enters at the south-eastern tip of the County boundary and exits just north of Lake Delancy.	3,633
Waccasassa	03110101	Waccasassa River	Only effects small south-western portion of the Marion County, Unincorporated Area. The Waccasassa River is a small, isolated river in Levy County, Florida, emptying into the Gulf of Mexico	1,299
Withlacoochee	03100208	Withlacoochee River	The majority of the watershed lies within Marion county. This watershed covers a large south-western piece of Marion County.	2,014

4.2 Principal Flood Problems

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

Table 6: Principal Flood Problems

Flooding Source	Description of Flood Problems
All sources	<p>Floods caused by increased storage in lakes can occur in unpredictable cycles. It is possible for the cumulative effect of slightly above-normal rainfall for several consecutive years to cause greater floods than those caused by one year of exceedingly high rainfall. Yet, an unfortunate combination of high lake levels, high ground water levels, and exceedingly high rainfall associated with several consecutive summer thunderstorms or a fall hurricane could produce extreme flooding. Any combination of meteorological and hydrologic conditions could produce water levels on these lakes that would inundate the areas adjacent to their normal shorelines. Marion County may be divided into two general types of drainage basins, depression basins and stream basins. The topographic depressions have no perennial outlet for surface water except by infiltration to ground water, evaporation, and evapotranspiration. The stream basins accumulate surface water by way of streams and channels which ultimately discharge into sinkholes, lakes, other depressions, or larger streams. The soils of both types of drainage basins are mostly sands, causing lower peaks when preceded by periods of little rain. During the rainy season in the summer and fall, saturated soils can cause rapid runoff and higher peaks during intense storms. The most severe flooding occurs usually as the result of frontal movements and hurricanes. The streams overflow into and pond in the adjacent low-lying areas and discharge into the previously shallow-flooded depressions.</p>

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

Table 7: Historic Flooding Elevations

Flooding Source	Location	Historic Peak (Feet NAVD88)	Event Date	Approximate Recurrence Interval (years)	Source of Data
Lake Bryant	Ocala National Forest	54.8	Oct-1945	Not Provided	USGS gaging station
Lake Kerr	Ocala National Forest	27	11-Oct-1966	Not Provided	USGS gaging station
Lake Weir	Between State Road 441 and Ocala Road	59.5	13-Sep-1960	Not Provided	USGS gaging station
Lake Weir	Between State Road 441 and Ocala Road	59.6	Jan-1938	Not Provided	USGS gaging station

Table 7: Historic Flooding Elevations (continued)

Flooding Source	Location	Historic Peak (Feet NAVD88)	Event Date	Approximate Recurrence Interval (years)	Source of Data
Mill Dam Lake	Ocala National Forest	54.1	1978	Not Provided	Surveyed in 1978
Rainbow River	Bridge on State Highway 484	33.7	Apr-1960	Not Provided	USGS gaging station
Rainbow Springs	North end of Rainbow River	33.2	Apr-1960	Not Provided	USGS gaging station
Withlacoochee River	Bridge on U.S. Highway 41	33	5-Apr-1960	Not Provided	Flood marks
Withlacoochee River	Bridge on State Highway 200	40.8	5-Apr-1960	Not Provided	Surveyed in 1960
Unnamed Pond	SE of intersection of SW 60th Ave & SW 20th St	75.2	24-Jun-2012	25	SWFWMD Survey FB #15/104 pg 26
Unnamed Pond	SE of intersection of SW 60th Ave & SW 20th St	75.3	24-Jun-2012	25	SWFWMD Survey FB #15/104 pg 26
Unnamed Pond	NE of intersection of SW 60th Ave & SW 20th St	76.5	24-Jun-2012	25	SWFWMD Survey FB #15/104 pg 27
Unnamed Pond	NE of intersection of SW 60th Ave & SW 20th St	76.6	24-Jun-2012	25	SWFWMD Survey FB #15/104 pg 27
Unnamed Pond	NE of intersection of SW 60th Ave & SW 6th Pl	59	24-Jun-2012	25	SWFWMD Survey FB #15/104 pg 27

Table 7: Historic Flooding Elevations (continued)

Flooding Source	Location	Historic Peak (Feet NAVD88)	Event Date	Approximate Recurrence Interval (years)	Source of Data
Unnamed Pond	NE of intersection of SW 60th Ave & SW 6th PI	58.7	24-Jun-2012	25	SWFWMD Survey FB #15/104 pg 27
Unnamed Pond	NE of intersection of SW 60th Ave & SW 6th PI	58.9	24-Jun-2012	25	SWFWMD Survey FB #15/104 pg 27
Unnamed Pond	SE of intersection of SW 80th Ave & SW 14th St	59.9	24-Jun-2012	25	SWFWMD Survey FB #15/104 pg 26
Unnamed Pond	SE of intersection of SW 60th Ave & U.S. Hwy 27	64.2	24-Jun-2012	25	SWFWMD Survey FB #15/104 pg 27
Drainage Ditch	W of intersection of SW 80th Ave & SW 19th PI	70.5	24-Jun-2012	25	SWFWMD Survey FB #15/104 pg 26
Unnamed Pond	NE of intersection of SW 80th Ave & SW 38th St	71.3	24-Jun-2012	25	SWFWMD Survey FB #15/104 pg 25
Drainage Ditch	NW of intersection of SW 80th Ave & SW 34th PI	58.8	24-Jun-2012	25	SWFWMD Survey FB #15/104 pg 25

4.3 Non-Levee Flood Protection Measures

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

Table 8: Non-Levee Flood Protection Measures

Flooding Source	Structure Name	Type of Measure	Location	Description of Measure
Lake Tsala Apopka	Structure 353 and Canal 331	Outlet works	North end of Lake Tsala Apopka near State Highway 200	Completed in 1968
Withlacoochee River	Inglis Dam, Lock and Bypass channel	Dam, Lock, and Bypass channel	Withlacoochee River	Completed in 1969

4.4 Levees

This section is not applicable to this Flood Risk Project.

Table 9: Levees

[Not Applicable to this Flood Risk Project]

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 10. Frequency Discharge-Drainage Area Curves used to develop the hydrologic models may also be shown in Figure 7 for selected flooding sources. A summary of stillwater elevations developed for non-coastal flooding sources is provided in Table 11. (Coastal stillwater elevations are discussed in Section 5.3 and shown in Table 17.) Stream gage information is provided in Table 12.

Table 10: Summary of Discharges

See Appendix A

Figure 7: Frequency Discharge-Drainage Area Curves

[Not Applicable to this Flood Risk Project]

Table 11: Summary of Non-Coastal Stillwater Elevations

See Appendix B

Table 12: Stream Gage Information used to Determine Discharges

Flooding Source	Gage Identifier	Agency that Maintains Gage	Site Name	Drainage Area (Square Miles)	Period of Record	
					From	To
Rainbow River at State Highway 484, and Rainbow Springs	02313100	USGS	Rainbow River at Dunnellon, FL	Indeterminate	01/01/1965	07/19/1982
Withlacoochee River at Dunnellon	02313200	USGS	Withlacoochee River at Dunnellon, FL	1,960	02/01/1963	07/19/1982
Withlacoochee River at State Highway 200	02313000	USGS	Withlacoochee River Near Holder, FL	1,825	08/01/1931	07/19/1982

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).

