

PRELIMINARY FLOOD INSURANCE STUDY

FEDERAL EMERGENCY MANAGEMENT AGENCY

A Report of Flood Hazards in
DUPLIN COUNTY, NORTH
CAROLINA AND
INCORPORATED AREAS



Community Name	Community Number
DUPLIN COUNTY	370083
TOWN OF BEULAVILLE	370547
TOWN OF CALYPSO	370661
TOWN OF FAISON	370495
TOWN OF GREENEVERS	370655
TOWN OF HARRELLS	370573
TOWN OF KENANSVILLE	370399
TOWN OF MAGNOLIA	370669
TOWN OF MOUNT OLIVE	370369
TOWN OF ROSE HILL	370375
TOWN OF TEACHEY	370623
TOWN OF WALLACE	370084
TOWN OF WARSAW	370633



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REVISED: 8/29/2014

Federal Emergency Management Agency

State of North Carolina

Flood Insurance Study Number

37061CV000

www.fema.gov and www.ncfloodmaps.com



FOREWORD

This countywide Flood Insurance Study (FIS) Report was produced through a unique cooperative partnership between the State of North Carolina and the Federal Emergency Management Agency (FEMA). The State of North Carolina has implemented a long-term approach to floodplain management to decrease the costs associated with flooding. This is demonstrated by the State's commitment to map floodplain areas at the state level. As a part of this effort, the State of North Carolina has joined with FEMA in a Cooperating Technical State (CTS) agreement to produce and maintain this FIS Report and the accompanying digital Flood Insurance Rate Map (FIRM) for North Carolina.

NOTICE TO FLOOD INSURANCE STUDY USERS

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

The following is a list of the publication dates of this Countywide FIS Report starting with the initial Report accompanying the North Carolina Statewide FIRM:

Date	Reason
2/16/2006	Initial Countywide FIS Report Effective Date

This FIS has been produced as part of the North Carolina Floodplain Mapping Program. Duplin County, North Carolina, falls under the administrative jurisdiction of Region IV of the Federal Emergency Management Agency (FEMA). Questions concerning this FIS may be directed to the North Carolina Floodplain Mapping Program at www.ncfloodmaps.com, the FEMA Map Assistance Center by calling the toll-free information line at 1-877-FEMA MAP (1-877-336-2627), or by contacting the FEMA Regional Office at the following address:

FEMA, Federal Insurance and Mitigation Administration
Koger Center - Rutgers Building
3003 Chamblee Tucker Road
Atlanta, Georgia 30341
(770) 220-5400

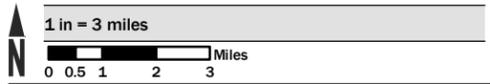
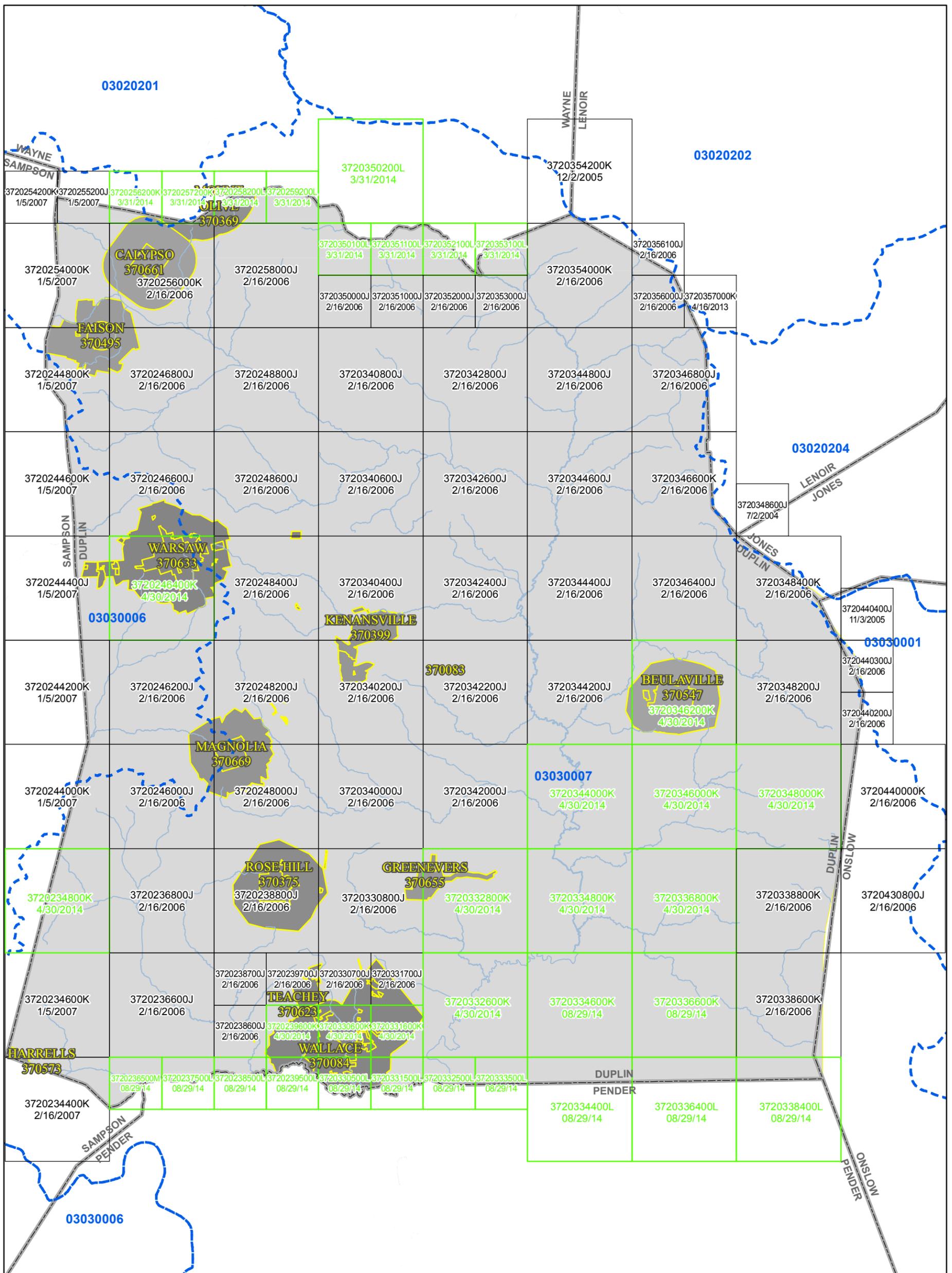
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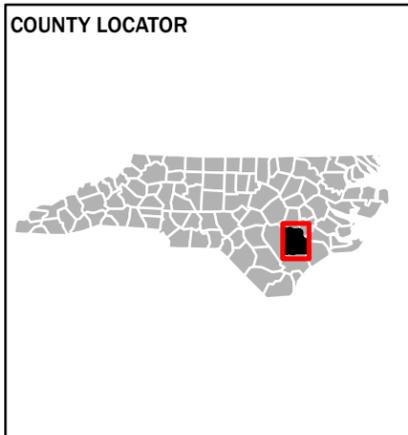


Map Projection:
Lambert Conformal Conic
North American Datum 1983

THE INFORMATION DEPICTED ON THIS MAP AND SUPPORTING DOCUMENTATION ARE ALSO AVAILABLE IN DIGITAL FORMAT AT
[HTTP://FRIS.NC.GOV/FRIS](http://FRIS.NC.GOV/FRIS)

SEE FLOOD INSURANCE STUDY FOR ADDITIONAL INFORMATION

PRELIMINARY
08/29/2014



NATIONAL FLOOD INSURANCE PROGRAM

FLOOD INSURANCE RATE MAP INDEX

DUPLIN COUNTY, NORTH CAROLINA And Incorporated Areas

PANELS PRINTED:
2446, 2466, 2486, 3406, 3426, 3446, 3466, 4402, 2346, 2366, 2387, 2397, 3307, 3317, 3326, 3346, 3366, 3386, 3502, 3542, 2542, 2552, 2562, 2572, 2582, 2592, 2540, 2560, 2580, 3501, 3511, 3521, 3531, 3540, 3561, 3500, 3510, 3520, 3530, 3560, 3570, 2448, 2468, 2488, 3408, 3486, 2444, 2464, 2484, 3404, 3424, 3444, 3464, 3484, 2442, 2462, 2482, 3402, 3422, 3442, 3462, 3482, 4403, 2440, 2460, 2480, 3400, 3420, 3440, 3460, 3480, 4400, 2348, 2368, 2388, 3308, 3328, 3348, 3368, 3388, 4308, 2386, 2396, 3306, 3316, 2344, 2365, 2375, 2385, 2395, 3305, 3315, 3325, 3335, 3344, 3364, 3384, 3428, 3448, 3468

FEMA
MAP NUMBER
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1.0 Introduction

1.1 The National Flood Insurance Program

In 1968, Congress created the National Flood Insurance Program (NFIP) in response to the rising cost of taxpayer-funded disaster relief for flood victims and the increasing amount of damage caused by floods. The NFIP makes federally backed flood insurance available in communities that agree to adopt and enforce floodplain management ordinances to reduce future flood damage. Federally backed flood insurance is available in more than 19,000 communities across the United States and its territories.

