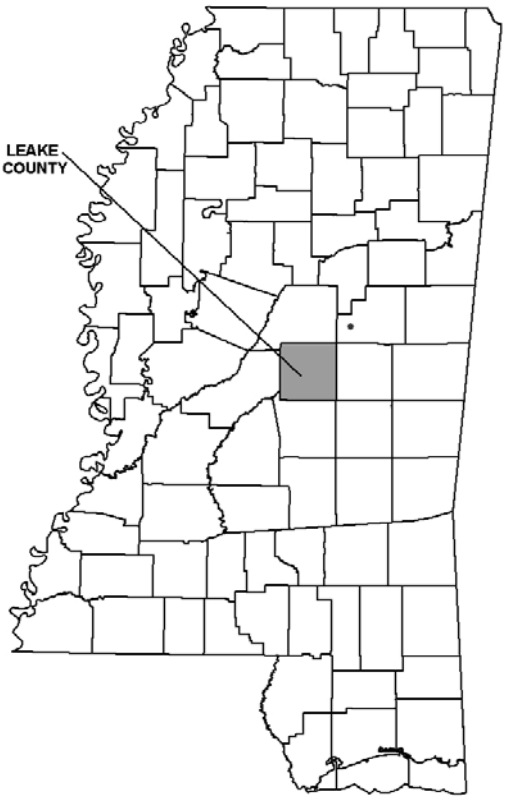
FLOOD INSURANCE STUDY

LEAKE COUNTY, MISSISSIPPI
AND INCORPORATED AREAS

COMMUNITY NAME	COMMUNITY NUMBER
CARTHAGE, CITY OF	280097
LEAKE COUNTY (UNINCORPORATED AREAS)	280293
LENA, TOWN OF	280204
PEARL RIVER VALLEY WATER SUPPLY DISTRICT	280338
WALNUT GROVE, TOWN OF	280098



PRELIMINARY

DEC 30 2009

Federal Emergency Management Agency

FLOOD INSURANCE STUDY NUMBER
28079CV000A

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.

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

Old Zone	New Zone
A1 through A30	AE
V1 through V30	VE
B	X
C	X

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.

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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 Leake County, including the City of Carthage; the Towns of Lena and Walnut Grove; the Pearl River Valley Water Supply District; and the unincorporated areas of Leake County (referred to collectively herein as Leake County), and 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. Please note that the Pearl River Valley Water Supply District is geographically located in Hinds, Leake, Madison, Rankin, and Scott Counties. The portion of the Pearl River Valley Water Supply District shown within Leake County is included in this FIS report. See the separately published Hinds, Scott, Madison, and Rankin Counties FIS reports and Flood Insurance Rate Maps (FIRMs) for flood-hazard information for the portion of the Pearl River Valley Water Supply District outside of Leake County.

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.

The hydrologic and hydraulic analyses for the September 15, 1989 study of the Leake County Unincorporated Areas were performed by the U.S. Geological Survey (USGS) for the Federal Emergency Management Agency (FEMA) under Inter-Agency Agreement No. EMW-85-E-1823, Project Order No. 13. The study was completed in January 1987.

The hydrologic and hydraulic analyses for this study were performed by AECOM Water and the State of Mississippi for the Federal Emergency Management Agency (FEMA), under Contract No. EMA-2007-CA-5774. This study was completed in October 2009.

Base map information shown on the Flood Insurance Rate Map (FIRM) was provided in digital format by the Statte of Mississippi and the U.S. Census Bureau. The digital orthoimagery was photogrammetrically compiled at a scale of 1:400 from aerial photography dated March 2006.

The digital FIRM was produced using the Mississippi State Plane Coordinate System, East Zone, FIPSZONE 2301. The horizontal datum was the North American Datum of 1983, GRS80 spheroid. Distance units were measured in U.S. feet.

1.3 Coordination

An initial Consultation Coordination Officers (CCO) meeting is held with representatives from FEMA, the State of Mississippi, the communities and the study contractor to explain the nature and purpose of a FIS, and to identify the streams to be studied by detailed methods. A final CCO meeting is held with representatives from FEMA, the communities and the study contractor to review the results of the study.

