FLOOD INSURANCE STUDY

FEDERAL EMERGENCY MANAGEMENT AGENCY

VOLUME 1 OF 4

RUTHERFORD COUNTY, TENNESSEE

AND INCORPORATED AREAS

COMMUNITY NAME	COMMUNITY NUMBER
EAGLEVILLE, CITY OF	470166
LA VERGNE, CITY OF	470167
MURFREESBORO, CITY OF	470168
RUTHERFORD COUNTY, UNINCORPORATED AREAS	470165
SMYRNA, TOWN OF	470169

FEMA

REVISED:

May 9, 2023

FLOOD INSURANCE STUDY NUMBER
47149CV001D
Version Number 2.4.3.6

TABLE OF CONTENTS
Volume 1

TABLE OF CONTENTS
Volume 1 (continued)

Figures

Tables

TABLE OF CONTENTS
Volume 2

Figures

TABLE OF CONTENTS
Volume 2 (continued)

Tables

Volume 3
Exhibit 1

Volume 4
Exhibit 1

Published Separately

Flood Insurance Rate Map (FIRM)

FLOOD INSURANCE STUDY REPORT
RUTHERFORD COUNTY, TENNESSEE

SECTION 1.0 – INTRODUCTION

1.1 The National Flood Insurance Program

The National Flood Insurance Program (NFIP) is a voluntary Federal program that enables property owners in participating communities to purchase insurance protection against losses from flooding. This insurance is designed to provide an alternative to disaster assistance to meet the escalating costs of repairing damage to buildings and their contents caused by floods.

For decades, the national response to flood disasters was generally limited to constructing flood-control works such as dams, levees, sea-walls, and the like, and providing disaster relief to flood victims. This approach did not reduce losses nor did it discourage unwise development. In some instances, it may have actually encouraged additional development. To compound the problem, the public generally could not buy flood coverage from insurance companies, and building techniques to reduce flood damage were often overlooked.

In the face of mounting flood losses and escalating costs of disaster relief to the general taxpayers, the U.S. Congress created the NFIP. The intent was to reduce future flood damage through community floodplain management ordinances, and provide protection for property owners against potential losses through an insurance mechanism that requires a premium to be paid for the protection.

The U.S. Congress established the NFIP on August 1, 1968, with the passage of the National Flood Insurance Act of 1968. The NFIP was broadened and modified with the passage of the Flood Disaster Protection Act of 1973 and other legislative measures. It was further modified by the National Flood Insurance Reform Act of 1994 and the Flood Insurance Reform Act of 2004. The NFIP is administered by the Federal Emergency Management Agency (FEMA), which is a component of the Department of Homeland Security (DHS).

Participation in the NFIP is based on an agreement between local communities and the Federal Government. If a community adopts and enforces floodplain management regulations to reduce future flood risks to new construction and substantially improved structures in Special Flood Hazard Areas (SFHAs), the Federal Government will make flood insurance available within the community as a financial protection against flood losses. The community's floodplain management regulations must meet or exceed criteria established in accordance with Title 44 Code of Federal Regulations (CFR) Part 60, *Criteria for Land Management and Use*.

SFHAs are delineated on the community's Flood Insurance Rate Maps (FIRMs). Under the NFIP, buildings that were built before the flood hazard was identified on the community's FIRMs are generally referred to as "Pre-FIRM" buildings. When the NFIP was created, the U.S. Congress recognized that insurance for Pre-FIRM buildings would be prohibitively expensive if the premiums were not subsidized by the Federal Government. Congress also recognized that most of these flood-prone buildings were

built by individuals who did not have sufficient knowledge of the flood hazard to make informed decisions. The NFIP requires that full actuarial rates reflecting the complete flood risk be charged on all buildings constructed or substantially improved on or after the effective date of the initial FIRM for the community or after December 31, 1974, whichever is later. These buildings are generally referred to as "Post-FIRM" buildings.

1.2 Purpose of this Flood Insurance Study Report

This Flood Insurance Study (FIS) Report revises and updates information on the existence and severity of flood hazards for the study area. The studies described in this report developed flood hazard data that will be used to establish actuarial flood insurance rates and to assist communities in efforts to implement sound floodplain management.

In some states or communities, floodplain management criteria or regulations may exist that are more restrictive than the minimum Federal requirements. Contact your State NFIP Coordinator to ensure that any higher State standards are included in the community's regulations.

1.3 Jurisdictions Included in the Flood Insurance Study Project

This FIS Report covers the entire geographic area of Rutherford County, Tennessee.

The jurisdictions that are included in this project area, along with the Community Identification Number (CID) for each community and the United States Geological Survey (USGS) 8-digit Hydrologic Unit Code (HUC-8) sub-basins affecting each, are shown in Table 1. The FIRM panel numbers that affect each community are listed. If the flood hazard data for the community is not included in this FIS Report, the location of that data is identified.

Table 1: Listing of NFIP Jurisdictions

Community	CID	HUC-8 Sub-Basin(s)	Located on FIRM Panel(s)	If Not Included, Location of Flood Hazard Data
Eagleville, City of	470166	05130204 06040002	47149C0214H[1] 47149C0220J 47149C0330H[1] 47149C0335H 47149C0355H	
La Vergne, City of	470167	05130202 05130203	47149C0004H[2] 47149C0010J 47149C0015J 47149C0020K 47149C0028J 47149C0040K 47149C0085H[1] 47149C0105J 47149C0106J	

Table 1: Listing of NFIP Jurisdictions (continued)

Community	CID	HUC-8 Sub-Basin(s)	Located on FIRM Panel(s)	If Not Included, Location of Flood Hazard Data
Murfreesboro, City of	470168	05130203	47149C0119H[1] 47149C0134H 47149C0140J 47149C0145J 47149C0161H 47149C0162H 47149C0163H 47149C0164H 47149C0235H 47149C0245H 47149C0255J 47149C0260J 47149C0265H 47149C0270J 47149C0280J 47149C0290J	
Rutherford County, Unincorporated Areas	470165	05130108 05130202 05130203 05130204 06040002	47149C0010J 47149C0020K 47149C0028J 47149C0029H[1] 47149C0040K 47149C0045J 47149C0063J 47149C0085H[1] 47149C0092H[1] 47149C0094H[1] 47149C0105J 47149C0108H 47149C0109K 47149C0115K 47149C0116K 47149C0117K 47149C0118K 47149C0119H[1] 47149C0126K 47149C0127J 47149C0128J 47149C0129J 47149C0131H 47149C0132H 47149C0133H 47149C0134H 47149C0140J 47149C0145J 47149C0151H[1] 47149C0152H 47149C0153H	

Table 1: Listing of NFIP Jurisdictions (continued)

Community	CID	HUC-8 Sub-Basin(s)	Located on FIRM Panel(s)	If Not Included, Location of Flood Hazard Data
Rutherford County, Unincorporated Areas (continued)	470165	05130108 05130202 05130203 05130204 06040002	47149C0154H 47149C0156H[1] 47149C0157H[1] 47149C0158H[1] 47149C0159H[1] 47149C0161H 47149C0162H 47149C0163H 47149C0164H 47149C0166H 47149C0167H 47149C0168H 47149C0169H 47149C0176H[1] 47149C0177H[1] 47149C0178H 47149C0179H 47149C0183J 47149C0184H[1] 47149C0190H 47149C0191H[1] 47149C0192H[1] 47149C0193J 47149C0194H[1] 47149C0209H[1] 47149C0214H[1] 47149C0220J 47149C0230K 47149C0235H 47149C0240H 47149C0245H 47149C0255J 47149C0260J 47149C0265H 47149C0270J 47149C0280J 47149C0285H 47149C0290J 47149C0295H 47149C0305H 47149C0306J 47149C0308J 47149C0315H 47149C0316J 47149C0318H[1] 47149C0330H[1] 47149C0335H 47149C0342H[1]	

Table 1: Listing of NFIP Jurisdictions (continued)

Community	CID	HUC-8 Sub-Basin(s)	Located on FIRM Panel(s)	If Not Included, Location of Flood Hazard Data
Rutherford County, Unincorporated Areas (continued)	470165	05130108 05130202 05130203 05130204 06040002	47149C0355H 47149C0360H[1] 47149C0370H[1] 47149C0376H 47149C0377J 47149C0378H 47149C0379H 47149C0381J 47149C0382H 47149C0383H 47149C0384H 47149C0390H 47149C0395H 47149C0401H 47149C0402H 47149C0403H 47149C0404H 47149C0410H 47149C0415H 47149C0420H 47149C0426H 47149C0427H 47149C0428H[1] 47149C0429H[1] 47149C0436H[1] 47149C0438H[1] 47149C0456H[1] 47149C0457H[1]	
Smyrna, Town of	470169	05130202 05130203	47149C0020K 47149C0040K 47149C0105J 47149C0106J 47149C0107K 47149C0108H 47149C0109K 47149C0115K 47149C0116K 47149C0117K 47149C0118K 47149C0126K 47149C0127J 47149C0128J 47149C0129J 47149C0140J	

[1] Panel Not Printed

[2] Panel not printed – Open Water Area

1.4 Considerations for using this Flood Insurance Study Report

The NFIP encourages State and local governments to implement sound floodplain management programs. To assist in this endeavor, each FIS Report provides floodplain data, which may include a combination of the following: 10-, 4-, 2-, 1-, and 0.2-percent annual chance flood elevations (the 1-percent-annual-chance flood elevation is also referred to as the Base Flood Elevation (BFE)); delineations of the 1-percent-annual-chance and 0.2-percent-annual-chance floodplains; and 1-percent-annual-chance floodway. This information is presented on the FIRM and/or in many components of the FIS Report, including Flood Profiles, Floodway Data tables, Summary of Non-Coastal Stillwater Elevations tables, and Coastal Transect Parameters tables (not all components may be provided for a specific FIS).

This section presents important considerations for using the information contained in this FIS Report and the FIRM, including changes in format and content. Figures 1, 2, and 3 present information that applies to using the FIRM with the FIS Report.

- Part or all of this FIS Report may be revised and republished at any time. In addition, part of this FIS Report may be revised by a Letter of Map Revision (LOMR), which does not involve republication or redistribution of the FIS Report. Refer to Section 6.5 of this FIS Report for information about the process to revise the FIS Report and/or FIRM.

  It is, therefore, the responsibility of the user to consult with community officials by contacting the community repository to obtain the most current FIS Report components. Communities participating in the NFIP have established repositories of flood hazard data for floodplain management and flood insurance purposes. Community map repository addresses are provided in Table 30, "Map Repositories," within this FIS Report.

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

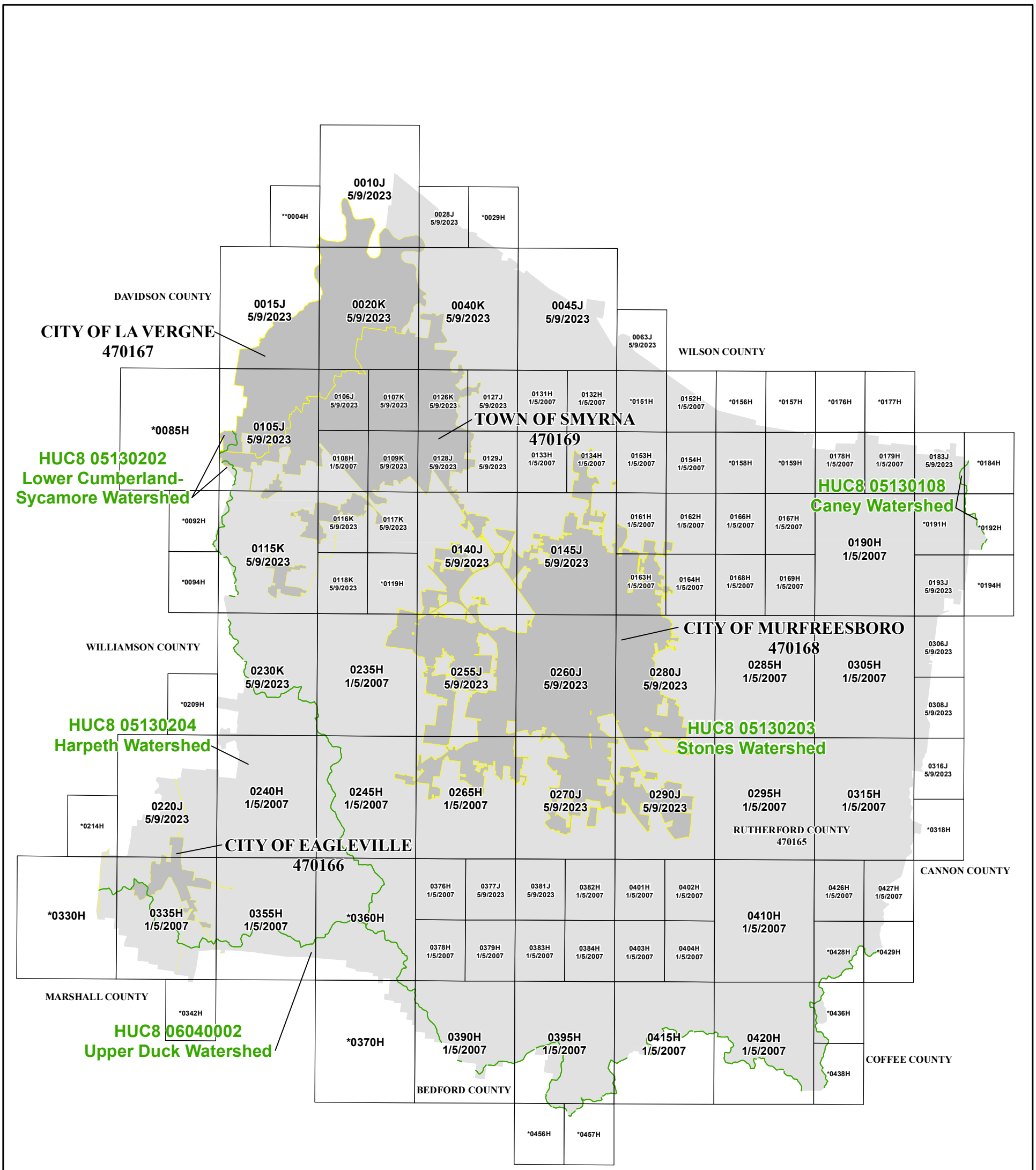
  The initial Countywide FIS Report for Rutherford County became effective on May 18, 1998. Refer to Table 27 for information about subsequent revisions to the FIRMs.

  The CRS is a voluntary incentive program that recognizes and encourages community floodplain management activities that exceed the minimum NFIP requirements. Visit the FEMA Web site at www.fema.gov/flood-insurance/rules-legislation/community-rating-system or contact your appropriate FEMA Regional Office for more information about this program.

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

The FIRM Index in Figure 1 shows the overall FIRM panel layout within Rutherford County, and also displays the panel number and effective date for each FIRM panel in the county. Other information shown on the FIRM Index includes community boundaries, watershed boundaries, and USGS HUC-8 codes.

Figure 1: FIRM Panel Index



ATTENTION: The corporate limits shown on this FIRM Index are based on the best information available at the time of publication. As such, they may be more current than those shown on FIRM panels issued before May 9,2023.

N

1 inch = 19,167 feet 1:230,000

0 5,000 10,000 20,000 30,000 40,000 feet

Map Projection:
State Plane Lambert Conformal Conic,
Tennessee Zone 4100; North American Datum 1983;
Western Hemisphere; Vertical Datum:NAVD 88

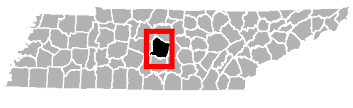
THE INFORMATION DEPICTED ON THIS MAP AND SUPPORTING DOCUMENTATION ARE ALSO AVAILABLE IN DIGITAL FORMAT AT

HTTPS://MSC.FEMA.GOV

SEE FLOOD INSURANCE STUDY FOR ADDITIONAL INFORMATION

* PANEL NOT PRINTED - NO SPECIAL FLOOD HAZARD AREAS
** PANEL NOT PRINTED - OPEN WATER AREA

COUNTY LOCATOR



NATIONAL FLOOD INSURANCE PROGRAM

FLOOD INSURANCE RATE MAP INDEX

RUTHERFORD COUNTY, TENNESSEE and Incorporated Areas

PANELS PRINTED:
0010, 0015, 0020, 0028, 0040, 0045, 0063, 0105, 0106, 0107,0108, 0109, 0115, 0116, 0117, 0118, 0126, 0127, 0128, 0129, 0131, 0132, 0133, 0134, 0140, 0145, 0152, 0153, 0154, 0161, 0162, 0163, 0164, 0166, 0167, 0168, 0169, 0178, 0179, 0183, 0190, 0193, 0220, 0230, 0235, 0240, 0245, 0255, 0260, 0265, 0270, 0280, 0285, 0290, 0295, 0305, 0306, 0308, 0315, 0316, 0335, 0355, 0376, 0377, 0378, 0379, 0381, 0382, 0383, 0384, 0390, 0395, 0401, 0402, 0403, 0404, 0410, 0415, 0420, 0426, 0427

FEMA

MAP NUMBER
47149CIND0D

MAP REVISED
MAY 9, 2023

Each FIRM panel may contain specific notes to the user that provide additional information regarding the flood hazard data shown on that map. However, the FIRM panel does not contain enough space to show all the notes that may be relevant in helping to better understand the information on the panel. Figure 2 contains the full list of these notes.

Figure 2: FIRM Notes to Users

NOTES TO USERS

For information and questions about this Flood Insurance Rate Map (FIRM), available products associated with this FIRM including historic versions of this FIRM, how to order products, or the National Flood Insurance Program in general, please call the FEMA Mapping and Insurance eXchange at 1-877-FEMA-MAP (1-877-336-2627) or visit the FEMA Flood Map Service Center website at msc.fema.gov. Available products may include previously issued Letters of Map Change, a Flood Insurance Study Report, and/or digital versions of this map. Many of these products can be ordered or obtained directly from the website. Users may determine the current map date for each FIRM panel by visiting the FEMA Flood Map Service Center website or by calling the FEMA Mapping and Insurance eXchange.

Communities annexing land on adjacent FIRM panels must obtain a current copy of the adjacent panel as well as the current FIRM Index. These may be ordered directly from the Flood Map Service Center at the number listed above.

For community and countywide map dates, refer to Table 27 in this FIS Report.

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

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

BASE FLOOD ELEVATIONS: For more detailed information in areas where Base Flood Elevations (BFEs) and/or floodways have been determined, consult the Flood Profiles and Floodway Data and/or Summary of Non-Coastal Stillwater Elevations tables within this FIS Report. Use the flood elevation data within the FIS Report in conjunction with the FIRM for construction and/or floodplain management.

FLOODWAY INFORMATION: Boundaries of the floodways were computed at cross sections and interpolated between cross sections. The floodways were based on hydraulic considerations with regard to requirements of the National Flood Insurance Program. Floodway widths and other pertinent floodway data are provided in the FIS Report for this jurisdiction.

FLOOD CONTROL STRUCTURE INFORMATION: Certain areas not in Special Flood Hazard Areas may be protected by flood control structures. Refer to Section 4.3 “Non-Levee Flood Protection Measures” of this FIS Report for information on flood control structures for this jurisdiction.

Figure 2: FIRM Notes to Users

PROJECTION INFORMATION: The projection used in the preparation of the map was State Plane Lambert Conformal Conic, Tennessee Zone 4100. The horizontal datum was the North American Datum 1983; Western Hemisphere. Differences in datum, spheroid, projection or State Plane zones used in the production of FIRMs for adjacent jurisdictions may result in slight positional differences in map features across jurisdiction boundaries. These differences do not affect the accuracy of the FIRM.

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

Local vertical monuments may have been used to create the map. To obtain current monument information, please contact the appropriate local community listed in Table 30 of this FIS Report.

BASE MAP INFORMATION: Base map information shown on this FIRM was provided by the State of Tennessee, Department of Finance & Administration, Strategic Technologies Solutions, GIS Services at https://tnmap.tn.gov/. Data was also obtained from the United States Geological Survey, and Watershed IV Alliance. Ortho imagery was originally produced by the Tennessee Department of Transportation, Office of Aerial Surveys in 2013 and has a 10 inch ground sample distance. For information about base maps, refer to Section 6.2 “Base Map” in this FIS Report.

The map reflects more detailed and up-to-date stream channel configurations than those shown on the previous FIRM for this jurisdiction. The floodplains and floodways that were transferred from the previous FIRM may have been adjusted to conform to these new stream channel configurations. As a result, the Flood Profiles and Floodway Data tables may reflect stream channel distances that differ from what is shown on the map.

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

NOTES FOR FIRM INDEX

REVISIONS TO INDEX: As new studies are performed and FIRM panels are updated within Rutherford County, Tennessee, corresponding revisions to the FIRM Index will be incorporated within the FIS Report to reflect the effective dates of those panels. Please refer to Table 27 of this FIS Report to determine the most recent FIRM revision date for each community. The most recent FIRM panel effective date will correspond to the most recent index date.

ATTENTION: The corporate limits shown on this FIRM Index are based on the best information available at the time of publication. As such, they may be more current than those shown on the FIRM panels issued before May 9, 2023.

SPECIAL NOTES FOR SPECIFIC FIRM PANELS

This Notes to Users section was created specifically for Rutherford County, Tennessee, effective May 9, 2023.

Figure 2: FIRM Notes to Users

FLOOD RISK REPORT: A Flood Risk Report (FRR) may be available for many of the flooding sources and communities referenced in this FIS Report. The FRR is provided to increase public awareness of flood risk by helping communities identify the areas within their jurisdictions that have the greatest risks. Although non-regulatory, the information provided within the FRR can assist communities in assessing and evaluating mitigation opportunities to reduce these risks. It can also be used by communities developing or updating flood risk mitigation plans. These plans allow communities to identify and evaluate opportunities to reduce potential loss of life and property. However, the FRR is not intended to be the final authoritative source of all flood risk data for a project area; rather, it should be used with other data sources to paint a comprehensive picture of flood risk.

