FLOOD INSURANCE STUDY

LAKE COUNTY, FLORIDA
AND INCORPORATED AREAS

Community Name	Community Number
ASTATULA, TOWN OF	120581
CLERMONT, CITY OF	120133
EUSTIS, CITY OF	120134
FRUITLAND PARK, CITY OF	120387
GROVELAND, CITY OF	120135
HOWEY IN THE HILLS, TOWN OF	120585
LADY LAKE, TOWN OF	120613
LAKE COUNTY (UNINCORPORATED AREAS)	120421
LEESBURG, CITY OF	120136
MASCOTTE, CITY OF	120591
MINNEOLA, TOWN OF	120412
MONTVERDE, TOWN OF	120614
MT. DORA, CITY OF	120137
TAVARES, CITY OF	120138
UMATILLA, CITY OF	120139

REVISED
December 18, 2012

Federal Emergency Management Agency

FLOOD INSURANCE STUDY NUMBER
12069CV000A

NOTICE TO
FLOOD INSURANCE STUDY USERS

Communities participating in the National Flood Insurance Program have established repositories of flood hazard data for floodplain management and flood insurance purposes. This Flood Insurance Study may not contain all data available within the repository. It is advisable to contact the community repository for any additional data.

Part or all of this Flood Insurance Study may be revised and republished at any time. In addition, part of this Flood Insurance Study may be revised by the Letter of Map Revision process, which does not involve republication or redistribution of the Flood Insurance Study. It is, therefore, the responsibility of the user to consult with community officials and to check the community repository to obtain the most current Flood Insurance Study components.

Initial Countywide FIS Effective Date: July 3, 2002

First Revised Countywide FIS Date: December 18, 2012

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Leesburg Tributary 3	Panels	06P
St. Johns River	Panels	07P-11P
Wekiva River	Panel	12P
Wolf Branch	Panels	13P-14P

Exhibit 2 – Flood Insurance Rate Map Index (Published Separately)
Flood Insurance Rate Maps (Published Separately)

FLOOD INSURANCE STUDY

LAKE COUNTY, FLORIDA, AND INCORPORATED AREAS

1.0 INTRODUCTION

1.1 Purpose of Study

This Flood Insurance Study (FIS) revises and updates information on the existence and severity of flood hazards in the geographic area of Lake County, including the Cities of Clermont, Eustis, Fruitland Park, Groveland, Leesburg, Mascotte, Mt. Dora, Tavares, and Umatilla; the Towns of Astatula, Howey in the Hills, Lady Lake, Minneola, and Montverde; and the unincorporated areas of Lake County (referred to collectively herein as Lake County).

This countywide FIS aids in the administration of the National Flood Insurance Act of 1968 and the Flood Disaster Protection Act of 1973. This study has developed flood-risk data for various areas of the community that will be used to establish actuarial flood insurance rates and to assist the community in its efforts to promote sound floodplain management. Minimum floodplain management requirements for participation in the National Flood Insurance Program (NFIP) are set forth in the Code of Federal Regulations at 44 CFR, 60.3.

In some states or communities, floodplain management criteria or regulations may exist that are more restrictive or comprehensive than the minimum Federal requirements. In such cases, the more restrictive criteria take precedence, and the State (or other jurisdictional agency) will be able to explain them.

The Digital Flood Insurance Rate Map (DFIRM) and FIS Report for this countywide study have been produced in digital format. Flood hazard information was converted to meet the Federal Emergency Management Agency (FEMA) DFIRM database specifications and geographic information standards and is provided in a digital format so that it can be incorporated into a local Geographic Information System and be accessed more easily by the community.

1.2 Authority and Acknowledgments

The sources of authority for this FIS report are the National Flood Insurance Act of 1968 and the Flood Disaster Protection Act of 1973.

For this revision of the countywide FIS, new hydrologic and hydraulic analyses were prepared by BakerAECOM, LLC, for FEMA, under Contract No. HSFEHQ-09-D-0368, Task Order HSFE04-09-J-0066. This revised study was completed in March 14, 2011.

This revision also incorporates the results of Royal Trails Flood Study that was performed by Inwood Consulting Engineers for the Department of Public Works, Lake County.

For the initial countywide FIS, the hydrologic and hydraulic analyses were prepared by Engineering Methods & Applications, Inc., for FEMA, under Inter-Agency Agreement No. EMW-96-CO-0024. That work was completed on November 11, 1997.

The initial countywide FIS was prepared to include all jurisdictions within Lake County in a countywide FIS. Information on the authority and acknowledgements for each jurisdiction with a previously printed FIS report included in the countywide FIS is shown below:

Astatula, Town of:	The hydrologic and hydraulic analyses for the FIS report dated February 15, 1984, were performed by Newman Consulting Engineering, for FEMA.
Clermont, City of:	The hydrologic and hydraulic analyses for the FIS report dated February 15, 1984, were performed by Newman Consulting Engineering, for FEMA.
Eustis, City of:	The hydrologic and hydraulic analyses for the FIS report dated June 4, 1987, were performed by Newman Consulting Engineers for FEMA. That FIS report also included information from the FIS of Lake County, Unincorporated Areas, Florida (FEMA, April 1982).
Fruitland Park, City of:	The hydrologic and hydraulic analyses for the FIS report dated March 5, 1984, were performed by Newman Consulting Engineering, for FEMA.
Groveland, City of:	The hydrologic and hydraulic analyses for the FIS report dated March 5, 1984, were performed by Newman Consulting Engineering, for FEMA
Howey in the Hills, Town of:	The hydrologic and hydraulic analyses for the FIS report dated February 15, 1984, were performed by Newman Consulting Engineering, for FEMA.
Lady Lake, Town of:	The hydrologic and hydraulic analyses for the FIS report dated February 15, 1984, were performed by Newman Consulting Engineering, for FEMA.
Lake County (Unincorporated areas):	The hydrologic and hydraulic analyses for the FIS report dated October 1, 1981, were prepared by the U.S. Army Corps of Engineers (USACE), Jacksonville District, for FEMA, under Inter-Agency Agreement No. IAA-H-9-79,

Project Order No. 10. That work was completed in May 1980.

Leesburg, City of:	The hydrologic and hydraulic analyses for the FIS report dated January 18,, 1985, were performed by Newman Consulting Engineering, for FEMA. For the FIS report dated April 7, 1999, the hydrologic and hydraulic analyses were performed for Lake Hollywood and Ponding Areas K1-1, K1-2A, K1-2B, K1-2C, and K1-2D by Walling Engineering for FEMA. That work was completed in February 1996.
Mascotte, Town of:	The hydrologic and hydraulic analyses for the FIS report dated May 15, 1984, were performed by Newman Consulting Engineering for FEMA.
Minneola, Town of:	The hydrologic and hydraulic analyses for the FIS report dated February 15, 1984, were performed by Newman Consulting Engineering for FEMA.
Montverde, Town of:	The hydrologic and hydraulic analyses for the FIS report dated May 15, 1984, were performed by Newman Consulting Engineering for FEMA.
Mt. Dora, City of:	The hydrologic and hydraulic analyses for the FIS report dated April 5, 1988, were performed by the U.S. Department of the Interior, Geological Survey (USGS), Water Resources Division, Orlando, Florida, for FEMA under Inter-Agency Agreement No. EMW-85-E-1823. That work was completed in July 1986.
Tavares, City of:	The hydrologic and hydraulic analyses for the FIS report dated March 16, 1988, were performed by the USGS, Water Resources Division, Orlando, Florida, for FEMA under Inter-Agency Agreement No. EMW-85-E-1823. That work was completed in July 1986.
Umatilla, City of:	The hydrologic and hydraulic analyses for the FIS report dated April 3, 1989, were performed by the USGS, Water Resources Division, Orlando, Florida, for FEMA under Inter-Agency Agreement No. EMW-85-E-1823, Project Order No. 75139. That work was completed in August 1987.

Base map information shown on this Flood Insurance Rate Map (FIRM) was derived from multiple sources. Base map information for Lake County and all incorporated communities within Lake County was provided in digital format by Lake County and Florida Geographic Data Library. Orthophotography was collected in 2009 by the South West Florida Water Management District (SWFWMD) and St. Johns River Water Management District (SJRWMD).

The coordinate system used for producing this FIRM is NAD 1983 State Plane Florida East FIPS 0901. The horizontal Datum was NAD83 HARN, GRS 1980 spheroid. Corner coordinates shown on the FIRM are in latitude and longitude referenced to the UTM projection, NAD 83. Differences in the datum and spheroid used in the production of FIRMs for adjacent counties may result in slight positional differences in map features at the county boundaries. These differences do not affect the accuracy of information shown on the FIRM.

1.3 Coordination

Consultation Coordination Officer's (CCO) meetings may be held for each jurisdiction in this countywide FIS. An initial Consultation Coordination Officer (CCO) meeting (also occasionally referred to as the Scoping meeting) is held with representatives of the communities, FEMA, and the study contractors to explain the nature and purpose of the FIS and to identify the streams to be studied by detailed methods. A final CCO (often referred to as the Preliminary DFIRM Community Coordination, or PDCC, meeting) is held with representatives of the communities, FEMA, and the study contractors to review the results of the study.

For this revision of the countywide FIS, the initial CCO meeting was held on November 3, 2009, and attended by community officials, representatives of the St. Johns River and South Florida Water Management Districts, the State of Florida, FEMA Region IV, and the study contractor, BakerAECOM, LLC.

The final CCO meeting was held on August 18 2011 to review and accept the results of this FIS. Those who attended this meeting included representatives of Lake County, Cities of Mt. Dora and Tavares and Towns of Lady Lake and Astatula, AECOM, FEMA REGION IV. All problems raised at that meeting have been addressed in this study.

The dates of the historical initial and final CCO meetings held for the communities within the boundaries of Lake County are shown in Table 1, "Historical CCO Meeting Dates."

Table 1: Historical CCO Meeting Dates

Community Name	Initial CCO Date	Final CCO Date
Town of Astatula	*	September 13, 1983
City of Clermont	*	September 12, 1983
City of Eustis	*	February 25, 1986
City of Fruitland Park	*	September 14, 1983

Community Name	Initial CCO Date	Final CCO Date
City of Groveland	*	September 12, 1983
Town of Howey in the Hills	*	September 13, 1983
Town of Lady Lake	*	September 14, 1983
Lake County and Incorporated Areas (countywide)	September 22, 1995	September 21, 2000
Lake County (Unincorporated Areas)	November 27, 1978	March 3, 1981
City of Mascotte	*	September 12, 1983
Town of Minneola	*	September 13, 1983
Town of Montverde	*	September 13, 1983
City of Mt. Dora	*	August 30, 1987
City of Tavares	*	August 30, 1987
City of Umatilla	*	April 27, 1988

* Data not available

For the initial countywide FIS report, the initial CCO meeting was attended by representatives of Lake County; Cities of Eustis, Fruitland Park, Leesburg, Mascotte, and Mt. Dora, and the Town of Montverde; local consulting engineering companies; Engineering Methods & Applications, Inc.; and FEMA. Numerous other contacts for coordination and data acquisition were made with appropriate agencies and groups throughout the course of the study, including the following:

- Lake County Department of Public Services
- Land Planning Group
- St. Johns River Water Management District (SJRWMD)
- Lake County Water Authority
- DeGrove Surveyors, Inc.
- Cities of Eustis, Fruitland Park, Leesburg, Mascotte, and Mt. Dora
- Town of Montverde
- Florida Turnpike Office
- Florida Department of Transportation
- Centrum Electric Company
- USACE, Jacksonville District
- U.S. Dept. of Agriculture, Natural Resource Conservation Service (NRCS)
- USGS, Water Resources Division
- National Weather Service
- Dewberry & Davis

- Local Engineering Firms

The Cities of Clermont, Groveland, Tavares, Umatilla and the Towns of Astatula, Howey in the Hills, Lady Lake, and Minneola, as well as the above communities who attended the initial CCO meeting, were notified by a letter dated January 6, 2000, that their FIS/FIRM would be revised in countywide format.

The final CCO meeting for the initial FIS report was attended by representatives of the Towns of Astatula, Howey in the Hills, Lady Lake, Minneola; the Cities of Clermont, Eustis, Fruitland Park, Groveland, Leesburg, Mascotte, Mt. Dora, Umatilla; Lake County; the study contractor; the state; and FEMA.

2.0 AREA STUDIED

2.1 Scope of Study

This FIS report covers the geographic area of Lake County, Florida, including the incorporated communities listed in Section 1.1. The scope and methods of this study were proposed to, and agreed upon, by FEMA and Lake County.

For this revision, a total of 13.1 stream miles were studied using detailed methods. Additionally, detailed methods were also used to determine stillwater elevations for ponding areas in the Royal Trails subdivision located in the unincorporated northeastern portion of Lake County. Royal Trails subdivision extends from west of State Road 44 to east of Lake Tracy. Floodplain boundaries of streams that had been previously studied by detailed methods were redelineated based on more detailed and up-to-date topographic mapping for this FIS report.

All or portions of the flooding sources in Table 2, "Flooding Sources Studied by Detailed Methods," were studied by detailed methods. Limits of detailed study are indicated on the Flood Profiles (Exhibit 1) and on the FIRM (Exhibit 2). The areas studied by detailed methods were selected with priority given to all known flood hazards and areas of projected development or proposed construction.

Table 2: Flooding Sources Studied by Detailed Methods

6th Avenue Depressional Area	Boggy Marsh	County Road 42 Depressional Area 1
Apopka Beauclair Canal	Bonaire Pond	County Road 42 Depressional Area 2
Bass Lake	Center Lake	Crescent Lake
Bear Pond	Cherry Lake	Crooked Lake
Big Prairie Lake	Church Lake	Crystal Lake
Blacks Still Lake	Clearwater Lake	Danger Pond
Blue Lake	Cook Lake	
Deep Lake	Depressional Area 1	Depressional Area 2

Table 2: Flooding Sources Studied by Detailed Methods (continued)

Depressional Area 3
Dilly Lake
Dilly Marsh
Dream Lake
Dukes Lake
Dyches Lake
East Crooked Lake
East Lake
East Lake 220
East Lake Dixie
Edgewood Lake
Emeralda Marsh
Forest Lake
Fountain Lake
Fountain Lake East
Fountain Lake West
Gallows Lake
Grande Canal
Grassy Lake
Hancock Bay North
Hancock Bay South
Hancock Lake
Heritage Hills North Ponding Area
Heritage Hills Pond 1A
Heritage Hills Pond 1B
Heritage Hills Pond 2
Heritage Hills Pond 3
Hickorynut Lake
Hidden Lake
Horseshoe Lake
Horseshoe Lake East
Horseshoe Lake West
Indianhouse Lake East
Indianhouse Lake West
Island Lake
Island Pond
Jacks Lake
Jake Bay Depressional Area
Johns Lake
Keene Lake
Lake Akron
Lake Alice
Lake Amos
Lake Apopka
Lake Arlene
Lake Arthur
Lake Audrey
Lake Beasley
Lake Beauclair
Lake Bracy
Lake Burns
Lake Carlton
Lake Catherine
Lake Charles
Lake Chloe
Lake Clair
Lake Cooley
Lake David
Lake Denham
Lake Dicie
Lake Dora
Lake Dot
Lake Douglas
Lake Edwards
Lake Eldorado
Lake Ella-170
Lake Ella-220
Lake Elsie
Lake Enola
Lake Etowah
Lake Eustis
Lake Eustis Area Pond 1
Lake Eustis Area Pond 2
Lake Eustis Area Pond 3
Lake Eustis Area Pond 4
Lake Felter
Lake Florence
Lake Frances
Lake Franklin
Lake Gary
Lake Gem
Lake Geneva
Lake Gertrude
Lake Gibson
Lake Glona
Lake Grace
Lake Gracie
Lake Griffin
Lake Harris
Lake Hermosa
Lake Heron Depressional Area 1
Lake Heron Depressional Area 2
Lake Heron Depressional Area 3
Lake Holly
Lake Holly Depressional Area 2
Lake Holly Depressional Area 3
Lake Holly Depressional Area 4
Lake Holly Depressional Area 5
Lake Holly Depressional Area 6
Lake Holly Depressional Area 7
Lake Hollywood
Lake Idamere
Lake Illinois
Lake Jewel
Lake Joanna
Lake John
Lake Josephine
Lake Junietta
Lake Katherine
Lake Kathryn
Lake Keith
Lake King

Table 2: Flooding Sources Studied by Detailed Methods (continued)

Lake Lincoln
Lake Linda
Lake Lizzie
Lake Lorraine
Lake Louisa
Lake Louise
Lake Lucerne
Lake Lucie
Lake Lulu
Lake Mack
Lake Madge
Lake Maggie
Lake Mary
Lake Minnehaha
Lake Minneola
Lake Needham
Lake Nellie
Lake Nettie
Lake Oleo
Lake Ouida
Lake Owen
Lake Palatlakaha
Lake Palm
Lake Pearl
Lake Sallie
Lake Saunders
Lake Schimmerhorn
Lake Seneca
Lake Sidney
Lake Smith
Lake Sparkling Water
Lake Spencer
Lake Sunnyside
Lake Sunshine
Lake Susan
Lake Swatara
Lake Tavares
Lake Tem
Lake Umatilla
Lake Vista
Lake Wash
Lake Willie
Lake Winona
Lake Woodward
Lake Yale
Leesburg Tributary 1
Leesburg Tributary 2
Leesburg Tributary 2-1
Leesburg Tributary 3
Leesburg Unnamed Pond
Little Bluff Lake
Little Everglades Area No. 1
Little Everglades Area No. 2
Little Everglades Area No. 3
Little Everglades Area No. 4
Little Everglades Area No. 5
Little Everglades Area No. 6
Little Grassy Lake
Little Lake Blackwelder
Little Lake Bracy
Little Lake Harris
Long Lake
Martins Lake
Minneola Annex Pond 1
Minneola Annex Pond 2
Mirror Lake
Mount Plymouth Lake
Mule Pond
Muscle Lake
Myrtle Lake
Neighborhood Lakes North
Neighborhood Lakes South
North Twin Lake
Olsen Lake
Park Lake
Peanut Pond
Perch Lake
Pike Lake
Pine Island Lake
Pine Meadows Lake
Plum Lake
Pond Chain 580-1
Ponding Area 07-3
Ponding Area 07-5
Ponding Areas 07-7
Ponding Area 180-1
Ponding Area 220-1
Ponding Area 306-1
Ponding Area 308-1
Ponding Area 345-1
Ponding Area 359-1
Ponding Area 359-2
Ponding Area 362-1
Ponding Area 367-1
Ponding Area 378-1
Ponding Area 378-2
Ponding Area 378-3
Ponding Area 378-4
Ponding Area 378-5
Ponding Area 378-6
Ponding Area 378-7
Ponding Area 380-1
Ponding Area 380-2
Ponding Area 380-3
Ponding Area 380-4
Ponding Area 395-1
Ponding Area 395-2
Ponding Area 480-1
Ponding Area 486-1
Ponding Area 495-1
Ponding Area 505-1
Ponding Area 505-2
Ponding Area 505-3
Ponding Area 505-4
Ponding Area 535-1
Ponding Area 550-1
Ponding Area 550-2
Ponding Area 550-3
Ponding Area 560-1

Table 2: Flooding Sources Studied by Detailed Methods (continued)

Ponding Area 560-2
Ponding Area 580-1
Ponding Area 580-2
Ponding Area 580-3
Ponding Area 590-1
Ponding Area 675-3
Ponding Area 675-4
Ponding Area 675-5
Ponding Area 750-1
Ponding Area A
Ponding Area B
Ponding Area B10B
Ponding Area B10C
Ponding Area B10D
Ponding Area B10E
Ponding Area B10F
Ponding Area B10G
Ponding Area B10H
Ponding Area B10I
Ponding Area B10J
Ponding Area B10K
Ponding Area B10M
Ponding Area B21D
Ponding Area B21E
Ponding Area B21F
Ponding Area B30A
Ponding Area B30C
Ponding Area B30D
Ponding Area C
Ponding Area D2B
Ponding Area D2E1
Ponding Area D2E2
Ponding Area D2G
Ponding Area D2H
Ponding Area D2J
Ponding Area D2K
Ponding Area D2L
Ponding Area D2M
Ponding Area D2N
Ponding Area D2O
Ponding Area D2P
Ponding Area E
Ponding Area E3B
Ponding Area F1A
Ponding Area F1D
Ponding Area F1H
Ponding Area F3D
Ponding Area F3F
Ponding Area F5B
Ponding Area F6B
Ponding Area F6C
Ponding Area F6D
Ponding Area G1-3
Ponding Area G1-4
Ponding Area G4B
Ponding Area G4C
Ponding Area G7B
Ponding Area G7C
Ponding Area G7D
Ponding Area G7E
Ponding Area G7F
Ponding Area G7H
Ponding Area G7HA
Ponding Area G7I
Ponding Area G7J
Ponding Area G8B
Ponding Area G9-1
Ponding Area G9-2
Ponding Area G9-3
Ponding Area H1B
Ponding Area H1C
Ponding Area H1D
Ponding Area H1H
Ponding Area H1I
Ponding Area H5A
Ponding Area H5F
Ponding Area H5G
Ponding Area J-1-1
Ponding Area K1-1
Ponding Area K1-2
Ponding Area K1-2A
Ponding Area K1-2B
Ponding Area K1-2C
Ponding Area K1-2D
Ponding Area K1A
Ponding Area K1B
Ponding Area K4-1
Ponding Area K5A
Ponding Area K5B
Ponding Area K5C
Ponding Area K5E
Ponding Area K5F
Ponding Area K5H
Ponding Area K-11-3
Ponding Area K-11-6
Ponding Area K-11-7
Ponding Area K-11-8
Ponding Area L1A
Ponding Area L1B
Ponding Area L1C
Ponding Area L1D
Ponding Area L1E
Ponding Area L1F
Ponding Area Q2-1
Ponding Area Q3-2
Ponding Area Q3-4
Ponding Area Q4-6
Ponding Area West of Plum Lake (L-26)
Round Lake
Sap Pond
Saw Mill Lake
Sawgrass Bay
Sawgrass Lake
Schoolhouse Lake
Shady Nook Lake
Shepherd Lake
Silver Lake
Smith Pond
South Lake
South Twin Lake
Spring Lake
Square Lake
Stewart Lake
St. Johns River
Sumner Lake

Table 2: Flooding Sources Studied by Detailed Methods (continued)

Sunset Lake
Sunset Valley Lake
Sylvan Lake
Sylvia Lake-Lake Ivanhoe
Trout Lake
Unity Lake
Unnamed Lake West of Lake Joanna
Unnamed Pond North of Lake Clair
Unnamed Pond North of Lake Sunnyside
Unnamed Pond South of Lake Sunshine
Unnamed Ponding Area 1
Unnamed Ponding Area 2
Unnamed Ponding Area 3
Unnamed Ponding Area 4
Unnamed Sand Mine Ponding Area
Wash Lake
Wash Pond 1
Wash Pond 2
Wash Pond 3
Wash Pond 4
West Crooked Lake
West Lake
West Lake Dixie
Wilma Lake North
Wilma Lake South
Wilson Lake
Wekiva River
Wolf Branch
Wolf Branch Sink
Zephyr Lake

All or portions of the following flooding sources have been studied or restudied in detail in the current revision.

