

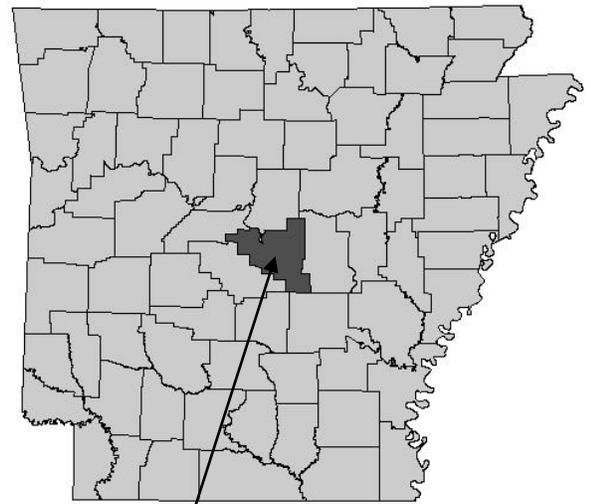
FLOOD INSURANCE STUDY



Volume 1 of 4

PULASKI COUNTY, ARKANSAS AND INCORPORATED AREAS

Community Name	Community Number
Alexander, Town of	050377
Cammack Village, City of	050310
Jacksonville, City of	050180
Little Rock, City of	050181
Maumelle, City of	050577
North Little Rock, City of	050182
Pulaski County (Unincorporated Areas)	050179
Sherwood, City of	050235
Wrightsville, City of	050142



PULASKI COUNTY

Revised:

PRELIMINARY
NOVEMBER 30, 2016



Federal Emergency Management Agency

FLOOD INSURANCE STUDY NUMBER
05119CV001B

**NOTICE TO
FLOOD INSURANCE STUDY USERS**

Communities participating in the National Flood Insurance Program (NFIP) have established repositories of flood hazard data for floodplain management and flood insurance purposes. This Flood Insurance Study (FIS) 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 (FIRM) panels for this community contain information that was previously shown separately on the corresponding Flood Boundary and Floodway Map (FBFM) panels (e.g., floodways, cross sections). In addition, former flood hazard zone designations have been changed as follows:

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

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

Initial Countywide FIS Effective Date: July 6, 2015

Revised Countywide FIS Dates: Month XX, XXXX

ATTENTION: On FIRM panels 0110G, 0120G, 0130G, 0140G, 0305G, 0309G, 0310G, 0316G, 0317G, 0336G, 0337G, 0341G, 0343G, 0344G, 0363G, 0364G, 0368G, 0370G, 0390G, 0457G, 0459G, 0476G, 0477G, 0478G, 0479G, 0481G, 0482G, 0483G, 0484G, 0490G, 0495G, 0505G, 0515G, 0555G, 0560G, 0565G, 0570G, 0580G, 0585G, 0590G, 0595G, 0610G, 0630G, and 0635G, the Baucum, Little Rock Drainage District #2, Old River, Plum Bayou, Roland, and Woodson levees and the North Little Rock Levee and Floodwall, have not been demonstrated by the community or levee owner(s) to meet the requirements of Section 65.10 of the NFIP regulations in the Code of Federal Regulations at 44 CFR as it relates to the levee's capacity to provide 1% annual chance flood protection. The subject areas are identified on FIRM panels (with notes and bounding lines) and in the FIS report as potential areas of flood hazard data changes based on further review.

FEMA has updated levee analysis and mapping protocols. Until such time as FEMA is able to initiate a new flood risk project to apply the new protocols, the flood hazard information on the aforementioned FIRM panels that are affected by the Arkansas River levees is being added as a snapshot of the prior effective information presented on the FIRMs and FIS reports dated October 19, 2001 (unincorporated areas of Pulaski County and the City of Little Rock), November 2, 1994 (City of Maumelle), and September 5, 1990 (City of North Little Rock). As indicated above, it is expected that affected flood hazard data within the subject area could be significantly revised. This may result in floodplain boundary changes, 1% annual chance flood elevation changes, and/or changes to flood hazard zone designations.

The effective FIRM panels (and the FIS) will again be revised to update the flood hazard information associated with the Arkansas River levees when FEMA is able to initiate and complete a new flood risk project to apply the new protocols.

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

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PUBLISHED SEPARATELY

Flood Insurance Rate Map Index
Flood Insurance Rate Map

FLOOD INSURANCE STUDY PULASKI COUNTY, 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 Pulaski County, Arkansas, including the Cities of Cammack Village, Jacksonville, Little Rock, Maumelle, North Little Rock, Sherwood and Wrightsville; the Town of Alexander; and the unincorporated areas of Pulaski County; (referred to collectively herein as Pulaski 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, Section 60.3.

Please note that the Town of Alexander is geographically located in two counties (Pulaski County and Saline County). The portions of the town within Pulaski County are included in this FIS. The portions of the town within Saline County are included in the Saline County, Arkansas and Incorporated Areas FIS.

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 also note that the Federal Emergency Management Agency (FEMA) has identified one or more levees in Pulaski County that have not been demonstrated by the community or levee owner(s) to meet the requirements of 44 CFR Section 65.10 of the NFIP regulations as it relates to the levee's capacity to provide 1% annual chance flood protection. As such, there are temporary actions being taken until such time as FEMA is able to initiate a new flood risk project to apply new protocols. Please refer to the Notice to Flood Insurance Study Users page at the front of this FIS report for more information.

1.2 Authority and Acknowledgments

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

The original hydrologic and hydraulic analyses for the Town of Alexander were performed by the U.S. Army Corps of Engineers, Little Rock District (USACE-LR), for FEMA, under Interagency Agreement No. H-9-79, Project Order No. 12. This work was completed in September 1980 (Reference 1).

The original hydrologic and hydraulic analyses for the City of Jacksonville were performed by the Soil Conservation Service (SCS) for FEMA, under Interagency Agreement No. IAA-H-18-75, Project Order No. 6. This work was completed in March 1977. An updated

version was prepared by Dewberry & Davis; this work was completed in May 1984 (Reference 2).

The hydrologic and hydraulic analyses for the original City of Little Rock study were prepared by the USACE-LR, for FEMA, under Inter-Agency Agreement Nos. IAA-H-19-74, Project Order No. 14; IAA-H-16-75, Project Order No. 6; IAA-H-16-75, Project Order No. 6, Amendment No. 3; IAA-H-7-76, Project Order No. 15; and IAA-H-7-76, Project Order No. 15, Amendment No. 1. The first revision was performed by Dewberry & Davis, for FEMA, and completed in June 1983. For the second revision to the City of Little Rock FIS, the updated hydrologic and hydraulic analyses were prepared by the USACE-LR for FEMA under Inter-Agency Agreement No. EMW-85-E-1822, Project Order No. 1, Amendment No. 2, and completed in December 1986. The third revision to the City of Little Rock FIS included new hydraulic analyses performed by the USACE-LR. The revision was completed on October 19, 2001, to update flood hazards based on construction of the Fourche Creek Flood Reduction Project by the USACE-LR, which included channel modifications along Fourche, Grassy Flat, and Rock Creeks within the City of Little Rock (Reference 3).

The City of Maumelle FIS information was taken directly from the revised Pulaski County FIS dated November 2, 1994; no restudies or new studies were performed (Reference 4).

The hydrologic and hydraulic analyses for the original North Little Rock study were prepared by the USACE-LR, for FEMA, under Inter-Agency Agreement Nos. IAA-H-7-76, Project Order No. 21; and IAA-H-10-77, Project Order No. 1, and completed in March 1978. The first revision is dated July 15, 1988 and included updated hydraulic analyses for Fairman Ditch and Glenview Ditch, by the USACE-LR. The second revision was completed in October 1988 and included updated hydraulic analyses for Shilcotts Bayou, Shilcotts Bayou Tributary, and the Arkansas River (Reference 5).

The hydrologic and hydraulic analyses in the original study and the first revision for unincorporated areas of Pulaski County were prepared by the USACE-LR for FEMA, under Interagency Agreement No. H-18-78, Project Order No. 32. Work for the first revision was completed in September 1981. The analyses in the second revision were prepared under agreement with FEMA. The hydrologic and hydraulic analyses for the third revision for flooding sources in the county were performed by USACE-LR for FEMA, under Interagency Agreement No. EMW-95-E-4759, Project Order No. 4, Amendment No. 1. This work was completed in 1996 (Reference 24). The hydrologic and hydraulic analyses for the fourth revision for flooding sources in the county were completed by USACE-LR with the construction of the Fourche Creek Flood Reduction Project; the study was revised on October 19, 2001 (Reference 6).

The hydrologic and hydraulic analyses for the original City of Sherwood FIS were performed by the SCS for FEMA, under Inter-Agency Agreement No. IAA-H-18-75, Project Order No. 6. Revisions performed in 1981 were incorporated to include portions of Fivemile and Woodruff Creeks. Information used for those revisions was taken directly from the effective Pulaski County (Unincorporated Areas) and City of North Little Rock, Arkansas, FISs, prepared for FEMA by the USACE (Reference 7).

For this countywide FIS, the new detailed and limited detailed hydrologic and hydraulic analyses for Ferndale Creek, Fletcher Creek, Good Earth Drain, Isom Creek, Kinley Creek, Little Maumelle River, Neal Creek, Nowlin Creek, South Loop Creek, South Loop Split, Taylor Loop Creek, and Tributaries 4, 5, 7, and 9 to the Little Maumelle River were performed by

FTN/Taylor JV, for FEMA, under Contract No. EMT-2002-CO-0050, Task Orders No. 005 and 011 completed September 2005, for Bayou Meto performed by Pulaski County under Cooperating Technical Partner agreement with FEMA completed September 2009. The review of the levees along the Arkansas River and portions of Fourche Creek performed by RAMPP for FEMA, under Contract No. HSFEHQ-09-D-0369, Task order HSFE06-09-J-0001 completed September 30, 2014.

Basemap information shown on this Flood Insurance Rate Map (FIRM) was provided by the State of Arkansas Geographic Information Office and the Pulaski Area Geographic Information System (PAGIS).

The projection used in the preparation of this FIRM was Arkansas State Plane North Zone (FIPS Zone 301) referenced to the North American Datum of 1983 (NAD83) and the GRS 1980 spheroid. Differences in the datum and spheroid used in the production of the FIRMs for adjacent counties may result in slight positional differences in map features at the county boundaries. These differences do not affect the accuracy of information shown on the FIRM.

1.3 Coordination

An initial Consultation Coordination Officer's (CCO) meeting is held with representatives from FEMA, the community, and the study contractor to discuss the nature and purpose of a FIS, and to identify the flooding sources to be studied by detailed methods. A final CCO meeting is held with representatives from FEMA, the community, and the study contractor to review the results of the study.

The dates of pre-countywide initial and final CCO meetings held for the communities within Pulaski County are shown in Table 1, "CCO Meeting Dates."

Table 1- CCO Meeting Dates

Community	Initial CCO Date	Final CCO Date
Alexander, Town of	11/9/1978	2/13/1981
Jacksonville, City of	12/1974	6/13/1982
Little Rock, City of	2/5/1974	1/22/1979
Second revision	9/26/1984	4/2/1992
Maumelle, City of	12/14/1977	6/3/1982
Second revision	N/A	11/18/1993
North Little Rock, City of	12/18/1975	1/18/1979
Pulaski County (Unincorporated Areas)	12/14/1977	6/13/1982
Sherwood, City of	12/1974	7/23/1976

The results of the study were reviewed at the final Consultation Coordination Officer's (CCO) meeting held on August 5, 2014, and attended by representatives of the City of Little Rock, City of North Little Rock, City of Maumelle, and Pulaski County, study contractors, and FEMA.

2.0 AREA STUDIED

2.1 Scope of Study

This FIS covers the geographic area of Pulaski County, Arkansas, including the incorporated communities listed in Section 1.1.

The areas studied by detailed methods were selected with priority given to known flood hazards and areas of projected development or proposed construction through May 2004. Analyses that were limited in detail were used to study those areas having a low to moderate development potential or minimal to moderate flood hazards. The scope and methods of study were proposed to, and agreed upon, by FEMA and Pulaski County.

This study also combines the individual community studies into a countywide FIS and converts all FIRMs to digital format.

Streams studied by detailed methods for this study and their respective study limits from downstream to upstream are listed below.

Bayou Two Prairie	Reach limits of approximately 1.9 miles (Upstream of Arkansas Highway 5 to upstream side of Private Drive)
Blue Branch	Reach limits approximate 1.1 miles (Confluence with Bayou Two Prairie to approximately 0.5 miles upstream of Arkansas Highway 89)
Glade Branch	Reach limits of approximately 3.8 miles (Upstream of U.S. Highway 67/167 to east side of Tadpole)
Good Earth Drain	Reach limits of approximately 0.2 miles (Confluence with Taylor Loop Creek to divergence from Taylor Loop Creek)
Isom Creek	Reach limits of approximately 2.3 miles (Confluence with Taylor Loop Creek to approximately 100 feet downstream of Russ Street)
Jacks Bayou	Reach limits of approximately 8.6 miles (Pulaski County / Lonoke County boundary to Roam Road vicinity)
Jacks Bayou Tributary 10	Reach limits of approximately 1.0 miles (Confluence with Jacks Bayou to approximately 0.3 miles upstream of Hercules Drive)
Kinley Creek	Reach limits of approximately 4.9 miles (Confluence with Nowlin Creek to just downstream of Copper Creek Lane)
Little Maumelle River	Reach limits of approximately 24.2 miles (Confluence with Arkansas River Pool 7 to the Pulaski County line)
Nowlin Creek	Reach limits of approximately 9.1 miles (Confluence with Little Maumelle River to approximately 3,500 feet upstream of a Forestry road crossing)
South Loop	Reach limits of approximately 1.2 miles (Confluence with Taylor Loop Creek to divergence from Taylor Loop Creek)

South Loop Split	Reach limits of approximately 0.2 miles (Confluence with South Loop to divergence from South Loop)
Taylor Loop Creek	Reach limits of approximately 4.5 miles (Confluence with Little Maumelle River to downstream side of Hinson Road)
White Oak Branch	Reach limits of approximately 2.2 miles (Upstream of Arkansas Highway 5 to Roland Road)

Streams studied by limited detail methods for this study and their respective study limits are listed below.

Ferndale Creek	Reach limits of approximately 1.8 miles (Confluence with Little Maumelle River to the Pulaski County line)
Fletcher Creek	Reach limits of approximately 3.0 miles (Confluence with Little Maumelle River to approximately 3,000 feet upstream of Walnut Grove Trail)
Neal Creek	Reach limits of approximately 4.0 miles (Confluence with Kinley Creek to approximately 5,800 feet downstream of Pulaski County limits)
Tributary 4 to Little Maumelle River	Reach limits of approximately 2.3 miles (Confluence with Little Maumelle River to just downstream of State Highway 10)
Tributary 5 to Little Maumelle River	Reach limits of approximately 1.5 miles (Confluence with Little Maumelle River to just downstream of Guenther Road)
Tributary 6 to Fletcher Creek	Reach limits of approximately 1.4 miles (Confluence with Fletcher Creek to approximately 6,500 feet upstream of Walnut Grove Trail)
Tributary 7 to Little Maumelle River	Reach limits of approximately 3.4 miles (Confluence with Little Maumelle River to approximately 1 mile upstream of Waldenwood Lane)
Tributary 8 to Fletcher Creek	Reach limits of approximately 1.6 miles (Confluence with Fletcher Creek to approximately 4,000 feet upstream of Cascade Creek Road)
Tributary 9 to Little Maumelle River	Reach limits of approximately 2.8 miles (Confluence with Little Maumelle River to approximately 1,200 feet upstream of Garrison Road)

All stream reaches with prior effective detailed study mapping not restudied for this countywide study were redelineated.

Numerous flooding sources in the county were studied by approximate methods. 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 Pulaski County.

This revision also incorporated the determination of letters issued by FEMA resulting in map changes as shown in Table 2, "Letters of Map Revision".

Table 2 - Letters of Map Revision

<u>Community</u>	<u>Flooding Source(s)/Project Identifier</u>	<u>Date Issued</u>	<u>Case No.</u>
City of North Little Rock	Landski & Parkway Drives	8/13/1999	99-06-1317P
City of Little Rock	Brodie Creek / Tall Timbers Subdivision	10/15/2000	00-06-1210P
City of Little Rock	Grassy Flat Creek / Pinnacle Bank	10/16/2002	01-06-1835P
City of Little Rock	Rock Creek / Corrections near Kanis Road \West 12 th Street Crossing	6/13/2003	02-06-2217P
City of Jacksonville	Fivemile Creek / Two Pine Landfill	12/08/2003	03-06-1385P
City of Little Rock	Arkansas River / Extension on Runway 22R in Pool 6	1/07/2004	03-06-1726P
City of Little Rock	Coleman Creek / Channelization Culvert	6/24/2004	03-06-2056P
City of Jacksonville	Jack Bayou Tributary 1 / Doyle Rogers Development	7/27/2004	04-06-1607P
City of Little Rock	Otter Creek / Wimbledon Loop	11/10/2004	03-06-2526P
City of Little Rock	Cloverdale Drain	12/22/2004	03-06-697P
City of Jacksonville	Bayou Meto Tributary 1-A / Marshall Road and John Hardin Drive	3/29/2006	05-06-1464P
City of Little Rock	Fourche Creek / Stonewood Apartments	5/26/2006	06-06-B192P
City of North Little Rock /Pulaski County	Fivemile Creek McCain Fork / Metropolitan Realty & Development LLC	7/20/2006	05-06-1777P
City of Little Rock	Arkansas River / Little Rock National Airport Runway 22L extension	9/29/2006	06-06-BG11P
City of Sherwood	Woodruff Creek Tributary 1 / WCT 1	2/22/2007	06-06-B539P
City of Jacksonville	Jack Bayou Tributary 1 / Jacksonville Plaza Addition	8/27/2007	07-06-1128P
City of North Little Rock	Arkansas River / Riverview Business Park	5/06/2008	08-06-1262P
City of Little Rock	Brodie Creek / Woodlands End Development	10/29/2008	08-06-2112P
City of Little Rock	Fourche Creek / Zimmerman Site	3/17/2010	09-06-1629P
Pulaski County	Fox/Little Maumelle Floodway Modifications	11/30/2010	10-06-1219P
City of Little Rock/ Pulaski County	Arkansas River / Welspun Pipes Inc.	6/06/2012	11-06-4271P
Pulaski County	Maumelle River @ Canterbury Park	10/11/2012	12-06-0415P

2.2 Community Description

Pulaski County is located in central Arkansas and is bordered by Faulkner County to the north, Perry County to the northwest, Saline County to the southwest, Grant and Jefferson Counties to the south, and Lonoke County to the east. The topography within the County varies widely from extremely flat areas especially in the southeast, to bluffs and other steep terrain in the northwest. The Town of Alexander is located in the extreme southwestern part of Pulaski County. The City of Jacksonville is located in eastern Pulaski County adjacent to the Lonoke County line, approximately 12 miles northeast of the City of Little Rock. The City of Little Rock, the state capital of Arkansas, is located along the south bank of the Arkansas River. The City of Maumelle is located in the north central portion of Pulaski County. The City of North Little Rock is located along the north bank of the Arkansas River, at the abrupt junction of the Ouachita Province of the Interior Highlands and the Mississippi Alluvial Plain. The City of Sherwood is located in the east central to northeast portion of Pulaski County.

For the Town of Alexander, Crooked Creek is the main drainage.

White Oak Bayou and the Arkansas River are the principal drainage systems studied that affect the City of Maumelle.

For the City of Jacksonville, Bayou Meto, which flows southeast through the southern portion of the City, and Jacks Bayou, which flows south along the east side of the City, are the principal streams in the City. The total drainage area of these two streams affecting City of Jacksonville is 171 square miles.

Small tributaries enter the Arkansas River along its bluffs in western and central Little Rock, with State Capitol Drain being the only one of these streams with significant floodplains and problems. Fourche Creek and its tributaries drain the remainder of the City. Rock Creek is the principal tributary of Fourche Creek, and Grassy Flat Creek is the principal tributary of Rock Creek. All of these streams and some of their tributaries have floodplains that experience significant flooding. The southern and western portions of the City of Little Rock and Pulaski County are experiencing a rapid residential and commercial growth with the resulting urbanization affecting the amounts of runoff and the extent of flooding. Much of the industrial growth and some of the commercial growth are in non-flood hazard areas. Stream slopes along the upper tributaries of Fourche Creek are steep, and floods are characterized by relatively high peaks and short durations. However, the lower portions of Fourche Creek have very flat slopes. During large floods on Fourche Creek, a lake is formed in the large storage area extending from approximately mile 2.8 to mile 11.5 that has no appreciable slope. Following large floods, peak outflows from this lake occur 1 to 2 days after the peak inflow. Generally, the floodplains of the upstream tributaries are narrow, but the floodplains widen at irregular intervals on a number of streams, causing more serious flood problems.