Each FIRM panel contains an abbreviated legend for the features shown on the maps. However, the FIRM panel does not contain enough space to show the legend for all map features. Figure 3 shows the full legend of all map features. Note that not all of these features may appear on the FIRM panels in Rutherford County.

Figure 3: Map Legend for FIRM

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

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

Figure 3: Map Legend for FIRM

OTHER AREAS OF FLOOD HAZARD

Shaded Zone X: Areas of 0.2% annual chance flood hazards and areas of 1% annual chance flood hazards with average depths of less than 1 foot or with drainage areas less than 1 square mile.

Future Conditions 1% Annual Chance Flood Hazard – Zone X: The flood insurance rate zone that corresponds to the 1% annual chance floodplains that are determined based on future-conditions hydrology. No base flood elevations or flood depths are shown within this zone.

Area with Reduced Flood Risk due to Levee: Areas where an accredited levee, dike, or other flood control structure has reduced the flood risk from the 1% annual chance flood.

Area with Flood Risk due to Levee: Areas where a non-accredited levee, dike, or other flood control structure is shown as providing protection to less than the 1% annual chance flood.

OTHER AREAS

Zone D (Areas of Undetermined Flood Hazard): The flood insurance rate zone that corresponds to unstudied areas where flood hazards are undetermined, but possible.

Unshaded Zone X: Areas of minimal flood hazard.

FLOOD HAZARD AND OTHER BOUNDARY LINES

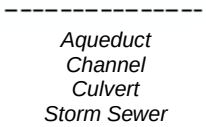
Flood Zone Boundary (white line on ortho-photography-based mapping; gray line on vector-based mapping)

Limit of Study

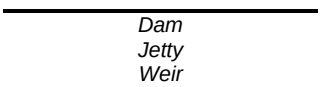
Jurisdiction Boundary

Limit of Moderate Wave Action (LiMWA): Indicates the inland limit of the area affected by waves greater than 1.5 feet

GENERAL STRUCTURES

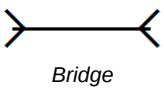


Channel, Culvert, Aqueduct, or Storm Sewer



Dam, Jetty, Weir

Levee, Dike, or Floodwall



Bridge

Figure 3: Map Legend for FIRM

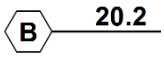
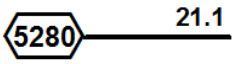
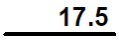
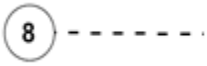
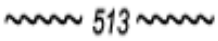
REFERENCE MARKERS	
	River mile Markers
CROSS SECTION & TRANSECT INFORMATION	
	Lettered Cross Section with Regulatory Water Surface Elevation (BFE)
	Numbered Cross Section with Regulatory Water Surface Elevation (BFE)
	Unlettered Cross Section with Regulatory Water Surface Elevation (BFE)
	Coastal Transect
	Profile Baseline: Indicates the modeled flow path of a stream and is shown on FIRM panels for all valid studies with profiles or otherwise established base flood elevation.
	Coastal Transect Baseline: Used in the coastal flood hazard model to represent the 0.0-foot elevation contour and the starting point for the transect and the measuring point for the coastal mapping.
	Base Flood Elevation Line
ZONE AE (EL 16)	Static Base Flood Elevation value (shown under zone label)
ZONE AO (DEPTH 2)	Zone designation with Depth
ZONE AO (DEPTH 2) (VEL 15 FPS)	Zone designation with Depth and Velocity

Figure 3: Map Legend for FIRM

BASE MAP FEATURES	
Missouri Creek	River, Stream or Other Hydrographic Feature
234	Interstate Highway
234	U.S. Highway
234	State Highway
234	County Highway
MAPLE LANE	Street, Road, Avenue Name, or Private Drive if shown on Flood Profile
RAILROAD	Railroad
	Horizontal Reference Grid Line
	Horizontal Reference Grid Ticks
+	Secondary Grid Crosshairs
Land Grant	Name of Land Grant
7	Section Number
R. 43 W. T. 22 N.	Range, Township Number
$^{42}76^{000m}E$	Horizontal Reference Grid Coordinates (UTM)
365000 FT	Horizontal Reference Grid Coordinates (State Plane)
80° 16’ 52.5”	Corner Coordinates (Latitude, Longitude)

SECTION 2.0 – FLOODPLAIN MANAGEMENT APPLICATIONS

2.1 Floodplain Boundaries

To provide a national standard without regional discrimination, the 1-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 hazard in the community.

Each flooding source included in the project scope has been studied and mapped using professional engineering and mapping methodologies that were agreed upon by FEMA and Rutherford County as appropriate to the risk level. Flood risk is evaluated based on factors such as known flood hazards and projected impact on the built environment. Engineering analyses were performed for each studied flooding source to calculate its 1-percent-annual-chance flood elevations; elevations corresponding to other floods (e.g. 10-, 4-, 2-, 0.2-percent annual chance, etc.) may have also been computed for certain flooding sources. Engineering models and methods are described in detail in Section 5.0 of this FIS Report. The modeled elevations at cross sections were used to delineate the floodplain boundaries on the FIRM; between cross sections, the boundaries were interpolated using elevation data from various sources. More information on specific mapping methods is provided in Section 6.0 of this FIS Report.

Depending on the accuracy of available topographic data (Table 22), study methodologies employed (Section 5.0), and flood risk, certain flooding sources may be mapped to show both the 1-percent and 0.2-percent-annual-chance floodplain boundaries, regulatory water surface elevations (BFEs), and/or a regulatory floodway. Similarly, other flooding sources may be mapped to show only the 1-percent-annual-chance floodplain boundary on the FIRM, without published water surface elevations. 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 is shown on the FIRM. Figure 3, “Map Legend for FIRM”, describes the flood zones that are used on the FIRMs to account for the varying levels of flood risk that exist along flooding sources within the project area. Table 2 and Table 3 indicate the flood zone designations for each flooding source and each community within Rutherford County, respectively.

Table 2, “Flooding Sources Included in this FIS Report,” lists each flooding source, including its study limits, affected communities, mapped zone on the FIRM, and the completion date of its engineering analysis from which the flood elevations on the FIRM and in the FIS Report were derived. Descriptions and dates for the latest hydrologic and hydraulic analyses of the flooding sources are shown in Table 12. Floodplain boundaries for these flooding sources are shown on the FIRM (published separately) using the symbology described in Figure 3. On the map, the 1-percent-annual-chance floodplain corresponds to the SFHAs. The 0.2-percent-annual-chance floodplain shows areas that, although out of the regulatory floodplain, are still subject to flood hazards.

Small areas within the floodplain boundaries may lie above the flood elevations but cannot be shown due to limitations of the map scale and/or lack of detailed topographic data. The procedures to remove these areas from the SFHA are described in Section 6.5 of this FIS Report.

Table 2: Flooding Sources Included in this FIS Report

Flooding Source	Community	Downstream Limit	Upstream Limit	HUC-8 Sub-Basin(s)	Length (mi) (streams or coastlines)	Floodway (Y/N)	Zone shown on FIRM	Date of Analysis
Andrews Creek	Rutherford County, Unincorporated Areas	Confluence with East Fork Stones River	Cannon County boundary	05130203	1.7	N	AE	09/01/2005
Armstrong Branch	Murfreesboro, City of; Rutherford County, Unincorporated Areas	Confluence with Puckett Creek	Approximately 1,000 feet upstream of Armstrong Valley Road	05130203	1.2	N	AE	12/01/2003
Armstrong Branch	Murfreesboro, City of; Rutherford County, Unincorporated Areas	Approximately 1,000 feet upstream of Armstrong Valley Road	Approximately 350 feet upstream of Private Drive	05130203	1.0	N	AE	09/01/2005
Bear Branch	Murfreesboro, City of; Rutherford County, Unincorporated Areas	Confluence with East Fork Stones River	Approximately 100 feet upstream of DeJarnette Lane	05130203	3.0	Y	AE	07/01/1982
Bear Branch	Murfreesboro, City of; Rutherford County, Unincorporated Areas	Approximately 100 feet upstream of DeJarnette Lane	At Wenlon Drive	05130203	1.6	Y	AE	08/01/1991
Big Springs Creek	Rutherford County, Unincorporated Areas	Confluence with Hurricane Creek #2 and Unnamed Tributary 119	Approximately 1,005 feet upstream of Jimmy C Newman Road	05130203	1.7	N	AE	09/01/2005
Bradley Creek	Rutherford County, Unincorporated Areas	Confluence with East Fork Stones River	Approximately 2.23 miles upstream of State Highway 96	05130203	6.0	Y	AE	12/01/2003
Bradley Creek	Rutherford County, Unincorporated Areas	Approximately 2.23 miles upstream of State Highway 96	Approximately 1.04 miles upstream of King Road	05130203	4.7	N	AE	09/01/2005
Bradley Creek Tributary 1	Rutherford County, Unincorporated Areas	Confluence with Bradley Creek	Wilson County boundary	05130203	0.3	N	AE	05/01/2019
Bushman Creek	Murfreesboro, City of; Rutherford County, Unincorporated Areas	Confluence with East Fork Stones River	Approximately 1,450 feet upstream of New Lascassas Road	05130203	4.0	Y	AE	02/01/1997

Table 2: Flooding Sources Included in this FIS Report (continued)

Flooding Source	Community	Downstream Limit	Upstream Limit	HUC-8 Sub-Basin(s)	Length (mi) (streams or coastlines)	Floodway (Y/N)	Zone shown on FIRM	Date of Analysis
Bushman Creek	Murfreesboro, City of; Rutherford County, Unincorporated Areas	Approximately 1,450 feet upstream of New Lascassas Road	Approximately 1.16 miles upstream of New Lascassas Road	05130203	0.9	N	AE	09/01/2005
Cheatham Branch	Eagleville, City of; Rutherford County, Unincorporated Areas	Confluence with Harpeth River	Approximately 920 feet upstream of Private Drive	05130204	2.8	N	AE	09/01/2005
Christmas Creek	Rutherford County, Unincorporated Areas	Confluence with West Fork Stones River	Approximately 430 feet upstream of the confluence of Unnamed Tributary 150	05130203	4.0	N	AE	09/01/2005
Concord Branch	Rutherford County, Unincorporated Areas	Confluence with Harpeth River	Approximately 1,200 feet upstream of Ditch Lane	05130204	1.4	N	AE	09/01/2005
Cripple Creek	Rutherford County, Unincorporated Areas	Confluence with East Fork Stones River	Approximately 1,900 feet upstream of Big Springs Road	05130203	14.7	N	AE	09/01/2005
Dry Branch	Rutherford County, Unincorporated Areas	Confluence with Cripple Creek	Approximately 1,435 feet upstream of U.S. Highway 70S / John Bragg Highway	05130203	3.3	N	AE	09/01/2005
Dry Creek	Rutherford County, Unincorporated Areas	Confluence with Hurricane Creek #2	Approximately 750 feet upstream of Cobb Road	05130203	0.7	N	AE	09/01/2005
Dry Fork	Rutherford County, Unincorporated Areas	Confluence with Bradley Creek	Approximately 1.56 miles upstream of Private Drive	05130203	3.9	N	AE	09/01/2005
Dry Fork Creek	Rutherford County, Unincorporated Areas	Confluence with West Fork Stones River	Approximately 4,660 feet upstream of Brothers Road	05130203	7.8	N	AE	09/01/2005
East Branch Hurricane Creek	La Vergne, City of	Confluence with Hurricane Creek	Approximately 900 feet upstream of Waldron Road	05130203	1.1	Y	AE	08/01/1991

Table 2: Flooding Sources Included in this FIS Report (continued)

Flooding Source	Community	Downstream Limit	Upstream Limit	HUC-8 Sub-Basin(s)	Length (mi) (streams or coastlines)	Floodway (Y/N)	Zone shown on FIRM	Date of Analysis
East Branch Hurricane Creek	La Vergne, City of	Approximately 900 feet upstream of Waldron Road	Approximately 500 feet upstream of Stone Ridge Parkway	05130203	1.0	Y	AE	04/01/1981
East Branch Hurricane Creek	La Vergne, City of	Approximately 500 feet upstream of Stone Ridge Parkway	Approximately 2,500 feet upstream of Stone Ridge Parkway	05130203	0.4	Y	AE	12/29/2003
East Branch Hurricane Creek	La Vergne, City of	Approximately 2,500 feet upstream of Stone Ridge Parkway	Davidson County boundary	05130203	0.1	N	A	07/01/1982
East Fork Stones River	Murfreesboro, City of; Rutherford County, Unincorporated Areas	Confluence with J. Percy Priest Reservoir and West Fork Stones River	Approximately 2,115 feet upstream of State Highway 96	05130203	19.2	Y	AE	11/01/2003
East Fork Stones River	Rutherford County, Unincorporated Areas	Approximately 2,115 feet upstream of State Highway 96	Approximately 4,320 feet upstream of Goochie Ford Road	05130203	17.0	N	AE	09/01/2005
East Fork Stones River	Rutherford County, Unincorporated Areas	Approximately 4,320 feet upstream of Goochie Ford Road	Cannon County boundary	05130203	0.1	N	AE	05/01/2019
East Fork Stones River Tributary 2	Rutherford County, Unincorporated Areas	Confluence with East Fork Stones River	Approximately 1,220 feet upstream of U.S. Highway 70S / John Bragg Highway	05130203	1.5	N	AE	05/01/2019
Fall Creek	Rutherford County, Unincorporated Areas	Confluence with J. Percy Priest Reservoir	Approximate 1.30 miles downstream of Old Lebanon Road	05130203	4.2	N	AE	09/01/2005
Fall Creek	Rutherford County, Unincorporated Areas	Approximate 1.30 miles downstream of Old Lebanon Road	Approximately 50 feet downstream of Old Lebanon Road	05130203	0.7	N	AE	11/12/2009
Finch Branch	La Vergne, City of; Smyrna, Town of	Confluence with Stewart Creek	Approximately 1,850 feet upstream of Taylor Drive	05130203	2.8	Y	AE	03/01/1981

Table 2: Flooding Sources Included in this FIS Report (continued)

Flooding Source	Community	Downstream Limit	Upstream Limit	HUC-8 Sub-Basin(s)	Length (mi) (streams or coastlines)	Floodway (Y/N)	Zone shown on FIRM	Date of Analysis
Finch Branch	La Vergne, City of	Approximately 1,850 feet upstream of Taylor Drive	Approximately 1,425 feet upstream of Irvine Drive	05130203	1.0	N	AE	09/01/2005
Harpeth River	Rutherford County, Unincorporated Areas	Approximately 1,900 feet downstream of Bellenfant Road / College Grove Boulevard	Approximately 390 feet upstream of Bellenfant Road / College Grove Boulevard	05130203	0.4	Y	AE	04/01/2016
Harpeth River	Eagleville, City of; Rutherford County, Unincorporated Areas	Approximately 390 feet upstream of Bellenfant Road / College Grove Boulevard	Approximately 680 feet upstream of North Lane	05130204	7.2	N	AE	09/01/2005
Harts Branch	Smyrna, Town of	Confluence with Stewart Creek	Confluence of Rock Spring Branch	05130203	2.9	Y	AE	01/15/2018
Henry Creek	Rutherford County, Unincorporated Areas	Confluence with Short Creek	Approximately 2,980 feet upstream of Sims Road	05130203	2.9	N	AE	09/01/2005
Hurricane Creek	Rutherford County, Unincorporated Areas	Confluence with J. Percy Priest Reservoir	Approximately 80 feet upstream of Heil Quaker Boulevard	05130203	4.3	Y	AE	05/01/2019
Hurricane Creek #2	Rutherford County, Unincorporated Areas	Confluence with Middle Fork Stones River	Confluence of Big Springs Branch and Unnamed Tributary 119	05130203	3.7	N	AE	09/01/2005
Kelly Creek	Eagleville, City of; Rutherford County, Unincorporated Areas	Confluence with Harpeth River	Approximately 2,150 feet upstream of Floyd Road	05130204	4.1	N	AE	09/01/2005
Lees Spring Branch	Murfreesboro, City of; Rutherford County, Unincorporated Areas	Confluence with Lytle Creek	Approximately 1,910 feet upstream of the confluence of Unnamed Tributary to Lees Spring Branch	05130203	2.2	Y	AE	07/01/2019
Long Creek	Rutherford County, Unincorporated Areas	Confluence with Middle Fork Stones River	Approximately 1,150 feet upstream of Private Drive	05130203	3.3	N	AE	09/01/2005

Table 2: Flooding Sources Included in this FIS Report (continued)

Flooding Source	Community	Downstream Limit	Upstream Limit	HUC-8 Sub-Basin(s)	Length (mi) (streams or coastlines)	Floodway (Y/N)	Zone shown on FIRM	Date of Analysis
Lytle Creek	Murfreesboro, City of; Rutherford County, Unincorporated Areas	Confluence with West Fork Stones River	Approximately 80 feet upstream of Homewood Drive	05130203	9.9	Y	AE	01/15/2018
Lytle Creek	Rutherford County, Unincorporated Areas	Approximately 80 feet upstream of Homewood Drive	Approximately 2,880 feet upstream of Homewood Drive	05130203	0.5	Y	AE	12/01/1998
Lytle Creek	Rutherford County, Unincorporated Areas	Approximately 2,880 feet upstream of Homewood Drive	Approximately 3,995 feet upstream Cedar Grove Road	05130203	3.1	N	AE	09/01/2005
Lytle Creek Overflow	Murfreesboro, City of	Confluence with Lytle Creek, Approximately 1,370 feet upstream of Broad Street on Lytle Creek	Confluence with Lytle Creek; Approximately 4,515 feet upstream of Broad Street on Lytle Creek	05130203	0.5	Y	AE	01/15/2018
McElroy Branch	Rutherford County, Unincorporated Areas	Confluence with Cripple Creek	Approximately 1,030 feet upstream of Murray-Kittrel Road	05130203	2.3	N	AE	09/01/2005
McKnight Branch	Rutherford County, Unincorporated Areas	Confluence with East Fork Stones River	Cannon County boundary	05130203	2.9	N	AE	09/01/2005
McKnight Branch	Rutherford County, Unincorporated Areas	Cannon County boundary	Approximately 2,120 feet upstream of Cannon County boundary	05130203	0.4	N	AE	05/01/2019
McKnight Branch Tributary	Rutherford County, Unincorporated Areas	Confluence with McKnight Branch	Approximately 1,110 feet upstream of Halls Hill Pike	05130203	0.4	N	AE	05/01/2019
Middle Fork Stones River	Murfreesboro, City of; Rutherford County, Unincorporated Areas	Confluence with West Fork Stones River	Approximately 3,350 feet upstream of the confluence with West Fork Stones River	05130203	0.6	Y	AE	03/04/2010

Table 2: Flooding Sources Included in this FIS Report (continued)

Flooding Source	Community	Downstream Limit	Upstream Limit	HUC-8 Sub-Basin(s)	Length (mi) (streams or coastlines)	Floodway (Y/N)	Zone shown on FIRM	Date of Analysis
Middle Fork Stones River	Murfreesboro, City of; Rutherford County, Unincorporated Areas	Approximately 3,350 feet upstream of the confluence with West Fork Stones River	Approximately 3.44 miles upstream of Elam Mill Road	05130203	9.4	Y	AE	07/01/1982
Middle Fork Stones River	Rutherford County, Unincorporated Areas	Approximately 3.44 miles upstream of Elam Mill Road	Approximately 300 feet upstream of Private Drive	05130203	7.9	N	AE	09/01/2005
Murray Branch	Rutherford County, Unincorporated Areas	Confluence with McElroy Branch	Approximately 260 feet upstream of the confluence of Unnamed Tributary 126	05130203	2.3	N	AE	09/01/2005
Olive Branch	Rutherford County, Unincorporated Areas; Smyrna, Town of	Confluence with Stewart Creek	Approximately 2,940 feet upstream of Rocky Ford Road	05130203	3.8	Y	AE	04/18/1994
Olive Branch	Rutherford County, Unincorporated Areas; Smyrna, Town of	Approximately 2,940 feet upstream of Rocky Ford Road	Approximately 250 feet upstream of Private Drive	05130203	2.0	N	AE	09/01/2005
Overall Creek	Murfreesboro, City of; Rutherford County, Unincorporated Areas	Confluence with West Fork Stones River	Approximately 100 feet downstream of Manson Pike	05130203	5.3	Y	AE	04/18/1994
Overall Creek	Murfreesboro, City of; Rutherford County, Unincorporated Areas	Approximately 100 feet downstream of Manson Pike	Approximately 700 feet upstream of Manson Pike	05130203	0.2	Y	AE	08/02/2007
Overall Creek	Murfreesboro, City of; Rutherford County, Unincorporated Areas	Approximately 700 feet upstream of Manson Pike	Approximately 2.40 miles upstream of Moreland Road	05130203	6.8	Y	AE	04/18/1994
Overall Creek	Rutherford County, Unincorporated Areas	Approximately 2.40 miles upstream of Moreland Road	Approximately 1.80 miles upstream of Windrow Road	05130203	2.0	N	AE	09/01/2005

Table 2: Flooding Sources Included in this FIS Report (continued)