Table 3: Flooding Sources with New or Revised Analyses as part of the Current Study Update

Flooding Source	Reach Length (miles)	Limits
Leesburg Tributary 1	1.7	From mouth to State Hwy 44
Leesburg Tributary 2	1.5	From mouth to a point approximately 100 feet upstream of Main Street
Leesburg Tributary 2-1	0.3	Confluence with Leesburg Tributary 2 to a point approximately 1,410 feet upstream of confluence
Leesburg Tributary 3	0.4	From mouth to a point Approximately 310 feet upstream of Youngs Road
St. Johns River	7.0	Approximately 3.1 miles downstream of State Hwy 40 to a point approximately 3.9 miles upstream of State Hwy 40
Wolf Branch	2.2	From mouth to a point to approximately 620 feet upstream of Country Club Boulevard

Approximate analyses were used to study those areas having a low development potential or minimal flood hazards. This revision refined Zone A for all flooding sources listed in Table 4.

Table 4: Flooding Sources Studied by Approximate Methods

Alexander Springs Creek
Big Creek
Billies Bay
Black Water Creek
Bugg Spring
Eustis Meadows
Glenn Branch
Glenn Branch Tributary
Hicks Ditch
Jumping Gully
Little Creek
Live Oak Hammock
Ninemile Branch
Ninemile Creek
Pittman Swamp
Seminole Creek
Sulpher Run
Tracy Canal
Tributary 1 to Alexander Springs Creek
Tributary 1 to Black Water Creek
Tributary 1 to Jumping Gulley
Tributary 1 to Lake Dexter
Tributary 1 to Ninemile Creek
Tributary 2 to Alexander Springs Creek
Tributary 2 to Lake Dexter
Tributary 2 to Lake Dorr
Tributary 2 to Little Creek
Tributary 2 to Little Lake Harris
Tributary 2 to Tracy Canal
Tributary 3 to Black Water Creek
Tributary 3 to Lake Dexter
Tributary 3 to Lake Dorr
Tributary 3 to Sulphur Run
Tributary 3-1 to Black Water Creek
Tributary 4 to Black Water Creek
Tributary 4 to St. Johns River
Tributary 4-1 to Black Water Creek
Tributary 5 to St. Johns River
Tributary 6 to St. Johns River
Tributary 6-1 to St. Johns River
Tributary 6-2 to St. Johns River
Tributary to Black Water Swamp
Tributary to Lake Norris
Unnamed Tributary to Lake Harris

This revision to the countywide FIS also incorporates the determination of letters issued by FEMA resulting in Letters of Map change as shown in Table 5, "Letters of Map Revision (LOMRs) Incorporated into Current Study."

Table 5: Letters of Map Revision (LOMRs) Incorporated into Current Study

Case Number	Flooding Source(s)	Communities Affected	Effective Date
97-04-377P	Zone A Ponding Area North of Wolf Branch Road	City of Mt. Dora	5/27/1999
02-04-323P	Zone A Ponding Areas	Lake County	7/5/2002
03-04-573P	Lake Frances	Lake County	12/23/2003
04-04-353P	Lake Everglades Ponding Area Nos. 1 through 6	Lake County	11/4/2004
04-04-363P	Schoolhouse Lake	Lake County	3/16/2005

Case Number	Flooding Source(s)	Communities Affected	Effective Date
05-04-0916P	Unnamed Ponding Area	Lake County	6/20/2005
05-04-3652P	Clearwater Lake	Lake County	5/23/2006
05-04-3654P	Unnamed Ponding Area 1, Unnamed Ponding Area 2, Grand Canal	City of Mt. Dora	5/23/2006
07-04-0194P	Lake Katherine, Lake Clair, Unnamed Pond North of Lake Clair	Lake County	6/22/2007
07-04-6495P	Ponding Area 650-3, Ponding Area 650-4, Ponding Area 650-5	Lake County	4/17/2008
08-04-5093P	Lake Sunshine, Unnamed Pond South of Lake Sunshine	Town of Lady Lake	1/30/2009
09-04-2296P	Ponding Area D2N, Ponding Area D2O, Ponding Area D2P	Lake County	11/16/2009
09-04-4297P	Lake Mack, Forest Lake, 6th Ave. Depressional Area, Depressional Area 1, Depressional Area 2, Depressional Area 3, Lake Heron Depressional Area 1, Lake Heron Depressional Area 2, Lake Heron Depressional Area 3, Jake Bay Depressional Area, Lake Holly, Lake Holly Depressional Area 2, Lake Holly Depressional Area 3, Lake Holly Depressional Area 4, Lake Holly Depressional Area 5, Lake Holly Depressional Area 6, Lake Holly Depressional Area 7, County Road 42 Depressional Area 1, County Road 42 Depressional Area 2	Lake County	5/11/10
09-04-7272P	Lake Eustis Ponding Area 1, Lake Eustis Ponding Area 2, Lake Eustis Ponding Area 3, Lake Eustis Ponding Area 4	Lake County	9/10/2010

Case Number	Flooding Source(s)	Communities Affected	Effective Date
10-04-4299P	Unnamed Sand Mine Ponding Area, Heritage Hlls North Ponding Area, Heritage Hills Pond 1A, Heritage Hills Pond 1B, Heritage Hills Pond 2, Heritage Hills Pond 3	Lake County	1/10/2011
11-04-4633P	Unnamed Ponding Area 3, Unnamed Ponding Area 4	Lake County	12/19/2011

2.2 Community Description

Lake County is located in central Florida, bounded on the east by Volusia, Seminole and the heavily developed Orange County; on the south by Polk County; on the west by Sumter County; and on the north by Marion County.

Topography in Lake County is varied. Ground elevations range from less than 5 feet above National Geodetic Vertical Datum of 1929 (NGVD) along the St. Johns River to a high of 312 feet NGVD (USGS; 7.5 min. Quads). Landforms in Lake County are of three basic types: ridges, valleys, and uplands. Lake County has 1,345 lakes whose surface areas are 2.5 acres or more. About 32 percent of the county is taken up by lakes, swamps, and marshes; 33 percent by open undeveloped land; 21 percent by agriculture; 12 percent by Ocala National Forest; and 2 percent by urban use.

The climate of the county is semitropical characterized by warm, humid summers and mild dry winters. The mean annual temperature is about 72 degrees Fahrenheit (°F). January is the coldest month with a mean minimum temperature of 50°F; however, occasional below-freezing temperatures occur. The hottest months are July and August, each with a mean maximum temperature of 92°F. Annual precipitation in Lake County averages about 51 inches, most of which occurs during the June-October rainy season.

Lake County has continued to be the site of rapid population growth and development owing to the popularity of central Florida as a major entertainment and recreational area. The County population more than doubled between the 1970 and 1990 censuses (increasing from 69,305 to 152,104), and is estimated to have increased another 24% by 1997 (State of Florida, February 1996). From April 1, 2000 to July 1, 2009, the populated increase was estimated at 48.3% with a total county population of 312,119 (U.S. Census, March 2011).

2.3 Principal Flood Problems

Floods can occur in Lake County any time during the year, however, they are most frequent during the June-October rainy season. Floods on the lakes would result from prolonged heavy rainfall over the study area with high antecedent lake stages. Floods on the streams would result from prolonged heavy rainfall over a large area. The flooding

would be more severe from rainfall associated with hurricanes or tropical storms and when antecedent rainfall has resulted in saturated ground conditions when the infiltration is minimal. Cloudburst storms can occur any time but do not constitute a serious flood hazard in the study area.

Information on past floods in Lake County is sparse. Heavy rainfall in late 1959 and the early spring of 1960 saturated the ground and raised the groundwater table well above normal. In September 1960, Hurricane "Donna" passed through the area causing significant flooding throughout Lake County. The flooding was considerably worse on the closed lake basins that depend on subsurface drainage. Table 6, "Historic Flood Elevations", lists lakes in Lake County with records of past stages. The table shows the historic peak, the date of the historic peak, and the date of the first year of record.

Table 6: Historic Flood Elevations

Lake	Historic Peak (feet NAVD)	Date	First Year of Records
Apopka	68.3	October 1936	1935
Beauclair	62.49	July 1968	1960
Carlton	62.52	November 1975	1960
Dora	64.7	1927	1927
Johns	97.46	August 1960	1959
Louisa	98.64	March 1960	1957
Minnehaha	98.04	April 1960	1945
Cherry	97.13	April 1959	1956
Yale	60.29	October 1960	1959

More recent flooding has also been recorded. Widespread flooding and property damages were observed in peninsular Florida in September 1994, when a tropical and non-tropical system combined to bring heavy rains. Heavy rains in December 1997 and January 1998 flooded a mobile home park in the Clermont area. An estimated 8 to 10 inches from Hurricane Frances in September 2004 flooded roads and a few homes in the central and northern part of Lake County (NOAA, March 2011).

2.4 Flood Protection Measures

Channelization for navigation purposes began as early as 1860 when a 4-foot channel was dug from the mouth of the Oklawaha River to Leesburg on Lake Griffin. Since that time, a great number of small public and private water control measures have been completed in Lake County. Lake Griffin has been regulated to some extent for more than 35 years by a control in the Oklawaha River at Moss Bluff, about 8 miles downstream of the lake. A timber control was placed in the Apopka-Beauclair canal in 1950, and the present lock and dam, about halfway between Lake Apopka and Lake Beauclair was opened in 1956. Also in 1956, the lock and dam in the canal between Lakes Eustis and Griffin was opened. The canals between Lakes Dora and Eustis and Lakes Apopka and Beauclair were deepened in 1958. Lake regulation has also been implemented on lakes in the

upper Palatlakaha basin which includes Lakes Cherry, Minneola, Minnehaha and Louisa.

For the City of Tavares, there are some privately owned retention/detention ponds, only the locks and control structures on the Apopka-Beauclair Canal, the Palatlakaha River, and the Oklawaha River affect the lake levels within the City of Tavares. Burrel Lock and Dam on Haines Creek, the outlet from Lake Eustis, acts to control the level of Lake Eustis and all waters upstream of the control in the City of Tavares.

There are no other existing or proposed flood protection projects which would significantly reduce the 1-percent-annual-chance flood levels in Lake County.

3.0 ENGINEERING METHODS

For the flooding sources studied by detailed methods 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 is expected to be equaled or exceeded once on the average during any 10-, 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-, 50-, 100-, and 500-year floods, have a 10-, 2-, 1-, and 0.2-percent 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 1-percent-annual-chance flood in any 50-year period is approximately 40 percent (4 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.

3.1 Hydrologic Analyses

For this countywide study, hydrologic analyses were carried out to establish peak discharge frequency relationships for each flooding source studied by detailed and approximate methods affecting the community. A summary of peak discharge-drainage area relationships for streams studied by detailed methods is shown in Table 7, "Summary of Discharges."

The stillwater elevations for the 10-, 2-, 1-, and 0.2-percent-annual-chance floods for all lacustrine flooding sources have been determined and are summarized in Table 8, "Summary of Stillwater Elevations."

3.1.1 Methods for Flooding Sources with New or Revised Analyses in Current Study

Peak flood discharges for 10-, 2-, 1-, and 0.2-percent-annual-chance recurrence intervals were developed using the USACE Hydrologic Engineering Center's Hydrologic Modeling System (HEC-HMS), Version 3.40, for all detailed study streams other than the St. Johns River. Peak discharges for St. Johns River

remain unchanged from that determined for the previous FIS.

SCS 24-hour Type II rainfall distribution was used for all design frequency simulations to develop runoff hydrographs. Rainfall values were obtained from the U.S. Department of Commerce Technical Paper No. 40 "*Rainfall Frequency Atlas of the Eastern United States*". A 24 hours storm was chosen based on historical patterns. For 0.2% annual chance flood, rainfall values were interpolated using best fit curve.

Drainage basin boundaries for the detailed studied streams in Lake County were delineated using a digital elevation model (DEM) generated from the LIDAR data collected and processed in 2007, as well as a 1/3 arc-second National Elevation Dataset DEM. A weighted runoff curve number was calculated for each sub-basin by using an intersection of soils data, land use data, and sub-basin boundary data. The resultant runoff curve number is the weighted runoff curve number for the sub-basin.

Soils information was obtained from the St. Johns River Water Management District (SJRWMD) 1:500000 General Soil Map, Florida, 1982. Land Use data was obtained from the St. Johns River Water Management District. The Land Use data was based on 2004 Natural Color and color infrared aerial photography.

3.1.2 Methods for Flooding Sources Incorporated from Previous Studies

This section describes the methodology used in previous studies of flooding sources incorporated into this FIS that were not revised for this countywide study. Hydrologic analyses were carried out to establish peak discharge-frequency relationships for each flooding source studied by detailed methods affecting the community.

Precountywide Analyses

The hydrologic data for the St. Johns River was taken from the January 1979 Seminole County FIS and "Flood Plain Information, St. Johns River and Lake Beresford, Volusia and Lake Counties, Florida," (USACE, 1974). Additional information was obtained from a stage-frequency analysis at Lake George on the St. Johns River.

The hydrologic data for the Wekiva River was taken from the January 1979 Seminole County FIS. Lakes Dora, Johns, Apopka, Beauclair, and Carlton were taken from May 1979 Unincorporated Areas of Orange County FIS.

Lakes Louisa, Minnehaha, and Yale were analyzed by a frequency analysis of historical data using a Weibull distribution. Lakes Cherry and Minneola are connected hydraulically with Lake Minnehaha and differ in stage only by the amount of headloss caused by the flow between the lakes (FIS Lake County, October, 1981).

To analyze lakes where little or no stage records exist, rainfall-frequency estimates were obtained from statistical analysis of records from long term rainfall stations in and around Lake County. Results are as follows:

	Rainfall (inches)			
Duration	10-percent-annual-chance	2-percent-annual-chance	1-percent-annual-chance	0.2-percent-annual-chance
1-day	6.4	10.0	12.0	17.4
3-day	8.8	11.9	13.6	18.5
1-month	15.2	19.5	21.0	24.0

Lakes Akron, Bass, Grace, Jewel, Kathryn, Louisa, Lulu, Perch, Schimmerhorn, Sidney, Silver, South, and were analyzed using the Volumetric runoff method. Analysis of the soil characteristics and land use of each lake basin were used to determine the percent of rainfall that would be retained on land from a storm of specified duration and frequency and the corresponding percent that would run off the basin into the lake. The sum of the volume of runoff added to the volume of rain falling directly on the lake gives the total volume of rainfall the lake receives during the storm. A stage-capacity curve was developed for each lake using contours on the USGS Quadrangle maps [USGS; 7.5 min. Quads: Salt Springs (1970), Juniper Springs (1970), Astor (1972), Alexander Springs (1972), Lake Woodruff (1962/1970), Emeralda Island (1966), Umatilla (1965/1970), Paisley (1965/1970), Pine Lakes (1962/1970), Orange City (1964/1970), Leesburg East (1965), Eustis (1966/1970), Sorrento (1960/1970), Sanford SW (1965/1970), Howey-in-the-Hills (1969), Astatula (1962/1970), Apopka (1960/1970), Clermont West (1969), Clermont East (1962/1970), Lake Nellie (1959), and Lake Louisa (1959/1970)] and field surveys. Applying the computed volume to the stage- capacity curve revealed the stage required to store the storm rainfall excess in the lake for each storm considered. The 5-day duration, 10-, 2-, 1-, and 0.2-percent-annual-chance storms were analyzed for the above lakes and the results are listed in Table 8 in the "Summary of Stillwater Elevations". For Lake Kathryn, which has outlet capacity, it was necessary to consider the rate of inflow and outflow, as well as the volume. An outflow rating was developed for the north and south outlets of Lake Kathryn and the rainfall inflow routed through the lake by the modified Puls techniques.

The February 15, 1984, Town of Astatula FIS; February 15, 1984, City of Clermont FIS; March 5, 1984, City of Fruitland Park FIS; March 5, 1984, City of Groveland FIS; February 15, 1984, Town of Howey in the Hills FIS; February 15, 1984, Town of Lady Lake FIS; May 15, 1984, City of Mascotte FIS; February 15, 1984, Town of Minneola FIS; April 7, 1999, City of Leesburg FIS; and the May 15, 1984, Town of Montverde FIS flooding sources were reviewed for the effects of three storms: a 10-percent-annual-chance 24 hour storm, a 2-percent-annual-chance 24 hour storm and a 1-percent-annual-chance 24 hour

storm. Both existing and proposed conditions were studied. Base runoff coefficients ranged from 0.9 for impervious areas to 0.15 for Agricultural areas. The existing flood prone maps were utilized to determine the elevations of land locked lakes for the 1-percent-annual-chance flood, existing conditions. The calculated 1-percent-annual-chance flood was then deducted from the level and used as a base level for existing occupancy and land use.

The June 4, 1987, City of Eustis FIS used a rainfall-frequency estimates to analyze lakes where little or no stage records exist by using statistical analysis of records from long term rainfall stations in and around Lake County.

The lakes and ponding areas studied in detail in the City of Eustis, except Lake Eustis, were elevations taken from "Comprehensive Drainage Plan, Lake County, Florida, Phase II" (Newman, 1981). The 1-percent-annual-chance (base) flood elevations were obtained from aerial photographs taken during actual flooding conditions and were overlaid onto topographic maps. The 10- and 2-percent-annual-chance flood elevations were determined from the base flood elevations. The 0.2-percent-annual-chance flood was not determined.

The April 7, 1999, FIS for the City of Leesburg revision, used advanced Interconnected Pond Routing (adICPR) modeling to determine the elevations of Lake Hollywood and Ponding Areas K1-1, K1-2A, K1-2B, K1-2C, and K1-2D in St. Johns Basin.

The April 5, 1988, City of Mt. Dora FIS and March 16, 1988, City of Tavares FIS analysis of the 1-percent-annual-chance flood elevation on Lake John, Lake Nettie, and Lake Tern followed the procedures developed by M.A. Lopez in his report "Regional Flood Relations for Unregulated Lakes in West-Central Florida" (Lopez, 1984). This procedure utilizes information available from maps and rainfall data to calculate the volume of water for a designated-frequency flood, which is then used to determine the elevation of that flood.

The 1-percent-annual-chance flood elevation in the City of Mt. Dora, for Lake Dora was taken from the June 1984 Unincorporated Areas of Orange County FIS.

The 1-percent-annual-chance flood elevation in the City of Tavares, for Lakes Frances, Junietta, and Tavares were based on the regionalized flood relations for ungaged lakes. The calculations for Lake Eustis were based on the frequency analysis of lake volumes for lakes with previous water level records.

The April 3, 1989, City of Umatilla FIS used equations for rural areas developed in USGS Report 82-4012 were used with the estimated local drainage basin parameters for each lake to estimate the 1-percent-annual-chance rural peak discharge (USGS, 1982b). Equations developed in USGS Water Supply Paper 2207 were used to adjust the 1-percent-annual-chance rural peak discharge to the 1-percent-annual-chance urban peak discharge (Sauer, 1983). The parameters used in the regionalized regression equations include basin drainage area; basin

slope; basin length; basin storage; impervious area; two-hour, two- year estimated rainfall; and a basin development factor. The basin parameters were determined using a topographic map. The rainfall parameter was taken from TP-40 (NOAA, 1961). The basin development factor was chosen by engineering judgement and based on field observation. Flood inflow hydrographs for each lake were estimated using a unit-hydrograph method described in USGS Open-File Report 82-365 (Sauer, 1982).

Hydraulic analyses of the basins in Umatilla were performed to provide estimates of the elevation of the 1-percent-annual-chance flood. For the routing analyses, a relationship between lake-stage and lake-storage volume for each lake was determined. The stage-storage relationship was determined from contours obtained from USGS Quadrangle maps (7.5 min. Umatilla Quad, 1980). Structural geometry and elevations of culverts were obtained from field surveys. For culverts, the coefficient of discharge was assumed to be 0.80 and the roughness factor (Manning's "n") was assumed to be 0.015. Outflows from Lake Mary and Lake Umatilla were computed using a broad-crested-spillway equation. The coefficient of discharge for outflows from Lake Mary and Lake Umatilla was assumed to be 2.0.

The 1-percent-annual-chance water-surface elevations for Lake Pearl, Lake Owen, Muscle Lake, and Lake Yale in the City of Umatilla were determined using aerial photographs taken at the time of actual flooding and delineated onto topographic maps.

The remaining water-surface elevations in the City of Umatilla for the 1-percent-annual-chance flood were computed using an interconnected lake routing computer program developed for this study. The computer program accounts for storage, flow through connecting culverts, flow over broad-crested weirs including submerged flow, local inflow, and possible reverse flows out of the lakes. The discharge for each lake culvert was computed using a simplified version of the culvert equations described by the USGS (Bodhaine, 1968).

Data for fifteen years of continuous record and one historical peak are available for Lake Umatilla. A lake volume-frequency analysis similar to that described in Bulletin No. 1713 was performed for Lake Umatilla and indicated a 1-percent-annual-chance flood elevation of 70.4 feet NGVD. That elevation is in general agreement with the 1-percent-annual-chance flood elevation of 69.9 feet NGVD generated by the USGS procedures.

Analyses for the Initial Countywide FIS

Hydrology for the Lake County restudy was determined using a variety of methods. For the St. Johns River a Log Pearson III statistical analysis of gage records was used (USGS, 1982). For streams the USACE HEC-1 computer program was used (USACE, September 1990). For lakes and ponding areas the adICPR computer program was used (Streamline Technologies, November 1996). SCS hydrographs were used in both the HEC-1 and adICPR programs to

determine basin runoff. Peak rate factors were determined based on standard recommendations by NRCS [previously, Soil Conservation Service (SCS)] for various basin slopes.