The principal drainage systems in the City of North Little Rock are Shilcotts Bayou and its tributaries, Fivemile Creek and its tributaries, the tributaries to Dark Hollow, and the tributaries to Faulkner Lake. Most of the tributaries and the upper portions of Shilcotts Bayou and Fivemile Creek have steep slopes and are characterized by relatively high peak flood flows of short duration. Stream slopes of the larger streams decrease rapidly as they reach the old floodplains of Arkansas River, and flood flows are sluggish and of much longer duration. Generally the floodplains of all of these streams are narrow, and few structures are affected by floods at any given location. The most prolonged flooding of developed areas occurs in the fringe areas bordering Dark Hollow and along the tributaries of Faulkner Lake.

In the unincorporated areas of Pulaski County, the principal drainages are Bayou Meto in the northeast, the Little Maumelle River in the west, Fourche Creek on the south, Pennington Bayou – Lorange Creek in the southeast, and the Arkansas River through the central portion of the county, from northwest to southeast.

For the City of Sherwood, Fivemile Creek is the main drainage outlet. It flows generally to the northeast through the eastern part of the city. Woodruff Creek, which flows into Fivemile Creek east of U.S. Highways 67/167, is the drainage outlet for much of the western part of the city. Numerous small tributaries flow into these two main outlets. Peeler Lake and Trammel Lake are overflow areas within the city. They are swampy wooded areas subject to frequent inundation.

Pulaski County is forested and rural to the west, urbanized around the City of Little Rock and along the U.S. Highways 67/167 corridor, and mainly agricultural or undeveloped to the east and southeast. In the year 2010, the population of Pulaski County, including the incorporated areas was approximately 382,748, with the majority of these people living in the City of Little Rock (Reference 8). The population of City of Little Rock in 2010 was approximately 193,524. The population of North Little Rock was 62,304 in 2010. The population of Sherwood, in 2010, was 29,523 people. The 2010 Census Bureau figure showed the City of Jacksonville population at 28,364. The 2010 Census listed the population of Maumelle as 17,163 and the 2010 Census estimated the population of Alexander as 2,901. Major transportation arteries in the county include the Union Pacific Railroad; Interstate Highways 30, 40, 430, 530, and 630; U.S. Highways 65, 67, 167, and 70; State Highways 10, 107, 130, 161, and 367; and numerous county roads.

The climate in Pulaski County is characterized by long summers and relatively short winters. The average temperature is 61.8 degrees Fahrenheit (°F). The yearly average temperatures range from a high of 71.7°F to a low of 51.8°F. The record high temperature of 110°F occurred in August 1936, and the record low temperature of -13°F occurred in February 1899. The average annual rainfall is 47.54 inches. The largest annual rainfall of 75.54 inches occurred in 1882 and the smallest annual rainfall of 28.26 inches occurred in 1963 (Reference 9).

2.3 Principal Flood Problems

In the Town of Alexander, flood problems are located adjacent to Crooked Creek due to Crooked Creek channel overflows, and in the northern part of the city due to a small amount of runoff from within the city.

In the City of Jacksonville, Bayou Meto and Jacks Bayou are the principal sources of flooding within the study area. Flooding also occurs within the study area on larger tributaries to these streams. Recent urbanization has increased flood magnitude and flood damages. Two large floods occurred in this vicinity in May 1968 and February 1969. Based on a USACE-LR analysis, the February 1969 flood was 1.7 feet below the 1-percent-annual-chance frequency flood on Bayou Meto at State Highway 161, and the May 1968 flood crest elevation was 0.4 feet below the February 1969 flood crest elevation.

In the City of Little Rock, the floodplains of Fourche and Rock Creek typically experience the most severe and significant flood losses. Severe flooding along these streams has occurred in 1968, 1969, 1973, 1974, and 1978. Continued encroachments into these floodplains have occurred, and a flood of the magnitude of the January – February 1969 flood (resulting from approximately a 10-percent-annual-chance frequency storm rainfall) would now result in much

higher flood losses. Some damage is experienced at docks and marinas along the Arkansas River during high stages; however, levees have provided flood protection along the river for the past several decades. Considerable damage to streets and utilities has been experienced along smaller streams within the City during intense local flooding. Continuous records of the Arkansas River stage at Little Rock are available from 1927 to the present. Partial – record gaging stations have been operated along Fourche, Grassy Flat, and Rock Creeks for various periods in the past. The National Weather Service maintains a rain gage at the Adams Field Airport.

In the City of Maumelle, flooding along the Arkansas River is typically not severe. During high river stages, some damage occurs at docks along the river. As development in the floodplains continue, losses from floods may become greater.

The most significant flood problems in the City of North Little Rock occur in the south and southeast parts of the city in the old alluvial floodplain of the Arkansas River. Although levees have provided flood protection, local runoff from upland watershed areas of the City of North Little Rock ponds in the Dark Hollow and Faulkner Lake areas. Developed fringe areas adjacent to Dark Hollow and Faulkner Lake suffer the most severe flood damages along with the Crockett Addition and the Gribble Avenue residential developments outside the protected areas. Some commercial development has occurred riverside of the levees and is subject to occasional flooding, with damages experienced at docks and marinas along the river front and near the mouths of Shilcotts and White Oak Bayous due to Arkansas River backwater. Flooding from local runoff occurred in January 1969 and April 1974. Minor flooding by the Arkansas River of areas unprotected by levees occurred in April 1973, which created interior flooding when the pumps at the Baring Cross pumping station failed. During severe local flood periods, considerable damages to streets and utilities have been experienced.

Significant flood problems within Pulaski County are generally found along highways and roads crossing streams. Encroachment of developments into floodplains have continued despite flooding in September 1978 and the January – February flood of 1969, in the Fourche Creek watershed. Flood damages are generally limited to residences and commercial structures at various locations throughout the lengths of streams within the County. Flooding of the Arkansas River is not severe except near the confluence of the Little Maumelle River. As in the City of Little Rock, protection provided by levees in the past has limited damage from flooding of the Arkansas River for several decades.

In the City of Sherwood, recent urbanization has increased flood magnitude and flood damages. Two large floods occurred in this vicinity in May 1968 and February 1969. Based on a USACE-LR analysis, the February 1969 flood was 1.7 feet below the 1-percent-annual-chance frequency flood on Bayou Meto at State Highway 161, about 5 miles northeast of Sherwood. Fivemile Creek, the primary outlet for Sherwood, flows into Bayou Meto.

2.4 Flood Protection Measures

Within Pulaski County there are one or more levees that have not been demonstrated by the community or levee owner(s) to meet the requirements of 44 CFR Section 65.10 of the NFIP regulations as it relates to the levee's capacity to provide 1% annual chance flood protection. Please refer to the Notice to Flood Insurance Study Users page at the front of this FIS report for more information.

Flood flows on the Arkansas River have been reduced by the construction of over 11.2 million acre-feet of flood control storage in 28 reservoir projects upstream of the City of Little Rock. The net effects of this storage and confinement by levees vary generally from 3 to 4 feet reduction in peak stages throughout the Little Rock portion of the Arkansas River. The reservoir projects have provided additional freeboard on the government-built levees which were designed and completed before most of the upstream reservoir projects were built. Two dams are also in place along the Arkansas River within Pulaski County – David D. Terry Lock and Dam, and Murray Lock and Dam. These dams were constructed as part of the McClellan – Kerr Arkansas River Navigation System, by the USACE.

In the unincorporated areas of Pulaski County and the Cities of Little Rock and North Little Rock, protection from Arkansas River flooding in past decades has also been provided by eight government-constructed and one private levee along the Arkansas River, including the Roland Drainage District Levee, from approximately mile 138.7 to mile 134.5 along the right descending bank; the North Little Rock Levee and Floodwall, from mile 120.2 to 117.3 along the left descending bank; the Little Rock-Pulaski Drainage District No. 2 Levee from approximately mile 117.9 to 114.0 along the right descending bank and along Fourche Creek left descending bank, from mile 4.5 to its confluence with the Arkansas River; the North Little Rock to Gillett Levees (includes Baucum, Old River Drainage District, and Plum Bayou Levees) from mile 115.8 continuous downstream along the left descending bank; and the Fourche Island to Pennington Bayou Levees (includes Fourche Island Drainage District No. 2 and Woodson Levees), from approximately mile 114.0 downstream to near the county boundary along the right descending bank. The privately constructed and certified Riverdale Improvement District No. 134 Levee is located along the right descending bank of the Arkansas River from mile 121.9 to 120.6.

Protection from flooding along Rock Creek has been provided by the 36th Street/Boyle Park Levee, from mile 2.0 to 1.7 along the right descending bank of Rock Creek, in the City of Little Rock.

Other flood protection measures in the City of Little Rock include enlargement of some channels of streams within the city by developers and private owners. The effects of such improvements are generally limited in extent to 2 to 8 blocks and are located in various areas throughout the City.

Other flood protection measures in the City of North Little Rock consist of enlargement of some stream channels within the City, particularly along Shilcotts Bayou. Effects of these channel improvements are limited generally to 2 to 10 blocks in extent and are in various locations around the city.

Flood protection measures in the City of Sherwood consist of an enlarged and straightened segment of Woodruff Creek. This channel work was initiated and performed by a private developer. The work is located near North Beverly Street and provides protection only from minor floods.

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 are 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-percent, 2-percent, 1-percent, 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 (100-year) 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.

Note: Within Pulaski County there are one or more levees that have not been demonstrated by the community or levee owner(s) to meet the requirements of 44 CFR Section 65.10 of the NFIP regulations as it relates to the levee's capacity to provide 1% annual chance flood protection. Please refer to the Notice to Flood Insurance Study Users page at the front of this FIS report for more information.

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.

Restudied Detailed Study Streams

In this study, the discharges for some flooding sources were based on hydrologic determinations for the previous studies.

The hydrologic analyses for the Arkansas River for all studies were obtained from the detailed and extensive engineering studies which have been previously made in connection with the design, construction, and maintenance of the McClellan-Kerr Arkansas River project (Reference 10). Discharge frequencies were based on continuous stage records at the Little Rock gage from 1872 to date and continuous flow records from 1927 to date. These were adjusted as required for the effects of the appropriate upstream storage reservoirs. The resulting discharge frequency curve was extrapolated to determine the 0.2-percent-annual-chance flood discharge.

In previous studies or restudies, the hydrologic analyses for discharges of Kinley Creek, Nowlin Creek, and portions of the Little Maumelle River were based on design storms using the HEC-1 Flood Hydrograph Package program (Reference 11). The HEC-1 computer program computes flood hydrographs using a unit hydrograph defined by Snyder's method parameters. In order to use this program, the initial rainfall loss, a uniform loss rate, the lag time (t_p), a peaking coefficient (C_p), the storm rainfall, and drainage areas had to be defined as input parameters. Rainfall data were developed using Weather Bureau Technical Paper No. 40, and National Weather Service Technical Memorandum NWS Hydro-35 (References 12 and 13).

The flows used for these flooding sources for this study was obtained from the FIS effective study and supporting technical data.

The lengths of reaches where FIS effective flows are available are listed as follows:

<u>Stream</u>	<u>River Miles</u>
Kinley Creek	0.00 – 4.20
Little Maumelle River	8.74 – 20.81
Nowlin Creek	0.00 – 8.26

The discharges used for the downstream portion of the Little Maumelle River were based on the technical supporting hydrologic data for the effective FIS and adjusted from the upstream discharges using a ratio of discharge to drainage area.

As stated in the FIS for the City of Little Rock, revised October 19, 2001 (Reference 3), discharges for the Taylor Loop Creek stream network (including Taylor Loop Creek, Good Earth Drain, South Loop, and South Loop Split) were obtained by methods similar to those described in the Fourche Bayou Basin General Design Memorandum No. 2 (Reference 14). Where applicable, the discharges for the 0.2-percent-annual-chance event were obtained by extrapolating the curves obtained from the 10-percent, 2-percent, and 1-percent-annual-chance flood discharges.

For computation of discharges along the downstream portion of Isom Creek, a Letter of Map Revision (LOMR) study dated August 1997 used the SCS hydrograph method. Parameters used were for ultimate development, and routing was performed using the kinematic wave routing approach. The reason provided for performance of a new hydrologic analysis was the availability of better topographic survey information for this flooding source. Discharges along the upstream portion of the Isom Creek restudy were based on the technical supporting hydrologic data for the effective September 30, 1999 LOMR (Case Number 99-06-1693P) and adjusted from the downstream discharges using a ratio of discharge to drainage area.

As part of the Pulaski County CTP MAS #1, Carter and Burgess performed detailed hydrologic analyses for several streams. In the Pulaski County FIS, dated October 19, 2001 (Reference 6), the original flood frequency discharge values did not exist for the CTP study streams. Hydrologic analysis was conducted by development of a rainfall-runoff model with HEC-HMS (Reference 15) for Jacks Bayou, White Oak Branch, Glade Branch, Bayou Two Prairie, Jacks Bayou Tributary 10, and Blue Branch. Precipitation data was developed for use in the HECHMS model from data available from the U. S. Weather Bureau (References 12 and 13). Hydrographs for the 10-, 2-, 1-, and 0.2 percent annual chance event flood for each stream and sub-basins of the stream in the study area using SCS Curve Number loss rate, landuse in the sub-basins, and lag time calculations (Reference 16).

New and Restudied Limited Detailed Study Streams

Discharges for Ferndale Creek (a stream that was restudied in limited detail) were determined in a previous study or restudy by the USACE-LR, using unit hydrographs developed at various locations on these streams along with appropriate design storms. The design storms were developed using data published by the U.S. Weather Bureau and the National Weather Service (References 12 and 13).

In this restudy, the discharges for Fletcher Creek, Neal Creek, Tributary 4 to Little Maumelle River, Tributary 5 to Little Maumelle River, Tributary 6 to Fletcher Creek, Tributary 7 to Little Maumelle River, Tributary 8 to Fletcher Creek, and Tributary 9 to Little Maumelle River were based on the Regional Regression Equations developed for rural streams for Region A in Arkansas by the U.S. Geological Survey (USGS) (1995) (Reference 15). There are no streamflow gages located on any of the new limited detailed study streams in Pulaski County.

Redelineated Detailed Study Streams

For all the streams studied in detail previously, except those specifically discussed below, discharges were determined using unit hydrographs developed at various locations on other streams in the area, along with appropriate design storms.

According to the FIS for the City of Jacksonville, revised August 16, 1995 (Reference 2), data published in Flood Plain Information, Bayou Meto and Tributaries, Jacksonville, Arkansas, were used to delineate flooding conditions created by Bayou Meto and Jacks Bayou backwater (Reference 16). Peak discharges for the 10-percent, 2-percent, and 1-percent-annual-chance events for the streams studied by detailed methods were obtained from Water Resource Circular No. 11 published by the USGS (Reference 17). Discharges for the 0.2-percent-annual-chance floods of all streams were determined by straight line extrapolation of a single log graph of flood discharges computed for frequencies up to 100 years.

In the FIS for the City of Little Rock, revised October 19, 2001 (Reference 3), discharges for Haw Branch, Panther Branch, and the Little Maumelle River were obtained from a previous FIS for Pulaski County.

In the FIS for the City of North Little Rock, revised September 5, 1990 (Reference 5), discharges for Shilcotts Bayou and Shilcotts Bayou Tributary were determined by developing a runoff hydrograph and routing the hydrograph using the USACE HEC-1 computer program (Reference 11).

In the original study and the FIS for the unincorporated areas of Pulaski County, revised October 19, 2001 (Reference 6), hydrologic determinations for Fourche Creek were based on previous studies, which used available high-water marks, random discharge measurements, storage determinations, and available rainfall records. Unit hydrographs were determined for various portions of the basin and were checked by applications of measured runoff volumes and flood routing. Final discharges were based on design storms developed by the U.S. Weather Bureau (Reference 12). The discharges for the 0.2-percent-annual-chance event were obtained by extrapolating the curve obtained from the 10-percent, 2-percent, and 1-percent-annual-chance flood discharges. Discharges on tributaries of Fourche Creek were obtained by methods similar to those described for Fourche Creek, except that fewer high-water marks were available and measured flood discharges were available only on the lower reaches of Rock Creek. Therefore, adopted unit hydrographs could not be checked in most instances.

In the original study and the FIS for the unincorporated areas of Pulaski County, revised October 19, 2001 (Reference 6), discharges on Fivemile Creek and its tributaries were determined by use of hydrographs developed at various locations on these streams along with appropriate design storms. The design storms were developed by the U.S. Weather Bureau (Reference 12). The discharges for the 0.2-percent-annual-chance event were obtained by extrapolating the curves obtained from the 10-percent, 2-percent, and 1-percent-annual-chance flood discharges. In some instances, in flat areas, flood routing of hydrographs was necessary to account for large storage areas and constricted openings. Flows for the 10-percent-annual-chance floods were checked whenever possible against estimated floods that have occurred in recent years.

Discharges on the other streams studied by detailed methods in the FIS for the unincorporated areas of Pulaski County, revised October 19, 2001 (Reference 6), were determined using unit hydrographs developed at various locations on these streams along with appropriate design storms. The design storms were developed by the U.S. Weather Bureau (Reference 12). The discharges for the 0.2-percent-annual-chance event were obtained by extrapolating the curves obtained from the 10-percent, 2-percent, and 1-percent-annual-chance flood discharges. Gaged data and high-water marks were used as guides in determining the design profiles.

In the FIS for the City of Sherwood, revised August 16, 1995 (Reference 7), the peak discharges for the lower portions of Fivemile Creek were determined using Floods in Arkansas, Magnitude and Frequency Characteristics through 1968 (Reference 17). Discharges on the upper portions (upstream of McAlmont Cutoff) of Fivemile Creek were determined by use of hydrographs developed at various locations along with appropriate design storms. Discharge decreases as drainage area increases on Woodruff Creek because of out-of-bank storage effects in areas such as Peeler Lake and Trammel Lake which are large overflow areas of timber.

Discharges for the 0.2-percent-annual-chance floods of all streams studied in detail in the FIS for the City of Sherwood, revised August 16, 1995 (Reference 7), except for Fivemile Creek, were determined by straight-line extrapolation of a single-log graph of flood discharges computed for frequencies of up to 100 years.

Peak discharge-drainage area relationships for each flooding source studied in Pulaski County are shown in Table 3, "Summary of Discharges."

