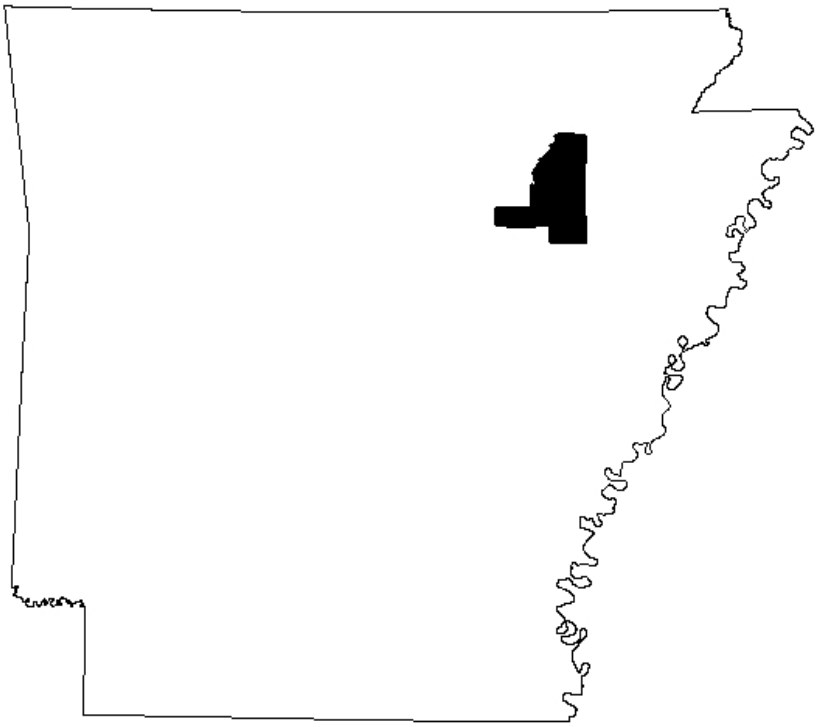
FLOOD INSURANCE STUDY

JACKSON COUNTY, ARKANSAS
AND INCORPORATED AREAS

COMMUNITY NAME	COMMUNITY NUMBER
AMAGON, CITY OF	050097
BEEDEVILLE, TOWN OF	050098
CAMPBELL STATION, CITY OF	050099
DIAZ, CITY OF	050100
GRUBBS, TOWN OF	050101
JACKSON COUNTY UNINCORPORATED AREAS	050096
JACKSONPORT, TOWN OF	050102
NEWPORT, CITY OF	050103
SWIFTON, CITY OF	050104
TUCKERMAN, CITY OF	050105
TUPELO, CITY OF	050106
WELDON, TOWN OF	050486



Effective _____

Federal Emergency Management Agency

Flood Insurance Study Number
05067CV000A

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

This preliminary revised Flood Insurance Study contains profiles presented at a reduced scale to minimize reproduction costs. All profiles will be included and printed at full scale in the final published report.

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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FLOOD INSURANCE STUDY
JACKSON COUNTY AND INCORPORATED AREAS, ARKANSAS

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 Jackson County, including the Cities of Amagon, Campbell Station, Diaz, Newport, Swifton, Tuckerman, and Tupelo; the Towns of Beedeville, Grubbs, Jacksonport and Weldon; and the unincorporated areas of Jackson County (referred to collectively herein as Jackson 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.

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.

This FIS was prepared to include the unincorporated areas of, and incorporated communities within, Jackson County in a countywide format. Information on the authority and acknowledgments for each jurisdiction included in this countywide FIS, as compiled from their previously printed FIS reports, is shown below.

The hydrologic and hydraulic analyses for the unincorporated areas of Jackson County in this study represent a revision to the original analyses prepared by Garver & Garver, Inc., for the Federal Emergency Management Agency (FEMA) under Contract No. EMW-C-0063. The work for the original study was completed in February 1981. A revision was prepared by the Little Rock District of the United States Army Corps of Engineers (USACE) under agreement with FEMA. The work for that revision was completed in February 1987.

The original hydrologic and hydraulic analyses for the Cities of Amagon and Tuckerman, and the Town of Grubbs were performed by USACE, Memphis District, and completed by the USACE, Little Rock District, for FEMA, under Inter-Agency Agreement No. H-18-78, Project Order No.9. That work was completed in November 1979, and covered all significant flooding sources within the Cities and the Town.

The hydrologic and hydraulic analyses for the City of Diaz in this study represent a revision of the original analysis prepared by the Little Rock District of the USACE for

FEMA under Inter-Agency Agreement No. H-18-78, Project Order No.9, Amendment No. 1. The hydrologic and hydraulic analyses for the White River were prepared by the USACE, in a revision that was completed in February 1987.

The hydrologic and hydraulic analyses for the Town of Jacksonport in this study represent a revision of the original analyses prepared by the Little Rock District of the USACE for FEMA, under Inter-Agency Agreement No. H-18-78, Project Order No.9, Amendment No.1. The work for that study was completed in March 1979. The hydrologic and hydraulic analyses for the White River were prepared by the Little Rock District of the USACE under agreement with FEMA, in a revision that was completed in February 1987.

The hydrologic and hydraulic analyses for the City of Newport in this study represent a revision of the original analyses prepared by the Little Rock District of USACE for FEMA, under Inter-Agency Agreement No. H-18-79, Project Order No.9, Amendment No.1. The work for the original study was completed in September 1980. Revised hydrologic and hydraulic analyses for Village Creek Outfall Ditch were prepared by the Little Rock District of USACE under agreement with FEMA in a revision that was completed in January 1989.

For this first-time countywide restudy, the redelineation of Special Flood Hazard Areas (SFHAs) was performed by Comprehensive Flood Risk Resources and Response Joint Venture (CF3R), for FEMA under contract number EMT-2002-CO-0049. This study was completed in January 2010.

The coordinate system used for the production of this FIRM is Arkansas State Plane North Zone (FIPS Zone 0301). The Horizontal Datum is NAD1983, Lambert Conformal Conic. 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 the flood hazard information shown on the FIRM.

1.3 Coordination

The dates of the initial and final Consultation Coordination Officer (CCO) meetings held for the specified incorporated communities within Jackson County and unincorporated areas are shown in the following tabulation.

Community Name	**Initial CCO Date**	**Final CCO Date**
City of Amagon	July 7, 1977	April 14, 1980
City of Diaz	July 7, 1977	November 1, 1979
Town of Grubbs	July 7, 1977	April 14, 1980
Town of Jacksonport	July 7, 1977	September 26, 1981
City of Newport	July 7, 1977	May 6, 1981
City of Tuckerman	July 7, 1977	February 11, 1980
Unincorporated Areas	June, 1979	September, 1981

For this first time countywide study, the initial Consultation Coordination Officer (CCO) meeting for this countywide FIS was held on April 14, 2008, and attended by representatives of FEMA, CF3R, Jackson County, Town of Beedeville, Cities of Newport, Diaz, Amagon, Jacksonport, Tuckerman and Grubbs, and the White River and Newport Levee Districts.

The results of the study were reviewed at the final CCO meeting held on _____, and attended by representatives of _____. All problems raised at that meeting have been addressed in this study.

2.0 AREA STUDIED

2.1 Scope of Study

This FIS report covers the geographic area of Jackson County, Arkansas, including the incorporated communities listed in Section 1.1.
The areas studied by detailed methods during the original FIS studies were selected with priority given to all known flood hazards and areas of projected development or proposed construction through January 2009. All the detailed-study streams were redelineated during the current revision. No new studies or re-studies of flood hazards were performed for any of the streams in Jackson County.

TABLE 1 – SCOPE OF STUDY

Stream	Limits of Detailed Study
Borrow Ditch Ponding Areas	Within the City of Newport corporate limits
Cache River	From a point approximately 105 miles above confluence with White River to a point approximately 117 miles above confluence.
Maple Ditch	From State Highway 225 to U.S. Highway 67
Newport Lake	From a point 0.03 mile above Newport Levee Outlet Culvert to a point 3.11 miles above Newport Levee Outlet Culvert
Swan Pond Ditch	From its mouth to State Highway 37
Swan Pond Tributary	From its mouth to State Highway 37
Tuckerman Ditch	From its mouth to the confluence of Watson Ditch
Village Creek	From State Street to State Highway 37
Village Creek Outfall Ditch	From a point 1.09 miles above the confluence with Village Creek to a point 2.33 miles above the confluence with Village Creek
Watson Ditch	From the confluence with Tuckerman Ditch to a approximately 0.62 mile above the confluence with Tuckerman Ditch
White River	From approximately River Mile 234 to approximately River Mile 267.5

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 and the communities. The floodplain boundaries for all Zone A streams in Jackson County were refined to match best available topographic information. Table 2 below lists the streams in Jackson County that were studied by approximate methods.

TABLE 2: STREAMS STUDIED BY APPROXIMATE METHODS

Bennett Branch	Departee Creek	Locust Creek Ditch	Taylor Bay
Black River	DeView Bayou	Long Branch	Tiger Ditch
Blue Creek	Eight Mile Creek	Lost Branch	Toms Creek
Browns Creek Ditch	Fussy Branch	M R Branch	Tuckerman Ditch
Bullock Branch	Glaise Creek	May Branch Lateral	Turkey Slough
Burns Creek	Gum Pond Ditch	Mill Creek	Village Creek
Cache River	Harley Anderson Ditch	Mud Slough	Whippoorwill Branch
Campbell Ditch	Hatchet Ditch	Oats Creek	White River
Caplener Branch	Hickman Branch	Overcup Slough	Willow Creek
Cattail Creek	Hogpen Slough	Piney Creek	Willow Ditch
Cow Lake Ditch	Hurricane Branch	Pompeys Ditch	Willow Slough
Cypress Creek Ditch	Jack Creek	Running Water Creek	Worthington Slough
Deadman Slough	Lick Pond Slough	Skillet Ditch	
Deep Slough	Little Cow Lake	Strawberry River	

2.2 Community Description

Jackson County, Arkansas is located in northeastern Arkansas, approximately 90 miles northeast of Little Rock. The county encompasses an area of 634 square miles. Jackson County is bordered by Independence and White Counties to the west; Lawrence County to the north; Woodruff County to the south; and Craighead, Poinsett, and Cross Counties to the east.

The White River, U. S. Highway 67, the Missouri-Pacific Railroad, and several state and county roads serve as the major transportation routes in the county with State Highway 14 crossing the county from east to west, and U.S. Highway 67 running from north to south. Jackson County was named after Andrew Jackson and established in 1829. The location of Jackson County near the White River has aided the commercial development of the county. Numerous industries and commercial establishments, such as lumber companies, manufacturers, and construction firms are located near the City of Newport. It experienced steady growth reaching a population of 21,264 in 1980, however, the population declined by 4,328 between 1980 and 2008, according to the U.S. Census Bureau's 2008 population estimate (References 1 & 2).

The City of Amagon is located in the eastern part of Jackson County, about 10 miles southeast of the City of Newport along State Highway 14 and near the Cache River. The 2000 census estimated the population of Amagon at 95 (References 2 and 3). There are a few commercial structures in the city and adjacent areas with development in Amagon almost entirely residential. The Cache River flows in a southerly direction about 2 miles west of the city. State Highway 14 runs east and west through Amagon and State Highway 37 extends south of the city. The land slopes gently to the west and has total relief within the corporate limits of about 5 feet (Reference 4).

The Town of Beedeville is located in the southeastern part of Jackson County, about 15 miles southeast of the City of Newport along State Highway 37, near the Cache River.

The 2000 census estimated the population of Beedeville at 105 (Reference 3). There are a few commercial structures in the city and adjacent areas with development in Beedeville almost entirely residential. Eight Mile Creek flows in a westerly direction just north of the town, and the Cache River flows in a southerly direction about 2 miles west of the town. State Highway 37 runs north and south through the town. The land slopes gently to the west toward the Cache River.

The City of Campbell Station is located in the central part of Jackson County, about 3 miles north of the City of Newport along State Highway 67, near Campbell Lake and Village Creek. The 2000 census estimated the population of Campbell Station at 228 (Reference 5). There are a few commercial structures in the city and adjacent areas with development in Campbell Station almost entirely residential. Campbell Lake and Village Creek flow in a southerly direction about 1 mile east of the city.

The City of Diaz is located in the central portion of Jackson County, near the confluence of the White and Black Rivers. It is bordered by the City of Newport to the south and east, the City of Campbell Station to the north, and the unincorporated areas of Jackson County to the northwest. Most of the developed areas in Diaz are located on the generally high ground that forms the divide between the Black River and Village Creek, which enters the White River downstream of the City of Newport. The 2000 population of the city was 1,284 (Reference 6). U. S. Highways 67 and 17, State Highway 18, and the Union Pacific Railroad provide transportation facilities to the city. Development within the community is largely residential, with some business and agriculture-related commercial facilities. A considerable portion of the city remains undeveloped and is used for agricultural purposes (Reference 6).

The Town of Grubbs is located in the eastern part of Jackson County, about 12 miles northeast of the City of Newport along State Highway 18, near the Cache River. The 2000 census estimated the population of Grubbs at 438 (Reference 3). There are a few commercial structures in the town with development in Grubbs being almost entirely residential. The Cache River flows in a southwesterly direction about one-half mile southeast of the town. State Highway 18 runs east and west through Grubbs and State Highway 37 extends north of the town. The land is generally flat with a very gentle slope toward the Cache River and Toms Creek. The total relief within the corporate limits is about 2 feet (Reference 7).

The Town of Jacksonport is located in the east-central portion of Jackson County, approximately 2 miles west of Newport, at the confluence of the White and Black Rivers. It is bordered on all sides by the unincorporated areas of Jackson County. The 2000 population of Jacksonport was 235 (Reference 3). The town lies within the common floodplain of the White and Black Rivers. State Highway 69 bisects the town, which essentially provides residences for workers in surrounding communities, primarily Newport. Only a few small businesses are located within the town. The total relief within the corporate limits is less than 5 feet (Reference 8).

The City of Newport is located in the west-central part of Jackson County. It is bordered by the City of Diaz to the north, the Town of Jacksonport to the northwest, and the unincorporated areas of Jackson County to the east and south. The estimated population in 2000 was 7,811 (Reference 3). The White River flows along the northwestern portion of the city; Village Creek lies to the south and bisects the city to the east. Major transportation routes in Newport include the Missouri Pacific Railroad, State Highways 14, 17, 18, and 224, and U.S. Highway 67. The oldest part of the city is protected from

flooding from the White River and Village Creek by the White River Levee Project. Growth is concentrated in the northern and eastern parts of the city. The land is flat, with gentle slopes, and has a total relief within the corporate limits of approximately 10 feet (Reference 9).

The City of Swifton is located in the extreme northern part of Jackson County, about 6 miles northeast of Tuckerman along U.S. Highway 67. Swifton lies between Cattail Creek and Maple Ditch. The 2000 census estimated the population of Swifton at 871 (Reference 3). The land is flat, with very gentle slopes, and has a total relief within the corporate limits of approximately 5 feet (Reference 10).

The City of Tuckerman is located in the northern part of Jackson County, about 6 miles northeast of Newport along U.S. Highway 67 and near Village Creek. In recent years, the city has experienced a steady decline in population with a 2000 estimated census of 1,757 (Reference 3). There are a few commercial structures in the business section and adjacent areas with development in the city being entirely residential. Tuckerman Ditch flows generally through the center of the city from the north and then southeast leaving Tuckerman. U.S. Highway 67 and the Missouri Pacific Railroad tracks parallel each other through Tuckerman from the northeast to the southwest. The land slopes generally toward the flood plain of Tuckerman Ditch and tributaries with a total relief within the corporate limits of about 8 feet (Reference 11).

The Town of Tupelo is located in the far south part of Jackson County, about 4 miles south of Weldon along State Highway 17 and adjacent to Overcup Ditch. County Road 33 runs west from Tupelo and State Highway 17 extends south of the city. Overcup Ditch runs through the southwestern portion of Tupelo. The 2000 census estimated the population of Tupelo at 177 (Reference 3). The land is generally flat, with a gentle slope towards Overcup Ditch. The total relief within the corporate limits is about 5 feet. (Reference 12).