Times of concentration were determined using either the SCS velocity method or the SCS lag equation (SCS, August 1972). Rainfall infiltration calculations were based on SCS curve number methods. Curve numbers were calculated based on SCS Lake County Soil maps (SCS, 1971), land-use as determined from 1995 Florida Department of Transportation aerials (Florida Department of Transportation, 1995), Digital aerial map files provided by the Lake County Water Authority (Lake County Water Authority, Spring 1994), and site visits.

Rainfall values were determined from analysis of rain gage data for locations in and around Lake County. Data was provided by the St. Johns River Water Management District and the National Weather Service (ibid.). A 4-day storm was chosen based on historical patterns.

Table 7: Summary of Discharges

FLOODING SOURCE AND LOCATION	Drainage Area (Square Miles)	Peak Discharge (Cubic Feet per Second)			
		10-percent-annual-chance	2-percent-annual-chance	1-percent-annual-chance	02.-percent-annual-chance
LEESBURG TRIBUTARY 1					
Approximately 800 feet downstream of the airport runway	3.6	938	1,605	1,920	2,561
Approximately 2,500 feet downstream of West Main Street	2.5	770	1,257	1,518	2,048
Approximately 1,450 feet downstream of West Main Street	2.2	740	1,205	1,452	1,967
LEESBURG TRIBUTARY 2					
Approximately 1,200 feet downstream of Youngs Road	1.93	796	1,154	1,336	1,709
Approximately 1,400 feet upstream of Interstate 44	1.36	713	1,040	1,206	1,543
LEESBURG TRIBUTARY 2-1					
At confluence with Leesburg Tributary 2	0.1	123	190	225	298
LEESBURG TRIBUTARY 3					
Approximately 1,600 feet downstream of Youngs Road	0.76	748	1,124	1,302	1,683
Approximately 500 feet downstream of Youngs Road	0.21	261	394	463	622
ST. JOHNS RIVER					
At Swamp Outflow	55.7	3,000	5,090	6,310	8,920

Table 7: Summary of Discharges (continued)

FLOODING SOURCE AND LOCATION	Drainage Area (Square Miles)	Peak Discharge (Cubic Feet per Second)			
		10-percent-annual-chance	2-percent-annual-chance	1-percent-annual-chance	02.-percent-annual-chance
ST. JOHNS RIVER (CONTINUED)					
At Astor Saunders Canal	3,070	12,120	16,592	18,506	23,075
WOLF BRANCH					
At mouth	5.5	2,160	2,292	3,794	4,955
Approximately 850 feet downstream of Wolf Branch Road	5.2	2,144	2,261	3,761	4,905
Approximately 2,350 feet upstream of Wolf Branch Road	4.6	2,051	2,127	3,579	4,645
Just downstream of Country Club Boulevard	3.5	1,732	1,752	2,993	3,863

3.2 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. Users should be aware that flood elevations shown on the FIRM represent rounded whole-foot elevations and may not exactly reflect the elevations shown on the Flood Profiles or in the Floodway Data tables in the FIS report. 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 in conjunction with the data shown on the FIRM.

Locations of selected cross sections used in the hydraulic analyses are shown on the Flood Profiles (Exhibit 1). For stream segments for which a floodway was computed (Section 4.2), selected cross section locations are also shown on the FIRM (Exhibit 2).

Channel roughness coefficients (Manning's “n”) used in the hydraulic computations were selected based on field observations, aerial photos, and photographs of the stream and floodplain areas. Table 9, “Manning’s ‘n’ Values,” contains the channel and overbank "n" values for the streams studied by detailed methods. Roughness values used for the main channels ranged from 0.03 to 0.05 with floodplain roughness values from 0.06 to 0.15 for all flood frequencies.

Flood profiles were drawn showing the computed water-surface elevations for floods of the selected recurrence intervals.

The stillwater elevations for the 10-, 2-, 1-, and 0.2-percent-annual chance floods have been determined and are summarized in Table 8, “Summary of Stillwater Elevations.”

The hydraulic analyses for this study were based on unobstructed flow. The flood elevations shown on the Flood Profiles (Exhibit 1) are thus considered valid only if hydraulic structures remain unobstructed, operate properly, and do not fail.

Table 8: Summary of Stillwater Elevations

Lake Name	Old Name If Changed for this FIS Report	FIRM Panel Number(s)	Community Name	Stillwater Elevations (feet NAVD88)			
				10-percent-annual-chance	2-percent-annual-chance	1-percent-annual-chance	0.2-percent-annual-chance
6th Avenue Depressional Area		150, 260	Lake County	*	*	44.2	*
Apopka Beauclair Canal		365, 370, 505, 525	Lake County	*	*	65.0	*
Bass Lake		235	Lake County	48.6	49.6	50.0	50.7
Bear Pond		385, 395,	Lake County	58.6	58.9	59.0	*
Big Prairie Lake		535, 550,	Lake County	92.7	93.3	93.5	94.0
Blacks Still Lake		580	Lake County	80.0	83.3	84.7	87.1
Blue Lake		357	Lake County, City of Eustis	133.1	133.7	134.1	*
Boggy Marsh		675, 750	Lake County	117.3	118.0	118.3	118.9
Bonaire Pond	Ponding Area K1-3	317	City of Leesburg	*	*	74.1	*
Center Lake		570	City of Clermont	96.1	96.8	97.1	*
Cherry Lake		555, 560	Lake County	96.9	97.9	98.3	98.6
Church Lake		490	Lake County	86.8	87.8	88.1	89.0
Clearwater Lake		460	Lake County	*	*	89.0	*
Cook Lake		333, 334, 335	Lake County	68.7	69.0	69.1	*
Cook Lake		560	Lake County	96.9	97.9	98.3	98.6

*Data Not Available

Table 8: Summary of Stillwater Elevations (continued)

Lake Name	Old Name If Changed for this FIS Report	FIRM Panel Number(s)	Community Name	Stillwater Elevations (feet NAVD88)			
				10-percent-annual-chance	2-percent-annual-chance	1-percent-annual-chance	0.2-percent-annual-chance
County Road 42 Depressional Area 1		150	Lake County	*	*	48.1	*
County Road 42 Depressional Area 2		150	Lake County	*	*	50.3	*
Crescent Lake		545	Lake County	105.1	106.1	106.5	107.4
Crescent Lake		210, 220	Lake County, City of Umatilla	68.7	69.0	69.1	*
Crescent Lake		570, 650	Lake County	*	*	99.0	*
Crooked Lake		750	Lake County.	117.2	117.5	117.6	117.7
Crystal Lake		306	Lake County, City of Fruitland Park	76.5	78.1	78.9	80.6
Crystal Lake		570	City of Clermont	98.5	98.9	99.1	*
Danger Pond		317	City of Leesburg	*	*	74.1	*
Deep Lake	Ponding Area F3G	215, 220	Lake County	63.7	63.9	64.0	*
Depressional Area 1		260	Lake County	*	*	49.8	*
Depressional Area 2		260	Lake County	*	*	49.8	*
Depressional Area 3		260	Lake County	*	*	46.4	*

*Data Not Available

Table 8: Summary of Stillwater Elevations (continued)

Lake Name	Old Name If Changed for this FIS Report	FIRM Panel Number(s)	Community Name	Stillwater Elevations (feet NAVD88)			
				10-percent-annual-chance	2-percent-annual-chance	1-percent-annual-chance	0.2-percent-annual-chance
Dilly Lake		486	Lake County	*	*	87.4	*
Dilly Marsh		480, 486	Lake County	*	*	87.4	*
Dream Lake		306, 307	City of Fruitland Park	71.0	72.2	72.8	74.1
Dukes Lake		535, 555, 565	Lake County, City of Groveland, City of Mascotte	98.8	99.0	99.1	*
Dyches Lake		316, 317	City of Leesburg	78.8	79.0	79.1	*
East Crooked Lake		358	Lake County, City of Eustis	*	*	73.0	*
East Lake		570, 590	City of Clermont	97.7	98.6	99.1	*
East Lake 220		220	Lake County, City of Umatilla	78.7	78.9	79.0	*
East Lake Dixie		317	City of Leesburg	73.6	73.9	74.0	*
Edgewood Lake		560, 580	Lake County, Town of Minneola	98.1	98.8	99.1	*
Emeralda Marsh		180, 185, 190, 195	Lake County	*	*	60.0	*
Forest Lake		150,260, 252	Lake County	*	*	46.8	*
Fountain Lake		309	City of Leesburg	*	*	70.1	*
Fountain Lake East		306	Lake County, City of Fruitland Park	85.7	85.9	86.2	86.4

*Data Not Available

Table 8: Summary of Stillwater Elevations (continued)

Lake Name	Old Name If Changed for this FIS Report	FIRM Panel Number(s)	Community Name	Stillwater Elevations (feet NAVD88)			
				10-percent-annual-chance	2-percent-annual-chance	1-percent-annual-chance	0.2-percent-annual-chance
Fountain Lake West		306	City of Fruitland Park	79.3	82.5	83.7	86.0
Gallows Lake		535	Lake County, City of Mascotte	103.8	104.0	104.1	*
Grande Canal		359	Lake County	*	*	163.0	*
Grassy Lake		580	Lake County, Town of Minneola	83.6	84.8	85.4	*
Hancock Bay North		675	Lake County	109.7	109.9	110.1	110.8
Hancock Bay South		675	Lake County	113.4	113.7	113.8	114.1
Hancock Lake		675, 750	Lake County	114.4	114.6	114.7	114.9
Heritage Hills North Ponding Area		590	City of Clermont	*	*	106.5	*
Heritage Hills Pond 1A		590	City of Clermont	*	*	105.2	*
Heritage Hills Pond 1B		590	City of Clermont	*	*	112.9	*
Heritage Hills Pond 2		590	City of Clermont	*	*	113.7	*

*Data Not Available

Table 8: Summary of Stillwater Elevations (continued)

Lake Name	Old Name If Changed for this FIS Report	FIRM Panel Number(s)	Community Name	Stillwater Elevations (feet NAVD88)			
				10-percent-annual-chance	2-percent-annual-chance	1-percent-annual-chance	0.2-percent-annual-chance
Heritage Hills Pond 3		590	City of Clermont	*	*	117.0	*
Hickorynut Lake		675	Lake County	*	*	106.0	*
Hidden Lake		675	Lake County	110.9	111.5	111.7	112.2
Horseshoe Lake		370, 525	Lake County	*	*	65.0	*
Horseshoe Lake East		525	Lake County	85.2	88.3	88.9	89.2
Horseshoe Lake West		495, 525	Lake County	82.3	83.7	84.8	88.5
Indianhouse Lake East		490, 555	Lake County	84.7	86.0	86.5	87.5
Indianhouse Lake West		490, 555	Lake County	85.3	86.1	86.5	87.5
Island Lake		205, 210	Lake County	73.6	73.9	74.0	*
Island Lake		675	Lake County	101.8	103.6	104.4	106.2
Island Pond		380	Lake County	64.3	68.1	69.6	71.3
Jacks Lake		590	Lake County, City of Clermont	88.8	89.0	89.1	*
Jake Bay Depressional Area		260	Lake County	*	*	44.4	*
Johns Lake		595	Lake County	96.9	99.0	99.7	101.1

*Data Not Available

Table 8: Summary of Stillwater Elevations (continued)

Lake Name	Old Name If Changed for this FIS Report	FIRM Panel Number(s)	Community Name	Stillwater Elevations (feet NAVD88)			
				10-percent-annual-chance	2-percent-annual-chance	1-percent-annual-chance	0.2-percent-annual-chance
Keene Lake		675	Lake County	110.0	110.6	110.8	111.0
Lake Akron		155, 235	Lake County	46.0	47.1	47.7	49.6
Lake Alice		170	Lake County	98.7	*	99.0	*
Lake Amos		380, 390	Lake County	60.8	63.1	64.1	*
Lake Apopka		505, 525, 580, 585, 595	Lake County, Town of Montverde	67.5	68.1	68.3	68.8
Lake Arlene	Wash Pond 5	565, 570	Lake County	103.8	104.4	104.8	*
Lake Arthur		490, 555,	Lake County	82.7	83.9	84.3	85.4
Lake Audrey		565	Lake County	106.6	106.9	107.1	*
Lake Beasley	Ponding Area F1F	220	Lake County	69.7	69.9	70.6	*
Lake Beauclair		367, 370,	Lake County	64.0	64.7	65.0	65.6
Lake Bracy		220	Lake County	68.7	68.9	69.0	*
Lake Burns		220	Lake County	73.6	73.9	74.0	*
Lake Carlton		370	Lake County	64.0	64.7	65.0	65.6
Lake Catherine		555, 565	Lake County, City of Groveland	98.7	99.0	99.1	*

*Data Not Available

Table 8: Summary of Stillwater Elevations (continued)

Lake Name	Old Name If Changed for this FIS Report	FIRM Panel Number(s)	Community Name	Stillwater Elevations (feet NAVD88)			
				10-percent-annual-chance	2-percent-annual-chance	1-percent-annual-chance	0.2-percent-annual-chance
Lake Charles		590	City of Clermont	88.6	88.9	89.1	*
Lake Chloe	Ponding Areas H1B	332, 334	Lake County	68.3	68.8	69.1	*
Lake Clair		570	Lake County	*	*	103.0	*
Lake Cooley		210	Lake County	69.7	69.9	70.0	*
Lake David		565	City of Groveland	98.6	98.9	99.1	*
Lake Denham		320	Lake County, City of Leesburg	*	*	64.0	*
Lake Dicie		358	Lake County	*	*	73.0	*
Lake Dora		361, 362, 365, 366, 367, 370	Lake County, City of Tavares, City of Mount Dora	64.0	64.7	65.0	65.6
Lake Dot		570	Lake County	96.0	96.8	98.9	*
Lake Dot		356	City of Eustis	66.6	67.6	69.1	*
Lake Douglas		565, 570	Lake County	*	*	97.0	*
Lake Edwards		395	Lake County	58.6	58.9	59.0	*
Lake Eldorado		220, 240	Lake County	64.8	65.1	65.2	*
Lake Ella-170		170	Lake County, Town of Lady Lake	78.6	78.9	79.0	*
Lake Ella-220		220	Lake County, City of Umatilla	*	*	70.3	*

*Data Not Available

Table 8: Summary of Stillwater Elevations (continued)

Lake Name	Old Name If Changed for this FIS Report	FIRM Panel Number(s)	Community Name	Stillwater Elevations (feet NAVD88)			
				10-percent-annual-chance	2-percent-annual-chance	1-percent-annual-chance	0.2-percent-annual-chance
Lake Elsie		355, 362	Lake County, City of Tavares	73.4	73.8	74.1	*
Lake Enola		220	Lake County	*	*	70.5	*
Lake Etowah		355	Lake County	72.6	73.0	73.1	*
Lake Eustis		195, 215, 331, 332, 334, 345, 355, 356, 361	Lake County, City of Eustis, City of Tavares	62.5	63.4	63.8	64.6
Lake Eustis Area Pond 1		332	Lake County	65.8	*	66.5	66.7
Lake Eustis Area Pond 2		332	Lake County	66.0	66.6	67.1	67.2
Lake Eustis Area Pond 3		332, 355	Lake County	66.1	66.6	67.1	67.2
Lake Eustis Area Pond 4		332	Lake County	67.7	68.0	68.1	68.2
Lake Felter		590	Lake County, City of Clermont	86.3	88.0	88.7	90.5
Lake Florence		585	Lake County, Town of Montverde	74.2	75.1	75.5	76.4
Lake Frances		215	Lake County	*	*	*	*
Lake Frances		355, 361, 362	City of Tavares	*	*	68.4	*

*Data Not Available

Table 8: Summary of Stillwater Elevations (continued)

Lake Name	Old Name If Changed for this FIS Report	FIRM Panel Number(s)	Community Name	Stillwater Elevations (feet NAVD88)			
				10-percent-annual-chance	2-percent-annual-chance	1-percent-annual-chance	0.2-percent-annual-chance
Lake Franklin		367	City of Mt. Dora	104.4	105.3	105.6	106.0
Lake Gary		650	Lake County	102.3	102.9	103.1	103.4
Lake Gem		306	City of Fruitland Park	87.6	90.2	91.0	91.5
Lake Geneva		220	City of Umatilla	*	*	74.2	*
Lake Gertrude		358, 359, 366	Lake County, City of Mt. Dora	69.9	71.4	72.0	73.5
Lake Gibson		210	Lake County	74.7	74.9	75.0	*
Lake Glona		650	Lake County	102.2	102.8	103.0	104.1
Lake Grace		235	Lake County	46.7	47.4	47.8	49.6
Lake Gracie		356	City of Eustis	*	*	64.1	*
Lake Griffin		170, 180, 190, 195, 307, 309, 330, 331	Lake County, City of Fruitland Park	*	*	60.5	*
Lake Harris		317, 320, 330, 333, 334, 340, 345, 361, 480, 485	Lake County, City of Leesburg, City of Tavares	*	*	63.8	*
Lake Hermosa		170	Lake County, Town of Lady Lake	83.8	83.9	84.0	*

*Data Not Available

Table 8: Summary of Stillwater Elevations (continued)

Lake Name	Old Name If Changed for this FIS Report	FIRM Panel Number(s)	Community Name	Stillwater Elevations (feet NAVD88)			
				10-percent-annual-chance	2-percent-annual-chance	1-percent-annual-chance	0.2-percent-annual-chance
Lake Hermosa		355	Lake County, City of Eustis	72.4	72.9	73.1	*
Lake Heron Depressional Area 1		252	Lake County	*	*	57.4	*
Lake Heron Depressional Area 2		252	Lake County	*	*	59.9	*
Lake Heron Depressional Area 3		150, 260	Lake County	*	*	59.2	*
Lake Holly		260	Lake County	*	*	51.4	*
Lake Holly Depressional Area 2		260	Lake County	*	*	50.2	*
Lake Holly Depressional Area 3		260	Lake County	*	*	56.6	*
Lake Holly Depressional Area 4		260	Lake County	*	*	56.5	*

*Data Not Available

Table 8: Summary of Stillwater Elevations (continued)

Lake Name	Old Name If Changed for this FIS Report	FIRM Panel Number(s)	Community Name	Stillwater Elevations (feet NAVD88)			
				10-percent-annual-chance	2-percent-annual-chance	1-percent-annual-chance	0.2-percent-annual-chance
Lake Holly Depressional Area 5		252	Lake County	*	*	57.0	*
Lake Holly Depressional Area 6		252	Lake County	*	*	58.0	*
Lake Holly Depressional Area 7		252, 260	Lake County	*	*	58.2	*
Lake Hollywood		317	City of Leesburg	*	*	74.1	*
Lake Idamere		345, 365	Lake County	67.6	68.8	69.3	70.5
Lake Illinois		485	Lake County, Town of Howey in the Hills	78.7	79.0	79.1	*
Lake Jewel		235	Lake County	47.3	48.2	48.7	50.4
Lake Joanna		357, 359	Lake County, City of Mt. Dora	153.7	154.0	154.1	*
Lake John		359, 367	City of Mt. Dora	79.9	81.4	81.9	82.9
Lake Josephine	Ponding Area F4C	210	Lake County	63.7	63.9	64.0	*
Lake Junietta		355	Lake County, City of Tavares	*	*	67.7	*
Lake Katherine		570	Lake County	*	*	107	*
Lake Kathryn		125, 150	Lake County	40.6	42.1	44.0	46.6

*Data Not Available

Table 8: Summary of Stillwater Elevations (continued)

Lake Name	Old Name If Changed for this FIS Report	FIRM Panel Number(s)	Community Name	Stillwater Elevations (feet NAVD88)			
				10-percent-annual-chance	2-percent-annual-chance	1-percent-annual-chance	0.2-percent-annual-chance
Lake Keith	Ponding Area F1G	220	Lake County	69.6	69.9	70.0	*
Lake King		210	Lake County	73.6	73.9	74.0	*
Lake Lincoln		357	Lake County	73.6	74.0	74.1	*
Lake Linda	Ponding Area HIE	333, 334	Lake County	69.6	69.9	70.1	*
Lake Lizzie	Ponding Area 220-2	220	Lake County	72.2	72.8	73.1	*
Lake Lorraine	Ponding Area G1-2	309	City of Leesburg	68.6	69.0	69.1	*
Lake Louisa		570, 590, 650, 675	Lake County	98.4	99.0	99.2	99.5
Lake Louise		358	Lake County, City of Eustis	78.5	78.9	79.1	*
Lake Lucerne		317	City of Leesburg	*	*	72.1	*
Lake Lucie		395	Lake County	61.0	62.8	63.5	65.1
Lake Lulu		235	Lake County	46.0	47.1	47.7	49.6
Lake Mack		252, 260	Lake County	*	*	58.1	*
Lake Madge		380	Lake County	*	*	80.0	*
Lake Maggie		357	Lake County, City of Eustis	*	*	154.1	*
Lake Mary	Lake 357-1	220, 357	Lake County	73.8	74.0	74.1	*
Lake Mary		220	Lake County, City of Umatilla	*	*	70.5	*

*Data Not Available

Table 8: Summary of Stillwater Elevations (continued)

Lake Name	Old Name If Changed for this FIS Report	FIRM Panel Number(s)	Community Name	Stillwater Elevations (feet NAVD88)			
				10-percent-annual-chance	2-percent-annual-chance	1-percent-annual-chance	0.2-percent-annual-chance
Lake Minnehaha		570, 590	Lake County, City of Clermont	97.8	98.6	98.8	99.1
Lake Minneola		560, 570	Lake County, City of Clermont, Town of Minneola	97.4	98.2	98.6	98.9
Lake Minneola	Ponding Area F6A	210	Lake County	73.7	73.9	74.0	*
Lake Needham		675	Lake County	*	*	106.0	*
Lake Nellie		650	Lake County	99.8	100.3	100.5	101.3
Lake Nettie		367	City of Mt. Dora	88.1	89.0	89.3	89.8
Lake Nettie		356, 358	Lake County, City of Eustis	63.6	64.0	64.1	*
Lake Oleo	Ponding Area F3H	205, 210, 215, 220	Lake County	68.8	68.9	69.0	*
Lake Ouida	Ponding Area B10N	210	Lake County	63.7	63.9	64.0	*
Lake Owen		205, 210	Lake County	68.7	68.9	69.0	*
Lake Palatlakaha		570	Lake County, City of Clermont	97.8	98.6	98.8	99.1
Lake Palm		220	City of Umatilla	*	*	78.8	*
Lake Pearl		210	Lake County, City of Umatilla	78.6	78.9	79.0	*

*Data Not Available

Table 8: Summary of Stillwater Elevations (continued)