Table 3 - Summary of Discharges

<u>FLOODING SOURCE AND LOCATION</u>	<u>DRAINAGE AREA (sq. miles)</u>	<u>PEAK DISCHARGES (cfs)</u>			
		<u>10% Annual Chance</u>	<u>2% Annual Chance</u>	<u>1% Annual Chance</u>	<u>0.2% Annual Chance</u>
Arkansas River					
At Main Street	N/A	333,000	430,000	480,000	625,000
Bayou Meto					
Approximately 260 ft downstream from State Highway 161	127.45	20,775	37,975	39,260	44,300
Approximately 200 ft downstream from Jacksonville Cutoff Rd	70.15	12,400	22,470	23,100	26,500
At River Mile 136.58	67.3	9,320	12,350	13,660	17,090
Bayou Meto Tributary 1-A					
At Marshall Road	0.3	245	410	470	590
Bayou Two Prairie					
At Limit of Detailed Study (Pulaski County line)	8.34	3,047	4,508	5,303	7,084
Confluence with Blue Branch	7.25	2,910	4,526	5,482	7,430
Tributary downstream of Keener Lake	5.57	2,392	3,850	4,621	6,227
At Highway 89	3.41	2,152	3,303	3,829	5,292
Blue Branch					
At confluence with Bayou Two Prairie	1.29	720	1,092	1,281	1,688
Bridge Creek	N/A	N/A	N/A	N/A	N/A
Bringle Creek					
At its confluence with Maumelle River	9.62	N/A	N/A	10,958	N/A
Approximately 1,680 ft upstream of State Highway 10	8.36	N/A	N/A	10,143	N/A
Bringle Tributary A					
At its confluence with Bringle Creek	0.80	N/A	N/A	1,914	N/A
Brodie Creek					
At its confluence with Fourche Creek	11.89	6,256	9,233	10,497	12,676
Callaghan Branch					
At its confluence with Fourche Creek	4.29	2,830	4,320	5,010	6,410

<u>FLOODING SOURCE AND LOCATION</u>	<u>DRAINAGE AREA (sq. miles)</u>	<u>PEAK DISCHARGES (cfs)</u>			
		<u>10% Annual Chance</u>	<u>2% Annual Chance</u>	<u>1% Annual Chance</u>	<u>0.2% Annual Chance</u>
Cane Creek					
At Ironton Road	2.2	2,300	2,900	3,150	3,750
Clark Bayou					
At Williams Ave	3.2	400	540	600	710
Cloverdale Drain					
At its confluence with Young Creek	1.06	1,840	2,299	2,587	3,984
Downstream of Union Pacific Railroad	0.93	1,773	2,229	2,381	3,667
Approximately 1,500 ft upstream of Union Pacific Railroad	0.41	824	1,024	1,158	1,783
Coleman Creek					
At its confluence with Fourche Creek	3.4	3,950	5,050	5,650	7,000
Just upstream of West 12 th Street	2.1	2,730	3,642	4,022	4,625
Crooked Creek					
At mouth	11.6	9,300	12,000	13,400	19,000
Fairman Ditch					
At mouth	0.6	270	337	370	448
Ferndale Creek					
At confluence with Little Maumelle River	4.42	N/A	N/A	6,967	N/A
Just upstream of weir	3.66	N/A	N/A	6,062	N/A
Just downstream of Fourth Way Road	1.48	N/A	N/A	3,330	N/A
Field Creek					
At its confluence with Little Fourche Creek	1.4	1,900	2,350	2,600	3,000
Field Creek Tributary					
At its confluence with Field Creek	2.00	1,748	2,533	2,890	3,626
Fish Creek					
At River Mile 5.3	5.2	3,800	4,700	5,300	6,900

<u>FLOODING SOURCE AND LOCATION</u>	<u>DRAINAGE AREA (sq. miles)</u>	<u>PEAK DISCHARGES (cfs)</u>			
		<u>10% Annual Chance</u>	<u>2% Annual Chance</u>	<u>1% Annual Chance</u>	<u>0.2% Annual Chance</u>
Fivemile Creek					
At confluence with Woodruff Creek	18.0	4,074	6,025	6,710	8,657
McAlmont Cutoff	9.7	3,227	4,314	5,078	6,212
At John F. Kennedy Blvd	4.7	3,550	5,100	5,800	7,850
Fivemile Creek East Tributary					
At U.S. Highway 67/167	0.3	340	420	460	580
Fivemile Creek McCain Fork					
At Smokey Lane	0.4	400	510	550	660
Fivemile Creek Tributary 1					
Confluence of Fivemile Creek	0.37	670	950	1,050	1,200
Upstream of Sherwood Corporate Limits	0.03	60	130	160	200
Fivemile Creek West Tributary					
At mouth	0.5	320	420	460	560
Fletcher Creek					
At confluence with Little Maumelle River	5.62	1,890	3,230	3,860	5,460
Fourche Bayou					
At Fourche Island to Pennington Bayou Levee	23.1	2,300	3,140	3,540	4,450
Fourche Creek					
Upstream of confluence with Rock Creek ¹	N/A	54,000	70,000	76,500	91,500
Downstream of confluence with Rock Creek	97.40	40,500	54,000	60,000	73,500
At mouth	N/A	24,600	32,250	35,750	43,000
Glade Branch					
At US Highway 67/167 (Limit of Detailed study)	1.09	1,100	1,617	1,850	2,363
At Roland Road	0.39	483	703	801	1,006
Glenview Ditch					
At mouth	0.6	150	180	200	250

<u>FLOODING SOURCE AND LOCATION</u>	<u>DRAINAGE AREA (sq. miles)</u>	<u>PEAK DISCHARGES (cfs)</u>			
		<u>10% Annual Chance</u>	<u>2% Annual Chance</u>	<u>1% Annual Chance</u>	<u>0.2% Annual Chance</u>
Grassy Flat Creek					
At mouth	N/A	7,200	9,200	10,000	11,600
At River Mile 0.1	N/A	5,230	7,325	7,960	9,235
Confluence with Colony West Branch	2.45	3,500	4,550	5,000	6,000
Upstream of Colony West Branch	N/A	3,050	3,945	4,335	5,205
Downstream of Macon Drive	N/A	1,915	2,490	2,735	3,285
Downstream of Rodney Parham Rd	N/A	1,310	1,710	1,880	2,250
Upstream of Shenandoah Valley Drive	N/A	526	699	786	959
Harris Bayou					
At River Mile 4.1	0.6	490	630	710	930
Haw Branch					
At mouth	2.9	2,750	3,650	4,000	4,900
Isom Creek					
At confluence with Taylor Loop Creek	2.01	3,402	4,501	4,807	5,841
Approximately 1,300 ft downstream from Cantrell Road	1.63	2,762	3,650	3,898	4,735
Jacks Bayou					
At Limit of Detailed Study (Pulaski County Line)	16.74	2,806	4,139	4,856	6,250
At US Highway 67/167	15.556	3,320	4,890	5,669	7,221
At Old Highway 67	14.61	3,611	5,303	6,162	7,816
Approximately 4000 feet upstream of Old Highway 67	12.05	3,123	4,502	5,135	6,436
Tribes 7, 8, 9 and unnamed confluence with Jacks Bayou	6.79	2,756	4,090	4,721	6,114
At Republican Road	6.12	2,333	3,449	3,990	5,188
At Confluence with Jacks Bayou Tributary 10	4.31	2,243	3,322	3,815	4,895
Jacks Bayou Tributary					
At County Route 161	1.2	522	833	949	1,190
Jacks Bayou Tributary 1					
At northwest Jacksonville Corporate Limits	4.3	2,061	3,458	3,966	4,800
At Missouri Pacific Railroad	2.0	1,115	1,871	2,146	2,550

Jacks Bayou Tributary 1(continued)

<u>FLOODING SOURCE AND LOCATION</u>	<u>DRAINAGE AREA (sq. miles)</u>	<u>PEAK DISCHARGES (cfs)</u>			
		<u>10% Annual Chance</u>	<u>2% Annual Chance</u>	<u>1% Annual Chance</u>	<u>0.2% Annual Chance</u>
At Highway U.S. 67 and 167	1.3	813	1,364	1,564	1,925
Jacks Bayou Tributary 1A					
At Laurel Street	0.8	577	967	1,109	1,375
At Missouri Pacific Railroad	0.4	298	501	574	690
At Brewer Street	0.1	110	184	211	255
Jacks Bayou Tributary 2					
At Missouri Pacific Railroad	1.3	553	882	1,005	1,250
At North Eastern Avenue	0.8	392	626	714	870
Approximately 600 ft downstream from Quince Hill Road	0.1	90	144	165	208
Jacks Bayou Tributary 2A					
Approximately 0.2 miles upstream from confluence with Jacks Bayou Tributary 2	0.3	237	398	456	565
Approximately 400 ft downstream from Madden Road	0.1	102	171	196	240
Jacks Bayou Tributary 2B					
Approximately 500 ft downstream from Trailer Court access street	0.3	220	362	415	530
Jacks Bayou Tributary 10					
Confluence with Jacks Bayou	1.35	862	1,265	1,443	1,832
Kellogg Creek					
At Oneida Street	24.6	1,150	1,685	2,010	2,915
Kinley Creek					
At mouth	11.7	5,670	8,050	9,200	11,680
Approximately 2000 ft downstream from Garrison Road	N/A	3,780	5,550	6,190	7,810
Lake No. 1 Tributary					
At Avondale Road	0.8	1,360	1,780	1,970	2,410
Landmark Branch					
At mouth	1.3	1,450	1,900	2,100	2,600

<u>FLOODING SOURCE AND LOCATION</u>	<u>DRAINAGE AREA (sq. miles)</u>	<u>PEAK DISCHARGES (cfs)</u>			
		<u>10% Annual Chance</u>	<u>2% Annual Chance</u>	<u>1% Annual Chance</u>	<u>0.2% Annual Chance</u>
Little Fourche Creek At 65 th Street	20.7	6,380	10,110	11,860	17,000
Little Maumelle River At its confluence with Arkansas River	82.26	29,381	39,258	43,884	53,892
Approximately 1.01 miles upstream of State Highway 10	31.48	15,500	21,400	24,200	30,000
Approximately 2,000 ft downstream of Kanis Road	10.2	5,860	8,050	9,110	11,900
Maumelle River Approximately 650 feet downstream of confluence of Rothly Creek	72.50	13,120	21,990	25,490	36,030
Approximately 11,710 feet upstream of confluence of Rothly Creek	65.90	12,270	20,590	23,890	33,830
Approximately 15,000 feet upstream of confluence with Rothly Creek	53.20	10,540	17,710	20,600	29,280
McHenry Creek At its confluence with Fourche Creek	8.4	6,600	8,200	9,000	11,500
At River Mile 3.30	4.6	2,503	3,718	4,419	5,709
Mill Bayou At River Mile 3.82	7.6	4,450	5,700	6,400	7,650
Mill Bayou Tributary At confluence with Mill Bayou	5.53	3,250	4,250	4,550	5,550
Nash Creek At River Mile 1.20	2.26	1,343	2,287	2,807	3,900
Nash Creek Tributary At its confluence with Nash Creek	0.32	545	848	950	1,157
Neal Creek At confluence with Kinley Creek	6.33	2,040	3,480	4,150	5,860
Nowlin Creek At mouth	26.56	12,170	17,000	19,450	24,670
Approximately 300 ft upstream of Goodson Road	N/A	5,940	7,884	8,686	9,940

<u>FLOODING SOURCE AND LOCATION</u>	<u>DRAINAGE AREA (sq. miles)</u>	<u>PEAK DISCHARGES (cfs)</u>			
		<u>10% Annual Chance</u>	<u>2% Annual Chance</u>	<u>1% Annual Chance</u>	<u>0.2% Annual Chance</u>
Otter Creek At River Mile 2.07	10.78	4,220	6,480	7,720	10,340
Panther Branch At its confluence with Brodie Creek	2.44	3,086	4,521	4,975	5,607
Pennington Bayou - Lorange Creek At County Route 215 (Arch Street Pike)	25.2	8,400	11,000	12,400	14,500
Rock Creek Tributary 1 At its confluence with Rock Creek	0.36	410	540	600	695
Rock Creek Tributary A At confluence with Rock Creek	0.58	870	1,210	1,350	1,600
Rocky Branch At U.S. Highway 67 and 167 Approximately 50 ft downstream from Braden Street	2.7	1,224	2,017	2,305	2,800
Approximately 50 ft upstream from Marshal Road	0.5	324	534	611	760
	0.35	253	417	476	580
Shilcotts Bayou At mouth	6.7	7,900	10,500	9,710	12,170
Shilcotts Bayou Tributary At mouth	2.6	3,500	4,700	5,150	6,430
Smith Creek At its confluence with Little Fourche Creek	2.00	1,748	2,533	2,890	3,626
Smith Creek Tributary At its confluence with Smith Creek	0.35	652	916	1,016	1,223
State Capitol Drain At its confluence with the Arkansas River	2.30	2,400	3,000	3,250	4,500

<u>FLOODING SOURCE AND LOCATION</u>	<u>DRAINAGE AREA (sq. miles)</u>	<u>PEAK DISCHARGES (cfs)</u>			
		<u>10% Annual Chance</u>	<u>2% Annual Chance</u>	<u>1% Annual Chance</u>	<u>0.2% Annual Chance</u>
Stump Creek					
At its confluence with Little Fourche Creek	0.71	973	1,332	1,474	1,770
Taylor Loop Creek					
At confluence with Little Maumelle River	N/A	9,900	14,755	16,810	20,520
Approximately 125 ft upstream of Pebble Beach Road	1.58	3,520	4,605	5,100	5,960
Treadway - Brewer Branch					
At mouth	7.4	4,500	5,800	6,600	8,300
Tributary 4 to the Little Maumelle River					
At its confluence with Little Maumelle River	2.98	1,160	1,990	2,390	3,390
Tributary 5 to the Little Maumelle River					
At its confluence with Little Maumelle River	0.68	308	514	611	852
Tributary 6 to Fletcher Creek					
At its confluence with Fletcher Creek	0.79	428	741	891	1,270
Tributary 7 to Little Maumelle River					
At its confluence with Little Maumelle River	2.13	858	1,460	1,750	2,470
Tributary 8 to Fletcher Creek					
At its confluence with Fletcher Creek	1.61	754	1,310	1,570	2,250
Tributary 9 to the Little Maumelle River					
At its confluence with the Little Maumelle River	1.35	647	1120	1340	1920
White Oak Bayou					
At River Mile 4.42	34.2	6,900	7,830	8,665	10,680
White Oak Branch					
At Limit of Detailed Study (Pulaski County Line)	1.62	847	1,256	1,486	1,950
At Mount Pleasant Cutoff	1.03	784	1,162	1,313	1,642

<u>FLOODING SOURCE AND LOCATION</u>	<u>DRAINAGE AREA (sq. miles)</u>	<u>PEAK DISCHARGES (cfs)</u>			
		<u>10% Annual Chance</u>	<u>2% Annual Chance</u>	<u>1% Annual Chance</u>	<u>0.2% Annual Chance</u>
Woodruff Creek					
Confluence of Fivemile Creek	8.0	3,800	5,100	5,900	7,100
Upstream limit of study	3.7	1,800	3,000	3,600	4,500
Woodruff Creek Tributary 1					
Approximately 400 feet upstream of Wadley Road	0.09	188	271	332	392
Confluence of Woodruff Creek	0.43	770	1,061	1,063	1,397
Woodruff Creek Tributary 2					
Confluence of Woodruff Creek	0.39	820	1,100	1,400	1,700
Limit of detailed study	0.29	800	1,050	1,250	1,600
Woodruff Creek Tributary 3					
Confluence of Woodruff Creek	1.1	1,400	2,100	2,400	3,100
Limit of detailed study	0.92	1,100	1,600	2,000	2,500
Young Creek					
At its confluence with Fourche Creek	3.66	3,441	5,013	5,763	7,378

¹Combined flow – Fourche Creek and Rock Creek
N/A – 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 or in the Floodway Data tables in the FIS report. Flood elevations shown on the FIRM are primarily intended for flood insurance rating purposes. For construction and/or floodplain management purposes, users are cautioned to use the flood elevation data presented in this FIS in conjunction with the data shown on the FIRM.

Locations of selected cross sections used in the hydraulic analyses are shown on the Flood Profiles (Exhibit 1). For stream segments for which a floodway was computed (Section 4.2), selected cross section locations are also shown on the FIRM (Exhibit 2). The hydraulic analyses for this study and the previous studies were based on unobstructed flow. The flood elevations shown on the profiles (Exhibit 1) are thus considered valid only if hydraulic structures remain unobstructed, operate properly, and do not fail.

New and Restudied Detailed Study Streams

For streams newly studied or restudied with detailed analyses, water surface elevations for the 10-percent, 2-percent, 1-percent, and 0.2-percent-annual-chance floods were computed using the USACE HEC-RAS version 3.0.1 step-backwater computer program (Reference 18). These streams were identified in Section 2.1.

For the remainder of the riverine analyses, the channel and near overbank (50 to 100 feet from channel) elevation and structure data for the hydraulic models were generally obtained from detailed field survey information. For each survey cross section, the field elevations were blended with overbank topographic data obtained from the Digital Elevation Model (DEM) for Pulaski County, Arkansas.

The Taylor Loop Creek stream network consists of four studied channels and related flow routes. The majority of discharges are routed along the main channel, Taylor Loop Creek. Another flow route carries a portion of flow from the main channel, Taylor Loop Creek, along the South Loop, under State Highway 10 and back into the main channel. A third flow route involves a channel overflow of the South Loop into a subsidiary channel, the South Loop Split, in the left overbank of the South Loop. The South Loop Split routes flow back into the South Loop a few hundred feet further downstream. The fourth flow route occurs due to overflows of the Taylor Loop Creek channel upstream of the State Highway 10 bridge. The overflow enters a relief ditch, Good Earth Drain, on the left bank of Taylor Loop Creek, passes through a culvert under State Highway 10 and back into Taylor Loop Creek several hundred feet further downstream.

For the effective Arkansas River hydraulic model information, roughness coefficients (Manning's "n" values) were determined by the USACE-LR and ranged from 0.0298 to 0.06 for the channel and from 0.0298 to 0.10 for the overbank areas. For the streams in this restudy, channel roughness coefficients were estimated based on conditions observed along the channel and floodplain areas, and ranged from 0.015 to 0.12 for the channel and from 0.01 to 0.15 for the overbank areas.

The channel and overbank “n” values for the new and restudied detailed study streams are shown in Table 4, “Manning's "n" Values”.

New and Restudied Limited Detailed Study Streams

Analyses of the hydraulic characteristics of flooding from the sources studied in limited detail were carried out to provide estimates of the elevations of floods of the selected recurrence interval (1-percent-annual-chance only) along each of these study streams: Ferndale Creek, Fletcher Creek, Neal Creek, Tributary 4 to Little Maumelle River, Tributary 5 to Little Maumelle River, Tributary 6 to Fletcher Creek, Tributary 7 to Little Maumelle River, Tributary 8 to Fletcher Creek, and Tributary 9 to Little Maumelle River.

The channel and overbank “n” values for the new and restudied limited detailed study streams are shown in Table 4, “Manning's "n" Values”.

Table 4 - Manning's "n" Values

<u>Stream Name</u>	<u>“n” values</u>	
	<u>Channel</u>	<u>Overbank</u>
Arkansas River (Pool 6)	0.0298 – 0.06 **	0.0298 – 0.10 *
Arkansas River (Pool 7)	0.027 – 0.029 **	0.01 – 0.09
Bayou Two Prairie	0.03 – 0.06	0.045 – 0.013
Blue Branch	0.03 – 0.06	0.045 – 0.013
Ferndale Creek	0.017 - 0.10	0.045 – 0.12 *
Fletcher Creek	0.03 – 0.08	0.03 – 0.15 *
Glade Branch	0.03 - 0.06	0.045 – 0.13
Good Earth Drain	0.04 – 0.12	0.03 – 0.12 *
Isom Creek	0.015 – 0.11	0.05 – 0.11 *
Jacks Bayou	0.03 – 0.06	0.045 – 0.13
Jacks Bayou Tributary 10	0.03 – 0.06	0.045 – 0.13
Kinley Creek	0.035	0.035 – 0.10 *
Little Maumelle River	0.03 – 0.10	0.03 – 0.12 *

* Overbank “n” settings do not include locations where n values are set to 0.01 where water is present in adjacent channels or impounded water bodies.

** For the Arkansas River Pools 6 & 7 models, a vertical variance in Manning’s “n” Values was used. These values were taken from existing model information (Reference 21).

Table 4 - Manning's "n" Values (continued)

Neal Creek	0.04	0.04 – 0.10 *
Nowlin Creek	0.03 – 0.045	0.05 – 0.12 *
South Loop	0.03 – 0.12	0.035 – 0.12 *
South Loop Split	0.025 – 0.05	0.035 – 0.12 *
Taylor Loop Creek	0.025 – 0.12	0.04 – 0.12 *
Tributary 4 to Little Maumelle River	0.035 – 0.05	0.035 – 0.10 *
Tributary 5 to Little Maumelle River	0.035 – 0.10	0.035 – 0.10 *
Tributary 6 to Fletcher Creek	0.03 – 0.04	0.06 – 0.08 *
Tributary 7 to Little Maumelle River	0.035 – 0.10	0.035 – 0.12 *
Tributary 8 to Fletcher Creek	0.03 – 0.10	0.03 – 0.10 *
Tributary 9 to Little Maumelle River	0.035 – 0.10	0.035 – 0.15 *
White Oak Branch	0.030 – 0.06	0.045 – 0.13

* Overbank “n” settings do not include locations where n values are set to 0.01 where water is present in adjacent channels or impounded water bodies.

** For the Arkansas River Pools 6 & 7 models, a vertical variance in Manning’s “n” Values was used. These values were taken from existing model information (Reference 21).

、 Redelineated Detailed Study Streams

Water-surface elevations for the streams previously studied in detail and redelineated for this countywide FIS in general, were initially computed through the use of step-backwater computer programs developed by the USACE (References 18 and 20) or a computer program by Thomas (Reference 21). The channel and overbank “n” values for the redelineated detailed study streams are listed below, if available.