The Town of Weldon is located in the far south part of Jackson County, about 10 miles south of Newport along State Highway 17 and just west of Overcup Ditch. County Road 22 runs east from Weldon and County Road 173 runs west. The 2000 census estimated the population of Weldon at 100 (Reference 3).The land slopes generally toward the flood plain of Overcup Ditch and tributaries with a total relief within the corporate limits of about 15 feet.

Soybeans, cotton, rice, wheat, oats and peanuts are the principal agricultural products in Jackson County. Many varieties of fruit are common to the area. Jackson County is also well-suited to the raising of livestock because of its abundant water supply (Reference 1).

A hilly area in the extreme western part of the county makes up approximately 10 percent of its land area. Half of the acreage in this area is arable, but erosion is moderate to severe. The soils in the other half are too steep or stony for intensive cultivation. The topography of the rest of the county is relatively flat. The soils formed in alluvial sediment that, in places, is capped with windblown silt that ranges from a few inches to several feet in depth. These soils are among the most productive in Arkansas. This alluvial area extends from the floodplains of the Black and White Rivers eastward across the county. The elevation of this area ranges from approximately 190 feet at the point where the White River leaves the county to approximately 255 feet atop natural levees in the northwestern part of the county (Reference 1).

The average annual temperature in the county is approximately 61 degrees Fahrenheit (ºF), with extremes ranging from below zero in winter to 100 ºF or above in summer. The climate is humid with long hot summers and short mild winters. The average annual precipitation is approximately 50 inches with a maximum of 81 inches and a minimum of 22 inches. Rainfall is fairly evenly distributed throughout the year. March, April and May are the wettest months; the driest season runs from August through October. Warm frontal systems are the most reliable sources of precipitation. Snowfall, averaging 4 inches per year, is a negligible source of precipitation (Reference 1). The White River has a well-defined channel and is navigable during most of the year. From Jacksonport, the White River flows generally south and leaves the county near the middle of the southern boundary. The river provides recreational facilities for fishing, boating, and waterfowl hunting. Surface waters throughout the county collect in low places and flow to larger streams through a system of artificial channels, or through improved channels of natural drainageways to Village Creek and the Black and White Rivers (Reference 1).

Flooding in Jackson County results from intense local storms that could occur during any month of the year; however, most storms of this type occur generally during the spring.

2.3 Principal Flood Problems

The major flooding problems in Jackson County are a result of the flat slopes in the area; however, because of these flat slopes, velocities are low and little damage results from excessive velocities. Serious flooding has occurred in Jackson County in the past. Although the Cache River has not been studied in detail, it is one of the major flooding sources in the eastern part of the county (Reference 1).

Flooding in the City of Amagon occurs over most of the city except for a small area generally east of Duncan Street and along State Highway 14. The flooding occurs from overflow of the Cache River and a small amount of runoff from within the city. (Reference 4).

Flooding in the City of Diaz generally results from intense local storms. The developed portion of the city has not experienced severe flood problems. The main drainage feature within the city is the drainage ditch that parallels Main Street (U. S. Route 17) through most of the city. The capacity of this ditch and the adjacent natural floodway is sufficient to handle local runoff without significant damage to existing structures. A small area within the city is located on the landward side of the White River Levee Project. This area is protected against events larger than the 0.2-percent-annual-chance flood, but a small culvert through the levee is blocked by backwater from the White River during extremely large floods, and minor interior flooding results. An undeveloped area along the eastern side of the city is flooded by Village Creek during severe floods on that stream (Reference 6).

The flooding problems in the Town of Grubbs occur over the entire town. The flooding occurs from overflow of the Cache River plus some runoff along Chestnut, Denton, and Toms Creeks within the town. (Reference 7).

The Town of Jacksonport has experienced severe flooding in the past. The levee system was inadequate and was overtopped or breached by a number of floods. Early houses and businesses, as well as the old courthouse, were built with ground floor elevations several feet above the ground. Frequent flooding was one of the reasons that the county seat was moved to Newport, which was easier to protect from flooding. Even when the levee

system mitigates effects of smaller floods, interior drainage and seepage water collects within the town and causes inconveniences and minor damage (References 8 and 9).

The White River Levee Project protects the City of Newport from White River floodwaters. However, flood problems still occur throughout the city. In central Newport, flooding is caused by overflow from Newport Lake and Village Creek Outfall Ditch; in northeastern Newport, Village Creek is the source of flood hazards; and in the southwestern part of the city Borrow Ditch Ponding Area is the primary flooding source. In addition, two small areas flood on the land side of the White River Levee Project. These areas, known as the Robinson Road Ponding Area and the Martin Street Ponding Area, are protected against White River floods of greater than the 0.2-percent-annual-chance flood. However, small culverts through the levee and the pumping station at the Martin Street Ponding Area delay the evacuation of interior floodwaters. This results in flooding in these areas. Village Creek floodwaters also flood the eastern part of the city along Brandenburg Ditch (Reference 9).

The flood problems in the City of Tuckerman are generally near the center of the city and adjacent to Tuckerman Ditch and to the north along Watson and Tuckerman Ditches. The flooding comes from overflow from Tuckerman and Watson Ditches and a small amount of runoff from within the city. The channel capacity of these streams and the culverts under U.S. Highway 67 and the railroad are inadequate to carry large amounts of runoff (Reference 11).

2.4 Flood Protection Measures

FEMA specifies that all levees must have a minimum of 3 foot freeboard against 1-percent-annual-chance flooding to be considered a safe flood protection structure. For purposes of this revision, the Newport Levee and Jacksonport Local Levee modifications are referred to as the White River Levee project. The modified levee extends from a high-ground area north of the Town of Jacksonport to a high-ground area at the City of Newport, for a total length of approximately 6.4 miles. It provides protection from 1-percent-annual-chance (base) flood elevations from the White River.

The Jacksonport Local Levee, which had failed or been overtopped by a lage number of floods in the past, has been substantially improved to protect areas of the city from severe floods along the White River. It was constructed using an abandoned railroad embankment for the main part of the levee. The improved Jacksonport Local Levee meets FEMA's 3 foot freeboard requirement (Reference 8).

The USACE-built Newport Levee protects a portion of the city from floodwaters from the White River and Village Creek (Reference 9). This levee provides freeboard of approximately 4 feet above the 0.2-percent-annual-chance modified flood on the White River.

Pumps have been installed at four locations within the levee to evacuate the storm runoff from the protected areas when rises on the White River block gravity flow through the gated outlets. These pumping stations are known as the Newport Lake, Borrow Ditch, Martin Street, and Village Creek Outfall Ditch pumping stations. The capacity of these pumps ranges from approximately 1.7 inches of runoff in 24 hours at the Village Creek Outfall Ditch station to approximately 5 inches of runoff in 24 hours at the Martin Street pumping station.

There are four multipurpose dam and reservoir projects on the White River upstream of Jackson County that were constructed by USACE and provide storage for flood control. These reservoirs control discharge from 8,740 square miles of contributing drainage area upstream of the Highway 67 Bridge at Newport. A total of 4,543,000 acre-feet of storage volume in these projects is reserved exclusively for storage of flood flows on the White River, the North Fork River, and the Black River (Reference 1).

In addition to the four multipurpose dam and reservoir projects on the White River, there is one on the Black River upstream from Newport, also constructed by USACE, and together, these provide storage for flood control. Since the Norfolk and Bull Shoals projects became operational, flood flows at Newport have been greatly reduced.

Some reaches of the Cache River have been channelized to provide drainage for the adjacent rural and urban lands. Most of the flood protection measures on the remaining streams in the county are limited to cleaning and excavating the channels to promote drainage through the study area (Reference 1).

No effective flood protective works exist in or around the City of Amagon (Reference 4).

Tuckerman Ditch and Watson Ditch are artificial channels designed through the City of Tuckerman to drain the rural and urban lands adjacent to the ditches. These ditches have been maintained at varying levels of capacity throughout the years and at present are in fairly good state of repair. (Reference 11).

3.0 ENGINEERING METHODS

For the flooding sources studied by detailed methods in the county, 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-annual-chance, respectively, of being equaled or exceeded during any year. Although the recurrence interval represents the long-term, average period between floods of a specific magnitude, rare floods could occur at short intervals or even within the same year. The risk of experiencing a rare flood increases when periods greater than 1 year are considered. For example, the risk of having a flood that equals or exceeds the 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 county/communities.

Flood-frequency discharge values for the White River were based on the 95-year period of record for the Newport gage, approximately one river mile downstream of the City of Diaz, at the U. S. Route 67 Bridge. The gage has been operational since 1886. The gage records were adjusted to reflect the effects of the upstream storage projects, and standard statistical methods (Log Pearson III analyses using Bulletin 17B guidelines) were used to

determine frequencies of discharges (Reference 6).

Flood-frequency discharge values for Village Creek were developed using the following procedures: (a) develop unit graphs from known events on the Village Creek Basin using the period of rainfall record; (b) distribute the period of record for rainfall by subarea unit graphs; (c) develop a routing procedure using synthesized period of record and runoff by reproducing known events; (d) calibrate backwater to develop a Village Creek rating; (e) combine the backwater model rating and routing curves and use routing procedure to route the floods from the period of record through routing reaches; and (f) develop discharge and elevation frequencies (Reference 8).

Drainage areas for Maple Ditch, Tuckerman Ditch, Swan Pond Ditch, and Swan Pond Tributary were measured from U. S. Geological Survey (USGS) topographic maps at a scale of 1:24,000, with a contour interval of 5 feet (Reference 9). Flows on Maple Ditch were developed at U. S. Highway 67, the mouth of Deep Ditch, and State Highway 226. Flows were reduced at Highway 67 and Highway 226 to account for the effects of overbank storage above the highways. Flows on Tuckerman Ditch were developed at its confluence with Village Creek and at the confluence of Swan Pond. The flows above Swan Pond were obtained from the prior effective Flood Insurance Study for the City of Tuckerman (Reference 11). Flows on Swan Pond Ditch were developed at State Highway 37, the mouth of Swan Pond Tributary, and the mouth of Swan Pond at Tuckerman Ditch. The flows below Highway 37 were reduced to account for the effects of overbank storage upstream of the highway. Flows on Swan Pond Tributary were developed at State Highway 37 and Swan Pond. The flows below Highway 37 were reduced to account for the effects of overbank storage upstream of the highway.

Discharges along Newport Lake, Village Creek Outfall Ditch, and Borrow Ditch Ponding Area were determined using unit hydrographs and routing procedures developed at Newport along with appropriate design storms. The hydrologic and hydraulic studied used for Newport Lake and Borrow Ditch Ponding Area were conducted initially for the Newport, Arkansas Flood Plain Information Report (Reference 13). The design storms were developed from the U.S. Weather Bureau Technical Papers 40 and 49 (References 14 & 15). The 0.2-percent-annual-chance discharges were obtained from log-probability extrapolation of the the 10-, 2- and 1-percent-annual-chance flood discharges.

Discharges along Tuckerman and Watson Ditches were determined by use of unit hydrographs developed at Tuckerman along with appropriate design storms. The design storms were developed from the U.S. Weather Bureau Technical Papers 40 and 49 (References 14 & 15). The 0.2-percent-annual-chance discharges were obtained by extrapolating the curves obtained from the 10-, 2-, and 1- annual-percent-chance flood discharges. Flows for the 10-percent-annual-chance floods were checked against estimated floods that had occurred in recent years (Reference 11).

Synthetic storms were computed to define the discharge-frequency data for the streams mentioned above. Rainfall distribution for the 10- 2- and 1-percent-annual-chance flood frequencies were computed from rainfall frequency data contained in National Weather Service Technical Paper No. 40 (Reference 14). Snyder's coefficients were used to compute unit hydrographs. The unit hydrographs and rainfall distributions were used to compute synthetic storms of the desired frequencies. The HEC-1 Flood Hydrograph Package was used to route the computed storms through the basin to arrive at the final peak discharges for the 10-, 2-, and 1-percent-annual-chance storms (Reference 16). A log-probability relationship of the lower frequency peak discharges was used to compute

each of the 0.2-percent-annual-chance flood peak discharges.

The hydrologic studies for the Cache River within the City of Amagon and the Town of Grubbs were obtained from the Memphis District, USACE, and were made for studies on that stream. Discharges were developed from a generalized equation based on observed events. Flow lines for the l0-percent-annual-chance floods were checked against floods that had occurred in recent years (References 4 and 7).

A summary of the drainage area-peak discharge relationships for the streams studied by detailed methods in Jackson County is shown in Table 3, "Summary of Discharges".

TABLE 3. SUMMARY OF DISCHARGES

FLOODING SOURCE AND LOCATION	DRAINAGE AREA (sq. miles)	PEAK DISCHARGES (cfs) 10% Annual Chance	2% Annual Chance	1% Annual Chance	0.2% Annual Chance
Cache River					
At the City of Amagon	800	9,000	*	13,200	*
At the Town of Grubbs	792	8,900	*	13,000	*
Newport Lake					
At levee outlet culverts	1.60	440	570	650	1,310
Swan Pond Ditch					
At confluence with Tuckerman Ditch	9.70	1,023	1,379	1,626	1,938
At confluence of Swan Pond Tributary	7.40	790	1,080	1,284	1,508
Swan Pond Ditch					
At State Highway 37	1.80	275	339	441	716
Tuckerman Ditch					
At confluence with Village Creek	21.40	2,301	3,110	3,671	4,564
Upstream of confluence of Swan Pond Ditch	11.30	1,530	2,040	2,300	2,850
At the Missouri Pacific Railroad	9.60	1,300	1,730	1,950	2,420
Village Creek					
At State Highways 17 and 14	274.00	7,700	9,100	9,700	11,100
At State Highway 18	257.60	6,900	8,300	8,800	10,200
At Grassy Slough	255.00	6,800	8,200	8,700	10,100
At confluence of Tuckerman Ditch	231.00	5,700	7,200	7,500	9,000
Village Creek Outfall Ditch					
At U. S. Highway 67	1.20	240	404	482	660
Watson Ditch					
At the Confluence with Tuckerman Ditch	3.20	750	990	1,100	1,320
White River					
At State Highway 67	19,812	170,000	340,000	388,000	450,000

*- Discharges not available/computed.

Two areas on the landward side of the White River Levee Project, located in the City of

Diaz, the Town of Jacksonport and the unincorporated areas of Jackson County, are subject to inundation by 1-percent-annual-chance floodwaters (elevation 222 and 231 feet) because of inadequate interior drainage associated with the levee. The elevation-frequency relationship for the ponding area was determined using rainfall data from Technical Papers No. 40 and No. 49 (References 14 and 15). It was assumed that flood elevations on the White River would be high enough to block the gravity outlets, and that runoff would pond behind the levee. The stillwater elevation for the 1- percent annual chance flood has been determined for the ponding areas and is shown in Table 4, "Summary of Stillwater Elevations. "

TABLE 4. SUMMARY OF STILLWATER ELEVATIONS

	Elevation in feet (NAVD 88)			
FLOODING SOURCE AND LOCATION	**10% Annual Chance**	**2% Annual Chance**	**1% Annual Chance**	**0.2% Annual Chance**
Ponding Area on Land Side of White River Levee Project				
East of levee in City of Diaz and Unincorporated Areas of Jackson County.	*	*	222.0	*
East of levee near Jacksonport and Unincorporated Areas of Jackson County.	*	*	231.0	*

* Data not computed

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 Flood Insurance Rate Map (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.

Along the Cache River, cross section data for the streams in the study area were obtained by field survey. All bridges and culverts were field surveyed to obtain elevation data and structural geometry. Cross sections were located at close intervals around bridges and culverts in order to compute significant backwater effects of these structures.

Below water sections of channels, bridges and culverts were obtained by field surveys. Additional information was obtained from topographic maps of the study area and public-domain aerial photography.

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.

As agreed at the scoping and CCO meetings with the Towns of Amagon and Grubbs, a

modified detail study along the Cache River was performed. Only the 10- and 1-percent annual chance flood profiles were modeled and shown.

In the vicinity of the City of Diaz, hydraulic methodologies used considered the effects of the improved Jacksonport Local Levee.

Water-surface elevations of floods of the selected recurrence intervals for Maple Ditch, Tuckerman Ditch, Swan Pond, Swan Pond Tributary, and White River were computed using the USACE HEC-2 step-backwater computer program (Reference 17). Starting water-surface elevations were derived from stage elevation frequency curves at the mouth of each stream. For Village Creek, routing procedures were used in determining water-surface elevations. Routing procedures, combined with the HEC-2 program, were also used in determining the Village Creek Outfall Ditch water-surface profiles. Newport Lake water-surface profiles were determined from storage routing and backwater computations. A revised area volume curve and observed 1969 high water were used to determine the Borrow Ditch Ponding Area 1-percent annual chance flood elevation.