Lake Name	Old Name If Changed for this FIS Report	FIRM Panel Number(s)	Community Name	Stillwater Elevations (feet NAVD88)			
				10-percent-annual-chance	2-percent-annual-chance	1-percent-annual-chance	0.2-percent-annual-chance
Lake Pearl	Ponding Area B10O	210	Lake County	63.6	63.9	64.0	*
Lake Sallie	Ponding Area D2C	170	Town of Lady Lake	83.7	83.9	84.0	*
Lake Saunders		355, 358, 362	Lake County, City of Mt. Dora	76.5	77.2	77.5	78.2
Lake Schimmerhorn		75	Lake County	48.8	49.8	50.3	51.5
Lake Seneca		380	Lake County	75.4	77.2	78.0	79.2
Lake Sidney		235	Lake County	46.3	47.4	48.1	50.3
Lake Smith		220	Lake County	68.7	68.9	69.1	*
Lake Sparkling Water		570	City of Clermont	98.4	98.9	99.1	*
Lake Spencer		555	Lake County	83.2	84.2	84.6	85.5
Lake Sunnyside		570	City of Clermont	98.1	98.8	99.1	*
Lake Sunshine		170	Town of Lady Lake	66.7	67.9	68.6	*
Lake Susan		570	Lake County	*	*	99.0	*
Lake Swatara		357	Lake County	71.6	71.7	71.8	*
Lake Tavares		362	Lake County, City of Tavares	*	*	70.9	*
Lake Tem		366	Lake County, City of Mt. Dora	*	*	81.3	*

*Data Not Available

Table 8: Summary of Stillwater Elevations (continued)

Lake Name	Old Name If Changed for this FIS Report	FIRM Panel Number(s)	Community Name	Stillwater Elevations (feet NAVD88)			
				10-percent-annual-chance	2-percent-annual-chance	1-percent-annual-chance	0.2-percent-annual-chance
Lake Umatilla		220	Lake County, City of Umatilla	*	*	68.9	*
Lake Vista		675	Lake County	*	*	106.2	*
Lake Wash		565, 570	Lake County	99.5	100.2	100.5	101.2
Lake Willie	Lake 356-1	356	Lake County, City of Eustis	103.1	103.8	104.1	*
Lake Winona		570	City of Clermont	97.8	98.6	98.8	99.1
Lake Woodward		358	Lake County, City of Eustis, City of Mt. Dora	73.5	73.9	74.1	*
Lake Yale		185, 195, 205, 215	Lake County	60.3	60.5	60.6	60.7
Leesburg Unnamed Pond		316, 317	Lake County, City of Leesburg	69.7	70.0	70.1	70.3
Little Bluff Lake		535	Lake County, City of Mascotte	98.6	99.0	99.1	*
Little Everglades Area No. 1		490, 495	Lake County	*	*	83.4	*
Little Everglades Area No. 2		490	Lake County	*	*	85.3	*
Little Everglades Area No. 3		490, 495	Lake County	*	*	84.8	*

*Data Not Available

Table 8: Summary of Stillwater Elevations (continued)

Lake Name	Old Name If Changed for this FIS Report	FIRM Panel Number(s)	Community Name	Stillwater Elevations (feet NAVD88)			
				10-percent-annual-chance	2-percent-annual-chance	1-percent-annual-chance	0.2-percent-annual-chance
Little Everglades Area No. 4		490, 495	Lake County	*	*	87.0	*
Little Everglades Area No. 5		490, 495	Lake County	*	*	85.2	*
Little Everglades Area No. 6		490, 495	Lake County	*	*	84.9	*
Little Grassy Lake		580	Lake County, Town of Minneola	86.2	88.6	89.6	91.4
Little Lake Blackwelder	Lake 530-1	490, 555	Lake County	88.6	89.8	90.3	91.5
Little Lake Bracy	Ponding Area H5E	220	Lake County	73.8	73.9	74.0	*
Little Lake Harris		485, 495, 505, 525	Lake County, Town of Howey in the Hills, Town of Astatula	63.4	63.8	63.9	64.1
Long Lake	Ponding Area 650-2	675	Lake County	102.9	104.3	105.0	106.5
Martins Lake		580	Town of Minneola	87.6	88.6	89.1	*
Minneola Annex Pond 1		560	Town of Minneola	91.4	93.8	94.8	97.2
Minneola Annex Pond 2		560	Town of Minneola	93.8	96.1	97.1	97.3

*Data Not Available

Table 8: Summary of Stillwater Elevations (continued)

Lake Name	Old Name If Changed for this FIS Report	FIRM Panel Number(s)	Community Name	Stillwater Elevations (feet NAVD88)			
				10-percent-annual-chance	2-percent-annual-chance	1-percent-annual-chance	0.2-percent-annual-chance
Mirror Lake		306	City of Fruitland Park	81.3	83.1	83.9	86.0
Mirror Lake		235	Lake County	46.7	47.4	47.8	49.6
Mirror Lake	Ponding Area F3I	220	Lake County	68.6	68.9	69.0	*
Mirror Lake	Ponding Area H5C	220	Lake County	69.7	69.9	70.0	*
Mount Plymouth Lake		385, 395	Lake County	63.8	64.0	64.1	*
Mule Pond	Ponding Area H6E	220	Lake Co.	83.3	83.8	84.0	*
Muscle Lake		210	Lake County City of Umatilla	68.6	68.9	69.0	*
Myrtle Lake		306, 308	Lake County, City of Fruitland Park	70.3	71.3	71.8	72.8
Neighborhood Lakes North		395	Lake County	58.7	59.4	59.7	60.3
Neighborhood Lakes South		395	Lake County	59.1	60.2	60.7	61.4
North Twin Lake		210	Lake County, City of Umatilla	63.7	63.9	64.0	*
Olsen Lake		565	Lake County	*	*	100.1	*
Park Lake		170	Lake County, Town of Lady Lake	73.9	74.0	74.0	*
Peanut Pond	Ponding Area H6F	220	Lake Co.	78.6	78.9	79.0	*

*Data Not Available

Table 8: Summary of Stillwater Elevations (continued)

Lake Name	Old Name If Changed for this FIS Report	FIRM Panel Number(s)	Community Name	Stillwater Elevations (feet NAVD88)			
				10-percent-annual-chance	2-percent-annual-chance	1-percent-annual-chance	0.2-percent-annual-chance
Perch Lake		235	Lake County	48.6	49.6	50.0	*
Pike Lake		675	Lake County	100.6	101.5	101.9	102.7
Pine Island Lake		565, 650	Lake County	107.7	107.9	108.1	108.3
Pine Meadows Lake	Ponding Area H5B	220	Lake County	69.7	69.9	70.0	*
Plum Lake		580	Lake County, Town of Minneola	84.1	85.7	86.5	88.2
Pond Chain 580-1	Pond Chain 555-1	580	Lake County	82.0	84.5	84.8	87.0
Ponding Area 07-3		309	City of Leesburg	73.3	73.9	74.1	*
Ponding Area 07-5		309	City of Leesburg	73.8	74.0	74.1	*
Ponding Area 07-7		308, 309	City of Leesburg	73.2	73.8	74.1	*
Ponding Area 180-1		180	Lake County	*	*	61.0	*
Ponding Area 220-1		220, 357	Lake County	68.3	68.8	69.0	*
Ponding Area 306-1		306	Lake County	*	*	79.0	*
Ponding Area 308-1		308	City of Fruitland Park	*	*	73.0	*
Ponding Area 345-1		345	Lake County	78.6	81.0	82.0	*

*Data Not Available

Table 8: Summary of Stillwater Elevations (continued)

Lake Name	Old Name If Changed for this FIS Report	FIRM Panel Number(s)	Community Name	Stillwater Elevations (feet NAVD88)			
				10-percent-annual-chance	2-percent-annual-chance	1-percent-annual-chance	0.2-percent-annual-chance
Ponding Area 359-1		359	City of Mt. Dora	*	*	76.0	*
Ponding Area 359-2		359	Lake County, City of Mt. Dora	*	*	168.0	*
Ponding Area 362-1		362	Lake County	*	*	80.0	*
Ponding Area 367-1		367	Lake County, City of Mt. Dora	*	*	115.0	*
Ponding Area 378-1		378	Lake County	*	*	161.0	*
Ponding Area 378-2		378	Lake County	*	*	160.0	*
Ponding Area 378-3		378, 390	Lake County	*	*	150.0	*
Ponding Area 378-4		378	Lake County	*	*	120.0	*
Ponding Area 378-5		378	Lake County	*	*	108.0	*
Ponding Area 378-6		378	Lake County	*	*	86.0	*

*Data Not Available

Table 8: Summary of Stillwater Elevations (continued)

Lake Name	Old Name If Changed for this FIS Report	FIRM Panel Number(s)	Community Name	Stillwater Elevations (feet NAVD88)			
				10-percent-annual-chance	2-percent-annual-chance	1-percent-annual-chance	0.2-percent-annual-chance
Ponding Area 378-7		378, 380, 390	Lake County	*	*	80.0	*
Ponding Area 380-1		380	Lake County	*	*	69.0	*
Ponding Area 380-2		380	Lake County	*	*	70.0	*
Ponding Area 380-3		380	Lake County	*	*	70.0	*
Ponding Area 380-4		380	Lake County	*	*	71.0	*
Ponding Area 395-1		395	Lake County	*	*	62.0	*
Ponding Area 395-2		395	Lake County	*	*	55.0	*
Ponding Area 480-1	Ponding Area 455-1	480, 485	Lake County	82.5	83.3	83.6	84.3
Ponding Area 486-1	Ponding Area 461-1	486	Lake County	*	*	87.0	*
Ponding Area 495-1	Ponding Area 470-1	495	Lake County	85.1	87.3	88.2	88.7
Ponding Area 505-1	Ponding Area 480-1	505	Town of Astatula	69.1	69.1	69.1	*

*Data Not Available

Table 8: Summary of Stillwater Elevations (continued)

Lake Name	Old Name If Changed for this FIS Report	FIRM Panel Number(s)	Community Name	Stillwater Elevations (feet NAVD88)			
				10-percent-annual-chance	2-percent-annual-chance	1-percent-annual-chance	0.2-percent-annual-chance
Ponding Area 505-2	Ponding Area 480-2	505	Town of Astatula	79.1	79.1	79.1	*
Ponding Area 505-3	Ponding Area 480-3	505	Town of Astatula	74.1	74.1	74.1	*
Ponding Area 505-4	Ponding Area 480-4	505	Lake County, Town of Astatula	74.1	74.1	74.1	*
Ponding Area 535-1	Ponding Area 510-1	535	Lake County	*	*	95.0	*
Ponding Area 550-1	Ponding Area 525-1	550	Lake County	*	*	98.0	*
Ponding Area 550-2	Ponding Area 525-2	535, 550	Lake County	*	*	94.0	*
Ponding Area 550-3	Ponding Area 525-3	550	Lake County	*	*	95.0	*
Ponding Area 560-1	Ponding Area 535-1	560	Town of Minneola	99.4	100.1	100.2	100.4
Ponding Area 560-2	Ponding Area 535-2	560	Town of Minneola	*	*	99.0	*
Ponding Area 580-1	Ponding Area 555-1	580, 585	Lake County, Town of Montverde	80.4	81.4	82.0	83.0
Ponding Area 580-2	Ponding Area 555-2	580, 585	Lake County, Town of Montverde	80.4	81.4	81.9	82.9

*Data Not Available

Table 8: Summary of Stillwater Elevations (continued)

Lake Name	Old Name If Changed for this FIS Report	FIRM Panel Number(s)	Community Name	Stillwater Elevations (feet NAVD88)			
				10-percent-annual-chance	2-percent-annual-chance	1-percent-annual-chance	0.2-percent-annual-chance
Ponding Area 580-3	Ponding Area 555-3	580	Lake County	85.3	88.8	90.2	93.1
Ponding Area 590-1	Ponding Area 565-1	590	City of Clermont	96.3	98.2	99.0	*
Ponding Area 675-3	Ponding Area 650-3	675	Lake County	*	*	96.1	*
Ponding Area 675-4	Ponding Area 650-4	675	Lake County	*	*	96.1	*
Ponding Area 675-5	Ponding Area 650-5	675	Lake County	*	*	92.2	*
Ponding Area 750-1	Ponding Area 725-1	750	Lake County	*	*	114.0	*
Ponding Area A		485	Town of Howey in the Hills	73.7	74.0	74.1	*
Ponding Area B		485	Town of Howey in the Hills	78.9	79.0	79.1	*
Ponding Area B10B		210	Lake County	64.7	64.9	65.0	*
Ponding Area B10C		210	Lake County	64.6	64.9	65.0	*

*Data Not Available

Table 8: Summary of Stillwater Elevations (continued)

Lake Name	Old Name If Changed for this FIS Report	FIRM Panel Number(s)	Community Name	Stillwater Elevations (feet NAVD88)			
				10-percent-annual-chance	2-percent-annual-chance	1-percent-annual-chance	0.2-percent-annual-chance
Ponding Area B10D		210	Lake County	82.7	82.9	83.0	*
Ponding Area B10E		210	Lake County	78.5	78.8	79.0	*
Ponding Area B10F		210	Lake County	68.6	68.9	69.1	*
Ponding Area B10G		210	Lake County	63.5	63.8	64.0	*
Ponding Area B10H		210	Lake County	68.5	68.8	69.0	*
Ponding Area B10I		210	Lake County	*	*	64.0	*
Ponding Area B10J		210	Lake County	*	*	64.0	*
Ponding Area B10K		210	Lake County	64.5	64.9	65.0	*
Ponding Area B10M		210	Lake County	63.6	63.9	64.0	*
Ponding Area B21D		395	Lake County	57.7	58.6	59.0	*
Ponding Area B21E		385	Lake County	56.5	56.8	57.0	*

*Data Not Available

Table 8: Summary of Stillwater Elevations (continued)

Lake Name	Old Name If Changed for this FIS Report	FIRM Panel Number(s)	Community Name	Stillwater Elevations (feet NAVD88)			
				10-percent-annual-chance	2-percent-annual-chance	1-percent-annual-chance	0.2-percent-annual-chance
Ponding Area B21F		395	Lake County	58.1	58.7	59.0	*
Ponding Area B30A		395	Lake County	58.6	58.9	59.0	*
Ponding Area B30C		385, 395	Lake County	60.6	60.9	61.0	*
Ponding Area B30D		395	Lake County	57.7	58.6	59.0	*
Ponding Area C		485	Town of Howey in the Hills	82.9	83.7	84.1	*
Ponding Area D2B		170	Town of Lady Lake	68.6	68.9	69.0	*
Ponding Area D2E1		170	Town of Lady Lake	78.9	79.0	79.0	*
Ponding Area D2E2		170	Lake County	83.7	83.9	84.0	*
Ponding Area D2G		170	Town of Lady Lake	68.6	68.9	69.0	*
Ponding Area D2H		170	Town of Lady Lake	68.4	68.8	69.0	*
Ponding Area D2J		170	Town of Lady Lake	70.0	70.3	70.6	*
Ponding Area D2K		170	Town of Lady Lake	73.6	73.9	74.0	*
Ponding Area D2L		170	Town of Lady Lake	73.5	73.8	74.0	*
Ponding Area D2M		170	Town of Lady Lake	68.6	68.8	69.0	*

*Data Not Available

Table 8: Summary of Stillwater Elevations (continued)

Lake Name	Old Name If Changed for this FIS Report	FIRM Panel Number(s)	Community Name	Stillwater Elevations (feet NAVD88)			
				10-percent-annual-chance	2-percent-annual-chance	1-percent-annual-chance	0.2-percent-annual-chance
Ponding Area D2N		170	Town of Lady Lake	*	*	65.9	*
Ponding Area D2O		170	Town of Lady Lake	*	*	71.8	*
Ponding Area D2P		170	Town of Lady Lake	*	*	72.7	*
Ponding Area E		485	Lake County, Town of Howey in the Hills	73.6	73.9	74.1	*
Ponding Area E3B		170	Lake County, Town of Lady Lake	74.6	75.0	75.0	*
Ponding Area F1A		215	Lake County	73.6	73.9	74.0	*
Ponding Area F1D		215, 220	Lake County	73.4	73.8	74.0	*
Ponding Area F1H		215, 220	Lake County	68.7	68.9	69.1	*
Ponding Area F3D		210	Lake County	68.7	68.9	69.0	*
Ponding Area F3F		205, 210	Lake County	73.6	73.9	74.0	*
Ponding Area F5B		210	Lake County	78.5	78.8	79.0	*
Ponding Area F6B		210	Lake County	73.6	73.9	74.0	*
Ponding Area F6C		210	Lake County	73.6	73.9	74.0	*
Ponding Area F6D		210	Lake County	73.3	73.8	74.0	*
Ponding Area G1-3		309	City of Leesburg	*	*	72.1	*
Ponding Area G1-4		309	City of Leesburg, City of Fruitland	*	*	65.1	*

*Data Not Available

Table 8: Summary of Stillwater Elevations (continued)

Lake Name	Old Name If Changed for this FIS Report	FIRM Panel Number(s)	Community Name	Stillwater Elevations (feet NAVD88)			
				10-percent-annual-chance	2-percent-annual-chance	1-percent-annual-chance	0.2-percent-annual-chance
Ponding Area G4B		170	Lake County, Town of Lady Lake	68.4	68.8	69.0	*
Ponding Area G4C		170	Town of Lady Lake	*	*	79.0	*
Ponding Area G7B		331	Lake County	67.7	68.0	68.1	*
Ponding Area G7C		331	Lake County	62.7	63.0	63.1	*
Ponding Area G7D		331	Lake County	68.8	69.0	69.1	*
Ponding Area G7E		331	Lake County	67.9	68.7	69.1	*
Ponding Area G7F		333	Lake County	68.5	68.9	69.1	*
Ponding Area G7H		331, 332	Lake County	67.7	68.0	68.1	*
Ponding Area G7HA		331	Lake County	63.6	63.9	64.1	*
Ponding Area G7I		331, 332	Lake County	68.7	69.0	69.1	*
Ponding Area G7J		331	Lake County	68.6	69.0	69.1	*
Ponding Area G8B		330	Lake County	68.7	69.0	69.1	*
Ponding Area G9-1		309	Lake County, City of Leesburg	*	*	69.1	*
Ponding Area G9-2		309	City of Leesburg	73.9	74.0	74.1	*
Ponding Area G9-3		309	City of Leesburg	*	*	72.0	*
Ponding Area H1B		332, 334	Lake County	68.3	68.8	69.1	*

*Data Not Available

Table 8: Summary of Stillwater Elevations (continued)

Lake Name	Old Name If Changed for this FIS Report	FIRM Panel Number(s)	Community Name	Stillwater Elevations (feet NAVD88)			
				10-percent-annual-chance	2-percent-annual-chance	1-percent-annual-chance	0.2-percent-annual-chance
Ponding Area H1C		332	Lake County	68.7	69.0	69.1	*
Ponding Area H1D		331, 333	Lake County	73.0	73.7	74.1	*
Ponding Area H1H		334	Lake County	68.5	68.9	69.1	*
Ponding Area H1I		333	Lake County	68.4	68.9	69.1	*
Ponding Area H5A		220	Lake County	69.6	69.9	70.0	*
Ponding Area H5F		220	Lake Co.	73.6	73.9	74.0	*
Ponding Area H5G		220	Lake Co.	80.1	80.7	81.0	*
Ponding Area J-1-1		560	Lake Co., Town of Montverde	73.1	73.7	74.1	*
Ponding Area K1-1		317	City of Leesburg	*	*	72.1	*
Ponding Area K1-2		317	City of Leesburg	*	*	74.1	*
Ponding Area K1-2A		317	City of Leesburg	*	*	74.3	*
Ponding Area K1-2B		317	City of Leesburg	*	*	73.1	*
Ponding Area K1-2C		317	City of Leesburg	*	*	72.2	*
Ponding Area K1-2D		317	City of Leesburg	*	*	72.0	*

*Data Not Available

Table 8: Summary of Stillwater Elevations (continued)

Lake Name	Old Name If Changed for this FIS Report	FIRM Panel Number(s)	Community Name	Stillwater Elevations (feet NAVD88)			
				10-percent-annual-chance	2-percent-annual-chance	1-percent-annual-chance	0.2-percent-annual-chance
Ponding Area K1A		340, 460, 480,	Lake Co.	73.6	73.9	74.1	*
Ponding Area K1B		330	Lake Co.	63.8	64.0	64.1	*
Ponding Area K4-1		330, 340	Lake Co., City of Leesburg	65.0	65.1	65.1	*
Ponding Area K5A		460	Lake Co.	78.3	78.9	79.1	*
Ponding Area K5B		320, 460	Lake Co.	73.4	73.9	74.1	*
Ponding Area K5C		320	Lake Co.	68.4	68.9	69.1	*
Ponding Area K5E		320	Lake County	83.4	83.8	84.1	*
Ponding Area K5F		320	Lake County	76.8	76.8	77.1	*
Ponding Area K5H		460	Lake County	72.7	73.0	73.1	*
Ponding Area K-11-3		485	Lake County, Town of Howey in the Hills	83.8	84.0	84.1	*
Ponding Area K-11-6		485	Town of Howey in the Hills	78.6	78.9	79.1	*
Ponding Area K-11-7		485	Town of Howey in the Hills	78.8	79.0	79.1	*
Ponding Area K-11-8		485	Town of Howey in the Hills	76.6	78.3	79.1	*
Ponding Area L1A		460	Lake County	81.2	81.9	82.1	*
Ponding Area L1B		460	Lake County	81.1	81.8	82.1	*

*Data Not Available

Table 8: Summary of Stillwater Elevations (continued)

Lake Name	Old Name If Changed for this FIS Report	FIRM Panel Number(s)	Community Name	Stillwater Elevations (feet NAVD88)			
				10-percent-annual-chance	2-percent-annual-chance	1-percent-annual-chance	0.2-percent-annual-chance
Ponding Area L1C		460	Lake County	83.6	84.0	84.1	*
Ponding Area L1D		460	Lake County	83.1	83.8	84.1	*
Ponding Area L1E		460	City of Leesburg	78.9	79.0	79.1	*
Ponding Area L1F		320	Lake County	78.6	78.9	79.1	*
Ponding Area Q2-1		308, 316	Lake County, City of Leesburg	*	*	77.1	*
Ponding Area Q3-2		316	Lake County, City of Leesburg	78.0	78.1	78.1	*
Ponding Area Q3-4		308, 309	Lake County, City of Leesburg	77.5	77.9	78.1	*
Ponding Area Q4-6		316, 317	Lake County, City of Leesburg	79.0	79.1	79.2	*
Ponding Area West of Plum Lake (L-26)		580	Town of Minneola	89.0	89.7	90.9	*
Round Lake	Ponding Area 650-1	675	Lake County	99.8	101.7	102.6	104.5
Sap Pond		480	Lake County	82.8	83.0	83.1	*
Saw Mill Lake		650	Lake County	100.5	101.7	102.3	104.1
Sawgrass Bay		675	Lake County	105.4	106.1	106.4	106.8
Sawgrass Lake		675	Lake County	105.3	106.1	106.4	106.8