The NFIP is managed by the Federal Insurance and Mitigation Administration of the Federal Emergency Management Agency (FEMA). The Federal Insurance and Mitigation Administration manages the insurance component of the NFIP and oversees the flood hazard mapping and the floodplain management aspects of the program.

The NFIP, through involvement with communities, the insurance industry, and the lending industry, helps reduce flood damage by nearly \$800 million a year. Further, buildings constructed in compliance with NFIP building standards suffer approximately 80% less damage annually than those not built in compliance. In addition, every \$3 paid in flood insurance claims saves \$1 in disaster assistance payments. The NFIP is self-supporting for the average historical loss year, which means that operating expenses and flood insurance claims are not paid by the taxpayer, but through premiums collected for flood insurance policies.

Additional information of interest to homeowners, community officials, insurance companies, lenders, and study contractors is available in Section 9.0 of this FIS Report and on the NFIP Internet homepage at <http://www.fema.gov/business/nfip/>.

1.2 Purpose of this Flood Insurance Study

Flood Insurance Studies (FISs) are one of the primary means by which the NFIP administers the National Flood Insurance Act of 1968, the Flood Disaster Protection Act of 1973, and the National Flood Insurance Reform Act of 1994. FISs develop flood risk data that are used to establish actuarial flood insurance rates. The information in this FIS Report will also be used by Duplin County and the jurisdictions therein (hereinafter referred to collectively as Duplin County) to facilitate the adoption and maintenance of floodplain management ordinances, which form the basis of communities' continued participation in the NFIP. Minimum requirements for participation in the NFIP are set forth in Title 44, Part 60, Section 3 of the Code of Federal Regulations (44 CFR 60.3). In some States and/or communities, floodplain management criteria or regulations may exist that are more restrictive than the minimum Federal requirements. In such cases, the more restrictive criteria will take precedence, and the State and/or community (or other jurisdictional agency) will be able to explain them.

This FIS investigates the existence and severity of flood hazards in, or revises and updates previous FISs for, the geographic area of Duplin County, North Carolina, including the jurisdictions listed in Table 1.

Table 1 - Jurisdictions in Duplin County

Community	Included in this FIS	If Not Included, Location of Flood Hazard/Flood Insurance Rate Data
DUPLIN COUNTY	Yes	*
TOWN OF BEULAVILLE	Yes	*
TOWN OF CALYPSO	Yes	*
TOWN OF FAISON	Yes	*
TOWN OF GREENEVERS	Yes	*
TOWN OF HARRELLS	Yes	*
TOWN OF KENANSVILLE	Yes	*
TOWN OF MAGNOLIA	Yes	*
TOWN OF MOUNT OLIVE	Yes	*
TOWN OF ROSE HILL	Yes	*

TOWN OF TEACHEY	Yes	*
TOWN OF WALLACE	Yes	*
TOWN OF WARSAW	Yes	*

1.3 FIS Components

A Flood Insurance Study (FIS) is an analysis of flood hazards, typically presented as a set of Flood Insurance Rate Map (FIRM) panels and the FIS Report, which includes a set of Flood Profiles and/or Water-surface elevation rasters.

Flood Insurance Study Report

The FIS Report provides a context for the information shown on the FIRM, as well as a summary of the data upon which the analyses are based. It also includes an index of sources of additional information on the NFIP.

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% annual chance flood elevation is also referred to as the Base Flood Elevation (BFE)); delineations of the 1% annual chance and 0.2% annual chance floodplains; and 1% 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).

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 27, "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 Duplin became Effective on 2/16/2006. Refer to Table XX for information about subsequent revisions to FIRMs.

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

Old Zone	New Zone
A1 through A30	AE
V1 through V30	VE
B	X (shaded)
C	X (unshaded)

FEMA does not impose floodplain management requirements or special insurance ratings based on Limit of Moderate Wave Action (LiMWA) delineations at this time. The LiMWA represents the approximate landward limit of the 1.5-foot breaking wave. If the LiMWA is shown on the FIRM, it is being provided by FEMA as information only. For communities that do adopt Zone VE building standards in the area defined by the LiMWA, additional Community Rating System (CRS) credits are available. Refer to Section 2.5.4 for additional information about the LiMWA.

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 <http://www.fema.gov> or contact your appropriate FEMA Regional Office for more information about this program.

Previous FIS Reports and FIRMs may have included levees that were accredited as reducing the risk associated with the 1% annual chance flood based on the information available and the mapping standards of the NFIP at that time. For FEMA to continue to accredit the identified levees, the levees must meet the criteria of the Code of Federal Regulations, Title 44, Section 65.10 (44 CFR 65.10), titled "Mapping of Areas Protected by Levee Systems.

Since the status of levees is subject to change at any time, the user should contact the appropriate agency for the latest information regarding levees presented in Table 9 of this FIS Report. For levees owned or operated by the U.S. Army Corps of Engineers (USACE), information may be obtained from the USACE national levee database. For all other levees, the user is encouraged to contact the appropriate local community.

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 <http://www.fema.gov>.

2.0 Floodplain Management Applications

Flood events of a magnitude expected to occur with a 10%, 2%, 1%, or 0.2% annual chance have been selected as having special significance for developing sound floodplain management programs. These events, commonly termed the 10-, 50-, 100-, and 500-year floods, have a 10%, 2%, 1%, and 0.2% chance, respectively, of being equaled in any given year. Therefore, FIS Reports typically determine water-surface elevations for floods with these probabilities. The FIRM delineates 1% and 0.2% annual chance floodplains and 1% annual chance floodway boundaries, and depicts 1% annual chance flood elevations, rounded to the nearest foot, to assist in developing floodplain management measures.

2.1 Floodplains

To provide a national standard without regional discrimination, the 1% annual chance flood has been adopted by FEMA as the base flood for floodplain management purposes. A 1% annual chance flood, or base flood, is defined as that having a 1% chance of being equaled or exceeded in any given year. The 1% annual chance floodplains shown on the FIRM identify areas that are expected to be inundated by the 1% annual chance flood. This 1% annual chance floodplain is also called a Special Flood Hazard Area (SFHA), where the NFIP's floodplain management regulations must be enforced by the community as a condition of participation in the NFIP. The 0.2% annual chance floodplain is employed to indicate additional areas of flood risk associated with exceptionally severe floods.

2.2 Floodways

Encroachment on floodplains such as that caused by placement of 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, floodways are provided as a tool to assist local communities in this aspect of floodplain management. Under this concept, the 1% annual chance riverine floodplain is divided into a floodway and a floodway fringe. The floodway is the channel of a stream, plus any adjacent floodplain areas, that must be kept free of encroachment so that the 1% annual chance flood can be carried without substantial increases in flood heights. Figure 1, "Floodway Schematic," illustrates this principle. Minimum Federal standards limit such increases to 1.0 foot, provided that hazardous velocities are not produced. The floodways in this FIS are presented to local agencies as a minimum standard that can be adopted directly or that can be used as a basis for additional encroachment studies.