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

Table 13: Summary of Hydrologic and Hydraulic Analyses

Flooding Source	Study Limits		Hydrologic Model or Method Used	Hydraulic Model or Method Used	Date Analyses Completed	Flood Zone on FIRM	Special Considerations
	Downstream Limit	Upstream Limit					
Unnamed Stream 1A	1,450 feet west of the intersection SW 38 th St. and SW 121 st Ter.	600 feet west of the intersection SW 38 th St. and SW 121 st Ter.	ICPR 3.02	ICPR 3.02	8/26/2011	AE	Not Included
Unnamed Stream 1B	1,210 feet north north-west of the intersection SW 125 th Ave. and 31 st St.	2,890 feet south-west of the intersection SW 125 th Ave. and SW 23 rd Ln.	ICPR 3.02	ICPR 3.02	8/26/2011	AE	Not Included
Unnamed Stream 1C	3,550 feet north north-west of the intersection SW 121 st Ter. and SW 38 th St.	2,000 feet north north-west of the intersection SW 117 th Ct. and SW 38 th St.	ICPR 3.02	ICPR 3.02	8/26/2011	AE	Not Included
Unnamed Stream 1D	250 feet north-east of the intersection SW 12 th St. Rd. and SW 132 nd Ter.	1,920 feet east of the intersection SW 6 th Ln. and SW 132 nd Ter.	ICPR 3.02	ICPR 3.02	8/26/2011	AE	Not Included
Unnamed Stream 2A	720 feet west of the intersection NW Highway 464B and NW 110 th Ave.	2,170 feet north-east of the intersection NW 42 nd St. and NW 110 th Ave.	NRCS Unit Hydrograph ICPR 3.02	ICPR 3.02	8/26/2011	AE	Not Included

Table 13: 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 Stream 2B	3,130 feet south south-west of the intersection N US Hwy 27 and NW 95 th Ave. Rd.	3,090 feet north-east of the intersection NW 28 th Pl. and NW 100 th Ave.	NRCS Unit Hydrograph ICPR 3.02	ICPR 3.02	8/26/2011	AE	Not Included
Unnamed Stream 2C	3,340 feet southwest of the intersection NW 90 th Ave. and N US Hwy 27	4,340 feet south south-west of the intersection NW 95 th Ave. Rd. and N US Hwy 27	NRCS Unit Hydrograph ICPR 3.02	ICPR 3.02	8/26/2011	AE	Not Included
Unnamed Stream 2D	2,780 feet northeast of the intersection NW 28 th Pl. and NW 100 th Ave.	2,550 feet east north-east of the intersection NW 28 th Pl. and NW 100 th Ave.	NRCS Unit Hydrograph ICPR 3.02	ICPR 3.02	8/26/2011	AE	Not Included
Unnamed Stream 2E	2,770 feet southeast of the intersection NW 28 th Pl. and NW 100 th Ave.	3,480 feet northeast of the intersection NW 21 st St. and NW 100 th Ave.	NRCS Unit Hydrograph ICPR 3.02	ICPR 3.02	8/26/2011	AE	Not Included
Unnamed Stream 5A	1,660 feet west north-west of the intersection NW 110 th Ave. and NW Highway 464B	690 feet north north-west of the intersection NW 115 th Ave. and NW 39 th St.	NRCS Unit Hydrograph ICPR 3.10 Service Pack 6	ICPR 3.10 Service Pack 6	3/7/2013	AE	Not Included
Unnamed Stream 5B	350 feet northwest of the intersection NW 115 th Ave. and NW Highway 464B	420 feet west of the intersection of NW 115 th Ave. and NW 50 th Ln.	NRCS Unit Hydrograph ICPR 3.10 Service Pack 6	ICPR 3.10 Service Pack 6	3/7/2013	AE	Not Included

Table 13: 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 Stream 5C	2,690 feet west north-west of the intersection NW 50 th Ln. and NW 115 th Ave.	Confluence with Unnamed Stream 5A	NRCS Unit Hydrograph ICPR 3.10 Service Pack 6	ICPR 3.10 Service Pack 6	3/7/2013	AE	Not Included
Unnamed Stream 5D	2,440 feet east south-east of the intersection NW 115 th Ave. and NW 50 th Ln.	1,380 feet north north-west of the intersection NW 110 th Ave. and NW 42 nd St.	NRCS Unit Hydrograph ICPR 3.10 Service Pack 6	ICPR 3.10 Service Pack 6	3/7/2013	AE	Not Included
Unnamed Stream 5E	430 feet south-east of the intersection NW 115 th Ave. and NW 39 th St.	2,830 feet west north-west of the intersection of NW 110 th Ave. and NW 28 th Pl.	NRCS Unit Hydrograph ICPR 3.10 Service Pack 6	ICPR 3.10 Service Pack 6	3/7/2013	AE	Not Included
Unnamed Stream 5F	2,010 feet west north-west of the intersection NW 110 th Ave.	Confluence with Unnamed Stream 5E	NRCS Unit Hydrograph ICPR 3.10 Service Pack 6	ICPR 3.10 Service Pack 6	3/7/2013	AE	Not Included
Unnamed Stream 5G	2,570 feet north north-east of the intersection NW 116 th Ter. and NW 21 st St.	1,370 feet north-west of the intersection NW 120 th Ave. and NW 21 st St.	NRCS Unit Hydrograph ICPR 3.10 Service Pack 6	ICPR 3.10 Service Pack 6	3/7/2013	AE	Not Included
Unnamed Stream 5H	4,260 feet north-west of the intersection NW Highway 464B and NW 115 th Ave.	2,790 feet east north-east of the intersection NW 130 th Ave. and NW Highway 464B	NRCS Unit Hydrograph ICPR 3.10 Service Pack 6	ICPR 3.10 Service Pack 6	3/7/2013	AE	Not Included

Table 13: 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 Stream 5I	1,790 feet west north-west of the intersection NW 110 th Ave. and NW 28 th Pl.	Confluence with Unnamed Stream 5E	NRCS Unit Hydrograph ICPR 3.10 Service Pack 6	ICPR 3.10 Service Pack 6	3/7/2013	AE	Not Included
Unnamed Stream 6F	40 feet south-east of the intersection of NW 14th St. and NW 73rd Ter.	310 feet north north-east of the intersection of NW 73rd Ter. and NW 11th St.	Streamline ICPR	Streamline ICPR	8/26/2011	AE	Not Included
Unnamed Stream 7A	1,680 feet west north-west of the intersection of NW HWY 225A and NW 60th St.	900 feet south west of the intersection of NW HWY 225A and NW 60th St.	ICPR 3.10 Service Pack 6	ICPR 3.10 Service Pack 6	7/18/2011	AE	Not Included
Unnamed Stream 7B	1,000 feet east of the intersection of NW HWY 225A and NW 44 th Ln.	1,015 feet east north-east of the intersection of NW HWY 225A and NW 44 th Ln.	ICPR 3.10 Service Pack 6	ICPR 3.10 Service Pack 6	7/18/2011	AE	Not Included
Unnamed Stream 7C	1,050 feet east north-east of the intersection of NW 225A and NW 44 th Ln.	1,375 feet north north-east of the intersection of NW HWY 225A and NW 44 th Ln.	ICPR 3.10 Service Pack 6	ICPR 3.10 Service Pack 6	7/18/2011	AE	Not Included
Unnamed Stream 7D	1,415 feet north of the intersection of NW 60 th Ave. and NW 90 th St.	1,360 feet north-east of the intersection of NW 60 th Ave. and NW 90 th St.	ICPR 3.10 Service Pack 6	ICPR 3.10 Service Pack 6	7/18/2011	AE	Not Included

Table 13: 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 Stream 7E	1,980 feet south-west of the intersection of NW Gainesville Rd. and NW 95th St.	1,820 feet south south-west of the intersection of NW Gainesville Rd. and NW 95th St.	ICPR 3.10 Service Pack 6	ICPR 3.10 Service Pack 6	7/18/2011	AE	Not Included
Unnamed Stream 7F	2,300 feet north-west of the intersection of NW 60th Ave. and NW 100th St.	3,020 feet south south-east of the intersection of NW 60th Ave. and 110th St.	ICPR 3.10 Service Pack 6	ICPR 3.10 Service Pack 6	7/18/2011	AE	Not Included
Unnamed Stream 7G	1,300 feet north of the intersection of NW 60th Ave. and NW 110th St.	1,800 feet east north-east of the intersection of NW 60th Ave. and NW 110th St.	ICPR 3.10 Service Pack 6	ICPR 3.10 Service Pack 6	7/18/2011	AE	Not Included
Unnamed Stream 7H	1,915 feet east north-east of the intersection of NW 71st Ct. and NW 125th St. Rd.	2,500 feet west south-west of the intersection of NW 55th Ct. Rd. and NW 125th St. Rd.	ICPR 3.10 Service Pack 6	ICPR 3.10 Service Pack 6	7/18/2011	AE	Not Included
Unnamed Stream 7I	2,440 feet west south-west of the intersection of NW 55th Ct. Rd. and NW 125th St. Rd.	2,500 feet west south-west of the intersection of NW 55th Ct. Rd. and NW 125th St. Rd.	ICPR 3.10 Service Pack 6	ICPR 3.10 Service Pack 6	7/18/2011	AE	Not Included
Unnamed Stream 8A	290 feet east north-east of the intersection of SW 57th Ct. and SW 57th Pl.	825 feet east south-east of the intersection of SW 57th Ct. and SW 57th Pl.	ICPR 3.10 Service Pack 2	ICPR 3.10 Service Pack 2	7/18/2011	AE	Not Included