*Data Not Available

Table 8: Summary of Stillwater Elevations (continued)

Lake Name	Old Name If Changed for this FIS Report	FIRM Panel Number(s)	Community Name	Stillwater Elevations (feet NAVD88)			
				10-percent-annual-chance	2-percent-annual-chance	1-percent-annual-chance	0.2-percent-annual-chance
Schoolhouse Lake		495,560	Lake County	*	*	89.0	*
Shady Nook Lake		570	City of Clermont	98.1	98.8	99.1	*
Shepherd Lake		560, 580	Lake County	84.6	85.6	86.1	87.1
Silver Lake		235	Lake County	48.6	49.6	50.0	50.7
Silver Lake		331, 333	Lake County	68.8	69.0	69.1	*
Smith Pond		485	Lake County	83.7	84.0	84.1	*
South Lake		235	Lake County	48.6	49.6	50.0	50.7
South Twin Lake		210	Lake County	63.7	63.9	64.0	*
South Twin Lake		210	Lake County	63.8	64.0	64.1	*
Spring Lake		170, 306	Lake County, City of Fruitland Park	74.0	74.0	74.1	*
Spring Lake		570	City of Clermont	98.0	98.8	99.1	*
Square Lake		675	Lake County	107.3	109.6	110.4	111.0
Stewart Lake		565	Lake County, City of Groveland	*	*	100.1	*
Sumner Lake		565, 570	Lake County	*	*	97.3	*
Sunset Lake		570	City of Clermont	*	*	104.9	*
Sunset Valley Lake		390	Lake County	77.7	80.7	81.9	84.0
Sylvan Lake	Ponding Area F1C	220	Lake County	72.6	72.9	73.0	*

*Data Not Available

Table 8: Summary of Stillwater Elevations (continued)

Lake Name	Old Name If Changed for this FIS Report	FIRM Panel Number(s)	Community Name	Stillwater Elevations (feet NAVD88)			
				10-percent-annual-chance	2-percent-annual-chance	1-percent-annual-chance	0.2-percent-annual-chance
Sylvia Lake-Lake Ivanhoe		170	Town of Lady Lake	68.7	69.0	69.0	*
Trout Lake		235	Lake County	46.3	47.4	48.1	*
Trout Lake		220, 355, 356	Lake County, City of Eustis	*	*	65.0	*
Trout Lake		675	Lake County	96.5	97.4	97.8	98.9
Unity Lake		170, 190, 307, 330	Lake County	*	*	64.0	*
Unnamed Lake West of Lake Joanna		358	Lake County	83.9	84.0	84.1	*
Unnamed Pond North of Lake Clair		570	Lake County	*	*	110.0	*
Unnamed Pond North of Lake Sunnyside		570	City of Clermont	123.1	123.8	124.0	*
Unnamed Pond South of Lake Sunshine		170	Town of Lady Lake	63.4	64.8	65.5	*
Unnamed Ponding Area 1		359	Lake County	*	*	165.0	*
Unnamed Ponding Area 2		359	Lake County	*	*	162.0	*

*Data Not Available

Table 8: Summary of Stillwater Elevations (continued)

Lake Name	Old Name If Changed for this FIS Report	FIRM Panel Number(s)	Community Name	Stillwater Elevations (feet NAVD88)			
				10-percent-annual-chance	2-percent-annual-chance	1-percent-annual-chance	0.2-percent-annual-chance
Unnamed Ponding Area 3		675	Lake County	*	*	92.2	*
Unnamed Ponding Area 4		675	Lake County	*	*	90.1	*
Unnamed Sand Mine Ponding Area		590, 595	Lake County	*	*	101.5	*
Wash Lake		650	Lake County	*	*	101.0	*
Wash Pond 1		565, 570	Lake County	99.6	100.4	100.7	*
Wash Pond 2		565, 570	Lake County	99.6	100.4	100.7	*
Wash Pond 3		565, 570	Lake County	99.6	100.4	100.7	*
Wash Pond 4		565	Lake County	100.2	100.8	101.1	*
West Crooked Lake		358	Lake County, City of Eustis	73.0	73.2	73.3	*
West Lake		570	City of Clermont	98.1	98.8	99.1	*
West Lake Dixie		317	City of Leesburg	73.6	73.9	74.0	*
Wilma Lake North		590	Lake County, City of Clermont	88.5	90.5	91.2	92.8
Wilma Lake South		590	Lake County, City of Clermont	86.0	88.8	90.2	92.8
Wilson Lake		560	Lake County	*	*	98.3	*

*Data Not Available

Table 8: Summary of Stillwater Elevations (continued)

Lake Name	Old Name If Changed for this FIS Report	FIRM Panel Number(s)	Community Name	Stillwater Elevations (feet NAVD88)			
				10-percent-annual-chance	2-percent-annual-chance	1-percent-annual-chance	0.2-percent-annual-chance
Wolf Branch Sink		390	Lake County	77.7	80.7	81.9	84.5
Zephyr Lake		306	Lake County, City of Fruitland	108.5	108.9	109.1	*

*Data Not Available

3.2.1 Methods for Flooding Sources with New or Revised Analyses in Current Study

Water-surface profiles for the 10-, 2-, 1- and 0.2-percent-annual-chance recurrence intervals were computed for detailed analyses, and the water-surface profile for the 1-percent-annual-chance recurrence interval was computed for approximate analyses. The USACE HEC-RAS step-backwater computer program version 4.0 was utilized for hydraulic analyses of Leesburg Tributary 1, Leesburg Tributary 2, Leesburg Tributary 2-1, Leesburg Tributary 3, the St. Johns River, Wolf Branch, and all approximate study streams (USACE, 2008).

Hydraulic cross section geometries were obtained from the Digital Terrain Model (DTM) and supplemented with surveyed hydraulic data at various locations throughout the detailed studied reaches. All hydraulic structures were field surveyed for detailed analyses. The Watershed Information System (WISE) software was used for preprocessing HEC-RAS data (Watershed Concepts, 2008). No floodway was calculated for streams studied by approximate methods.

Starting conditions for the hydraulic models were set to normal depth using starting slopes calculated from channel elevation values taken from the DTM, or set based on known downstream water-surface elevations as appropriate. Manning's n-values were estimated using high-resolution imagery and field photos for both channel and overbank areas.

Interconnected Channel and Pond Routing (ICPR) model, version 3.1, was used to determine the stillwater elevations for ponding areas located in Royal Trails Subdivision (Lake County, 2009).

3.2.2 Methods for Flooding Sources Incorporated from Previous Studies

Precountywide Analyses

Flood profiles were drawn showing computed water-surface elevations to an accuracy of 0.5 foot for floods of the selected recurrence intervals.

All elevations are measured from NGVD.

Flood boundaries in other locations in Lake County, which overflow relatively undeveloped areas, were determined by approximate methods. The approximate methods involved the use of USGS quadrangle maps [USGS; 7.5 min. Quads: Salt Springs (1970), Juniper Springs (1970), Astor (1972), Alexander Springs (1972), Lake Woodruff (1962/1970), Emeralda Island (1966), Umatilla (1965/1970), Paisley (1965/1970), Pine Lakes (1962/1970), Orange City (1964/1970), Leesburg East (1965), Eustis (1966/1970), Sorrento (1960/1970), Sanford SW (1965/1970), Howey-in-the-Hills (1969), Astatula (1962/1970), Apopka (1960/1970), Clermont West (1969), Clermont East (1962/1970), Lake Nellie (1959), and Lake Louisa (1959/1970)].

During floods, debris collecting at culverts could decrease their carrying capacity and cause greater water depths (backwater effect) upstream of the structures. However, since the occurrence and amount of debris are indeterminate factors, only the physical characteristics of the structures were considered in preparing the profiles. Flood elevations shown on the profiles are thus considered valid only if hydraulic structures in general remain unobstructed.

Encroachment on flood plains, such as artificial fill, reduces the flood-carrying capacity, increases the flood heights of streams, and increases flood hazards in areas beyond the encroachment itself. One aspect of flood plain management involves balancing the economic gain from flood plain development against the resulting increase in flood hazard. For purposes used as a tool to assist local communities in this aspect of flood plain management. A floodway is not appropriate in areas such as those that may be inundated by floodwaters from lakes and shallow flooding areas. The flood profiles for the St. Johns and Wekiva Rivers were taken from previous studies which did not include determination of floodways. It was determined at the pre-contract consultation and coordination meeting on November 27, 1978, to not include a floodway analysis for the St. Johns and Wekiva Rivers.

Analyses for the Initial Countywide FIS

For streams studied by detailed methods, water-surface elevations for the 10-, 2-, 1-, and 0.2-percent-annual-chance floods were computed using the USACE HEC-RAS water-surface profile computer programs (USACE, April 1997). All lakes were studied using adICPR. Starting water-surface elevations for streams were taken to be normal depth; for lakes, the starting water surface was determined based gage data; lake elevations reported on USGS quad sheets, supplementary one-foot topo, or new surveyed levels; controlling culvert invert elevations; or backwater from adjacent water bodies.

Channel cross sections and lake outlets were obtained from new surveys by DeGrove Surveyors, Inc., performed as part of that study.

Channel roughness factors (Manning's n) used in the hydraulic computations were selected based on field observations, aerial photos, and photographs of the stream and floodplain areas. Roughness values used for the main channels ranged from 0.03 to 0.08 with floodplain roughness values from 0.06 to 0.15 for all flood frequencies.

Gage data for historical storm events was used for determining discharges along the St. Johns River, initial starting elevations for lakes and verification of the adICPR lake models. Gage data was obtained from USGS (USGS, WATSTORE); the gages used were: 02236820 Lake Louisa, 02236840 Lake Minnehaha, 02236860 Lake Apshawa, 02236880 Cherry Lake, 02237370 Church Lake, 02237753 West Crooked Lake, 02237865 Lake Umatilla, 02238020 Silver Lake, 02238180 Holly Lake, 02238200 Lake Yale, 02266239 Trout Lake, 02312670 Lake Catherine, 02312694 Lady Lake, 02235260 Mt. Plymouth Lake,

02235150 Lake Don, 02237520 Lake Harris, 02237800 Lake Dora, 02237900 Lake Eustis, 02238300 Lake Griffin, 02236000 St. Johns River Near Deland, and 02236125 St. Johns River at Astor.

Table 9: Manning's "n" Values

Flooding Source	Channel "n"	Overbank "n"
Leesburg Tributary 1	0.050	0.060-0.150
Leesburg Tributary 2	0.050	0.060-0.150
Leesburg Tributary 3	0.050	0.060-0.150
St. Johns River	0.030	0.060-0.150
Wolf Branch	0.050	0.060-0.150

3.3 Vertical Datum

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 (NGVD 29). With the completion of the North American Vertical Datum of 1988 (NAVD 88), many FIS reports and FIRMs are now prepared using NAVD 88 as the referenced vertical datum.

All flood elevations shown in this FIS report and on the FIRM are referenced to the NAVD 88. These flood elevations must be compared to structure and ground elevations referenced to the same vertical datum. It is important to note that adjacent counties may be referenced to NGVD, which may result in differences in base flood elevations across county lines.

Ground, structure, and flood elevations may be compared and/or referenced to NGVD 29 by applying a standard conversion factor. For Lake County, Florida, the conversion factor to NGVD is 0.9 for the southern portion of the county and 1.0 for the northern portion of the county. The Elevation Reference Marks are referenced as NAVD 88 as indicated in the Elevation Reference Marks table shown on the FIRM.

The BFEs shown on the FIRM represent whole-foot rounded values. For example, a BFE of 102.4 feet will appear as 102 feet on the FIRM and 102.6 will appear as 103. Therefore, users who wish to convert the elevations in this FIS report to NGVD should apply the stated conversion factor to elevations shown on the Flood Profiles and supporting data tables in the FIS report, which are shown at a minimum to the nearest 0.1 foot.

For more information regarding conversion between the NGVD and NAVD, see the FEMA publication entitled *Converting the National Flood Insurance Program to the*

North American Vertical Datum of 1988 (FEMA, 1992), 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 Technical Support Data Notebook associated with the FIS report and FIRM for this community. Interested individuals may contact FEMA to access these data.

To obtain current elevation, description, and/or location information for benchmarks shown on this map, please contact the Information Services Branch of the NGS at (301) 713-3242, or visit their website at www.ngs.noaa.gov.

4.0 FLOODPLAIN MANAGEMENT APPLICATIONS

The NFIP encourages State and local governments to adopt sound floodplain management programs. To assist in this endeavor, each FIS report provides 1-percent-annual-chance floodplain data, which may include a combination of the following: 10-, 2-, 1-, and 0.2-percent-annual-chance flood elevations; delineations of the 1- and 0.2-percent-annual-chance floodplains; and a 1-percent-annual-chance floodway. This information is presented on the FIRM and in many components of the FIS report, including Flood Profiles, Floodway Data tables, and Summary of Stillwater Elevation tables. Users should reference the data presented in the FIS report as well as additional information that may be available at the local community map repository before making flood elevation and/or floodplain boundary determinations.

4.1 Floodplain Boundaries

To provide a national standard without regional discrimination, the 1-percent-annual-chance flood has been adopted by FEMA as the base flood for floodplain management purposes. The 0.2-percent-annual-chance flood is employed to indicate additional areas of flood risk in the community. For each stream studied by detailed or limited detailed methods, the 1- and 0.2-percent-annual-chance floodplain boundaries have been delineated using the flood elevations determined at each cross section.

Between cross sections, the boundaries were interpolated based on contours developed from the Digital Terrain Model (BakerAECOM, 2010).

The 1- and 0.2-percent-annual-chance floodplain boundaries for streams studied by detailed methods are shown on the FIRM. On this map, the 1-percent-annual-chance floodplain boundary corresponds to the boundary of the areas of special flood hazards (Zones A and AE), and the 0.2-percent-annual-chance floodplain boundary corresponds to the boundary of areas of moderate flood hazards. In cases where the 1- and 0.2-percent-annual-chance floodplain boundaries are close together, only the 1-percent-annual-chance floodplain boundary has been shown. Small areas within the floodplain boundaries may lie above the flood elevations, but cannot be shown due to limitations of the map scale and/or lack of detailed topographic data.

For the flooding sources studied by approximate methods, only the 1-percent-annual-chance floodplain boundary is shown on the FIRM (Exhibit 2).

4.2 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 this aspect of floodplain management. Under this concept, the area of the 1-percent-annual-chance floodplain is divided into a floodway and a floodway fringe. The floodway is the channel of a stream, plus any adjacent floodplain areas, that must be kept free of encroachment so that the base flood can be carried without substantial increases in flood heights. Minimum Federal standards limit such increases to 1 foot, provided that hazardous velocities are not produced. The floodways in this study are presented to local agencies as minimum standards that can be adopted directly or that can be used as a basis for additional floodway studies.

The floodways presented in this study 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. The results of the floodway computations are tabulated for selected cross sections and provided in Table 10, “Floodway Data.” The computed floodway is shown on the FIRM (Exhibit 2). In cases where the floodway and 1-percent-annual-chance floodplain boundaries are either close together or collinear, only the floodway boundary is shown on the FIRM.

No floodway is shown for the Wekiva River and portions of the St. Johns River.

Encroachment into areas subject to inundation by floodwaters having hazardous velocities aggravates the risk of flood damage and heightens potential flood hazards by further increasing velocities. A listing of stream velocities at selected cross sections is provided in Table 10. To reduce the risk of property damage in areas where the stream velocities are high, the community may wish to restrict development in areas outside the floodway.

The area between the floodway and 1-percent-annual-chance floodplain boundaries is termed the floodway fringe. The floodway fringe encompasses the portion of the floodplain that could be completely obstructed without increasing the water-surface elevation (WSEL) of the base 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 1.

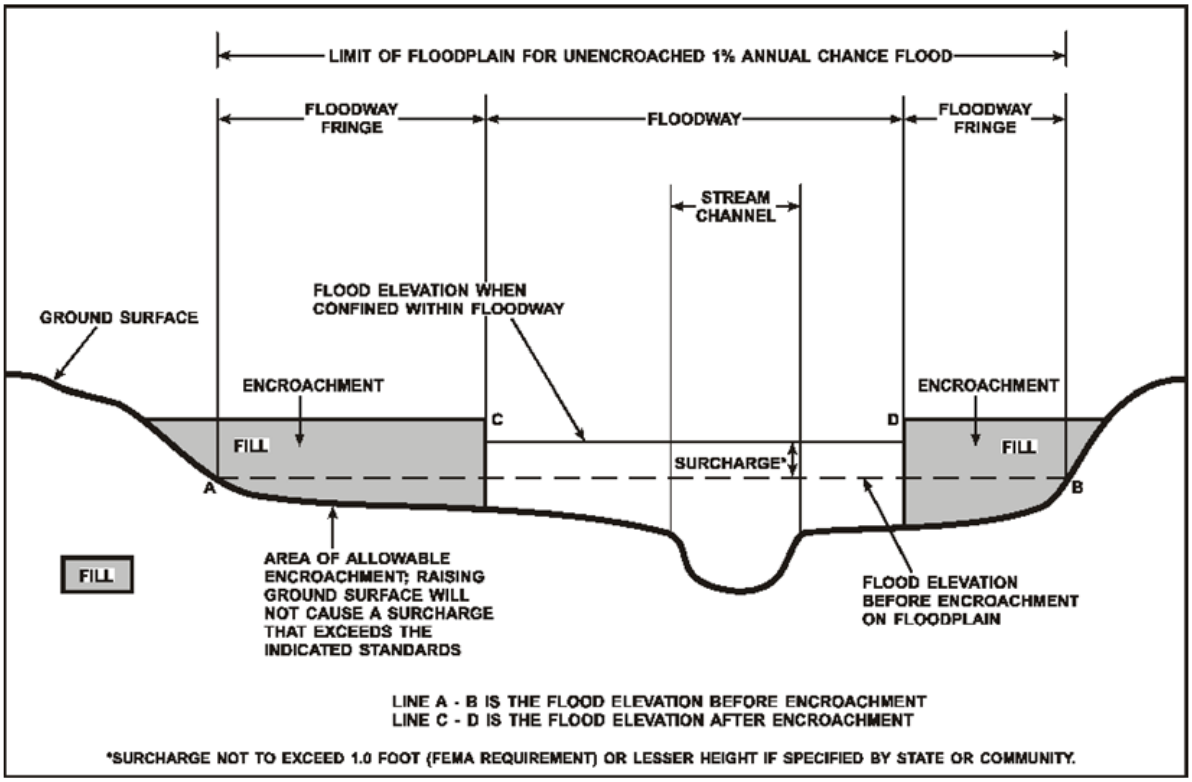

Figure 1. Floodway Schematic

FLOODING SOURCE		FLOODWAY			BASE FLOOD WATER SURFACE ELEVATION			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY (FEET NAVD 88)	WITHOUT FLOODWAY (FEET NAVD 88)	WITH FLOODWAY (FEET NAVD 88)	INCREASE (FEET)
LEESBURG TRIBUTARY 1								
A	9,115	447	1,378	1.4	64.1	64.1	65.1	1.0
B	9,423	459	1,196	1.6	65.2	65.2	66.2	1.0
C	12,571	850	2,408	0.8	80.2	80.2	80.8	0.6
D	12,886	1,000	4,026	0.5	80.2	80.2	80.8	0.6
E	13,446	1,200	4,619	0.3	80.2	80.2	80.9	0.7
F	13,813	1,200	6,957	0.2	80.2	80.2	80.9	0.7
G	14,593	1,200	4,937	0.3	80.2	80.2	80.9	0.7
H	15,004	1,000	3,864	0.4	80.2	80.2	81.0	0.8
I	15,607	483	2,760	0.6	80.2	80.2	81.1	0.9
J	16,004	475	2,844	0.5	80.3	80.3	81.1	0.8
K	16,310	470	2,215	0.7	80.3	80.3	81.1	0.8
L	16,669	550	1,978	0.7	80.3	80.3	81.2	0.9
M	17,024	465	1,498	1.0	80.3	80.3	81.2	0.9

[1] Feet above mouth.

TABLE 10

FEDERAL EMERGENCY MANAGEMENT AGENCY

LAKE COUNTY, FL

AND INCORPORATED AREAS

FLOODWAY DATA

LEESBURG TRIBUTARY 1

FLOODING SOURCE		FLOODWAY			BASE FLOOD WATER SURFACE ELEVATION			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY (FEET NAVD 88)	WITHOUT FLOODWAY (FEET NAVD 88)	WITH FLOODWAY (FEET NAVD 88)	INCREASE (FEET)
LEESBURG TRIBUTARY 2								
A	3	478	1,142	1.2	64.4	64.4	65.4	1.0
B	461	37	128	10.5	69.1	69.1	69.1	0.0
C	907	30	197	6.8	74.6	74.6	74.9	0.3
D	1,436	400	1,910	0.7	78.4	78.4	79.0	0.6
E	1,971	400	1,646	0.8	78.4	78.4	79.0	0.6
F	2,848	224	1,266	1.1	78.6	78.6	79.3	0.7
G	3,498	326	2,131	0.6	78.7	78.7	79.5	0.8
H	3,978	200	769	1.7	78.7	78.7	79.7	1.0
I	4,851	325	1,509	0.9	79.4	79.4	80.0	0.6
J	5,452	325	640	2.1	79.4	79.4	80.4	1.0
K	6,200	216	523	2.3	81.7	81.7	81.9	0.2
L	6,827	206	777	1.6	82.3	82.3	82.7	0.4
M	7,261	146	651	1.9	82.6	82.6	83.0	0.4
N	7,763	160	637	1.9	82.7	82.7	83.4	0.7

[1] Feet above mouth.

FLOODING SOURCE		FLOODWAY			BASE FLOOD WATER SURFACE ELEVATION			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY (FEET NAVD 88)	WITHOUT FLOODWAY (FEET NAVD 88)	WITH FLOODWAY (FEET NAVD 88)	INCREASE (FEET)
LEESBURG TRIBUTARY 2-1								
A	822	28	58	3.9	78.4	74.9[2]	75.7	0.8
B	1,149	55	175	1.3	78.4	75.5[2]	76.4	0.9
C	1,410	25	34	6.6	78.4	76.4[2]	76.9	0.5

[1] Stream distance in feet above confluence with Leesburg Tributary 2.