Flooding Source	Community	Downstream Limit	Upstream Limit	HUC-8 Sub-Basin(s)	Length (mi) (streams or coastlines)	Floodway (Y/N)	Zone shown on FIRM	Date of Analysis
Panther Creek	Rutherford County, Unincorporated Areas	Confluence with West Fork Stones River	Approximately 2.51 miles upstream of the confluence of Unnamed Tributary 092	05130203	4.7	N	AE	09/01/2005
Puckett Creek	Murfreesboro, City of; Rutherford County, Unincorporated Areas	Confluence with Overall Creek	Approximately 1,480 feet downstream of Blaze Drive	05130203	1.0	Y	AE	07/01/1982
Puckett Creek	Murfreesboro, City of; Rutherford County, Unincorporated Areas	Approximately 1,480 feet downstream of Blaze Drive	Approximately 1,300 feet upstream of Old Fort Parkway	05130203	1.1	Y	AE	07/26/2007
Puckett Creek	Murfreesboro, City of; Rutherford County, Unincorporated Areas	Approximately 1,300 feet upstream of Old Fort Parkway	Approximately 260 feet downstream of State Highway 99 / Old Salem Road / Salem Pike	05130203	2.9	Y	AE	07/01/1982
Puckett Creek	Rutherford County, Unincorporated Areas	Approximately 260 feet downstream of State Highway 99 / Old Salem Road / Salem Pike	Approximately 4,300 feet upstream of State Highway 99 / Old Salem Road / Salem Pike	05130203	0.9	N	AE	09/01/2005
Reed Creek	Rutherford County, Unincorporated Areas	Confluence with Cripple Creek	Approximately 1,400 feet upstream of Private Drive	05130203	5.1	N	AE	09/01/2005
Rock Spring Branch	La Vergne, City of; Rutherford County, Unincorporated Areas; Smyrna, Town of	Confluence with Harts Branch	Approximately 1,670 feet upstream of Rock Springs Road	05130203	5.3	Y	AE	01/15/2018
Rocky Fork Creek	Rutherford County, Unincorporated Areas; Smyrna, Town of	Confluence with Stewart Creek	Approximately 1,245 feet upstream of Laddie Lane	05130203	3.9	N	AE	09/01/2005
Short Creek	Rutherford County, Unincorporated Areas	Confluence with Long Creek and Unnamed Tributary 081	Approximately 3,310 feet upstream of Millersburg Road	05130203	4.8	N	AE	09/01/2005

Table 2: Flooding Sources Included in this FIS Report (continued)

Flooding Source	Community	Downstream Limit	Upstream Limit	HUC-8 Sub-Basin(s)	Length (mi) (streams or coastlines)	Floodway (Y/N)	Zone shown on FIRM	Date of Analysis
Sinking Creek	Murfreesboro, City of	Confluence with West Fork Stones River	Approximately 410 feet upstream of Bell Street	05130203	5.4	Y	AE	02/01/1997
Stewart Creek	Rutherford County, Unincorporated Areas; Smyrna, Town of	Confluence with J. Percy Priest Reservoir	Approximately 920 feet upstream of Almaville Road / State Highway 102	05130203	19.9	Y	AE	01/15/2018
Stinking Creek	La Vergne, City of	Confluence with J. Percy Priest Reservoir	Approximately 1,220 feet upstream of Bill Stewart Boulevard	05130203	1.5	N	AE	09/01/2005
Unnamed Tributary 007	Rutherford County, Unincorporated Areas	Confluence with McKnight Branch	Approximately 1.06 miles upstream of the confluence with McKnight Branch	05130203	1.1	N	AE	09/01/2005
Unnamed Tributary 009	Rutherford County, Unincorporated Areas	Confluence with Wades Branch	Approximately 570 feet upstream of Dunaway Chapel Road	05130203	1.6	N	AE	09/01/2005
Unnamed Tributary 011	Rutherford County, Unincorporated Areas	Confluence with Unnamed Tributary 009	Approximately 1,720 feet upstream of Dunaway Chapel Road	05130203	0.4	N	AE	09/01/2005
Unnamed Tributary 014	Rutherford County, Unincorporated Areas	Confluence with Stewart Creek	Approximately 845 feet upstream of Old Almaville Road	05130203	2.5	N	AE	09/01/2005
Unnamed Tributary 018	Rutherford County, Unincorporated Areas	Confluence with Cripple Creek	Approximately 3,540 feet upstream of Cranor Road	05130203	0.8	N	AE	09/01/2005
Unnamed Tributary 026	Rutherford County, Unincorporated Areas; Smyrna, Town of	Confluence with Stewart Creek	Approximately 530 feet upstream of Private Drive	05130203	1.1	N	AE	09/01/2005
Unnamed Tributary 028	Rutherford County, Unincorporated Areas; Smyrna, Town of	Confluence with Stewart Creek	Approximately 1,850 feet upstream of Woodland Trail	05130203	0.9	N	AE	09/01/2005

Table 2: Flooding Sources Included in this FIS Report (continued)

Flooding Source	Community	Downstream Limit	Upstream Limit	HUC-8 Sub-Basin(s)	Length (mi) (streams or coastlines)	Floodway (Y/N)	Zone shown on FIRM	Date of Analysis
Unnamed Tributary 046	Eagleville, City of; Rutherford County, Unincorporated Areas	Confluence with Harpeth River	Approximately 1,460 feet upstream of U.S. Highway 41A North / Shelbyville Road	05130204	1.1	N	AE	09/01/2005
Unnamed Tributary 047	Eagleville, City of; Rutherford County, Unincorporated Areas	Confluence with Harpeth River	Approximately 1,315 feet upstream of Private Drive	05130204	2.2	N	AE	09/01/2005
Unnamed Tributary 049	Eagleville, City of; Rutherford County, Unincorporated Areas	Williamson County boundary	Approximately 370 feet upstream of U.S. Highway 41A North / Shelbyville Road	05130204	0.7	N	AE	09/01/2005
Unnamed Tributary 051	Rutherford County, Unincorporated Areas	Confluence with Unnamed Tributary 052	Approximately 1,620 feet upstream of Manus Road	05130203	0.4	N	AE	09/01/2005
Unnamed Tributary 052	Rutherford County, Unincorporated Areas	Confluence with Murray Branch	Approximately 2,890 feet upstream of Manus Road	05130203	1.1	N	AE	09/01/2005
Unnamed Tributary 055	Rutherford County, Unincorporated Areas	Confluence with Middle Fork Stones River	Approximately 245 feet upstream of Broyles Road	05130203	2.6	N	AE	09/01/2005
Unnamed Tributary 056	Rutherford County, Unincorporated Areas	Confluence with Unnamed Tributary 055	Approximately 2,530 feet upstream of Christiana Hoover Gap Road	05130203	0.9	N	AE	09/01/2005
Unnamed Tributary 057	Rutherford County, Unincorporated Areas	Confluence with Unnamed Tributary 055	Approximately 680 feet upstream of the confluence with Unnamed Tributary 055	05130203	0.1	N	AE	09/01/2005
Unnamed Tributary 058	Rutherford County, Unincorporated Areas	Confluence with Middle Fork Stones River	Approximately 2,500 feet upstream of the confluence with Middle Fork Stones River	05130203	0.5	N	AE	09/01/2005

Table 2: Flooding Sources Included in this FIS Report (continued)

Flooding Source	Community	Downstream Limit	Upstream Limit	HUC-8 Sub-Basin(s)	Length (mi) (streams or coastlines)	Floodway (Y/N)	Zone shown on FIRM	Date of Analysis
Unnamed Tributary 069	Rutherford County, Unincorporated Areas	Confluence with Harpeth River	Approximately 4,110 feet upstream of Swamp Road	05130204	1.2	N	AE	09/01/2005
Unnamed Tributary 081	Rutherford County, Unincorporated Areas	Confluence with Long Creek and Short Creek	Approximately 930 feet upstream of Miller Johnson Road	05130203	0.4	N	AE	09/01/2005
Unnamed Tributary 092	Rutherford County, Unincorporated Areas	Confluence with Panther Creek	Approximately 2,420 feet upstream of Panther Creek Road	05130203	0.6	N	AE	09/01/2005
Unnamed Tributary 116	Rutherford County, Unincorporated Areas	Confluence with Hurricane Creek #2	Approximately 4,310 feet upstream of Jacobs Road	05130203	1.9	N	AE	09/01/2005
Unnamed Tributary 118	Rutherford County, Unincorporated Areas	Confluence with Hurricane Creek #2	Approximately 3,350 feet upstream of the confluence with Hurricane Creek #2	05130203	0.6	N	AE	09/01/2005
Unnamed Tributary 119	Rutherford County, Unincorporated Areas	Confluence with Big Springs Creek and Hurricane Creek #2	Approximately 1,240 feet upstream of the confluence with Big Springs Creek and Hurricane Creek #2	05130203	0.2	N	AE	09/01/2005
Unnamed Tributary 124	Rutherford County, Unincorporated Areas	Confluence with Murray Branch	Approximately 960 feet upstream of Private Drive	05130203	0.8	N	AE	09/01/2005
Unnamed Tributary 126	Rutherford County, Unincorporated Areas	Confluence with Murray Branch	Approximately 1,670 feet upstream of Gum Puckett Road	05130203	0.9	N	AE	09/01/2005
Unnamed Tributary 133	Rutherford County, Unincorporated Areas	Cannon County boundary	Approximately 1,960 feet upstream of the confluence with East Fork Stones River	05130203	0.4	N	AE	09/01/2005

Table 2: Flooding Sources Included in this FIS Report (continued)

Flooding Source	Community	Downstream Limit	Upstream Limit	HUC-8 Sub-Basin(s)	Length (mi) (streams or coastlines)	Floodway (Y/N)	Zone shown on FIRM	Date of Analysis
Unnamed Tributary 141	Rutherford County, Unincorporated Areas	Confluence with Stewart Creek	Approximately 2,125 feet upstream of Stewart Creek Road	05130203	1.0	N	AE	09/01/2005
Unnamed Tributary 143	Rutherford County, Unincorporated Areas; Smyrna, Town of	Confluence with Stewart Creek	Approximately 1.00 mile upstream of Almaville Road	05130203	1.4	N	AE	09/01/2005
Unnamed Tributary 144	Rutherford County, Unincorporated Areas	Confluence with Stewart Creek	Approximately 2.38 miles upstream of Almaville Road	05130203	2.7	N	AE	09/01/2005
Unnamed Tributary 150	Rutherford County, Unincorporated Areas	Confluence with Christmas Creek	Approximately 610 feet upstream of the confluence with Christmas Creek	05130203	0.1	N	AE	09/01/2005
Unnamed Tributary 177	Rutherford County, Unincorporated Areas	Confluence with Harpeth River	Approximately 830 feet upstream of Private Drive	05130204	0.6	N	AE	09/01/2005
Unnamed Tributary 179	Rutherford County, Unincorporated Areas	Confluence with Harpeth River	Approximately 2,706 feet upstream of the confluence with Harpeth River	05130204	0.5	N	AE	09/01/2005
Unnamed Tributary 182	La Vergne, City of	Confluence with Finch Branch	Approximately 395 feet upstream of Akin Street	05130203	0.8	N	AE	09/01/2005
Unnamed Tributary 183	La Vergne, City of	Confluence with Finch Branch	Approximately 480 feet upstream of Private Drive	05130203	0.9	N	AE	09/01/2005
Unnamed Tributary 184	Smyrna, Town of	Confluence with Stewart Creek	Approximately 3,540 feet upstream of Sam Ridley Parkway	05130203	0.9	N	AE	09/01/2005
Unnamed Tributary 184	Smyrna, Town of	Approximately 3,540 feet upstream of Sam Ridley Parkway	Approximately 1.21 miles upstream of Sam Ridley Parkway	05130203	0.5	N	A	08/31/2010

Table 2: Flooding Sources Included in this FIS Report (continued)

Flooding Source	Community	Downstream Limit	Upstream Limit	HUC-8 Sub-Basin(s)	Length (mi) (streams or coastlines)	Floodway (Y/N)	Zone shown on FIRM	Date of Analysis
Unnamed Tributary 185	Eagleville, City of	Confluence with Cheatham Branch	Approximately 450 feet upstream of Spring Street	05130204	0.6	N	AE	09/01/2005
Unnamed Tributary to Kelly Creek	Rutherford County, Unincorporated Areas	Confluence with Kelly Creek	Approximately 720 feet upstream of the confluence with Kelly Creek	05130204	0.1	N	AE	09/01/2005
Unnamed Tributary to Lees Spring Branch	Murfreesboro, City of	Confluence with Lees Spring Branch	Approximately 1,770 feet upstream of the confluence with Lees Spring Branch	05130203	0.3	Y	AE	07/01/2019
Unnamed Tributary to West Fork Stones River	Murfreesboro, City of; Rutherford County, Unincorporated Areas	Confluence with West Fork Stones River	Approximately 1.70 miles upstream State Highway 99	05130203	3.0	Y	AE	07/01/1982
Unnamed Tributary to West Fork Stones River	Murfreesboro, City of; Rutherford County, Unincorporated Areas	Approximately 1.70 miles upstream State Highway 99	Approximately 120 feet upstream of Private Drive	05130203	0.5	N	AE	09/01/2005
Wades Branch	Rutherford County, Unincorporated Areas	Confluence with East Fork Stones River	Approximately 2.83 miles upstream of the confluence with East Fork Stones Creek	05130203	2.8	Y	AE	07/01/1982
Wades Branch	Rutherford County, Unincorporated Areas	Approximately 2.83 miles upstream of the confluence with East Fork Stones Creek	Approximately 3,170 feet upstream of the confluence of Unnamed Tributary 009	05130203	0.6	N	AE	09/01/2005
West Fork Stones River	Murfreesboro, City of; Rutherford County, Unincorporated Areas; Smyrna, Town of	Confluence with East Fork Stones River and J. Percy Priest Reservoir	Approximately 100 feet downstream of Sulpher Springs Road	05130203	6.5	Y	AE	12/01/1998
West Fork Stones River	Murfreesboro, City of; Rutherford County, Unincorporated Areas	Approximately 100 feet downstream of Sulpher Springs Road	Approximately 4,800 feet upstream of Sulpher Springs Road	05130203	0.8	Y	AE	07/25/2014

Table 2: Flooding Sources Included in this FIS Report (continued)

Flooding Source	Community	Downstream Limit	Upstream Limit	HUC-8 Sub-Basin(s)	Length (mi) (streams or coastlines)	Floodway (Y/N)	Zone shown on FIRM	Date of Analysis
West Fork Stones River	Murfreesboro, City of; Rutherford County, Unincorporated Areas	Approximately 4,800 feet upstream of Sulpher Springs Road	Approximately 200 feet downstream of New Salem Highway	05130203	13.1	Y	AE	12/01/1998
West Fork Stones River	Murfreesboro, City of; Rutherford County, Unincorporated Areas;	Approximately 200 feet downstream of New Salem Highway	Approximately 4,300 feet upstream of Private Drive	05130203	2.8	Y	AE	03/04/2010
West Fork Stones River	Murfreesboro, City of; Rutherford County, Unincorporated Areas	Approximately 4,300 feet upstream of Private Drive	Approximately 1.32 miles upstream of Stones River Lane	05130203	3.5	Y	AE	12/01/1998
West Fork Stones River	Rutherford County, Unincorporated Areas	Approximately 1.32 miles upstream of Stones River Lane	Approximately 1.75 miles upstream of Midland Fosterville Road	05130203	7.3	N	AE	09/01/2005

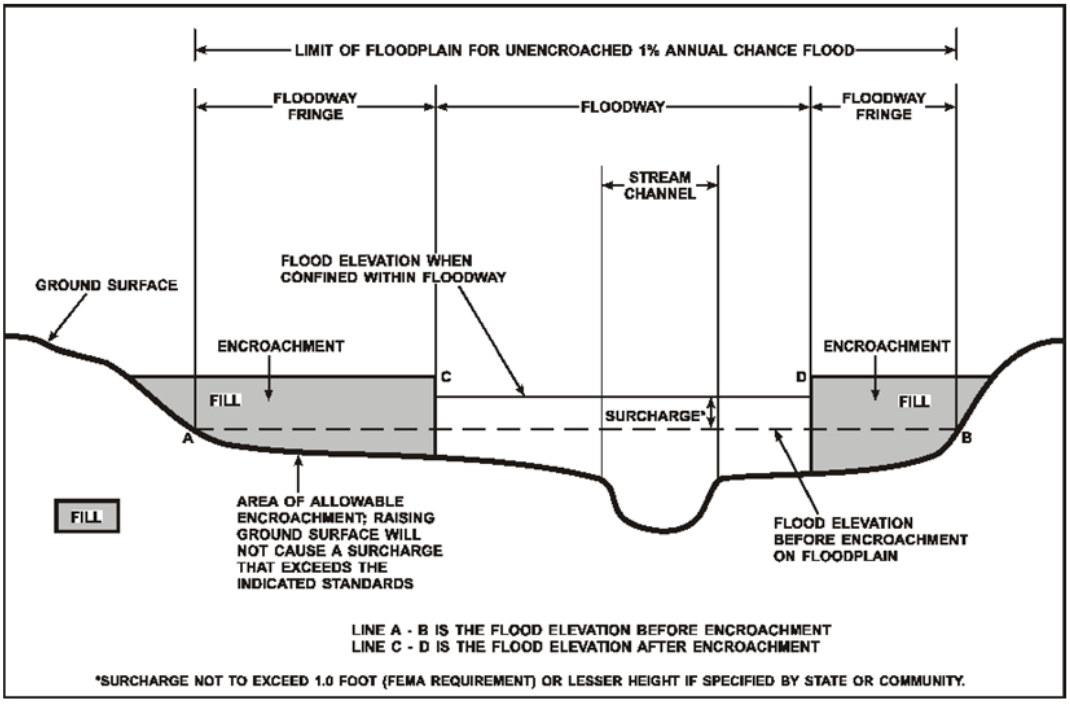
2.2 Floodways

Encroachment on floodplains, such as structures and fill, reduces flood-carrying capacity, increases flood heights and velocities, and increases flood hazards in areas beyond the encroachment itself. One aspect of floodplain management involves balancing the economic gain from floodplain development against the resulting increase in flood hazard.

For purposes of the NFIP, a floodway is used as a tool to assist local communities in balancing floodplain development against increasing flood hazard. With this approach, the area of the 1-percent-annual-chance floodplain on a river is divided into a floodway and a floodway fringe based on hydraulic modeling. The floodway is the channel of a stream, plus any adjacent floodplain areas, that must be kept free of encroachment in order to carry the 1-percent-annual-chance flood. The floodway fringe is the area between the floodway and the 1-percent-annual-chance floodplain boundaries where encroachment is permitted. The floodway must be wide enough so that the floodway fringe could be completely obstructed without increasing the water surface elevation of the 1-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 4.

To participate in the NFIP, Federal regulations require communities to limit increases caused by encroachment to 1.0 foot, provided that hazardous velocities are not produced. Regulations for State require communities in Rutherford County to limit increases caused by encroachment to 1.0 foot and several communities have adopted additional restrictions. The floodways in this project are presented to local agencies as minimum standards that can be adopted directly or that can be used as a basis for additional floodway projects.

Figure 4: Floodway Schematic



Floodway widths presented in this FIS Report and on the FIRM were computed at cross sections. Between cross sections, the floodway boundaries were interpolated. For certain stream segments, floodways were adjusted so that the amount of floodwaters conveyed on each side of the floodplain would be reduced equally. The results of the floodway computations have been tabulated for selected cross sections and are shown in Table 23, “Floodway Data.”

All floodways that were developed for this Flood Risk Project are shown on the FIRM using the symbology described in Figure 3. In cases where the floodway and 1-percent-annual-chance floodplain boundaries are either close together or collinear, only the floodway boundary has been shown on the FIRM. For information about the delineation of floodways on the FIRM, refer to Section 6.3.

2.3 Base Flood Elevations

The hydraulic characteristics of flooding sources were analyzed to provide estimates of the elevations of floods of the selected recurrence intervals. The BFE is the elevation of the 1-percent-annual-chance flood. These BFEs are most commonly rounded to the whole foot, as shown on the FIRM, but in certain circumstances or locations they may be rounded to 0.1 foot. Cross section lines shown on the FIRM may also be labeled with the BFE rounded to 0.1 foot. Whole-foot BFEs derived from engineering analyses that apply to coastal areas, areas of ponding, or other static areas with little elevation change may also be shown at selected intervals on the FIRM.

BFEs are primarily intended for flood insurance rating purposes. Cross sections with BFEs shown on the FIRM correspond to the cross sections shown in the Floodway Data table and Flood Profiles in this FIS Report. For construction and/or floodplain management purposes, users are cautioned to use the flood elevation data presented in this FIS Report in conjunction with the data shown on the FIRM. For example, the user may use the FIRM to determine the stream station of a location of interest and then use the profile to determine the 1-percent annual chance elevation at that location. Because only selected cross sections may be shown on the FIRM for riverine areas, the profile should be used to obtain the flood elevation between mapped cross sections. Additionally, for riverine areas, whole-foot elevations shown on the FIRM may not exactly reflect the elevations derived from the hydraulic analyses; therefore, elevations obtained from the profile may more accurately reflect the results of the hydraulic analysis.

2.4 Non-Encroachment Zones

This section is not applicable to this Flood Risk Project.

2.5 Coastal Flood Hazard Areas

This section is not applicable to this Flood Risk Project.

2.5.1 Water Elevations and the Effects of Waves

This section is not applicable to this Flood Risk Project.

Figure 5: Wave Runup Transect Schematic

[Not Applicable to this Flood Risk Project]

2.5.2 Floodplain Boundaries and BFEs for Coastal Areas

This section is not applicable to this Flood Risk Project.

2.5.3 Coastal High Hazard Areas

This section is not applicable to this Flood Risk Project.

Figure 6: Coastal Transect Schematic

[Not Applicable to this Flood Risk Project]

2.5.4 Limit of Moderate Wave Action

This section is not applicable to this Flood Risk Project.

SECTION 3.0 – INSURANCE APPLICATIONS

3.1 National Flood Insurance Program Insurance Zones

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

The 1-percent-annual-chance floodplain boundary corresponds to the boundary of the areas of special flood hazards (e.g. Zones A, AE, V, VE, etc.), and the 0.2-percent-annual-chance floodplain boundary corresponds to the boundary of areas of additional flood hazards.

Table 3 lists the flood insurance zones in Rutherford County.