Flood profiles of record with their applicable discharges were available for the White River throughout the entire range of discharges required in the Town of Jacksonport. Because of local conditions in Jacksonport, no floodway widths were required for this study; therefore, no new cross sections or detailed hydraulic analyses were performed. Water-surface elevations of floods of the selected recurrence intervals were obtained from observed profiles and from rating curves for the 1-percent annual chance profiles. The 1-percent annual chance discharge is within the limits of the profiles, which have been determined from field observations. The drainage area of the White River below the mouth of the Black River is 19,812 square miles. The 1-percent annual chance modified discharge at this location is 388,000 cfs.

The completion of the White River levee project, and the updated topographic information added in the prior revision did not warrant changes to the water-surface profiles developed by USACE for the White River.

Flood profiles were drawn showing computed water-surface elevations for floods of the selected recurrence intervals. Water-surface profiles for Village Creek were developed from profiles provided by the Little Rock District of USACE. Water surface profiles for the White River in the unincorporated areas of Jackson County were developed using flows and profiles provided by the Little Rock District of USACE.

Channel roughness factors (Manning's "n" values) used in the hydraulic computations were estimated on the basis of field inspection of floodplain areas. The Manning's "n" values for Maple Ditch, Tuckerman Ditch, Swan Pond Ditch, and Swan Pond Tributary were verified by field inspection. Selected Manning’s “n” coefficients are listed in Table 5 below.

The hydraulic analyses for this study and the flood elevations reported herein 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 5- SUMMARY OF ROUGHNESS COEFFICIENTS

Stream	Overbank "n" Value	Channel "n" Value
Cache River	0.09 - 0.125	0.05 - 0.07
Maple Ditch	0.03	0.06
Newport Lake	0.010 - 0.035	0.020 - 0.040
Swan Pond Ditch	0.03	0.06
Swan Pond Tributary	0.03	0.06
Tuckerman Ditch	0.03	0.06
Village Creek	0.110 - 0.130	0.060 - 0.100
Village Creek Outfall Ditch	0.010 - 0.035	0.020 - 0.040
Watson Ditch	0.03	0.06
White River	0.080 - 0.150	0.020 - 0.040

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 as the referenced vertical datum.

Flood elevations shown in this FIS report and on the FIRM are referenced to the NAVD. These flood elevations must be compared to structure and ground elevations referenced to the same vertical datum. Some of the data used in this revision were taken from the prior effective FIS reports and FIRMs and adjusted to NAVD88. The county-wide average datum conversion factor from NGVD29 to NAVD88 in Jackson County is 0.21 foot, with a maximum deviation of 0.07 foot.

For information regarding conversion between the NGVD and NAVD, 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
SSMC-3, #9202
National Geodetic Survey
1315 East-West Highway
Silver Spring, Maryland 20910-3282

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 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 using topographic maps at a scale of 1:24,000, with a contour interval of 5 or 10 feet (Reference 18).

The revised floodplain boundaries along the White River were obtained from "as built" plans for the White River Levee Project provided by the Little Rock District of USACE (Reference 19).

For the streams studied by detailed methods, the 1- percent-annual-chance floodplain boundaries were delineated using the 1982 Flood Insurance Study for the unincorporated areas of Jackson County (Reference 1). The 1- and 0.2- 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, AH and AO), 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 or collinear, 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 streams studied by approximate methods, only the 1- percent annual chance floodplain boundary is shown on the FIRM. Approximate 1-percent annual chance floodplain boundaries in some portions of the study area were taken directly from the Flood Hazard Boundary Maps for the Town of Beedville and the Cities of Campbell Station, Swifton and Tupelo (References 12, 20 - 22).

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 for each stream segment for which a floodway is computed (see Table 6, Floodway Data). In cases where the floodway and 1-percent-annual-chance floodplain boundaries are either close together or collinear, only the floodway boundary is shown.

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.

Near the mouths of streams studied in detail, floodway computations are made without regard to flood elevations on the receiving water body. Therefore, "Without Floodway" elevations presented in Table 2 for certain downstream cross sections of Village Creek and Tuckerman Ditch are lower than the regulatory flood elevations in that area, which must take into account the 100-year flooding due to backwater from other sources. Only a partial floodway was calculated for the White River because of inadequate data available.

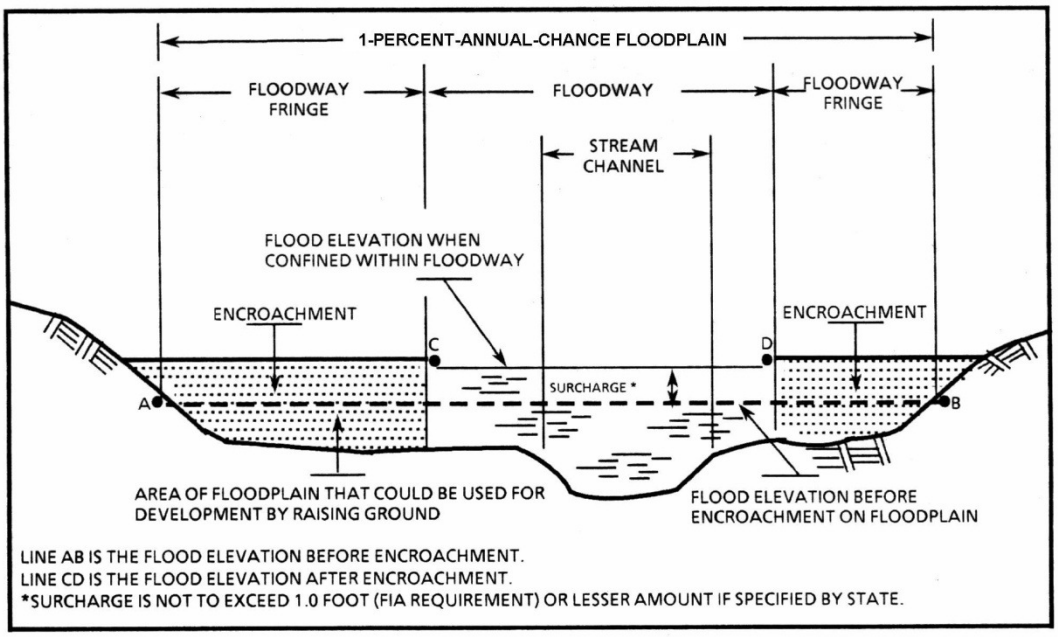

Figure 1. Floodway Schematic

FLOODING SOURCE		FLOODWAY			BASE FLOOD WATER SURFACE ELEVATION			
CROSS SECTION	DISTANCE	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
Borrow Ditch Ponding Area		**	**	0.0	218.7	218.7	219.7	1.0
Maple Ditch								
A	12,450 [1]	500	1,733	1.1	242.9	242.9	243.9	1.0
B	12,750 [1]	500	1,809	1.1	243.3	243.3	244.2	0.9
C	15,160 [1]	400	1,570	1.2	243.7	243.7	244.7	1.0
D	15,410 [1]	387	1,566	1.2	243.8	243.8	244.8	1.0
E	21,340 [1]	500	1,899	0.7	244.6	244.6	245.6	1.0
F	21,590 [1]	500	1,953	0.7	244.7	244.7	245.7	1.0
G	25,290 [1]	450	1,535	0.9	245.1	245.1	246.1	1.0
H	25,640 [1]	450	1,556	0.9	245.2	245.2	246.2	1.0
I	28,340 [1]	200	483	2.5	245.6	245.6	246.6	1.0
Newport Lake								
A	0.63 [2]	150	440	1.5	217.7	217.7	218.7	1.0
B	1.77 [2]	420	2,390	0.3	219.0	219.0	220.0	1.0
Swan Pond Ditch								
A	6,000 [1]	48	235	5.5	237.2	237.2	237.9	0.7
Swan Pond Tributary								
A	2,110 [1]	50	74	6.0	239.9	239.9	239.9	0.0
Tuckerman Ditch								
A	0.80 [3]	650	3,171	1.2	236.2	235.7 [4]	236.5	0.8
B	1.02 [3]	700	2,293	1.6	236.2	236.0 [4]	236.9	0.9
C	2.00 [3]	210	1,040	2.2	238.0	238.0	238.9	0.9
D	2.58 [3]	260	1,540	1.3	241.8	241.8	241.9	0.1
E	2.70 [3]	210	1,180	1.6	241.9	241.9	242.0	0.1
F	2.84 [3]	210	1,340	1.5	242.0	242.0	242.2	0.2
G	2.98 [3]	210	1,240	1.6	242.0	242.0	242.3	0.3
H	3.21 [3]	225	1,120	1.7	242.1	242.1	242.8	0.7

[1] Feet above mouth

[2] Miles above Newport Outlet Culvert

[3] Miles above Mouth

[4] Elevation Computed Without Consideration of Backwater Effects

** Data not available

TABLE 6

FEDERAL EMERGENCY MANAGEMENT AGENCY
JACKSON COUNTY, ARKANSAS
AND INCORPORATED AREAS

FLOODWAY DATA

Borrow Ditch Ponding Area - Maple Ditch - Newport Lake - Swan Pond Ditch - Swan Pond Tributary - Tuckerman Ditch

FLOODING SOURCE		FLOODWAY			BASE FLOOD WATER SURFACE ELEVATION			
CROSS SECTION	DISTANCE	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
Village Creek								
A	4.562 [1]	800	9,666	1.0	229.6	224.4 [2]	225.4	1.0
B	5.089 [1]	1,000	9,587	1.0	229.7	225.0 [2]	226.0	1.0
C	5.835 [1]	1,500	13,452	0.7	229.7	225.7 [2]	226.6	0.9
D	6.565 [1]	1,100	14,412	0.7	229.7	226.1 [2]	226.9	0.8
E	7.197 [1]	420	6,380	1.5	229.7	226.6 [2]	227.4	0.8
F	7.371 [1]	900	12,685	0.8	229.7	226.8 [2]	227.6	0.8
G	7.838 [1]	600	8,044	1.2	229.7	227.2 [2]	228.1	0.9
H	8.573 [1]	800	10,266	0.9	229.7	228.0 [2]	228.7	0.7
I	8.995 [1]	640	8,224	1.2	229.7	228.4 [2]	229.0	0.6
J	9.361 [1]	640	8,615	1.1	229.7	229.0 [2]	229.6	0.6
K	10.100 [1]	1,000	10,748	0.9	229.7	229.7	230.5	0.8
L	10.557 [1]	1,000	11,433	0.8	230.0	230.0	230.8	0.8
M	12.379 [1]	2,000	18,102	0.5	230.7	230.7	231.4	0.7
N	12.960 [1]	2,000	15,904	0.6	230.9	230.9	231.6	0.7
O	13.120 [1]	2,200	15,400	0.6	231.1	231.1	231.8	0.7
P	13.281 [1]	2,093	14,457	0.6	231.2	231.2	231.9	0.7
Q	14.279 [1]	2,200	17,287	0.5	231.9	231.9	232.6	0.7
R	16.173 [1]	2,200	12,931	0.7	233.4	233.4	234.1	0.7
S	17.206 [1]	2,450	8,607	1.0	234.6	234.6	235.3	0.7
T	18.400 [1]	1,720	11,689	0.7	235.9	235.9	236.8	0.9
U	18.700 [1]	2,300	12,374	0.7	236.3	236.3	237.2	0.9
Village Creek Outfall								
A	1.50 [3]	30	134	3.6	224.6	224.6	225.4	0.8
B	1.80 [3]	70	192	1.8	226.5	226.5	227.1	0.6
C	1.94 [3]	151	349	0.8	226.6	226.6	227.3	0.7
D	2.11 [3]	130	297	0.9	226.7	226.7	227.5	0.8
E	2.33 [3]	200	528	0.4	226.9	226.9	227.8	0.9

[1] Miles above mouth

[2] Elevation Computed Without Consideration of Backwater Effects

[3] Miles above confluence with Village Creek

TABLE 6

FEDERAL EMERGENCY MANAGEMENT AGENCY
JACKSON COUNTY, ARKANSAS
AND INCORPORATED AREAS

FLOODWAY DATA

Village Creek - Village Creek Outfall Ditch

FLOODING SOURCE		FLOODWAY			BASE FLOOD WATER SURFACE ELEVATION			
CROSS SECTION	DISTANCE	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
Watson Ditch								
A	0.03 [1]	350	1,100	1.0	242.2	242.2	243.0	0.8
White River								
A	256.0 [2]	**	**	**	229.9	229.9	**	**
B	258.4 [2]	2,095	**	**	231.0	231.0	**	**
C	263.2 [2]	**	**	**	232.2	232.2	**	**
D	264.2 [2]	**	**	**	232.7	232.7	**	**

[1] Miles above mouth

** Data not available

[2] Miles above confluence with Arkansas River

TABLE 6

FEDERAL EMERGENCY MANAGEMENT AGENCY
JACKSON COUNTY, ARKANSAS
AND INCORPORATED AREAS

FLOODWAY DATA

Watson Ditch - White River

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 AO

Zone AO is the flood insurance rate zone that corresponds to areas of l-percent-annual-chance shallow flooding (usually sheet flow on sloping terrain) where average depths are between 1 and 3 feet. Average whole-foot depths derived from the detailed hydraulic analyses are shown within this zone.

Zone AH

Zone AH is the flood insurance rate zone that corresponds to areas of 1 percent annual chance shallow flooding (usually areas of ponding) where average depths are between 1 and 3 feet. 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- and 0.2-percent-annual-chance floodplains, floodways, and the locations of selected cross sections used in the hydraulic analyses and floodway computations.

The countywide FIRM presents flooding information for the entire geographic area of Jackson 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 7, "Community Map History."

COMMUNITY NAME	INITIAL IDENTIFICATION	FLOOD HAZARD BOUNDARY MAP REVISION	FLOOD INSURANCE RATE MAP EFFECTIVE DATE	FLOOD INSURANCE RATE MAP REVISION DATE(S)
Amagon, City of	January 2, 1976	None	April 1, 1981	
Beedeville, Town of	August 16, 1974	January 23, 1976 January 23, 1979	January 23, 1979	
Campbell Station, City of	August 16, 1974	January 2, 1976	January 9, 1979	
Diaz, City of	March 8, 1974	December 5, 1975	September 17, 1980	April 1, 1983 March 19, 1990
Jacksonport, Town of	August 23, 1974	None	July 16, 1980	September 2, 1982 February 2, 1990
Grubbs, Town of	August 9, 1974	July 2, 1976	April 1, 1981	
Newport, City of	November 16, 1973	June 25, 1976	April 1, 1982	June 18, 1990
Swifton, City of	April 12, 1974	February 27, 1976 January 2, 1979	January 2, 1979	
Tuckerman, City of	November 16, 1973	February 27, 1976	February 4, 1981	
Tupelo, City of	August 16, 1974	March 5, 1976 January 23, 1979	January 23, 1979	
Unincorporated Areas	January 24, 1977	June 3, 1977	August 16, 1982	March 19, 1990
Weldon, Town of				

TABLE 7

FEDERAL EMERGENCY MANAGEMENT AGENCY

JACKSON COUNTY, ARKANSAS AND INCORPORATED AREAS

COMMUNITY MAP HISTORY

7.0 OTHER STUDIES

Flood Insurance Studies have been prepared for the Cities of Jacksonport and Tuckerman, and the unincorporated areas of Independence County, White County, and Woodruff County (References 8,11,23 – 25). The results of this study are in agreement with the results of those studies. Flood Insurance Studies are concurrently being prepared for Craighead, Cross, Independent, White and Poinsett Counties, (References 26 - 30). The results of those studies are compatible with the results of this study.

This FIS report either 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 FEMA Region VI, Federal Insurance and Mitigation Division, 800 North Loop 288, Denton, Texas 76209.

9.0 BIBLIOGRAPHY AND REFERENCES

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3. U.S. Department of Commerce, Bureau of the Census, 2000 Census. http://factfinder.census.gov.

4. Federal Emergency Management Agency, Flood Insurance Study, City of Amagon, Jackson County, Arkansas, Washington, D. C., October 1, 1980.