[2] Elevation computed without consideration of backwater effects from Leesburg Tributary 2.

TABLE 10

FEDERAL EMERGENCY MANAGEMENT AGENCY

LAKE COUNTY, FL

AND INCORPORATED AREAS

FLOODWAY DATA

LEESBURG TRIBUTARY 2-1

FLOODING SOURCE		FLOODWAY			BASE FLOOD WATER SURFACE ELEVATION			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY (FEET NAVD 88)	WITHOUT FLOODWAY (FEET NAVD 88)	WITH FLOODWAY (FEET NAVD 88)	INCREASE (FEET)
LEESBURG TRIBUTARY 3								
A	1,449	205	593	2.2	64.3	64.3	65.3	1.0
B	1,999	62	227	5.7	69.3	69.3	69.9	0.6
C	2,440	177	1,001	0.5	70.5	70.5	71.5	1.0
D	2,761	100	107	4.3	71.0	71.0	71.4	0.4

[1] Feet above mouth.

TABLE 10

FEDERAL EMERGENCY MANAGEMENT AGENCY

LAKE COUNTY, FL

AND INCORPORATED AREAS

FLOODWAY DATA

LEESBURG TRIBUTARY 3

FLOODING SOURCE		FLOODWAY			BASE FLOOD WATER SURFACE ELEVATION			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY (FEET NAVD 88)	WITHOUT FLOODWAY (FEET NAVD 88)	WITH FLOODWAY (FEET NAVD 88)	INCREASE (FEET)
ST. JOHNS RIVER								
A	650,002	7,238[2]/3,253[3]	57,630	0.3	6.0	6.0	7.0	1.0
B	654,720	5,204[2]/2,823[3]	42,525	0.4	6.1	6.1	7.1	1.0
C	657,880	792[2]/327[3]	17,672	1.1	6.1	6.1	7.1	1.0
D	662,328	716[2]/267[3]	12,937	1.4	6.1	6.1	7.1	1.0
E	666,334	942[2]/710[3]	10,779	1.7	6.2	6.2	7.2	1.0
F	666,591	942[2]/718[3]	13,309	1.6	6.3	6.3	7.3	1.0
G	670,351	1,601[2]/890[3]	18,677	1.0	6.4	6.4	7.3	0.9
H	673,881	769[2]/297[3]	14,250	1.3	6.4	6.4	7.4	1.0
I	677,612	765[2]/380[3]	14,119	1.3	6.5	6.5	7.4	0.9
J	683,384	2,087[2]/1,579[3]	24,406	0.8	6.5	6.5	7.5	1.0
K	687,038	2,399[2]/1,212[3]	33,224	0.6	6.6	6.6	7.6	1.0

[1] Feet above mouth.

[2] Total floodway width.

[3] Floodway width within Lake County.

FLOODING SOURCE		FLOODWAY			BASE FLOOD WATER SURFACE ELEVATION			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY (FEET NAVD 88)	WITHOUT FLOODWAY (FEET NAVD 88)	WITH FLOODWAY (FEET NAVD 88)	INCREASE (FEET)
WOLF BRANCH								
A	86	531	2,410	1.6	82.5	82.5	83.5	1.0
B	732	299	1,139	3.3	84.1	84.1	85.0	0.9
C	1,320	129	593	6.4	87.0	87.0	88.0	1.0
D	1,883	75	580	6.5	90.8	90.8	91.5	0.7
E	2,599	100	574	6.6	96.9	96.9	97.1	0.2
F	3,206	44	507	7.5	101.4	101.4	102.3	0.9
G	3,718	96	443	8.6	106.8	106.8	107.1	0.3
H	4,365	109	728	5.2	112.4	112.4	113.3	0.9
I	5,887	141	1,296	2.9	124.4	124.4	124.7	0.3
J	7,029	266	2,058	1.8	126.5	126.5	127.3	0.8
K	7,565	475	3,814	0.9	126.9	126.9	127.8	0.9
L	8,729	42	332	10.8	137.4	137.4	138.4	1.0
M	9,338	47	292	12.3	147.1	147.1	147.2	0.1
N	9,897	160	1,141	3.1	152.3	152.3	153.3	1.0
O	10,691	70	303	11.8	158.3	158.3	158.7	0.4
P	11,919	271	1,199	2.5	167.7	167.7	168.6	0.9

[1] Feet above mouth.

TABLE 10

FEDERAL EMERGENCY MANAGEMENT AGENCY

LAKE COUNTY, FL

AND INCORPORATED AREAS

FLOODWAY DATA

WOLF BRANCH

5.0 INSURANCE APPLICATIONS

For flood insurance rating purposes, flood insurance zone designations are assigned to a community based on the results of the engineering analyses. These zones are as follows:

Zone A

Zone A is the flood insurance rate zone that corresponds to the 1-percent-annual-chance floodplains that are determined in the FIS report by approximate methods. Because detailed hydraulic analyses are not performed for such areas, no base (1-percent-annual-chance) flood elevations (BFEs) or depths are shown within this zone.

Zone AE

Zone AE is the flood insurance rate zone that corresponds to the 1-percent-annual-chance floodplains that are determined in the FIS report by detailed methods. Whole-foot BFEs derived from the detailed hydraulic analyses are shown at selected intervals within this zone.

Zone X

Zone X is the flood insurance rate zone that corresponds to areas outside the 0.2-percent-annual-chance floodplain, areas within the 0.2-percent-annual-chance floodplain, areas of 1-percent-annual-chance flooding where average depths are less than 1 foot, areas of 1-percent-annual-chance flooding where the contributing drainage area is less than 1 square mile (sq. mi.), and areas protected from the base flood by levees. No BFEs or depths are shown within this zone.

Zone D

Zone D is the flood insurance rate zone that corresponds to unstudied areas where flood hazards are undetermined, but possible.

6.0 FLOOD INSURANCE RATE MAP

The FIRM is designed for flood insurance and floodplain management applications.

For flood insurance applications, the map designates flood insurance rate zones as described in Section 5.0 and, in the 1-percent-annual-chance floodplains that were studied by detailed methods, shows selected whole-foot BFEs or average depths. Insurance agents use zones and BFEs in conjunction with information on structures and their contents to assign premium rates for flood insurance policies.

For floodplain management applications, the map shows by tints, screens, and symbols, the 1- and 0.2-percent-annual-chance floodplains, floodways, and the locations of selected cross sections used in the hydraulic analyses and floodway computations.

The current FIRM presents flooding information for the entire geographic area of Lake County. This countywide FIRM includes flood hazard information previously printed on separate Flood

Hazard Boundary Maps and/or FIRMs that were prepared for each incorporated community identified as flood-prone and the unincorporated areas of the County. Historical data relating to the maps prepared for each community are presented in Table 11, “Community Map History.”

COMMUNITY NAME	INITIAL IDENTIFICATION	FLOOD HAZARD BOUNDARY MAP REVISIONS DATE	FIRM EFFECTIVE DATE	FIRM REVISIONS DATE
Astatula, Town of	August 24, 1979	None	August 15, 1984	None
Clermont, Town of	May 31, 1974	January 30, 1976	August 15, 1984	None
Eustis, City of	June 28, 1974	October 17, 1975	June 4, 1987	None
Fruitland Park, City of	January 14, 1977	None	September 5, 1984	None
Groveland, City of	January 16, 1974	January 30, 1976	September 5, 1984	None
Howey in the Hills, Town of	March 2, 1979	None	August 15, 1984	None
Lady Lake, Town of	August 15, 1984	None	August 15, 1984	None
Lake County (Unincorporated Areas)	May 26, 1978	None	April 1, 1982	None
Leesburg, City of	September 13, 1974	January 28, 1977	July 18, 1985	April 7, 1999
Mascotte, City of	September 21 1979	None	November 15, 1984	None

TABLE 11

FEDERAL EMERGENCY MANAGEMENT AGENCY

LAKE COUNTY, FL
AND INCORPORATED AREAS

COMMUNITY MAP HISTORY

COMMUNITY NAME	INITIAL IDENTIFICATION	FLOOD HAZARD BOUNDARY MAP REVISIONS DATE	FIRM EFFECTIVE DATE	FIRM REVISIONS DATE
Minneola, Town of	July 23, 1976	None	August 15, 1984	None
Montverde, Town of	November 15, 1984	None	November 15, 1984	None
Mt. Dora, City of	June 28, 1974	February 27, 1976	April 5, 1988	None
Tavares, City of	August 2, 1974	September 12, 1975	March 16, 1988	None
Umatilla, City of	May 31, 1974	January 30, 1976	April 3, 1989	None

TABLE 11

FEDERAL EMERGENCY MANAGEMENT AGENCY

LAKE COUNTY, FL
AND INCORPORATED AREAS

COMMUNITY MAP HISTORY

7.0 OTHER STUDIES

FIS reports have been prepared for the unincorporated and incorporated areas of Marion, Volusia, Seminole, Orange, and Polk Counties and for the unincorporated areas of Sumter County.

This FIS report supersedes or is compatible with all previous studies published on streams studied in this report and should be considered authoritative for the purposes of the NFIP.

8.0 LOCATION OF DATA

Information concerning the pertinent data used in the preparation of this study can be obtained by contacting Federal Insurance and Mitigation Division, FEMA Region IV, Koger-Center — Rutgers Building, 3003 Chamblee Tucker Road, Atlanta, GA 30341.

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U.S. Geological Survey. (1982b). *Water Resources Investigations Report 82-4012, Technique for Estimating Magnitude and Frequency of Floods on Natural Flow Streams in Florida,* Bridges, Wayne C.

U.S. Geological Survey. (various dates). 7.5 Minute-series Topographic Maps (all maps covering Lake County, scale 1:24,000, 5 foot contour intervals).

U.S. Geological Survey. WATSTORE computer hydrologic database.

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10.0 REVISION DESCRIPTIONS

This section has been added to provide information regarding significant revisions made since the original FIS was printed. Future revisions may be made that do not result in the republishing of the FIS report. To assure that the user is aware of all revisions, it is advisable to contact the community repository of flood-hazard data located at:

- Astatula Town Hall
  25019 Country Road 561
  Astatula, Florida 34705

- Clermont Planning and Zoning Department
  685 W. Montrose Street – 1st Floor
  Clermont, Florida 34711

- Eustis Building Department
  10 North Grove Street
  Eustis, Florida 32727-0068

- Fruitland Park City Hall Building Department
  506 West Berckman Street
  Groveland, Florida 34731

- Howey in the Hills Town Hall
  101 North Palm Avenue
  Howey in the Hills, Florida 34737

- Lady Lake Town Hall
  409 Fennell Boulevard
  Lady Lake, Florida 32159

- Lake County Public Works Department
  437 Ardice Avenue
  Eustis, Florida 32726

- Leesburg Public Works Department
  550 South 14th Street
  Leesburg, Florida 34748

- Mascotte City Hall
  100 East Myers Boulevard
  Mascotte, Florida 34753

- Minneola City Hall
  800 North U.S. Highway 27
  Minneola, Florida 34715

- Montverde Town Hall
  17404 Sixth Street
  Montverde, Florida 34756

- Mt. Dora Building and Zoning
  510 North Baker Street
  Mt. Dora, Florida 32757

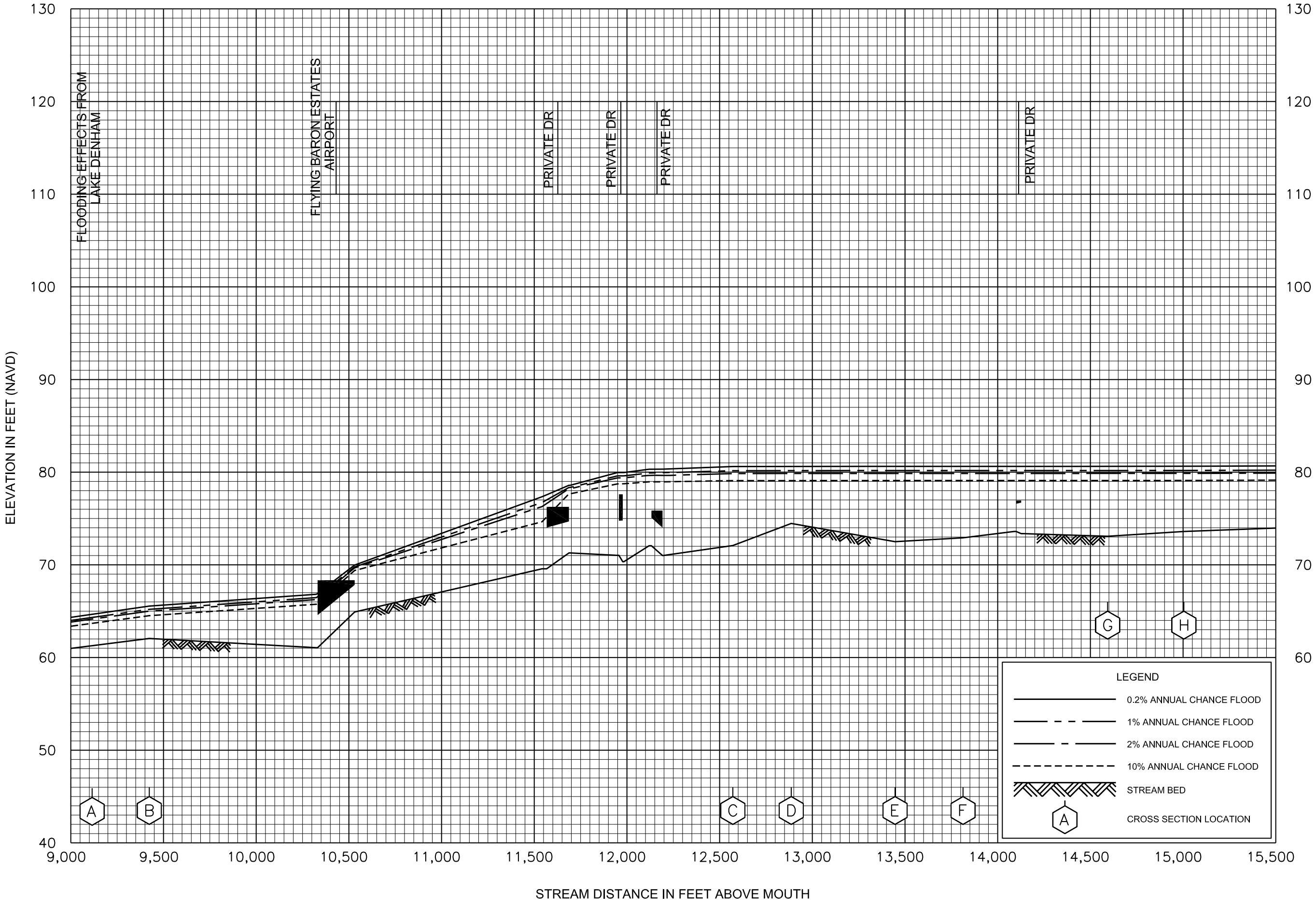
- Tavares Planning and Zoning
  201 East Main Street
  Tavares, Florida 32778

- Umatilla City Hall
  1 South Central Avenue
  Umatilla, Florida 32784

10.1 First Revision (Revised December 18, 2012)

This December 18, 2012 revision was initiated in support of the FEMA Risk MAP Program.

This revision involved countywide remapping of Lake County, Florida. The revision included new detailed studies of St. Johns River, Leesburg Tributary 1, 2, 2-1 and 3 and Wolf Branch, refinement and establishment of approximate zones, redelineation of existing studies, and creation of new FIRMs using new topographic and base map data.