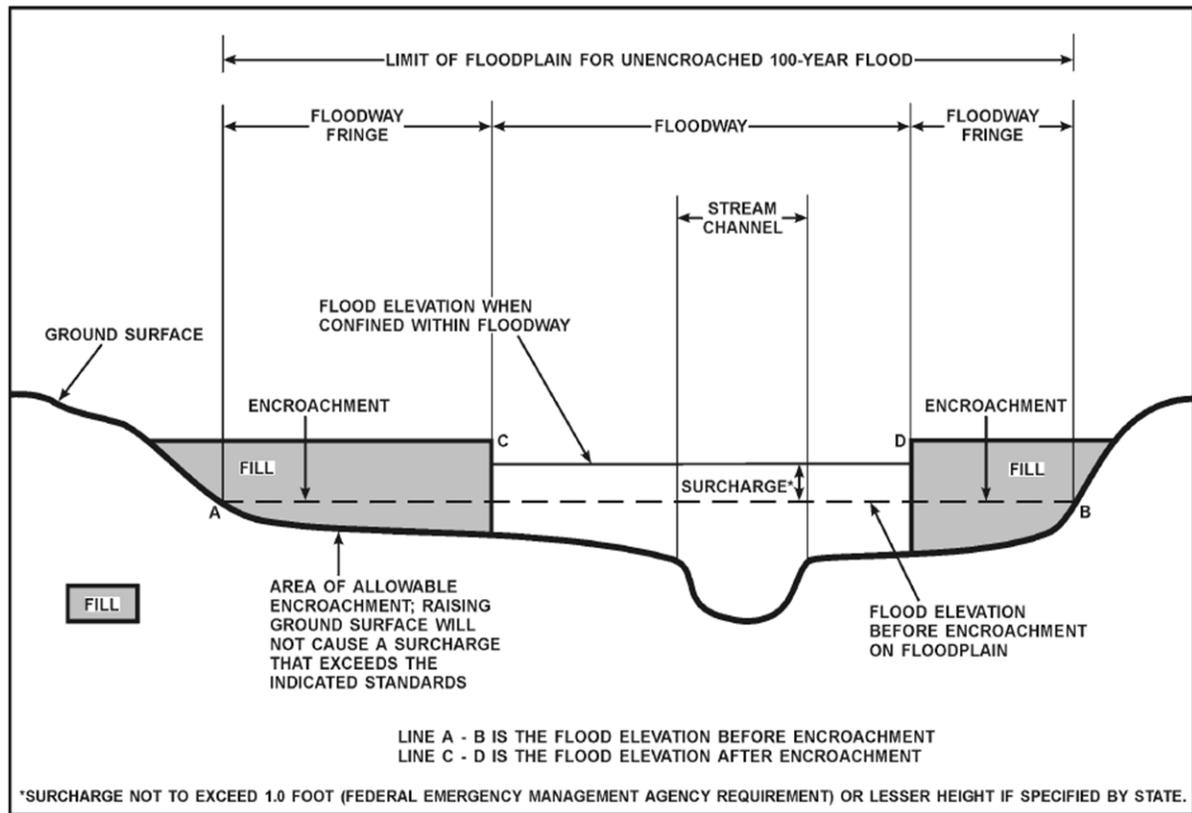


Figure 1- Floodway Schematic

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 Base Flood Elevation (BFE) is the elevation of the 1% 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. 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. BFEs 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.

2.4 Watershed Characteristics

Because a FIS is a probability analysis that may not account for some of the factors listed below, communities are strongly encouraged to consider adopting more restrictive or higher floodplain management criteria or ordinances than the minimum Federal requirements. Communities may also increase the validity of their flood hazard data by investing in continuous maintenance of river gages (see the Data Validity and Reliability paragraph below). If the U.S. Geological Survey (USGS) or other agencies do not maintain gages on the flooding sources of interest, partnerships with the USGS may be pursued, or local gages may be installed. For more information, see Section 9.0 of this report.

This flood hazard study represents an analysis of certain watershed characteristics, some of which are summarized as follows:

Drainage Area

In general, streams that drain larger areas have greater flood hazards. FISs, in North Carolina, do not typically analyze flood hazards in places with rural drainage areas of less than one square mile and within urban drainage areas of less than ½ square mile.

Soil Permeability and Infiltration

Differences in the types of soil and the amount of vegetation in a watershed have a significant effect on the amount of water that the soil can absorb; soils with a high sand content absorb much more water than soils with a high clay content. The presence of vegetation increases infiltration; the presence of pavement decreases infiltration and also speeds runoff to receiving waters. As soil permeability and infiltration decrease, the volume and rate of overland flow increases.

Soil Moisture Conditions

In addition to soil permeability and infiltration, the level of the water table helps determine the saturation point, beyond which no water is absorbed. As rainfall duration increases, the height of the water table increases.

Channel and Floodplain Geometry

The geometric contour of a streambed, termed channel geometry, and the geometric contour of a floodplain determine the volume of water that a channel can hold and partially determine the rate at which water flows through it.

Channel and Floodplain Roughness

The roughness of a surface affects the characteristics of runoff whether the water is on the surface of the watershed or in the channel.

FIS Reports include analyses of how these factors will combine to produce overland flow patterns during floods that have a certain probability of occurring in any given year. Although the recurrence interval represents the long-term average period between floods of a specific magnitude, rare floods could occur at shorter intervals or even within the same year. The risk of experiencing a rare flood increases when longer periods are considered. For example, the risk of having a flood which equals or exceeds the 1% annual chance flood (1% chance of annual exceedence) in any 50-year period is approximately 40% (4 in 10), but for any 90-year period, the risk increases to approximately 60% (6 in 10).

It is important to note that the 1% annual chance flood is used as the national standard to allow a consistent approach to floodplain management, flood hazard assessment, and flood hazard mapping. In any given community, a number of factors may result in flooding characteristics that do not conform to predicted conditions. Therefore, the determination that an area is not shown on the FIRM as being within a Special Flood Hazard Area is no guarantee that it will not flood during a 1% annual chance flood. Examples of these factors include Data Validity and Reliability; Developmental and Topographic Changes Over Time; Erosion, Deposition, and Debris Flow; and Meandering and Lateral Migration.

Data Validity and Reliability

Certain types of analysis methods yield more justifiable characterizations of flood hazards. For example, a gage analysis, to determine peak discharges, is based on actual measurements of watershed conditions over time and, therefore, is typically considered the most accurate method of hydrologic analysis. However, it is not feasible to install enough gages to gather data on every stream. In addition, for many of the gage sites that do exist, there are interruptions in the period of record. The usefulness of gage data for the purpose of predicting flooding behavior decreases with interruptions in the period of record; predicted flooding conditions over a 100-year period based on 20 years of measurements spread over a 35-year period are less valid than those based on 30 years of continuous measurements. A regression analysis is typically considered the best method in the absence of gage data, as it uses gage data from watersheds with similar characteristics to estimate flood frequency and magnitude in an ungaged watershed. Regression equations reflect average conditions for a region; therefore, the results will not exactly match the results of a gage analysis at a particular location. The standard errors of the North Carolina rural regression equations range from 44 to 51 percent for estimates of the 1% annual chance flood. That means the difference between the results of the regression equation and the gage analysis for approximately two-thirds of the locations that gage data exists are within 44 to 51 percent of the gage analysis results. A rainfall-runoff hydrologic analysis may be used for gaged or ungaged watersheds, and can estimate the effects of storage areas and flood control structures and measures. This method is most valid when calibrated against historical data.

Developmental and Topographic Changes Over Time

A FIRM is based on the best topographic and planimetric information available to FEMA and the State of North Carolina at the time the study is produced. In time, however, development and/or natural phenomena can alter the physical characteristics of a watershed and its drainage channels, resulting in changes in the flood hazards in those areas. For example, constructing a housing subdivision reduces the amount of soil that is available to absorb water; this in turn causes an increase in the volume of surface water that flows

into the channel.

Erosion, Deposition, and Debris Flow

The flood hazards shown on a FIRM are based on the assumption of unobstructed flow. The FIRM does not reflect an analysis of areas that are subject to erosion caused by the increased water-surface elevations and velocities that occur during flooding. In addition to the risks of landslides or a weakening of the ground underneath roads or structures, any sediment that is removed from one location will be deposited in another; accumulated deposits may have a pronounced effect on flood hazards in those areas. Similarly, debris such as fallen trees or branches, litter, or other items may obstruct stream channels or hydraulic structures, increasing water-surface elevations, velocities, and floodplain width.

Meandering and Lateral Migration

FISs are based on the assumption that channel geometry will remain stable during normal drainage and during flood events. This assumption is valid for most streams, which flow over bedrock or between bedrock outcroppings that form non-alluvial channels. However, alluvial streams change the channel geometry with time, significantly so during flood events. Alluvial streams are subject to erosion and deposition, which may result in braided or meandering channels. Streams of this type may be characterized by lateral migration, or channel shifting, in which the stream may change course entirely during a flood. Whenever clear evidence is available, a FIRM will identify the alluvial nature of a studied flooding source and designate wider floodways to allow for potential migration. However, these floodways are based on qualitative assessments and not on quantitative geomorphic and engineering analyses.

2.5 Coastal Flood Hazard Areas

This section is not applicable to this FIS project.

3.0 Insurance Applications

3.1 National Flood Insurance Program Insurance Zones

For flood insurance applications, the FIRM designates flood insurance rate zones and, in 1% annual chance floodplains that were studied by detailed methods, shows selected whole-foot BFEs or average depths. Insurance agents use the zones and BFEs in conjunction with information on structures and their contents to assign premium rates for flood insurance policies. Table 2, "Flood Zone Designations," includes a description of each type of flood hazard zone.

Table 2 - Flood Designations

Zone	Description
A	Zone A is the flood insurance rate zone that corresponds to the 1% annual chance floodplains that are determined in the FIS Report by approximate methods. Because detailed hydraulic analyses are not performed for such areas, no Base Flood Elevations or depths are shown within this zone.
AE	Zone AE is the flood insurance rate zone that corresponds to the 1% annual chance floodplains that are determined in the FIS Report by detailed methods. In most instances, whole-foot Base Flood Elevations derived from the detailed hydraulic analyses are shown at selected intervals within this zone.
AH	Zone AH is 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 Base Flood Elevations derived from the detailed hydraulic analyses are shown at selected intervals within this zone.
AO	Zone AO is 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 detailed hydraulic analyses are shown within this zone.
AR	Zone AR is 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.
A99	Zone A99 is 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 depths are shown within this zone.