In the FIS for the Town of Alexander, published July 20, 1981 (Reference 1), water-surface elevations of floods for the selected recurrence intervals were developed from the HEC-2 Water-Surface Profile program (Reference 20). Cross sections for the stream studied in detail, Crooked Creek, were obtained from field surveys. Channel roughness coefficients were estimated from field inspection of flood plain areas and ranged from 0.03 to 0.06 for the main channel and 0.15 for the overbank area. Starting water-surface elevations for Crooked Creek were obtained from known elevations on Fourche Creek.

In the FIS for the City of Jacksonville, revised August 16, 1995 (Reference 2), water-surface elevations of floods of the selected recurrence intervals were initially computed using the SCS WSP2 water-surface profile computer program (Reference 22). Starting water-surface elevations for Bayou Meto and its tributaries were obtained from

stage-frequency curves obtained from the USACE-LR and water-surface profiles published in the Flood Plain Information report for Bayou Meto and its tributaries (Reference 16). Starting elevations for Jacks Bayou and its tributaries were based on estimated downstream slopes and the physical parameters of the starting cross section.

In the FIS for the City of Little Rock, revised October 19, 2001 (Reference 3), flood hazards associated with Fourche, Grassy Flat, and Rock Creeks were updated. With completion of the Fourche Creek Flood Reduction Project, field survey data from channel rectification along Fourche, Rock, and Grassy Flat Creeks were incorporated into the revised HEC-2 models by the USACE-LR. Those models were used to produce revised water-surface profiles and floodplain mapping. For the streams studied as part of that study, channel roughness coefficients (Manning's "n") used in the hydraulic computations were assigned on the basis of the conditions along the channel and overbank section, using field surveys and aerial photographs. The channel "n" values ranged from 0.030 to 0.080, and the overbank "n" values ranged from 0.080 to 0.150. For the streams studied by approximate methods, as part of that study, the extent of the 1-percent-annual-chance flood was determined from slope/area computations using areas and slopes from topographic maps and discharges from discharge-area curves.

In the FIS for the City of Maumelle, revised November 2, 1994 (Reference 4), water-surface elevations of floods of the selected recurrence intervals were computed using either the USACE HEC-2 step-backwater computer program, or a computer program by Thomas (References 20 and 21). Flood profiles were drawn showing computed water-surface elevations for floods of the selected recurrence intervals. Starting elevations for the Arkansas River were based on the established discharge rating at David D. Terry Lock and Dam. For White Oak Bayou, the starting water-surface elevation was determined using the slope area method.

In the FIS for the City of North Little Rock, revised September 5, 1990 (Reference 5), starting water-surface elevations for flooding sources studied by detailed methods were taken from their confluence with the Arkansas River or the main stream. For the streams studied by approximate methods, the boundaries of the 1-percent-annual-chance flood were developed from depths determined from slope/area computations using areas and slopes from topographic sheets and discharges from discharge-area curves.

In the original study and for the streams studied as part of the unincorporated areas of Pulaski County FIS, revised October 19, 2001 (Reference 6), water-surface elevations of floods of the selected recurrence intervals were computed using either the USACE HEC-2 computer program or a computer program by Thomas (References 20 and 21). The revised hydraulic analysis for Grassy Flat Creek was initiated by Michael Baker Jr., Inc. and completed by Dewberry & Davis. That study also included a restudy of two areas of Rock Creek, performed by the USACE-LR: the Rushing Circle area near Kanis Road and the Asher Avenue area toward University Avenue. Also, channelization of the Taylor Loop Creek was incorporated into the original USACE-LR hydraulic model. The hydraulic analysis of that channelization was performed by Garver and Garver, Inc., of Little Rock, Arkansas. All other hydrologic and hydraulic analyses in the first revision were performed by Michael Baker Jr., Inc. for streams in the areas of annexation taken from Pulaski County. Those analyses were taken from the FIS for the unincorporated areas of Pulaski County, Arkansas.

In the FIS for the City of Sherwood, revised August 16, 1995 (Reference 7), the water-surface elevations for all streams studied in detail except the upper portions of Fivemile Creek for floods of the selected recurrence intervals were computed through use of the SCS WSP-2 Water-Surface Profile Computer Program (Reference 22). Water-surface profiles for the upper portions of Fivemile Creek were developed from the HEC-2 Water-Surface Profile Program (Reference 20). Starting elevations were taken from the USACE-LR Floodplain Information Report on Bayou Meto (Reference 16). For streams studied by approximate methods, the 1-percent-annual-chance flood elevations were computed by using the Chezy-Manning equation for discharge. No backwater analyses were performed for these streams. The area around Indianhead Lake was annexed by the City of Sherwood after the fieldwork for this study had been completed. The flooding shown in this area was taken from the above-referenced Floodplain Information Report.

3.3 Vertical Datum

All flood elevations shown in this FIS report and on the FIRM (Exhibit 2) are referenced to North American Vertical Datum of 1988 (NAVD 88). Structure and ground elevations in the community must, therefore, be referenced to NAVD 88. It is important to note that adjacent counties may be referenced to National Geodetic Vertical Datum (NGVD 29). This may result in differences in Base Flood Elevations (BFEs) across the corporate limits between the counties. The data conversion for this FIS report for Pulaski County is -0.11 feet to convert from NGVD 29 to NAVD 88.

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 National Geodetic Survey (NGS) benchmarks shown on this map, please contact the Information Services Branch of the NGS at (301) 713-3242, or visit their website at <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 (100-year) flood has been adopted by FEMA as the base flood for floodplain

management purposes. The 0.2-percent-annual-chance (500-year) flood is employed to indicate additional areas of flood risk in the community. For each stream studied by detailed methods, the 1-percent 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 data at a scale of 1:12000, with contour intervals of 2 feet in the City of Little Rock and 4 feet in the remainder of the communities (Reference 23).

The 1-percent 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, and AH), and the 0.2-percent-annual-chance floodplain boundary corresponds to the boundary of areas of moderate flood hazards. In cases where the 1-percent and 0.2-percent-annual-chance floodplain boundaries are close together, only the 1-percent-annual-chance floodplain boundary has been shown. Small areas within the floodplain boundaries may lie above the flood elevations but cannot be shown due to limitations of the map scale and/or lack of detailed topographic data.

Within Pulaski County there are one or more levees that have not been demonstrated by the community or levee owner(s) to meet the requirements of 44 CFR Section 65.10 of the NFIP regulations as it relates to the levee's capacity to provide 1-percent annual chance flood protection. As such, the floodplain boundaries in this area are subject to change. Please refer to the Notice to Flood Insurance Study Users page at the front of this FIS report for more information on how this may affect the floodplain boundaries shown on this FIRM.

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

Approximate 1-percent-annual-chance floodplain boundaries in some portions of the study area were taken directly from the appropriate FIRMs for the Town of Alexander, the City of Jacksonville, the City of Little Rock, the City of Maumelle, the City of North Little Rock, unincorporated areas of Pulaski County, and the City of Sherwood, where applicable (References 1 through 7, respectively).

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 1-percent-annual-chance flood can be carried without substantial increases in flood heights. Minimum Federal standards limit such increases to 1.0 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. Priority was also given to matching effective floodway width in areas of existing floodway. 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 (see Table 5, 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.

Portions of the floodway for the Arkansas River, Fourche Creek, and Pennington Bayou - Lorraine Creek extend beyond the Pulaski County boundary.

Floodways were not determined for Faulkner Lake and Hill Lake because these drainage patterns were treated as shallow flooding areas. Portions of the 1-percent-annual-chance floodplain are designated floodway for storage for portions of the following streams and their reaches: Fourche Creek, Pennington Bayou-Lorraine Creek, Harris Bayou, Clark Bayou, and Mill Bayou. This area is a ponding area for the effective operation of the gated structures located at the outlets of Pennington and Harris Bayous, on the Fourche Island to Pennington Bayou Levees.

Near the mouths of streams studied in detail, floodway computations were made without regard to flood elevations of the receiving water body. Therefore, "Without Floodway" elevations presented in Table 5 for certain downstream cross sections of Clark Bayou, Field Creek Tributary, Fourche Creek, Kellogg Creek, Little Maumelle River, Rocky Branch, Shilcotts Bayou, and State Capitol Drain are lower than the regulatory flood elevations in that area, which must take into account the 1-percent-annual-chance flooding due to backwater from other sources.

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 of the 1-percent-annual-chance flood more than 1 foot at any point. Typical relationships between the floodway and the floodway fringe and their significance to floodplain development are shown in Figure 1, "Floodway Schematic".

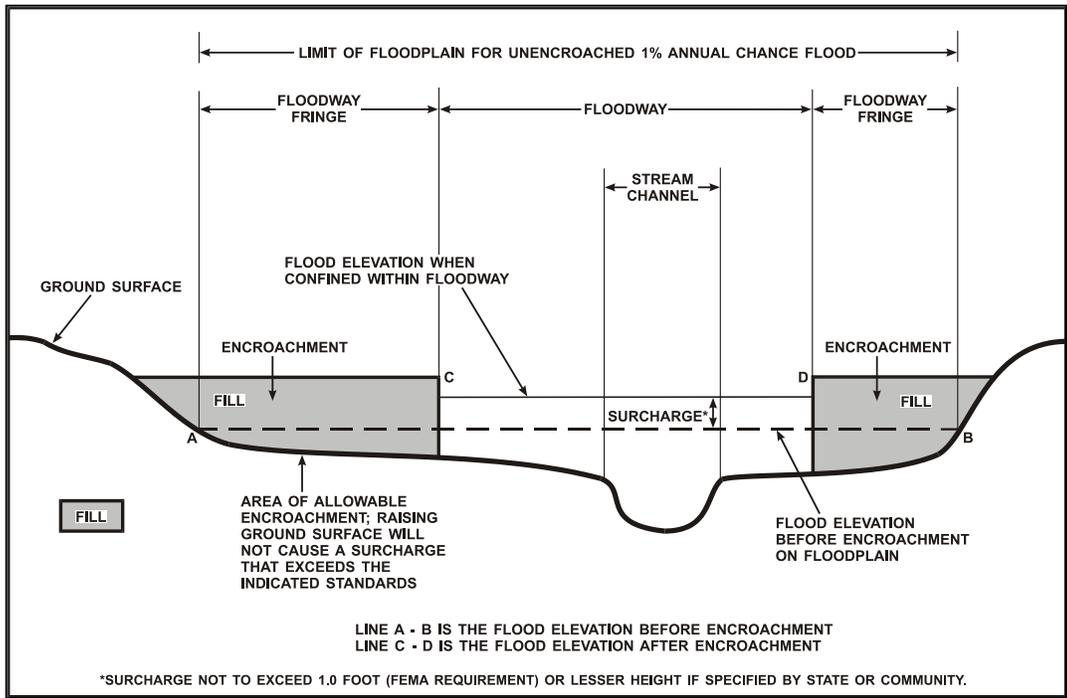


Figure 1 - Floodway Schematic

FLOODING SOURCE		FLOODWAY			BASE FLOOD WATER SURFACE ELEVATION			
CROSS SECTION ³	DISTANCE ¹	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY	WITHOUT FLOODWAY		INCREASE
						FEET (NAVD 88)		
Arkansas River								
A	97.1	4,970	*	8.2	232.0	232.0	232.9	0.9
B	102.98	5,355	*	8.8	236.3	236.3	237.2	0.9
C	107.2	10,400	*	8.1	239.8	239.8	240.6	0.8
D	113.1	3,463	*	8.0	247.5	247.5	248.4	0.9
E	115.4	3,630	*	6.8	249.4	249.4	250.4	0.9
F	116.4	2,600	*	8.5	250.5	250.5	251.4	0.9
G	117.29	1,670	*	10.4	251.0	251.0	251.9	0.9
H	118.08	1,550	*	10.5	252.4	252.4	253.2	0.8
I	120.76	2,033	*	8.9	256.3	256.3	256.9	0.6
J	124.14	4,000	*	8.7	258.9	258.9	259.6	0.7
K	135.75	6,500 ²	*	6.1	268.2	268.2	269.1	0.9
L	138.5	3,500 ²	*	7.6	270.0	270.0	270.8	0.8

¹ River miles above confluence with Mississippi River

² Width extends beyond the county boundary

* Data not computed

³ These cross sections lie within an area that has not been updated on the FIRM at this time due to the presence of levees that have not been demonstrated to meet the requirements of NFIP Regulation Section 65.10. Please refer to the Notice to Flood Insurance Study Users page at the front of this FIS for more information.

TABLE 5

FEDERAL EMERGENCY MANAGEMENT AGENCY
PULASKI COUNTY, AR
AND INCORPORATED AREAS

FLOODWAY DATA

ARKANSAS RIVER

FLOODING SOURCE		FLOODWAY			BASE FLOOD WATER SURFACE ELEVATION			
CROSS SECTION	DISTANCE ¹	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY	WITHOUT FLOODWAY		INCREASE
						FEET (NAVD 88)		
Bayou Meto								
A	481	2,621	24,805	0.4	243.0	243.0	243.9	0.9
B	6,239	3,356	27,198	0.4	243.0	243.0	243.9	0.9
C	7,336	3,874	33,448	0.3	243.0	243.0	244.0	1.0
D	12,159	4,286	27,164	0.4	243.0	243.0	244.0	1.0
E	17,115	491	6,426	2.0	246.8	246.8	247.7	0.9
F	17,903	900	7,269	1.3	246.9	246.9	247.8	0.9
G	19,614	272	11,356	2.2	247.4	247.4	248.3	0.9
H	22,754	3,267	32,918	0.4	247.6	247.6	248.5	1.0
I	28,499	8,856	49,574	0.9	248.0	248.0	248.8	0.8
J	32,684	10382	98,312	0.1	248.1	248.1	248.9	0.8
K	39,406	5,093	41,407	0.5	248.1	248.1	248.9	0.8
L	41,308	2,529	12,907	1.2	248.4	248.4	249.1	0.7
M	43,496	2,587	18,426	0.8	248.9	248.9	249.5	0.6
N	45,472	375	12,911	3.9	250.0	250.0	250.5	0.5
O	49,880	280	3,369	5.4	252.4	252.4	253.4	1.0
P	52,031	328	7,163	3.3	256.8	256.8	257.7	0.9
Q	53,637	354	4,901	3.7	257.4	257.4	258.3	0.9
R	58,133	389	5,867	3.1	260.5	260.5	261.3	0.8
S	63,083	298	5,224	3.5	264.3	264.3	264.7	0.4
T	68,123	898	14,783	1.2	264.9	264.9	265.6	0.7
U	69,947	580	7,106	3.0	265.0	265.0	265.9	0.9
V	71,985	1,181	14,757	1.2	265.6	265.6	266.4	0.8
W	75,518	2,077	25,364	0.7	265.6	265.6	266.5	0.9
X	77,097	2,212	26,151	0.7	265.7	265.7	266.5	0.8

¹ Distance in feet above county boundary

TABLE 5	FEDERAL EMERGENCY MANAGEMENT AGENCY PULASKI COUNTY, AR AND INCORPORATED AREAS	FLOODWAY DATA
		BAYOU METO

FLOODING SOURCE		FLOODWAY			BASE FLOOD WATER SURFACE ELEVATION			
CROSS SECTION	DISTANCE ¹	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
						FEET (NAVD 88)		
Bayou Meto (continued)								
Y	82,975	1,400	8,618	1.1	266.1	266.1	267.0	0.9
Z	94,591	1,300	7,678	1.4	270.3	270.3	271.1	0.8
AA	98,182	1,300	7,483	1.4	273.5	273.5	274.2	0.7
AB	104,940	300	2,891	3.7	287.9	287.9	288.4	0.5
AC	107,210	250	3,037	3.5	294.8	294.8	295.7	0.9
AD	111,012	350	2,362	4.5	299.0	299.0	299.7	0.7
AE	114,391	300	1,858	5.7	322.3	322.3	323.1	0.8

¹ Distance in feet above county boundary

TABLE 5

FEDERAL EMERGENCY MANAGEMENT AGENCY
PULASKI COUNTY, AR
AND INCORPORATED AREAS

FLOODWAY DATA

BAYOU METO

FLOODING SOURCE		FLOODWAY			BASE FLOOD WATER SURFACE ELEVATION				
CROSS SECTION	DISTANCE ¹	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY	WITHOUT FLOODWAY		WITH FLOODWAY	INCREASE
						FEET (NAVD 88)			
Bayou Meto Tributary 1									
A	2,693	50	204	8.7	261.8	261.8	262.2	0.4	
B	3,207	70	185.00	9.6	268	268	268	0	
C	3,397	100	287.00	6.6	280.7	280.7	281.2	0.5	
D	5,164	100	580.00	3.1	283.4	283.4	284.3	0.9	
E	5,274	100	739.00	2.4	286.4	286.4	286.6	0.2	
F	6,190	100	306.00	5.8	286.5	286.5	286.8	0.3	
G	71,011	90	305	4.20	292.7	292.7	293.7	1	
H	7,339	90	587.00	2.2	299.4	299.4	300.1	0.7	

TABLE 5

FEDERAL EMERGENCY MANAGEMENT AGENCY
PULASKI COUNTY, AR
AND INCORPORATED AREAS

FLOODWAY DATA

BAYOU METO TRIBUTARY 1

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		INCREASE
						FEET (NAVD 88)		
Bayou Meto Tributary 1-A								
A	0.06 3	522	2,120	0.2	258.3	258.3	259.3	1.0
B	0.32 3	26	113	3.6	260.8	260.8	261.8	1.0

TABLE 5	FEDERAL EMERGENCY MANAGEMENT AGENCY PULASKI COUNTY, AR AND INCORPORATED AREAS	FLOODWAY DATA
		BAYOU METO TRIBUTARY 1-A

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
						FEET (NAVD 88)		
Bayou Two Prairie								
A	190 ¹	1,385	3,617	1.5	281.3	281.3	282.0	0.7
B	2966 ¹	1,074	3,673	1.5	285.3	285.3	286.2	0.9
C	5961 ¹	752	2,911	1.9	286.9	286.9	287.8	0.9
D	8911 ¹	613	1,876	2.5	288.9	288.9	289.6	0.7
E	12120 ¹	544	2,005	2.3	292.2	292.2	293.2	1.0
F	16285 ¹	400	1,589	2.4	298.7	298.7	299.1	0.4
G	18753 ¹	500	2,222	1.7	304.7	304.7	305.2	0.5
H	21190 ¹	260	687	3.8	309.7	309.7	309.9	0.2
Blue Branch								
A	1572 ²	170	392	3.3	290.5	290.5	291.3	0.8
B	2092 ²	137	184	7.0	294.5	294.5	294.7	0.2
C	2369 ²	439	857	1.5	297.2	297.2	297.5	0.3
D	3166 ²	185	210	6.1	304.0	304.0	304.5	0.5
E	4336 ²	211	468	2.7	318.3	318.3	319.0	0.7

¹ Stream Distance in feet Above Arkansas Highway 5

² Stream Distance in feet Above Confluence with Bayou Two Prairie

TABLE 5

FEDERAL EMERGENCY MANAGEMENT AGENCY
PULASKI COUNTY, AR
AND INCORPORATED AREAS

FLOODWAY DATA

BAYOU TWO PRAIRIE - BLUE BRANCH

FLOODING SOURCE		FLOODWAY			BASE FLOOD WATER SURFACE ELEVATION			
CROSS SECTION	DISTANCE ¹	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY	WITHOUT FLOODWAY FEET (NAVD 88)	WITH FLOODWAY	INCREASE
Bridge Creek								
A	189	2,050	28,430	0.6	265.6	265.6	266.6	1.0
B	1,932	2,386	33,221	0.5	265.6	265.6	266.6	1.0
C	4,378	2,496	25,627	0.7	265.6	265.6	266.6	1.0
D	8,160	1,906	16,604	1.3	265.8	265.8	266.8	1.0
E	9,551	2,368	19,431	0.5	266.0	266.0	266.9	0.9
F	12,768	1,244	5,530	1.3	266.1	266.1	267.0	0.9
G	14,612	425	2,982	3.5	268.9	268.9	269.8	0.9
H	15,333	594	3,871	2.0	270.1	270.1	270.8	0.7
I	17,048	386	1,130	3.5	271.4	271.4	272.1	0.7