Table 3: Flood Zone Designations by Community

Community	Flood Zone(s)
Eagleville, City of	AE, X
La Vergne, City of	A, AE, X
Murfreesboro, City of	AE, X
Rutherford County, Unincorporated Areas	AE, X
Smyrna, Town of	A, AE, X

SECTION 4.0 – AREA STUDIED

4.1 Basin Description

Table 4 contains a description of the characteristics of the HUC-8 sub-basins within which each community falls. The table includes the main flooding sources within each basin, a brief description of the basin, and its drainage area.

Table 4: Basin Characteristics

HUC-8 Sub-Basin Name	HUC-8 Sub-Basin Number	Primary Flooding Source	Description of Affected Area	Drainage Area (square miles)[1]
Caney	05130108	Caney River	This watershed only contains a small portion of the county. No flooding sources are located in this watershed.	0.2
Harpeth	05130204	Harpeth River	This watershed is located in the southwestern corner of the county. It contains the City of Eagleville.	52.5
Lower Cumberland – Sycamore	05130202	Cumberland River	This watershed is the smallest watershed in the county. No flooding sources are located in this watershed.	0.5
Stones	05130203	Stones River	This watershed contains the entire county and has the largest presence in the county.	556.2
Upper Duck	06040002	Duck River	This watershed is located in the southwestern corner of the county and contains no flooding sources.	14.9

[1] Total drain area of watershed inside the county

4.2 Principal Flood Problems

Table 5 contains a description of the principal flood problems that have been noted for Rutherford County by flooding source.

Table 5: Principal Flood Problems

Flooding Source	Description of Flood Problems
All Sources	Floods of large magnitude have occurred in the vicinity of Murfreesboro and have caused extensive damage to bridges, highways, railroads, homes, businesses, farm lands, and public facilities. These floods occurred in 1902, 1944, 1945, 1948, 1955, 1963, and 1975; each having estimated peak discharges in excess of 20,000 cubic feet per second (cfs) (FIS 2008).

Table 5: Principal Flood Problems (continued)

Flooding Source	Description of Flood Problems
All Sources	At least six times, floods of large magnitude have occurred in the vicinity of Smyrna causing extensive damage to bridges, highways, railroads, homes, businesses, farmlands, and public facilities. These floods occurred in 1902, 1940, 1955, 1962, 1970, and 1975. The March 28, 1902, flood stands as the highest known flood in the Town of Smyrna (FIS 2008).
All Sources	In the Town of Smyrna, the most critical flooding period is December through April, when frequent, widespread, high-intensity storms take place. The streams in the Smyrna area are relatively small and subject to very rapid flood rises. Flood crests could be reached in a matter of a few hours following heavy rainfall with the stream receding to within its banks rapidly. Calculated travel times for Harts Branch and Rock Spring Branch indicate that they are more susceptible to flood conditions than Stewart Creek because of the short time required to react to storm runoff (FIS 2008).
Hurricane Creek and Finch Creek	In the City of La Vergne, major floods from Hurricane Creek and Finch Branch are usually caused by the headwater floods that are more likely to occur in late winter or early spring. Though greater amounts of precipitation generally fall on this area from December through March, these streams are also subject to flooding from thunderstorms, which can produce intense rainfall at any time of year. Because of their small drainage areas, steep stream slopes, and rolling terrain, both Hurricane Creek and Finch Branch are likely to experience flash floods. Following periods of heavy rainfall, the streams overflow their banks, reach flood crest, and recede within their banks in a matter of a few hours. Natural obstructions to flood flows on the lower end of Hurricane Creek include trees, other vegetation, rocks, and a meandering alignment, all of which contribute to some degree to increasing flood stages. Obstructions on the upper portion of Hurricane Creek are almost entirely the result of the construction that occurred for Interchange City. Obstructions on Finch Branch include both natural obstructions and those caused by various types of debris. Few records of damaging floods on Hurricane Creek and Finch Branch exist before March 1975, when high-water marks for that flood were documented. However, the May 1979 flood reached higher levels than the March 1975 flood on both Hurricane Creek and Finch Branch. The 1979 flood appears to have been at or to have exceeded the 0.2-percent annual chance event on the upper portions of both streams, while it appears to have ranged between the 4- and 1-percent annual chance events on the lower portions of these streams (FIS 2008).
Stones Creek and Stewart Creek	High floods were recorded on nearby Stewart Creek in March 1955, February 1962, June 1970, and March 1975. In addition, flood data for other streams in the area, particularly the Stones River, indicate that record floods occurred in March 1902 and February 1948 (FIS 2008).
Todds Lake	In the City of Murfreesboro, flooding in the sinkhole region occurs when large depressions in the natural ground, with little or no outlets, simply store the rainwater. During the flood of March 1975, 12 homes on Johnson Street (located in the Todds Lake Sinkhole configuration) were damaged by sinkhole flooding, with water depth reaching nearly 7 feet on the first floor. Sinkhole flooding is a major problem in Murfreesboro. Although many sinkholes exist within the corporate limits, development trends dictated that only one large sinkhole configuration be studied (FIS 2008).

Table 5: Principal Flood Problems (continued)

Flooding Source	Description of Flood Problems
West Fork Stones River	At the Murfreesboro gage, the West Fork Stones River has risen over 15 feet in less than 12 hours during several major floods. The other relatively smaller streams in Murfreesboro rise even faster than West Fork Stones River and reach flood peaks in only a few hours. The maximum flood stage recorded on West Fork Stone River at the USGS Gage ID 03428000 occurred on February 13, 1948, reaching a stage of 22.73 feet NGVD (22.77 ft. NAVD), with an estimated peak discharge of 38,000 cfs. The March 28, 1902, flood stands as the highest known flood. This flood crested at 25.0 feet NGVD (25.04 ft. NAVD) with an estimated peak discharge of 50,000 cfs. Velocities of water during major floods range up to 12 fps (approximately 8 miles per hour) in the channel. Velocities on the floodplain vary widely, depending on location, but generally are less than 4 fps (FIS 2008).

Table 6 contains information about historic flood elevations in the communities within Rutherford County.

Table 6: Historic Flooding Elevations

Flooding Source	Location	Historic Peak (Feet NAVD88)	Event Date	Approximate Recurrence Interval (years)	Source of Data
West Fork Stones River	USGS Gage ID 03428000, West Fork Stones River Near Murfreesboro, TN	22.77	02/13/1948	N/A	FIS 2008
West Fork Stones River	USGS Gage ID 03428000, West Fork Stones River Near Murfreesboro, TN	25.04	03/28/1902	N/A	FIS 2008

4.3 Non-Levee Flood Protection Measures

Table 7 contains information about non-levee flood protection measures within Rutherford County such as dams, jetties, and or dikes. Levees are addressed in Section 4.4 of this FIS Report.

Table 7: Non-Levee Flood Protection Measures

Flooding Source	Structure Name	Type of Measure	Location	Description of Measure
City of Murfreesboro flooding sources	N/A	Earthen Dike	City of Murfreesboro	Protection against sinkhole flooding has been provided by the City of Murfreesboro with the construction of an earthen dike, approximately 15 feet high, around the homes on Johnson Street and with the installation of a pumping station in this area (FIS 2008).

Table 7: Non-Levee Flood Protection Measures (continued)

Flooding Source	Structure Name	Type of Measure	Location	Description of Measure
Lytle Creek	N/A	Channel Improvements	Along the channel	Some minor channel improvements along Lytle Creek have been made by a private citizen, as have bridge modifications at U.S. Highway 231 where it crosses Lytle Creek. These modifications were made in conjunction with the widening of U.S. Highway 231 from two lanes to four (FIS 2008).

4.4 Levees

This section is not applicable to this Flood Risk Project.

Table 8: Levees

[Not Applicable to this Flood Risk Project]

SECTION 5.0 – ENGINEERING METHODS

For the flooding sources in the community, standard hydrologic and hydraulic study methods were used to determine the flood hazard data required for this study. Flood events of a magnitude that are expected to be equaled or exceeded at least once on the average during any 10-, 25-, 50-, 100-, or 500-year period (recurrence interval) have been selected as having special significance for floodplain management and for flood insurance rates. These events, commonly termed the 10-, 25-, 50-, 100-, and 500-year floods, have a 10-, 4-, 2-, 1-, and 0.2-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 100-year flood (1-percent chance of annual exceedance) during the term of a 30-year mortgage is approximately 26 percent (about 3 in 10); for any 90-year period, the risk increases to approximately 60 percent (6 in 10). The analyses reported herein reflect flooding potentials based on conditions existing in the community at the time of completion of this study. Maps and flood elevations will be amended periodically to reflect future changes.

The engineering analyses described here incorporate the results of previously issued Letters of Map Change (LOMCs) listed in Table 26, “Incorporated Letters of Map Change”, which include Letters of Map Revision (LOMRs). For more information about LOMRs, refer to Section 6.5, “FIRM Revisions.”

5.1 Hydrologic Analyses

Hydrologic analyses were carried out to establish the peak elevation-frequency relationships for floods of the selected recurrence intervals for each flooding source studied. Hydrologic analyses are typically performed at the watershed level. Depending on factors such as watershed size and shape, land use and urbanization, and natural or man-made storage, various models or methodologies may be applied. A summary of the hydrologic methods applied to develop the discharges used in the hydraulic analyses for each stream is provided in Table 12. Greater detail (including assumptions, analysis, and results) is available in the archived project documentation.

A summary of the discharges is provided in Table 9. A summary of stillwater elevations developed for non-coastal flooding sources is provided in Table 10. Stream gage information is provided Table 11.

Table 9: Summary of Discharges

Flooding Source	Location	Drainage Area (Square Miles)	Peak Discharge (cfs)				
			10% Annual Chance	4% Annual Chance	2% Annual Chance	1% Annual Chance	0.2% Annual Chance
Andrews Creek	At the confluence with East Fork Stones River	4.80	*	*	*	3,151	*
Andrews Creek	Approximately 2,715 feet upstream of Goochie Ford Road	3.90	*	*	*	2,692	*
Armstrong Branch	At the confluence with Puckett Creek	7.51	2,720	3,570	4,170	4,780	*
Armstrong Branch	Just upstream of Armstrong Valley Road	7.37	*	*	*	4,305	*
Armstrong Branch	Approximately 845 feet upstream of Thompson Road	5.07	*	*	*	3,258	*
Big Springs Branch	At the confluence with Hurricane Creek #2 and Unnamed Tributary 119	4.83	*	*	*	3,147	*
Big Springs Branch	Approximately 900 feet downstream of Arnold Road	4.20	*	*	*	2,833	*
Big Springs Branch	At Arnold Road	2.44	*	*	*	1,894	*
Big Springs Branch	Approximately 1,650 feet upstream of Arnold Road	2.33	*	*	*	1,825	*
Bear Branch	Approximately 110 feet upstream of the confluence with East Fork Stones River	3.00	1,800	*	2,680	3,090	4,020
Bear Branch	Just upstream of DeJarnette Lane	1.35	620	*	960	1,100	1,500
Bear Branch	At East Northfield Boulevard	0.49	210	*	310	350	450
Bear Branch	Approximately 1,740 feet upstream of East Northfield Boulevard	0.25	135	*	195	220	285

Table 9: Summary of Discharges (continued)

Flooding Source	Location	Drainage Area (Square Miles)	Peak Discharge (cfs)				
			10% Annual Chance	4% Annual Chance	2% Annual Chance	1% Annual Chance	0.2% Annual Chance
Bradley Creek	At the confluence with East Fork Stones River	39.00	8,700	11,650	13,800	16,000	20,500
Bradley Creek	Approximately 3,170 feet upstream of Browns Mill Road	37.00	8,400	11,200	13,250	15,350	19,500
Bradley Creek	Just downstream of State Highway 96	30.00	6,800	9,100	10,750	12,450	16,500
Bradley Creek	Approximately 1.00 mile downstream of Rhodes Lane	15.47	*	*	*	7,478	*
Bradley Creek	Approximately 475 feet downstream of Rhodes Lane	14.73	*	*	*	7,210	*
Bradley Creek	Just downstream of Rhodes Lane	13.45	*	*	*	6,737	*
Bradley Creek	Approximately 550 feet upstream of Twelve Corners Road	10.53	*	*	*	5,617	*
Bradley Creek	Approximately 1,000 feet downstream of Weatherly Road	8.30	*	*	*	4,705	*
Bradley Creek	Approximately 1,125 feet upstream of Weatherly Road	7.80	*	*	*	4,491	*
Bradley Creek	Approximately 620 feet upstream of King Road	7.00	*	*	*	4,145	*
Bradley Creek	Approximately 3,960 feet upstream of King Road	5.91	*	*	*	3,652	*
Bradley Creek	Approximately 4,380 feet upstream of King Road	2.54	*	*	*	1,944	*
Bradley Creek Tributary 1	At the confluence with Bradley Creek	3.37	1,447	1,830	2,117	2,404	3,068
Bushman Creek	At the confluence with East Fork Stones River	13.36	3,800	*	5,700	6,300	9,310

Table 9: Summary of Discharges (continued)

Flooding Source	Location	Drainage Area (Square Miles)	Peak Discharge (cfs)				
			10% Annual Chance	4% Annual Chance	2% Annual Chance	1% Annual Chance	0.2% Annual Chance
Bushman Creek	Approximately 2,500 feet downstream of Compton Road	11.24	3,450	*	5,250	5,800	8,295
Bushman Creek	Approximately 50 feet downstream of Osborne Lane	11.08	2,700	*	3,650	3,900	7,692
Bushman Creek	Approximately 500 feet downstream of New Lascassas Road	9.73	2,300	*	2,750	2,850	7,533
Bushman Creek	Approximately 1,690 feet upstream of Lascassas Pike	11.64[1]	*	*	*	1,345	*
Cheatham Branch	At the confluence with Harpeth River	2.00	*	*	*	1,627	*
Cheatham Branch	Approximately 2,155 feet upstream of Clark Street	0.60	*	*	*	664	*
Christmas Creek	At the confluence with West Fork Stones River	6.70	*	*	*	4,009	*
Christmas Creek	Approximately 1,320 feet downstream of Stones River Road	5.85	*	*	*	3,622	*
Christmas Creek	Approximately 2,220 feet downstream of Shelbyville Pike	5.48	*	*	*	3,454	*
Christmas Creek	Approximately 2,640 feet downstream of Old Christiana Fosterville Road	4.48	*	*	*	2,973	*
Christmas Creek	Approximately 900 feet upstream of Old Christiana Fosterville Road	2.20	*	*	*	1,752	*
Concord Branch	At the confluence with Harpeth River	10.68	*	*	*	5,673	*

Table 9: Summary of Discharges (continued)

Flooding Source	Location	Drainage Area (Square Miles)	Peak Discharge (cfs)				
			10% Annual Chance	4% Annual Chance	2% Annual Chance	1% Annual Chance	0.2% Annual Chance
Concord Branch	Approximately 3,220 feet downstream of Ditch Lane	9.78	*	*	*	5,317	*
Concord Branch	Approximately 2,270 feet downstream of Ditch Lane	6.20	*	*	*	3,786	*
Cripple Creek	At the confluence with East Fork Stones River	48.52	*	*	*	15,747	*
Cripple Creek	Approximately 4,805 feet upstream of Halls Hill Road	47.63	*	*	*	15,594	*
Cripple Creek	Approximately 3,430 feet downstream of Cranor Road	37.49	*	*	*	13,739	*
Cripple Creek	At Cranor Road	34.54	*	*	*	13,156	*
Cripple Creek	Approximately 3,330 feet upstream of Cranor Road	33.80	*	*	*	13,006	*
Cripple Creek	Approximately 5,170 feet downstream of Woodbury Pike	32.87	*	*	*	12,816	*
Cripple Creek	Approximately 1,850 feet downstream of Woodbury Pike	30.20	*	*	*	12,254	*
Cripple Creek	Just upstream of Murray Kittrell Road	17.83	*	*	*	8,312	*
Cripple Creek	Approximately 2,480 feet downstream of Murray Kittrell Road	17.75	*	*	*	8,286	*
Cripple Creek	Approximately 735 feet downstream of McElroy Road	16.72	*	*	*	7,923	*
Cripple Creek	Approximately 4,280 feet upstream of McElroy Road	16.16	*	*	*	7,724	*
Cripple Creek	Approximately 3,960 feet downstream of Vaught Road	15.17	*	*	*	7,372	*

Table 9: Summary of Discharges (continued)

Flooding Source	Location	Drainage Area (Square Miles)	Peak Discharge (cfs)				
			10% Annual Chance	4% Annual Chance	2% Annual Chance	1% Annual Chance	0.2% Annual Chance
Cripple Creek	Approximately 660 feet downstream of Vaught Road	14.99	*	*	*	7,304	*
Cripple Creek	Approximately 2,800 feet upstream of Vaught Road	13.99	*	*	*	6,939	*
Cripple Creek	Approximately 2,530 feet downstream of Cripple Creek Road	13.07	*	*	*	6,598	*
Cripple Creek	Approximately 1,950 feet upstream of Cripple Creek Road	6.15	*	*	*	3,763	*
Cripple Creek	Approximately 4,330 feet downstream of Cripple Creek Road	5.79	*	*	*	3,596	*
Cripple Creek	Approximately 900 feet downstream of Cripple Creek Road	4.79	*	*	*	3,124	*
Cripple Creek	Approximately 1,740 feet upstream of East Lyon Road	3.81	*	*	*	2,635	*
Cripple Creek	Approximately 900 feet downstream of Bradyville Pike	2.81	*	*	*	2,101	*
Cripple Creek	Approximately 1,370 feet upstream of Bradyville Road	1.88	*	*	*	1,554	*
Cripple Creek	Approximately 1,060 feet downstream of Big Springs Road	1.26	*	*	*	1,156	*
Dry Branch	At the confluence with Cripple Creek	9.14	*	*	*	5,054	*
Dry Branch	Approximately 2,690 feet upstream of the confluence of Cripple Creek	8.34	*	*	*	4,719	*

Table 9: Summary of Discharges (continued)

Flooding Source	Location	Drainage Area (Square Miles)	Peak Discharge (cfs)				
			10% Annual Chance	4% Annual Chance	2% Annual Chance	1% Annual Chance	0.2% Annual Chance
Dry Branch	Approximately 3,850 feet upstream of the confluence of Cripple Creek	7.41	*	*	*	4,324	*
Dry Branch	Approximately 1.07 miles downstream of Woodbury Pike	6.73	*	*	*	4,024	*
Dry Branch	Approximately 4,490 feet downstream of Woodbury Pike	6.01	*	*	*	3,697	*
Dry Branch	Approximately 3,640 feet downstream of Woodbury Pike	4.88	*	*	*	3,166	*
Dry Branch	Approximately 530 feet upstream of Woodbury Pike	4.27	*	*	*	2,869	*
Dry Branch	Approximately 580 feet downstream of U.S. Highway 70S / John Bragg Highway	3.05	*	*	*	2,233	*
Dry Creek	At the confluence with Hurricane Creek #2	1.59	*	*	*	1,371	*
Dry Fork	At the confluence with Bradley Creek	10.47	*	*	*	5,590	*
Dry Fork	Approximately 690 feet downstream of Givens Road	9.55	*	*	*	5,222	*
Dry Fork	Just upstream of Givens Road	7.98	*	*	*	4,568	*
Dry Fork	Approximately 2,010 feet upstream of Givens Road	7.51	*	*	*	4,367	*
Dry Fork	Approximately 1.00 mile upstream of Givens Road	6.94	*	*	*	4,118	*

Table 9: Summary of Discharges (continued)

Flooding Source	Location	Drainage Area (Square Miles)	Peak Discharge (cfs)				
			10% Annual Chance	4% Annual Chance	2% Annual Chance	1% Annual Chance	0.2% Annual Chance
Dry Fork	Approximately 1.04 miles upstream of Givens Road	5.74	*	*	*	3,571	*
Dry Fork	Approximately 1.69 miles upstream of Givens Road	5.22	*	*	*	3,328	*
Dry Fork	Approximately 1.96 miles upstream of Givens Road	4.23	*	*	*	2,848	*
Dry Fork	Approximately 2.22 miles upstream of Givens Road	3.32	*	*	*	2,375	*
Dry Fork Creek	At the confluence with West Fork Stones River	11.36	*	*	*	5,941	*
Dry Fork Creek	Approximately 1.13 miles downstream of Rock Springs Midland Road	10.77	*	*	*	5,710	*
Dry Fork Creek	Approximately 1,110 feet upstream of Rock Springs Midland Road	9.83	*	*	*	5,333	*
Dry Fork Creek	Approximately 2,480 feet upstream of Rock Springs Midland Road	9.22	*	*	*	5,090	*
Dry Fork Creek	Approximately 2.27 miles downstream of Shelbyville Pike	8.40	*	*	*	4,748	*
Dry Fork Creek	Approximately 1.82 miles downstream of Shelbyville Pike	7.68	*	*	*	4,438	*
Dry Fork Creek	Approximately 2,750 feet downstream of Shelbyville Pike	5.70	*	*	*	3,556	*
Dry Fork Creek	Approximately 950 feet downstream of Shelbyville Pike	5.21	*	*	*	3,325	*

Table 9: Summary of Discharges (continued)

Flooding Source	Location	Drainage Area (Square Miles)	Peak Discharge (cfs)				
			10% Annual Chance	4% Annual Chance	2% Annual Chance	1% Annual Chance	0.2% Annual Chance
Dry Fork Creek	Approximately 2,010 feet downstream of Fosterville Road	4.58	*	*	*	3,020	*
Dry Fork Creek	Approximately 320 feet upstream of Brothers Road	3.67	*	*	*	2,559	*
East Branch Hurricane Creek	At the confluence with Hurricane Creek	5.20	1,750	*	2,600	3,300	4,500
East Branch Hurricane Creek	Approximately 630 feet upstream of Stone Ridge Parkway	2.11	1,130	*	1,650	1,870	2,380
East Fork Stones River	At the confluence with J. Percy Priest Reservoir and West Fork Stones River	314.00	23,700	30,700	36,000	41,600	55,500
East Fork Stones River	Approximately 3,170 feet downstream of Lebanon Pike	294.00	23,300	30,400	35,800	41,500	54,000
East Fork Stones River	At the confluence of Wades Branch	274.00	21,900	28,700	34,000	39,500	52,000
East Fork Stones River	Approximately 1.60 miles upstream of Betty Ford Road	253.00	20,800	27,500	32,700	38,000	49,000
East Fork Stones River	Approximately 5,020 feet upstream of the confluence of Bradley Creek	216.17	*	*	*	34,710	*
East Fork Stones River	Approximately 3.40 miles downstream of Guy James Road	215.25	*	*	*	34,632	*
East Fork Stones River	Approximately 3.01 miles downstream of Guy James Road	210.73	*	*	*	34,245	*
East Fork Stones River	Approximately 1.77 miles downstream of Guy James Road	209.77	*	*	*	34,163	*