V	Zone V is the flood insurance rate zone that corresponds to the 1% annual chance coastal floodplains that have additional hazards associated with storm waves. Because approximate hydraulic analyses are performed for such areas, no Base Flood Elevations are shown within this 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. Whole-foot Base Flood Elevations derived from the detailed hydraulic analyses are shown at selected intervals within this zone.
X	Zone X is the flood insurance rate zone that corresponds to areas outside the 0.2% annual chance floodplain, areas within the 0.2% annual chance floodplain, and to areas of 1% annual chance flooding where average depths are less than 1 foot, areas of 1% annual chance flooding where the contributing drainage area is less than 1 square mile, and areas protected from the 1% annual chance flood by levees. No Base Flood Elevations or depths are shown within this zone.
X (Future)	Zone X (Future Base Flood) is the flood insurance risk zone that corresponds to the 1-percent-annual-chance floodplains that are determined based on future-conditions hydrology. No BFEs or base flood depths are shown within this zone.
D	Zone D is the flood insurance rate zone that corresponds to unstudied areas where flood hazards are undetermined, but possible.

3.2 Coastal Barrier Resources System

This section is not applicable to this FIS project.

4.0 Area Studied

Duplin County is found in the Coastal Plain region of North Carolina. It is surrounded by Wayne County to the north, Onslow County to the east, Pender County to the south, and Sampson County to the west.

4.1 Basin Description

Table 3, "Basin Description" 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 area.

Table 3 - Basin Description

HUC-8 Sub-Basin Name	HUC-8 Sub-Basin Number	Primary Flooding Source	Description	HUC Area (square miles)
Black	03030006	Black River	The Black River Basin begins in the northeastern region of Harnett County, North Carolina. The basin then drains southeast through significant portions of Bladen, Cumberland, and Sampson Counties, ending at the Cape Fear River in Pender County.	1,574
Lower Neuse	03020204	Neuse River	The Lower Neuse River Basin reaches up into Lenoir County, North Carolina and then drains east into the Pamlico Sound. The basin drains significant portions of Cartaret, Craven, Jones, and Pamlico Counties.	1,583
Middle Neuse	03020202	Neuse River	The Middle Neuse River Basin headwaters are in Wayne and Pitt Counties. The basin also drains significant portions of Beaufort, Greene, Jones, and Lenoir Counties and ends near New Bern, North Carolina in Craven County.	1,065
New River	03020302	New River	The New River Basin begins above the northwestern corner of Onslow County. The basin also includes coastal regions of Brunswick, New Hanover, Pender, and Onslow Counties.	891
Northeast Cape Fear	03030007	Northeast Cape Fear River	The Northeast Cape Fear River Basin begins in the northeastern region of Sampson County and along the Wayne/Duplin County boundary. The basin then drains south through Pender County, ending at the Cape Fear River in New Hanover County.	1,741
Upper Neuse	03020201	Neuse River	The Upper Neuse Basin is initially drained by the Eno and Flat Rivers in Orange County. Once they confluence near Falls Lake, the basin is then drained by the Neuse River which flows through Durham, Wake, and Johnston Counties.	2,406

4.2 Principal Flood Problems

Table 4, "Principal Flood Problems" contains a list of principal flooding problems in Duplin County.

Table 4 - Principal Flood Problems

Flooding Source	Problem
All Sources	The county is drained by the Northeast Cape Fear River and its tributaries, except for a small area along the western boundary that is drained by the tributaries of the Black River. The Northeast Cape Fear River is the largest stream in the county, drai
All Sources	The county is drained by the Northeast Cape Fear River and its tributaries, except for a small area along the western boundary that is drained by the tributaries of the Black River. The Northeast Cape Fear River is the largest stream in the county, draining an area of 874 square miles as it leaves the county. Most other streams are small, stream gradients are low, and stream velocities are slow. Floods can occur at any time during the year, but major floods are more likely to occur during the hurricane season from July to November.

4.3 Historic Flood Elevations

Hurricane Floyd

(9/16/1999)

Hurricane Floyd made landfall near Wilmington with category two winds of 105 to 110 mph. Rainfall totals from Floyd were as high as 15 to 20 inches over portions of eastern North Carolina; with a record of 23.45 inches of rain falling in the month of September at Wilmington, NC. This breaks the previous record of 21.12 inches set in July 1886. These rains combined with saturated ground from previous rain events, including Hurricane Dennis, to produce an inland flood disaster. There were 74 deaths in the United States, including 52 in North Carolina, due to drowning from flood waters. This makes Floyd the deadliest U.S. hurricane since Agnes in 1972. Data from the USGS indicate that eleven of their stream gage monitoring sites in North Carolina (Ahoskie, Rocky Mount, Hilliardston, White Oak, Enfield, Tarboro, Lucama, Hookerton, Trenton, Chinquapin, and Freeland) exceeded 0.2% annual chance flood levels due to Floyd. Total losses in North Carolina approach \$5 billion with an estimated \$3.5 billion in damages to North Carolina homes, businesses, roads, and infrastructure. Floyd passed relatively close to the entire U.S. east coast, justifying hurricane warnings from Florida to Massachusetts and requiring an estimated two million people to evacuate. The last hurricane to require warnings for as large a stretch of coastline was Hurricane Donna in 1960.

Hurricane Bonnie

(8/26/1998)

The landfall location of Bonnie was in southern North Carolina near Cape Fear very close to landfall of both Hurricanes Bertha and Fran in 1996. Even though a powerful storm, damage from Bonnie was much less than Fran, which was also Category 3. Winds gusted up to 100 knots and storm tides of 5 to 8 feet above normal were reported mainly in eastern beaches of Brunswick County, while a storm surge of 6 feet was reported at Pasquotank and Camden Counties in the Albemarle Sound.

Hurricane Fran

(9/5/1996)

The landfall location of Fran near the city of Wilmington and its progression into the Raleigh-Durham area caused an estimated \$1.275 billion in damage in North Carolina alone. Fran hit with gusts up to 105 mph and a storm surge of approximately 16 feet. Over \$1 billion in damage was reported in North Topsail Beach and Surf City and 23 people were killed.

Hurricane Bertha

(7/12/1996)

1996 was a damaging year in the hurricane history of North Carolina. Tropical Storm Arthur, Hurricane Bertha, and Hurricane Fran all made direct landfall on the North Carolina coastline. It was the most active tropical cyclone season in the state since 1955, when Hurricanes Connie, Diane, and Lone all hit the coast. Bertha entered North Carolina in North Topsail Beach with 105 mph gust and a storm surge of approximately 5 feet.

Hurricane Gloria

(9/26/1985)

The landfall location of Gloria was Cape Hatteras, with 90 knot winds and a storm surge of approximately 6-8 feet.

Hurricane Diana

(9/13/1984)

The landfall location of Diana was 38 miles south of Wilmington with 90 mph winds at its closest approach to Wilmington. Diana had 115 mph sustained winds before landfall. Storm surge was approximately 5-6 feet.

Table 5, "Historic Flood Elevations", lists selected flooding sources in Duplin County with records of past stages. The table shows the historic peak, a location description, approximate stream station, the date of the historic peak, and approximate recurrence interval of the flood elevation. The approximate recurrence interval for a flood is often estimated based on an analysis of rainfall amounts from a storm and /or stream gage data.

Table 5 - Historic Flood Elevations

Flooding Source/Tropical Storm	Location Description	Approx. Stream Station	Historic Peak (Feet NAVD 88)	Date	Approximate Recurrence Interval (in years)
Cypress Creek Tributary 2 / Hurricane Floyd	Downstream of Fountaintown Road - Barn	6224	42.2	9/1/1999	100
Cypress Creek Tributary 2 / Hurricane Floyd	Downstream of Fountaintown Road - Barn	6224	44.0	9/1/1999	500
Doctors Creek / Hurricane Floyd	At NC Highway 41 - Trailer	36931	59.6	9/1/1999	*
Goshen Swamp / Hurricane Floyd	NC Highway 11 and NC Highway 903	3944	63.9	9/1/1999	500
Goshen Swamp / Hurricane Floyd	Summerlins Crossroads	40853	79.7	9/1/1999	500
Goshen Swamp / Hurricane Floyd	At NC Highway 403	100681	104.2	9/1/1999	500
Grove Creek / Hurricane Floyd	Approximately 0.4 mile downstream of Stokes Street	37109	74.0	9/1/1999	500
Limestone Creek / Hurricane Floyd	Approximately 635 feet upstream of NC Highway 24 - First Floor	67327	66.3	9/1/1999	500
Northeast Cape Fear River / Hurricane Floyd	Deep Bottom Road	433108	32.8	9/1/1999	500
Northeast Cape Fear River / Hurricane Floyd	Approximately 5.3 miles downstream of Deep Bottom Road	404913	35.2	9/1/1999	500
Northeast Cape Fear River / Hurricane Floyd	Window	455062	41.4	9/1/1999	500
Northeast Cape Fear River / Hurricane Floyd	At NC Highway 24 Westbound	532819	49.5	9/1/1999	500
Northeast Cape Fear River / Hurricane Floyd	At NC Highway 11	600379	68.3	9/1/1999	500
Northeast Cape Fear River / Hurricane Floyd	John Grady Road	624313	77.3	9/1/1999	500
Northeast Cape Fear River / Hurricane Floyd	Outlaw Road	640381	84.1	9/1/1999	500
Panther Creek / Hurricane Floyd	Greenhouse	10697	69.4	9/1/1999	500
Sawyer Branch / Hurricane Floyd	Above road	930	108.0	9/1/1999	500
Sawyer Branch / Hurricane Floyd	Guy Sanderson Road	950	108.0	9/1/1999	500
Taylor Creek / Hurricane Floyd	Above road	35296	82.8	9/1/1999	500
Turkey Creek / Hurricane Floyd	Approximately 1.5 miles upstream of NC Highway 133	28572	23.2	9/1/1999	*

* Data Not Available

4.4 Flood Protection Measures

Flood protection measures may be structural (such as levees, dams, and reservoirs) or non-structural (such as land-use management ordinances, policies, or practices).