¹ Distance in feet above confluence with Bayou Meto

TABLE 5

FEDERAL EMERGENCY MANAGEMENT AGENCY
PULASKI COUNTY, AR
AND INCORPORATED AREAS

FLOODWAY DATA

BRIDGE CREEK

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
						FEET (NAVD 88)		
Bringle Creek								
A	3,640 ¹	175	1,157	9.5	314.4	314.4	314.8	0.4
B	4,845 ¹	185	928	10.9	323.9	323.9	323.9	0.0
C	7,300 ¹	215	1,824	5.6	345.2	345.2	346.2	1.0
Bringle Creek Tributary A								
A	450 ²	61	205	9.3	347.2	347.2	347.7	0.5
Brodie Creek								
A	0.82 ³	236	2,163	4.9	270.8	270.8	271.8	1.0
B	1.08 ³	533	3,048	3.4	275.9	275.9	276.6	0.7
C	1.23 ³	497	2,347	4.5	278.4	278.4	279.3	0.9
D	1.46 ³	635	3,749	2.8	283.5	283.5	284.4	0.9
E	1.76 ³	447	2,029	5.2	286.5	286.5	287.5	1.0
F	2.02 ³	77	732	14.5	290.8	290.8	290.8	0.0
G	2.27 ³	907	5,247	2.0	298.7	298.7	299.5	0.8
H	2.47 ³	338	2,106	4.9	301.3	301.3	301.8	0.5
I	2.78 ³	346	2,322	4.4	305.5	305.5	306.4	0.9
J	2.92 ³	187	1,082	9.5	307.7	307.7	308.0	0.3
K	3.06 ³	349	3,006	3.4	314.3	314.3	314.9	0.6
L	3.22 ³	378	2,699	3.8	315.5	315.5	316.5	1.0
M	3.57 ³	514	3,030	1.9	323.4	323.4	323.6	0.2
N	3.91 ³	352	1,419	4.1	325.4	325.4	326.2	0.8
O	4.96 ³	200	1,117	4.4	347.1	347.1	347.5	0.4
P	5.34 ³	225	1,326	3.7	356.4	356.4	357.0	0.6

¹ Distance in feet above confluence with Maumelle River

² Distance in feet above confluence with Bringle Creek

³ Distance in miles above confluence with Fourche Creek

TABLE 5

FEDERAL EMERGENCY MANAGEMENT AGENCY
PULASKI COUNTY, AR
AND INCORPORATED AREAS

FLOODWAY DATA

BRINGLE CREEK - BRINGLE CREEK TRIBUTARY A -
BRODIE CREEK

FLOODING SOURCE		FLOODWAY			BASE FLOOD WATER SURFACE ELEVATION			
CROSS SECTION	DISTANCE	WIDTH (FEET)	SECTION AREA (SQARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
						FEET (NAVD 88)		
Callaghan Branch								
A	0.35 ¹	183	941	5.3	297.1	297.1	297.9	0.8
B	0.58 ¹	68	621	8.1	306.5	306.5	307.3	0.8
C	0.76 ¹	81	572	8.8	310.6	310.6	311.3	0.7
D	0.82 ¹	109	695	7.2	312.9	312.9	313.2	0.3
E	1.03 ¹	109	590	8.5	317.3	317.3	317.3	0.0
F	1.18 ¹	110	567	8.8	321.9	321.9	321.9	0.0
G	1.38 ¹	351	2,287	2.2	328.3	328.3	328.3	0.0
H	1.56 ¹	165	1,112	4.1	337.6	337.6	338.6	1.0
I	1.95 ¹	369	1,451	3.2	347.1	347.1	347.7	0.6
J	2.41 ¹	396	1,294	2.6	361.9	361.9	362.6	0.7
K	2.84 ¹	228	572	5.9	374.1	374.1	374.5	0.4
L	3.34 ¹	228	1,080	3.1	394.1	394.1	394.8	0.7
M	3.92 ¹	152	363	3.1	408.6	408.6	408.6	0.0
N	4.28 ¹	48	238	4.7	421.4	421.4	421.8	0.4
Cane Creek								
A	0.85 ²	270	1,575	2.4	244.1	244.1	244.9	0.8
B	1.90 ²	531	2,449	1.6	253.3	253.3	254.1	0.8
C	2.44 ²	1,235	10,431	0.3	264.3	264.3	265.3	1.0
D	2.80 ²	328	1,433	2.2	265.7	265.7	266.5	0.8
E	2.96 ²	460	3,136	1.0	270.8	270.8	271.8	1.0
F	3.10 ²	546	2,227	1.4	271.2	271.2	272.1	0.9
G	3.60 ²	432	2,079	1.5	279.2	279.2	280.0	0.8
H	4.08 ²	316	1,603	2.0	289.3	289.3	290.2	0.9

¹ Stream distance in miles above confluence with Fourche Creek

² Stream distance in miles above confluence with Fish Creek

TABLE 5

FEDERAL EMERGENCY MANAGEMENT AGENCY
PULASKI COUNTY, AR
AND INCORPORATED AREAS

FLOODWAY DATA

CALLAGAHAN BRANCH - CANE CREEK

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
						FEET (NAVD 88)		
Clark Bayou								
A	5.30 ¹	220	880	0.7	234.4	233.3 ⁴	233.3	0.0
Cloverdale Drain								
A	0.07 ²	160	957	2.7	271.6	271.6	272.6	1.0
B	0.38 ²	130	954	2.5	280.0	280.0	280.6	0.6
C	0.51 ²	150	872	2.7	280.0	280.0	280.9	0.9
D	0.86 ²	50	145	8.0	284.9	284.9	285.2	0.3
Coleman Creek								
A	0.66 ³	150	1,200	4.7	262.4	262.4	263.4	1.0
B	0.90 ³	250	1,200	4.7	269.5	269.5	270.5	1.0
C	1.20 ³	250	1,200	4.7	280.5	280.5	281.5	1.0
D	1.40 ³	250	800	7.1	286.3	286.3	287.3	1.0
E	1.55 ³	200	1,000	5.7	292.7	292.7	293.7	1.0
F	1.76 ³	125	725	5.7	303.0	303.0	304.0	1.0
G	1.93 ³	200	880	4.7	310.9	310.9	311.9	1.0
H	2.11 ³	200	700	5.9	318.6	318.6	319.6	1.0
I	2.28 ³	150	750	5.5	328.6	328.6	329.6	1.0
J	2.48 ³	81	605	6.6	330.4	330.4	331.1	0.7
K	2.62 ³	150	366	14.8	336.4	336.4	337.4	1.0
L	2.83 ³	150	766	7.1	350.2	350.2	351.2	1.0
M	3.02 ³	100	978	3.8	361.8	361.8	362.8	1.0
N	3.15 ³	100	683	5.5	369.6	369.6	370.6	1.0
O	3.37 ³	100	395	3.2	380.9	380.9	381.9	1.0

¹ Stream distance in miles above confluence with Pennginton Bayou - Lorange Creek

² Stream distance in miles above confluence with Young Creek

³ Stream distance in miles above confluence with Fourche Creek

⁴ Elevation computed without consideration of backwater effects

TABLE 5

FEDERAL EMERGENCY MANAGEMENT AGENCY
PULASKI COUNTY, AR
AND INCORPORATED AREAS

FLOODWAY DATA

CLARK BAYOU - CLOVERDALE DRAIN - COLEMAN
CREEK

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
						FEET (NAVD 88)			
Coleman Creek (continued)									
P	3.43 ¹	100	288	4.4	385.4	385.4	386.4	1.0	
Q	3.51 ¹	100	1,609	0.7	391.8	391.8	392.8	1.0	
R	3.69 ¹	100	109	7.8	413.6	413.6	414.6	1.0	
Colony West Branch									
A	808 ²	100	355	7.0	386.3	386.3	386.6	0.3	
B	1,500 ²	62	230	10.8	394.5	394.5	394.5	0.0	
C	1,963 ²	95	352	7.1	399.6	399.6	400.0	0.4	
D	2,108 ²	125	613	4.2	402.0	402.0	402.9	0.9	

¹ Stream distance in miles above confluence with Fourche Creek

² Stream distance in feet above confluence with Grassy Flat Creek North

TABLE 5

FEDERAL EMERGENCY MANAGEMENT AGENCY
PULASKI COUNTY, AR
AND INCORPORATED AREAS

FLOODWAY DATA

COLEMAN CREEK - COLONY WEST BRANCH

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
						FEET (NAVD 88)			
Crooked Creek									
A	0.25 ¹	652	4,539	2.4	301.7	301.7	302.5	0.8	
B	0.97 ¹	687	5,540	2.0	305.8	305.8	306.6	0.8	
C	1.93 ¹	476	2,750	4.0	310.5	310.5	311.4	0.9	
Fairman Ditch									
A	0.06 ²	15	52	4.2	248.1	248.1	248.1	0.0	
B	0.12 ²	28	125	1.7	249.8	249.8	249.8	0.0	
C	0.27 ²	24	125	1.5	250.1	250.1	250.3	0.2	
D	0.54 ²	36	62	3.2	251.2	251.2	251.3	0.1	
E	1.23 ²	250	958	0.2	251.3	251.3	252.3	1.0	
Ferndale Creek									
A	987 ³	129	708	8.8	371.3	371.3	371.7	0.4	
B	2,635 ³	153	2,192	2.8	389.9	389.9	390.0	0.1	
C	4,870 ³	157	1,070	5.7	398.9	398.9	399.8	0.9	
D	7,842 ³	229	752	4.4	435.3	435.3	436.1	0.8	
E	9,223 ³	68	353	9.4	453.6	453.6	454.5	0.9	

¹ Stream distance in miles above confluence with Fourche Creek

² Stream distance in miles above confluence with Faulkner Lake

³ Stream distance in feet above confluence with Little Maumelle River

TABLE 5

FEDERAL EMERGENCY MANAGEMENT AGENCY
PULASKI COUNTY, AR
AND INCORPORATED AREAS

FLOODWAY DATA

CROOKED CREEK - FAIRMAN DITCH - FERNDALE
CREEK

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
						FEET (NAVD 88)		
Field Creek								
A	0.66 ¹	64	445	4.5	263.9	263.9	264.5	0.6
B	0.82 ¹	53	259	6.4	265.6	265.6	266.0	0.4
C	1.01 ¹	53	273	6.1	270.1	270.1	271.0	0.9
D	1.07 ¹	43	251	6.6	271.4	271.4	271.7	0.3
E	1.09 ¹	59	376	4.4	272.5	272.5	273.1	0.6
F	1.24 ¹	30	186	9.0	273.3	273.3	273.5	0.2
G	1.35 ¹	22	90	11.5	276.3	276.3	276.3	0.0
H	1.38 ¹	34	197	5.3	277.2	277.2	277.8	0.6
Field Creek Tributary								
A	0.10 ²	32	*	6.2	263.3	263.2 ⁴	263.4	0.2
B	0.31 ²	37	*	4.9	269.0	269.0	270.0	1.0
Fish Creek								
A	1.42 ³	737	5,937	1.3	237.5	237.5	238.4	0.9
B	2.50 ³	557	4,488	1.4	242.6	242.6	243.4	0.8
C	2.80 ³	1,148	9,436	0.7	242.9	242.9	243.7	0.8
D	3.75 ³	1,075	5,773	1.1	246.0	246.0	246.8	0.8
E	4.56 ³	647	4,019	1.3	250.5	250.5	251.3	0.8
F	5.35 ³	401	2,071	2.6	254.9	254.9	255.7	0.8
G	6.65 ³	530	2,488	2.1	268.0	268.0	268.8	0.8

¹ Stream distance in miles above confluence with Little Fourche Creek

² Stream distance in miles above confluence with Field Creek

³ Stream distance in miles above confluence with Pennington Bayou - Lorange Creek

* Data not computed

⁴ Elevation computed without consideration of backwater effects from Field Creek

TABLE 5

FEDERAL EMERGENCY MANAGEMENT AGENCY
PULASKI COUNTY, AR
AND INCORPORATED AREAS

FLOODWAY DATA

FIELD CREEK - FIELD CREEK TRIBUTARY - FISH CREEK

FLOODING SOURCE		FLOODWAY			BASE FLOOD WATER SURFACE ELEVATION			
CROSS SECTION	DISTANCE	WIDTH (FEET)	SECTION AREA (SQARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
						FEET (NAVD 88)		
Fivemile Creek								
A	1.08 ¹	1,750	13,457	0.5	248.9	248.9	249.3	0.4
B	2.28 ¹	932	8,891	0.7	250.6	250.6	251.4	0.8
C	2.84 ¹	1,558	12,869	0.5	250.9	250.9	251.9	1.0
D	3.31 ¹	2,500	23,817	0.3	251.0	251.0	252.0	1.0
E	4.35 ¹	1,542	16,972	0.3	251.5	251.5	252.4	0.9
F	6.11 ¹	615	5,045	1.6	256.0	256.0	256.6	0.6
G	7.00 ¹	120	942	7.1	299.3	299.3	300.3	1.0
H	8.62 ¹	85	617	9.4	374.8	374.8	375.4	0.6
I	9.01 ¹	110	1,051	5.5	388.6	388.6	389.4	0.8
J	9.50 ¹	80	702	6.9	398.6	398.6	399.2	0.6
K	10.69 ¹	150	1,345	3.1	439.7	439.7	440.3	0.6
Fivemile Creek East Tributary								
A	0.30 ²	70	126	3.7	257.3	257.3	257.9	0.6
Fivemile Creek McCain Fork								
A	1.05 ³	100	526	1.1	261.9	261.9	262.5	0.6

¹ Stream distance in miles above confluence with Bayou Meto

² Stream distance in miles above confluence with Fivemile Creek McCain Fork

³ Stream distance in miles above confluence with Fivemile Creek

TABLE 5

FEDERAL EMERGENCY MANAGEMENT AGENCY
PULASKI COUNTY, AR
AND INCORPORATED AREAS

FLOODWAY DATA

FIVEMILE CREEK - FIVEMILE EAST TRIBUTARY -
FIVEMILE MCCAIN FORK

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
						FEET (NAVD 88)		
Fivemile Creek Tributary 1								
A	0.15 ¹	220	1,341	0.8	250.7	250.7	251.7	1.0
B	0.42 ¹	467	1,629	0.7	252.1	252.1	253.1	1.0
C	0.65 ¹	430	2,050	0.4	252.6	252.6	253.6	1.0
D	0.67 ¹	296	1,264	0.6	252.6	252.6	253.6	1.0
E	1.12 ¹	41	118	2.2	265.8	265.8	266.8	1.0
Fivemile Creek West Tributary								
A	0.09 ¹	520	3,840	0.1	414.9	414.9	414.9	0.0
B	0.36 ¹	520	7,235	0.1	434.2	434.2	434.2	0.0
C	0.69 ¹	115	173	1.8	447.1	447.1	447.1	0.0
Fletcher Creek								
A	2,001 ²	91	557	5.8	331.3	331.3	331.9	0.6
B	4,005 ²	96	399	8.1	344.1	344.1	344.3	0.2
C	6,005 ²	58	299	10.8	354.5	354.5	354.7	0.2
D	8,088 ²	73	338	5.1	369.9 ³	367.7	368.4	0.7
E	10,001 ²	37	197	8.7	383.4	383.4	384.2	0.8
F	11,086 ²	55	243	7.1	390.8	390.8	391.1	0.3
G	13,998 ²	59	175	8.6	411.3	411.3	411.3	0.0
H	15,973 ²	90	195	7.7	428.8	428.8	429.1	0.3

¹ Stream distance in miles above confluence with Fivemile Creek

² Stream distance in feet above confluence with Little Maumelle River

³ Common floodplain with Tributary 6 to Fletcher Creek

TABLE 5

FEDERAL EMERGENCY MANAGEMENT AGENCY
PULASKI COUNTY, AR
AND INCORPORATED AREAS

FLOODWAY DATA

FIVEMILE CREEK TRIBUTARY 1 - FIVEMILE CREEK
WEST TRIBUTARY - FLETCHER CREEK

FLOODING SOURCE		FLOODWAY			BASE FLOOD WATER SURFACE ELEVATION			
CROSS SECTION	DISTANCE ¹	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
						FEET (NAVD 88)		
Fourche Creek								
A ²	0.12	331	4,998	7.2	249	243.7 ⁵	244.7	1.0
B	1.56	233	5,826	6.1	252.2	252.2	252.8	0.6
C	2.20	242	5,688	5.7	253.2	253.2	253.7	0.5
D	2.86	297	7,143	5.0	254.2	254.2	254.8	0.6
E	3.75	800	11,268	3.2	255.7	255.7	256.2	0.5
F	4.38	630	13,106	2.7	256.0	256.0	256.8	0.8
G	13.40	793	8,612	7.0	259.8	259.8	259.8	0.0
H	14.14	809	14,587	4.1	265.4	265.4	266.3	0.9
I	14.57	1,512	24,575	2.1	267.3	267.3	268.2	0.9
J	15.30	2,501	28,960	1.6	269.9	269.9	270.7	0.8
K	16.24	3,199 ³	37,018	1.3	273.7	273.7	274.5	0.8
L	16.95	2,820	26,761	1.8	275.9	275.9	276.9	1.0
M	18.22	1,100	8,750	4.6	284.1	284.1	284.8	0.7
N	18.55	1,052 ⁴	13,498	3.0	288.8	288.8	289.2	0.4
O	19.02	2,298 ⁴	26,725	1.4	290.1	290.1	290.9	0.8
P	19.25	2,223 ⁴	28,029	1.3	290.8	290.8	291.8	1.0
Q	20.15	2,625 ⁴	16,219	2.1	293.8	293.8	294.7	0.9
R	21.24	660	5,832	3.4	301.8	301.8	302.7	0.9
S	22.02	930	6,175	3.3	309.8	309.8	310.7	9.0

¹ Stream distance in miles above confluence with Arkansas River

³ Combined Nash Creek / Fourche Creek floodway"

⁴ Combined Otter Creek / Fourche Creek floodway"

⁵ Gngxcvqp"eqo r wgf "y kj qw'eqpulf gtcvqp"qh'dceny cvgt gh'gew'ltqo 'Ctn'pucu'Tk'gt

² This cross section lies within an area that has not been updated on the FIRM at this time due to the presence of levees that have not been demonstrated to meet the requirements of NFIP Regulation Section 65.10. Please refer to the Notice to Flood Insurance Study Users page at the front of this FIS for more information.