Table 13: 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 Stream 8B	660 feet south-east of the intersection of SR 200 N. and Tartan Rd.	800 feet south-east of the intersection of SR 200 N. and Tartan Rd.	ICPR 3.10 Service Pack 2	ICPR 3.10 Service Pack 2	7/18/2011	AE	Not Included
Rainbow River	Confluence with Withlacoochee River	5.9 miles upstream of confluence of Withlacoochee River	Log-Pearson Type III Distribution	U.S. Geological Survey Step-Backward Computer Model	8/1/1984	AE	Not Included
Withlacoochee River	Levy County Boundary	Sumter County Boundary	Log-Pearson Type III Distribution	Data Taken From the Flood Hazard Information, Withlacoochee River, Nobleton to Gulf of Mexico, Florida	8/1/1984	AE	Not Included
Unnamed Ponding Areas	City of Ocala Drainage Area	City of Ocala Drainage Area	ICPR 3.10 Service Pack 11	ICPR v3.10 Service Pack 11	2013	A	Effects of hydraulic structures were not considered in the model.
Unnamed Ponding Areas (Blichton Watershed)	Blichton Watershed Drainage Area	Blichton Watershed Drainage Area	ICPR 3.02	ICPR 3.02	8/26/2011	AE	Not Included

Table 13: 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 Ponding Areas(Martel Watershed)	Martel Watershed Drainage Area	Martel Watershed Drainage Area	NRCS Unit Hydrograph ICPR 3.02	ICPR 3.02	8/26/2011	AE	Not Included
Unnamed Ponding Areas (Cotton Plant 1 Watershed)	Cotton Plant 1 Watershed Drainage Area	Cotton Plant 1 Watershed Drainage Area	NRCS Unit Hydrograph ICPR 3.02	ICPR 3.02	8/26/2011	AE	Not Included
Unnamed Ponding Areas (Cotton Plant 2 Watershed)	Cotton Plant 2 Watershed Drainage Area	Cotton Plant 2 Watershed Drainage Area	ICPR 3.10 Service Pack 7	ICPR 3.10 Service Pack 7	8/26/2011	AE	Not Included
Unnamed Ponding Areas (Cotton Plant 3 Watershed)	Cotton Plant 3 Watershed Drainage Area	Cotton Plant 3 Watershed Drainage Area	ICPR 3.10 Service Pack 7	ICPR 3.10 Service Pack 7	8/26/2011	AE	Not Included
Unnamed Ponding Areas (NW Ocala Watershed)	NW Ocala Watershed Drainage Area	NW Ocala Watershed Drainage Area	ICPR 3.10 Service Pack 6	ICPR 3.10 Service Pack 6	7/18/2011	AE	Not Included
Unnamed Ponding Areas (SR 200 Watershed)	SR200 Watershed Drainage Area	SR200 Watershed Drainage Area	ICPR 3.10 Service Pack 2	ICPR 3.10 Service Pack 2	8/26/2011	AE	Not Included

Table 13: 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 Ponding Areas (US441 & 31st Street Watershed)	US 441 and 31st Street Watershed Drainage Area	US 441 and 31st Street Watershed Drainage Area	ICPR 3.10	ICPR 3.10	3/7/2013	AE	Not Included
Unnamed Ponding Areas (Hog Prairie Watershed)	Hog Prairie Watershed Drainage Area	Hog Prairie Watershed Drainage Area	ICPR 3.10 Service Pack 6	ICPR 3.10 Service Pack 6	3/7/2013	AE	Not Included
Unnamed Ponding Areas (Withlacoochee Watershed)	Withlacoochee Watershed Drainage Area	Withlacoochee Watershed Drainage Area	ICPR 3.10 Service Pack 6	ICPR 3.10 Service Pack 6	3/7/2013	AE	Not Included
Unnamed Ponding Areas (West Ocala Watershed)	West Ocala Watershed Drainage Area	West Ocala Watershed Drainage Area	ICPR 3.10 Service Pack 8	ICPR 3.10 Service Pack 8	December 2014	AE	Not Included
Unnamed Ponding Areas (Florida Ridge Watershed)	Florida Ridge Watershed Drainage Area	Florida Ridge Watershed Drainage Area	ICPR 3.10 with PercPack	ICPR 3.10 with PercPack	February 2014	AE	Not Included
Unnamed Ponding Areas (Marshall Swamp Watershed)	Marshall Swamp Watershed Drainage Area	Marshall Swamp Watershed Drainage Area	ICPR 3.10 with PercPack	ICPR 3.10 with PercPack	July 2012	AE	Not Included

Table 14: Roughness Coefficients

Flooding Source	Channel “n”	Overbank “n”
Hydraulic Structures in the adICPR Models from all Watershed Studies	0.012-0.024	0.012-0.024
Unnamed Stream 1A	0-0.12	0-0.12
Unnamed Stream 1B	0-0.12	0-0.12
Unnamed Stream 1C	0-0.12	0-0.12
Unnamed Stream 1D	0-0.12	0-0.12
Unnamed Stream 2A	0-0.12	0-0.12
Unnamed Stream 2B	0-0.12	0-0.12
Unnamed Stream 2C	0-0.12	0-0.12
Unnamed Stream 2D	0-0.12	0-0.12
Unnamed Stream 2E	0-0.12	0-0.12
Unnamed Stream 5A	0.035-0.12	0.035-0.12
Unnamed Stream 5B	0.035-0.12	0.035-0.12
Unnamed Stream 5C	0.035-0.12	0.035-0.12
Unnamed Stream 5D	0.035-0.12	0.035-0.12
Unnamed Stream 5E	0.035-0.12	0.035-0.12
Unnamed Stream 5F	0.035-0.12	0.035-0.12
Unnamed Stream 5G	0.035-0.12	0.035-0.12
Unnamed Stream 5H	0.035-0.12	0.035-0.12
Unnamed Stream 5I	0.035-0.12	0.035-0.12
Unnamed Stream 6F	0.012-0.12	0.012-0.12
Unnamed Stream 7A	0-0.035	0-0.035
Unnamed Stream 7B	0-0.035	0-0.035
Unnamed Stream 7C	0-0.035	0-0.035
Unnamed Stream 7D	0-0.035	0-0.035

Table 14: Roughness Coefficients (continued)

Flooding Source	Channel “n”	Overbank “n”
Unnamed Stream 7E	0-0.035	0-0.035
Unnamed Stream 7F	0-0.035	0-0.035
Unnamed Stream 7G	0-0.035	0-0.035
Unnamed Stream 7H	0-0.035	0-0.035
Unnamed Stream 7I	0-0.035	0-0.035
Unnamed Stream 8A	0-0.12	0-0.12
Unnamed Stream 8B	0-0.12	0-0.12
Withlacoochee River and Rainbow River	0.035-0.060	0.050-0.200

5.3 Coastal Analyses

This section is not applicable to this Flood Risk Project.

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

5.3.1 Total Stillwater Elevations

This section is not applicable to this Flood Risk Project.

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

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

5.3.2 Waves

This section is not applicable to this Flood Risk Project.

5.3.3 Coastal Erosion

This section is not applicable to this Flood Risk Project.

5.3.4 Wave Hazard Analyses

This section is not applicable to this Flood Risk Project.

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

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

5.4 Alluvial Fan Analyses

This section is not applicable to this Flood Risk Project.

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

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

SECTION 6.0 – MAPPING METHODS

6.1 Vertical and Horizontal Control

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

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

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 Marion County are provided in Table 20.

Table 20: Countywide Vertical Datum Conversion

Quadrangle Name	Quadrangle Corner	Latitude	Longitude	Conversion from NGVD29 to NAVD88 (feet)
Average Conversion from NGVD29 to NAVD88 = +0.9 feet				

Table 21: Stream-Based Vertical Datum Conversion

[Not Applicable to this Flood Risk Project]

6.2 Base Map

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

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

Table 22: Base Map Sources

Data Type	Data Provider	Data Date	Data Scale	Data Description
Digital Orthophotographic	Florida Department of Transportation	2014	1:6,000	1-foot pixels at a scale of 1:6,000
Water Features	United States Geological Survey	2012	1:24,000	Spatial and attribute information for S_Wtr_Ar and S_Wtr_Ln

Table 22: Base Map Sources (continued)

Data Type	Data Provider	Data Date	Data Scale	Data Description
High Water Marks	Southwest Florida Water Management District	2012	1:24,000	Spatial and attribute information for S_HWM
Marion County, FL political boundaries	Marion County Engineering Department	2003	1:12,000	Spatial and attribute information for the Marion County Unincorporated Areas in S_Pol_Ar
U.S. Public Land Survey System (PLSS) data	United States Geological Survey	2004	1:24,000	Spatial and attribute information for S_PLSS_Ar
Ocala, FL political boundaries	City of Ocala	2013	1:12,000	Spatial and attribute information for the City of Ocala areas in S_Pol_Ar
Transportation Features	Marion County Engineering Department	2014	1:12,000	Spatial and attribute information for S_Trnsport_Ln

6.3 Floodplain and Floodway Delineation

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

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

In cases where the 1% and 0.2% 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 24, "Floodway Data."