For the Sptember 15, 1989 study, a final CCO meeting was held on October 19, 1988. The results of the 1989 study of the Unincorporated Areas of Leake County were reviewed and accepted and was attended by representatives of the study contractor (USGS), FEMA and the community.

For this countywide FIS, an initial CCO meeting was held with the representatives from the impacted communities and the study contractor to explain the nature and purpose of a FIS, and to identify the streams to be studied by detailed methods on April 2, 2008. A final meeting, the Preliminary DFIRM Community Coordination (PDCC) was held on TBD to review the results of this study.

2.0 AREA STUDIED

2.1 Scope of Study

This FIS report covers the geographic area of Leake County, Mississippi, including the incorporated communities listed in Section 1.1.

No new detail studies have been performed for this countywide study. A section of Pearl River and Tuscolameta Creek were studied by redelineation methods.

Enhanced Approximate studies were performed along Crowder Creek, Pollard Creek Tributary 1 and Town Creek.

The Scope of Study for the Redelineated Streams and new Enhanced Approximate study streams are presented in Table 1, "Scope of Study."

Table 1. Scope of Study

Stream	Limits of Detailed and New Enhanced Approximate Study
Crowder Creek	From the confluence with North Canal to approximately 0.6 mile upstream of Crowder Creek Road.
Pollard Creek Tributary 1	From approximately 1,400 feet downstream of State Highway 16 to approximately 0.8 mile upstream of Jordan Road.

Table 1. Scope of Study

Stream	Limits of Detailed and New Enhanced Approximate Study
Town Creek	From approximately 1,000 feet downstream of State Highway 16 to approximately 0.6 mile upstream of Red Dog Road.

Approximate analyses were used to study those areas having a low development potential or minimal flood hazards. The scope and methods of study were proposed to, and agreed upon, by FEMA, Leake County and the Study Contractor.

2.2 Community Description

Leake County is located in the geographic center of Mississippi. The total land area contained within the county is 583 square miles. It is situated approximately 9 miles west of Meridian, Mississippi, and 50 miles east of Jackson, Mississippi. According to U.S. Census Bureau figures, the 2008 population for Leake County, Mississippi is estimated to be approximately 22,844 (Reference 1).

Leake County is bordered by four counties, Attala County to the north, Neshoba County to the east, Scott and Newton County to the south, and Madison County to the west. Its county seat is the City of Carthage. The county is served by the Illinois Central Gulf Railroad and State Highways 13, 16, 25, 35 and 43. Manufacturing, educational, health and social services and retail trade are mainstays of the economy.

The terrain may be described as gently rolling with moderately well-drained to poorly drained, silty soils. Vegetation in the drainage basins includes a wide variety of hardwoods and pines.

Leake County has a climate characterized by long, hot summers and short, mild winters and abundant rainfall which annually averages 57.3 inches. Temperatures range from an average of 43.8 ºF in January for the coldest month to an average of 80.8 ºF in July for the warmest month (Reference 2).

2.3 Principal Flood Problems

The USGS has operated three stream gages on the Pearl River in Leake County. The gaging station on the Pearl River at State Highway 35 near Carthage has been in operation since 1962. The U.S. Army Corp of Engineers (USACE) recorded the peak discharge and gage height at this site in 1938 and 1939. The two largest annual peak flows during this period of record occurred April 14, 1979 (elevation 343.94 feet North American Vertical Datum of 1988 (NAVD)) and May 22, 1983 (elevation 342.25 feet NAVD). These floods had recurrence intervals greater than 100 years at this gage. A historic peak at this site occurred in March 1902 (elevation 342.34 feet NAVD).

The USGS has operated a gaging station at the State Highway 16 crossing of Pearl River since 1928. The U.S. Weather Bureau recorded gage heights at the site from 1909 – 1958. The two largest annual peak flows during this period of record occurred April 14, 1979 (elevation 371.64 feet NAVD) and May 22, 1983 (elevation 369.94 feet NAVD). The flood

of April 1979 had a recurrence interval greater than 100 years. A historic peak at this site occurred in March 1902 (elevation 370.74 feet NAVD).