5. U. S. Department of Housing and Urban Development, Federal Insurance Administration, Flood Hazard Boundary Maps, City of Campbell Station, Jackson County, Arkansas, Washington, D. C., January 9, 1979.

6. Federal Emergency Management Agency, Flood Insurance Study, City of Diaz, Jackson County, Arkansas, Washington, D. C., March 19, 1990.

7. Federal Emergency Management Agency, Flood Insurance Study, Town of Grubbs, Jackson County, Arkansas, Washington, D. C., October 1, 1980.

8. Federal Emergency Management Agency, Flood Insurance Study, Town of Jacksonport, Jackson County, Arkansas, Washington, D. C., February 2, 1990.

9. Federal Emergency Management Agency, Flood Insurance Study, City of Newport, Jackson County, Arkansas, Washington, D. C., June 18, 1990

10. U. S. Department of Housing and Urban Development, Federal Insurance Administration, Flood

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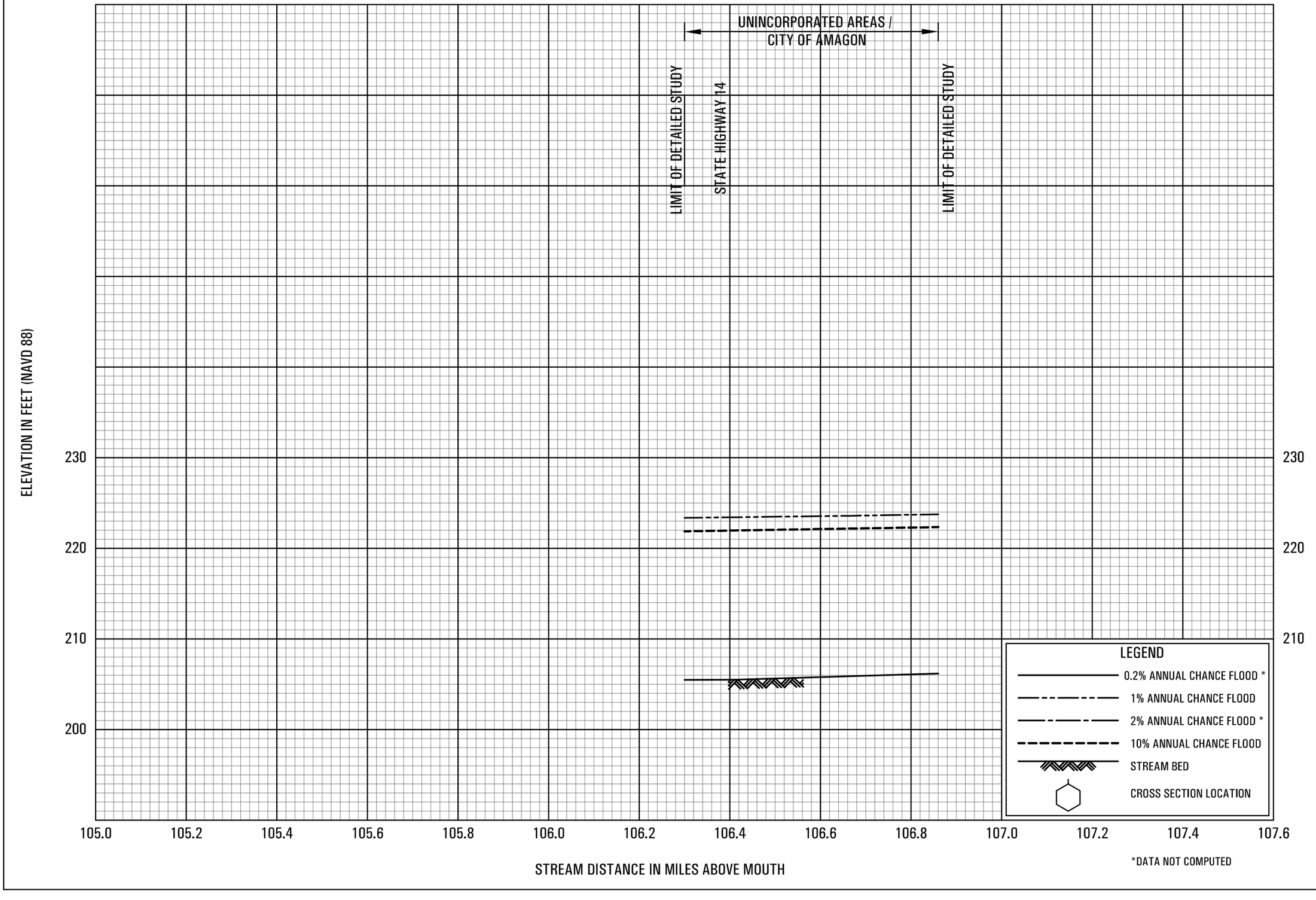


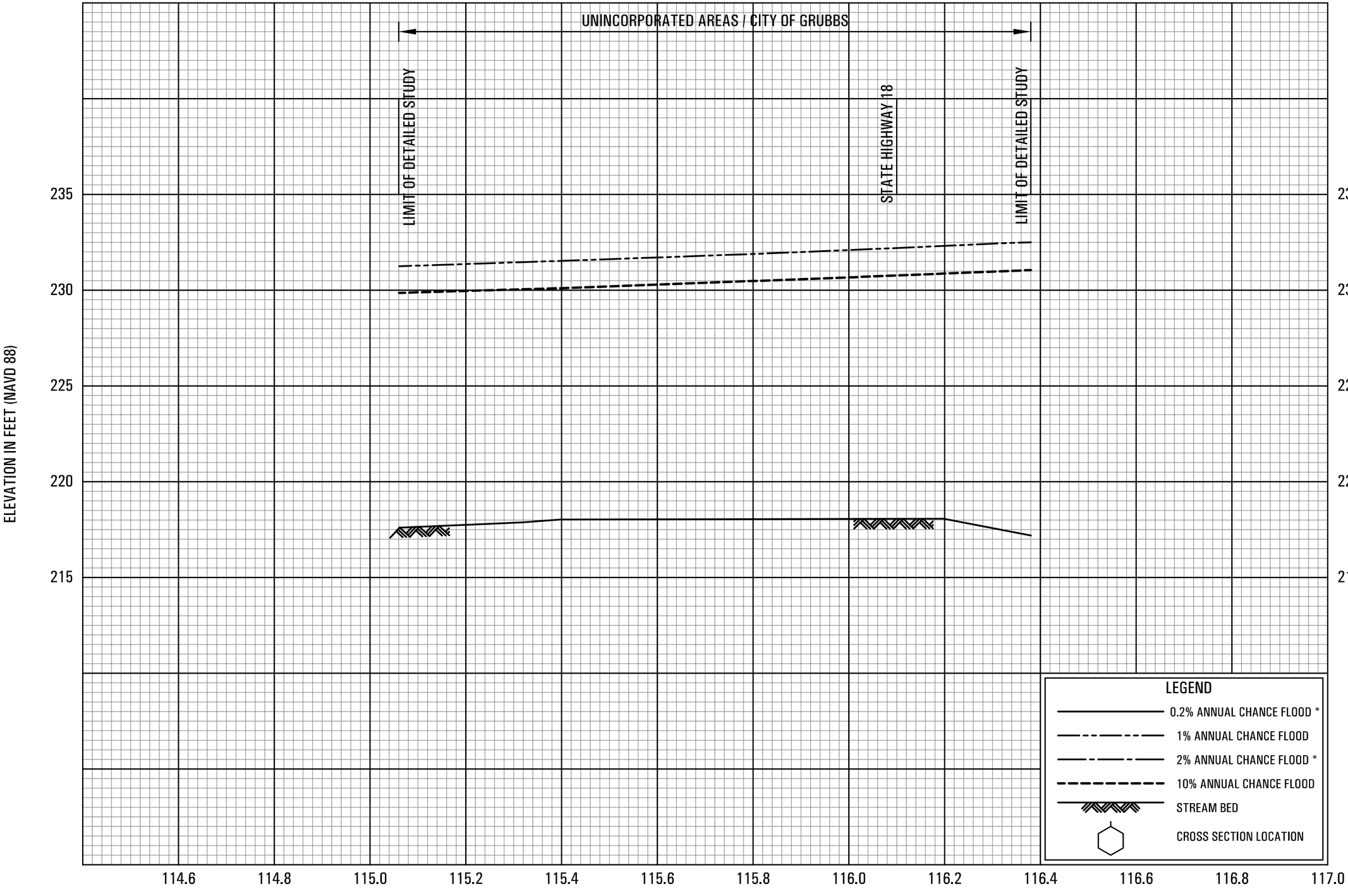
FLOOD PROFILES

CACHE RIVER

FEDERAL EMERGENCY MANAGEMENT AGENCY

JACKSON COUNTY, AR
AND INCORPORATED AREAS

01P



FLOOD PROFILES

CACHE RIVER

FEDERAL EMERGENCY MANAGEMENT AGENCY

JACKSON COUNTY, AR

AND INCORPORATED AREAS

02P

UNINCORPORATED AREA

LIMIT OF DETAILED STUDY
ARKANSAS HIGHWAY 226

COUNTY ROAD 88

CONFLUENCE OF
DEEP DITCH

MAIN STREET
COUNTY ROAD 75

ELEVATION IN FEET (NAVD 88)