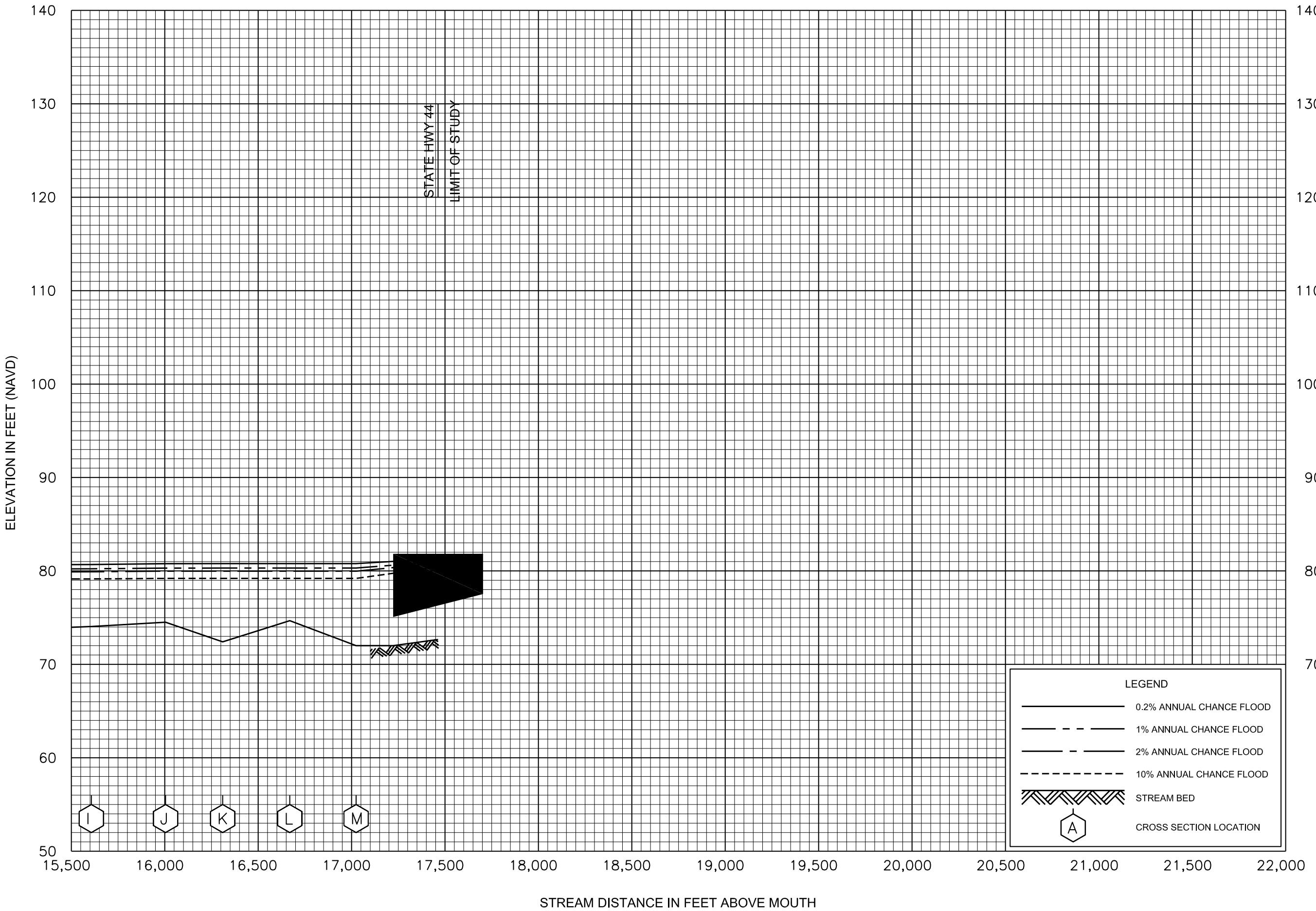
FLOOD PROFILES

LEESBURG TRIBUTARY 1

FEDERAL EMERGENCY MANAGEMENT AGENCY

LAKE COUNTY, FL
AND INCORPORATED AREAS

01P



FLOOD PROFILES

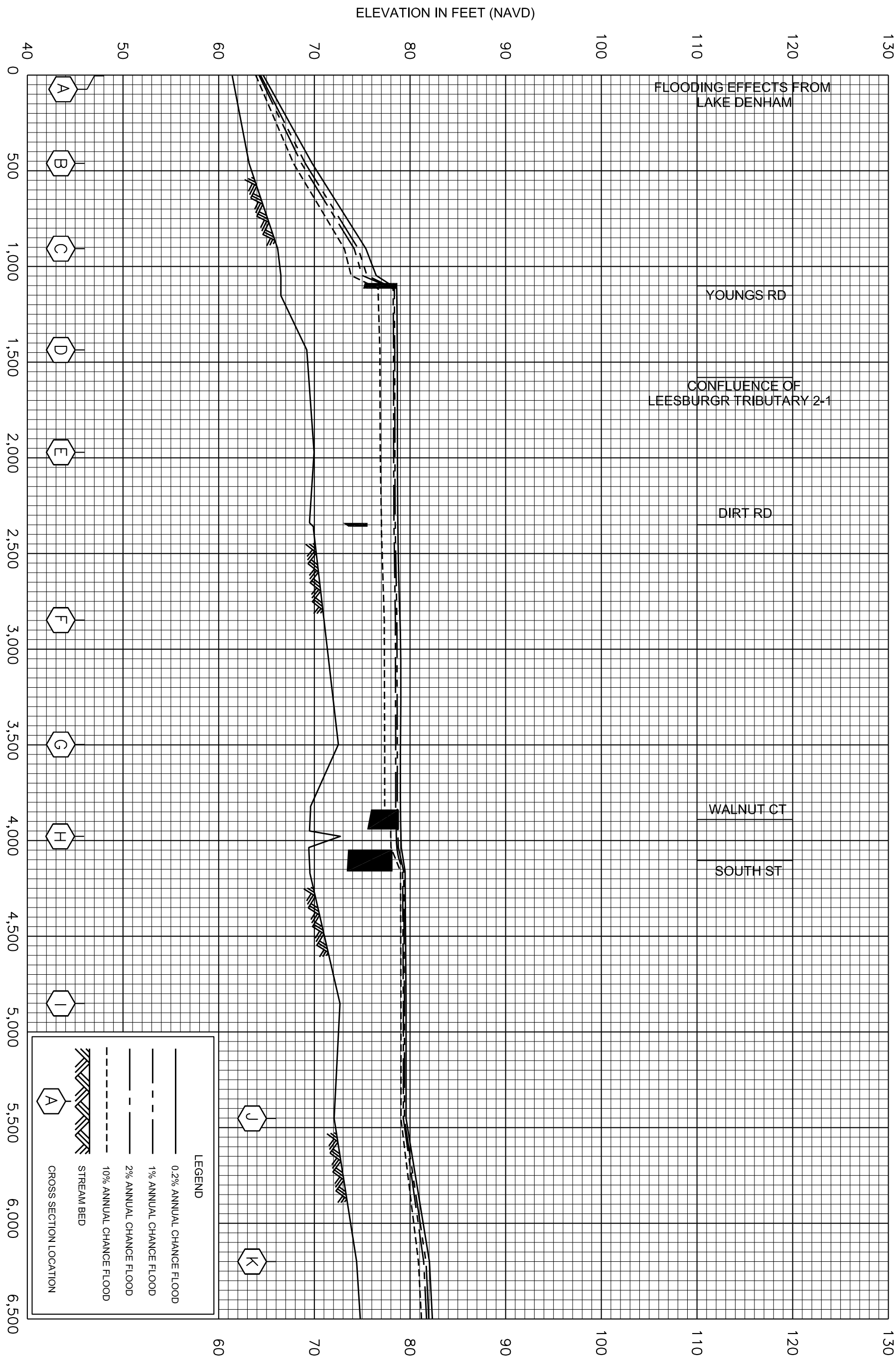
LEESBURG TRIBUTARY 1

FEDERAL EMERGENCY MANAGEMENT AGENCY

LAKE COUNTY, FL

AND INCORPORATED AREAS

02P



03P

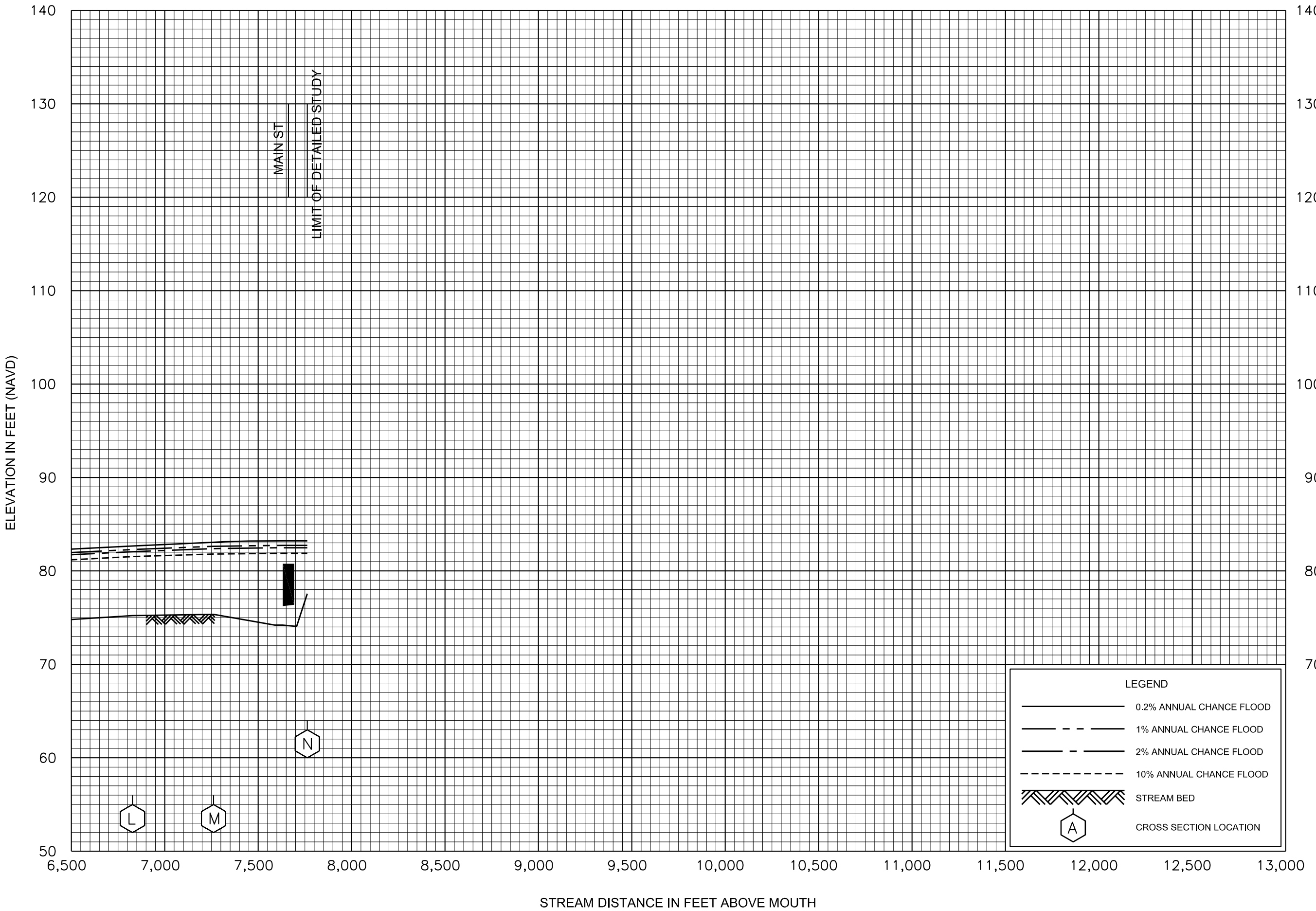
FEDERAL EMERGENCY MANAGEMENT AGENCY

LAKE COUNTY, FL

AND INCORPORATED AREAS

FLOOD PROFILES

LEESBURG TRIBUTARY 2



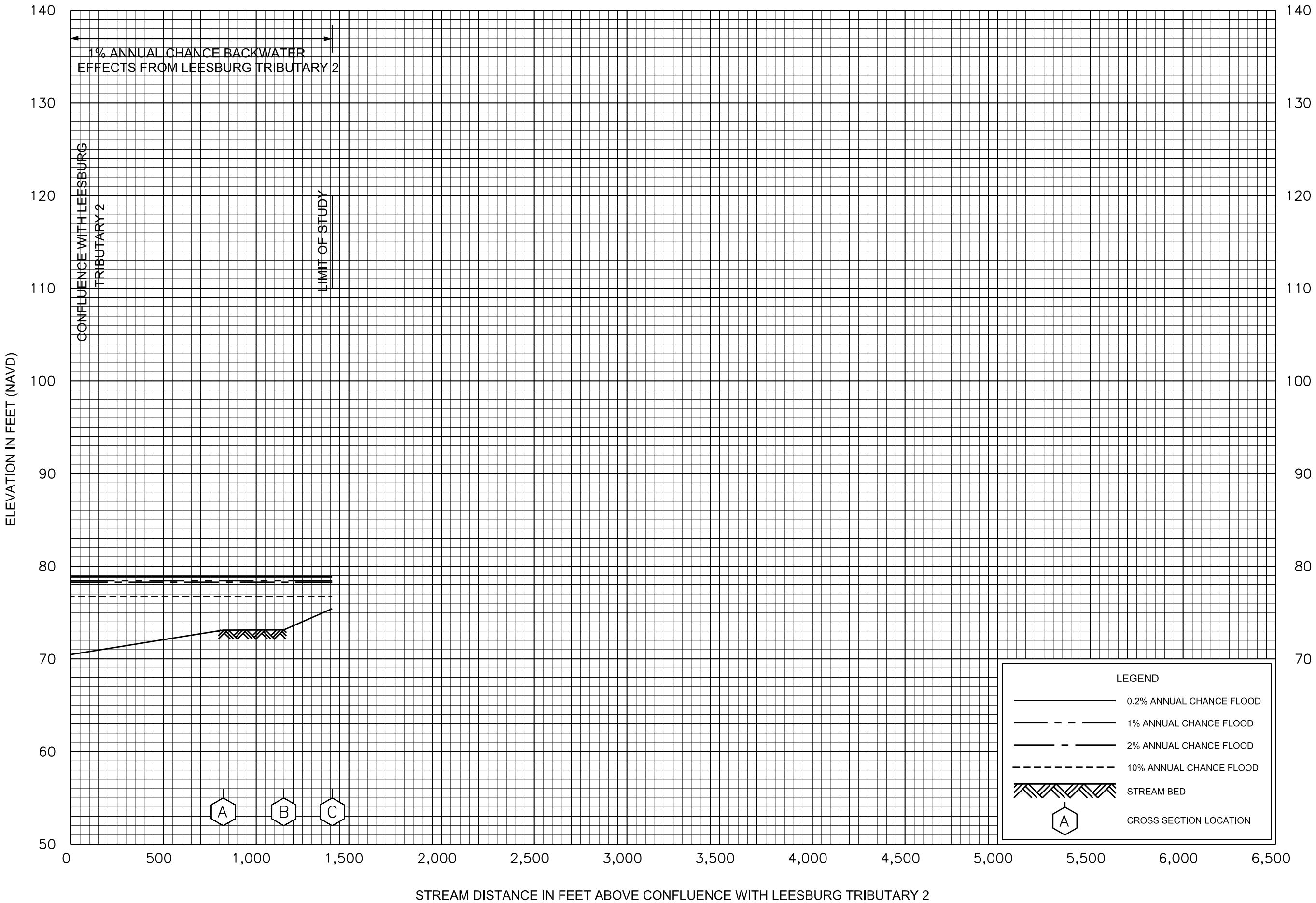
FLOOD PROFILES

LEESBURG TRIBUTARY 2

FEDERAL EMERGENCY MANAGEMENT AGENCY

LAKE COUNTY, FL

AND INCORPORATED AREAS



FLOOD PROFILES

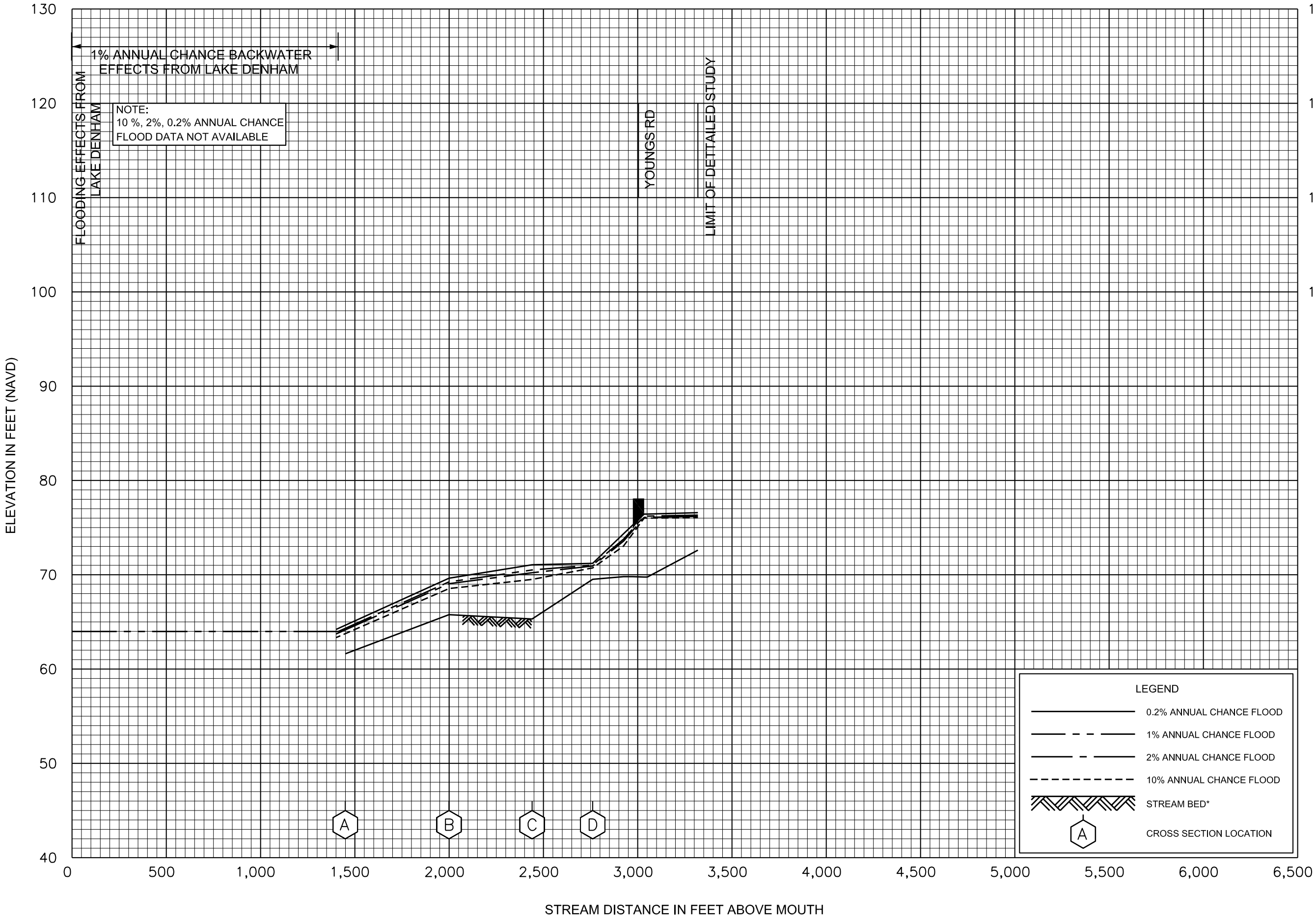
LEESBURG TRIBUTARY 2-1

FEDERAL EMERGENCY MANAGEMENT AGENCY

LAKE COUNTY, FL

AND INCORPORATED AREAS

05P



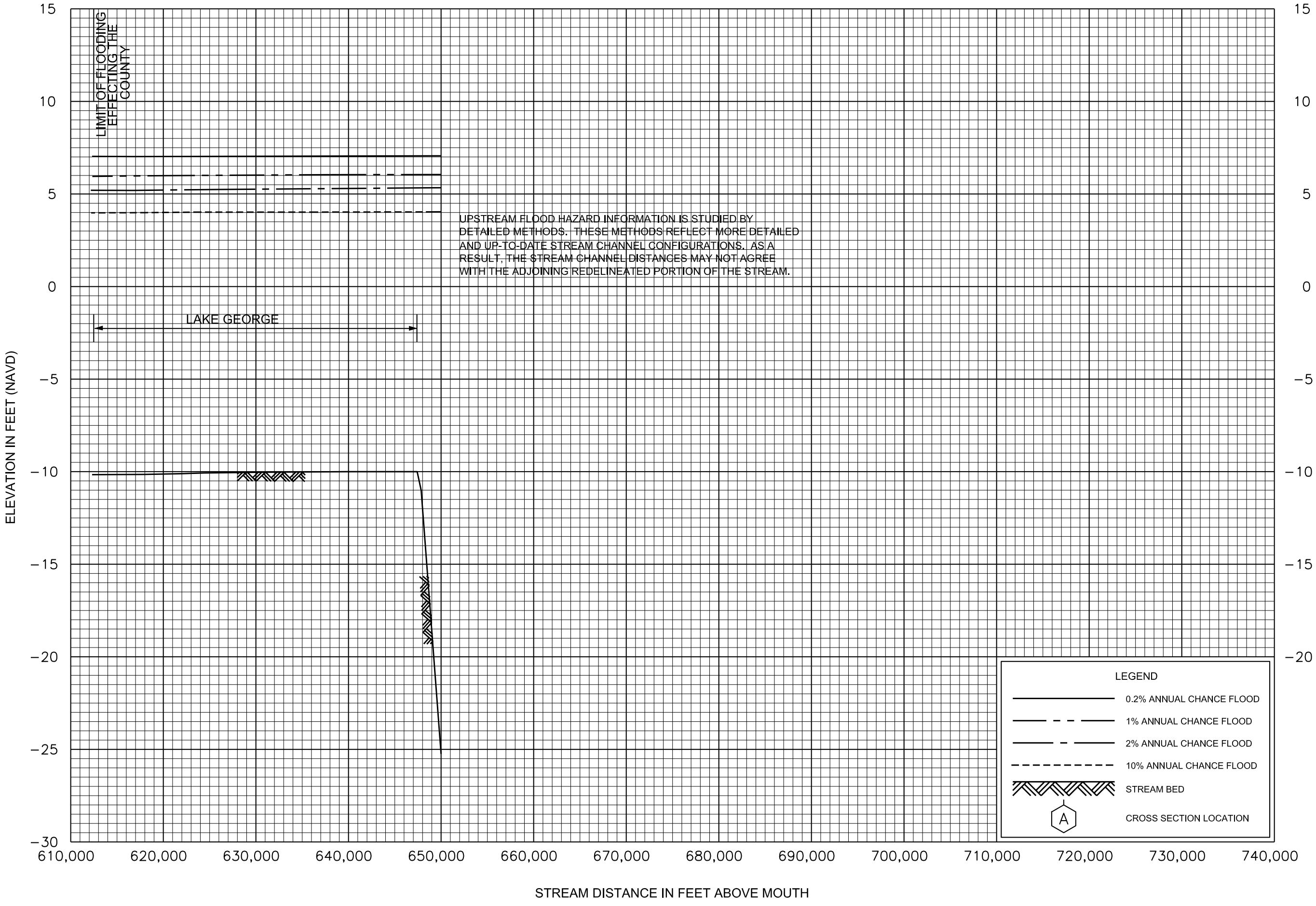
FLOOD PROFILES

LEESBURG TRIBUTARY 3

FEDERAL EMERGENCY MANAGEMENT AGENCY

LAKE COUNTY, FL
AND INCORPORATED AREAS

06P



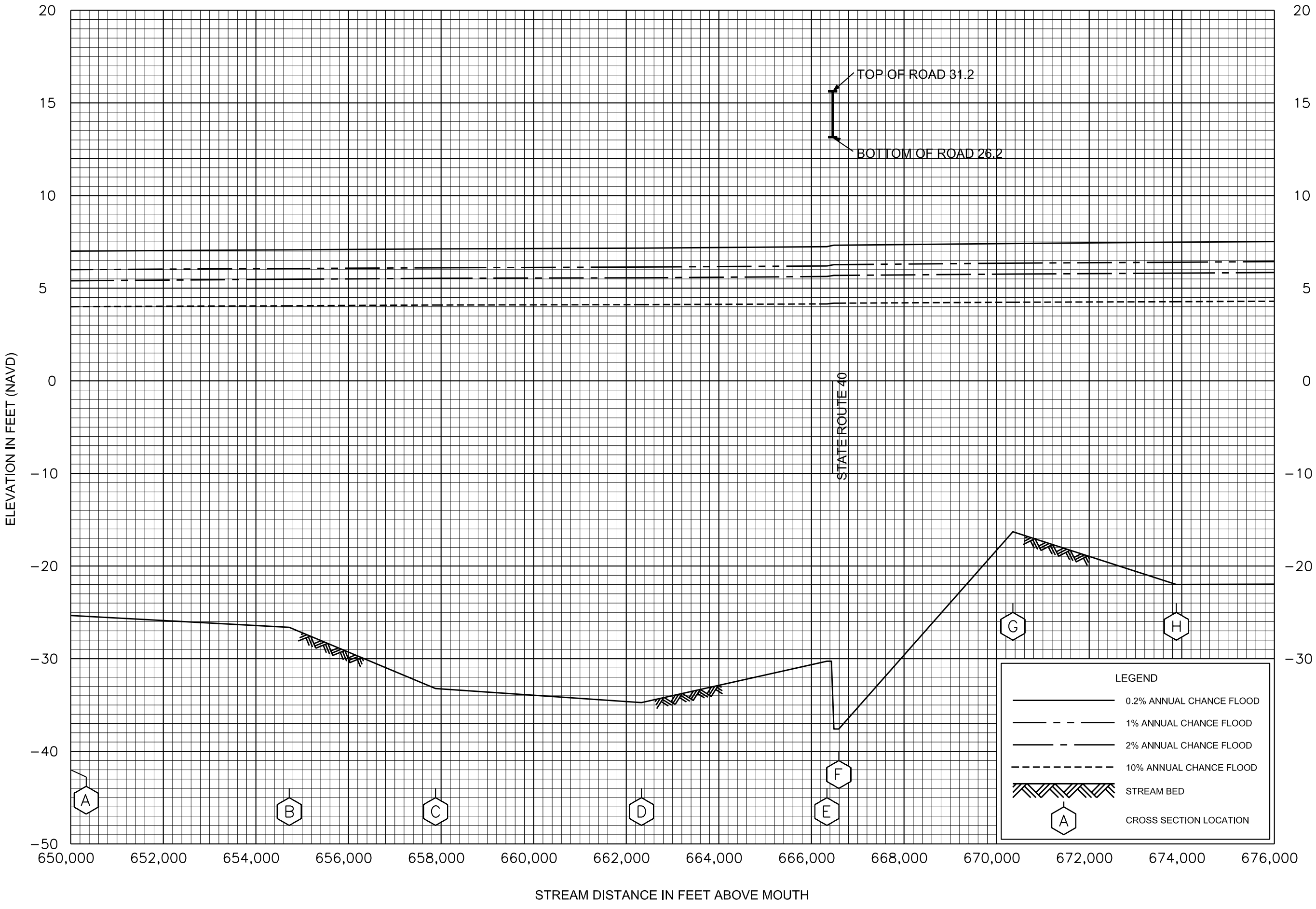
FLOOD PROFILES

ST. JOHNS RIVER

FEDERAL EMERGENCY MANAGEMENT AGENCY