A stream gage was also operated by the USGS from 1937-1953 on Pearl River at State Highway 13. Highwater marks were surveyed by the USGS at the State Highway 13 crossing for several extreme floods from 1953 to the present and the USACE recorded the peak gage height at the site during the flood of March 1902 (elevation 329.84 NAVD). Two of the highest known gage heights occurred April 14, 1979 (elevation 331.64 feet NAVD) and May 22, 1983 (elevation 330.54 feet NAVD).

The floodplain of Tuscolameta Creek in the vicinity of State Highway 35 is approximately 1.5 miles wide. During the period 1926-1928, two canals, about 1 mile apart, were dug along the valley from a point about 17 miles upstream of State Highway 35 to a point about 7.3 miles downstream from the crossing. The canals are known as the North and South Canals. The canals and the original stream channel have intermingling flow at water-surface elevations greater than about 347 feet at the State Highway 35 crossing. The USGS has operated gages on the Old Tuscolameta Creek, North Canal and South Canal at the State Highway 35 crossing since 1939. Streamflow records are combined for the three channels and gage heights represent water-surface elevations at North Canal. The three largest annual peak flows at North Canal during the period of record occurred January 7, 1950 (elevation 355.64 feet NAVD), April 14, 1974 (elevation 352.84 feet NAVD) and March 6, 1983 (elevation 352.54 feet NAVD).

2.4 Flood Protection Measures

Flood protection measures are not known to exist within the study area.

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

Hydrologic analyses were carried out to establish peak discharge-frequency relationships for each flooding source studied by detailed methods affecting the community.

The discharge values used for the Pearl River study were based on a coordinated analysis of flood frequency of the Pearl River completed in 1980 by the USGS and USACE. Since the

drainage area at the upstream and downstream limits of the studied reach of the Pearl River is within 2 percent of the size of the drainage area at the Carthage gage, the discharge value of the 1-percent-annual-chance flood determined at the Carthage gage was used throughout the study reach.

For the Tuscolameta Creek study, the discharge of the 1-percent-annual-chance flood was determined using a log-Pearson Type III statistical distribution (Reference 3) of records of annual peak flow at the State Highway 35 gage. An independent estimate of the discharge of the 1-percent-annual-chance was determined at the State Highway 35 gage using regional regression equations developed by the USGS (Reference 4). A weighting procedure using the number of annual peak records at the gage and the equivalent years of record for the regional equations was used to estimate the 1-percent-annual-chance discharge for Tuscolameta Creek at the State Highway 35 gage that is used in this study. For Tuscolameta Creek at the downstream limit of the study, the 1-percent-annual-chance discharge was determined using regional regression equations for that location and the weighted 1-percent-annual-chance flood of Tuscolameta Creek at the State Highway 35 gage, transferred on the basis of drainage area. These two values were weighted on the basis of the difference in drainage area between the gaged site and the downstream study limit following USGS procedures (Reference 4).

Discharges for the 1-percent-annual-chance recurrence interval for all new enhanced approximate and approximate study streams in Leake County were determined using the Rural-East Region USGS regression equations for Mississippi as described in the USGS Water-Resources Investigations report 94-4002 (Reference 5), except for the urbanized sections of Pollard Creek Tributary 1 and Town Creek. The discharges for the urbanized sections of these streams were calculated using the national urban regression 7-parameter equations as described in USGS Water-Supply Paper (Reference 6).

Drainage areas along streams were determined using a flow accumulation grid developed from the USGS 10 meter digital elevation models and corrected National Hydrologic Data (NHD) stream coverage. Flow points along stream centerlines were calculated using the regression equations in conjunction with accumulated area for every 10 percent increase in flow along a particular stream.

Peak discharge-drainage area relationships for the selected recurrence intervals are shown in Table 2, Summary of Discharges.