250
248
246
244
242
240
238
236
234
232

12.0 13.0 14.0 15.0 16.0 17.0 18.0 19.0 20.0 21.0 22.0

STREAM DISTANCE IN MILES ABOVE CONFLUENCE WITH VILLAGE CREEK

A B C D E F

LEGEND

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

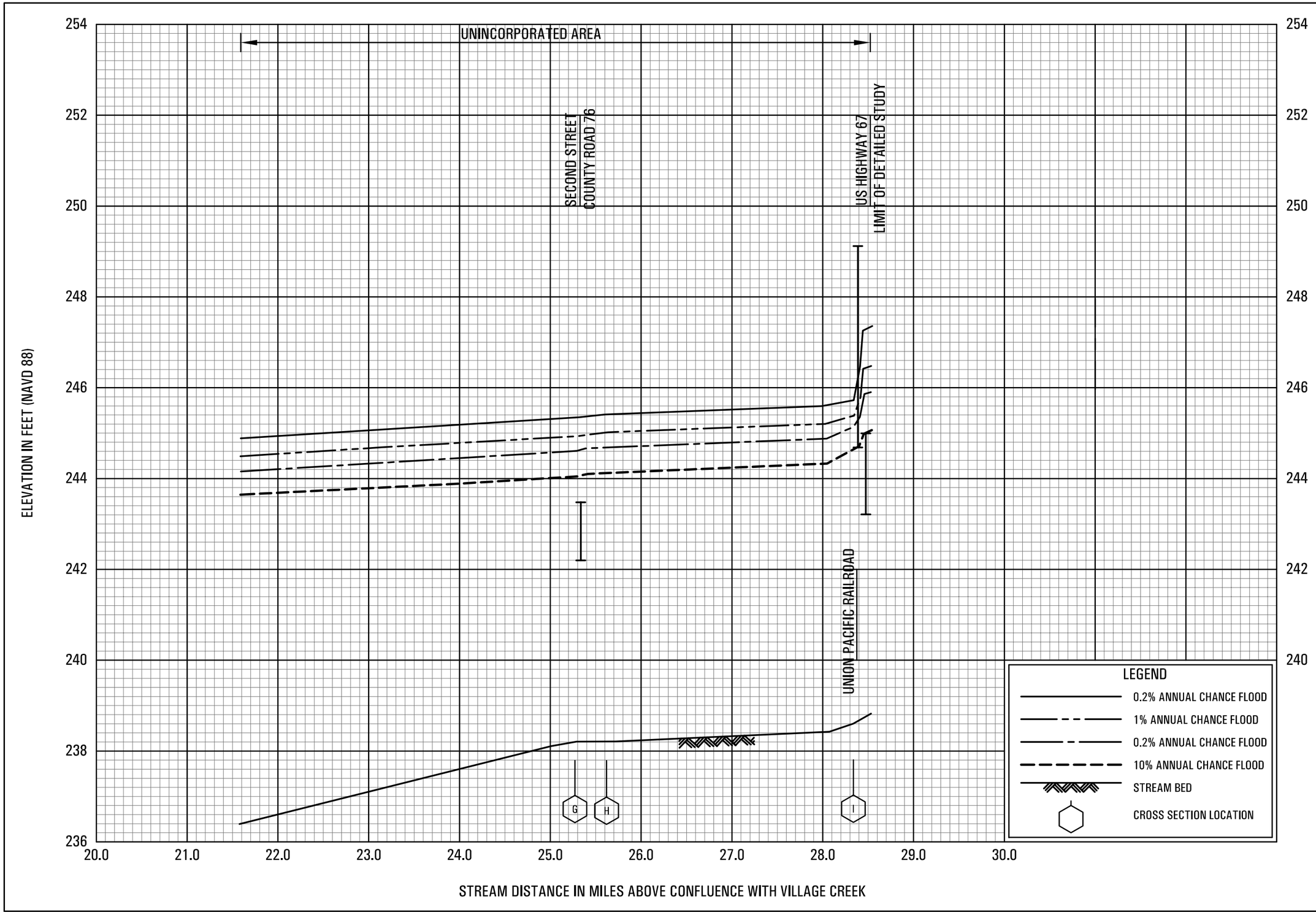
FLOOD PROFILES

MAPLE DITCH

FEDERAL EMERGENCY MANAGEMENT AGENCY

JACKSON COUNTY, AR
AND INCORPORATED AREAS

03P



FLOOD PROFILES

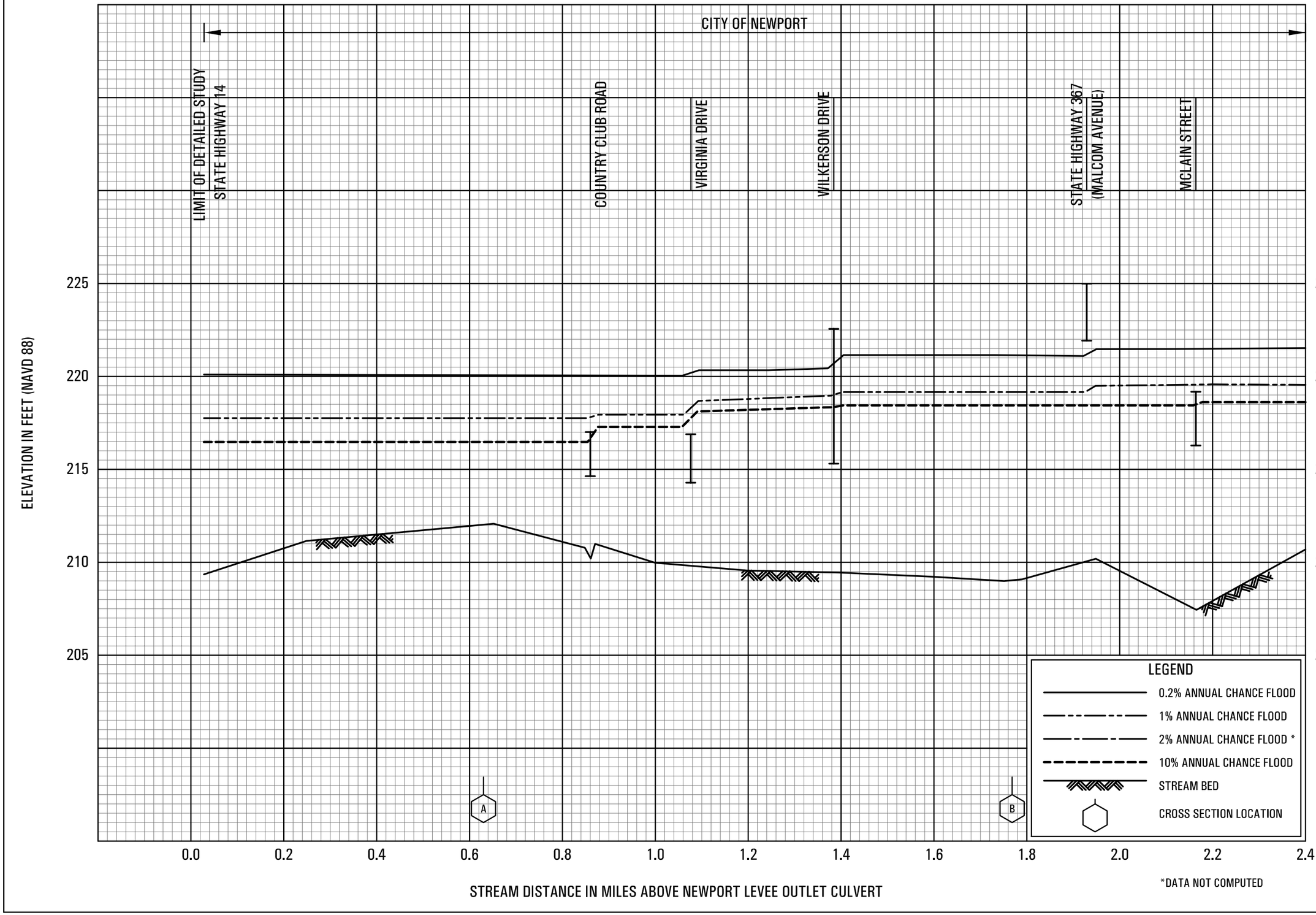
MAPLE DITCH

FEDERAL EMERGENCY MANAGEMENT AGENCY

JACKSON COUNTY, AR

AND INCORPORATED AREAS

04P



FLOOD PROFILES

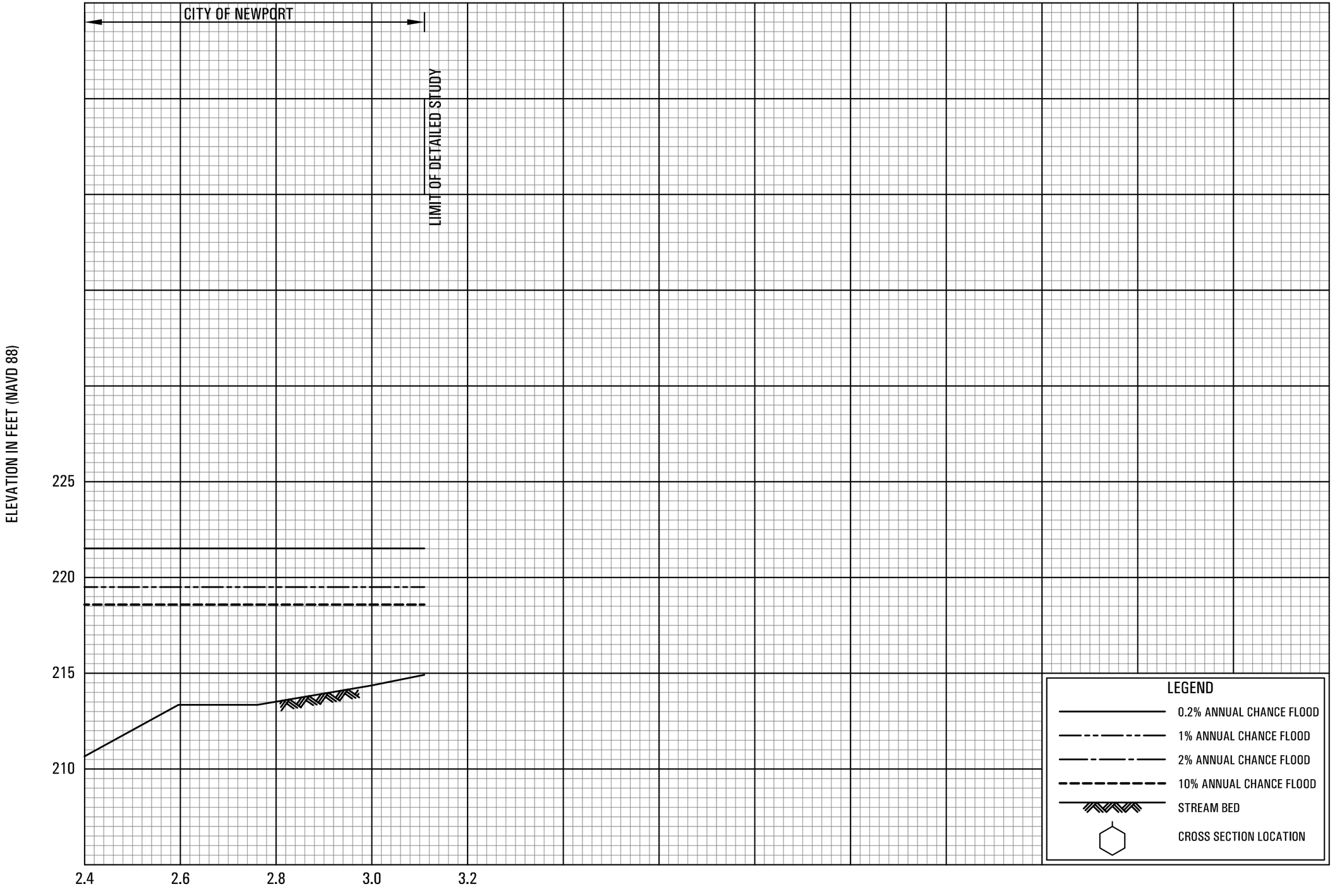
NEWPORT LAKE

FEDERAL EMERGENCY MANAGEMENT AGENCY

JACKSON COUNTY, AR

AND INCORPORATED AREAS

05P



FLOOD PROFILES

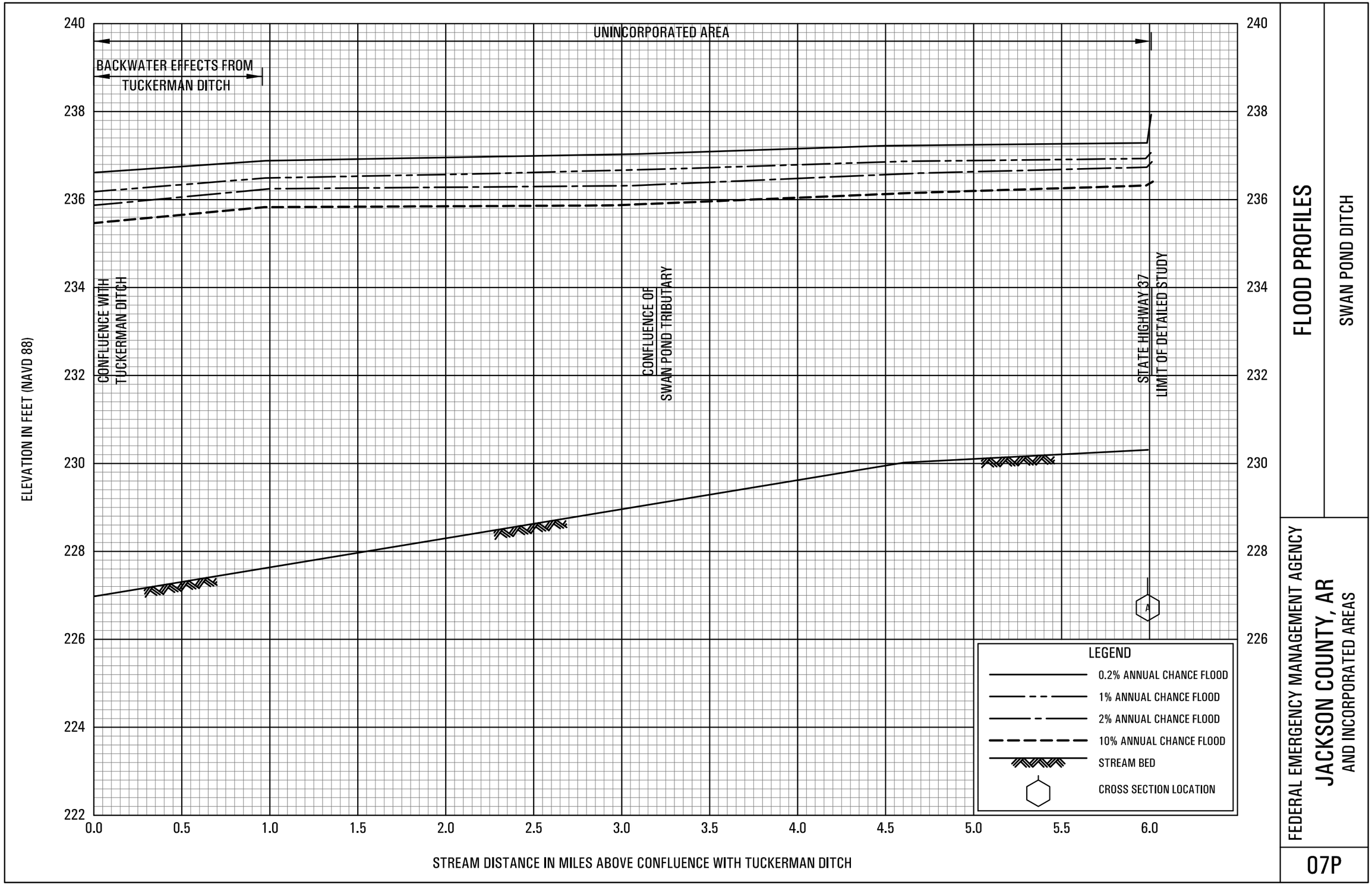
NEWPORT LAKE

FEDERAL EMERGENCY MANAGEMENT AGENCY

JACKSON COUNTY, AR

AND INCORPORATED AREAS

06P



FLOOD PROFILES

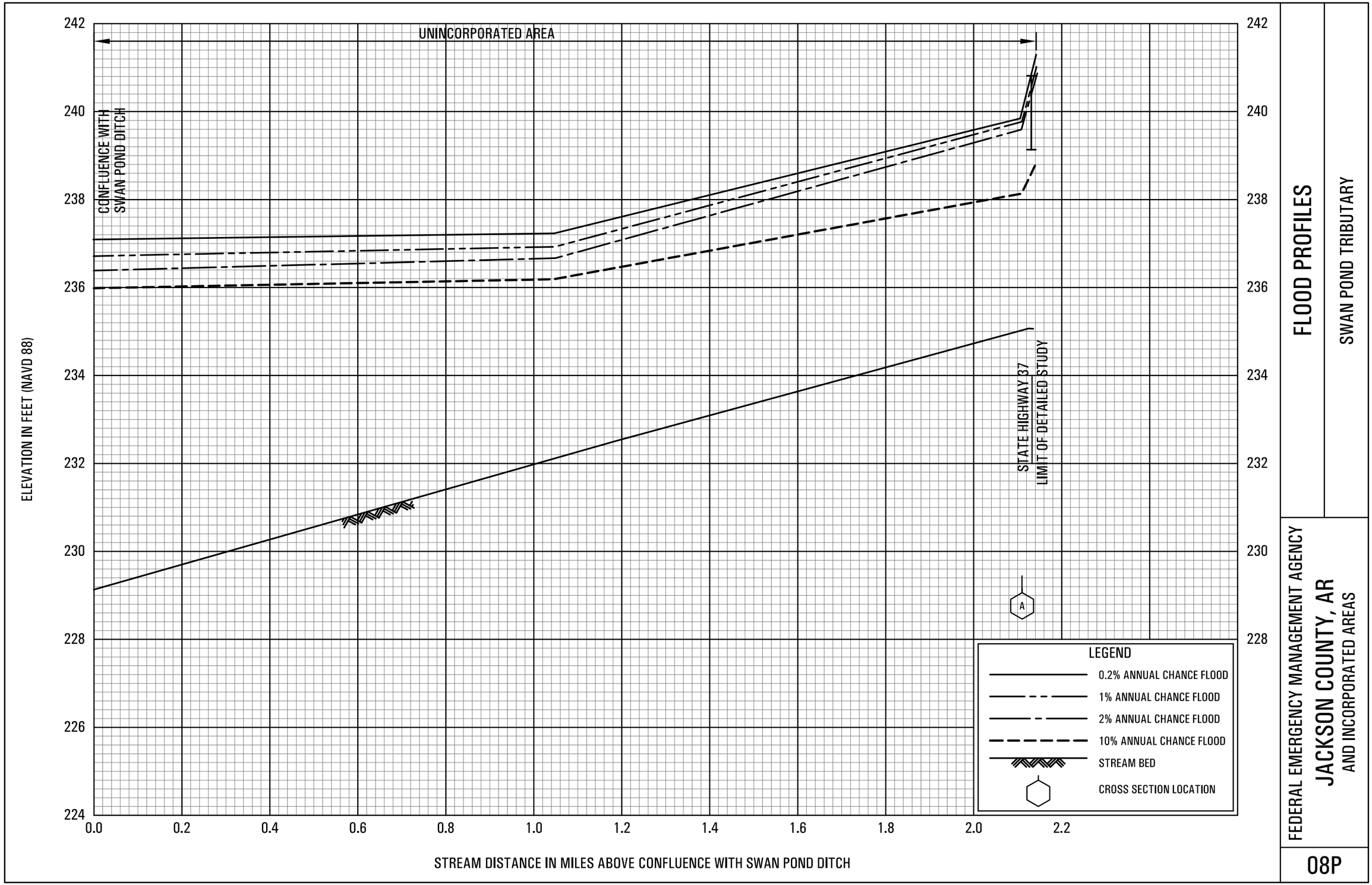