Table 9: Summary of Discharges (continued)

Flooding Source	Location	Drainage Area (Square Miles)	Peak Discharge (cfs)				
			10% Annual Chance	4% Annual Chance	2% Annual Chance	1% Annual Chance	0.2% Annual Chance
East Fork Stones River	Approximately 1,060 feet downstream of Guy James Road	207.39	*	*	*	33,957	*
East Fork Stones River	Approximately 4,440 feet upstream of Guy James road	204.89	*	*	*	33,740	*
East Fork Stones River	Approximately 1.30 miles upstream of Guy James Road	156.29	*	*	*	29,238	*
East Fork Stones River	Approximately 1.60 miles downstream of Trimble Road	155.65	*	*	*	29,174	*
East Fork Stones River	Approximately 4,650 feet downstream of Trimble Road	153.62	*	*	*	28,972	*
East Fork Stones River	Approximately 740 feet upstream of Trimble Road	152.32	*	*	*	28,842	*
East Fork Stones River	Approximately 4,220 feet upstream of Trimble Road	147.83	*	*	*	28,389	*
East Fork Stones River	Approximately 2.11 miles downstream of Halls Hill Pike	146.88	*	*	*	28,292	*
East Fork Stones River	Approximately 1.41 miles downstream of Halls Hill Pike	146.13	*	*	*	28,216	*
East Fork Stones River	Approximately 1.07 miles downstream of Halls Hill Pike	145.31	*	*	*	28,133	*
East Fork Stones River	Approximately 530 feet downstream of Halls Hill Pike	133.76	*	*	*	26,927	*
East Fork Stones River	Approximately 2,960 feet upstream of Halls Hill Pike	128.56	*	*	*	26,368	*

Table 9: Summary of Discharges (continued)

Flooding Source	Location	Drainage Area (Square Miles)	Peak Discharge (cfs)				
			10% Annual Chance	4% Annual Chance	2% Annual Chance	1% Annual Chance	0.2% Annual Chance
East Fork Stones River	Approximately 4,960 feet upstream of Halls Hill Pike	127.20	*	*	*	26,220	*
East Fork Stones River	Approximately 4,440 feet downstream of Goochie Ford Road	125.70	*	*	*	26,055	*
East Fork Stones River	Approximately 2,220 feet downstream of Goochie Ford Road	124.35	*	*	*	25,907	*
East Fork Stones River	Approximately 530 feet upstream of Goochie Ford Road	123.88	*	*	*	25,855	*
East Fork Stones River Tributary 2	At the confluence with East Fork Stones River	1.37	729	928	1,078	1,228	1,576
East Fork Stones River Tributary 2	Approximately 480 feet downstream of North Lassiter Baker Road	1.20	658	839	976	1,112	1,428
East Fork Stones River Tributary 2	Approximately 460 feet upstream of North Lassiter Baker Road	1.02	583	744	866	987	1,269
East Fork Stones River Tributary 2	Approximately 1,600 feet upstream of North Lassiter Baker Road	0.69	434	556	648	739	952
Fall Creek	Approximately 1.44 miles downstream of Powells Chapel Road	60.29	*	*	*	17,665	*
Fall Creek	Approximately 3,330 feet downstream of Powells Chapel Road	59.59	*	*	*	17,556	*
Fall Creek	Approximately 2,320 feet downstream of Powells Chapel Road	58.60	*	*	*	17,401	*

Table 9: Summary of Discharges (continued)

Flooding Source	Location	Drainage Area (Square Miles)	Peak Discharge (cfs)				
			10% Annual Chance	4% Annual Chance	2% Annual Chance	1% Annual Chance	0.2% Annual Chance
Fall Creek	Just upstream of Powells Chapel Road	56.86	*	*	*	17,125	*
Fall Creek	Approximately 1.10 miles downstream of Fall Parkway	56.02	*	*	*	16,992	*
Fall Creek	Approximately 1,320 feet downstream of Fall Parkway	55.02	*	*	*	16,831	*
Fall Creek	Approximately 1,370 feet upstream of Fall Parkway	54.04	*	*	*	16,671	*
Fall Creek	Approximately 1.17 miles upstream of Fall Parkway	53.09	*	*	*	16,514	*
Finch Branch	Approximately 1.10 miles upstream of the confluence with Stewart Creek	5.08	2,100	*	3,150	3,620	4,300
Finch Branch	Approximately 2.04 miles upstream of the confluence with Stewart Creek	4.30	1,900	*	2,800	3,200	3,680
Finch Branch	Approximately 50 feet downstream of Mercury Drive	3.49	1,600	*	2,400	2,760	3,100
Finch Branch	Approximately 1,000 feet upstream of Minerva Drive	3.01	1,190	*	1,780	2,050	2,200
Finch Branch	Approximately 1,110 feet upstream of Taylor Drive	1.94	1,051	*	1,570	1,800	2,350
Finch Branch	Approximately 1,060 feet downstream of Jefferson Pike	1.53	*	*	*	1,336	*
Finch Branch	Approximately 580 feet upstream of Old Nashville Highway	0.57	*	*	*	642	*

Table 9: Summary of Discharges (continued)

Flooding Source	Location	Drainage Area (Square Miles)	Peak Discharge (cfs)				
			10% Annual Chance	4% Annual Chance	2% Annual Chance	1% Annual Chance	0.2% Annual Chance
Harpeth River	Approximately 3,000 feet downstream of Bellenfant Road / College Grove Road[3,4]	39.04	3,720	4,490	5,060	5,780	7,490
Harpeth River	Approximately 1,630 feet downstream of Bellenfant Road / College Grove Road[3,4]	37.19	2,260	2,730	3,080	3,520	4,610
Harpeth River	Approximately 2,000 feet downstream of Bellenfant Road / College Grove Road[3]	32.15	*	*	*	12,666	*
Harpeth River	Approximately 1,580 feet upstream of Bellenfant Road / College Grove Road	31.87	*	*	*	12,608	*
Harpeth River	Approximately 4,280 feet upstream of Bellenfant Road / College Grove Road	31.65	*	*	*	12,562	*
Harpeth River	Approximately 1.14 miles downstream of U.S. Highway 41A North	31.17	*	*	*	12,462	*
Harpeth River	Approximately 1,950 feet downstream of U.S. Highway 41A North	28.52	*	*	*	11,797	*
Harpeth River	Approximately 790 feet upstream of U.S. Highway 41A North	26.79	*	*	*	11,258	*
Harpeth River	Approximately 1,530 feet upstream of U.S. Highway 41A North	26.76	*	*	*	11,249	*
Harpeth River	Approximately 2,640 feet upstream U.S. Highway 41A North	25.93	*	*	*	10,988	*

Table 9: Summary of Discharges (continued)

Flooding Source	Location	Drainage Area (Square Miles)	Peak Discharge (cfs)				
			10% Annual Chance	4% Annual Chance	2% Annual Chance	1% Annual Chance	0.2% Annual Chance
Harpeth River	Approximately 2,270 feet downstream of Shoemaker Road	23.74	*	*	*	10,291	*
Harpeth River	Approximately 3,430 feet upstream of Shoemaker Road	17.59	*	*	*	8,228	*
Harpeth River	Approximately 1,430 feet downstream of Little Rock Road	16.03	*	*	*	7,680	*
Harpeth River	Approximately 1,320 feet upstream of Swamp Road	14.16	*	*	*	7,002	*
Harts Branch	At the confluence with Stewart Creek	10.99	3,473	4,329	4,980	5,629	7,094
Harts Branch	Approximately 1,660 feet downstream of Mapleview Street	10.16	3,280	4,093	4,712	5,327	6,719
Harts Branch	Approximately 250 feet downstream of Highland Avenue	9.40	3,098	3,868	4,456	5,039	6,359
Henry Creek	At the confluence with Short Creek	2.22	*	*	*	1,762	*
Henry Creek	Approximately 630 feet upstream of Christiana Road	2.00	*	*	*	1,632	*
Henry Creek	Approximately 2,060 feet upstream of Sims Road	1.01	*	*	*	980	*
Hurricane Creek	Approximately 1,584 feet upstream of the confluence of J. Percy Priest Reservoir	14.60	9,545	10,945	12,250	13,555	16,750
Hurricane Creek	Approximately 4,752 feet downstream of U.S. Highway 41 / Murfreesboro Road	13.48	9,040	10,285	11,480	12,645	15,515

Table 9: Summary of Discharges (continued)

Flooding Source	Location	Drainage Area (Square Miles)	Peak Discharge (cfs)				
			10% Annual Chance	4% Annual Chance	2% Annual Chance	1% Annual Chance	0.2% Annual Chance
Hurricane Creek	Approximately 2,640 feet downstream of U.S. Highway 41 / Murfreesboro Road	12.90	8,790	9,950	11,060	12,165	15,030
Hurricane Creek	Approximately 370 feet downstream of U.S. Highway 41 / Murfreesboro Road	11.00	7,780	8,395	9,255	10,075	12,245
Hurricane Creek	Approximately 900 feet upstream of the confluence of Holloway Branch	9.93	7,465	7,795	8,535	9,315	11,345
Hurricane Creek	At the confluence of East Branch Hurricane Creek	7.60	6,250	6,725	7,445	8,280	10,420
Hurricane Creek	Approximately 1,000 feet upstream of the confluence of East Branch Hurricane Creek	2.74	1,890	2,095	2,250	2,405	2,725
Hurricane Creek #2	At the confluence with Middle Fork Stones River	13.02	*	*	*	6,579	*
Hurricane Creek #2	Approximately 845 feet upstream of Interstate Highway 24	12.88	*	*	*	6,525	*
Hurricane Creek #2	Approximately 2,530 feet upstream of Manchester Pike	9.90	*	*	*	5,364	*
Hurricane Creek #2	Approximately 3,430 feet downstream of Cobb Road	9.33	*	*	*	5,130	*
Hurricane Creek #2	Approximately 1,950 feet downstream of Cobb Road	8.66	*	*	*	4,852	*
Hurricane Creek #2	Approximately 950 feet upstream of Cobb Road	7.98	*	*	*	4,569	*

Table 9: Summary of Discharges (continued)

Flooding Source	Location	Drainage Area (Square Miles)	Peak Discharge (cfs)				
			10% Annual Chance	4% Annual Chance	2% Annual Chance	1% Annual Chance	0.2% Annual Chance
Hurricane Creek #2	Approximately 370 feet upstream of the confluence of Dry Creek	5.46	*	*	*	3,440	*
Kelly Creek	At the confluence with Harpeth River	7.23	*	*	*	4,242	*
Kelly Creek	Approximately 900 feet downstream of State Highway 99	2.99	*	*	*	2,196	*
Kelly Creek	Approximately 1,000 feet downstream of South Main Street	2.30	*	*	*	1,808	*
Kelly Creek	Approximately 1,370 feet downstream of Floyd Road	1.43	*	*	*	1,267	*
Lees Spring Branch	At the confluence with Lytle Creek	3.29	1,543	2,018	2,407	2,820	3,584
Lees Spring Branch	Approximately 2,570 feet upstream of confluence with Lytle Creek	2.92	1,506	1,962	2,336	2,733	3,472
Lees Spring Branch	Approximately 35 feet upstream of Dilton Mankin Road	2.88	1,489	1,949	2,321	2,708	3,442
Lees Spring Branch	Approximately 1,940 feet upstream of Dilton Mankin Road	2.66	1,206	1,586	1,886	2,192	2,788
Lees Spring Branch	Approximately 4,740 feet upstream of Dilton Mankin Road	1.96	1,153	1,526	1,802	2,095	2,663
Lees Spring Branch	Approximately 20 feet downstream of the confluence of Unnamed Tributary to Lees Spring Branch	1.89	859	1,082	1,259	1,445	1,815

Table 9: Summary of Discharges (continued)

Flooding Source	Location	Drainage Area (Square Miles)	Peak Discharge (cfs)				
			10% Annual Chance	4% Annual Chance	2% Annual Chance	1% Annual Chance	0.2% Annual Chance
Lees Spring Branch	Approximately 1,040 feet upstream of the confluence of Unnamed Tributary to Lees Spring Branch	1.18	126	160	186	215	270
Long Creek	At the confluence with Middle Fork Stones River	11.78	*	*	*	6,104	*
Long Creek	Approximately 3,850 feet downstream of Rucker Road	11.57	*	*	*	6,022	*
Long Creek	Approximately 3,380 feet downstream of Rucker Road	9.98	*	*	*	5,397	*
Long Creek	Approximately 1,800 feet upstream of Rucker Road	9.44	*	*	*	5,177	*
Long Creek	Approximately 5,020 feet upstream of Rucker Road	7.63	*	*	*	4,417	*
Lytle Creek	At the confluence with West Fork Stones River	26.29	3,313	4,461	5,415	6,454	9,249
Lytle Creek	Approximately 1,400 feet downstream of State Highway 96 / Old Fort Parkway	24.79	3,162	4,258	5,170	6,163	8,833
Lytle Creek	Approximately 650 feet upstream of Northwest Broad Street	18.23	2,478	3,341	4,060	4,841	6,947
Lytle Creek	At Middle Tennessee Boulevard	17.49	2,398	3,234	3,931	4,687	6,727
Lytle Creek	Approximately 600 feet upstream of U.S. Highway 41 / Manchester Pike	14.22	2,035	2,746	3,340	3,984	5,722
Lytle Creek	Approximately 2,050 feet upstream of .South Highway 41 / Manchester Pike	11.04	1,666	2,250	2,739	3,267	4,698

Table 9: Summary of Discharges (continued)

Flooding Source	Location	Drainage Area (Square Miles)	Peak Discharge (cfs)				
			10% Annual Chance	4% Annual Chance	2% Annual Chance	1% Annual Chance	0.2% Annual Chance
Lytle Creek	Approximately 1.00 mile downstream of Dilton Mankin Road	7.95	1,283	1,735	2,114	2,523	3,632
Lytle Creek	Approximately 850 feet downstream of Dilton Mankin Road	6.76	1,129	1,528	1,863	2,223	3,203
Lytle Creek	Just upstream of Homewood Drive	4.89	873	1,183	1,444	1,724	2,487
Lytle Creek	Approximately 2,690 feet upstream of Homewood Drive	4.66	*	*	*	3,059	*
Lytle Creek	Approximately 1.32 miles downstream of Cedar Grove Road	4.02	*	*	*	2,739	*
Lytle Creek	Approximately 3,330 feet downstream of Cedar Grove Road	3.58	*	*	*	2,512	*
Lytle Creek	Approximately 2,220 feet downstream of Cedar Grove Road	1.49	*	*	*	1,311	*
Lytle Creek Overflow	At the confluence with Lytle Creek	N/A	230	440	627	910	1,565
McElroy Branch	At the confluence with Cripple Creek	12.06	*	*	*	6,214	*
McElroy Branch	Approximately 4,170 feet downstream of Murray Kittrell Road	11.76	*	*	*	6,096	*
McElroy Branch	Approximately 1,850 feet downstream of Murray Kittrell Road	10.88	*	*	*	5,754	*
McElroy Branch	Just above the confluence of Murray Branch	3.18	*	*	*	2,303	*

Table 9: Summary of Discharges (continued)

Flooding Source	Location	Drainage Area (Square Miles)	Peak Discharge (cfs)				
			10% Annual Chance	4% Annual Chance	2% Annual Chance	1% Annual Chance	0.2% Annual Chance
McKnight Branch	At the confluence with East Fork Stones River	10.93	*	*	*	5,773	*
McKnight Branch	At Trimble Road	10.39	*	*	*	5,559	*
McKnight Branch	Approximately 2,110 upstream of Private Drive	7.29	*	*	*	4,271	*
McKnight Branch	At the confluence of Northcutt Branch	4.10	1,681	2,122	2,452	2,783	3,548
McKnight Branch	At the confluence of McKnight Branch Tributary	2.54	1,168	1,481	1,715	1,949	2,492
McKnight Branch Tributary	At the confluence with McKnight Branch	1.48	775	986	1,145	1,304	1,672
Middle Fork Stones River	Approximately 530 feet upstream the confluence with West Fork Stones River	66.80	15,900	*	26,000	31,200	46,100
Middle Fork Stones River	Approximately 3,850 feet upstream of Elam Mill Road	44.30	10,700	*	17,500	21,000	31,000
Middle Fork Stones River	Approximately 1.45 miles downstream of Epps Mill Road	37.53	*	*	*	13,747	*
Middle Fork Stones River	Approximately 3,060 feet downstream of Epps Mill Road	24.02	*	*	*	10,380	*
Middle Fork Stones River	Approximately 1,370 feet downstream of Epps Mill Road	21.51	*	*	*	9,560	*
Middle Fork Stones River	At Sledge Road	16.18	*	*	*	7,733	*
Middle Fork Stones River	At Miller Road	13.75	*	*	*	6,849	*
Middle Fork Stones River	Approximately 4,910 feet upstream of Miller Road	12.31	*	*	*	6,306	*

Table 9: Summary of Discharges (continued)

Flooding Source	Location	Drainage Area (Square Miles)	Peak Discharge (cfs)				
			10% Annual Chance	4% Annual Chance	2% Annual Chance	1% Annual Chance	0.2% Annual Chance
Middle Fork Stones River	Approximately 1.42 miles upstream of Miller Road	11.77	*	*	*	6,100	*
Middle Fork Stones River	Approximately 4,010 feet upstream of Interstate Highway 24	10.86	*	*	*	5,747	*
Middle Fork Stones River	Immediately downstream of Hoovers Gap Frontage Road	6.57	*	*	*	3,952	*
Middle Fork Stones River	Approximately 1,900 feet upstream of Hoovers Gap Frontage Road	6.00	*	*	*	3,693	*
Middle Fork Stones River	Approximately 1,210 feet upstream of Hoovers Gap Frontage Road	3.95	*	*	*	2,703	*
Murray Branch	At the confluence with McElroy Branch	6.70	*	*	*	4,009	*
Murray Branch	Approximately 740 feet upstream of Floraton Road	5.50	*	*	*	3,463	*
Murray Branch	Approximately 580 feet upstream of confluence of Unnamed Tributary 052	3.15	*	*	*	2,290	*
Murray Branch	Approximately 370 feet upstream of confluence of Unnamed Tributary 126	1.09	*	*	*	1,036	*
Olive Branch	At the confluence with Stewart Creek	7.31	2,746	*	4,133	4,749	6,227
Olive Branch	Approximately 2,400 feet upstream of Interstate Highway 24	6.54	2,548	*	3,836	4,409	5,784
Olive Branch	Approximately 900 feet downstream of Rosewood Drive	5.98	2,398	*	3,612	4,153	5,449

Table 9: Summary of Discharges (continued)

Flooding Source	Location	Drainage Area (Square Miles)	Peak Discharge (cfs)				
			10% Annual Chance	4% Annual Chance	2% Annual Chance	1% Annual Chance	0.2% Annual Chance
Olive Branch	Approximately 650 feet upstream of Rosewood Drive	5.55	2,281	*	3,436	3,951	5,186
Olive Branch	At Lee Road	4.06	1,847	*	2,786	3,205	4,213
Olive Branch	Approximately 3,010 feet upstream of Rocky Ford Road	3.14	*	*	*	2,280	*
Olive Branch	Approximately 2.10 miles upstream of Rocky Ford Road	1.88	*	*	*	1,556	*
Overall Creek	At the confluence with West Fork Stones River	59.47	11,332	*	16,910	19,352	25,161
Overall Creek	Approximately 150 feet downstream of U.S. Highway 41 (northbound)	59.15	11,292	*	16,860	19,283	25,072
Overall Creek	Approximately 100 feet downstream of Old Nashville Highway	58.78	11,243	*	16,778	19,201	24,966
Overall Creek	Approximately 2,100 feet upstream of Old Nashville Highway	58.43	11,198	*	16,710	19,124	24,867
Overall Creek	Approximately 4,220 feet upstream of Old Nashville Highway	57.90	11,130	*	16,610	19,009	24,719
Overall Creek	Approximately 2,100 feet downstream of Asbury Road	57.25	11,046	*	16,484	18,866	24,533
Overall Creek	Approximately 100 feet downstream of Asbury Road	51.71	10,310	*	15,393	17,621	22,923
Overall Creek	Approximately 4,220 feet upstream of Asbury Road	50.84	10,194	*	15,220	17,423	22,668

Table 9: Summary of Discharges (continued)

Flooding Source	Location	Drainage Area (Square Miles)	Peak Discharge (cfs)				
			10% Annual Chance	4% Annual Chance	2% Annual Chance	1% Annual Chance	0.2% Annual Chance
Overall Creek	Approximately 100 feet downstream of Interstate Highway 24	50.23	10,111	*	15,097	17,283	22,486
Overall Creek	Approximately 470 feet downstream of Manson Pike	49.73	10,042	*	14,995	17,166	22,335
Overall Creek	Approximately 2,400 feet upstream of Manson Pike	33.23	7,646	*	11,436	13,103	17,076
Overall Creek	Approximately 1,000 feet upstream of Brinkley Road	27.48	6,725	*	10,066	11,538	15,048
Overall Creek	Approximately 3,700 feet upstream of Brinkley Road	26.83	6,617	*	9,906	11,354	14,810
Overall Creek	Approximately 580 feet downstream of Windrow Road	4.70	*	*	*	3,078	*
Overall Creek	Approximately 2,850 feet upstream of Windrow Road	4.03	*	*	*	2,749	*
Overall Creek	Approximately 3,960 feet upstream of Windrow Road	2.69	*	*	*	2,031	*
Overall Creek	Approximately 1.08 miles upstream of Windrow Road	2.23	*	*	*	1,769	*
Overall Creek	Approximately 1.88 miles upstream of Windrow Road	1.40	*	*	*	1,254	*
Panther Creek	At the confluence with West Fork Stones River	6.36	*	*	*	3,855	*
Panther Creek	Approximately 4,750 feet downstream of Midland Road	6.11	*	*	*	3,744	*
Panther Creek	Approximately 2,900 feet downstream of Midland Road	5.14	*	*	*	3,289	*