Table 2. Summary of Discharges

FLOODING SOURCE AND LOCATION	DRAINAGE AREA (Square miles)	PEAK DISCHARGES (cfs) 10% Annual Chance	2% Annual Chance	1% Annual Chance	0.2% Annual Chance
CROWDER CREEK					
At the confluence with Tuscolameta Creek	4.9	*	*	2,830	*
Approximately 0.9 mile upstream of the confluence with Tuscolameta Creek	1.8	*	*	1,388	*
Approximately 0.5 mile downstream of State Highway 35	1.2	*	*	1,077	*

Table 2. Summary of Discharges

FLOODING SOURCE AND LOCATION	DRAINAGE AREA (Square miles)	PEAK DISCHARGES (cfs) 10% Annual Chance	2% Annual Chance	1% Annual Chance	0.2% Annual Chance
Approximately 680 feet downstream of State Highway 35	1.0	*	*	988	*
Approximately 750 feet upstream of Crowder Creek Road	0.5	*	*	740	*
PEARL RIVER					
Approximately 1.0 mile downstream of State Highway 35	1,370	*	*	61,300	*
At State Highway 35	1,350	*	*	61,300	*
POLLARD CREEK TRIBUTARY 1					
Approximately 0.5 mile downstream of State Highway 16	1.3	*	*	1,226	*
Approximately 1,080 feet downstream of Jordan Road	0.6	*	*	650	*
TOWN CREEK					
Approximately 0.5 mile downstream of State Highway 16	8.9	*	*	3,961	*
Approximately 550 feet downstream of State Highway 16	8.5	*	*	3,278	*
Approximately 950 feet upstream of Cotten Boulevard	7.4	*	*	3,078	*
Approximately 0.5 mile upstream of Red Dog Road	5.6	*	*	2,703	*
TUSCOLAMETA CREEK					
Approximately 0.5 mile downstream of Illinois Central Railroad	481	*	*	51,000	*
At State Highway 35	411	*	*	42,400	*

*Data not available

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 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.

Using data from the gage on Pearl River at State Highway 16 and high-water marks surveyed on the Pearl River near State Highway 13, flood profiles for the large floods of 1902, 1938, December 1961, April 1974, April 1979 and May 1983 were determined. The slopes compared favorably among the flood profiles throughout the reach.

Using an average of these slopes, the elevations of the 1-percent-annual-chance flood were determined by extending the elevation of the 1-percent-annual-chance flood at State Highway 35 estimated from the stage-discharge relationship for the Carthage gage station.

The elevation of the 1-percent-annual-chance flood on Tuscolameta Creek at State Highway 35 was estimated from the stage-discharge relationship for the gage station at that site. High-water marks at the Tuscolameta Creek gage at State Highway 35 and at the State Highway 487 crossing were documented for floods on March 6, 1983 and May 21, 1983. The average slope for these two floods was used to extend the 1-percent-annual-chance elevation downstream of the limit of study.

Cross section data for streams that have been studied by enhanced approximate methods were obtained by field surveys. All bridges and culverts were field surveyed to obtain elevation data and structural geometry. Cross sections were located at close intervals upstream and downstream of bridges and culverts in order to compute significant backwater effects of these structures.

The locations of selected cross sections used in the hydraulic analyses are shown on the Flood Profiles (Exhibit 1).

Roughness coefficients (Manning's "n") for the computations were estimated on the basis of field inspection. The roughness coefficients ranged from 0.046 to 0.051 for the main channel and 0.05 to 0.13 for the overbank areas.

Analyses of the hydraulic characteristics of flooding from the sources studied by enhanced approximate and approximate methods were carried out to provide estimates of the elevations of floods of the selected recurrence intervals.

Water-surface profiles were computed for enhanced approximate and approximate study streams through the use of the U.S. Army Corps of Engineers HEC-RAS version 3.1.3 computer program (Reference 7). Water surface profiles were produced for the 1-percent-annual-chance storms for enhanced approximate and approximate studies.

The enhanced approximate and approximate study methodology used Watershed Information SystEm (WISE) (Reference 8) as a preprocessor to HEC-RAS. Tools within WISE allowed the engineer to verify that the cross-section data was acceptable. The WISE program was used to generate the input data file for HEC-RAS. Then HEC-RAS was used to determine the flood elevation at each cross section of the modeled stream. No floodway was calculated for streams studied by approximate methods.