Table 6, "Non-Levee Flood Protection Measures", lists the flood protection measures undertaken to mitigate flood damage in Duplin County.

Table 6 - Non-Levee Flood Protection Measures

Flooding Source	Structure Name	Type of Measure	Location	Description of Measure
Little Rockfish Creek	CF033LRC_DAM1	DAM		
Little Rockfish Creek	Little Rockfish Creek Channel	CHANNEL	Little Rockfish Creek Channel	The creek channel has been realigned and enlarged to improve drainage in the study reach. The channel of Rockfish Creek Tributary has also been improved. However, it has been ascertained that these improvements may not protect the county from rare even
Rockfish Creek Tributary	CF033RCT_ST1	CULVERT		
Rockfish Creek Tributary	CF033RCT_ST2	CULVERT		

N/A - Not Applicable

Table 7, "Levees" is not applicable in Duplin County.

4.5 Scope of Study

For this map maintenance revision, a scoping meeting was held in Duplin County to present the results of initial research to the county and communities within the county and to discuss their floodplain mapping needs. The county and communities were asked to provide input on proposed study priorities and analysis methods. These meetings resulted in the identification of flooding sources having a floodplain mapping need. Map Maintenance Plans were developed based on the results of the scoping meetings and were both mailed to each jurisdiction within Duplin County and posted to the State's website at www.ncfloodmaps.com.

Draft basin plans were developed based on the results of the initial scoping meetings. Final scoping meetings were held by the State and FEMA to provide counties and communities an overview of the draft basin plans, including the proposed scope and schedule for the project, and to provide an opportunity for additional county and community input. After the final scoping meeting was held, the Final Basin Plans were produced.

This FIS covers the geographic area of Duplin County, North Carolina, and all jurisdictions therein. The areas studied by detailed methods were selected with priority given to all known flood hazard areas and areas of projected development and proposed construction. Limits of detailed study are indicated on the Flood Profiles and/or Water-surface elevation rasters and/or the FIRM.

Table 8P, "Scope of Revisions: Revised or New Detailed Study -Preliminary", lists flooding sources that were newly studied by detailed methods or were previously studied by detailed methods and had a change in backwater elevation due to flooding effects from a newly studied flooding source.

Table 8P - Scope of Revisions: Revised or New Detailed Study - Preliminary

Source	Riverine Sources		Affected Communities
	From	To	
Doctors Creek	Approximately 2.3 miles upstream of the confluence with Rockfish Creek	Just downstream of Alderman Road (SR 1157)	Duplin County
Little Rockfish Creek	Just upstream of NC Highway 11	Approximately 1,525 feet upstream of NC Highway 41/ East Southerland Street	Town Of Wallace
Northeast Cape Fear River	Approximately 0.47 mile d/s of Bennets Bridge Road	Approximately 0.39 mile u/s of the confluence of Pasture Branch River	Duplin County Town Of Mount Olive
Northeast Cape Fear River	Approximately 200 feet upstream of the confluence of Rockfish Creek	Approximately 0.6 mile upstream of Deep Bottom Road (SR 1827)	Duplin County
Rockfish Creek	Approximately 560 feet downstream of Willard Railroad Street	Approximately 1.16 miles upstream of Wallace Airport Road (SR 1307)	Town Of Wallace
Rockfish Creek	The confluence with the Northeast Cape Fear River	Approximately 0.5 mile upstream of the confluence of Little Rockfish Creek	Duplin County Town Of Wallace
Rockfish Creek Tributary	The confluence with Rockfish Creek	Approximately 1,400 feet upstream of NC Highway 41	Town Of Wallace

Table 9P, "Scope of Revisions: Redelineated - Preliminary" is not applicable in Duplin County.

Table 10P, "Scope of Revisions: Limited Detailed - Preliminary", lists flooding sources that were newly studied by limited detailed methods or were previously studied by limited detailed methods and had a change in backwater elevation due to flooding effects from a newly studied flooding source.

Table 10P - Scope of Revisions: Limited Detailed - Preliminary

Source	Riverine Sources		Affected Communities
	From	To	
Island Creek ¹	Approximately 475 feet downstream of NC Highway 41	At the confluence with Island Creek Tributary	Duplin County
Island Creek Tributary ¹	Approximately 475 feet upstream of confluence with Island Creek	At Hanchey Road	Duplin County
Little Beaverdam Creek	The confluence with Big Beaverdam Creek	Approximately 0.3 mile upstream of NC Highway 903	Duplin County
Muddy Creek	The confluence with Northeast Cape Fear River	Approximately 0.65 mile upstream of Lyman Road (SR 1801)	Duplin County Town Of Beulaville
Muddy Creek Tributary ¹	Approximately 0.2 mile upstream of confluence with Muddy Creek	Approximately 940 feet downstream of NC Highway 111	Duplin County
Muddy Creek Tributary 1	The confluence with Muddy Creek	Approximately 340 feet upstream of Fountaintown Road (SR 1715)	Duplin County
Muddy Creek Tributary 2	The confluence with Muddy Creek Tributary 1	Approximately 155 feet upstream of CR Edwards Road (SR 1807)	Duplin County

Table 10P - Scope of Revisions: Limited Detailed - Preliminary

Source	Riverine Sources		Affected Communities
	From	To	
Oakie Branch ¹	Approximately 630 feet upstream of confluence with Northeast Cape Fear River	Just downstream of NC Highway 41	Duplin County
Polly Run Creek ¹	Confluence with Northeast Cape Fear River	Approximately 1,300 feet upstream of the confluence with Northeast Cape Fear River	Duplin County
Rattlesnake Branch ¹	Confluence with Northeast Cape Fear River	Approximately 2,000 feet upstream of the confluence with Northeast Cape Fear River	Duplin County
Rockfish Creek	Approximately 0.5 mile upstream of the confluence of Little Rockfish Creek	Approximately 500 feet downstream of Williard Railroad Street	Town Of Wallace
Stewarts Creek	Approximately 1.7 miles upstream of U.S. Highway 17	Approximately 200 feet downstream of East College Street	Town Of Warsaw

¹Revised to reflect backwater effects from new detailed study

Table 8, "Flooding Sources Studied by Detailed Methods", lists all flooding sources within the county that were studied by detailed methods for this FIS and previous FISs.

Table 8 - Flooding Sources Studied by Detailed Methods: Revised or Newly Studied

Source	Riverine Sources		Affected Communities
	From	To	
Doctors Creek	Approximately 2.3 miles upstream of the confluence with Rockfish Creek	Just downstream of Alderman Road (SR 1157)	Duplin County
Little Rockfish Creek	Just upstream of NC Highway 11	Approximately 1,525 feet upstream of NC Highway 41/ East Southerland Street	Town Of Wallace
Northeast Cape Fear River	Approximately 0.47 mile d/s of Bennets Bridge Road	Approximately 0.39 mile u/s of the confluence of Pasture Branch River	Duplin County Town Of Mount Olive
Northeast Cape Fear River	Approximately 200 feet upstream of the confluence of Rockfish Creek	Approximately 0.6 mile upstream of Deep Bottom Road (SR 1827)	Duplin County
Rockfish Creek	Approximately 560 feet downstream of Willard Railroad Street	Approximately 1.16 miles upstream of Wallace Airport Road (SR 1307)	Town Of Wallace
Rockfish Creek	The confluence with the Northeast Cape Fear River	Approximately 0.5 mile upstream of the confluence of Little Rockfish Creek	Duplin County Town Of Wallace
Rockfish Creek Tributary	The confluence with Rockfish Creek	Approximately 1,400 feet upstream of NC Highway 41	Town Of Wallace

Table 9, "Flooding Sources Studied by Detailed Methods: Redelineated", lists all flooding sources that were studied by detailed methods for the pre- statewide FIS and redelineated for previous FISs. These flooding sources were not part of this revision and their effective analyses remain valid.