Table 23: Summary of Topographic Elevation Data used in Mapping

Community	Flooding Source	Source for Topographic Elevation Data			
		Description	Scale	Contour Interval	Citation
Marion County and Incorporated Areas	Streams Studied in Detail (100- and 500-year)	Topographic maps	1:12,000	2 ft.	SFWMD 1972
Marion County and Incorporated Areas	Streams Studied in Detail (100- and 500-year)	Topographic maps	1:24,000	5 and 10 ft.	U.S. Department of the Interior 1970 and 1954
Marion County and Incorporated Areas	Streams Studied by Approximate Methods (1% Annual Chance)	USGS Flood-Prone Area Maps	Not Provided	Not Provided	U.S. Department of the Interior 1967 and 1954
Marion County, Unincorporated Areas	Blichton Watershed	LiDAR Data	1:6,000	1 ft.	Jones Edmunds 2003
Marion County, Unincorporated Areas	Cotton Plant 1 Watershed	LiDAR Data	1:6,000	1 ft.	Jones Edmunds 2003
Marion County, Unincorporated Areas	Cotton Plant 2 Watershed	LiDAR Data	1:6,000	1 ft.	Jones Edmunds 2003

Table 23: Summary of Topographic Elevation Data used in Mapping (continued)

Community	Flooding Source	Source for Topographic Elevation Data			
		Description	Scale	Contour Interval	Citation
Marion County, Unincorporated Areas	Cotton Plant 3 Watershed	LiDAR Data	1:6,000	1 ft.	Jones Edmunds 2003
Marion County, Unincorporated Areas	Martel Watershed	LiDAR Data	1:6,000	1 ft.	Jones Edmunds 2003
Marion County, Unincorporated Areas	Northwest Ocala Watershed	LiDAR Data	1:6,000	1 ft.	Jones Edmunds 2003
Marion County, Unincorporated Areas	State Road 200 Watershed	LiDAR Data	1:6,000	1 ft.	Jones Edmunds 2003
Marion County, Unincorporated Areas	Hog Prairie Watershed	LiDAR Data	1:6,000	1 ft.	Jones Edmunds 2003
Marion County, Unincorporated Areas	Withlacoochee Watershed	LiDAR Data	1:6,000	1 ft.	Jones Edmunds 2003

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. Rounded whole-foot elevations may be shown on the FIRM in coastal areas, areas of ponding, and other areas with static base flood elevations.

Table 24: Floodway Data

[Not Applicable to this Flood Risk Project]

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

[Not Applicable to this Flood Risk Project]

6.4 Coastal Flood Hazard Mapping

This section is not applicable to this Flood Risk Project.

**Table 26: Summary of Coastal Transect Mapping Considerations
[Not Applicable to this Flood Risk Project]**

6.5 FIRM Revisions

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

6.5.1 Letters of Map Amendment

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

To obtain an application for a LOMA, visit <http://www.fema.gov> and download the form “MT-1 Application Forms and Instructions for Conditional and Final Letters of Map Amendment and Letters of Map Revision Based on Fill”. Visit the “Flood Map-Related Fees” section to determine the cost, if any, of applying for a LOMA.

FEMA offers a tutorial on how to apply for a LOMA. The LOMA Tutorial Series can be accessed at http://www.fema.gov/plan/prevent/fhm/ot_lmreq.shtm.

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

6.5.2 Letters of Map Revision Based on Fill

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

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

Related Fees” section.

A tutorial for LOMR-F is available at http://www.fema.gov/plan/prevent/fhm/ot_lmreq.shtm.

6.5.3 Letters of Map Revision

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

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

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

Table 27: Incorporated Letters of Map Change

Case Number	Effective Date	Flooding Source	FIRM Panel(s)
14-04-6358P	6/25/2015	Unnamed Ponding Areas	12083C0514E 12083C0702E
14-04-2852P	10/13/2014	Unnamed Ponding Areas	12083C0482E 12083C0484E
08-04-4557P	9/15/2009	Unnamed Ponding Areas	12083C0516E
09-04-0503P	6/12/2009	Unnamed Ponding Areas	12083C0509E 12083C0517E

6.5.4 Physical Map Revisions

PMRs are an official republication of a community’s NFIP map to effect changes to base flood elevations, floodplain boundary delineations, regulatory floodways and planimetric features. These changes typically occur as a result of structural works or improvements, annexations resulting in additional flood hazard areas or correction to base flood elevations or SFHAs.

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

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

6.5.5 Contracted Restudies

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

6.5.6 Community Map History

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

- *Community Name* includes communities falling within the geographic area shown on the FIRM, including those that fall on the boundary line, nonparticipating communities, and communities with maps that have been rescinded. Communities with No Special Flood Hazards are indicated by a footnote. If all maps (FHBM, FBFM, and FIRM) were rescinded for a community, it is not listed in this table unless SFHAs have been identified in this community.
- *Initial Identification Date (First NFIP Map Published)* is the date of the first NFIP map that identified flood hazards in the community. If the FHBM has been converted to a FIRM, the initial FHBM date is shown. If the community has never been mapped, the upcoming effective date or "pending" (for Preliminary FIS Reports) is shown. If the community is listed in Table 28 but not identified on the map, the community is treated as if it were unmapped.
- *Initial FHBM Effective Date* is the effective date of the first Flood Hazard Boundary Map (FHBM). This date may be the same date as the Initial NFIP Map Date.
- *FHBM Revision Date(s)* is the date(s) that the FHBM was revised, if applicable.
- *Initial FIRM Effective Date* is the date of the first effective FIRM for the community.

This is the first effective date that is shown on the FIRM panel.

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

The initial effective date for the Marion County FIRMs in countywide format was 08/28/2008.

Table 28: Community Map History

Community Name	Initial Identification Date (First NFIP Map Published)	Initial FHBM Effective Date	FHBM Revision Date(s)	Initial FIRM Effective Date	FIRM Revision Date(s)
Belleview, City of	08/28/2008	None	None	08/28/2008	None
Dunnellon, City of	08/26/1977	None	None	02/01/1985	08/28/2008
Marion County Unincorporated Areas	12/27/1974	12/27/1974	07/22/1977	01/19/1983	08/28/2008
McIntosh, Town of	08/28/2008	None	None	08/28/2008	None
Ocala, City of	02/14/1975	02/14/1975	04/02/1976 02/11/1977	09/22/1978	08/28/2008
Reddick, Town of*	08/28/2008	None	None	08/28/2008	None

*No Special Flood Hazard Areas identified

SECTION 7.0 – CONTRACTED STUDIES AND COMMUNITY COORDINATION

7.1 Contracted Studies

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

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

Flooding Source	FIS Report Dated	Contractor	Number	Work Completed Date	Affected Communities
Halfmoon Lake	8/28/2008	Engineering Methods & Applications, Inc. (later named Watershed Concepts)	EMA-98-CO-0088	October 2002, Revised September 2004	Marion County, Unincorporated Areas
Lake Bryant	8/28/2008	Engineering Methods & Applications, Inc. (later named Watershed Concepts)	EMA-98-CO-0088	October 2002, Revised September 2004	Marion County, Unincorporated Areas
Lake Kerr	8/28/2008	Engineering Methods & Applications, Inc. (later named Watershed Concepts)	EMA-98-CO-0088	October 2002, Revised September 2004	Marion County, Unincorporated Areas
Lake Weir	8/28/2008	Engineering Methods & Applications, Inc. (later named Watershed Concepts)	EMA-98-CO-0088	October 2002, Revised September 2004	Marion County, Unincorporated Areas
Little Lake Kerr	8/28/2008	Engineering Methods & Applications, Inc. (later named Watershed Concepts)	EMA-98-CO-0088	October 2002, Revised September 2004	Marion County, Unincorporated Areas