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.

Floodplains were mapped to include backwater effects that govern each flooding source near its downstream extent. Floodplains were reviewed for accuracy and adjusted as necessary.

All qualifying bench marks within a given jurisdiction that are cataloged by the National Geodetic Survey (NGS) and entered into the National Spatial Reference System (SRS) as First or Second Order Vertical and have a vertical stability classification of A, B, or C are shown and labeled on the FIRM with their 6-character NSRS Permanent Identifier.

Bench Marks cataloged by the NGS and entered into the NSRS vary widely in vertical stability classification. NSRS vertical stability classifications are as follows:

- Stability A: Monuments of the most reliable nature, expected to hold position/elevation well (e.g., mounted in bedrock)
- Stability B: Monuments which generally hold their position/elevation well (e.g., concrete bridge abutment)
- Stability C: Monuments which may be affected by surface ground movements (e.g., concrete monument below frost line)
- Stability D: Mark of questionable or unknown vertical stability (e.g., concrete monument above frost line, or steel witness post)

In addition to NSRS bench marks, the FIRM may also show vertical control monuments established by a local jurisdiction; these monuments will be shown on the FIRM with the appropriate designations. Local monuments will only be placed on the FIRM if the community has requested that they be included, and if the monuments meet the aforementioned NSRS inclusion criteria.

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

It is important to note that 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 this FIS and FIRM. Interested individuals mat contact FEMA to access this data.

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 in use for newly created or revised FIS reports and FIRMs was the National Geodetic Vertical Datum of 1929 (NGVD 29). With the finalization of the North American Vertical Datum of 1988 (NAVD 88), many FIS reports and FIRMs are being prepared using NAVD 88 as the referenced vertical datum.

Flood elevations shown in this FIS report and on the FIRM are referenced to NAVD88. These flood elevations must be compared to structure and ground elevations referenced to the same vertical datum. The datum conversion between NGVD29 to NAVD88 for Leake County is -0.06 feet. It is important to note that adjacent counties may be referenced to NGVD 29. This

may result in differences in base flood elevations across county lines.

For more information on NAVD 88, see Converting the National Flood Insurance Program to the North American Vertical Datum of 1988, FEMA Publication FI-20/June 1992, or contact the Vertical Network Branch, National Geodetic Survey, Coast and Geodetic Survey, National Oceanic and Atmospheric Administration, Rockville, Maryland 20910 (Internet address http: 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, though none are mapped in Leake County.

For all studied streams, the 1-percent-annual-chance floodplain boundaries have been delineated using the flood elevations determined at each cross section. Between cross sections, the boundaries were interpolated using 4-foot contours developed from 10 meter digital elevation models (DEMs) acquired from the Mississippi Automated Resource Information System (Reference 9).

The 1-percent-annual-chance floodplain boundaries are shown on the FIRM (Exhibit 2). On this map, the 1 percent-annual-chance floodplain boundary corresponds to the boundary of the areas of special flood hazards (Zones A, AE and X). 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 streams studied by enhanced approximate and approximate method, only the 1-percent-annual-chance floodplain boundary is shown on the FIRM.

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 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.