SWAN POND DITCH

FEDERAL EMERGENCY MANAGEMENT AGENCY

JACKSON COUNTY, AR

AND INCORPORATED AREAS

07P



FLOOD PROFILES

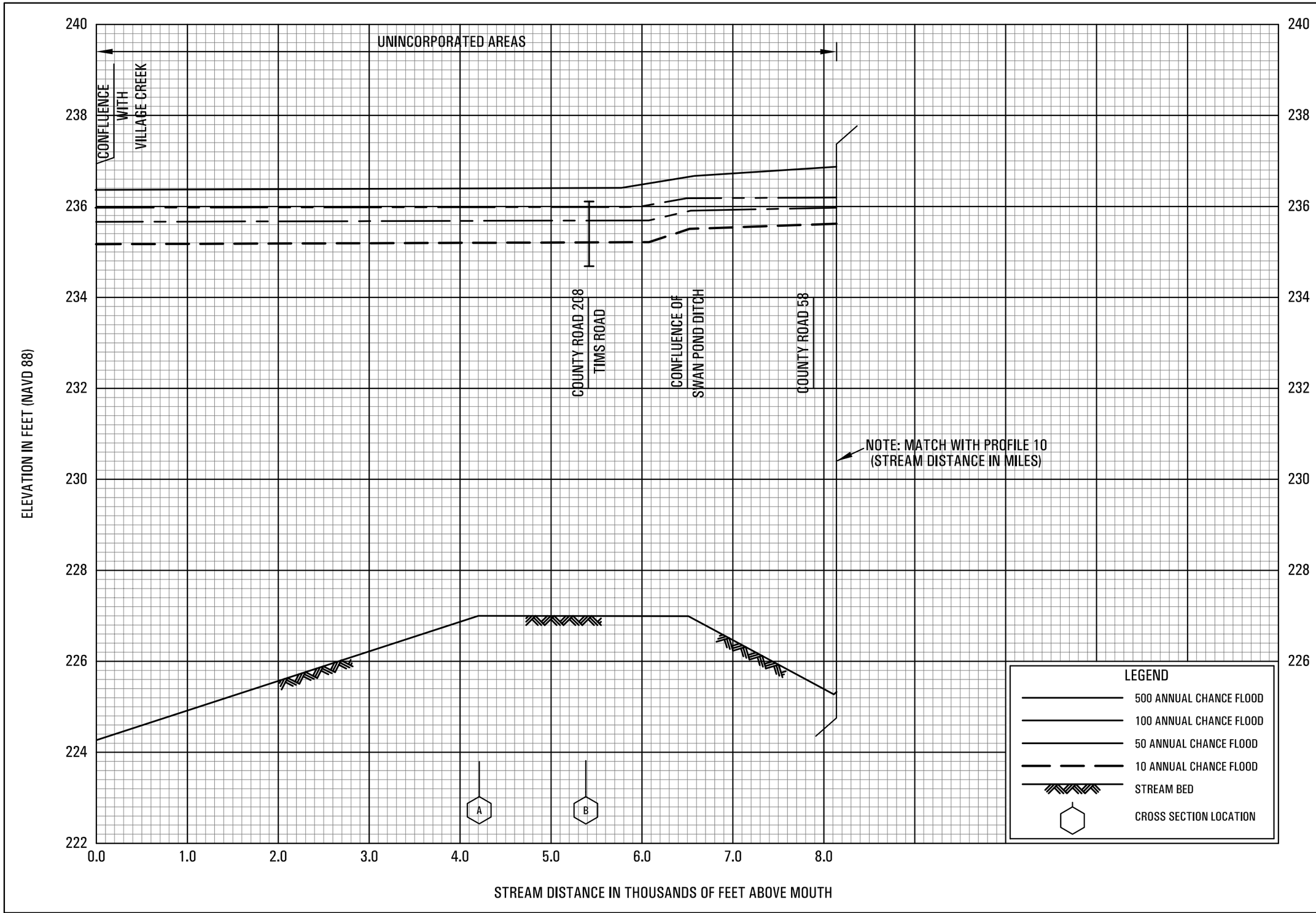
SWAN POND TRIBUTARY

FEDERAL EMERGENCY MANAGEMENT AGENCY

JACKSON COUNTY, AR

AND INCORPORATED AREAS

08P



FLOOD PROFILES

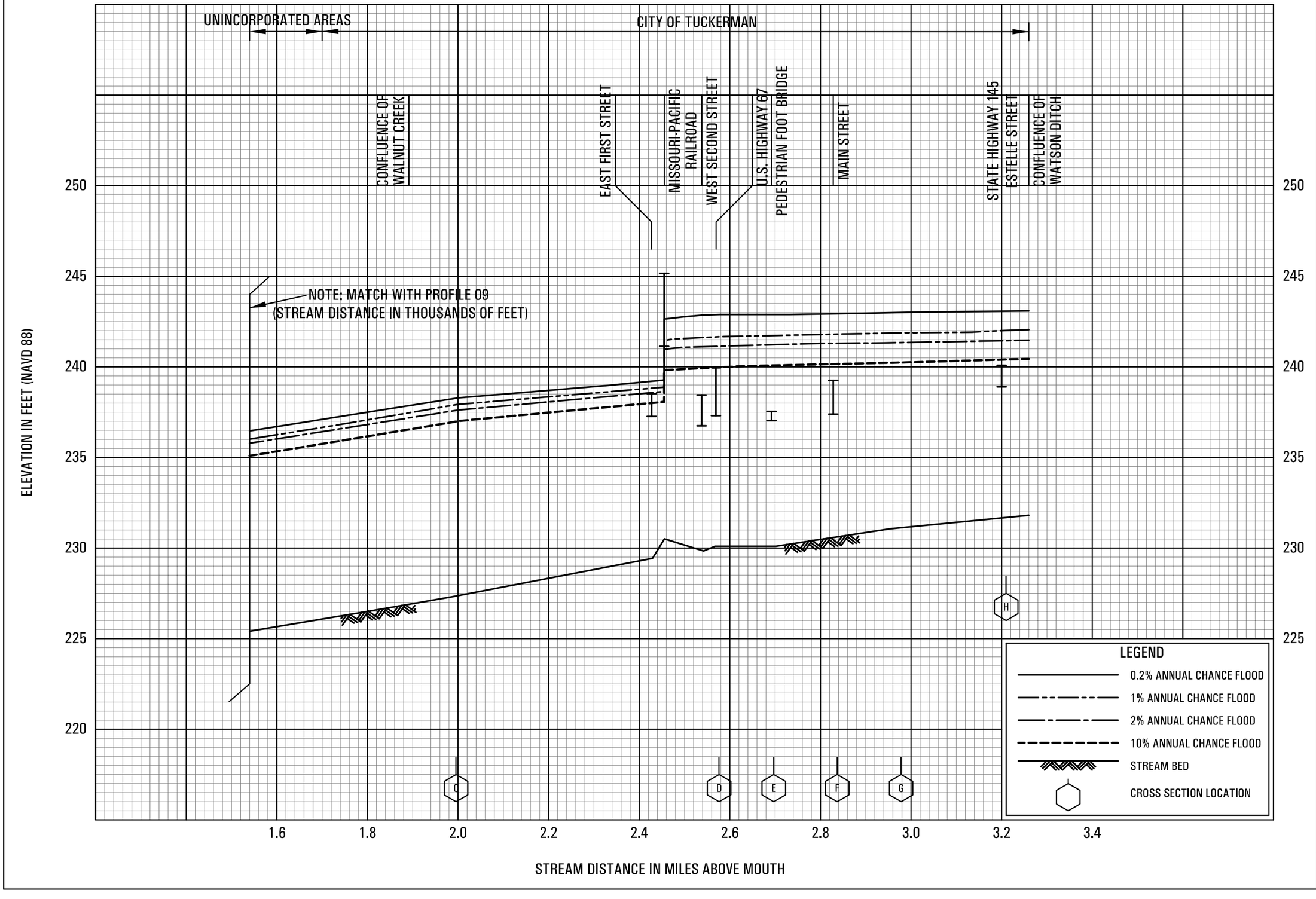
TUCKERMAN DITCH

FEDERAL EMERGENCY MANAGEMENT AGENCY

JACKSON COUNTY, AR

AND INCORPORATED AREAS

09P



FLOOD PROFILES

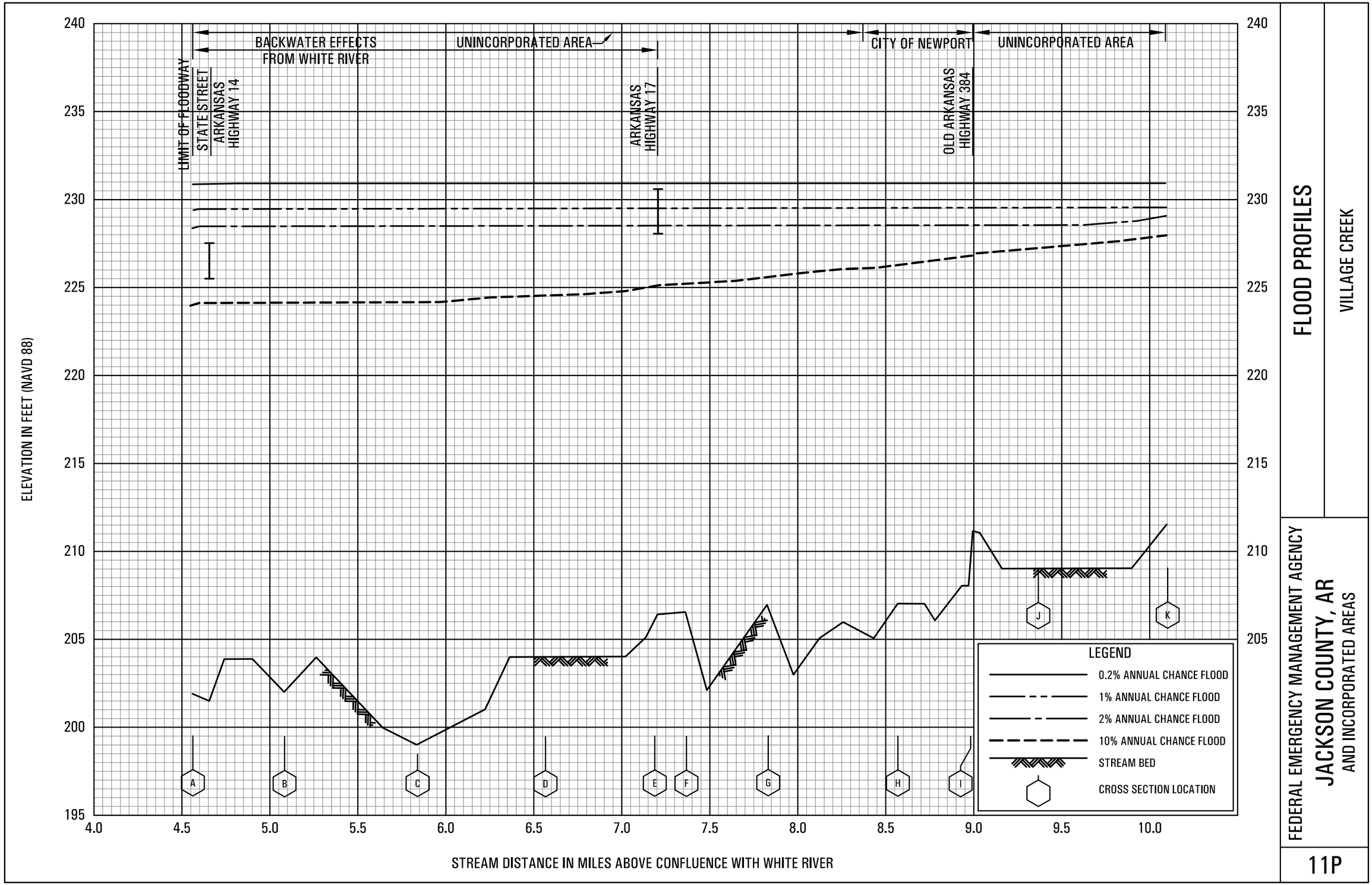
TUCKERMAN DITCH

FEDERAL EMERGENCY MANAGEMENT AGENCY

JACKSON COUNTY, AR

AND INCORPORATED AREAS

10P



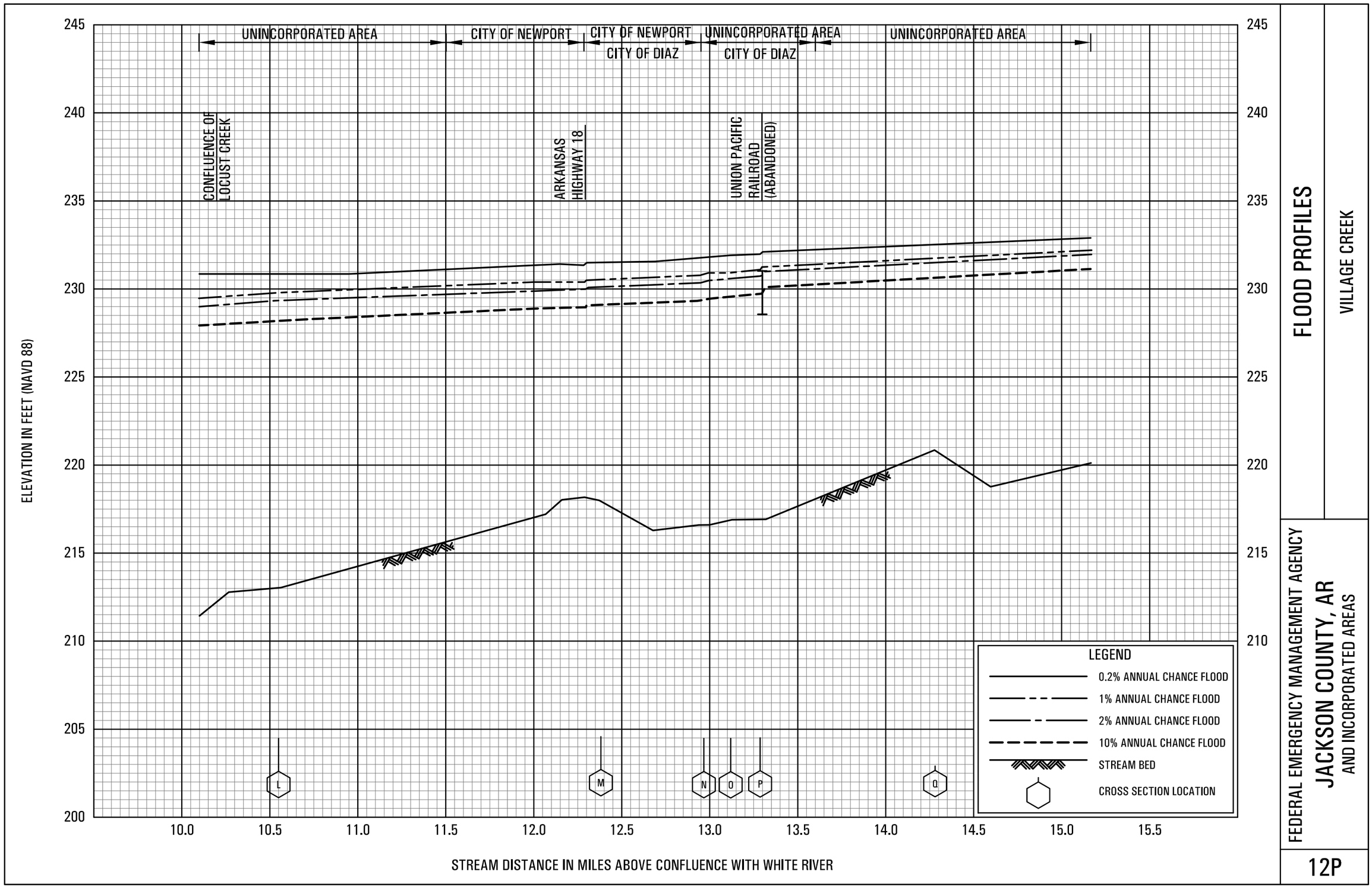
FLOOD PROFILES

VILLAGE CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY

JACKSON COUNTY, AR

AND INCORPORATED AREAS



FLOOD PROFILES

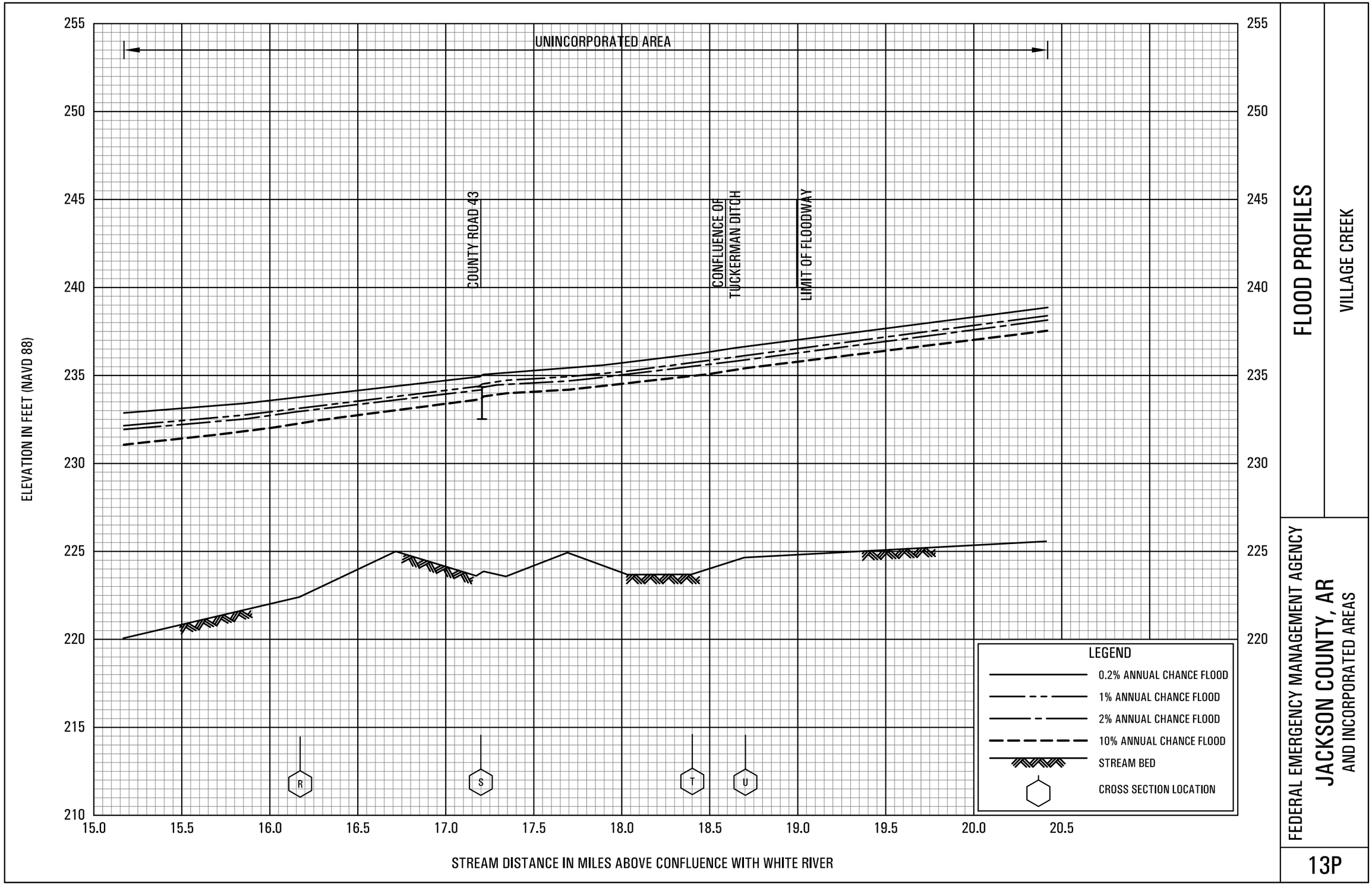
VILLAGE CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY