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

Flooding Source	FIS Report Dated	Contractor	Number	Work Completed Date	Affected Communities
Little Lake Weir	8/28/2008	Engineering Methods & Applications, Inc. (later named Watershed Concepts)	EMA-98-CO-0088	October 2002, Revised September 2004	Marion County, Unincorporated Areas
Mill Dam Lake	8/28/2008	Engineering Methods & Applications, Inc. (later named Watershed Concepts)	EMA-98-CO-0088	October 2002, Revised September 2004	Marion County, Unincorporated Areas
Rainbow River	7/19/1982	U.S Geological Survey, Water Resources Division	IAA-H-8-76, Project Order No. 18	January 1979	Dunnellon, City of and Marion County, Unincorporated Areas
Rainbow River	8/28/2008	Engineering Methods & Applications, Inc. (later named Watershed Concepts)	EMA-98-CO-0088	October 2002, Revised September 2004	Marion County, Unincorporated Areas
Unnamed Ponding Areas (Blichton Watershed)	Revised Preliminary – 6/8/2016	Engineering Methods & Applications, Inc. (later named Watershed Concepts)	Agreement No. 06CC0000020	September 2009, Revised August 2011	Marion County, Unincorporated Areas

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

Flooding Source	FIS Report Dated	Contractor	Number	Work Completed Date	Affected Communities
Unnamed Ponding Areas (Cotton Plant 1 Watershed)	Revised Preliminary – 6/8/2016	Engineering Methods & Applications, Inc. (later named Watershed Concepts)	Agreement No. 06CC0000020	September 2009, Revised August 2011	Marion County, Unincorporated Areas
Unnamed Ponding Areas (Cotton Plant 2 Watershed)	Revised Preliminary – 6/8/2016	SWFWMD contractor (AECOM)	Agreement No. 07CC0000006	August 2010, Revised August 2011	Marion County, Unincorporated Areas
Unnamed Ponding Areas (Cotton Plant 3 Watershed)	Revised Preliminary – 6/8/2016	SWFWMD contractor (AECOM)	Agreement No. 07CC0000006	August 2010, Revised August 2011	Marion County, Unincorporated Areas
Unnamed Ponding Areas (Hog Prairie Watershed)	Revised Preliminary – 6/8/2016	Marion County	Not Provided	March 2013	Marion County, Unincorporated Areas
Unnamed Ponding Areas (Martel Watershed)	Revised Preliminary – 6/8/2016	Engineering Methods & Applications, Inc. (later named Watershed Concepts)	Agreement No. 06CC0000020	September 2009, Revised August 2011	Marion County, Unincorporated Areas
Unnamed Ponding Areas (City of Ocala Drainage Areas)	Revised Preliminary – 6/8/2016	Taylor Engineering, Inc.	HSFEHQ-09-D-0368	March 2013	Ocala, City of

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

Flooding Source	FIS Report Dated	Contractor	Number	Work Completed Date	Affected Communities
Unnamed Ponding Areas (US 441 & 31st Street Sub-Watershed)	Revised Preliminary – 6/8/2016	Marion County	Not Provided	March 2013	Marion County, Unincorporated Areas
Unnamed Ponding Areas (Withlacoochee Watershed)	Revised Preliminary – 6/8/2016	Marion County	Not Provided	March 2013	Marion County, Unincorporated Areas
Unnamed Ponding Areas(NW Ocala Watershed)	Revised Preliminary – 6/8/2016	SWFWMD contractor (AECOM)	Agreement No. 07CC0000006	July 2011	Marion County, Unincorporated Areas
Unnamed Ponding Areas(SR 200 Watershed)	Revised Preliminary – 6/8/2016	SWFWMD contractor (AECOM)	Agreement No. 06CC0000021	September 2009, Revised August 2011	Marion County, Unincorporated Areas
Unnamed Ponding Areas (West Ocala Watershed)	Revised Preliminary – 6/8/2016	Jones Edmunds & Associates, Inc.	Agreement No. 11CC0000024	December 2014	Marion County, Unincorporated Areas and the City of Ocala
Unnamed Ponding Areas (Florida Ridge Watershed)	Revised Preliminary – 6/8/2016	Jones Edmunds & Associates, Inc.	Agreement Amendment No. 12Q-020-PA-03	February 2014	Marion County, Unincorporated Areas and the City of Ocala
Unnamed Ponding Areas (Marshall Swamp Watershed)	Revised Preliminary – 6/8/2016	Jones Edmunds & Associates, Inc.	Agreement Amendment No. 06Q-074-PA-13	July 2012	Marion County, Unincorporated Areas and the City of Ocala

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

Flooding Source	FIS Report Dated	Contractor	Number	Work Completed Date	Affected Communities
Withlacoochee River	8/1/1984	U.S Geological Survey, Water Resources Division	IAA-H-8-76, Project Order No. 18	January 1979	Dunnellon, City of and Marion County, Unincorporated Areas
Withlacoochee River	8/28/2008	Engineering Methods & Applications, Inc. (later named Watershed Concepts)	EMA-98-CO-0088	October 2002, Revised September 2004	Marion County, Unincorporated Areas

7.2 Community Meetings

The dates of the community meetings held for this Flood Risk Project and any previous Flood Risk Projects are shown in Table 30. These meetings may have previously been referred to by a variety of names (Community Coordination Officer (CCO), Scoping, Discovery, etc.), but all meetings represent opportunities for FEMA, community officials, study contractors, and other invited guests to discuss the planning for and results of the project.

Table 30: Community Meetings

Community	FIS Report Dated	Date of Meeting	Meeting Type	Attended By
Dunnellon, City of	8/1/1984	02/27/1984	CCO Open House	Representatives of FEMA and the community
Marion County and Incorporated Areas	8/28/2008	5/5/1998	Initial CCO	Representatives of Marion County Zoning Department, Marion County Engineering Department, City of Ocala, City of Dunnellon, Town of Belleview, Town of McIntosh, Engineering Methods & Applications, Inc. and FEMA Region IV
Marion County Unincorporated Areas	7/9/1982	2/1/1976	Scoping	Representatives of Marion County, FEMA and the study contractor
		9/22/1978	Technical Meeting	Representatives of the USACE, SWFWMD, Marion County, FEMA and the study contractor
		2/8/1982	CCO Open House	Representatives of Marion County, FEMA and the study contractor
Marion County Unincorporated Areas	N/A	5/24/2011	Public Meeting	Representatives of the SWFWMD, Marion County, FEMA and the study contractor

SECTION 8.0 – ADDITIONAL INFORMATION

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

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

Table 31: Map Repositories

Community	Address	City	State	Zip Code
Belleview, City of	Belleview City Hall Public Works Department 5343 Southeast Abshier Boulevard	Belleview	FL	33420
Dunnellon, City of	Dunnellon City Hall 20750 River Drive	Dunnellon	FL	34431
Marion County, Unincorporated Areas	Marion County Growth Services 2710 East Silver Springs Boulevard	Ocala	FL	34470
McIntosh, Town of	McIntosh Town Hall 5965 Avenue F	McIntosh	FL	32664
Ocala, City of	Department of Public Works 1805 Northeast 30th Avenue	Ocala	FL	34470

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

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

Table 32: Additional Information

FEMA and the NFIP	
FEMA and FEMA Engineering Library website	http://www.fema.gov
NFIP website	http://www.fema.gov/national-flood-insurance-program
FEMA Region IV	3003 Chamblee-Tucker Road Atlanta, GA 30341 (770) 220-5200
NFHL Dataset	http://msc.fema.gov
Other Federal Agencies	
USGS website	http://www.usgs.gov
Hydraulic Engineering Center website	http://www.hec.usace.army.mil
State Agencies and Organizations	
State NFIP Coordinator	Steve Martin Florida Division of Emergency Management 2555 Shumard Oak Boulevard Tallahassee, FL 32399 (850) 922-5269 Steve.Martin@em.myflorida.com
State GIS Coordinator	Richard Butgereit, GISP Florida Division of Emergency Management 2555 Shumard Oak Boulevard Tallahassee, FL 32399 Phone: (850) 413-9907 richard.butgereit@em.myflorida.com
State Hazard Mitigation Officer	Miles Anderson Florida Division of Emergency Management 2555 Shumard Oak Boulevard Tallahassee, FL 32399 (850) 413-9816 Miles.Anderson@em.myflorida.com
Hazard Mitigation Assistance	Gabriela Vigo, Ph.D. Florida Division of Emergency Management 2555 Shumard Oak Boulevard Tallahassee, FL 32399 (850) 413-9816 gabriela.vigo@fema.dhs.gov
State Floodplain Management Office	Steve Martin Florida Division of Emergency Management 2555 Shumard Oak Boulevard Tallahassee, FL 32399 (850) 922-5269 Steve.Martin@em.myflorida.com
State Floodplain Management Office	Allison Kearns Florida Division of Emergency Management 2555 Shumard Oak Boulevard Tallahassee, FL 32399 (850) 413-9925 alison.kearns@em.myflorida.com