Table 9: Summary of Discharges (continued)

Flooding Source	Location	Drainage Area (Square Miles)	Peak Discharge (cfs)				
			10% Annual Chance	4% Annual Chance	2% Annual Chance	1% Annual Chance	0.2% Annual Chance
Panther Creek	Approximately 2,590 feet upstream of Midland Road	3.38	*	*	*	2,409	*
Panther Creek	Approximately 1.40 miles upstream of Midland Road	2.58	*	*	*	1,968	*
Panther Creek	Approximately 2.10 miles upstream of Midland Road	1.80	*	*	*	1,507	*
Puckett Creek	Approximately 530 feet upstream of the confluence with Overall Creek	23.8	6,450	*	9,600	11,000	14,400
Puckett Creek	Just downstream of the confluence of Armstrong Branch	23.65	*	*	*	10,261	*
Puckett Creek	Approximately 250 feet upstream of Old Salem Road	11.01	*	*	*	5,804	*
Puckett Creek	Approximately 1,160 feet upstream of Old Salem Road	10.23	*	*	*	5,495	*
Reed Creek	At the confluence with Cripple Creek	6.03	*	*	*	3,705	*
Reed Creek	Approximately 1.00 mile downstream O Ferrell Hollow Road	5.20	*	*	*	3,321	*
Reed Creek	Approximately 1,740 feet upstream of O Ferrell Hollow Road	4.26	*	*	*	2,863	*
Reed Creek	Approximately 1,060 feet upstream of Bradyville Pike	3.28	*	*	*	2,353	*
Reed Creek	Approximately 1.08 miles upstream of Bradyville Pike	2.29	*	*	*	1,799	*

Table 9: Summary of Discharges (continued)

Flooding Source	Location	Drainage Area (Square Miles)	Peak Discharge (cfs)				
			10% Annual Chance	4% Annual Chance	2% Annual Chance	1% Annual Chance	0.2% Annual Chance
Rock Spring Branch	At the confluence with Harts Branch	7.76	2,700	3,380	3,899	4,414	5,581
Rock Spring Branch	Approximately 1,750 feet downstream of Old Nashville Highway	7.45	2,616	3,274	3,778	4,277	5,409
Rock Spring Branch	Approximately 1,540 feet downstream of Interstate Highway 24	6.43	2,329	2,917	3,368	3,814	4,826
Rock Spring Branch	Approximately 1,850 feet downstream of Interstate Highway 24	4.65	1,830	2,298	2,659	3,014	3,824
Rock Spring Branch	Approximately 2,900 feet upstream of Interstate Highway 24	3.26	1,389	1,748	2,026	2,298	2,921
Rock Spring Branch	Approximately 900 feet upstream of Rock Springs Road	1.83	897	1,134	1,319	1,498	1,912
Rock Spring Branch	Approximately 900 feet downstream of Rock Springs Road	0.78	476	607	710	810	1,041
Rocky Fork Creek	At the confluence with Stewart Creek	6.65	*	*	*	3,988	*
Rocky Fork Creek	Approximately 1,800 feet downstream of Morton Lane	5.89	*	*	*	3,644	*
Rocky Fork Creek	Approximately 2,160 feet upstream of Morton Lane	5.09	*	*	*	3,266	*
Rocky Fork Creek	Just downstream of Rocky Fork / Almaville Road	4.12	*	*	*	2,792	*
Rocky Fork Creek	Approximately 845 feet upstream of Laddie Lane	3.18	*	*	*	2,300	*

Table 9: Summary of Discharges (continued)

Flooding Source	Location	Drainage Area (Square Miles)	Peak Discharge (cfs)				
			10% Annual Chance	4% Annual Chance	2% Annual Chance	1% Annual Chance	0.2% Annual Chance
Short Creek	At the confluence with Long Creek	7.00	*	*	*	4,142	*
Short Creek	Approximately 1.18 miles upstream of Miller Johnson Road	4.18	*	*	*	2,823	*
Short Creek	Approximately 740 feet upstream of Bell Buckle Road	3.53	*	*	*	2,488	
Short Creek	Approximately 370 feet upstream of Short Creek Road	2.57	*	*	*	1,963	*
Short Creek	Approximately 2,110 feet upstream of Millersburg Road	1.59	*	*	*	1,376	*
Sinking Creek	At the confluence with West Fork Stones River	5.80	1,400	*	1,875	2,225	2,600
Stewart Creek	Approximately 4.80 miles downstream of Sam Ridley Parkway East	78.87[2]	9,474	12,475	14,818	17,130	22,637
Stewart Creek	Approximately 4.00 miles downstream of Sam Ridley Parkway East	73.45[2]	8,572	11,477	13,777	16,063	21,426
Stewart Creek	Approximately 3.30 miles downstream of Sam Ridley Parkway East	72.73[2]	8,503	11,414	13,777	16,063	21,468
Stewart Creek	Approximately 2.97 miles downstream of Sam Ridley Parkway East	70.15[2]	8,092	10,958	13,251	15,547	20,913
Stewart Creek	At Sam Ridley Parkway	68.75[2]	8,116	10,974	13,267	15,570	20,999
Stewart Creek	Just upstream of the confluence of Harts Branch	57.33	8,144	10,869	13,029	15,182	20,277

Table 9: Summary of Discharges (continued)

Flooding Source	Location	Drainage Area (Square Miles)	Peak Discharge (cfs)				
			10% Annual Chance	4% Annual Chance	2% Annual Chance	1% Annual Chance	0.2% Annual Chance
Stewart Creek	Approximately 2,000 feet downstream of Enon Springs East	55.67	8,153	10,823	12,928	15,019	19,982
Stewart Creek	Approximately 2,800 feet upstream of South Lowry Street	53.97	8,218	10,854	12,928	14,989	19,925
Stewart Creek	Approximately 4,300 feet downstream of Old Nashville Highway	52.37	8,210	10,791	12,810	14,810	19,608
Stewart Creek	Approximately 2,300 feet downstream of Old Nashville Highway	51.86	8,176	10,728	12,718	14,682	19,385
Stewart Creek	Approximately 800 feet upstream of Lee Victory Parkway	51.07	8,173	10,698	12,662	14,599	19,242
Stewart Creek	Approximately 3,500 feet upstream of Lee Victory Parkway	49.42	8,186	10,665	12,585	14,475	19,032
Stewart Creek	Approximately 1.97 miles downstream of U.S. Highway 41 / Murfreesboro Road	48.11	8,175	10,611	12,490	14,336	18,796
Stewart Creek	Approximately 1.42 miles downstream of U.S. Highway 41 / Murfreesboro Road	40.49	7,956	10,088	11,681	13,216	16,992
Stewart Creek	Approximately 1.07 miles downstream of U.S. Highway 41 / Murfreesboro Road	39.97	7,944	10,088	11,681	13,216	16,992
Stewart Creek	Approximately 2,800 feet upstream of U.S. Highway 41 / Murfreesboro Road	39.21	7,958	10,088	11,681	13,216	16,992

Table 9: Summary of Discharges (continued)

Flooding Source	Location	Drainage Area (Square Miles)	Peak Discharge (cfs)				
			10% Annual Chance	4% Annual Chance	2% Annual Chance	1% Annual Chance	0.2% Annual Chance
Stewart Creek	Approximately 1.19 miles upstream of U.S. Highway 41 / Murfreesboro Road	38.28	7,935	10,037	11,605	13,113	16,837
Stewart Creek	Approximately 1.23 miles upstream of U.S. Highway 41 / Murfreesboro Road	34.57	7,732	9,691	11,130	12,498	15,892
Stewart Creek	Approximately 2.97 miles downstream of Burnt Knob Road	26.81	6,710	8,295	9,482	10,680	13,363
Stewart Creek	Approximately 2.58 miles downstream of Burnt Knob Road	25.83	6,572	8,133	9,304	10,485	13,129
Stewart Creek	Approximately 2.06 miles downstream of Burnt Knob Road	25.30	6,528	8,087	9,259	10,439	13,083
Stewart Creek	Approximately 1.90 miles downstream of Burnt Knob Road	24.54	6,351	7,866	9,005	10,151	12,720
Stewart Creek	Approximately 1.60 miles downstream of Burnt Knob Road	24.12	6,295	7,801	8,934	10,075	12,630
Stewart Creek	Approximately 1.00 mile downstream of Burnt Knob Road	23.43	6,185	7,669	8,787	9,912	12,432
Stewart Creek	Approximately 3,500 feet downstream of Burnt Knob Road	21.94	5,890	7,308	8,377	9,452	11,861
Stewart Creek	Approximately 2,500 feet downstream of Burnt Knob Road	20.58	5,599	6,949	7,967	8,990	11,285

Table 9: Summary of Discharges (continued)

Flooding Source	Location	Drainage Area (Square Miles)	Peak Discharge (cfs)				
			10% Annual Chance	4% Annual Chance	2% Annual Chance	1% Annual Chance	0.2% Annual Chance
Stewart Creek	Approximately 600 feet upstream of Burnt Knob Road	18.02	5,025	6,238	7,153	8,071	10,134
Stewart Creek	Approximately 1,600 feet upstream of Burnt Knob Road	7.75	2,785	3,497	4,045	4,586	5,814
Stewart Creek	Approximately 1.30 miles downstream of Almaville Road	5.06	2,011	2,532	2,935	3,332	4,234
Stinking Creek	Approximately 1,370 feet downstream of Hollandale Road	1.01	*	*	*	978	*
Stinking Creek	Approximately 2,800 feet upstream of Hollandale Road	0.49	*	*	*	573	*
Unnamed Tributary 007	At the confluence with McKnight Branch	2.51	*	*	*	1,929	*
Unnamed Tributary 007	Approximately 4,800 upstream of the confluence with McKnight Branch	1.41	*	*	*	1,28	*
Unnamed Tributary 009	At the confluence with Wades Branch	6.06	*	*	*	3,723	*
Unnamed Tributary 009	Approximately 2,430 feet upstream of Lane Road	2.36	*	*	*	1,842	*
Unnamed Tributary 011	At the confluence with Unnamed Tributary 009	3.23	*	*	*	2,329	*
Unnamed Tributary 011	Approximately 1,740 feet upstream of Dunaway Chapel Road	1.84	*	*	*	1,530	*
Unnamed Tributary 014	At the confluence with Stewart Creek	9.36	*	*	*	5,145	*

Table 9: Summary of Discharges (continued)

Flooding Source	Location	Drainage Area (Square Miles)	Peak Discharge (cfs)				
			10% Annual Chance	4% Annual Chance	2% Annual Chance	1% Annual Chance	0.2% Annual Chance
Unnamed Tributary 014	Approximately 1,370 feet upstream of the confluence with Stewart Creek	9.31	*	*	*	5,122	*
Unnamed Tributary 014	Approximately 1,950 feet upstream of the confluence with Stewart Creek	2.78	*	*	*	2,079	*
Unnamed Tributary 014	Approximately 845 feet downstream of Ocala Road	2.13	*	*	*	1,707	*
Unnamed Tributary 014	Just downstream of Old Almaville Road	1.21	*	*	*	1,144	*
Unnamed Tributary 018	At the confluence with Cripple Creek	2.52	*	*	*	1,940	*
Unnamed Tributary 026	At the confluence with Stewart Creek	0.73	*	*	*	770	*
Unnamed Tributary 028	At the confluence with Stewart Creek	1.38	*	*	*	1,234	*
Unnamed Tributary 028	Approximately 1,060 feet upstream of Private Drive	0.54	*	*	*	617	*
Unnamed Tributary 046	At the confluence with Harpeth River	0.75	*	*	*	784	*
Unnamed Tributary 047	At the confluence with Harpeth River	1.76	*	*	*	1,482	*
Unnamed Tributary 047	Approximately 3,120 feet upstream of Rocky Glade Road	1.00	*	*	*	975	*
Unnamed Tributary 049	Approximately 3,010 feet downstream of North US Highway 41A / Shelbyville Road	1.86	*	*	*	1,542	*
Unnamed Tributary 051	At the confluence with Unnamed Tributary 052	0.83	*	*	*	851	*

Table 9: Summary of Discharges (continued)

Flooding Source	Location	Drainage Area (Square Miles)	Peak Discharge (cfs)				
			10% Annual Chance	4% Annual Chance	2% Annual Chance	1% Annual Chance	0.2% Annual Chance
Unnamed Tributary 052	At the confluence with Murray Branch	2.16	*	*	*	1,725	*
Unnamed Tributary 052	Approximately 690 feet downstream of Manus Road	1.09	*	*	*	1,037	*
Unnamed Tributary 055	At the confluence with Middle Fork Stones River	4.58	*	*	*	3,019	*
Unnamed Tributary 055	Approximately 2,800 feet upstream of Sledge Road	2.59	*	*	*	1,977	*
Unnamed Tributary 055	Approximately 690 feet downstream of Christiana Hoovers Gap Road	1.53	*	*	*	1,335	*
Unnamed Tributary 056	At the confluence with Unnamed Tributary 055	1.21	*	*	*	1,118	*
Unnamed Tributary 056	Approximately 630 feet upstream of Christiana Hoovers Gap Road	1.07	*	*	*	1,020	*
Unnamed Tributary 057	At the confluence with Unnamed Tributary 055	0.92	*	*	*	915	*
Unnamed Tributary 058	At the confluence with Middle Fork Stones River	1.58	*	*	*	1,623	*
Unnamed Tributary 069	At the confluence with Harpeth River	1.51	*	*	*	1,323	*
Unnamed Tributary 069	Approximately 1,530 feet upstream of Swamp Road	1.22	*	*	*	1,128	*
Unnamed Tributary 081	At the confluence with Long Creek	1.22	*	*	*	1,133	*
Unnamed Tributary 081	Approximately 950 feet upstream of Miller Johnson Road	1.17	*	*	*	1,094	*
Unnamed Tributary 092	At the confluence with Panther Creek	1.43	*	*	*	1,272	*

Table 9: Summary of Discharges (continued)

Flooding Source	Location	Drainage Area (Square Miles)	Peak Discharge (cfs)				
			10% Annual Chance	4% Annual Chance	2% Annual Chance	1% Annual Chance	0.2% Annual Chance
Unnamed Tributary 116	At the confluence with Hurricane Creek #2	1.99	*	*	*	1,621	*
Unnamed Tributary 116	Approximately 4,010 feet upstream of Jacobs Road	1.00	*	*	*	973	*
Unnamed Tributary 118	At the confluence with Hurricane Creek #2	0.70	*	*	*	750	*
Unnamed Tributary 119	At the confluence with Big Springs Creek and Hurricane Creek #2	0.36	*	*	*	458	*
Unnamed Tributary 124	At the confluence with Murray Branch	0.72	*	*	*	765	*
Unnamed Tributary 126	At the confluence with Murray Branch	1.56	*	*	*	1,357	*
Unnamed Tributary 133	At the confluence with East Fork Stones River	1.38	*	*	*	1,239	*
Unnamed Tributary 141	At the confluence with Stewart Creek	1.20	*	*	*	1,113	*
Unnamed Tributary 143	At the confluence with Stewart Creek	2.30	*	*	*	1,808	*
Unnamed Tributary 143	Approximately 4,860 feet upstream of Almaville Road	1.65	*	*	*	1,414	*
Unnamed Tributary 144	At the confluence with Stewart Creek	2.46	*	*	*	1,901	*
Unnamed Tributary 144	Approximately 1.62 miles upstream of Almaville Road	1.27	*	*	*	1,161	*
Unnamed Tributary 150	At the confluence with Christmas Creek	1.49	*	*	*	1,307	*
Unnamed Tributary 177	At the confluence with Harpeth River	1.68	*	*	*	1,431	*

Table 9: Summary of Discharges (continued)

Flooding Source	Location	Drainage Area (Square Miles)	Peak Discharge (cfs)				
			10% Annual Chance	4% Annual Chance	2% Annual Chance	1% Annual Chance	0.2% Annual Chance
Unnamed Tributary 179	At the confluence with Harpeth River	0.48	*	*	*	564	*
Unnamed Tributary 182	At the confluence with Finch Branch	0.86	*	*	*	870	*
Unnamed Tributary 183	At the confluence with Finch Branch	0.55	*	*	*	622	*
Unnamed Tributary 184	At the confluence with Stewart Creek	0.73	*	*	*	770	*
Unnamed Tributary 185	At the confluence with Cheatham Branch	0.31	*	*	*	401	*
Unnamed Tributary to Kelly Creek	At the confluence with Kelly Creek	3.24	*	*	*	2,332	*
Unnamed Tributary to Lees Spring Branch	At the confluence with Lees Spring Branch	0.49	435	546	634	727	912
Unnamed Tributary to West Fork Stones River	Approximately 530 feet upstream of the confluence with West Fork Stones River	4.80	2,030	*	3,032	3,485	4,539
Unnamed Tributary to West Fork Stones River	Approximately 530 feet upstream of State Highway 99	3.20	1,513	*	2,262	2,602	3,383
Unnamed Tributary to West Fork Stones River	At the confluence with West Fork Stones River	4.70	*	*	*	974	*
Wades Branch	Approximately 110 feet upstream of the confluence with East Fork Stones River	10.40	3,540	*	5,270	6,060	7,920
Wades Branch	At the confluence of West Fork Stones River	1.76	*	*	*	1,481	*
West Fork Stones River	At Sulphur Springs Road	238.05	33,470	*	51,887	58,976	82,800

Table 9: Summary of Discharges (continued)

Flooding Source	Location	Drainage Area (Square Miles)	Peak Discharge (cfs)				
			10% Annual Chance	4% Annual Chance	2% Annual Chance	1% Annual Chance	0.2% Annual Chance
West Fork Stones River	Approximately 740 feet downstream of the confluence of Overall Creek	226.24	32,906	*	51,071	58,126	81,688
West Fork Stones River	At the confluence of Overall Creek	174.27	28,469	*	44,027	50,749	71,233
West Fork Stones River	Approximately 2.97 miles downstream of Thompson Lane	170.02	28,293	*	43,776	50,490	70,899
West Fork Stones River	Approximately 1.84 miles downstream of Thompson Lane	165.36	27,889	*	42,985	49,648	69,528
West Fork Stones River	At Old Nashville Highway	159.46	27,580	*	42,503	49,147	68,829
West Fork Stones River	Approximately 2,800 feet upstream of Mason Drive	139.10	25,699	*	39,729	46,091	64,724
West Fork Stones River	Approximately 4,750 feet downstream of State Highway 96	136.53	25,587	*	39,546	45,899	64,445
West Fork Stones River	At Interstate Highway 24	132.55	25,305	*	39,071	45,417	63,732
West Fork Stones River	At State Highway 99 (USGS Gage ID 03428000 near Murfreesboro, TN)	127.95	25,036	*	38,509	44,933	62,984
West Fork Stones River	Approximately 2,220 feet downstream of the confluence of Middle Fork Stones River	126.80	24,969	*	38,468	44,813	62,798
West Fork Stones River	Just upstream of the confluence of Middle Fork Stones River	59.42	9,872	*	15,294	17,751	24,911

Table 9: Summary of Discharges (continued)

Flooding Source	Location	Drainage Area (Square Miles)	Peak Discharge (cfs)				
			10% Annual Chance	4% Annual Chance	2% Annual Chance	1% Annual Chance	0.2% Annual Chance
West Fork Stones River	Approximately 1.62 miles upstream of Barfield Crescent Road	47.70	8,860	*	13,685	16,386	23,076
West Fork Stones River	At the confluence of Christmas Creek	36.83	6,687	*	10,244	11,509	15,996
West Fork Stones River	Approximately 4,650 feet downstream of Stones River Road	36.15	6,623	*	10,143	11,422	15,875
West Fork Stones River	Approximately 3,640 feet downstream of Stones River Road	30.13	6,018	*	9,024	10,675	14,871
West Fork Stones River	Approximately 357 feet downstream of Walnut Grove Road	14.97	*	*	*	7,298	*
West Fork Stones River	Approximately 3,060 feet downstream of Walnut Grove Road	14.55	*	*	*	7,144	*
West Fork Stones River	Approximately 3,960 feet downstream of Rock Springs Midland Road	13.61	*	*	*	6,799	*
West Fork Stones River	Just upstream of Rock Springs Midland Road	12.95	*	*	*	6,551	*
West Fork Stones River	Approximately 2,590 feet upstream of Jones Road	12.05	*	*	*	6,209	*
West Fork Stones River	Approximately 3,220 feet upstream of Jones Road	7.62	*	*	*	4,411	*
West Fork Stones River	Approximately 5,120 feet downstream of Midland Trail	6.41	*	*	*	3,880	*
West Fork Stones River	Approximately 4,220 feet downstream of Midland Trail	4.62	*	*	*	3,040	*

Table 9: Summary of Discharges (continued)

Flooding Source	Location	Drainage Area (Square Miles)	Peak Discharge (cfs)				
			10% Annual Chance	4% Annual Chance	2% Annual Chance	1% Annual Chance	0.2% Annual Chance
West Fork Stones River	Approximately 2,530 feet downstream of Midland Fosterville Road	4.57	*	*	*	3,014	*
West Fork Stones River	Approximately 2,900 feet upstream of Midland Fosterville Road	3.58	*	*	*	2,514	*
West Fork Stones River	Approximately 3,270 feet upstream of Midland Fosterville Road	2.29	*	*	*	1,805	*
West Fork Stones River	Approximately 1.54 miles upstream of Midland Fosterville Road	2.00	*	*	*	1,631	*

* Not calculated for this Flood Risk Project

[1] Drainage area out of order due to study type change from detailed study to limited detailed study

[2] Contributing drainage area is about 7.6 square miles less than the reported drainage area

[3] Located in Williamson County

[4] Flow used in detailed model in this FIS Report 47149CV001D

Figure 7: Frequency Discharge-Drainage Area Curves

[Not Applicable to this Flood Risk Project]

Table 10: Summary of Non-Coastal Stillwater Elevations

Flooding Source	Location	Elevations (feet NAVD88)				
		10% Annual Chance	4% Annual Chance	2% Annual Chance	1% Annual Chance	0.2% Annual Chance
J. Percy Priest Reservoir	Entire shoreline within Rutherford County	502.5	*	505.9	506.3	509.9
Todds Lake	At the shoreline	*	*	*	613.0	*

* Not calculated for this Flood Risk Project

Table 11: Stream Gage Information used to Determine Discharges

Flooding Source	Gage Identifier	Agency that Maintains Gage	Site Name	Drainage Area (Square Miles)	Period of Record[1]	
					From	To
Bear Branch	03427707	USGS	Bear Branch near Lascassas, TN	2.87	02/21/1989	02/26/1992
East Fork Stones River	03427500	USGS	East Fork Stones River near Lascassas, TN	262	12/08/1951	04/22/2017
Lytle Creek	03428043	USGS	Lyle Creek at Murfreesboro, TN	17.6	05/03/2003	04/28/2013
Stewart Creek	03429500	USGS	Stewart Creek near Smyrna, TN	69.7	04/30/1953	03/30/1981
Stones River	03429000	USGS	Stones River near Smyrna, TN	571	03/28/1902	12/10/1966
West Fork Stones River	03428200	USGS	West Fork Stones River at Murfreesboro, TN	177	03/15/1973	04/22/2017
West Fork Stones River	03428000	USGS	West Fork Stones River near Murfreesboro, TN	122	03/01/1902	02/02/1969

[1] Dates used in the hydrologic calculation

5.2 Hydraulic Analyses

Analyses of the hydraulic characteristics of flooding from the sources studied were carried out to provide estimates of the elevations of floods of the selected recurrence intervals. Base flood elevations on the FIRM represent the elevations shown on the Flood Profiles and in the Floodway Data tables in the FIS Report. Rounded whole-foot elevations may be shown on the FIRM in coastal areas, areas of ponding, and other areas with static base flood elevations. These whole-foot elevations may not exactly reflect the elevations derived from the hydraulic analyses. Flood elevations shown on the FIRM are primarily intended for flood insurance rating purposes. For construction and/or floodplain management purposes, users are cautioned to use the flood elevation data presented in this FIS Report in conjunction with the data shown on the FIRM. The hydraulic analyses for this FIS were based on unobstructed flow. The flood elevations shown on the profiles are thus considered valid only if hydraulic structures remain unobstructed, operate properly, and do not fail.