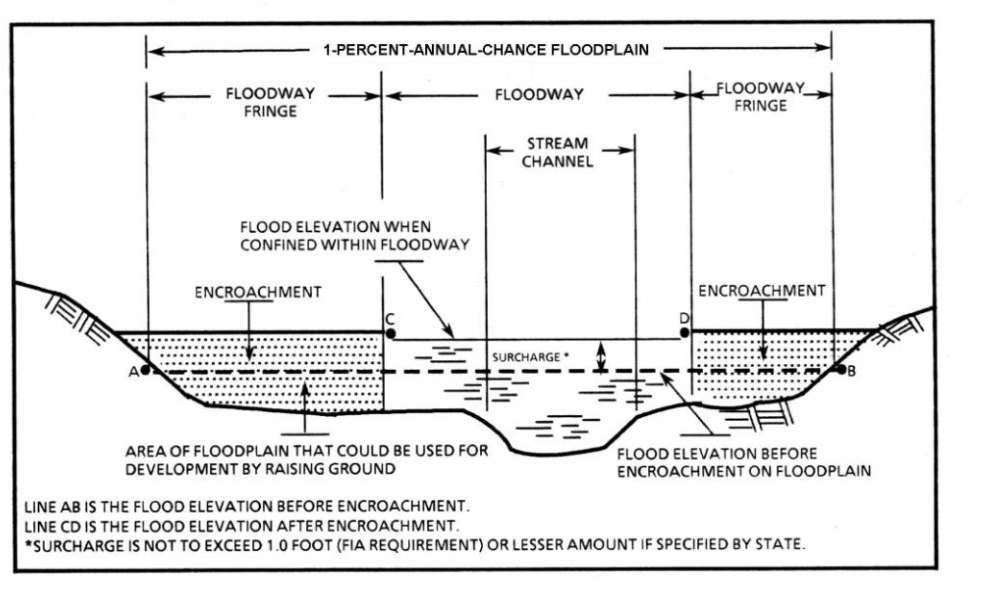

Figure 1. Floodway Schematic

No floodways were computed for this community. Floodways have not been computed for streams studied by enhanced approximate and approximate methods because of limitations in the study methodology. Along streams where floodways have not been computed, the community must ensure that the cumulative effect of development in the floodplain will not cause more than a 1.0-foot increase in the base flood elevations at any point within the community.

5.0 INSURANCE APPLICATION

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.

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-percent-annual-chance floodplains used in the hydraulic analyses.

The countywide FIRM presents flooding information for the entire geographic area of Leake County. Previously, FIRMs were prepared for each incorporated community and the unincorporated areas of the County identified as flood-prone. This countywide FIRM also includes flood-hazard information that was presented separately on Flood Boundary and Floodway Maps (FBFMs), where applicable. Historical data relating to the maps prepared for each community are presented in Table 3, "Community Map History."

COMMUNITY NAME	INITIAL IDENTIFICATION	FLOOD HAZARD BOUNDARY MAP REVISIONS DATE	FIRM EFFECTIVE DATE	FIRM REVISIONS DATE
Carthage, City of	June 7, 1974	March 26, 1976	August 19, 1985	TBD
Leake County Unincorporated Areas	May 20, 1977		September 15, 1989	TBD
Lena, Town of	October 25, 1974		TBD	
Pearl River Valley Water Supply District	August 11, 1978		March 2, 1993	March 17, 2010 TBD
Walnut Grove, Town of	June 28, 1974		TBD	

TABLE 3

FEDERAL EMERGENCY MANAGEMENT AGENCY

LEAKE COUNTY, MS
AND INCORPORATED AREAS

COMMUNITY MAP HISTORY

7.0 OTHER STUDIES

The Flood Insurance Rate Maps for Attala, Madison, Neshoba, Newton, and Scott Counties are in agreement with this study.

Information pertaining to revised and unrevised flood hazards for each jurisdiction within Leake County has been compiled into this FIS. Therefore, this FIS report supersedes or is compatible with all previously printed FIS reports, FIRMs, and Flood Hazard Boundary Maps (FBFMs) for all jurisdictions within Leake County, and should be considered authoritative for the purposed of the NFIP (References 10-16).

8.0 LOCATION OF DATA

Information concerning the pertinent data used in the preparation of this FIS can be obtained by contacting FEMA, Federal Insurance and Mitigation Administration, Koger Center - Rutgers Building, 3003 Chamblee Tucker Road, Atlanta, Georgia 30341.

Future revisions may be made that do not result in the republishing of the Flood Insurance Study report. To ensure that any user is aware of all revisions, it is advisable to contact the map repository of flood hazard data located in the community.