Table 9 - Flooding Sources Studied by Detailed Methods: Redelineated

Source	Riverine Sources		Affected Communities
	From	To	
Doctors Creek	Confluence of Bull Branch	Approximately 2.4 miles upstream of confluence of the Bull Branch	Duplin County

Table 10, "Flooding Sources Studied by Detailed Methods: Limited Detailed", lists all flooding sources within the county that were studied by limited detailed methods for either this FIS or previous FISs.

Table 10 - Flooding Sources Studied by Detailed Methods: Limited Detailed

Source	Riverine Sources		Affected Communities
	From	To	
Angola Creek	Confluence with Back Swamp	Approximately 0.3 mile upstream of Lightwood Bridge Road	Duplin County
Back Swamp	Confluence of Cypress Creek	Approximately 0.7 mile upstream of Dell Brock Road	Duplin County
Back Swamp Tributary 2	Confluence with Back Swamp	Approximately 0.5 mile upstream of Fountaintown Road	Duplin County
Back Swamp Tributary 3	Confluence with Back Swamp	Approximately 2.2 miles upstream of confluence with Back Swamp	Duplin County

Table 10 - Flooding Sources Studied by Detailed Methods: Limited Detailed

Source	Riverine Sources		Affected Communities
	From	To	
Back Swamp Tributary 4	Confluence with Back Swamp Tributary 3	Approximately 0.7 mile upstream of Highway 111	Duplin County
Back Swamp Tributary 5	Confluence with Back Swamp Tributary 4	Approximately 0.8 mile upstream of Highway 111	Duplin County
Bear Marsh Branch	Confluence with Goshen Swamp	Approximately 0.8 mile upstream of Swinsons Mhp Lane	Duplin County
Bear Swamp	Confluence with Goshen Swamp	Approximately 0.5 mile upstream of Warren Road	Duplin County
Bear Swamp Tributary	Confluence with Bear Swamp	Approximately 1.9 miles upstream of NC Highway 50 and US Highway 117	Duplin County
Beaverdam Branch (near Gracys Crossroads)	Confluence with Great Branch	Approximately 0.4 mile upstream of Richard Rouse Road	Duplin County
Beaverdam Branch (near Kenansville)	Confluence with Maple Branch	Approximately 0.3 mile upstream of Dr. Williams Road	Duplin County
Beaverdam Branch (near Scotts Store)	Approximately 0.6 mile downstream of Woodland Church Road	Approximately 0.4 mile upstream of Red Hill Road	Duplin County
Big Beaverdam Branch	Approximately 0.7 mile downstream of Interstate 40	Approximately 1.3 miles upstream of US Highway 117	Duplin County
Big Beaverdam Creek	Confluence with Rockfish Creek	Approximately 1.7 miles upstream of Old Camp Road	Duplin County
Big Branch	Confluence with Bear Swamp	Approximately 1.1 miles upstream of Bowdens Road	Duplin County
Buck Marsh Branch	Approximately 0.3 mile downstream of NC Highway 11	Approximately 2.1 miles upstream of the Duplin-Wayne County Line	Duplin County
Buckhall Creek	Confluence with Stewarts Creek (near Carroll)	Approximately 1.3 miles upstream of Buckhall Creek Road crossing	Duplin County
Burn Coat Creek	Approximately 1.1 miles downstream of NC Highway 111 and 11	Approximately 0.7 mile upstream of Maxwell Mill Road	Duplin County
Cabin Creek	Approximately 950 feet upstream of confluence with Limestone Creek	Approximately 0.9 mile upstream of NC Highway 111	Duplin County
Camp Branch	Approximately 0.2 mile upstream of confluence with Northeast Cape Fear River	Approximately 0.8 mile upstream of Woodland Church Road	Duplin County
Cow Hole Branch	Confluence with Goshen Swamp	Approximately 1.3 miles upstream of confluence with Goshen Swamp	Duplin County
Cowhole Branch	Confluence with Goshen Swamp	Approximately 1.3 miles upstream of confluence with Goshen Swamp	Duplin County
Cypress Creek	Confluence with Northeast Cape Fear River	At confluence of Back Swamp and Ninemile Creek	Duplin County
Cypress Creek Tributary 1	Confluence with Cypress Creek	Approximately 1.6 miles upstream of Maready Rd	Duplin County
Cypress Creek Tributary 2	Confluence with Cypress Creek Tributary 1	Approximately 1.4 miles upstream of confluence with Cypress Creek tributary 1	Duplin County
Dark Branch	Approximately 0.5 mile upstream of confluence with Northeast Cape Fear River	Approximately 1.5 miles upstream of Dark Branch Road	Duplin County
Doctors Creek	Approximately 85 feet downstream of Alderman Road	Sampson-Duplin County boundary	Duplin County
Doctors Creek	Confluence with Rockfish Creek	Approximately 1.3 miles upstream of Doctors Creek Road	Duplin County
Dufis Creek	Confluence with Rockfish Creek	Approximately 520 feet upstream of Wells Town Road	Duplin County
Elder Branch	Approximately 0.4 mile upstream of confluence with Maxwell Creek	Approximately 0.2 mile upstream of Hamilton Road	Duplin County
Fussell Mill Branch	Confluence with Rockfish Creek	Approximately 0.9 mile upstream of Cornwallis Road	Duplin County
Goshen Swamp	Confluence with Northeast Cape Fear River	Approximately 228 feet upstream of Preacher Henrys Road	Duplin County Town Of Calypso Town Of Faison
Great Branch	Approximately 740 feet downstream of Sheep Pasture Road	Approximately 1.8 miles upstream of NC Highway 903	Duplin County
Grove Creek	Approximately 0.9 mile upstream of confluence with Northeast Cape Fear River	Approximately 2.7 miles upstream of Abner Phillips Road	Duplin County Town Of Kenansville
Herring Marsh Run	Confluence with Goshen Swamp	Approximately 0.4 mile upstream of Kinsey Mill Road	Duplin County
Island Creek	Approximately 475 feet downstream of NC Highway 41	Approximately 1.2 miles upstream of Rosemary Road	Duplin County
Island Creek Tributary	Approximately 475 feet upstream of confluence with Island Creek	Approximately 1.5 miles upstream of Hanchey Road	Duplin County
Juniper Branch	Approximately 210 feet upstream of confluence with Matthews Creek	Approximately 0.3 mile upstream of confluence with Matthews Creek	Duplin County
King Branch	Confluence with Nahunga Creek	Approximately 0.8 mile upstream of Veachs Mill Road	Duplin County