For streams for which hydraulic analyses were based on cross sections, locations of selected cross sections are shown on the Flood Profiles (Exhibit 1). For stream segments for which a floodway was computed (Section 6.3), selected cross sections are also listed in Table 23, “Floodway Data.”

A summary of the methods used in hydraulic analyses performed for this project is provided in Table 12. Roughness coefficients are provided in Table 13. Roughness coefficients are values representing the frictional resistance water experiences when passing overland or through a channel. They are used in the calculations to determine water surface elevations. Greater detail (including assumptions, analysis, and results) is available in the archived project documentation.

Table 12: Summary of Hydrologic and Hydraulic Analyses

Flooding Source	Study Limits Downstream Limit	Study Limits Upstream Limit	Hydrologic Model or Method Used	Hydraulic Model or Method Used	Date Analyses Completed	Flood Zone on FIRM	Special Considerations
Andrews Creek	Confluence with East Fork Stones River	Cannon County boundary	Regression Equations (USGS 2000; USGS 1993)	HEC-RAS 3.1.2 (USACE 2004)	09/01/2005	AE	
Armstrong Branch	Confluence with Puckett Creek	Approximately 1,000 feet upstream of Armstrong Valley Road	Regression Equations (USGS 2000)	HEC-RAS 3.1.2 (USACE 2004)	12/01/2003	AE	The hydrology and hydraulics were performed by Site Engineering Consultants Inc. and James Civil Engineering. A more complete description of the engineering methods can be found in, "Armstrong Branch Hydrologic Study" (SEC & JCE 2003b). Note the stream was studied with detailed methods; however a floodway was not created.
Armstrong Branch	Approximately 1,000 feet upstream of Armstrong Valley Road	Approximately 350 feet upstream of Private Drive	Regression Equations (USGS 2000)	HEC-RAS 3.1.2 (USACE 2004)	09/01/2005	AE	
Bear Branch	Confluence with East Fork Stones River	Approximately 100 feet upstream of DeJarnette Lane	Regression Equations (USGS 1976)	HEC-2 (USACE 1976)	07/01/1982	AE w/ Floodway	
Bear Branch	Approximately 100 feet upstream of DeJarnette Lane	At Wenlon Drive	Regression Equations (USGS 1976)	HEC-2 (USACE 1991)	08/01/1991	AE w/ Floodway	
Big Springs Creek	Confluence with Hurricane Creek #2 and Unnamed Tributary 119	Approximately 1,005 feet upstream of Jimmy C Newman Road	Regression Equations (USGS 2000)	HEC-RAS 3.1.2 (USACE 2004)	09/01/2005	AE	

Table 12: Summary of Hydrologic and Hydraulic Analyses (continued)

Flooding Source	Study Limits Downstream Limit	Study Limits Upstream Limit	Hydrologic Model or Method Used	Hydraulic Model or Method Used	Date Analyses Completed	Flood Zone on FIRM	Special Considerations
Bradley Creek	Confluence with East Fork Stones River	Approximately 2.23 miles upstream of State Highway 96	HEC-HMS 2.2.1 (USACE 2002a)	HEC-RAS 3.1.0 (USACE 2002b)	12/01/2003	AE w/ Floodway	The hydrology and hydraulics were performed by Site Engineering Consultants Inc. and James Civil Engineering. A more complete description of the engineering methods can be found in, “East Fork Stones River Basin Study: East Fork Stones River and Bradley Creek” (SEC & JCE 2003b).
Bradley Creek	Approximately 2.23 miles upstream of State Highway 96	Approximately 1.04 miles upstream of King Road	Regression Equations (USGS 2000)	HEC-RAS 3.1.2 (USACE 2004)	09/01/2005	AE	
Bradley Creek Tributary 1	Confluence with Bradley Creek	Wilson County boundary	Regression Equations (USGS 2000)	HEC-RAS 5.0.7 (USACE 2019)	05/01/2019	AE	
Bushman Creek	Confluence with East Fork Stones River	Approximately 1,450 feet upstream of New Lascassas Road	HEC-1 (USACE 1984)	HEC-2 (USACE 1991)	02/01/1997	AE w/ Floodway	Starting water-surface elevation was determined using the slope/area method (FIS 1999).
Bushman Creek	Approximately 1,450 feet upstream of New Lascassas Road	Approximately 1.16 miles upstream of New Lascassas Road	Regression Equations (USGS 2000)	HEC-RAS 3.1.2 (USACE 2004)	09/01/2005	AE	
Cheatham Branch	Confluence with Harpeth River	Approximately 920 feet upstream of Private Drive	Regression Equations (USGS 2000)	HEC-RAS 3.1.2 (USACE 2004)	09/01/2005	AE	
Christmas Creek	Confluence with West Fork Stones River	Approximately 430 feet upstream of the confluence of Unnamed Tributary 150	Regression Equations (USGS 2000)	HEC-RAS 3.1.2 (USACE 2004)	09/01/2005	AE	
Concord Branch	Confluence with Harpeth River	Approximately 1,200 feet upstream of Ditch Lane	Regression Equations (USGS 2000)	HEC-RAS 3.1.2 (USACE 2004)	09/01/2005	AE	

Table 12: Summary of Hydrologic and Hydraulic Analyses (continued)

Flooding Source	Study Limits Downstream Limit	Study Limits Upstream Limit	Hydrologic Model or Method Used	Hydraulic Model or Method Used	Date Analyses Completed	Flood Zone on FIRM	Special Considerations
Cripple Creek	Confluence with East Fork Stones River	Approximately 1,900 feet upstream of Big Springs Road	Regression Equations (USGS 2000)	HEC-RAS 3.1.2 (USACE 2004)	09/01/2005	AE	
Dry Branch	Confluence with Cripple Creek	Approximately 1,435 feet upstream of U.S. Highway 70S / John Bragg Highway	Regression Equations (USGS 2000)	HEC-RAS 3.1.2 (USACE 2004)	09/01/2005	AE	
Dry Creek	Confluence with Hurricane Creek #2	Approximately 750 feet upstream of Cobb Road	Regression Equations (USGS 2000)	HEC-RAS 3.1.2 (USACE 2004)	09/01/2005	AE	
Dry Fork	Confluence with Bradley Creek	Approximately 1.56 miles upstream of Private Drive	Regression Equations (USGS 2000)	HEC-RAS 3.1.2 (USACE 2004)	09/01/2005	AE	
Dry Fork Creek	Confluence with West Fork Stones River	Approximately 4,660 feet upstream of Brothers Road	Regression Equations (USGS 2000)	HEC-RAS 3.1.2 (USACE 2004)	09/01/2005	AE	
East Branch Hurricane Creek	Confluence with Hurricane Creek	Approximately 900 feet upstream of Waldron Road	Regression Equations (USGS 1976)	HEC-2 (USACE 1985 & USACE 1991)	08/01/1991	AE w/ Floodway	Previous FIS Reports referred to this section of the stream as “East Branch Hurricane Creek (After Levee Overtopping)”. Detailed information about East Branch Hurricane Creek is provided in the narrative below.
East Branch Hurricane Creek	Approximately 900 feet upstream of Waldron Road	Approximately 500 feet upstream of Stone Ridge Parkway	Regression Equations (USGS 1976)	HEC-2 (USACE 1974)	04/01/1981	AE w/ Floodway	Previous FIS Reports referred to this stream as “East Branch Hurricane Creek (Before Levee Overtopping)”. Detailed information about East Branch Hurricane Creek is provided in the narrative below.

Table 12: Summary of Hydrologic and Hydraulic Analyses (continued)

Flooding Source	Study Limits Downstream Limit	Study Limits Upstream Limit	Hydrologic Model or Method Used	Hydraulic Model or Method Used	Date Analyses Completed	Flood Zone on FIRM	Special Considerations
East Branch Hurricane Creek	Approximately 500 feet upstream of Stone Ridge Parkway	Approximately 2,500 feet upstream of Stone Ridge Parkway	Regression Equations (USGS 2002)	HEC-2 (USACE 1991)	12/29/2003	AE w/ Floodway	The countywide FIS 2008 incorporated the Letter of Map Revision (LOMR) Case No. 03-04-559P, issued for East Branch Hurricane Creek, final determination date December 29, 2003 (LOMR 2003).
East Branch Hurricane Creek	Approximately 2,500 feet upstream of Stone Ridge Parkway	Davidson County boundary	Other	Other	07/01/1982	A	For the flooding sources studied by approximate methods in the unincorporated areas of Rutherford County, a depth-area relationship, which was developed by the USGS, was used to estimate the depth of the 1-percent annual chance flow at locations unaffected by backwater from bridge obstructions. Estimates of backwater effects from such obstructions were made by field inspection. The peak stage for the 1-percent annual chance flood within the sinkhole drainage basin located within the City of Murfreesboro was determined by correlating the volume-frequency relationships of the 1-percent annual chance flood with the stage-volume curve for the sinkhole drainage basin (FIS 1989).

Table 12: Summary of Hydrologic and Hydraulic Analyses (continued)

Flooding Source	Study Limits Downstream Limit	Study Limits Upstream Limit	Hydrologic Model or Method Used	Hydraulic Model or Method Used	Date Analyses Completed	Flood Zone on FIRM	Special Considerations
East Fork Stones River	Confluence with J. Percy Priest Reservoir and West Fork Stones River	Approximately 2,115 feet upstream of State Highway 96	HEC-HMS 2.2.1 (USACE 2002a)	HEC-RAS 3.1.0 (USACE 2002b)	11/01/2003	AE w/ Floodway	The hydrology and hydraulics were performed by Site Engineering Consultants Inc. and James Civil Engineering. A more complete description of the engineering methods can be found in, “East Fork Stones River Basin Study: East Fork Stones River and Bradley Creek” (SEC & JCE 2003a). The model was calibrated using available gage data the USGS gage ID 03427500.
East Fork Stones River	Approximately 2,115 feet upstream of State Highway 96	Approximately 4,320 feet upstream of Goochie Ford Road	Regression Equations (USGS 2000)	HEC-RAS 3.1.2 (USACE 2004)	09/01/2005	AE	
East Fork Stones River	Approximately 4,320 feet upstream of Goochie Ford Road	Cannon County boundary	Regression Equations (USGS 2000)	HEC-RAS 5.0.7 (USACE 2019)	05/01/2019	AE	
East Fork Stones River Tributary 2	Confluence with East Fork Stones River	Approximately 1,220 feet upstream of U.S. Highway 70S / John Bragg Highway	Regression Equations (USGS 2000)	HEC-RAS 5.0.7 (USACE 2019)	05/01/2019	AE	
Fall Creek	Confluence with J. Percy Priest Reservoir	Approximate 1.30 miles downstream of Old Lebanon Road	Regression Equations (USGS 2000)	HEC-RAS 3.1.2 (USACE 2004)	09/01/2005	AE	

Table 12: Summary of Hydrologic and Hydraulic Analyses (continued)

Flooding Source	Study Limits Downstream Limit	Study Limits Upstream Limit	Hydrologic Model or Method Used	Hydraulic Model or Method Used	Date Analyses Completed	Flood Zone on FIRM	Special Considerations
Fall Creek	Approximate 1.30 miles downstream of Old Lebanon Road	Approximately 50 feet downstream of Old Lebanon Road	Other	HEC-RAS 4.0.0 (USACE 2008)	11/12/2009	AE	This countywide FIS incorporates the Letter of Map Revision (LOMR) Case No. 09-04-3370P, issued for Fall Creek, final determination date November 12, 2009 (LOMR 2009). Note the hydrology was not revised; LOMR covers Rutherford and Wilson County.
Finch Branch	Confluence with Stewart Creek	Approximately 1,850 feet upstream of Taylor Drive	Regression Equations (USGS 1976)	HEC-2 (USACE 1976)	03/01/1981	AE w/ Floodway	The hydrology and hydraulics were studied in 1981 and published in both the City of La Vergne FIS 1983 and City of Smyrna FIS 1982.
Finch Branch	Approximately 1,850 feet upstream of Taylor Drive	Approximately 1,425 feet upstream of Irvine Drive	Regression Equations (USGS 2000)	HEC-RAS 3.1.2 (USACE 2004)	09/01/2005	AE	
Harpeth River	Approximately 1,900 feet downstream of Bellenfant Road / College Grove Boulevard	Approximately 390 feet upstream of Bellenfant Road / College Grove Boulevard	HEC-HMS 4.0 (USACE 2013)	HEC-RAS 4.1.0 (USACE 2010a)	04/01/2016	AE w/ Floodway	The hydrology and hydraulics were performed by USACE. A more complete description of the engineering methods can be found in, Nashville Flood Preparedness FIS Update, “Harpeth River Watershed Flood Insurance Update” (USACE 2016).
Harpeth River	Approximately 390 feet upstream of Bellenfant Road / College Grove Boulevard	Approximately 680 feet upstream of North Lane	Regression Equations (USGS 2000)	HEC-RAS 3.1.2 (USACE 2004)	09/01/2005	AE	
Harts Branch	Confluence with Stewart Creek	Confluence of Rock Spring Branch	Regression Equations (USGS 2000)	HEC-RAS 4.1.0 (USACE 2010a)	01/15/2018	AE w/ Floodway	The hydrology and hydraulics were performed by Michael Baker Jr, Inc. (BakerAECOM 2014) and revised hydraulics was performed by AECOM.

Table 12: Summary of Hydrologic and Hydraulic Analyses (continued)

Flooding Source	Study Limits Downstream Limit	Study Limits Upstream Limit	Hydrologic Model or Method Used	Hydraulic Model or Method Used	Date Analyses Completed	Flood Zone on FIRM	Special Considerations
Henry Creek	Confluence with Short Creek	Approximately 2,980 feet upstream of Sims Road	Regression Equations (USGS 2000)	HEC-RAS 3.1.2 (USACE 2004)	09/01/2005	AE	
Hurricane Creek	Confluence with J. Percy Priest Reservoir	Approximately 80 feet upstream of Heil Quaker Boulevard	HEC-HMS 4.0 (USACE 2013)	HEC-RAS 4.1.0 (USACE 2010a)	05/01/2019	AE w/ Floodway	The hydrology and hydraulics were performed by USACE. A more complete description of the engineering methods can be found in, Nashville Flood Preparedness Phase 4B 2015 FIS Update, "Metro Nashville PAS - Phase 4B Flood Insurance Update" (USACE 2015).
Hurricane Creek #2	Confluence with Middle Fork Stones River	Confluence of Big Springs Branch and Unnamed Tributary 119	Regression Equations (USGS 2000)	HEC-RAS 3.1.2 (USACE 2004)	09/01/2005	AE	
Kelly Creek	Confluence with Harpeth River	Approximately 2,150 feet upstream of Floyd Road	Regression Equations (USGS 2000)	HEC-RAS 3.1.2 (USACE 2004)	09/01/2005	AE	
Lees Spring Branch	Confluence with Lytle Creek	Approximately 1,910 feet upstream of the confluence of Unnamed Tributary to Lees Spring Branch	HEC-HMS 3.5 (USACE 2010b)	HEC-RAS 4.1.0 (USACE 2010a)	07/01/2019	AE w/ Floodway	The hydrology and hydraulics were performed by Neel-Schaffer, Inc. and revised hydraulics was performed by AECOM.
Long Creek	Confluence with Middle Fork Stones River	Approximately 1,150 feet upstream of Private Drive	Regression Equations (USGS 2000)	HEC-RAS 3.1.2 (USACE 2004)	09/01/2005	AE	
Lytle Creek	Confluence with West Fork Stones River	Approximately 80 feet upstream of Homewood Drive	Regression Equations (USGS 2000)	HEC-RAS 4.1.0 (USACE 2010a)	01/15/2018	AE w/ Floodway	The hydrology and hydraulics were performed by Michael Baker Jr, Inc. (BakerAECOM 2014) and revised hydraulics was performed by AECOM.

Table 12: Summary of Hydrologic and Hydraulic Analyses (continued)

Flooding Source	Study Limits Downstream Limit	Study Limits Upstream Limit	Hydrologic Model or Method Used	Hydraulic Model or Method Used	Date Analyses Completed	Flood Zone on FIRM	Special Considerations
Lytle Creek	Approximately 80 feet upstream of Homewood Drive	Approximately 2,880 feet upstream of Homewood Drive	HEC-1 (USACE 1984)	HEC-2 (USACE 1991)	12/01/1998	AE w/ Floodway	
Lytle Creek	Approximately 2,880 feet upstream of Homewood Drive	Approximately 3,995 feet upstream Cedar Grove Road	Regression Equations (USGS 2000)	HEC-RAS 3.1.2 (USACE 2004)	09/01/2005	AE	
Lytle Creek Overflow	Confluence with Lytle Creek, Approximately 1,370 feet upstream of Broad Street on Lytle Creek	Confluence with Lytle Creek; Approximately 4,515 feet upstream of Broad Street on Lytle Creek	Regression Equations (USGS 2000)	HEC-RAS 4.1.0 (USACE 2010a)	01/15/2018	AE w/ Floodway	The hydrology and hydraulics were performed by Michael Baker Jr, Inc. (BakerAECOM 2014) and revised hydraulics was performed by AECOM.
McElroy Branch	Confluence with Cripple Creek	Approximately 1,030 feet upstream of Murray-Kittrel Road	Regression Equations (USGS 2000)	HEC-RAS 3.1.2 (USACE 2004)	09/01/2005	AE	
McKnight Branch	Confluence with East Fork Stones River	Cannon County boundary	Regression Equations (USGS 2000)	HEC-RAS 3.1.2 (USACE 2004)	09/01/2005	AE	
McKnight Branch	Cannon County boundary	Approximately 2,120 feet upstream of Cannon County boundary	Regression Equations (USGS 2000)	HEC-RAS 5.0.7 (USACE 2019)	05/01/2019	AE	
McKnight Branch Tributary	Confluence with McKnight Branch	Approximately 1,110 feet upstream of Halls Hill Pike	Regression Equations (USGS 2000)	HEC-RAS 5.0.7 (USACE 2019)	05/01/2019	AE	
Middle Fork Stones River	Confluence with West Fork Stones River	Approximately 3,350 feet upstream of the confluence with West Fork Stones River	Other	HEC-RAS 3.1.3 (USACE 2005)	03/04/2010	AE w/ Floodway	This countywide FIS incorporates the Letter of Map Revision (LOMR) Case No. 09-04-0707P, issued for Middle Fork Stones River and West Fork Stones River, final determination date March 4, 2010 (LOMR 2010a). Note the hydrology was not revised for the LOMR.