SECTION 9.0 – BIBLIOGRAPHY AND REFERENCES

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

Table 33: Bibliography and References

Citation in this FIS	Publisher/Issuer	<i>Publication Title, "Article," Volume, Number, etc.</i>	Author/Editor	Place of Publication	Publication Date/Date Issuance	Link
Aquarian Software Inc. 1996	Aquarian Software Inc.	<i>CHAN for Windows, Version 2</i>	Not Provided	Not Provided	1996	Not Provided
Bras 1990	Addison-Wesley Publishing Company	<i>Hydrology -An Introduction to Hydrologic Science</i>	Bras, Rafael L.	Reading, MA	1990	Not Provided
Chow 1964	McGraw-Hill Book Company	<i>Handbook of Applied Hydrology</i>	Chow, Yen T.	New York, NY	1964	Not Provided
ESE 2000	Environmental Science & Engineering, Inc.	<i>Final Report Marion County Floodplain Analysis and Storm Water Management Master Plan</i>	Not Provided	Not Provided	November 2000	Not Provided

Table 33: Bibliography and References (continued)

Citation in this FIS	Publisher/Issuer	Publication Title, "Article," Volume, Number, etc.	Author/Editor	Place of Publication	Publication Date/Date Issuance	Link
Aquarian Software Inc. 1996	Aquarian Software Inc.	<i>CHAN for Windows, Version 2</i>	Not Provided	Not Provided	1996	Not Provided
Bras 1990	Addison-Wesley Publishing Company	<i>Hydrology -An Introduction to Hydrologic Science</i>	Bras, Rafael L.	Reading, MA	1990	Not Provided
Chow 1964	McGraw-Hill Book Company	<i>Handbook of Applied Hydrology</i>	Chow, Yen T.	New York, NY	1964	Not Provided
ESE 2000	Environmental Science & Engineering, Inc.	<i>Final Report Marion County Floodplain Analysis and Storm Water Management Master Plan</i>	Not Provided	Not Provided	November 2000	Not Provided

Table 33: Bibliography and References (continued)

Citation in this FIS	Publisher/Issuer	Publication Title, "Article," Volume, Number, etc.	Author/Editor	Place of Publication	Publication Date/Date Issuance	Link
FEMA 1967	Federal Emergency Management Agency	<i>Flood Insurance Study, Putnam County, Florida and Unincorporated Areas</i>	Not Provided	Washington, D.C.	December 1967	FEMA Map Service Center http://msc.fema.gov
FEMA 1981	Federal Emergency Management Agency	<i>Flood Insurance Study, Sumter County, Florida and Unincorporated Areas</i>	Not Provided	Washington, D.C.	September 1981	FEMA Map Service Center http://msc.fema.gov
FEMA 1984	Federal Emergency Management Agency	<i>Flood Insurance Study, Citrus County, Florida (Unincorporated Areas)</i>	Not Provided	Washington, D.C.	February 1984	FEMA Map Service Center http://msc.fema.gov
FEMA 2002	Federal Emergency Management Agency	<i>Flood Insurance Study, Lake County, Florida and Incorporated Areas</i>	Not Provided	Washington, D.C.	July 2002	FEMA Map Service Center http://msc.fema.gov

Table 33: Bibliography and References (continued)

Citation in this FIS	Publisher/Issuer	Publication Title, "Article," Volume, Number, etc.	Author/Editor	Place of Publication	Publication Date/Date Issuance	Link
FEMA 2006	Federal Emergency Management Agency	<i>Flood Insurance Study, Alachua County. Florida and Incorporated Areas</i>	Not Provided	Washington, D.C.	June 2006	FEMA Map Service Center http://msc.fema.gov
FEMA 2008	Federal Emergency Management Agency	<i>Flood Insurance Study, Marion County. Florida and Incorporated Areas</i>	Watershed Concepts	Washington, D.C.	August 2008	FEMA Map Service Center http://msc.fema.gov
Marion County 2013	Marion County, Florida	<i>U.S. 441 and 31st Street/ SW 32nd Street Floodplain Delineation Narrative</i>	Evan Shane Williams, Ph.D, P.E	Ocala, Florida	2013	Not Provided
Marion County 2013	Marion County, Florida	<i>Hog Prairie Floodplain Delineation Narrative</i>	Evan Shane Williams, Ph.D, P.E	Ocala, Florida	2013	Not Provided

Table 33: Bibliography and References (continued)

Citation in this FIS	Publisher/Issuer	Publication Title, "Article," Volume, Number, etc.	Author/Editor	Place of Publication	Publication Date/Date Issuance	Link
Marion County 2013	Marion County, Florida	<i>Withlacoochee Floodplain Delineation Narrative</i>	Evan Shane Williams, Ph.D, P.E	Ocala, Florida	2013	Not Provided
McCuen	Prentice-Hall Inc.	<i>A Guide to Hydrologic Analysis Using SCS Methods</i>	Richard H. McCuen	Englewood Cliffs, NJ	1982	Not Provided
Merrick & Company, 2003	Southwest Florida Water Management District	<i>2003 LiDAR Data GIS LAS files</i>	Merrick & Company	City of Brooksville, Florida	February 2003	https://www.swfwmd.state.fl.us/
NOAA 1964	National Oceanic and Atmospheric Administration, National Weather Service	<i>Two to Ten Day Precipitation for Return Periods of 2 to 100 Years in the Contiguous United States, Technical Paper TP-49</i>	Not Provided	Not Provided	1964	http://www.noaa.gov/
NRCS 2013	Natural Resources Conservation Service, United States Department of Agriculture	<i>Soil Survey GIS feature class</i>	NRCS	Washington, D.C.	2013	http://websoilsurvey.nrcs.usda.gov/

Table 33: Bibliography and References (continued)

Citation in this FIS	Publisher/Issuer	Publication Title, "Article," Volume, Number, etc.	Author/Editor	Place of Publication	Publication Date/Date Issuance	Link
SJRWMD 1991	St. Johns River Water Management District	<i>24-Hour Rainfall Distributions for Surface Water Basins Within the St. Johns River Water Management District, Northeast Florida, St. Johns River Water Management District Technical Publication No. 91-3</i>	Rao, D.V.	City of Palatka, Florida	1991	http://www.sjrwmd.com/
SJRWMD 2009	St. Johns River Water Management District	<i>Landuse GIS feature class</i>	SJRWMD	City of Palatka, Florida	2009	http://www.sjrwmd.com/
Streamline Technologies 2000	Streamline Technologies, Inc.	Advanced ICPR User's Manual, Version 2.20	Streamline Technologies	Winter Springs, Florida	October 2000	http://streamnologies.com/index.htm
Streamline Technologies 2013	Streamline Technologies, Inc.	ICPR v3.10 Service Pack 11	Streamline Technologies	Winter Springs, Florida	2002	http://streamnologies.com/index.htm

Table 33: Bibliography and References (continued)

Citation in this FIS	Publisher/Issuer	Publication Title, "Article," Volume, Number, etc.	Author/Editor	Place of Publication	Publication Date/Date Issuance	Link
SWFWMD 1972	Southwest Florida Water Management District	<i>Withlacoochee Phase 1, Aerial Photographs With Contours, Scale 1:12,000, Contour Interval 2 feet</i>	SWFWMD	Not Provided	1972	Not Provided
SWFWMD 1973	Southwest Florida Water Management District	<i>Flood Profiles on Rainbow River</i>	SWFWMD	Not Provided	October 1973	http://www.swfwmd.state.fl.us/
SWFWMD 1998	Southwest Florida Water Management District	<i>1-Foot Contours for Hog Prairie and State Road 200</i>	SWFWMD	Not Provided	1998	http://www.swfwmd.state.fl.us/
SWFWMD 2001	Southwest Florida Water Management District	<i>1-Foot Contours for Cotton Plant Extension and Ocala Ridge</i>	SWFWMD	Not Provided	2001	http://www.swfwmd.state.fl.us/

Table 33: Bibliography and References (continued)