Table 10 - Flooding Sources Studied by Detailed Methods: Limited Detailed

Source	Riverine Sources		Affected Communities
	From	To	
Ladds Branch	Confluence with Polly Run Creek	Approximately 1.6 miles upstream of Oak Ridge Avenue	Duplin County
Limestone Creek	South Williams Road	Approximately 1.8 miles upstream of Highway 24	Duplin County Town Of Beulaville
Little Beaverdam Creek	Confluence with Big Beaverdam Creek	NC Highway 11	Duplin County
Little Limestone Creek	Approximately 0.3 mile upstream of confluence with Limestone Creek	Approximately 0.5 mile upstream of Church Road	Duplin County
Little Rockfish Creek	NC Highway 41	Approximately 0.7 mile upstream of NC Highway 41	Town Of Wallace
Maple Branch	Confluence with Goshen Swamp	Approximately 0.6 mile upstream of Summerlinns Crossroads	Duplin County
Maple Creek	Approximately 420 feet upstream of confluence with Limestone Creek	Approximately 1.9 miles upstream of Hallsville Road	Duplin County
Marsh Branch	Approximately 530 feet upstream of confluence with Grove Creek	Approximately 1.8 miles upstream of Mallard Road	Duplin County
Matthews Creek	Approximately 0.3 mile upstream of confluence with Northeast Cape Fear River	Approximately 3.2 miles upstream of NC Highway 111 and 903	Duplin County
Maxwell Creek	Approximately 0.5 mile upstream of confluence with Stocking Head Creek	Approximately 0.4 mile upstream of John Rich Road	Duplin County Town Of Magnolia
Mill Branch (near Kornegay)	Approximately 630 feet upstream of confluence with Burn Coat Creek	Approximately 0.9 mile upstream of Burncoat Road	Duplin County
Mill Branch (near Teachey)	Confluence with Paget Branch and Little Rockfish Creek	Approximately 260 feet downstream of Stallings Road	Town Of Wallace
Mill Creek	Confluence with Doctors Creek	Approximately 800 ft upstream of Matthews Road	Duplin County
Miller's Creek	Confluence with Stewarts Creek (Near Carroll)	Approximately 1.43 miles upstream of	Duplin County Town Of Magnolia
Mire Branch	Approximately 530 feet upstream of confluence with Northeast Cape Fear River	Approximately 1.4 miles upstream of Garner Chapel Road	Duplin County
Muddy Creek	The confluence with Northeast Cape Fear River	Approximately 0.65 mile upstream of Lyman Road (SR 1801)	Duplin County Town Of Beulaville
Muddy Creek Tributary	Approximately 0.2 mile upstream of confluence with Muddy Creek	Approximately 3.2 miles upstream of Lyman Road	Duplin County
Muddy Creek Tributary 1	The confluence with Muddy Creek	Approximately 340 feet upstream of Fountaintown Road (SR 1715)	Duplin County
Muddy Creek Tributary 2	The confluence with Muddy Creek Tributary 1	Approximately 155 feet upstream of CR Edwards Road (SR 1807)	Duplin County
Murpheys Creek	Confluence with Rockfish Creek	Approximately 1.3 miles upstream of Waycross Road	Duplin County
Murpheys Creek Tributary	Approximately 0.2 mile upstream of confluence with Muddy Creek	Approximately 3.2 miles upstream of Lyman Road	Duplin County
Nahunga Creek	Approximately 370 feet downstream of Veachs Mill Road	Approximately 85 feet downstream of Revelle Road	Duplin County
Ninemile Creek	Confluence with Cypress Creek and Back Swamp	Approximately 1,000 feet downstream of Davis Road	Duplin County
Northeast Cape Fear River	Approximately 2.2 miles upstream of Crooms Bridge Road	Approximately 0.3 mile downstream of Bennetts Bridge Road	Duplin County
NP	Confluence with Doctors Creek	Approximately 0.5 mile upstream of Bull Tail Road	Duplin County
Oakie Branch	Approximately 630 feet upstream of confluence with Northeast Cape Fear River	Approximately 0.6 mile upstream of Jack Dale Road	Duplin County
Paget Branch	Confluence with Mill Branch (near Teachey) and Little Rockfish Creek	Approximately 0.3 mile upstream of High School Road	Duplin County Town Of Wallace
Panther Branch (near Faison)	Confluence with Goshen Swamp	Approximately 0.3 mile upstream of Interstate 40	Duplin County Town Of Faison
Panther Creek	Approximately 1.1 miles downstream of NC Highway 11	Approximately 2.8 miles upstream of Kitty Noecker Road	Duplin County
Persimmon Branch	Approximately 0.3 mile upstream of confluence with Northeast Cape Fear River	Approximately 2.2 miles upstream of Dobson Chapel Road	Duplin County
Pharisee Creek	Sampson/Duplin County boundary	Approximately 0.5 mile upstream of Wilmington Highway	Duplin County
Poley Branch	Confluence with Buck Marsh Branch	Approximately 1.9 miles upstream of Drummersville Road	Duplin County
Polly Run Creek	Confluence with Northeast Cape Fear River	Confluence with Wolfscape Branch and Ladds Branch	Duplin County
Pudding Branch	Confluence with Beaverdam Br (near Kenansville)	Approximately 0.3 mile upstream of Summerlinns Crossroads	Duplin County
Rattlesnake Branch	Confluence with Northeast Cape Fear River	Approximately 1.5 miles upstream of confluence with Northeast Cape Fear River	Duplin County

Table 10 - Flooding Sources Studied by Detailed Methods: Limited Detailed

Source	Riverine Sources		Affected Communities
	From	To	
Reedy Branch (near Blizzards Crossroads)	Approximately 530 feet upstream of confluence with Mire Branch	Approximately 0.3 mile upstream of confluence with Mire Branch	Duplin County
Reedy Branch (near Faison)	Confluence with Goshen Swamp	Approximately 1.3 miles upstream of Main Street	Town Of Faison
Rockfish Creek	Approximately 0.5 mile upstream of the confluence of Little Rockfish Creek	Approximately 500 feet downstream of Williard Railroad Street	Town Of Wallace
Rockfish Creek	Confluence of Rockfish Creek Tributary	Approximately 0.9 mile upstream of Blue Newkirk Road	Duplin County Town Of Wallace
Sawyer Branch	Approximately 530 feet upstream of Matthews Creek	Approximately 0.7 mile upstream of Guy Sanderson Road	Duplin County
Stewarts Creek	Approximately 1.7 miles upstream of U.S. Highway 17	Approximately 200 feet downstream of East College Street	Town Of Warsaw
Stewarts Creek	Confluence with Six Runs Creek	Approximately 1.7 miles upstream of Highway 17 road crossing	Duplin County Town Of Warsaw
Stewarts Creek (near Friendship)	Confluence with Nahunga Creek	Approximately 1.3 miles upstream of confluence with Nahunga Creek	Duplin County
Stocking Head Creek	Approximately 0.9 mile upstream of confluence with Northeast Cape Fear River	Approximately 685 feet upstream of Dobson Chapel Road	Duplin County
Taylor Creek	Confluence with Dufis Creek	Approximately 0.5 mile upstream of Merritt Road	Duplin County Town Of Rose Hill
Turkey Creek	Confluence with Six Runs Creek	Approximately 0.8 mile upstream of Blackmore Road crossing	Duplin County
Welch Branch	Approximately 0.4 mile upstream of Confluence with Dark Branch	Approximately 2.9 miles upstream of Confluence with Dark Branch	Duplin County
White Oak Branch	Approximately 0.3 mile downstream of a private road	Approximately 950 feet upstream of Broadhurst Road	Duplin County
Whiteoak Branch	Approximately 0.3 mile downstream of a private road	Approximately 950 feet upstream of Broadhurst Road	Duplin County Town Of Calypso Town Of Mount Olive
Wolfscape Branch	Confluence with Polly Run Creek	Approximately 0.5 mile upstream of Bethel Church Road	Duplin County

Additional Flooding Sources included in this FIS Report studied by Other Methods

Source	Riverine Sources		Affected Communities	Study Type
	From	To		
NP	NP	NP	Duplin County	NP

Table 11, "Stream Name Changes" is not applicable in Duplin County.

Table 12, "Letters of Map Revision" is not applicable in Duplin County.

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% 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.

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. For details on the county's hydrologic analyses, the hydrologic report is available by request.

A summary of the drainage area-peak discharge relationships for the flooding sources studied by detailed methods is shown in Table 13, "Summary of Discharges".

Table 13 - Summary of Discharges

Flooding Source		Discharges (cfs)			
Location	Drainage Area (square miles)	10% Annual Chance	2% Annual Chance	1% Annual Chance	0.2% Annual Chance
Angola Creek					
Just upstream of the confluence with Cypress Creek	3.81	*	*	1340	*
Approximately 370 feet upstream of Lightwood Bridge Road	2.33	*	*	1020	*
Back Swamp					
Just upstream of the confluence with Ninemile Creek and Cypress Creek	36.25	*	*	4810	*
Approximately 1.1 miles upstream of the confluence with Ninemile Creek and Cypress Creek	35.05	*	*	4720	*
Approximately 1.7 miles upstream of the confluence with Ninemile Creek and Cypress Creek	33.77	*	*	4620	*
Approximately 2.3 miles upstream of the confluence with Ninemile Creek and Cypress Creek	31.96	*	*	4480	*
Approximately 2.5 miles upstream of the confluence with Ninemile Creek and Cypress Creek	31.10	*	*	4410	*
Approximately 2.8 miles upstream of the confluence with Ninemile Creek and Cypress Creek	28.15	*	*	4170	*
Approximately 3.1 miles upstream of the confluence with Ninemile Creek and Cypress Creek	27.79	*	*	4140	*
Approximately 3.9 miles upstream of the confluence with Ninemile Creek and Cypress Creek	26.88	*	*	4060	*
Just upstream of the confluence of Back Swamp Tributary 1	22.30	*	*	3650	*
Just upstream of the confluence of Back Swamp Tributary 2	20.50	*	*	3480	*
Back Swamp Tributary 2					
Just upstream of the confluence with Back Swamp	1.60	*	*	820	*
Approximately 80 feet upstream of Fountaintown Road	1.17	*	*	688	*
Back Swamp Tributary 3					
Approximately 850 feet upstream of the confluence of Back Swamp Tributary 4	1.00	*	*	632	*
Approximately 0.9 mile upstream of the confluence of Back Swamp Tributary 4	0.67	*	*	1400	*
Just upstream of the confluence with Back Swamp	0.60	*	*	486	*
Back Swamp Tributary 4					
Approximately 550 feet upstream of the confluence with Back Swamp Tributary 3	2.41	*	*	1030	*
Just upstream of the confluence of Back Swamp Tributary 5	0.70	*	*	513	*
Approximately 110 feet upstream of NC Hwy 111	0.33	*	*	333	*
Back Swamp Tributary 5					
Just upstream of the confluence with Back Swamp Tributary 4	0.62	*	*	480	*
Approximately 0.3 mile upstream of NC Hwy 111	0.41	*	*	378	*
Bear Marsh Branch					