9.0 BIBLIOGRAPHY AND REFERENCES

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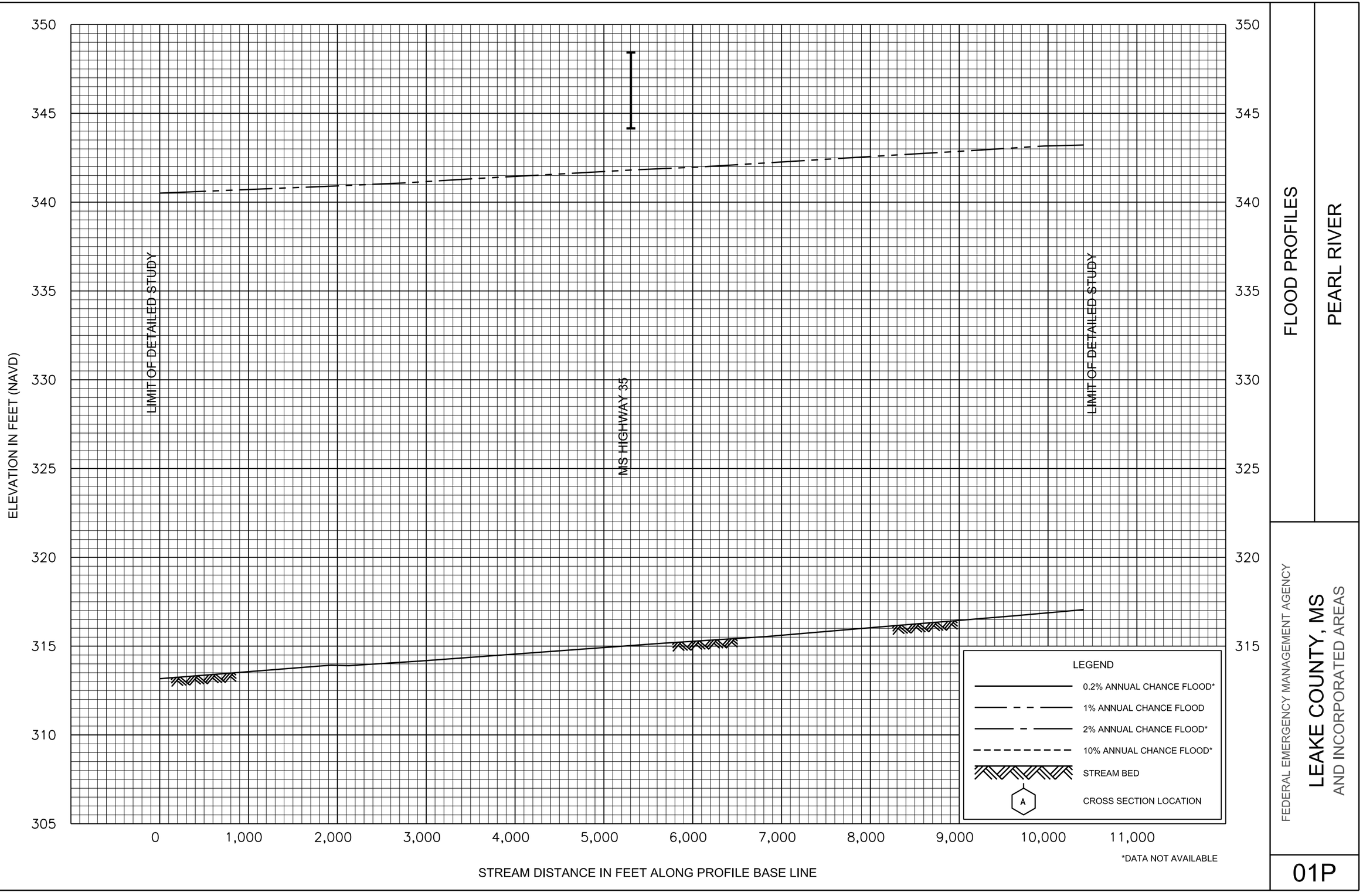