TABLE 5

FEDERAL EMERGENCY MANAGEMENT AGENCY
PULASKI COUNTY, AR
AND INCORPORATED AREAS

FLOODWAY DATA

FOURCHE CREEK

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
						FEET (NAVD 88)		
Fourche Creek (continued)								
T	24.21 ¹	746 / 669 ⁴	4,693	2.6	342.5	342.5	343.4	0.9
U	24.7 ¹	700	3,832	3.2	349.4	349.4	350.2	0.8
V	25.5 ¹	675	3,706	3.3	363.0	363.0	363.8	0.8
W	26.55 ¹	700	2,650	3.7	374.1	374.1	375.1	1.0
X	27.17 ¹	640	4,373	2.2	383.3	393.3	384.2	0.9
Y	28.24 ¹	400	3,226	3.0	397.8	397.8	398.6	0.8
Z	29.00 ¹	300	1,313	7.5	415.1	415.1	415.1	0.0
AA	30.36 ¹	500	2,397	3.3	447.8	447.8	448.8	1.0
AB	31.22 ¹	300	1,202	3.6	468.0	468.0	468.5	0.5
Glade Branch								
A	4738 ²	300	417	4.6	276.3	276.3	277.0	0.7
B	6213 ²	278	910	2.1	282.3	282.3	283.3	1.0
C	10125 ²	220	909	2.1	293.3	293.3	294.2	0.9
D	13862 ²	100	238	4.4	309.1	309.1	310.0	0.9
E	16091 ²	110	203	5.1	323.0	323.0	323.2	0.2
F	19389 ²	110	249	2.7	344.6	344.6	344.9	0.3
Glenview Ditch								
A	0.36 ⁴	43	49	3.3	248.6	248.6	249.4	0.8
B	0.61 ⁴	37	108	1.5	250.6	250.6	250.8	0.2
C	1.00 ⁴	66	260	0.6	250.8	250.8	251.3	0.5

¹ Stream distance in miles above confluence with Arkansas River

⁴ Width / width within county boundary

² Stream distance in feet above U.S. Highway 67/167

³ Stream distance in miles above confluence with Fairman Ditch

TABLE 5

FEDERAL EMERGENCY MANAGEMENT AGENCY
PULASKI COUNTY, AR
AND INCORPORATED AREAS

FLOODWAY DATA

FOURCHE CREEK - GLADE BRANCH - GLENVIEW 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
						FEET (NAVD 88)			
Good Earth Drain									
A	617 ¹	100	360	8.1	287.3	283.0	283.7	0.7	
Grassy Flat Creek									
A	0.54 ²	65	799	12.5	342.2	342.2	343.2	1.0	
B	1.51 ²	70	593	13.4	371.8	371.8	372.4	0.6	
C	2.13 ²	113	657	6.6	386.7	386.7	387.7	1.0	
D	2.96 ²	40	314	13.8	416.9	416.9	417.2	0.3	
E	3.56 ²	30	276	6.8	434.2	434.2	434.4	0.2	
F	3.80 ²	55	178	4.4	447.7	447.7	447.9	0.2	
G	4.23 ²	52	157	5.0	471.4	471.4	472.1	0.7	
H	4.47 ²	33	188	4.2	481.0	481.0	481.8	0.8	
Grassy Flat Creek North									
A	991 ³	106	374	3.6	385.0	385.0	385.9	0.9	
B	1,243 ³	41	130	10.3	387.5	387.5	387.5	0.0	
C	1,554 ³	26	125	10.6	391.9	391.9	391.9	0.0	
D	2,149 ³	54	167	8.0	399.7	399.7	399.9	0.2	
E	2,308 ³	80	345	3.8	404.1	404.1	405.1	1.0	
F	2,971 ³	27	128	10.4	410.1	410.1	410.2	0.1	
G	3,904 ³	26	113	11.8	425.5	425.5	426.3	0.8	

¹ Stream distance in feet above confluence with Taylor Loop Creek

² Stream distance in miles above confluence with Rock Creek

³ Stream distance in feet above confluence with Grassy Flat Creek

TABLE 5

FEDERAL EMERGENCY MANAGEMENT AGENCY
PULASKI COUNTY, AR
AND INCORPORATED AREAS

FLOODWAY DATA

GOOD EARTH DRAIN - GRASSY FLAT CREEK - GRASSY
FLAT CREEK NORTH

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
						FEET (NAVD 88)			
Harris Bayou A	2.36 ¹	3,200	7,846	1.1	231.4	231.4	231.4	0.0	
Haw Branch A	0.17 ²	109	1,031	3.9	288.9	288.9	289.9	1.0	
B	0.72 ²	273	1,608	2.5	305.4	305.4	306.4	1.0	
C	0.99 ²	225	1,484	2.7	315.5	315.5	316.5	1.0	
D	1.19 ²	90	458	4.8	320.9	320.9	321.4	0.5	
E	1.36 ²	120	622	3.5	329.7	329.7	329.7	0.0	

¹ Stream distance in miles above confluence with Arkansas River

² Stream distance in miles above confluence with Fourche Creek

TABLE 5

FEDERAL EMERGENCY MANAGEMENT AGENCY
PULASKI COUNTY, AR
AND INCORPORATED AREAS

FLOODWAY DATA

HARRIS BAYOU - HAW BRANCH

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
						FEET (NAVD 88)		
Isom Creek								
A	4,375 ¹	117	413	10.8	264.3	264.3	264.3	0.0
B	6,069 ¹	183	561	6.9	286.8	286.8	286.9	0.1
C	7,464 ¹	175	508	7.4	303.9	303.9	303.9	0.0
D	9,086 ¹	225	1,098	3.4	319.6	319.6	320.4	0.8
E	9,957 ¹	147	683	4.7	327.1	327.1	327.4	0.3
F	11,705 ¹	238	577	5.2	343.9	343.9	344.6	0.7
Jacks Bayou								
A	620 ²	2,189	10,633	0.6	255.6	255.6	256.2	0.5
B	2834 ²	2800	12,757	0.5	256.0	256.0	256.3	0.3
C	6885 ²	2672	1,254	4.5	256.2	256.2	256.8	0.6
D	12157 ²	2,550	1,272	4.9	259.3	259.3	260.1	0.8
E	16727 ²	1,725	7,486	0.7	262.1	262.1	262.6	0.5
F	21045 ²	1,400	2,409	2.0	263.6	263.6	264.3	0.7
G	25656 ²	963	5,298	0.9	267.3	267.3	268.1	0.8
H	29579 ²	145	722	5.5	268.5	268.5	269.2	0.7
I	33616 ²	500	2,177	1.2	271.7	271.7	272.1	0.4
J	38933 ²	400	1,326	1.9	276.4	276.4	277.2	0.8
K	43485 ²	411	1,708	1.5	282.1	282.1	283.1	1.0
Jacks Bayou Tributary								
A	0.83 ³	308	10,647	0.9	260.9	260.9	261.9	1.0

¹ Stream distance in feet above confluence with Taylor Loop Creek

² Stream distance in miles above county boundary

³ Stream distance in miles above confluence with Jacks Bayou

TABLE 5

FEDERAL EMERGENCY MANAGEMENT AGENCY
PULASKI COUNTY, AR
AND INCORPORATED AREAS

FLOODWAY DATA

ISOM CREEK - JACKS BAYOU - JACKS BAYOU
TRIBUTARY

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		INCREASE
						FEET (NAVD 88)		
Jacks Bayou Tributary 1								
A	0.00 ¹	851	3,672	1.1	**	252.5	253.5	1.0
B	0.86 ¹	1785	7,499	0.4	**	255.9	256.9	1.0
C	1.38 ¹	2247	15,274	0.1	**	261.9	262.9	1.0
D	1.76 ¹	472	1,453	1.4	**	264.7	265.7	1.0
E	2.09 ¹	307	1,341	1.3	**	268.5	269.5	1.0
F	2.26 ¹	123	496	3.4	**	270.7	271.7	1.0
G	2.35 ¹	287	1,932	2.4	**	272.9	272.7	0.2
H	2.54 ¹	632	924	1.7	**	274.5	274.4	0.1
Jacks Bayou Tributary 1A								
A	0.90 ²	339	799	1.4	**	263.0	264.0	1.0
B	0.97 ²	248	549	1.2	**	263.7	264.7	1.0
C	1.11 ²	452	2,877	0.2	**	272.3	273.3	1.0
D	1.28 ²	61	239	1.3	**	272.9	273.9	1.0
E	1.42 ²	32	122	2.2	**	276.3	277.3	1.0
F	1.53 ²	43	91	2.4	**	280.1	281.1	1.0
G	1.62 ²	32	90	1.8	**	282.8	283.8	1.0
Jacks Bayou Tributary 2								
A	0.33 ¹	450	1,248	0.8	**	257.8	258.8	1.0
B	1.01 ¹	348	552	1.4	**	258.2	259.2	1.0
C	1.06 ¹	31	106	6.9	**	258.2	259.2	1.0
D	1.15 ¹	28	130	5.5	**	258.2	259.2	1.0
E	1.45 ¹	241	502	0.3	**	262.6	263.6	1.0
F	1.61 ¹	16	35	1.9	**	265.8	266.8	1.0

¹ Distance in miles above eastern Jacksonville Corporate limits

² Distance in miles above confluence with Jacks Bayou Tributary 1

TABLE 5

FEDERAL EMERGENCY MANAGEMENT AGENCY
PULASKI COUNTY, AR
AND INCORPORATED AREAS

FLOODWAY DATA

JACKS BAYOU TRIBUTARY 1 - JACKS BAYOU
TRIBUTARY 1A - JACKS BAYOU TRIBUTARY 2

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
						FEET (NAVD 88)		
Jacks Bayou Tributary 2A								
A	0.19 ¹	65	185	2.5	**	262.1	263.1	1.0
B	0.61 ¹	72	174	1.1	**	272.6	273.6	1.0
Jacks Bayou Tributary 2B								
A	0.37 ¹	92	267	1.6	**	267.5	268.5	1.0
B	0.42 ¹	29	97	4.2	**	268.3	269.3	1.0
C	0.46 ¹	142	330	1.2	**	269.7	270.7	1.0

¹ Stream distance in miles above confluence with Jacks Bayou Tributary 2

** Data not available

TABLE 5

FEDERAL EMERGENCY MANAGEMENT AGENCY
PULASKI COUNTY, AR
AND INCORPORATED AREAS

FLOODWAY DATA

JACKS BAYOU TRIBUTARY 2A - JACKS BAYOU TRIBUTARY 2B

FLOODING SOURCE		FLOODWAY			BASE FLOOD WATER SURFACE ELEVATION				
CROSS SECTION	DISTANCE ¹	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY	WITHOUT FLOODWAY		WITH FLOODWAY	INCREASE
						FEET (NAVD 88)			
Jacks Bayou Tributary 10									
A	2,602	150	373	3.9	274.0	274.0	274.7	0.7	
B	3,066	230	931	1.6	276.1	276.1	276.8	0.7	
C	3,879	233	793	1.8	277.3	277.3	277.8	0.5	
D	5,330	270	526	2.7	279.9	279.9	280.1	0.2	

¹ Stream Distance in feet Above Confluence with Jacks Bayou

TABLE 5

FEDERAL EMERGENCY MANAGEMENT AGENCY
PULASKI COUNTY, AR
AND INCORPORATED AREAS

FLOODWAY DATA

JACKS BAYOU TRIBUTARY 10

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
						FEET (NAVD 88)		
Kellogg Creek								
A	5.99 ¹	949	4,316	0.9	250.1	249.9 ⁴	250.8	0.9
B	7.96 ¹	268	1,487	2.5	259.1	259.1	260.0	0.9
C	8.79 ¹	96	688	5.4	268.4	268.4	269.2	0.8
Kinley Creek								
A	1,700 ²	350	1,713	5.4	297.3	297.3	297.4	0.1
B	3,664 ²	180	1,652	5.6	308.4	308.4	308.6	0.2
C	5,730 ²	435	1,679	4.6	316.4	316.4	317.3	0.9
D	8,216 ²	500	1,760	3.5	327.3	327.3	328.0	0.7
E	11,303 ²	350	734	8.4	342.6	342.6	343.5	0.9
F	13,303 ²	205	863	7.2	351.6	351.6	352.5	0.9
G	15,313 ²	240	1,152	5.4	362.1	362.1	363.0	0.9
H	17,469 ²	200	920	6.7	374.4	374.4	374.4	0.0
I	19,213 ²	140	476	6.0	382.2	382.2	382.2	0.0
J	21,795 ²	110	339	8.4	399.5	399.5	399.7	0.2
K	24,307 ²	154	418	6.8	423.1	423.1	423.2	0.1
Lake No. 1 Tributary								
A	0.91 ³	55	287	6.9	271.4	271.4	272.0	0.6
B	1.30 ³	80	409	4.8	300.4	300.4	301.4	1.0
C	1.56 ³	90	418	4.7	318.8	318.8	319.6	0.8

¹ Stream distance in miles above confluence with Bayou Meto

² Stream distance in feet above confluence with Nowlin Creek

³ Stream distance in miles above mouth

⁴ Elevation computed without consideration of backwater effects from Bayou Meto

TABLE 5

FEDERAL EMERGENCY MANAGEMENT AGENCY
PULASKI COUNTY, AR
AND INCORPORATED AREAS

FLOODWAY DATA

KELLOGG CREEK - KINLEY CREEK - LAKE NO. 1
TRIBUTARY

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
						FEET (NAVD 88)		
Landmark Branch								
A	0.42 ¹	256	2,105	1.0	285.3	285.3	286.1	0.8
B	0.68 ¹	199	866	2.4	290.4	290.4	291.2	0.8
C	0.76 ¹	185	958	2.2	292.8	292.8	293.6	0.8
D	0.86 ¹	136	575	3.7	298.4	298.4	299.2	0.8
E	1.15 ¹	143	826	2.2	310.6	310.6	311.4	0.8
F	1.36 ¹	195	905	2.0	317.7	317.7	318.5	0.8
G	1.50 ¹	160	636	2.9	322.7	322.7	323.4	0.7
H	1.64 ¹	178	688	2.7	331.7	331.7	332.4	0.7
I	1.73 ¹	204	1,237	1.5	338.7	338.7	339.5	0.8
Little Fourche Creek								
A	5.30 ²	431	2,831	3.8	258.0	258.0	258.9	0.9
B	5.85 ²	679	7,855	1.6	262.1	262.1	263.1	1.0
C	6.17 ²	997	9,875	1.1	262.7	262.7	263.7	1.0
D	6.76 ²	1024	10,244	0.8	263.5	263.5	264.5	1.0
E	7.43 ²	205	1,735	2.6	265.6	265.6	266.6	1.0
F	7.62 ²	357	3,511	1.3	269.5	269.5	270.5	1.0
G	8.48 ²	1061	6,976	0.7	272.4	272.4	273.4	1.0
H	8.51 ²	230	650	8.6	273.2	273.2	274.2	1.0
I	8.89 ²	280	530	10.6	274.5	274.5	275.5	1.0
J	9.48 ²	280	530	10.6	285.6	285.6	286.6	1.0

¹ Stream distance in miles above confluence with Treadway-Brewer Branch

² Stream distance in miles above confluence with Fourche Creek

TABLE 5

FEDERAL EMERGENCY MANAGEMENT AGENCY
PULASKI COUNTY, AR
AND INCORPORATED AREAS

FLOODWAY DATA

LANDMARK BRANCH - LITTLE FOURCHE CREEK

FLOODING SOURCE		FLOODWAY			BASE FLOOD WATER SURFACE ELEVATION			
CROSS SECTION	DISTANCE ¹	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY	WITHOUT FLOODWAY		INCREASE
						FEET (NAVD 88)		
Little Maumelle River								
A ³	10,289	1,220	14,516	1.4	263.1	260.5 ²	261.5	1.0
B ³	13,367	1,220	12,920	1.5	263.3	260.7 ²	261.7	1.0
C	19,755	802	7,154	2.8	263.9	261.4 ²	262.4	1.0
D	23,451	930	7,648	2.6	263.9	262.1 ²	263.0	0.9
E	31,160	1,520	17,007	1.2	263.9	262.5 ²	263.3	0.8
F	34,486	1,699	25,545	0.8	263.9	262.7 ²	263.5	0.8
G	40,822	2,680	31,868	0.6	263.9	263.0 ²	263.9	0.9
H	48,900	1,700	12,120	1.6	267.3	267.3	268.3	1.0
I	53,842	1,254	8,076	2.7	273.1	273.1	274.0	0.9
J	58,847	1,463	8,427	2.9	283.8	283.8	284.7	0.9
K	64,828	450	2,844	8.5	300.9	300.9	301.0	0.1
L	70,457	665	6,554	3.3	316.1	316.1	316.9	0.8
M	75,852	279	2,179	9.0	329.8	329.8	330.6	0.8
N	81,347	200	1,128	8.1	347.8	347.8	348.6	0.8
O	86,983	164	899	5.8	367.3	367.3	367.3	0.0
P	92,348	400	1,011	5.1	389.6	389.6	390.1	0.5
Q	97,352	200	623	6.3	413.9	413.9	414.0	0.1
R	102,356	120	457	5.0	437.1	437.1	437.4	0.3
S	107,446	200	517	4.4	462.6	462.6	463.2	0.6
T	112,349	134	290	7.8	494.8	494.8	494.9	0.1
U	117,525	220	1,271	1.8	535.6	535.6	536.6	1.0
V	120,939	153	569	4.0	560.8	560.8	561.5	0.7

¹ Stream distance in feet above confluence with Arkansas River

² Elevation computed without consideration of backwater effects from Arkansas River

³ This cross section lies within an area that has not been updated on the FIRM at this time due to the presence of levees that have not been demonstrated to meet the requirements of NFIP Regulation Section 65.10. Please refer to the Notice to Flood Insurance Study Users page at the front of this FIS for more information.

TABLE 5

FEDERAL EMERGENCY MANAGEMENT AGENCY
PULASKI COUNTY, AR
AND INCORPORATED AREAS

FLOODWAY DATA

LITTLE MAUMELLE RIVER

FLOODING SOURCE		FLOODWAY			BASE FLOOD WATER SURFACE ELEVATION			
CROSS SECTION	DISTANCE ¹	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY	WITHOUT FLOODWAY FEET (NAVD 88)	WITH FLOODWAY	INCREASE
Maumelle River								
A	2,700	325	3,786	9.1	337.3	337.3	337.9	0.6
B	5,290	1,100	6,171	8.9	344.0	344.0	344.7	0.7
C	7,520	1,100	7,031	6.3	350.7	350.7	351.5	0.8
D	9,695	1,018	5,294	8.4	354.7	354.7	355.6	0.9

¹ Feet upstream of confluence with Rothy Creek

TABLE 5

FEDERAL EMERGENCY MANAGEMENT AGENCY
PULASKI COUNTY, AR
AND INCORPORATED AREAS

FLOODWAY DATA

MAUMELLE RIVER

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		INCREASE
						FEET (NAVD 88)		
McHenry Creek								
A	0.32 ¹	481	3,803	1.9	282.4	282.4	283.4	1.0
B	0.55 ¹	862	4,138	1.8	284.5	284.5	285.3	0.8
C	1.20 ¹	496	1,893	3.9	298.8	298.8	299.3	0.5
D	1.64 ¹	550	3,184	2.3	310.7	310.7	311.6	0.9
E	2.46 ¹	544	2,689	3.3	331.2	331.2	331.6	0.4
F	2.84 ¹	489	4,077	2.2	347.7	347.7	348.3	0.6
G	3.14 ¹	220	1,510	6.0	354.6	354.6	355.2	0.6
H	3.33 ¹	137	830	5.3	358.5	358.5	359.4	0.9
I	4.61 ¹	255	2,712	1.5	412.1	412.1	412.8	0.7
J	5.14 ¹	175	1,435	2.8	418.2	418.2	419.2	1.0
K	6.08 ¹	140	735	3.7	447.3	447.6	447.4	0.1
L	6.77 ¹	190	779	2.8	468.6	468.6	469.5	0.9
M	7.85 ¹	137	583	2.2	511.5	511.5	512.5	1.0
N	8.52 ¹	115	371	1.9	545.9	545.9	546.2	0.3
Mill Bayou								
A ⁴	3.88 ²	322	1,901	3.4	262.4	262.4	262.8	0.4
B ⁴	4.45 ²	871	6,907	0.9	264.6	264.6	265.6	1.0
C ⁴	4.86 ²	412	2,445	0.7	264.8	264.8	265.8	1.0
D ⁴	5.54 ²	164	1,025	1.8	283.7	283.7	284.6	0.9
Mill Bayou Tributary								
A ⁴	0.58 ³	712	6,326	0.7	264.9	264.9	265.6	0.7
B ⁴	0.96 ³	312	2,362	1.9	265.2	265.2	265.9	0.7
C ⁴	1.21 ³	618	3,009	1.5	266.3	266.3	267.3	1.0

¹ Stream distance in miles above confluence with Fourche Creek

² Stream distance in miles above confluence with Arkansas River

³ Stream distance in miles above confluence with Mill Bayou

⁴ This cross section lies within an area that has not been updated on the FIRM at this time due to the presence of levees that have not been demonstrated to meet the requirements of NFIP Regulation 65.10. Please refer to the Notice to Flood Insurance Study Users page at the front of this FIS for more information

TABLE 5

FEDERAL EMERGENCY MANAGEMENT AGENCY
PULASKI COUNTY, AR
AND INCORPORATED AREAS

FLOODWAY DATA

MCHENRY CREEK - MILL BAYOU - MILL BAYOU
TRIBUTARY

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
						FEET (NAVD 88)		
Nash Creek								
A	1.87 ¹	453	2,206	1.4	281.3	281.3	282.3	1.0
B	2.49 ¹	245	1,338	2.4	289.0	289.0	290.0	1.0
C	2.75 ¹	185	1,147	2.1	293.5	293.5	294.4	0.9
D	3.13 ¹	258	1,270	1.9	302.2	302.2	303.0	0.8
Nash Creek Tributary								
A	0.40 ²	30	111	2.2	297.7	297.7	298.6	0.9
Neal Creek								
A	2,001 ³	85	557	7.2	390.8	390.8	391.7	0.9
B	4,062 ³	106	626	6.4	400.8	400.8	401.1	0.3
C	5,989 ³	112	354	9.7	411.4	411.4	411.8	0.4
D	7,529 ³	229	872	3.9	417.3	417.3	418.1	0.8
E	9,001 ³	134	648	5.3	425.7	425.7	426.7	1.0
F	11,001 ³	190	852	4.0	436.4	436.4	437.4	1.0
G	13,218 ³	140	655	5.3	450.8	450.8	450.9	0.1
H	14,999 ³	126	343	6.4	464.6	464.6	464.7	0.1
I	17,000 ³	141	290	6.2	479.9	479.9	480.2	0.3
J	19,141 ³	115	253	7.1	497.0	497.0	497.1	0.1
K	21,000 ³	57	235	7.6	514.1	514.1	514.3	0.2