LAKE COUNTY, FL
AND INCORPORATED AREAS

07P



FLOOD PROFILES

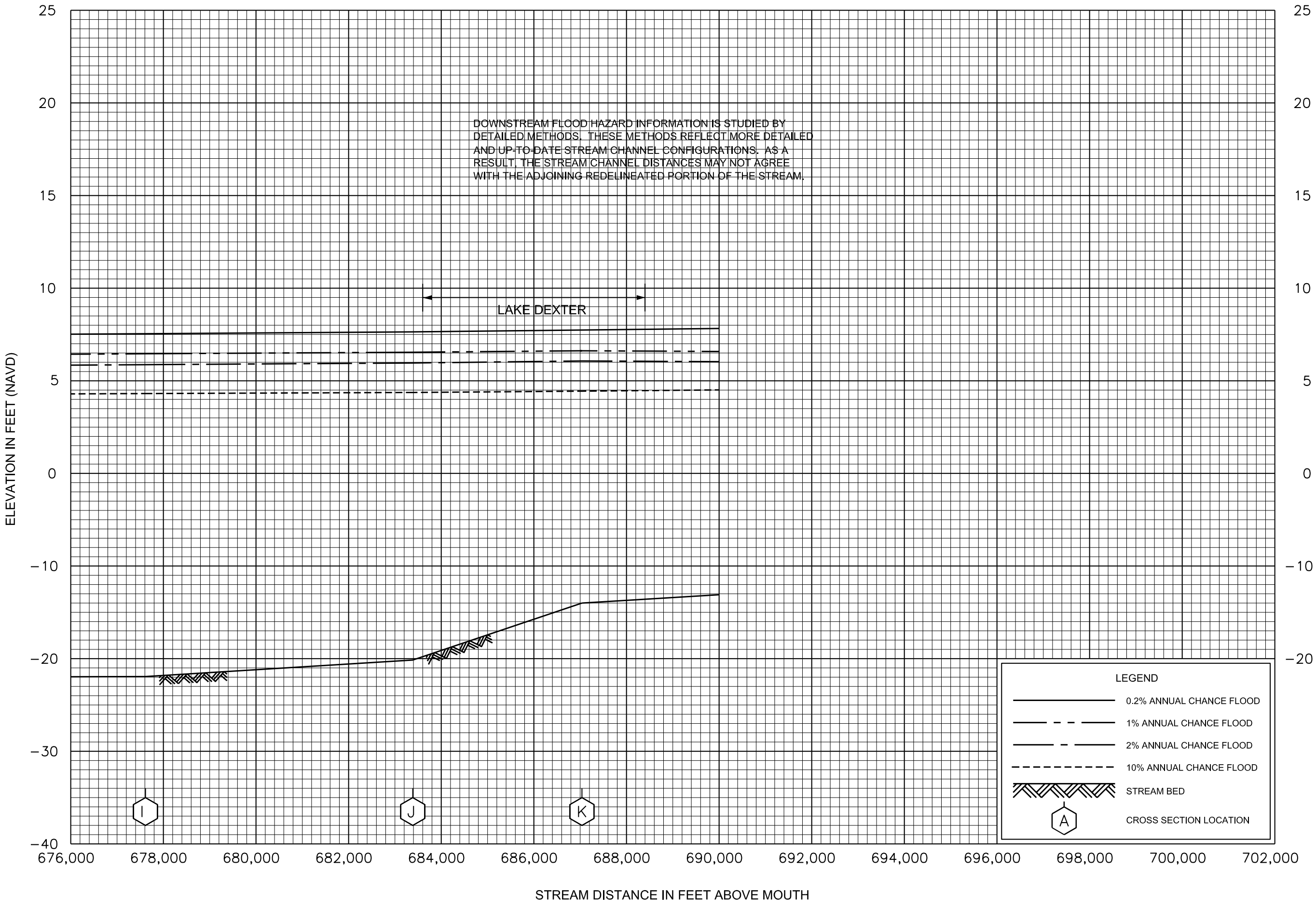
ST. JOHNS RIVER

FEDERAL EMERGENCY MANAGEMENT AGENCY

LAKE COUNTY, FL

AND INCORPORATED AREAS

08P



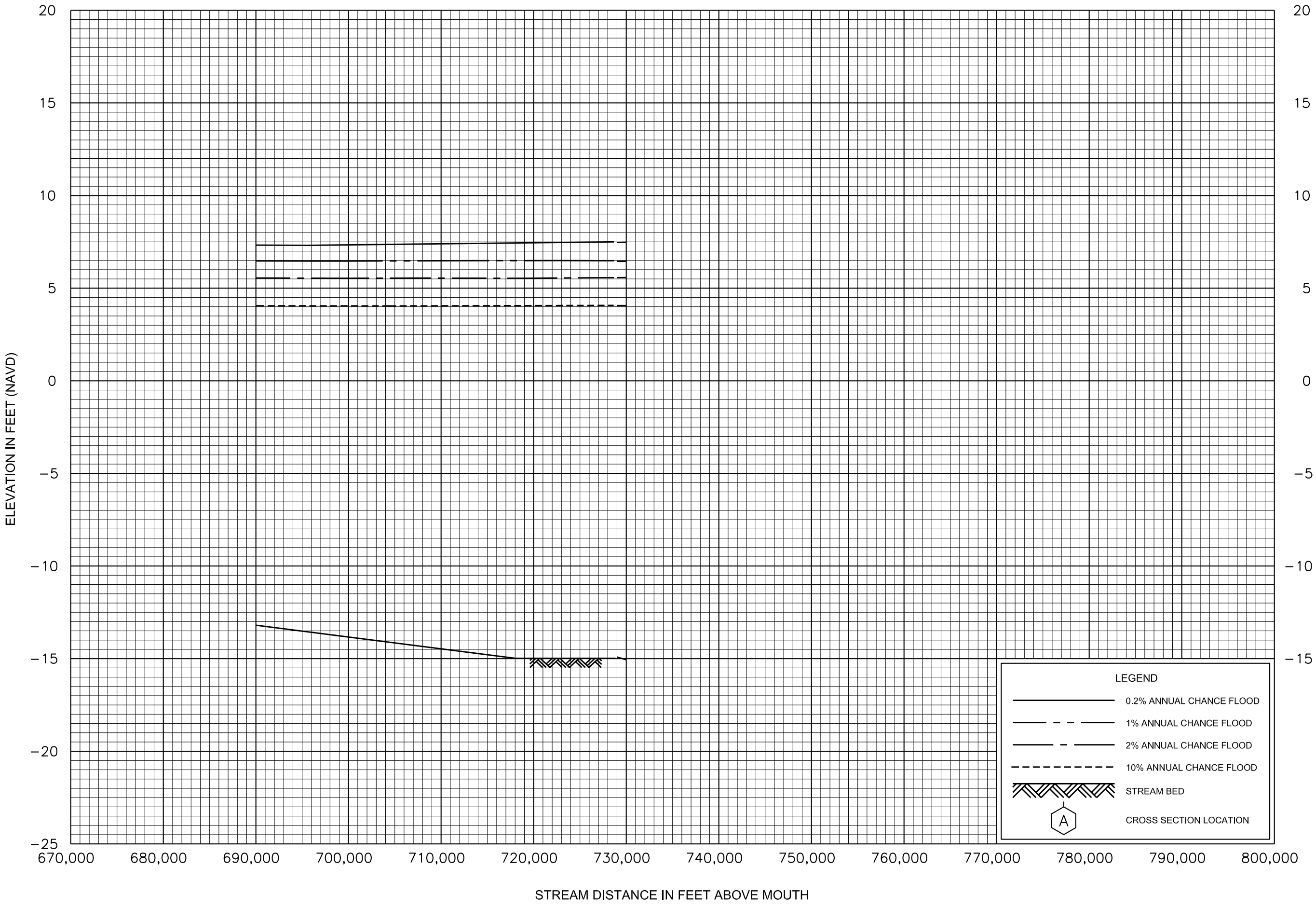
FLOOD PROFILES

ST. JOHNS RIVER

FEDERAL EMERGENCY MANAGEMENT AGENCY

LAKE COUNTY, FL
AND INCORPORATED AREAS

09P



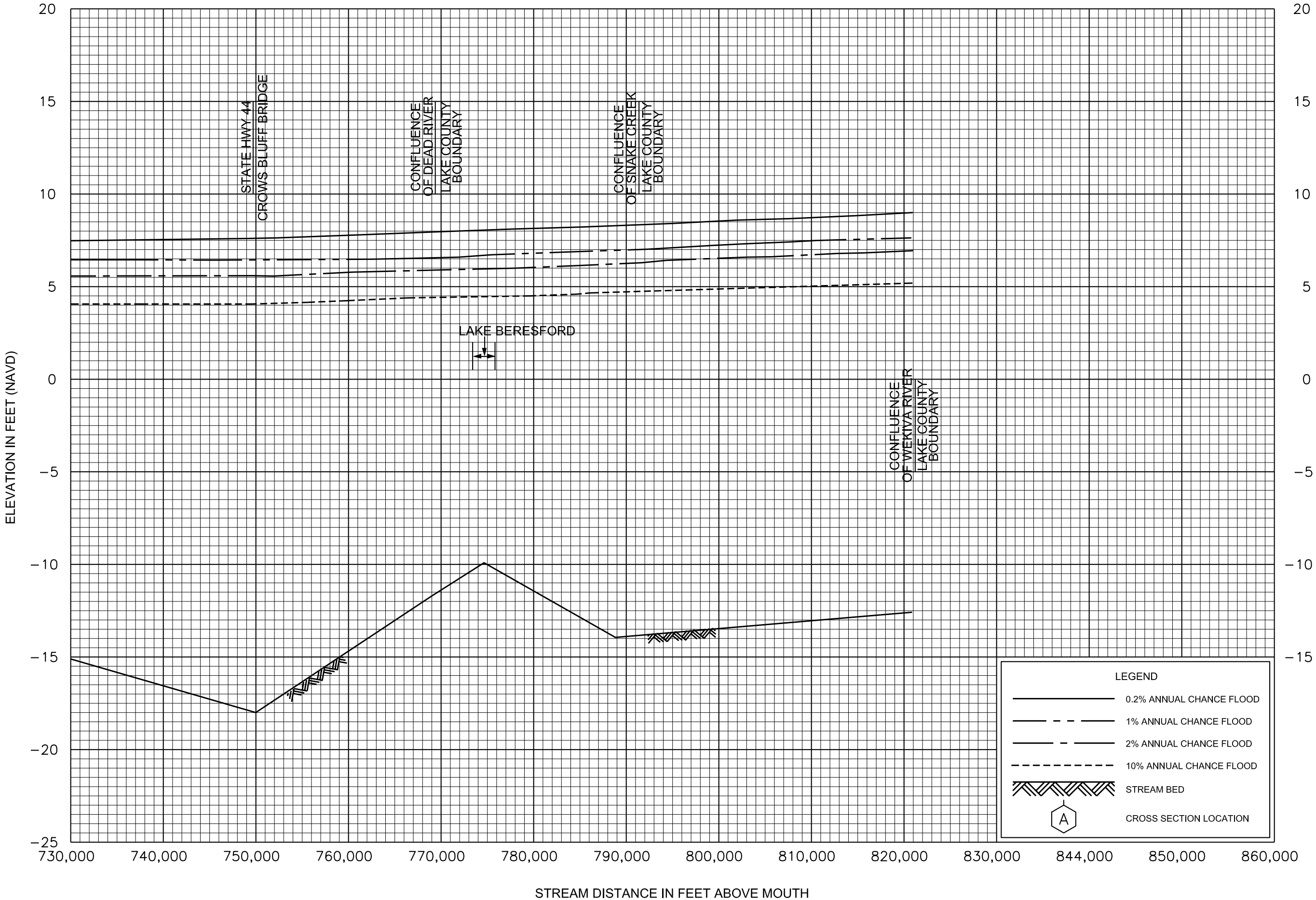
FLOOD PROFILES

ST. JOHNS RIVER

FEDERAL EMERGENCY MANAGEMENT AGENCY

LAKE COUNTY, FL

AND INCORPORATED AREAS

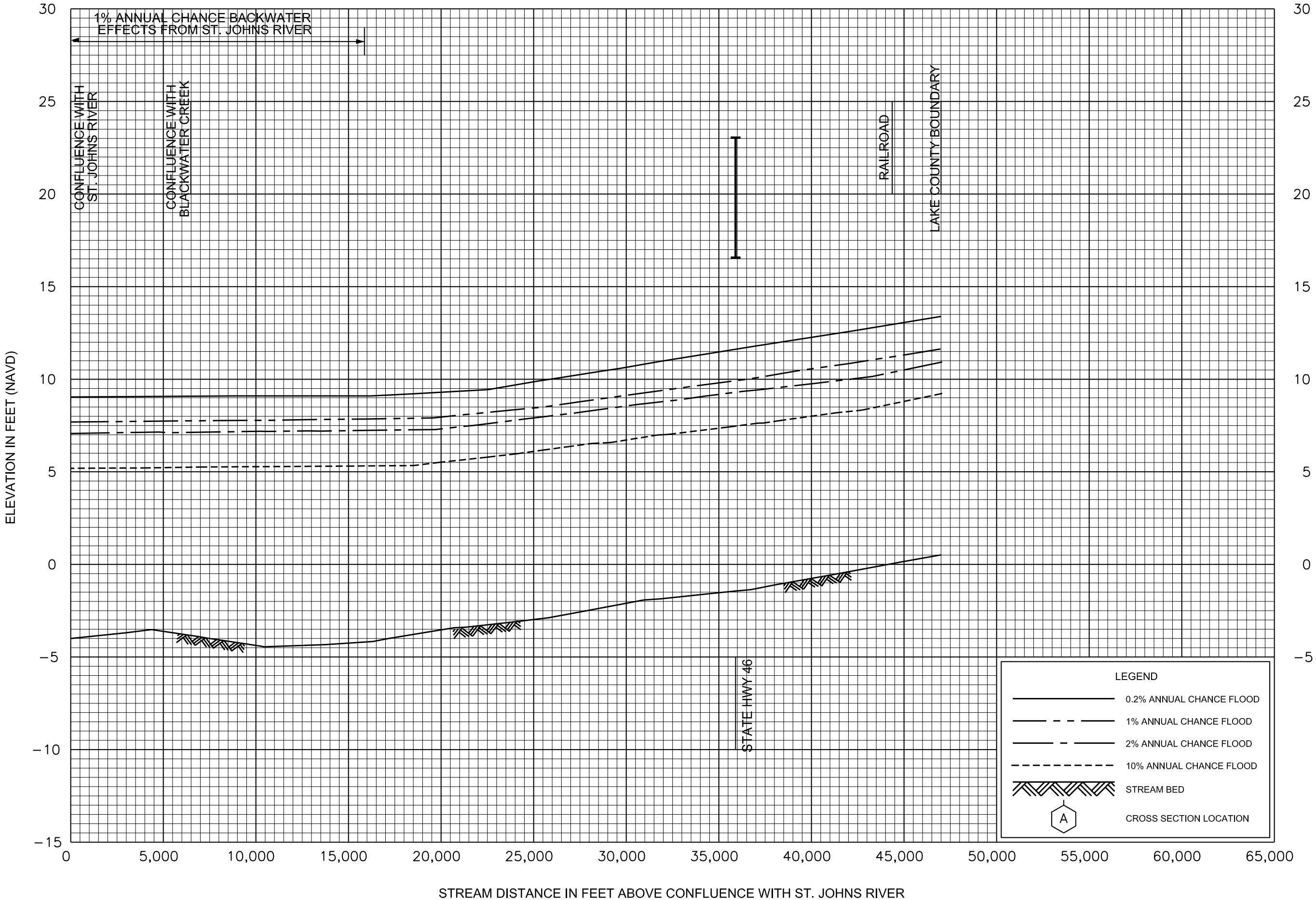


FLOOD PROFILES

ST. JOHNS RIVER

FEDERAL EMERGENCY MANAGEMENT AGENCY

LAKE COUNTY, FL
AND INCORPORATED AREAS

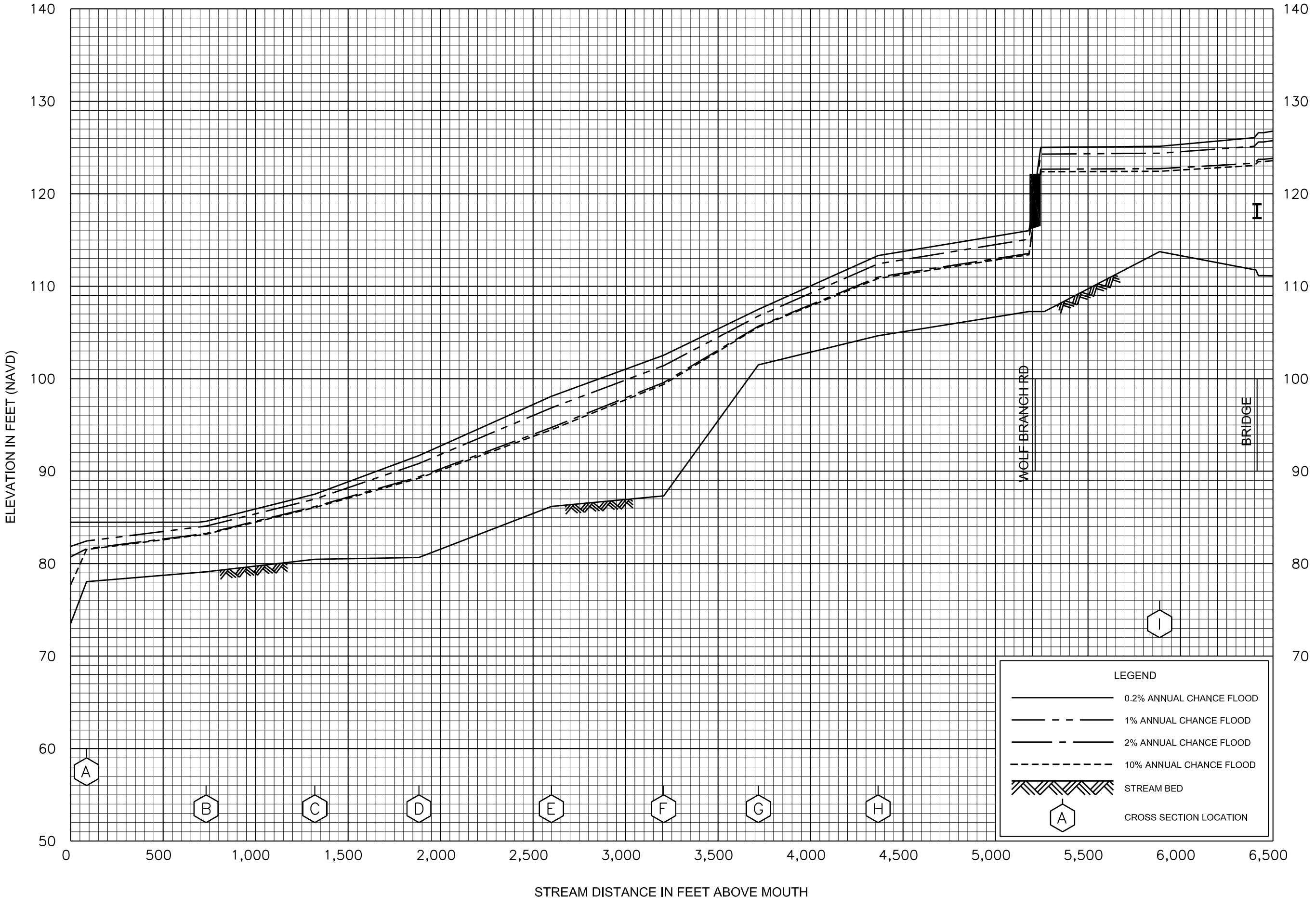


FLOOD PROFILES

WEKIVA RIVER

FEDERAL EMERGENCY MANAGEMENT AGENCY

LAKE COUNTY, FL
AND INCORPORATED AREAS



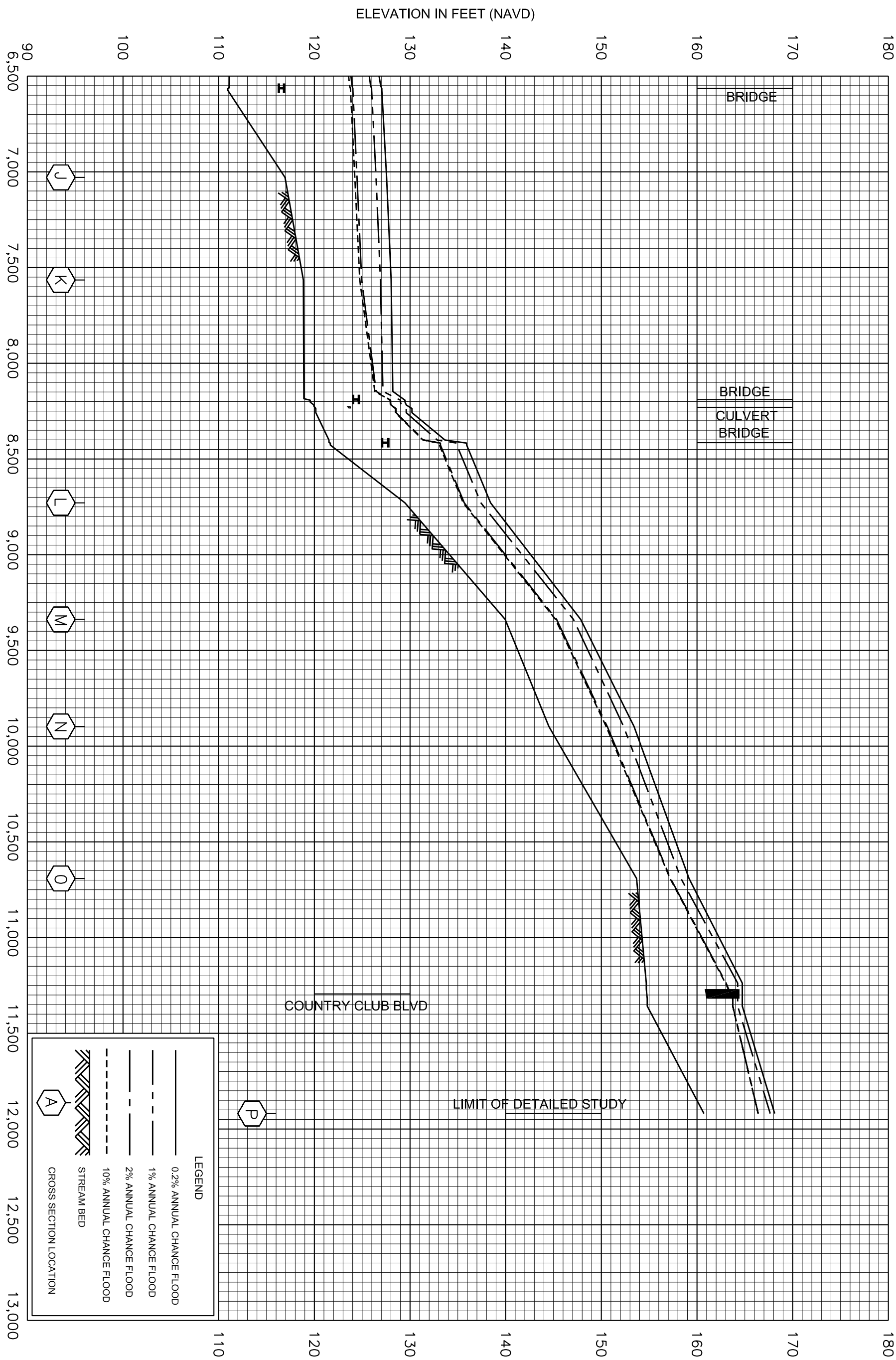
FLOOD PROFILES

WOLF BRANCH

FEDERAL EMERGENCY MANAGEMENT AGENCY

LAKE COUNTY, FL

AND INCORPORATED AREAS



FEDERAL EMERGENCY MANAGEMENT AGENCY

LAKE COUNTY, FL

AND INCORPORATED AREAS

FLOOD PROFILES

WOLF BRANCH