FLOOD PROFILES

PEARL RIVER

FEDERAL EMERGENCY MANAGEMENT AGENCY

LEAKE COUNTY, MS
AND INCORPORATED AREAS

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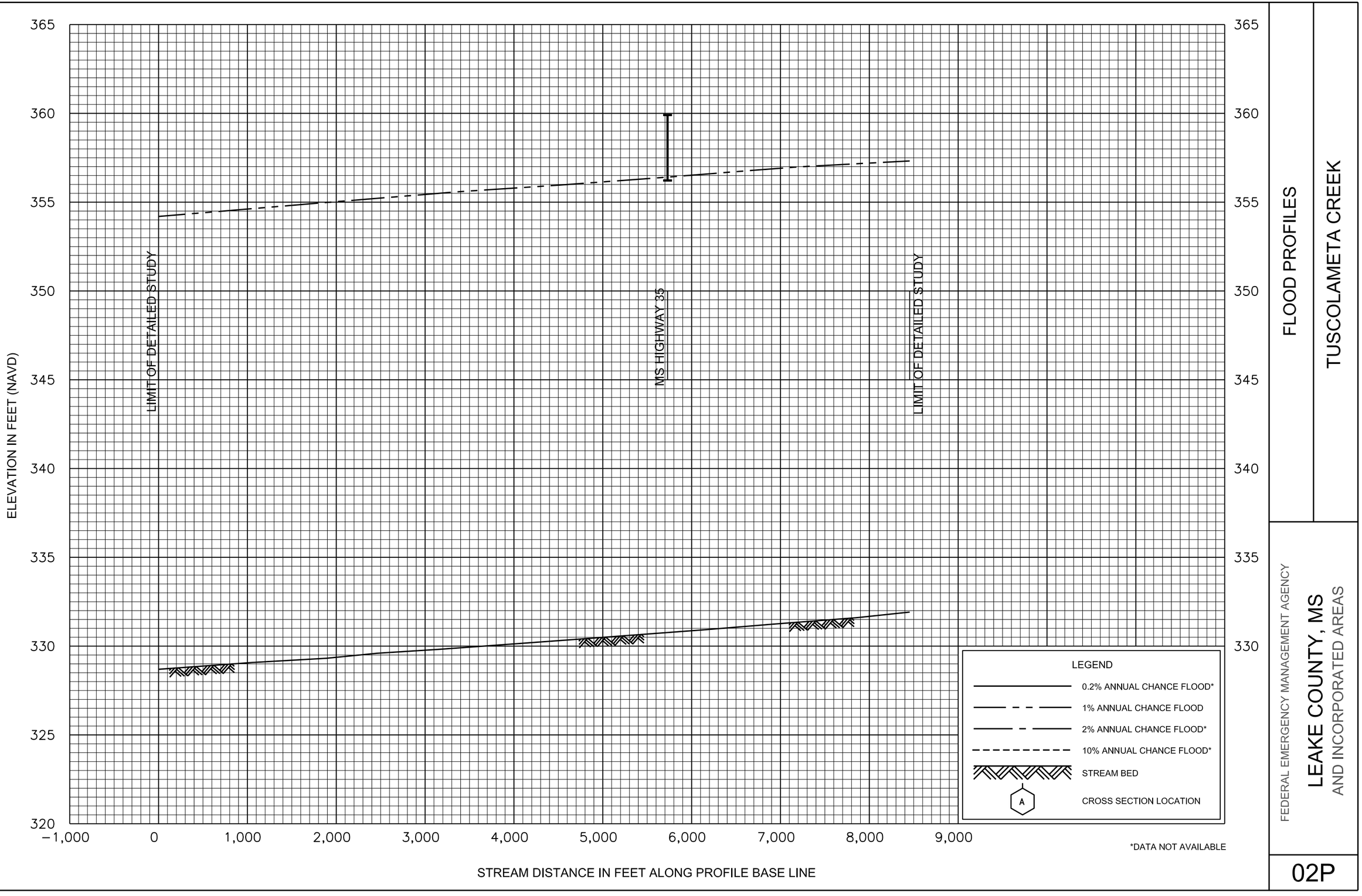

FLOOD PROFILES

TUSCOLAMETA CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY

LEAKE COUNTY, MS
AND INCORPORATED AREAS

02P