¹ Stream distance in miles above confluence with Fourche Creek

² Stream distance in miles above confluence with Nash Creek

³ Stream distance in feet above confluence with Kinley Creek

TABLE 5

FEDERAL EMERGENCY MANAGEMENT AGENCY
PULASKI COUNTY, AR
AND INCORPORATED AREAS

FLOODWAY DATA

NASH CREEK - NASH CREEK TRIBUTARY - NEAL CREEK

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
						FEET (NAVD 88)		
Nowlin Creek								
A	3,100 ¹	700	5,959	3.3	271.7	271.7	272.7	1.0
B	7,000 ¹	930	4,525	4.3	279.0	279.0	279.4	0.4
C	8,382 ¹	400	2,780	7.3	284.2	284.2	284.2	0.0
D	13,988 ¹	725	3,951	2.5	299.2	299.2	300.2	1.0
E	16,001 ¹	625	2,374	4.1	305.3	305.3	305.5	0.2
F	20,544 ¹	166	843	11.0	318.8	318.8	319.6	0.8
G	21,952 ¹	210	1,518	6.8	328.3	328.3	328.9	0.6
H	25,011 ¹	470	1,688	5.1	342.7	342.7	343.2	0.5
I	27,979 ¹	482	1,839	4.5	360.1	360.1	361.0	0.9
J	31,611 ¹	585	2,060	4.0	379.5	379.5	380.5	1.0
K	34,842 ¹	218	1,565	5.3	399.1	399.1	399.5	0.4
L	36,943 ¹	280	1,518	5.5	412.5	412.5	413.5	1.0
M	39,123 ¹	215	1,343	6.2	425.7	425.7	425.9	0.2
N	42,003 ¹	275	1,201	6.9	449.1	449.1	450.1	1.0
O	45,011 ¹	250	1,259	6.6	477.5	477.5	477.7	0.2
P	47,763 ¹	190	1,214	6.8	497.2	497.2	498.1	0.9
Otter Creek								
A	2.11 ²	638	6,097	1.3	299.9	299.9	300.8	0.9
B	2.74 ²	809	7,582	1.0	302.8	302.8	303.5	0.7
C	3.52 ²	625	4,603	1.9	304.4	304.4	305.4	1.0
D	3.84 ²	556	2,603	3.3	307.5	307.5	307.8	0.3
E	4.14 ²	996	7,195	1.2	308.9	308.9	309.9	1.0
F	4.95 ²	550	3,499	1.7	311.7	311.7	312.6	0.9

¹ Stream distance in feet above confluence with Little Maumelle River

² Stream distance in miles above confluence with Fourche Creek

TABLE 5

FEDERAL EMERGENCY MANAGEMENT AGENCY
PULASKI COUNTY, AR
AND INCORPORATED AREAS

FLOODWAY DATA

NOWLIN CREEK - OTTER CREEK

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
						FEET (NAVD 88)		
Panther Branch								
A	0.21 ¹	138	731	6.8	320.2	320.2	321.2	1.0
B	0.42 ¹	160	680	7.3	333.2	333.2	333.2	0.0
C	0.68 ¹	216	1,263	2.5	342.2	342.2	343.1	0.9
D	0.98 ¹	80	391	8.1	351.5	351.5	351.9	0.4
Pennington Bayou - Lorance Creek								
A	11.34 ²	635 / 212 ³	7,109	1.5	247.9	247.9	248.7	0.8
B	12.38 ²	1,045 / 1,040 ³	9,317	1.1	252.9	252.9	253.9	1.0
C	13.32 ²	440	3,754	3.3	254.5	254.5	255.5	1.0
D	15.58 ²	540	5,085	2.4	266.6	266.6	267.5	0.9
E	16.00 ²	1,500 / 1,038 ³	9,079	1.4	268.1	268.1	269.0	0.9

¹ Stream distance in miles above confluence with Brodie Creek

² Stream distance in miles above confluence with Arkansas River

³ Width / width within county boundary

TABLE 5

FEDERAL EMERGENCY MANAGEMENT AGENCY
PULASKI COUNTY, AR
AND INCORPORATED AREAS

FLOODWAY DATA

PANTHER BRANCH - PENNINGTON BAYOU-LORANCE
CREEK

FLOODING SOURCE		FLOODWAY			BASE FLOOD WATER SURFACE ELEVATION			
CROSS SECTION	DISTANCE ¹	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
						FEET (NAVD 88)		
A	1,882	307	3,936	7.0	259.9	259.9	260.2	0.3
B	2,321	505	6,597	4.2	261.1	261.1	261.4	0.3
C	4,213	600	4,607	6.0	262.7	262.7	263.2	0.5
D	5,527	430	5,086	6.1	272.0	272.0	272.5	0.5
E	8,040	476	2,869	9.6	275.4	275.4	276.4	1.0
F	10,656	570	4,963	5.2	289.5	289.5	289.6	0.1
G	12,366	690	4,100	6.3	292.5	292.5	293.5	1.0
H	13,455	595	4,363	5.9	298.5	298.5	298.6	0.1
I	14,541	235	2,038	12.6	300.4	300.4	300.6	0.2
J	15,866	195	2,023	12.7	305.1	305.1	305.2	0.1
K	17,189	166	2,247	11.5	312.6	312.6	312.6	0.0
L	18,511	460	4,141	5.2	316.2	316.2	316.2	0.0
M	20,015	230	1,941	11.1	317.3	317.3	318.3	1.0
N	21,358	242	1,919	11.2	321.9	321.9	321.9	0.0
O	22,747	260	1,994	10.1	326.8	326.8	327.8	1.0
P	23,490	430	3,172	6.3	331.2	331.2	331.9	0.7
Q	24,870	545	2,463	8.2	339.2	339.2	339.2	0.0
R	26,288	398	2,953	6.8	348.0	348.0	348.8	0.8
S	28,016	355	1,624	5.6	355.4	355.4	355.9	0.5
T	29,794	141	1,631	5.6	371.3	371.3	371.3	0.0
U	30,453	155	1,879	4.9	377.1	377.1	377.3	0.2
V	32,977	105	821	11.1	384.5	384.5	385.5	1.0
W	34,288	195	1,584	5.8	394.7	394.7	394.7	0.0
X	35,424	270	1,220	6.0	400.2	400.2	400.3	0.1
Y	37,647	160	980	7.5	415.8	415.8	416.5	0.7
Z	40,811	182	1,250	5.9	433.3	433.3	433.9	0.6
AA	41,503	245	1,365	5.4	437.1	437.1	437.4	0.3
AB	42,489	200	1,979	4.6	444.8	444.8	445.3	0.5

¹ Stream distance in feet above confluence with Fourche Creek

TABLE 5

FEDERAL EMERGENCY MANAGEMENT AGENCY
PULASKI COUNTY, AR
AND INCORPORATED AREAS

FLOODWAY DATA

ROCK CREEK

FLOODING SOURCE		FLOODWAY			BASE FLOOD WATER SURFACE ELEVATION			
CROSS SECTION	DISTANCE ¹	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
						FEET (NAVD 88)		
AC	43,413	150	1,002	7.3	445.6	445.6	446.1	0.5
AD	44,433	131	1,202	6.1	450.1	450.1	451.0	0.9
AE	47,406	130	1,061	5.0	462.5	462.5	462.8	0.3
AF	48,960	260	1,768	3.0	465.8	465.8	466.7	0.9
AG	51,303	228	1,982	2.7	471.3	471.3	471.8	0.5
AH	53,014	200	1,559	3.0	479.8	479.8	480.3	0.5
AI	53,752	240	1,216	3.9	480.8	480.8	481.8	1.0
AJ	54,514	217	1,330	4.1	484.2	484.2	484.5	0.3
AK	54,833	204	576	8.2	489.5	489.5	489.5	0.0
AL	55,902	170	1,065	4.4	490.7	490.7	491.6	0.9
AM	57,467	220	1,684	3.2	496.2	496.2	497.0	0.8
AN	58,382	260	1,205	3.9	498.1	498.1	498.6	0.5
AO	60,126	94	741	6.4	503.9	503.9	504.6	0.7
AP	60,499	91	665	7.1	504.8	504.8	505.7	0.9
AQ	60,936	110	747	6.7	507.3	507.3	508.1	0.8
AR	61,168	120	894	5.3	510.9	510.9	511.1	0.2
AS	62,137	192	735	3.9	511.9	512.0	512.1	0.1
AT	63,130	68	458	6.3	514.9	514.9	514.9	0.0
AU	64,091	234	1,983	1.5	521.6	521.6	521.6	0.0
AV	64,958	82	396	2.5	521.7	521.7	521.7	0.0
AW	65,558	87	418	2.4	522.6	522.6	522.6	0.0
AX	66,076	68	179	5.6	523.3	523.3	523.3	0.0
AY	66,651	15	83	12.1	529.7	529.7	530.1	0.4

¹ Stream distance in feet above confluence with Fourche Creek

² Elevation computed without consideration of backwater effects from Fourche Creek

TABLE 5

FEDERAL EMERGENCY MANAGEMENT AGENCY
PULASKI COUNTY, AR
AND INCORPORATED AREAS

FLOODWAY DATA

ROCK CREEK

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
						FEET (NAVD 88)		
Rock Creek Tributary 1								
A	0.38 ¹	193	2,025	0.3	523.0	523.0	523.0	0.0
B	0.55 ¹	48	180	3.3	532.9	532.9	532.9	0.0
C	0.8 ¹	15	41	9.5	552.5	552.5	553.0	0.5
Rock Creek Tributary A								
A	1.05 ¹	39	76	8.0	547.6	547.6	548.1	0.5
Rocky Branch								
A	1.01 ²	428	2,823	0.8	249.9	249.9	250.9	1.0
B	1.08 ²	594	3,579	0.6	250.4	250.4	251.4	1.0
C	1.34 ²	93	641	3.2	252.3	252.3	253.3	1.0
D	1.69 ²	32	183	3.3	258.4	258.4	259.4	1.0
E	1.99 ²	504	1,418	0.3	266.2	266.2	267.2	1.0
F	2.46 ²	34	108	2.9	283.2	283.2	284.2	1.0

¹ Stream distance in miles above Rock Creek

² Stream distance in miles above confluence with Bayou Meto

TABLE 5

FEDERAL EMERGENCY MANAGEMENT AGENCY
PULASKI COUNTY, AR
AND INCORPORATED AREAS

FLOODWAY DATA

ROCK CREEK TRIBUTARY 1 - ROCK CREEK TRIBUTARY
A - ROCKY BRANCH

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
						FEET (NAVD 88)		
Shilcotts Bayou								
A	1.24 ¹	150	1,646	6.3	257.8	256.1 ⁴	256.9	0.8
B	1.53 ¹	260	892	5.8	258.1	258.1	258.4	0.3
C	1.95 ¹	302	4,384	1.0	278.4	278.4	279.1	0.7
D	2.25 ¹	325	1,524	2.3	281.2	281.2	282.2	1.0
E	2.73 ¹	225	1,128	2.3	301.3	301.3	302.3	1.0
F	2.97 ¹	198	832	3.2	312.3	312.3	313.1	0.8
G	3.23 ¹	182	706	2.6	322.5	322.5	323.5	1.0
H	3.46 ¹	190	593	3.1	332.5	332.5	333.3	0.8
Shilcotts Bayou Tributary								
A	0.28 ²	275	1,808	2.8	262.8	262.8	263.6	0.8
B	0.40 ²	235	1,244	4.1	269.3	269.3	269.9	0.6
C	0.78 ²	57	647	6.0	283.4	283.4	284.0	0.6
D	1.09 ²	160	629	4.1	290.9	290.9	291.8	0.9
E	1.38 ²	181	728	3.5	300.5	300.5	301.4	0.9
Smith Creek								
A	0.60 ³	549	2,446	1.2	267.0	267.0	267.8	0.8
B	0.82 ³	489	2,175	1.3	268.2	268.2	269.1	0.9
C	1.32 ³	225	930	3.1	273.9	273.9	274.8	0.9
D	1.68 ³	167	699	2.8	281.8	281.8	282.8	1.0
E	1.87 ³	195	672	2.9	285.8	285.8	286.8	1.0
F	1.96 ³	208	878	2.2	288.8	288.8	289.4	0.6
G	2.19 ³	149	568	3.5	293.3	293.3	294.3	1.0
H	2.23 ³	193	809	2.4	294.4	294.4	295.3	0.9

¹ Stream distance in miles above confluence with White Oak Bayou

⁴ Elevation computed without consideration of backwater effects

² Stream distance in miles above confluence with Shilcotts Bayou

³ Stream distance in miles above confluence with Little Fourche Creek

TABLE 5

**FEDERAL EMERGENCY MANAGEMENT AGENCY
PULASKI COUNTY, AR
AND INCORPORATED AREAS**

FLOODWAY DATA

**SHILCOTTS BAYOU - SHILCOTTS BAYOU TRIBUTARY -
SMITH CREEK**

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		INCREASE	
						WITH FLOODWAY			
						FEET (NAVD 88)			
Smith Creek Tributary									
A	0.09 ¹	51	276	3.7	275.9	275.9	276.8	0.9	
B	0.28 ¹	38	185	5.5	279.1	279.1	279.9	0.8	
C	0.36 ¹	78	342	3.0	282.4	282.4	283.4	1.0	
South Loop									
A	1,082 ²	102	346	12.2	267.2	267.2	267.2	0.0	
B	3,215 ²	150 ⁴	419	7.8	279.3	279.3	279.5	0.2	
C	6,461 ²	96	385	9.9	304.4	304.4	304.4	0.0	
South Loop Split									
A	705 ³	55	131	3.8	285.2	285.2	285.5	0.3	

¹ Stream distance in miles above confluence with Smith Creek

² Stream distance in feet above confluence with Taylor Loop Creek

³ Stream distance in feet above confluence with South Loop

⁴ Width does not reflect combined floodway

TABLE 5

FEDERAL EMERGENCY MANAGEMENT AGENCY
PULASKI COUNTY, AR
AND INCORPORATED AREAS

FLOODWAY DATA

SMITH CREEK TRIBUTARY - SOUTH LOOP - SOUTH
LOOP SPLIT

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
						FEET (NAVD 88)		
State Capitol Drain								
A	0.21 ¹	100	800	4.1	255.4	240.4 ²	241.4	1.0
B	0.60 ¹	100	800	4.1	255.4	253.7 ²	254.7	1.0
C	0.78 ¹	100	570	4.8	265.4	265.4	266.4	1.0
D	0.93 ¹	100	500	5.5	268.9	268.9	269.9	1.0
E	1.11 ¹	100	2,000	1.4	279.5	279.5	280.5	1.0
F	1.21 ¹	100	1,200	2.3	285.0	285.0	286.0	1.0
G	1.82 ¹	100	400	5.8	311.5	311.5	312.5	1.0
H	1.841	114	380	8.6	312.4	312.4	312.4	0.0
I	1.863	143	515	6.3	314.4	314.4	314.6	0.2
J	1.886	81	417	4.1	315.9	315.9	316.9	1.0
K	1.947	88	301	5.6	316.9	316.9	317.8	1.0
L	1.972	62	247	6.9	318.5	318.5	319.1	0.6
M	2.032	69	270	6.3	321.4	321.4	322.5	1.0
N	2.077	42	208	8.2	325.8	325.8	326.8	1.0
O	2.118	19	133	12.8	328.3	328.3	329.3	1.0
P	2.214	78	267	6.3	334.2	334.2	335.1	0.9
Q	2.288	93	330	5.1	339.7	339.7	340.7	1.0
R	2.322	76	248	6.8	341.8	341.8	342.2	0.3
S	2.355	85	327	5.2	345.0	345.0	345.9	0.9
T	2.387	66	283	6.0	347.3	347.3	348.1	0.8
U	2.425	102	322	5.3	350.7	350.7	351.4	0.7
V	2.457	92	326	5.2	354.4	354.4	355.2	0.8
W	2.497	79	309	5.5	358.7	358.7	359.6	0.9
X	2.507	80	355	4.8	360.3	360.3	361.2	0.9
Y	2.549	16	78	7.3	360.7	360.7	361.6	0.8

¹ Stream distance in miles above confluence with Arkansas River

² Elevation computed without consideration of backwater effects from Arkansas River

TABLE 5

FEDERAL EMERGENCY MANAGEMENT AGENCY
PULASKI COUNTY, AR
AND INCORPORATED AREAS

FLOODWAY DATA

STATE CAPITOL DRAIN

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
						FEET (NAVD 88)		
Stump Creek								
A	0.59 ¹	65	197	7.5	262.7	262.7	263.0	0.3
B	0.70 ¹	230	911	1.2	265.8	265.8	266.8	1.0
C	0.81 ¹	82	335	3.3	269.9	269.9	270.5	0.6
D	0.98 ¹	167	585	1.9	271.7	271.7	272.7	1.0
E	1.13 ¹	68	202	5.0	278.3	278.3	278.7	0.4
Taylor Loop Creek								
A	7,658 ²	245	807	8.0	269.6	269.6	269.8	0.2
B	9,337 ²	105	424	12.4	282.6	282.6	282.6	0.0
C	10,517 ²	174 ³	825	9.8	288.5	288.5	288.5	0.0
D	12,237 ²	145	520	11.7	302.8	302.8	302.8	0.0
E	12,857 ²	130	924	8.4	311.3	311.3	311.3	0.0
F	14,887 ²	148	1,308	7.0	324.4	324.4	325.3	0.9
G	15,539 ²	116	735	10.6	326.9	326.9	327.8	0.9
H	17,220 ²	112	732	10.6	344.6	344.6	344.8	0.2
I	18,320 ²	112	927	5.5	363.1	363.1	363.9	0.8
J	19,831 ²	110	375	6.4	374.7	374.7	374.7	0.0
K	20,433 ²	114	414	5.8	384.2	384.2	384.3	0.1
L	21,795 ²	139	937	1.8	407.7	407.7	408.1	0.4
M	20,020 ²	75	217	6.3	417.3	417.3	417.7	0.4
N	23,870 ²	90	273	5.0	429.4	429.4	429.8	0.4

¹ Stream distance in miles above confluence with Little Fourche Creek

³ Width does not reflect combined floodway

² Stream distance in feet above confluence with Little Maumelle River

TABLE 5

FEDERAL EMERGENCY MANAGEMENT AGENCY
PULASKI COUNTY, AR
AND INCORPORATED AREAS

FLOODWAY DATA

STUMP CREEK - TAYLOR LOOP CREEK

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
						FEET (NAVD 88)		
Treadway - Brewer Branch								
A	0.38 ¹	755	4,580	1.4	268.2	268.2	269.1	0.9
B	0.89 ¹	672	6,567	1.0	278.0	278.0	279.0	1.0
C	1.48 ¹	597	3,342	1.0	279.8	279.8	280.6	0.8
D	1.84 ¹	268	2,002	1.6	288.3	288.3	289.0	0.7
E	2.23 ¹	124	782	4.2	299.4	299.4	300.3	0.9
F	2.45 ¹	410	3,110	1.1	306.6	306.6	307.3	0.7
Tributary 4 to Little Maumelle River								
A	8,182 ²	88	195	8.6	268.7	268.7	268.7	0.0
B	10,102 ²	60	222	7.5	285.8	285.8	285.8	0.0
C	12,183 ²	110	237	7.1	302.1	302.1	302.1	0.0

¹ Stream distance in miles above confluence with Pennington Bayou - Lorraine Creek

² Stream distance in feet above confluence with Little Maumelle River

TABLE 5

**FEDERAL EMERGENCY MANAGEMENT AGENCY
PULASKI COUNTY, AR
AND INCORPORATED AREAS**

FLOODWAY DATA

**TREADWAY-BREWER BRANCH - TRIBUTARY 4 TO
LITTLE MAUMELLE RIVER**

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
						FEET (NAVD 88)		
Tributary 5 to Little Maumelle River								
A	5,160 ¹	190	1,096	0.5	267.6	267.6	267.6	0.0
B	7,392 ¹	80	155	3.8	282.6	282.6	283.1	0.5
Tributary 6 to Fletcher Creek								
A	2,001 ²	63	133	5.9	383.2	383.2	383.6	0.4
B	3,997 ²	54	101	7.8	411.1	411.1	411.2	0.1
C	5,990 ²	22	77	10.3	432.6	432.6	433.1	0.5
D	7,434 ²	19	53	9.6	450.3	450.3	451.1	0.8