Table 12: Summary of Hydrologic and Hydraulic Analyses (continued)

Flooding Source	Study Limits Downstream Limit	Study Limits Upstream Limit	Hydrologic Model or Method Used	Hydraulic Model or Method Used	Date Analyses Completed	Flood Zone on FIRM	Special Considerations
Middle Fork Stones River	Approximately 3,350 feet upstream of the confluence with West Fork Stones River	Approximately 3.44 miles upstream of Elam Mill Road	Regression Equations (USGS 1976)	HEC-2 (USACE 1976)	07/01/1982	AE w/ Floodway	
Middle Fork Stones River	Approximately 3.44 miles upstream of Elam Mill Road	Approximately 300 feet upstream of Private Drive	Regression Equations (USGS 2000)	HEC-RAS 3.1.2 (USACE 2004)	09/01/2005	AE	
Murray Branch	Confluence with McElroy Branch	Approximately 260 feet upstream of the confluence of Unnamed Tributary 126	Regression Equations (USGS 2000)	HEC-RAS 3.1.2 (USACE 2004)	09/01/2005	AE	
Olive Branch	Confluence with Stewart Creek	Approximately 2,940 feet upstream of Rocky Ford Road	Regression Equations (USGS 1984)	HEC-2 (USACE 1991)	04/18/1994	AE w/ Floodway	Starting water-surface elevation was determined using the slope/area method (FIS 1999).
Olive Branch	Approximately 2,940 feet upstream of Rocky Ford Road	Approximately 250 feet upstream of Private Drive	Regression Equations (USGS 2000)	HEC-RAS 3.1.2 (USACE 2004)	09/01/2005	AE	
Overall Creek	Confluence with West Fork Stones River	Approximately 100 feet downstream of Manson Pike	Regression Equations (USGS 1984)	HEC-2 (USACE 1991)	04/18/1994	AE w/ Floodway	Starting water-surface elevation was determined using the slope/area method (FIS 1999).
Overall Creek	Approximately 100 feet downstream of Manson Pike	Approximately 700 feet upstream of Manson Pike	Other	HEC-2 (USACE 1991)	08/02/2007	AE w/ Floodway	This countywide FIS incorporates the Letter of Map Revision (LOMR) Case No. 06-04-C283P, issued for Overall Creek, final determination date August 2, 2007 (LOMR 2007b). Note the hydrology was not revised for the LOMR.
Overall Creek	Approximately 700 feet upstream of Manson Pike	Approximately 2.40 miles upstream of Moreland Road	Regression Equations (USGS 1984)	HEC-2 (USACE 1991)	04/18/1994	AE w/ Floodway	Starting water-surface elevation was determined using the slope/area method (FIS 1999).

Table 12: Summary of Hydrologic and Hydraulic Analyses (continued)

Flooding Source	Study Limits Downstream Limit	Study Limits Upstream Limit	Hydrologic Model or Method Used	Hydraulic Model or Method Used	Date Analyses Completed	Flood Zone on FIRM	Special Considerations
Overall Creek	Approximately 2.40 miles upstream of Moreland Road	Approximately 1.80 miles upstream of Windrow Road	Regression Equations (USGS 2000)	HEC-RAS 3.1.2 (USACE 2004)	09/01/2005	AE	
Panther Creek	Confluence with West Fork Stones River	Approximately 2.51 miles upstream of the confluence of Unnamed Tributary 092	Regression Equations (USGS 2000)	HEC-RAS 3.1.2 (USACE 2004)	09/01/2005	AE	
Puckett Creek	Confluence with Overall Creek	Approximately 1,480 feet downstream of Blaze Drive	Regression Equations (USGS 1976)	HEC-2 (USACE 1976)	07/01/1982	AE w/ Floodway	
Puckett Creek	Approximately 1,480 feet downstream of Blaze Drive	Approximately 1,300 feet upstream of Old Fort Parkway	Other	HEC-2 (USACE 1991)	07/26/2007	AE w/ Floodway	This countywide FIS incorporates the Letter of Map Revision (LOMR) Case No. 07-04-2511P, issued for Puckett Creek, final determination date July 26, 2007 (LOMR 2007a). Note the hydrology was not revised for the LOMR.
Puckett Creek	Approximately 1,300 feet upstream of Old Fort Parkway	Approximately 260 feet downstream of State Highway 99 / Old Salem Road / Salem Pike	Regression Equations (USGS 1976)	HEC-2 (USACE 1976)	07/01/1982	AE w/ Floodway	
Puckett Creek	Approximately 260 feet downstream of State Highway 99 / Old Salem Road / Salem Pike	Approximately 4,300 feet upstream of State Highway 99 / Old Salem Road / Salem Pike	Regression Equations (USGS 2000)	HEC-RAS 3.1.2 (USACE 2004)	09/01/2005	AE	
Reed Creek	Confluence with Cripple Creek	Approximately 1,400 feet upstream of Private Drive	Regression Equations (USGS 2000)	HEC-RAS 3.1.2 (USACE 2004)	09/01/2005	AE	

Table 12: Summary of Hydrologic and Hydraulic Analyses (continued)

Flooding Source	Study Limits Downstream Limit	Study Limits Upstream Limit	Hydrologic Model or Method Used	Hydraulic Model or Method Used	Date Analyses Completed	Flood Zone on FIRM	Special Considerations
Rock Spring Branch	Confluence with Harts Branch	Approximately 1,670 feet upstream of Rock Springs Road	Regression Equations (USGS 2000)	HEC-RAS 4.1.0 (USACE 2010a)	01/15/2018	AE w/ Floodway	The hydrology and hydraulics were performed by Michael Baker Jr, Inc. (BakerAECOM 2014) and revised hydraulics was performed by AECOM.
Rocky Fork Creek	Confluence with Stewart Creek	Approximately 1,245 feet upstream of Laddie Lane	Regression Equations (USGS 2000)	HEC-RAS 3.1.2 (USACE 2004)	09/01/2005	AE	
Short Creek	Confluence with Long Creek and Unnamed Tributary 081	Approximately 3,310 feet upstream of Millersburg Road	Regression Equations (USGS 2000)	HEC-RAS 3.1.2 (USACE 2004)	09/01/2005	AE	
Sinking Creek	Confluence with West Fork Stones River	Approximately 410 feet upstream of Bell Street	HEC-1 (USACE 1984)	HEC-RAS 2.0 (USACE 1997)	02/01/1997	AE w/ Floodway	Starting water-surface elevation was determined using the slope/area method (FIS 1999).
Stewart Creek	Confluence with J. Percy Priest Reservoir	Approximately 920 feet upstream of Almaville Road / State Highway 102	Regression Equations (USGS 2000)	HEC-RAS 4.1.0 (USACE 2010a)	01/15/2018	AE w/ Floodway	The hydrology and hydraulics were performed by Michael Baker Jr, Inc. (BakerAECOM 2014) and revised hydraulics was performed by AECOM.
Stinking Creek	Confluence with J. Percy Priest Reservoir	Approximately 1,220 feet upstream of Bill Stewart Boulevard	Regression Equations (USGS 2000)	HEC-RAS 3.1.2 (USACE 2004)	09/01/2005	AE	
Unnamed Tributary 007	Confluence with McKnight Branch	Approximately 1.06 miles upstream of the confluence with McKnight Branch	Regression Equations (USGS 2000)	HEC-RAS 3.1.2 (USACE 2004)	09/01/2005	AE	
Unnamed Tributary 009	Confluence with Wades Branch	Approximately 570 feet upstream of Dunaway Chapel Road	Regression Equations (USGS 2000)	HEC-RAS 3.1.2 (USACE 2004)	09/01/2005	AE	

Table 12: Summary of Hydrologic and Hydraulic Analyses (continued)

Flooding Source	Study Limits Downstream Limit	Study Limits Upstream Limit	Hydrologic Model or Method Used	Hydraulic Model or Method Used	Date Analyses Completed	Flood Zone on FIRM	Special Considerations
Unnamed Tributary 011	Confluence with Unnamed Tributary 009	Approximately 1,720 feet upstream of Dunaway Chapel Road	Regression Equations (USGS 2000)	HEC-RAS 3.1.2 (USACE 2004)	09/01/2005	AE	
Unnamed Tributary 014	Confluence with Stewart Creek	Approximately 845 feet upstream of Old Almaville Road	Regression Equations (USGS 2000)	HEC-RAS 3.1.2 (USACE 2004)	09/01/2005	AE	
Unnamed Tributary 018	Confluence with Cripple Creek	Approximately 3,540 feet upstream of Cranor Road	Regression Equations (USGS 2000)	HEC-RAS 3.1.2 (USACE 2004)	09/01/2005	AE	
Unnamed Tributary 026	Confluence with Stewart Creek	Approximately 530 feet upstream of Private Drive	Regression Equations (USGS 2000)	HEC-RAS 3.1.2 (USACE 2004)	09/01/2005	AE	
Unnamed Tributary 028	Confluence with Stewart Creek	Approximately 1,850 feet upstream of Woodland Trail	Regression Equations (USGS 2000)	HEC-RAS 3.1.2 (USACE 2004)	09/01/2005	AE	
Unnamed Tributary 046	Confluence with Harpeth River	Approximately 1,460 feet upstream of U.S. Highway 41A North / Shelbyville Road	Regression Equations (USGS 2000)	HEC-RAS 3.1.2 (USACE 2004)	09/01/2005	AE	
Unnamed Tributary 047	Confluence with Harpeth River	Approximately 1,315 feet upstream of Private Drive	Regression Equations (USGS 2000)	HEC-RAS 3.1.2 (USACE 2004)	09/01/2005	AE	
Unnamed Tributary 049	Williamson County boundary	Approximately 370 feet upstream of U.S. Highway 41A North / Shelbyville Road	Regression Equations (USGS 2000)	HEC-RAS 3.1.2 (USACE 2004)	09/01/2005	AE	
Unnamed Tributary 051	Confluence with Unnamed Tributary 052	Approximately 1,620 feet upstream of Manus Road	Regression Equations (USGS 2000)	HEC-RAS 3.1.2 (USACE 2004)	09/01/2005	AE	

Table 12: Summary of Hydrologic and Hydraulic Analyses (continued)

Flooding Source	Study Limits Downstream Limit	Study Limits Upstream Limit	Hydrologic Model or Method Used	Hydraulic Model or Method Used	Date Analyses Completed	Flood Zone on FIRM	Special Considerations
Unnamed Tributary 052	Confluence with Murray Branch	Approximately 2,890 feet upstream of Manus Road	Regression Equations (USGS 2000)	HEC-RAS 3.1.2 (USACE 2004)	09/01/2005	AE	
Unnamed Tributary 055	Confluence with Middle Fork Stones River	Approximately 245 feet upstream of Broyles Road	Regression Equations (USGS 2000)	HEC-RAS 3.1.2 (USACE 2004)	09/01/2005	AE	
Unnamed Tributary 056	Confluence with Unnamed Tributary 055	Approximately 2,530 feet upstream of Christiana Hoover Gap Road	Regression Equations (USGS 2000)	HEC-RAS 3.1.2 (USACE 2004)	09/01/2005	AE	
Unnamed Tributary 057	Confluence with Unnamed Tributary 055	Approximately 680 feet upstream of the confluence with Unnamed Tributary 055	Regression Equations (USGS 2000)	HEC-RAS 3.1.2 (USACE 2004)	09/01/2005	AE	
Unnamed Tributary 058	Confluence with Middle Fork Stones River	Approximately 2,500 feet upstream of the confluence with Middle Fork Stones River	Regression Equations (USGS 2000)	HEC-RAS 3.1.2 (USACE 2004)	09/01/2005	AE	
Unnamed Tributary 069	Confluence with Harpeth River	Approximately 4,110 feet upstream of Swamp Road	Regression Equations (USGS 2000)	HEC-RAS 3.1.2 (USACE 2004)	09/01/2005	AE	
Unnamed Tributary 081	Confluence with Long Creek and Short Creek	Approximately 930 feet upstream of Miller Johnson Road	Regression Equations (USGS 2000)	HEC-RAS 3.1.2 (USACE 2004)	09/01/2005	AE	
Unnamed Tributary 092	Confluence with Panther Creek	Approximately 2,420 feet upstream of Panther Creek Road	Regression Equations (USGS 2000)	HEC-RAS 3.1.2 (USACE 2004)	09/01/2005	AE	
Unnamed Tributary 116	Confluence with Hurricane Creek #2	Approximately 4,310 feet upstream of Jacobs Road	Regression Equations (USGS 2000)	HEC-RAS 3.1.2 (USACE 2004)	09/01/2005	AE	

Table 12: Summary of Hydrologic and Hydraulic Analyses (continued)

Flooding Source	Study Limits Downstream Limit	Study Limits Upstream Limit	Hydrologic Model or Method Used	Hydraulic Model or Method Used	Date Analyses Completed	Flood Zone on FIRM	Special Considerations
Unnamed Tributary 118	Confluence with Hurricane Creek #2	Approximately 3,350 feet upstream of the confluence with Hurricane Creek #2	Regression Equations (USGS 2000)	HEC-RAS 3.1.2 (USACE 2004)	09/01/2005	AE	
Unnamed Tributary 119	Confluence with Big Springs Creek and Hurricane Creek #2	Approximately 1,240 feet upstream of the confluence with Big Springs Creek and Hurricane Creek #2	Regression Equations (USGS 2000)	HEC-RAS 3.1.2 (USACE 2004)	09/01/2005	AE	
Unnamed Tributary 124	Confluence with Murray Branch	Approximately 960 feet upstream of Private Drive	Regression Equations (USGS 2000)	HEC-RAS 3.1.2 (USACE 2004)	09/01/2005	AE	
Unnamed Tributary 126	Confluence with Murray Branch	Approximately 1,670 feet upstream of Gum Puckett Road	Regression Equations (USGS 2000)	HEC-RAS 3.1.2 (USACE 2004)	09/01/2005	AE	
Unnamed Tributary 133	Cannon County boundary	Approximately 1,960 feet upstream of the confluence with East Fork Stones River	Regression Equations (USGS 2000)	HEC-RAS 3.1.2 (USACE 2004)	09/01/2005	AE	
Unnamed Tributary 141	Confluence with Stewart Creek	Approximately 2,125 feet upstream of Stewart Creek Road	Regression Equations (USGS 2000)	HEC-RAS 3.1.2 (USACE 2004)	09/01/2005	AE	
Unnamed Tributary 143	Confluence with Stewart Creek	Approximately 1.00 mile upstream of Almaville Road	Regression Equations (USGS 2000)	HEC-RAS 3.1.2 (USACE 2004)	09/01/2005	AE	
Unnamed Tributary 144	Confluence with Stewart Creek	Approximately 2.38 miles upstream of Almaville Road	Regression Equations (USGS 2000)	HEC-RAS 3.1.2 (USACE 2004)	09/01/2005	AE	

Table 12: Summary of Hydrologic and Hydraulic Analyses (continued)

Flooding Source	Study Limits Downstream Limit	Study Limits Upstream Limit	Hydrologic Model or Method Used	Hydraulic Model or Method Used	Date Analyses Completed	Flood Zone on FIRM	Special Considerations
Unnamed Tributary 150	Confluence with Christmas Creek	Approximately 610 feet upstream of the confluence with Christmas Creek	Regression Equations (USGS 2000)	HEC-RAS 3.1.2 (USACE 2004)	09/01/2005	AE	
Unnamed Tributary 177	Confluence with Harpeth River	Approximately 830 feet upstream of Private Drive	Regression Equations (USGS 2000)	HEC-RAS 3.1.2 (USACE 2004)	09/01/2005	AE	
Unnamed Tributary 179	Confluence with Harpeth River	Approximately 2,706 feet upstream of the confluence with Harpeth River	Regression Equations (USGS 2000)	HEC-RAS 3.1.2 (USACE 2004)	09/01/2005	AE	
Unnamed Tributary 182	Confluence with Finch Branch	Approximately 395 feet upstream of Akin Street	Regression Equations (USGS 2000)	HEC-RAS 3.1.2 (USACE 2004)	09/01/2005	AE	
Unnamed Tributary 183	Confluence with Finch Branch	Approximately 480 feet upstream of Private Drive	Regression Equations (USGS 2000)	HEC-RAS 3.1.2 (USACE 2004)	09/01/2005	AE	
Unnamed Tributary 184	Confluence with Stewart Creek	Approximately 3,540 feet upstream of Sam Ridley Parkway	Regression Equations (USGS 2000)	HEC-RAS 3.1.2 (USACE 2004)	09/01/2005	AE	
Unnamed Tributary 184	Approximately 3,540 feet upstream of Sam Ridley Parkway	Approximately 1.21 miles upstream of Sam Ridley Parkway	Other	Other	08/31/2010	A	This countywide FIS incorporates the Letter of Map Revision (LOMR) Case No. 10-04-6789P, issued for Unnamed Tributary 184, final determination date August 31, 2010 (LOMR 2010c). Note that there was not model created.
Unnamed Tributary 185	Confluence with Cheatham Branch	Approximately 450 feet upstream of Spring Street	Regression Equations (USGS 2000)	HEC-RAS 3.1.2 (USACE 2004)	09/01/2005	AE	

Table 12: Summary of Hydrologic and Hydraulic Analyses (continued)

Flooding Source	Study Limits Downstream Limit	Study Limits Upstream Limit	Hydrologic Model or Method Used	Hydraulic Model or Method Used	Date Analyses Completed	Flood Zone on FIRM	Special Considerations
Unnamed Tributary to Kelly Creek	Confluence with Kelly Creek	Approximately 720 feet upstream of the confluence with Kelly Creek	Regression Equations (USGS 2000)	HEC-RAS 3.1.2 (USACE 2004)	09/01/2005	AE	
Unnamed Tributary to Lees Spring Branch	Confluence with Lees Spring Branch	Approximately 1,770 feet upstream of the confluence with Lees Spring Branch	HEC-HMS 3.5 (USACE 2010)	HEC-RAS 4.1.0 (USACE 2010a)	07/01/2019	AE w/ Floodway	The hydrology and hydraulics were performed by Neel-Schaffer, Inc. and revised hydraulics was performed by AECOM.
Unnamed Tributary to West Fork Stones River	Confluence with West Fork Stones River	Approximately 1.70 miles upstream State Highway 99	Regression Equations (USGS 1976)	HEC-2 (USACE 1976)	07/01/1982	AE w/ Floodway	
Unnamed Tributary to West Fork Stones River	Approximately 1.70 miles upstream State Highway 99	Approximately 120 feet upstream of Private Drive	Regression Equations (USGS 2000)	HEC-RAS 3.1.2 (USACE 2004)	09/01/2005	AE	
Wades Branch	Confluence with East Fork Stones River	Approximately 2.83 miles upstream of the confluence with East Fork Stones Creek	Regression Equations (USGS 1976)	HEC-2 (USACE 1976)	07/01/1982	AE w/ Floodway	
Wades Branch	Approximately 2.83 miles upstream of the confluence with East Fork Stones Creek	Approximately 3,170 feet upstream of the confluence of Unnamed Tributary 009	Regression Equations (USGS 2000)	HEC-RAS 3.1.2 (USACE 2004)	09/01/2005	AE	
West Fork Stones River	Confluence with East Fork Stones River and J. Percy Priest Reservoir	Approximately 100 feet downstream of Sulpher Springs Road	HEC-1 (USACE 1984)	HEC-2 (USACE 1991)	12/01/1998	AE w/ Floodway	

Table 12: Summary of Hydrologic and Hydraulic Analyses (continued)

Flooding Source	Study Limits Downstream Limit	Study Limits Upstream Limit	Hydrologic Model or Method Used	Hydraulic Model or Method Used	Date Analyses Completed	Flood Zone on FIRM	Special Considerations
West Fork Stones River	Approximately 100 feet downstream of Sulpher Springs Road	Approximately 4,800 feet upstream of Sulpher Springs Road	Other	HEC-2 (USACE 1991)	07/25/2014	AE w/ Floodway	This countywide FIS incorporates the Letter of Map Revision (LOMR) Case No. 13-04-7742P, issued for West Fork Stones River, final determination date July 25, 2014 (LOMR 2014). Note the hydrologic method could not be found.
West Fork Stones River	Approximately 4,800 feet upstream of Sulpher Springs Road	Approximately 200 feet downstream of New Salem Highway	HEC-1 (USACE 1984)	HEC-2 (USACE 1991)	12/01/1998	AE w/ Floodway	
West Fork Stones River	Approximately 200 feet downstream of New Salem Highway	Approximately 4,300 feet upstream of Private Drive	Other	HEC-RAS 3.1.3 (USACE 2005)	03/04/2010	AE w/ Floodway	This countywide FIS incorporates the Letter of Map Revision (LOMR) Case No. 09-04-0707P, issued for Middle Fork Stones River and West Fork Stones River, final determination date March 4, 2010 (LOMR 2010a). Note the hydrology was not revised for the LOMR.
West Fork Stones River	Approximately 4,300 feet upstream of Private Drive	Approximately 1.32 miles upstream of Stones River Lane	HEC-1 (USACE 1984)	HEC-2 (USACE 1991)	12/01/1998	AE w/ Floodway	
West Fork Stones River	Approximately 1.32 miles upstream of Stones River Lane	Approximately 1.75 miles upstream of Midland Fosterville Road	Regression Equations (USGS 2000)	HEC-RAS 3.1.2 (USACE 2004)	09/01/2005	AE	

East Branch Hurricane Creek

The FIS 1998 revised the hydraulics for the “After Levee Overtopping” section only.

This countywide FIS combined the two sections together, as the levee is unaccredited.

FEMA specifies that all levees must have a minimum of 3 feet of freeboard against the 1-percent annual chance of flooding to be considered a safe flood protection structure. The study area contains levees that provide the community with some degree of protection against flooding. However, it has been ascertained that some of these levees may not protect the community from rare events such as the 1-percent annual chance flood. The criteria used to evaluate protection against the 1-percent annual chance flood are: 1) adequate design, including freeboard; 2) structural stability; and, 3) proper operation and maintenance. Levees that do not protect against the 1-percent annual chance flood are not considered in the hydraulic analysis of the 1-percent annual chance flood. A private development firm has constructed levees on both sides of the East Branch Hurricane Creek from its mouth to above Aldron Road, at approximate river mile 1.1, and on the main stem to approximately 300 feet downstream of the confluence of the East and West Branches of Hurricane Creek (FIS 2008).