Citation in this FIS	Publisher/Issuer	Publication Title, "Article," Volume, Number, etc.	Author/Editor	Place of Publication	Publication Date/Date Issuance	Link
SWFWMD 2009	Southwest Florida Water Management District	<i>Landuse GIS feature class</i>	SWFWMD	City of Brooksville, Florida	2009	https://www.swfwmd.state.fl.us/
SWFWMD 2011	Marion County, Florida	<i>Flood Plain Analysis Blitchton Watershed (L462)</i>	AECOM Water	Jacksonville, Florida	2011	Not Provided
SWFWMD 2011	Marion County, Florida	<i>Flood Plain Analysis Cotton Plant 1 Watershed (L462)</i>	AECOM Water	Jacksonville, Florida	2011	Not Provided
SWFWMD 2011	Marion County, Florida	<i>Flood Plain Analysis Cotton Plant 2 Watershed (L783)</i>	AECOM Water	Jacksonville, Florida	2011	Not Provided
SWFWMD 2011	Marion County, Florida	<i>Flood Plain Analysis Cotton Plant 3 Watershed (L783)</i>	AECOM Water	Jacksonville, Florida	2011	Not Provided

Table 33: Bibliography and References (continued)

Citation in this FIS	Publisher/Issuer	Publication Title, "Article," Volume, Number, etc.	Author/Editor	Place of Publication	Publication Date/Date Issuance	Link
SWFWMD 2011	Marion County, Florida	<i>Flood Plain Analysis Martel Watershed (L462)</i>	AECOM Water	Jacksonville, Florida	2011	Not Provided
SWFWMD 2011	Marion County, Florida	<i>Flood Plain Analysis Northwest Ocala Watershed (L784)</i>	AECOM Water	Jacksonville, Florida	2011	Not Provided
SWFWMD 2011	Marion County, Florida	<i>Flood Plain Analysis State Road 200 Watershed (L463)</i>	AECOM Water	Jacksonville, Florida	2011	Not Provided
Taylor Engineering, Inc. 2013	Taylor Engineering, Inc.	<i>Technical Support Data Notebook for Oklawaha Watershed Study (City of Ocala Drainage Areas)</i>	Taylor Engineering, Inc.	Jacksonville, Florida	March 2013	Not Provided
University of Florida 1998	University of Florida	<i>Florida Geographic Data Library: Marion, GeoPlan Center, Version 1</i>	Not Provided	Not Provided	1998	Not Provided

Table 33: Bibliography and References (continued)

Citation in this FIS	Publisher/Issuer	Publication Title, "Article," Volume, Number, etc.	Author/Editor	Place of Publication	Publication Date/Date Issuance	Link
USACE 1966	U.S Army Corps of Engineers	<i>Flood Hazard Information, Withlacoochee River, Nobleton to Gulf of Mexico</i>	Not Provided	Not Provided	August 1996	Not Provided
USACE 1988	U.S Army Corps of Engineers	<i>Hydrologic Engineering Center, HEC-RAS River Analysis System, Version 2.2</i>	Not Provided	Davis, California	September 1998	Not Provided
USDA 1972	Soil Conservation Service, United States Department of Agriculture	<i>National Engineering Handbook, Section 4, Hydrology</i>	USDA	Washington, D.C.	1972	http://www.nrcs.usda.gov/wps/portal/nrcs/detailfull/national/water/?cid=stelprd1043063
USDA 1980	Soil Conservation Service, United States Department of Agriculture	<i>Interim Runoff Procedure for Florida, Florida Bulletin 210-1-2</i>	Cronshey, Roger	Washington, D.C.	1980	http://www.nrcs.usda.gov

Table 33: Bibliography and References (continued)

Citation in this FIS	Publisher/Issuer	Publication Title, "Article," Volume, Number, etc.	Author/Editor	Place of Publication	Publication Date/Date Issuance	Link
USDA 1986	Soil Conservation Service, United States Department of Agriculture	<i>Urban Hydrology for Small Watersheds. Technical Release No. 55</i>	USDA	Washington, D.C.	1986	http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/stelprdb1044171.pdf
U.S Department of Commerce 1976	U.S Department of Commerce	<i>National Oceanic and Atmospheric Administration, Climatological Data for Florida, Annual Summary</i>	Not Provided	Not Provided	1976	Not Provided
U.S Department of Commerce 2000	U.S Department of Commerce	<i>Bureau of the Census.</i>	Not Provided	Not Provided	April 2000	http://quickfacts.census.gov/qfd/states/12/12083.htm
U.S Department of Housing and Urban Development, Federal Insurance Administration 1977	U.S Department of Housing and Urban Development, Federal Insurance Administration	<i>Flood Hazard Boundary Map, Marion County, Florida and Unincorporated Areas</i>	Not Provided	Not Provided	July 1977	Not Provided

Table 33: Bibliography and References (continued)

Citation in this FIS	Publisher/Issuer	Publication Title, "Article," Volume, Number, etc.	Author/Editor	Place of Publication	Publication Date/Date Issuance	Link
U.S. Department of the Interior 1976	U.S. Department of the Interior	<i>Geological Survey, Open-File Report 76-499, Computer Applications for Step-Backwater and Floodway Analyses</i>	Not Provided	Not Provided	1976	Not Provided
U.S. Department of the Interior	U.S. Department of the Interior, Geological Survey	<i>7.5-Minute Series Flood-Prone Area Maps, Scale 1:24,000, Contour Interval 5 feet</i> Anthony, Florida Belleview, Florida Citra, Florida Emeralda Island, Florida Eureka Dam, Florida Farles Lake, Florida Fort McCoy, Florida Halfmoon Lake, Florida Hawthorne, Florida Juniper Springs, Florida Lady Lake, Florida Lake Delancy, Florida Lake Kerr, Florida Lake Mary, Florida Lake Panasoffkee NW, Florida Lake Weir, Florida Lynne, Florida Morristown, Florida Ocala East, Florida Ocala West, Florida Oxford, Florida Salt Springs, Florida Shady, Florida	Not Provided	Washington D.C.	Various	http://topomaps.usgs.gov

Table 33: Bibliography and References (continued)

Citation in this FIS	Publisher/Issuer	<i>Publication Title, "Article," Volume, Number, etc.</i>	Author/Editor	Place of Publication	Publication Date/Date Issuance	Link
U.S. Department of the Interior	U.S. Department of the Interior, Geological Survey	Umatilla, Florida Welaha, Florida Williston, Florida Cotton Plant, Florida Dunnellon, Florida Dunnellon SE, Florida Fairfield, Florida Flemington, Florida Keuka, Florida McIntosh, Florida Reddick, Florida Rodman, Florida Romeo, Florida Stokes Ferry, Florida Tidewater, Florida Yankeetown SE, Florida	Not Provided	Washington D.C.	Various	http://topomaps.usgs.gov
U.S. Department of the Interior	U.S. Department of the Interior, Geological Survey	<i>7.5-Minute Series Topographic Maps, Scale 1:24,000, Contour Interval 10 feet</i> Dunnellon, Florida Dunnellon SE, Florida Stokes Ferry, Florida Yankeetown SE, Florida	Not Provided	Washington D.C.	1954	http://topomaps.usgs.gov
U.S. Department of the Interior	U.S. Department of the Interior, Geological Survey	<i>7.5-Minute Series Topographic Maps, Scale 1:24,000, Contour Interval 5 feet,</i> Halfmoon Lake, Florida Lake Delancy, Florida Lake Kerr, Florida Lake Weir, Florida Lynne, Florida Salt Springs, Florida	Not Provided	Washington D.C.	1970	http://topomaps.usgs.gov

Table 33: Bibliography and References (continued)

Citation in this FIS	Publisher/Issuer	Publication Title, "Article," Volume, Number, etc.	Author/Editor	Place of Publication	Publication Date/Date Issuance	Link
U.S. Department of the Interior	U.S. Department of the Interior, Geological Survey	<i>7.5-Minute Series Topographic Maps, Scale 1:24,000, Contour Interval 5 feet</i>	Not Provided	Lady Lake, Florida	1966	http://topomaps.usgs.gov
USFWS 2012	U.S. Fish & Wildlife Service	<i>National Wetlands Inventory</i>	U.S. Fish & Wildlife Service	Washington, D.C.	2012	http://www.fws.gov/wetlands/
U.S. SCS 1972	U.S. Soil Conservation Service	<i>National Engineering Handbook, Section 4: Hydrology</i>	Not Provided	Not Provided	1972	Not Provided
U.S. Water Resources Council 1977	U.S. Water Resources Council, Bulletin 17A	<i>Guidelines for Determining Flood Flow Frequency</i>	Not Provided	Not Provided	June 1977	Not Provided

Table 33: Bibliography and References (continued)