¹ Stream distance in feet above confluence with Little Maumelle River

² Stream distance in feet above confluence with Fletcher Creek

TABLE 5

**FEDERAL EMERGENCY MANAGEMENT AGENCY
PULASKI COUNTY, AR
AND INCORPORATED AREAS**

FLOODWAY DATA

**TRIBUTARY 5 TO LITTLE MAUMELLE RIVER -
TRIBUTARY 6 TO FLETCHER CREEK**

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
						FEET (NAVD 88)		
Tributary 7 to Little Maumelle River								
A	2,625 ¹	35	134	10.4	325.6	325.6	325.7	0.1
B	4,509 ¹	104	218	6.4	340.7	340.7	341.7	1.0
C	7,001 ¹	47	197	7.1	361.4	361.4	362.2	0.8
D	9,000 ¹	64	232	6.0	376.9	376.9	377.8	0.9
E	10,980 ¹	80	228	4.8	395.3	395.3	395.9	0.6
F	14,005 ¹	44	134	5.9	419.0	419.0	419.8	0.8
G	15,989 ¹	55	160	4.9	436.8	436.8	437.2	0.4
H	17,596 ¹	41	93	8.5	455.1	455.1	455.1	0.0
Tributary 8 to Fletcher Creek								
A	1,008 ²	45	165	9.5	408.6	408.6	408.6	0.0
B	2,004 ²	113	374	4.2	417.9	417.9	418.5	0.6
C	4,226 ²	51	271	5.6	443.0	443.0	443.8	0.8
D	6,004 ²	50	191	7.9	469.8	469.8	470.8	1.0
E	6,995 ²	43	101	8.6	484.4	484.4	485.1	0.7
F	8,446 ²	17	46	9.5	509.4	509.4	510.0	0.6

¹ Stream distance in feet above confluence with Little Maumelle River

² Stream distance in feet above confluence with Fletcher Creek

TABLE 5

**FEDERAL EMERGENCY MANAGEMENT AGENCY
PULASKI COUNTY, AR
AND INCORPORATED AREAS**

FLOODWAY DATA

**TRIBUTARY 7 TO LITTLE MAUMELLE RIVER -
TRIBUTARY 8 TO FLETCHER CREEK**

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
						FEET (NAVD 88)		
Tributary 9 to Little Maumelle River								
A	1,107 ¹	58	216	6.2	331.5	331.5	332.0	0.5
B	3,158 ¹	42	179	7.5	355.0	355.0	355.9	0.9
C	5,145 ¹	54	193	6.9	376.2	376.2	377.1	0.9
D	6,301 ¹	68	173	6.7	387.5	387.5	387.7	0.2
E	8,304 ¹	76	196	5.9	408.4	408.4	408.9	0.5
F	10,793 ¹	97	283	2.2	439.6	439.6	439.6	0.0
G	12,000 ¹	55	88	7.1	457.0	457.0	457.8	0.8
H	13,818 ¹	30	72	8.8	512.0	512.0	512.0	0.0
White Oak Bayou								
A	9.09 ²	450	4,876	1.5	261.4	261.4	262.3	0.9
B	10.39 ²	860	8,474	0.9	262.5	262.5	263.3	0.8
C	11.79 ²	1,400	12,994	0.6	263.2	263.2	264.0	0.8
D	12.15 ²	1,400	12,361	0.3	263.7	263.7	264.5	0.8
E	12.99 ²	1,300	7,111	0.6	264.0	264.0	264.9	0.9
F	14.82 ²	1,000	3,807	1.1	271.8	271.8	272.7	0.9
G	15.58 ²	800	3,918	1.1	276.2	276.2	277.0	0.8
H	16.46 ²	800	2,080	1.1	281.7	281.7	282.3	0.6

¹ Stream distance in feet above confluence with Little Maumelle River

² Stream distance in miles above confluence with Arkansas River

TABLE 5

FEDERAL EMERGENCY MANAGEMENT AGENCY
PULASKI COUNTY, AR
AND INCORPORATED AREAS

FLOODWAY DATA

TRIBUTARY 9 TO LITTLE MAUMELLE RIVER - WHITE
OAK BAYOU

FLOODING SOURCE		FLOODWAY			BASE FLOOD WATER SURFACE ELEVATION			
CROSS SECTION	DISTANCE ¹	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY	WITHOUT FLOODWAY FEET (NAVD 88)	WITH FLOODWAY	INCREASE
White Oak Branch								
A	224	160	614	2.4	288.2	288.2	289.2	1.0
B	3,631	150	339	4.4	292.2	292.2	292.8	0.6
C	6,436	100	289	4.5	304.7	304.7	305.2	0.5
D	9,255	80	204	3.7	317.5	317.5	318.4	0.9

¹ Stream Distance in feet Above Arkansas Highway 5

TABLE 5

**FEDERAL EMERGENCY MANAGEMENT AGENCY
PULASKI COUNTY, AR
AND INCORPORATED AREAS**

FLOODWAY DATA

WHITE OAK BRANCH

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
						FEET (NAVD 88)		
Woodruff Creek								
A	0.19 ¹	650	4,110	1.1	250.4	250.4	251.4	1.0
B	0.25 ¹	500	3,512	1.3	250.4	250.4	251.4	1.0
C	0.82 ¹	1,152	10,881	0.5	250.9	250.9	251.9	1.0
D	1.52 ¹	137	1,118	6.8	256.9	256.9	257.9	1.0
E	1.82 ¹	474	1,658	4.6	266.9	266.9	267.9	1.0
F	2.10 ¹	150	930	7.7	273.1	273.1	274.1	1.0
G	2.35 ¹	168	1,049	5.8	290.3	290.3	291.3	1.0
H	2.37 ¹	153	1,604	3.8	296.4	296.4	297.4	1.0
I	2.88 ¹	150	876	6.7	334.7	334.7	335.7	1.0
J	3.15 ¹	79	890	5.2	350.4	350.4	351.4	1.0
Woodruff Creek Tributary 1								
A	0.445 ²	184	685	1.2	250.7	250.7	251.5	0.8
B	0.74 ²	28	90	6.1	257.4	257.4	257.4	0.0
C	0.913 ²	28	58	7.0	263.6	263.6	263.9	0.3

¹ Stream distance in miles above confluence with Fivemile Creek

² Stream distance in miles above confluence with Woodruff Creek

TABLE 5

FEDERAL EMERGENCY MANAGEMENT AGENCY
PULASKI COUNTY, AR
AND INCORPORATED AREAS

FLOODWAY DATA

WOODRUFF CREEK - WOODRUFF CREEK TRIBUTARY 1

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
						FEET (NAVD 88)		
Woodruff Creek Tributary 2								
A	0.19 ¹	100	531	2.3	263.9	263.9	264.9	1.0
B	0.27 ¹	114	434	2.7	271.8	271.8	272.8	1.0
Woodruff Creek Tributary 3								
A	0.20 ¹	150	1,063	2.3	283.7	283.7	284.7	1.0
B	0.73 ¹	250	766	2.6	337.8	337.8	338.8	1.0
Young Creek								
A	1.02 ²	310	1,804	1.7	271.1	271.1	272.0	0.9
B	1.36 ²	190	479	2.9	272.6	272.6	273.4	0.8

¹ Stream distance in miles above confluence with Woodruff Creek

² Stream distance in miles above confluence with Fourche Creek

TABLE 5

FEDERAL EMERGENCY MANAGEMENT AGENCY
PULASKI COUNTY, AR
AND INCORPORATED AREAS

FLOODWAY DATA

WOODRUFF CREEK TRIBUTARY 2 - WOODRUFF CREEK
TRIBUTARY 3 - YOUNG CREEK

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 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 by detailed methods. Whole-foot BFEs derived from the detailed hydraulic analyses are shown at selected intervals within this zone.

Zone AH

Zone AH is the flood insurance rate zone that corresponds to the 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, and areas protected from the 1-percent-annual-chance 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 the 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 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 Pulaski 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 Floodway Maps, where applicable. Historical data relating to the maps prepared for each community are presented in Table 6 "Community Map History."

Within Pulaski County there are one or more levees that have not been demonstrated by the community or levee owner(s) to meet the requirements of 44 CFR Section 65.10 of the NFIP

regulations as it relates to the levee's capacity to provide 1% annual chance flood protection. Please refer to the Notice to Flood Insurance Study Users page at the front of this FIS report for more information on how this may affect the FIRM.

COMMUNITY NAME	INITIAL IDENTIFICATION	FLOOD HAZARD BOUNDARY MAP REVISION DATE (S)	FIRM EFFECTIVE DATE	FIRM REVISION DATE (S)
Alexander, Town of	April 18, 1975	None	January 20, 1982	
Cammack Village, City of ¹	N/A	N/A	N/A	
Jacksonville, City of	February 1, 1974	October 10, 1975	September 29, 1978	January 29, 1980
				July 18, 1985
				August 16, 1995
Little Rock, City of	November 2, 1973	March 1, 1974	March 4, 1980	August 5, 1985
		February 21, 1975		November 3, 1993
				October 19, 2001
Maumelle, City of	November 2, 1994	None	November 2, 1994	
North Little Rock, City of	November 2, 1973	March 4, 1977	July 16, 1980	July 15, 1988
				September 5, 1990

¹This community does not have map history prior to the first countywide mapping.

COMMUNITY NAME	INITIAL IDENTIFICATION	FLOOD HAZARD BOUNDARY MAP REVISION DATE (S)	FIRM EFFECTIVE DATE	FIRM REVISION DATE (S)
Pulaski County, Unincorporated Areas	October 25, 1977	None	July 16, 1981	May 16, 1983 August 5, 1991 November 2, 1994 July 16, 1996 July 20, 1998 October 19, 2001
Sherwood, City of	May 17, 1974	January 16, 1976	October 17, 1978	February 26, 1980 January 19, 1982 August 16, 1995
Wrightsville, City of ¹	October 25, 1977	None	July 16, 1981	May 16, 1983 August 5, 1991 November 2, 1994 July 16, 1996 July 20, 1998 October 19, 2001

¹Dates for this community were taken from the Unincorporated Areas of Pulaski County

T A B L E 6	FEDERAL EMERGENCY MANAGEMENT AGENCY PULASKI COUNTY, AR AND INCORPORATED AREAS	COMMUNITY MAP HISTORY
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1.0 OTHER STUDIES

FIS studies are ongoing for Lonoke County and Jefferson County, which border Pulaski County to the east and southeast. This study is compatible with the recently completed FIS studies for Faulkner and Saline Counties, which border Pulaski County to the northwest and southwest.

This 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.

This is a multi-volume FIS. Each volume may be revised separately, in which case it supersedes the previously printed volume. Users should refer to the Table of Contents in Volume 1 for the current effective data for each volume; volumes bearing these dates contain the most up-to-date flood hazard data.

The TBD countywide FIS is a part of the larger Bayou Meto and Little Arkansas Maumelle watershed studies. Additional materials related to the entire Bayou Meto and Little Arkansas Maumelle watershed studies may be obtained by accessing the TSDN.

2.0 LOCATION OF DATA

Information concerning the pertinent data used in the preparation of this study can be obtained by contacting FEMA, Mitigation Division, Federal Regional Center, Room 206, 800 North Loop 288, Denton, Texas 76201-3698.

3.0 BIBLIOGRAPHY AND REFERENCES

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10.0

REVISION DESCRIPTIONS

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

10.1 First Revision

This study was revised on Month XX, XXXX, to include new studies and physical map revision requests based on newly studied streams and ponding areas.

Bayou Meto Tributary 1:

A new detailed hydraulic study for a portion of Bayou Meto Tributary 1 was initiated in July 2015 and completed in September 2015 by FTN Associates Ltd. This new detailed study of Bayou Meto Tributary 1 encompasses a portion of the City of Jacksonville in Pulaski County, AR.

Bayou Meto Tributary 1 is being restudied from the confluence with Rocky Branch upstream approximately 1.4 miles to approximately 440 feet upstream of General Samuels Road.

All study streams were studied using the U.S. Army Corps of Engineers hydraulic computer model HEC-RAS version 4.1.0 (Reference 1). The flood profiles were computed for the 10%, 4%, 2%, 1%, "1% plus", and 0.2% annual chance events and floodway using the discharge values developed during the hydrologic phase with the resulting 1% and 0.2% annual chance event floodplain elevations produced by the HEC-RAS models being mapped on the 2011 Pulaski Area Geographic Information System (PAGIS) LIDAR data obtained by ESP Associates, P.A. for Risk Assessment, Mapping, and Planning Partners (Reference 2) and 2012 Bayou Meto Watershed LIDAR obtained by Laser Mapping Specialist, Inc. and processed by Dewberry for USGS/FEMA Region 6 (Reference 3).

The USACE GIS toolset, HEC-GeoRAS, was used in ESRI's ArcGIS (Version 10.1) to develop the stream centerline, flowpaths, reach lengths, and cross sections, which were then imported into HEC-RAS. Cross section spacing varied, but generally ranged from every 200 to 1,500 feet and was oriented to be as perpendicular as possible to the floodplain. Cross section elevations for Bayou Meto Tributary 1 were based on the 2011 PAGIS LIDAR data.

All study reaches were previously mapped as Zone A areas prior to this study. The new floodplain delineation developed indicates that there are similarities in some areas compared to the effective mapped approximate 1% annual chance floodplains but that there are large differences in many areas as well. Since BFEs were not present on the effective mapping and details about previously developed information were not available, a detailed comparison could not be performed.

Floodway widths at each section for the new models were based on an equal conveyance calculation with additional consideration given to appearance along the detailed study reaches.

No LOMRs currently exist on any of the study streams. The LOMR-Fs and LOMR-FWs were either not incorporated due to being out of the updated floodplain or need to be reevaluated. A summary of the LOMRs for the Bayou Meto Tributary 1 Restudy area has been reviewed as available through September 2015.

Rock Creek and State Capitol Drain Watersheds

New detailed hydraulic studies for portions of Rock Creek, Grassy Flat Creek North, Colony West Branch, and State Capitol Drain were initiated in October 2014 and completed in December 2015 by FTN Associates, Ltd. These new detailed studies encompass portions of the City of Little Rock, as well as unincorporated areas of Pulaski County, AR.

Rock Creek is being restudied from the confluence with Fourche Creek upstream approximately 12.6 miles to approximately 5,000 feet upstream of Chenal Valley Drive.

Grassy Flat Creek North is being studied from the confluence with Grassy Flat Creek upstream approximately to just downstream of Interstate 430.

Colony West Branch is being studied from the confluence with Grassy Flat Creek North upstream approximately 0.4 miles to approximately 110 feet upstream of Old Forge Drive.

State Capitol Drain is being studied from West 7th Street upstream approximately 0.7 miles to Jack Stephens Drive.

The Rock Creek Watershed and State Capitol Drain Watershed flood insurance restudy scope, for portions of Unincorporated Pulaski County, and the City of Little Rock, AR, involves collection and use of new survey data to develop hydrologic and hydraulic models, and resultant floodplain mapping to revise or update relevant portions of the Flood Insurance Rate Map (FIRM) and Flood Insurance Study (FIS) report for Pulaski County, Arkansas.

The Rock Creek Watershed and State Capitol Drain projects are the result of Risk MAP Discovery activities in the Lower Arkansas Maumelle Watershed. During discussions with the City of Little Rock, it was noted that the City of Little Rock had initiated a plan to research the cost to restudy portions of Rock Creek. As Rock Creek flows through the City of Little Rock, it is continually impacted by development improvements in the watershed. As such, it was a known issue that in areas, the Rock Creek hydrologic data was outdated and possibly incorrect. As part of the Cooperating Technical Partnership (CTP), the Arkansas Natural Resources Commission (ANRC) and its technical contractor, FTN Associates, Ltd. (FTN) were able to meet with the City to develop a project that would resolve the hydrologic modeling for the Rock Creek Watershed. Additionally during discussions with the City, it was noted that two tributaries in the Rock Creek Watershed, Grassy Flat Creek North and Colony West Branch, are currently represented as an Approximate Flood Zone A and the City would like to update the Zone A Special Flood Hazard Area (SFHA) to detailed Zone AE SFHA mapping, which includes base flood elevations and floodways. In addition, the upstream portion of State Capitol Drain, located near downtown Little Rock is currently represented by a Zone A SFHA and the City had hoped to update this area in the future. Based on these conversations and partnering opportunities, the ANRC through the Risk MAP program was able to include both watersheds to develop a new, more detailed area hydrologic model for this flood insurance update.

All study streams were studied using the U.S. Army Corps of Engineers hydraulic computer model HEC-RAS version 4.1.0 (Reference 1). The flood profiles were computed for the 10%, 4%, 2%, 1%, "1% plus", and 0.2% annual chance events and floodway using the discharge values developed during the hydrologic phase with the resulting 1% and 0.2% annual chance event floodplain elevations produced by the HEC-RAS models being mapped on the Pulaski County, AR and Incorporated Areas LiDAR data completed in 2010 and 2011, available through Pulaski Area GIS (PAgis) (References 2 and 3).

The USACE GIS toolset, HEC-GeoRAS, was used in ESRI's ArcGIS (Version 10.1) to develop the stream centerline, flowpaths, reach lengths, and cross sections, which were then imported into HEC-RAS. Cross section spacing varied,

but generally ranged from every 200 to 500 feet and was oriented to be as perpendicular as possible to the floodplain. Cross section elevations were based on the Pulaski County, AR and Incorporated Areas LiDAR data completed in 2010 and 2011.

No LOMRs currently exist on any of the study streams. The LOMR-Fs and LOMR-FWs were either not incorporated due to being out of the updated floodplain or need to be reevaluated. A summary of the LOMRs for the Rock Creek Restudy area of Rock Creek, Grassy Flat Creek North, and Colony West Branch and the State Capitol Drain Restudy area have been reviewed as available through September 2015.

Table 7 - Range of Hydraulic Roughness Coefficients (Manning's "n")

Flooding Source	Channel	Overbanks
Bayou Meto Tributary 1	0.035	0.015 – 0.12
Rock Creek	0.020 – 0.040	0.013 – 0.100
Grassy Flat Creek North	0.040 – 0.045	0.013 – 0.100
Colony West Branch	0.040 – 0.045	0.100
State Capital Drain	0.020 – 0.040	0.020 – 0.080

Table 8 - Peak flows Utilized in this Study

Flooding Source and Locaton	Drainage Area (ml²)	10% Annual-Chance (cfs)	2% Annual-Chance (cfs)	1% Annual-Chance (cfs)	0.2% Annual-Chance (cfs)
Bayou Meto Tributary 1					
At Arnold Drive	0.27	459	621	672	827
At General Samuels Road	0.69	787	1,146	1,267	1,622
At confluence with Rocky Branch	1.30	1,084	1,598	1,777	2,284
Rock Creek					
Approximately 5,000 feet upstream of Chenal Valley Drive	0.51	583	872	1,005	1,319
Downstream of confluence with Rock Creek Tributary 1	2.19	1,725	2,539	2,880	3,659
Approximately 1,400 feet downstream of Rahling Road	3.83	2,666	4,121	4,729	6,243
Downstream of confluence with Rock Creek Tributary A	4.50	3,145	4,562	5,268	7,383
Approximately 2,950 feet upstream of Bowman Road	7.48	4,416	6,421	7,325	9,865
At Interstate I-430	9.09	5,867	8,224	9,126	11,372
Downstream of confluence of Grassy Flat Creek	15.26	13,280	18,175	20,107	24,569
At Interstate I-630	16.06	14,214	19,428	21,513	26,355
At 28th Street	19.24	16,825	23,216	25,746	31,875
At Colonel Glenn Road	21.14	18,346	24,930	27,584	34,255
At University Avenue	21.63	17,419	23,704	26,338	32,230
At Mouth	21.68	17,368	23,685	26,324	32,160
Grassy Flat Creek North					
Upstream of Breckenridge Drive	0.38	880	1,180	1,329	1,617
At confluence with Grassy Flat Creek	1.25	2,612	3,439	3,806	4,606
Colony West Branch					
At confluence with Grassy Flat Creek North	0.81	1,657	2,182	2,403	2,908
State Capitol Drain					
Just downstream of Jack Stephens Drive	0.12	392	505	564	669
Just upstream of Lamar Street	0.58	1,149	1,524	1,696	2,062