JACKSON COUNTY, AR

AND INCORPORATED AREAS

12P



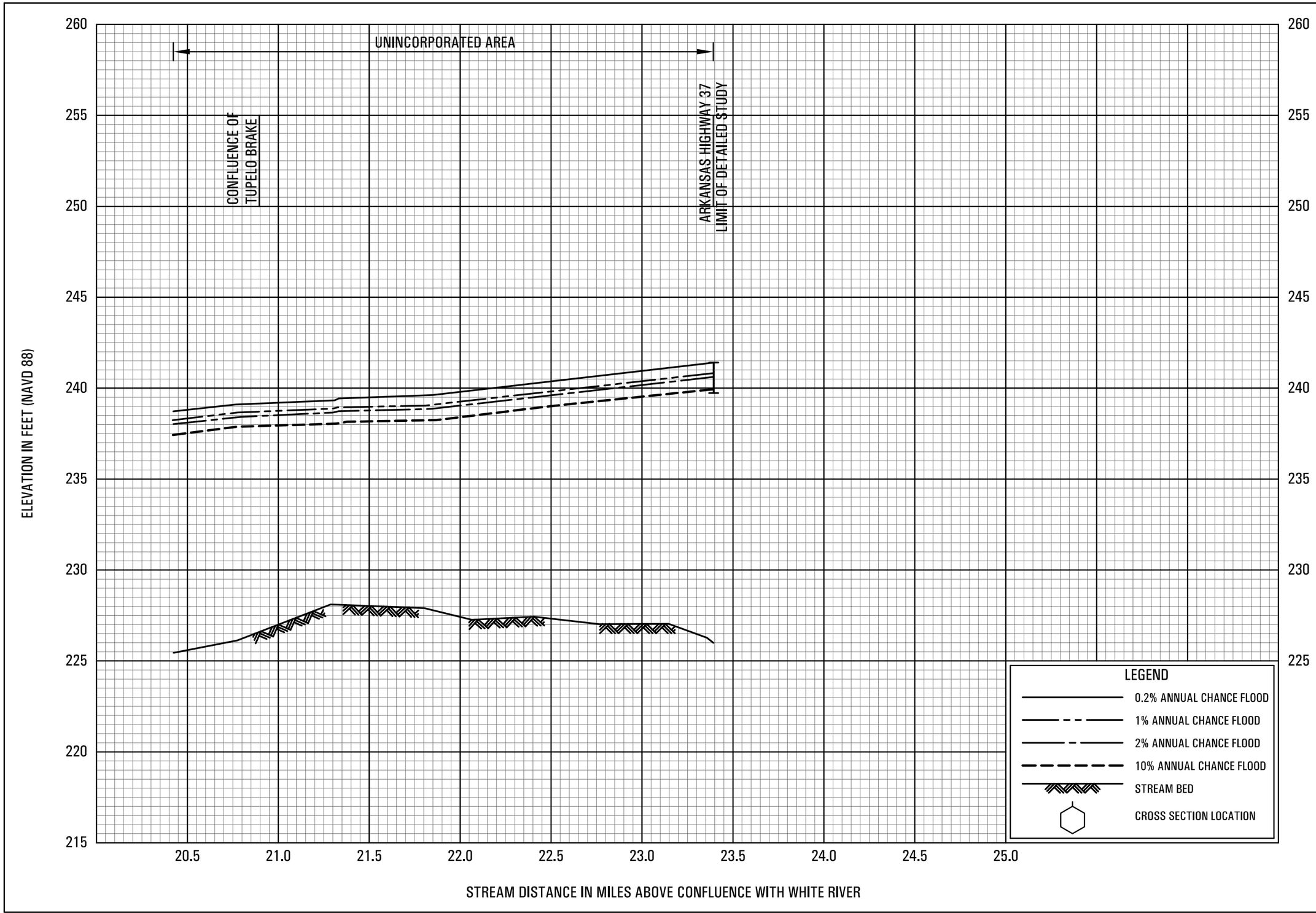
FLOOD PROFILES

VILLAGE CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY

JACKSON COUNTY, AR
AND INCORPORATED AREAS

13P

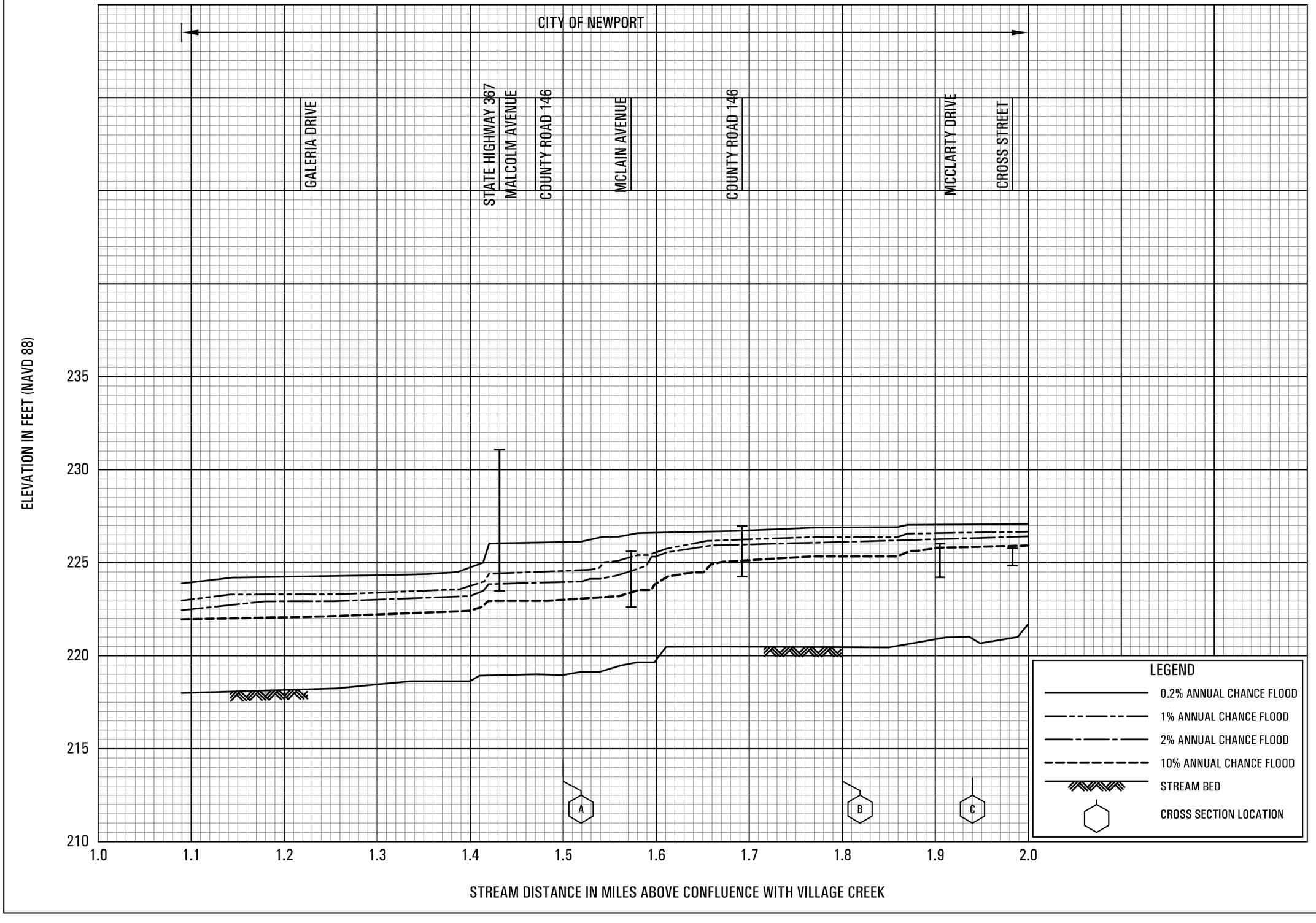


FLOOD PROFILES

VILLAGE CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY

JACKSON COUNTY, AR
AND INCORPORATED AREAS



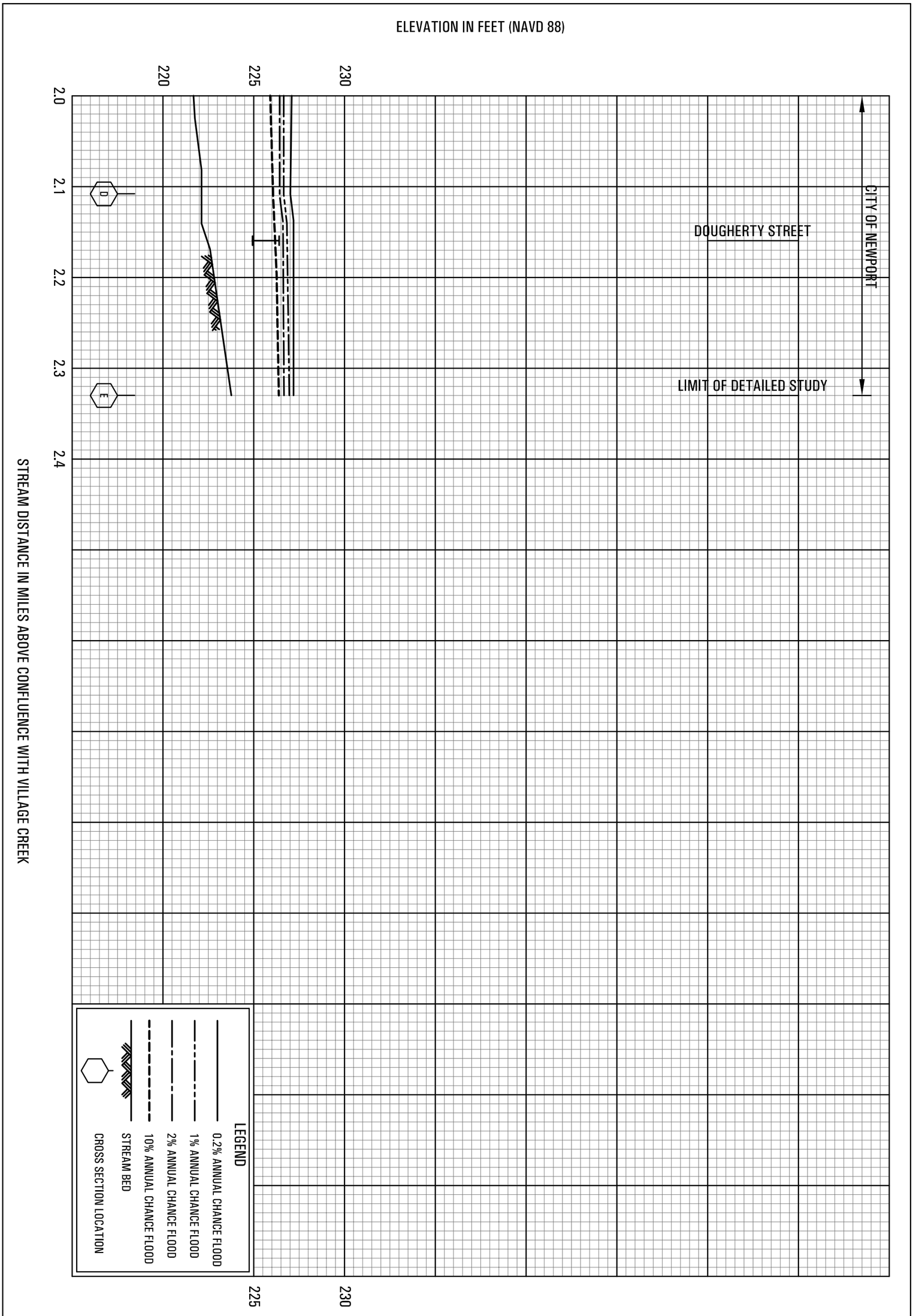
FLOOD PROFILES

VILLAGE CREEK OUTFALL DITCH

FEDERAL EMERGENCY MANAGEMENT AGENCY

JACKSON COUNTY, AR

AND INCORPORATED AREAS



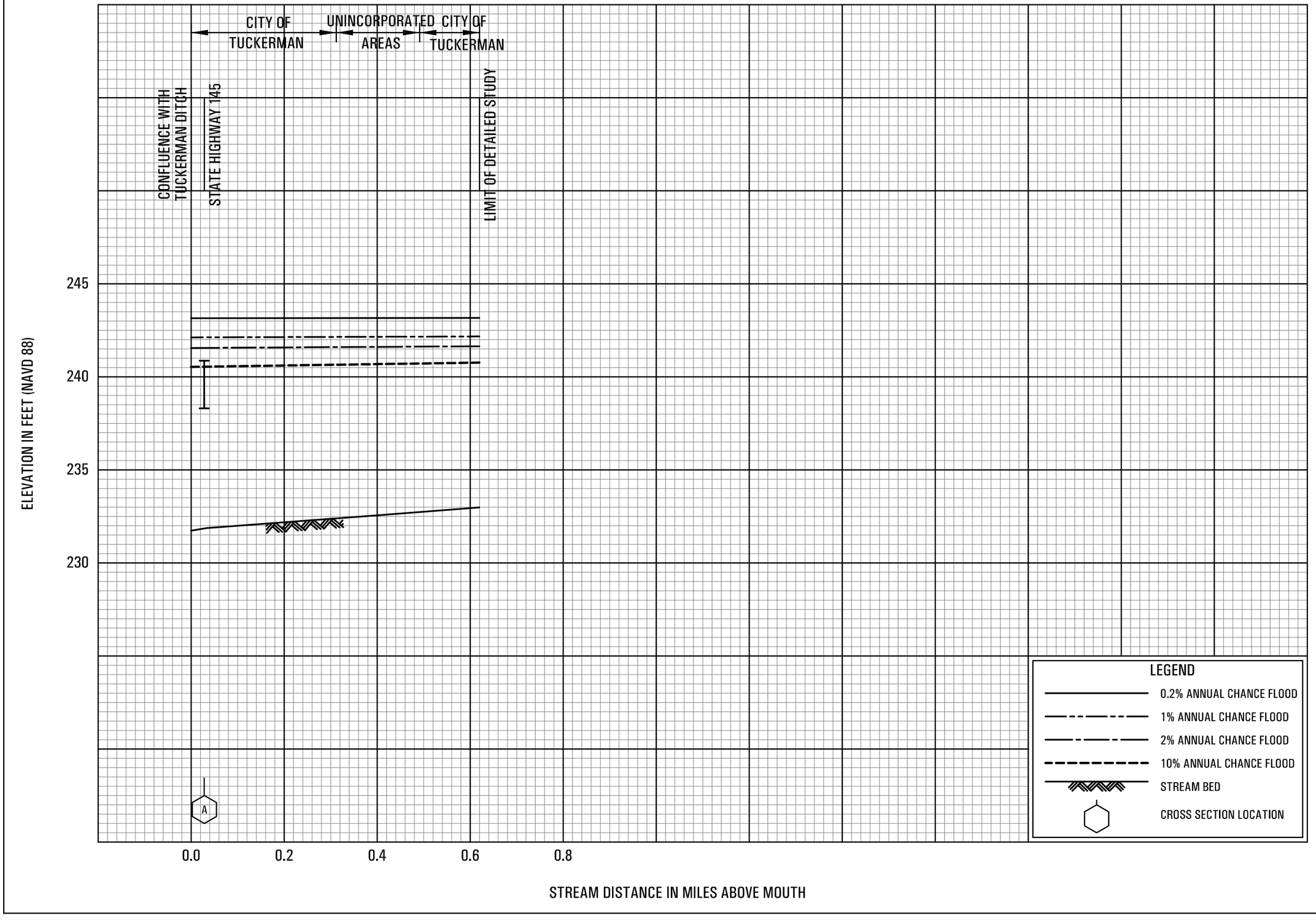
FEDERAL EMERGENCY MANAGEMENT AGENCY

JACKSON COUNTY, AR

AND INCORPORATED AREAS

FLOOD PROFILES

VILLAGE CREEK OUTFALL DITCH