Citation in this FIS	Publisher/Issuer	<i>Publication Title, "Article," Volume, Number, etc.</i>	Author/Editor	Place of Publication	Publication Date/Date Issuance	Link
Watershed Concepts June 2002 -August 2002	Watershed Concepts	<i>Technical Support Data Notebook</i>	Not Provided	Not Provided	June 2002 -August 2002	Not Provided
Watershed Concepts 2004	Watershed Concepts	<i>Addendum to Technical Support Data Notebook</i>	Not Provided	Not Provided	December 2004	Not Provided



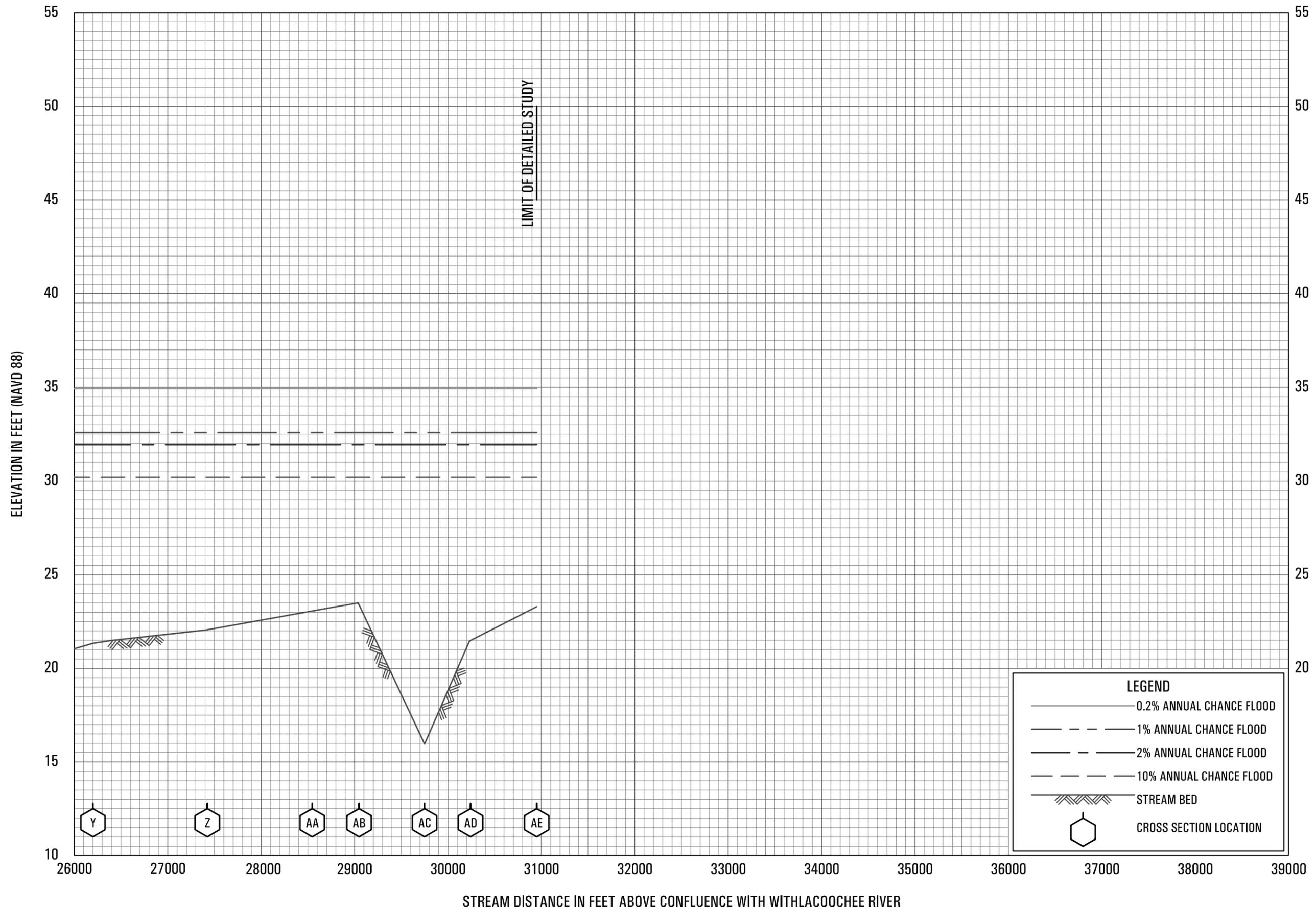
FLOOD PROFILES

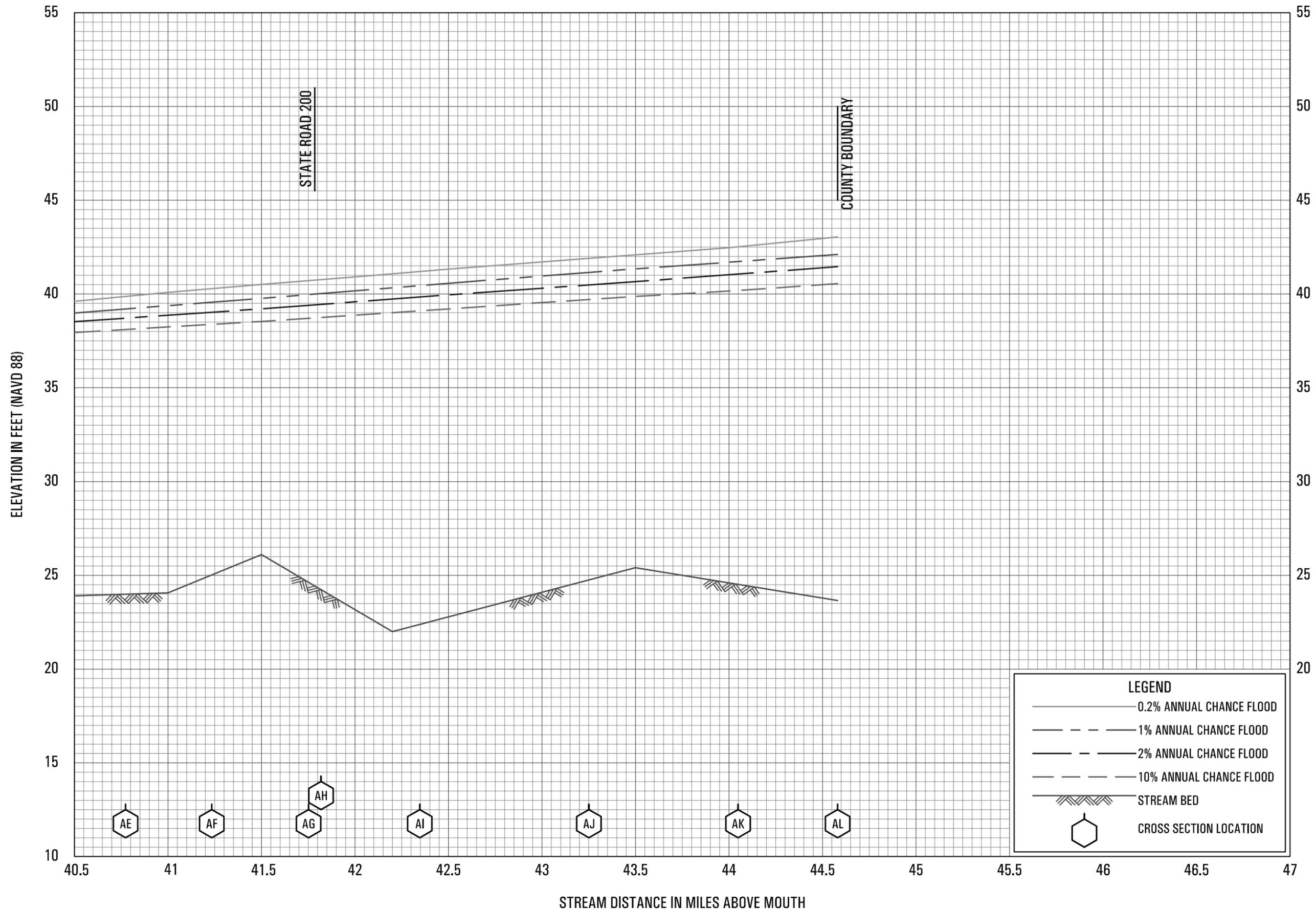
RAINBOW RIVER

FEDERAL EMERGENCY MANAGEMENT AGENCY

MARION COUNTY, FL
AND INCORPORATED AREAS

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FLOOD PROFILES
WITHLACOOCHEE RIVER

FEDERAL EMERGENCY MANAGEMENT AGENCY
MARION COUNTY, FL
AND INCORPORATED AREAS