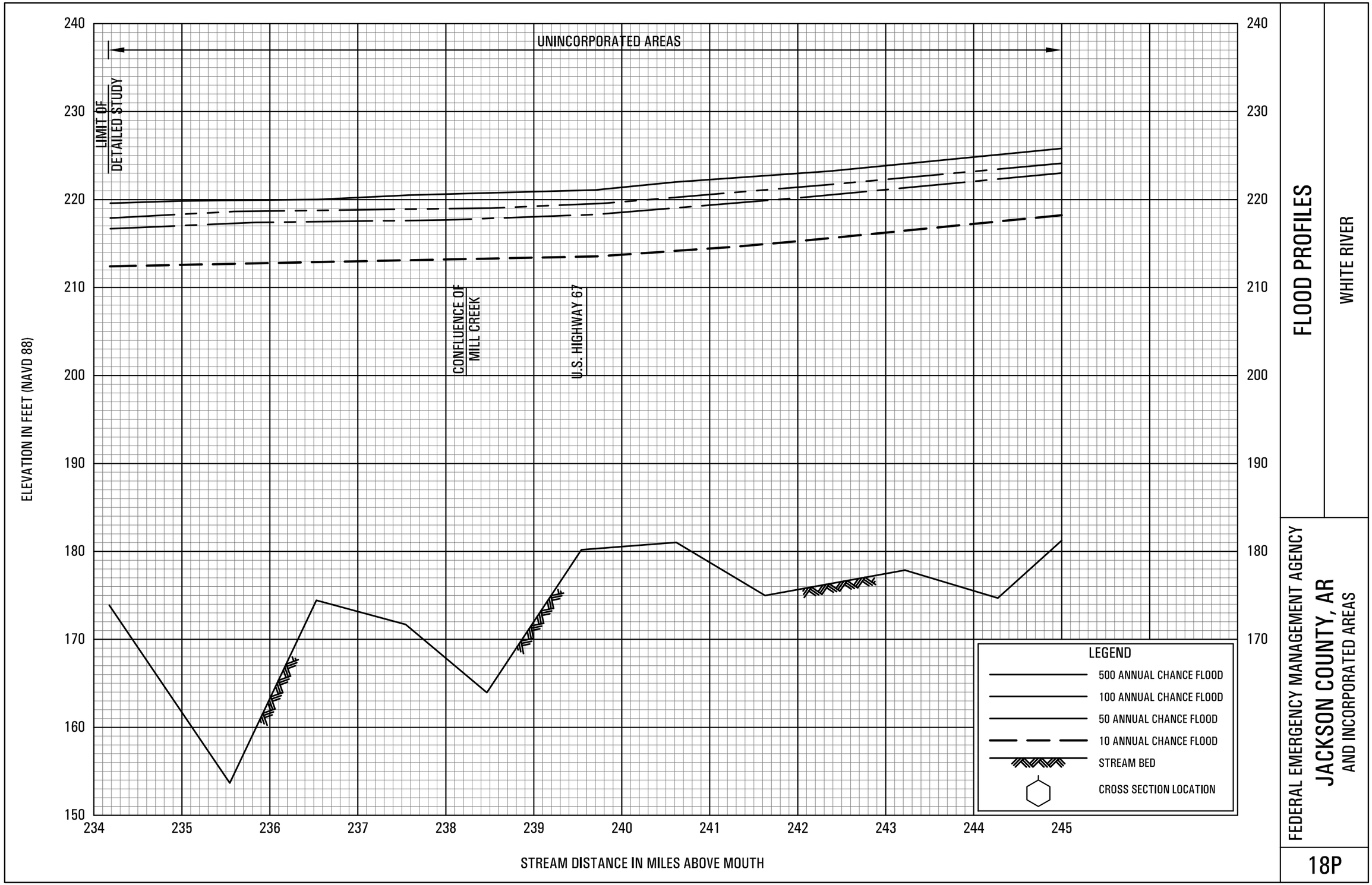
FLOOD PROFILES

WATSON DITCH

FEDERAL EMERGENCY MANAGEMENT AGENCY

JACKSON COUNTY, AR

AND INCORPORATED AREAS



FLOOD PROFILES

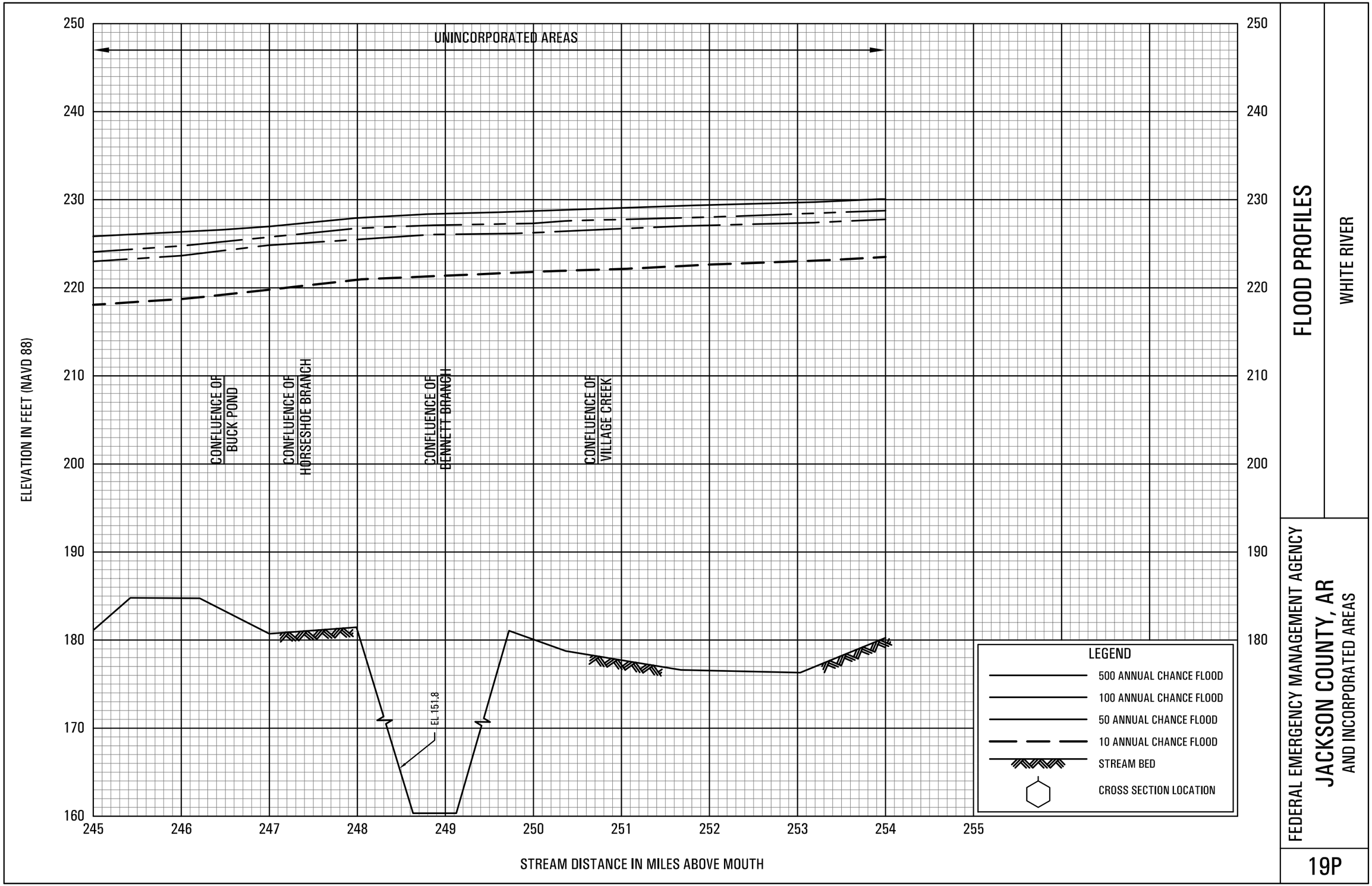
WHITE RIVER

FEDERAL EMERGENCY MANAGEMENT AGENCY

JACKSON COUNTY, AR

AND INCORPORATED AREAS

18P



FLOOD PROFILES

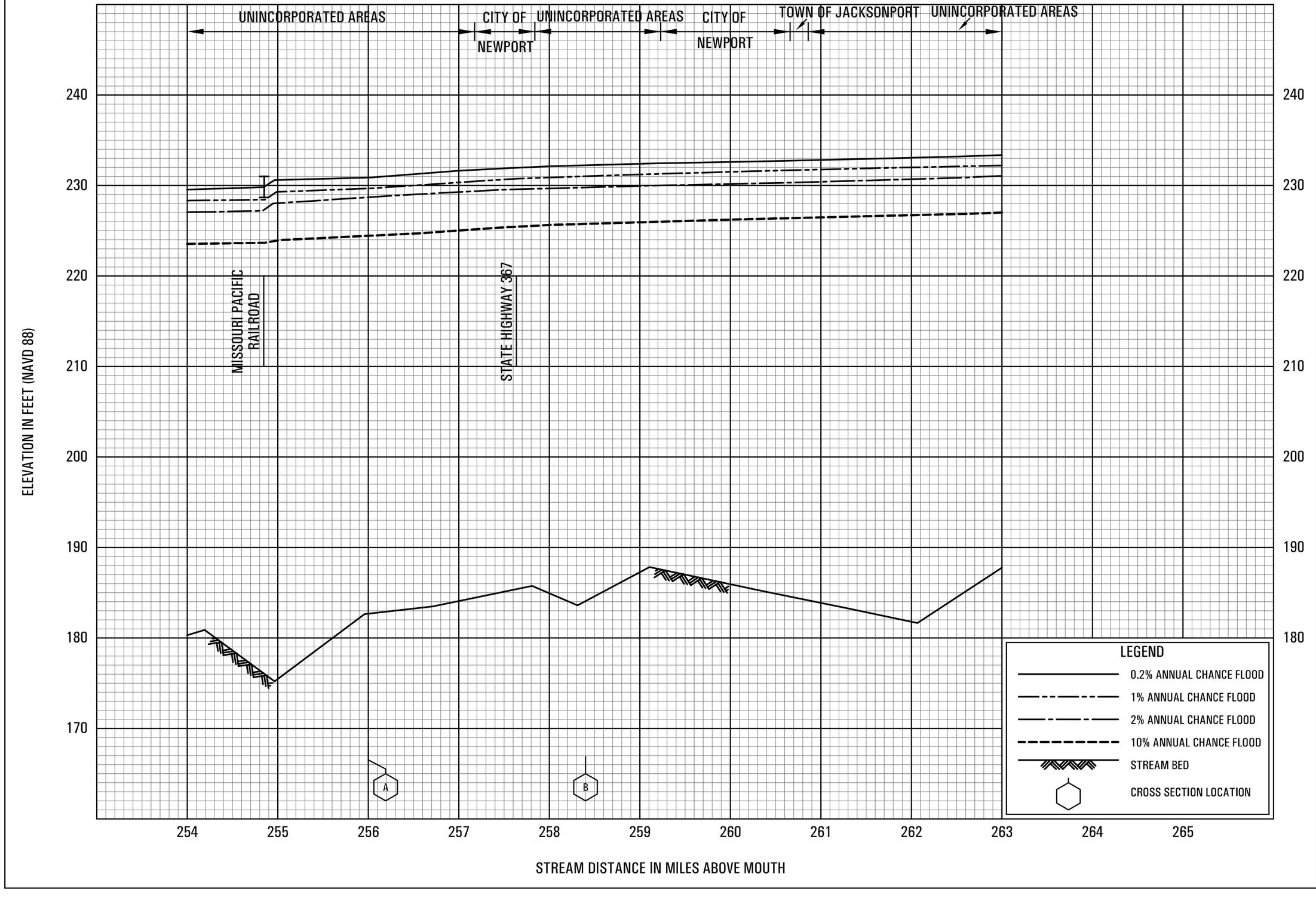
WHITE RIVER

FEDERAL EMERGENCY MANAGEMENT AGENCY

JACKSON COUNTY, AR

AND INCORPORATED AREAS

19P

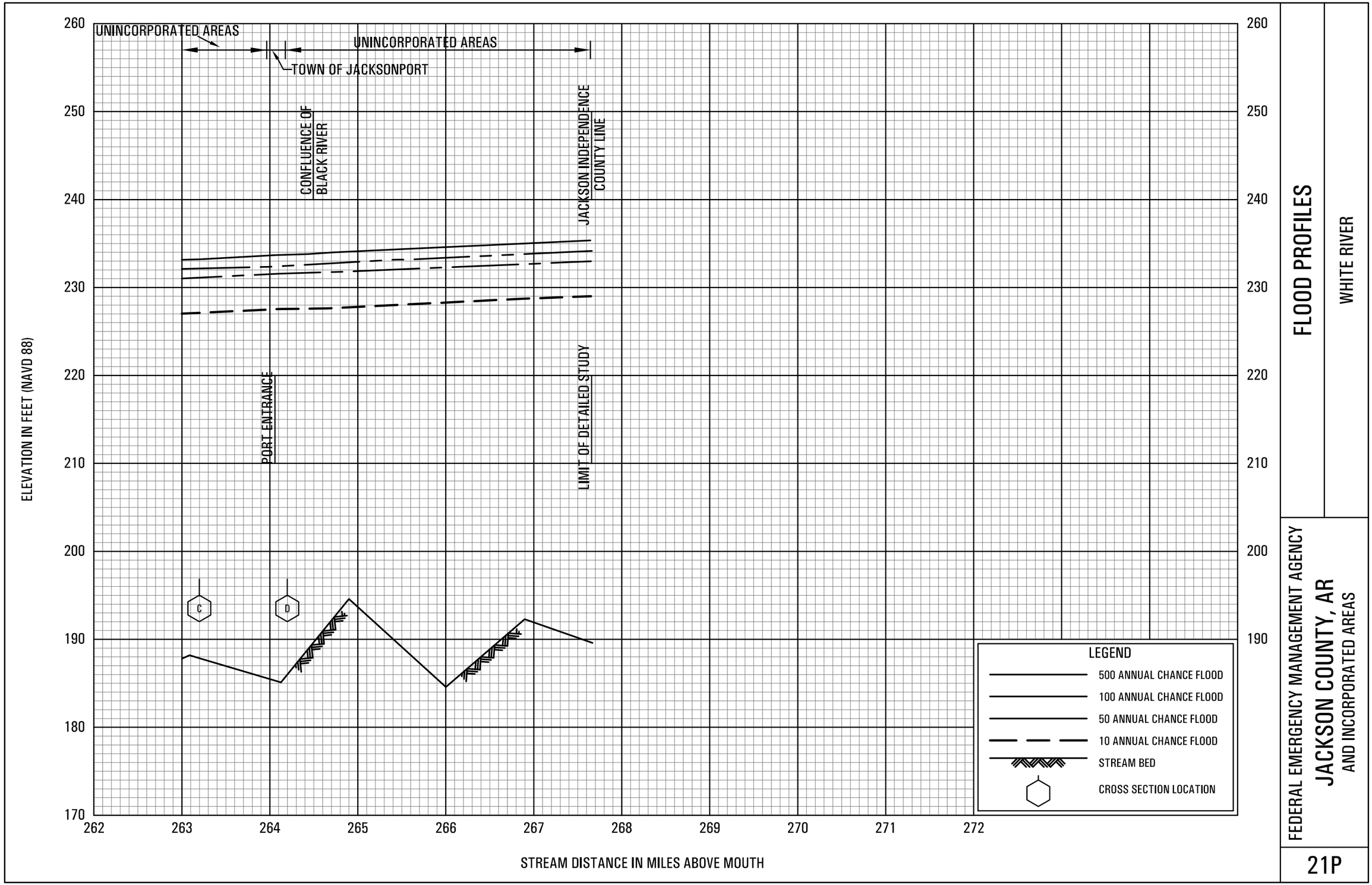


FLOOD PROFILES

WHITE RIVER

FEDERAL EMERGENCY MANAGEMENT AGENCY

JACKSON COUNTY, AR
AND INCORPORATED AREAS



FLOOD PROFILES

WHITE RIVER

FEDERAL EMERGENCY MANAGEMENT AGENCY

JACKSON COUNTY, AR

AND INCORPORATED AREAS

21P