Table 13 - Summary of Discharges

Flooding Source		Discharges (cfs)			
Location	Drainage Area (square miles)	10% Annual Chance	2% Annual Chance	1% Annual Chance	0.2% Annual Chance
Just upstream of the confluence with Goshen Swamp	6.25	*	*	1320	*
Approximately 0.4 mile upstream of Pate Pond Road	5.96	*	*	1290	*
Approximately 0.1 mile upstream of Beautancus Road	5.17	*	*	1190	*
Approximately 0.3 mile downstream of Swinsons Mhp Lane	3.42	*	*	939	*
Approximately 0.5 mile upstream of Swinsons Mhp Lane	2.63	*	*	808	*
Bear Swamp					
Just upstream of the confluence with Goshen Swamp	19.82	*	*	2540	*
Approximately 0.4 mile upstream of the confluence with Goshen Swamp	19.38	*	*	2510	*
Approximately 0.3 mile upstream of Friendship Church Road	17.95	*	*	2400	*
Approximately 0.2 mile downstream of Taylor Town Road	13.93	*	*	2080	*
Just upstream of the confluence of Bear Swamp Tributary	10.23	*	*	1750	*
Just upstream of the confluence of Big Branch	5.55	*	*	1230	*
Approximately 550 feet downstream of NC Highway 50 and US Highway 117	4.90	*	*	1150	*
Approximately 0.7 mile upstream of NC Highway 50 and US Highway 117	4.15	*	*	1050	*
Approximately 0.2 mile upstream of Warren Road	2.06	*	*	704	*
Bear Swamp Tributary					
Just upstream of the confluence with Bear Swamp	2.40	*	*	768	*
Approximately 0.5 mile downstream of NC Highway 50 and US Highway 117	1.86	*	*	665	*
Approximately 0.9 mile upstream of NC Highway 50 and US Highway 117	0.66	*	*	369	*
Beaverdam Branch (near Gracys Crossroads)					
Just upstream of the confluence with Great Branch	2.02	*	*	697	*
Beaverdam Branch (near Kenansville)					
Just upstream of the confluence with Maple Branch and Pudding Branch	2.74	*	*	828	*
Approximately 460 feet downstream of Dr. Williams Road	2.28	*	*	746	*
Beaverdam Branch (near Scotts Store)					
Just upstream of the confluence with Northeast Cape Fear River	3.74	*	*	988	*
Approximately 0.3 mile upstream of Woodland Church Road	2.59	*	*	803	*
Approximately 0.4 mile upstream of Red Hill Road	1.21	*	*	522	*
Big Beaverdam Branch					
Just upstream of the confluence with Maxwell Creek	14.07	*	*	2812	*
Approximately 0.2 mile downstream of Brooks Quinn Road	12.49	*	*	2629	*
Approximately 0.5 mile upstream of Brooks Quinn Road	10.03	*	*	2321	*
Approximately 0.3 mile upstream of Sheffield Road	4.70	*	*	1511	*
Approximately 0.3 mile upstream of Sheffield Road	3.46	*	*	1269	*
At Railroad crossing	2.53	*	*	1064	*
Big Beaverdam Creek					
Just upstream of the confluence of with Rockfish Creek	12.12	*	*	2580	*
Approximately 0.8 mile upstream of the confluence with Rockfish Creek	10.98	*	*	2440	*
Just upstream of the confluence with Little Beaverdam Creek	5.90	*	*	1720	*
Approximately 0.6 mile upstream of Old Camp Road	4.77	*	*	1520	*
Approximately 1.3 miles upstream of Old Camp Road	1.29	*	*	725	*
Big Branch					
Just upstream of the confluence with Bear Swamp	3.68	*	*	978	*

Table 13 - Summary of Discharges

Flooding Source		Discharges (cfs)			
Location	Drainage Area (square miles)	10% Annual Chance	2% Annual Chance	1% Annual Chance	0.2% Annual Chance
Just upstream of Bowdens Road	2.95	*	*	863	*
Approximately 0.6 mile upstream of Bowdens Road	2.10	*	*	713	*
Buck Marsh Branch					
Just upstream of the confluence with Northeast Cape Fear River	21.47	*	*	2660	*
Just upstream of the confluence of Poley Branch	15.79	*	*	2230	*
Approximately 0.8 mile upstream of Donald K Outlaw Road	14.40	*	*	2120	*
Buckhall Creek					
Just upstream of the confluence with Stewarts Creek	7.84	*	*	1500	*
Approximately 0.4 mile upstream of Buck Hall Creek Road	7.20	*	*	1430	*
Approximately 0.5 mile upstream of Buck Hall Creek Road	3.11	*	*	890	*
Approximately 0.5 mile downstream of Carlton Chapel Church	2.85	*	*	847	*
Bull Branch					
Just upstream of confluence with Doctors Creek	3.86	510	980	1240	2019
Bulltail Creek					
Just upstream of the confluence with Doctors Creek	11.94	*	*	2560	*
Just upstream of the confluence with Pharisee Creek	7.18	*	*	1920	*
Approximately 0.3 mile upstream of the confluence with Pharisee Creek	6.33	*	*	1790	*
Approximately 0.2 mile upstream of Bull Tail Road	4.40	*	*	1450	*
Burn Coat Creek					
Just upstream of the confluence with Northeast Cape Fear River	10.69	*	*	1789	*
Approximately 0.6 mile upstream of the confluence with Northeast Cape Fear River	10.43	*	*	1764	*
Approximately 0.2 mile upstream of NC Highway 111 and NC Highway 11	9.75	*	*	1698	*
Approximately 1.0 mile upstream of NC Highway 111 and NC Highway 11	8.46	*	*	1567	*
Approximately 1.8 miles upstream of NC Highway 111 and NC Highway 11	7.14	*	*	1424	*
Approximately 0.2 mile downstream of Maxwell Mill Road	5.29	*	*	1201	*
Cabin Creek					
Just upstream of the confluence with Limestone Creek	5.10	*	*	1582	*
Approximately 0.4 mile downstream of Sarecta Road	4.86	*	*	1538	*
Approximately 640 feet upstream of Sarecta Road	2.86	*	*	1140	*
Approximately 0.9 mile upstream of NC Highway 111	2.01	*	*	934	*
Camp Branch					
Just upstream of the confluence with Northeast Cape Fear River	2.28	*	*	746	*
Just upstream of Woodland Church Road	2.01	*	*	695	*
Approximately 0.7 mile upstream of Woodland Church Road	1.49	*	*	587	*
Cow Hole Branch					
Just upstream of the confluence with Goshen Swamp	2.97	*	*	867	*
Approximately 0.9 mile upstream of the confluence with Goshen Swamp	2.00	*	*	692	*
Approximately 1.6 miles upstream of the confluence with Goshen Swamp	1.53	*	*	596	*
Cowhole Branch					
Just upstream of the confluence with Burn Coat Creek and Cowhole Branch	2.75	*	*	830	*
Approximately 0.4 mile upstream of Jimmy Lee Road	2.55	*	*	794	*
Cypress Creek					
Just upstream of the confluence with Northeast Cape Fear River	88.85	*	*	8000	*

Table 13 - Summary of Discharges

Flooding Source		Discharges (cfs)			
Location	Drainage Area (square miles)	10% Annual Chance	2% Annual Chance	1% Annual Chance	0.2% Annual Chance
Approximately 135 feet downstream of Norwood Blanchard Road	87.19	*	*	7910	*
Approximately 0.8 mile upstream of Norwood Blanchard Road	85.70	*	*	7830	*
Just upstream of the confluence of Cypress Creek Tributary 1	77.72	*	*	7410	*
Approximately 0.5 mile upstream of the confluence of Cypress Creek Tributary 1	75.37	*	*	7280	*
Just downstream of NC Highway 50	73.62	*	*	7190	*
Approximately 1.4 miles upstream of NC Highway 50	71.47	*	*	7070	*
Approximately 1.6 miles upstream of NC Highway 50	69.51	*	*	6960	*
Approximately 2.0 miles upstream of NC Highway 50	68.11	*	*	6880	*
Approximately 3.2 miles upstream of NC Highway 50	67.23	*	*	6830	*
Approximately 3.6 miles upstream of NC Highway 50	64.72	*	*	6680	*
Approximately 4.3 miles upstream of NC Highway 50	63.12	*	*	6590	*
Just upstream of the confluence of Angola Creek	56.49	*	*	6180	*
Cypress Creek Tributary 1					
Just upstream of the confluence with Cypress Creek	6.59	*	*	1830	*
Just upstream of the confluence of Cypress Creek Tributary 2	3.77	*	*	1330	*
Approximately 0.3 mile upstream of Maready Road	3.08	*	*	1190	*
Just downstream of a Private Road off of Fountaintown Road	2.10	*	*	955	*
Approximately 0.3 mile upstream of a Private Road off of Fountaintown Road	0.77	*	*	540	*
Cypress Creek Tributary 2					
Just upstream of the confluence with Cypress Creek Tributary 1	2.34	*	*	1020	*
Approximately 1.1 miles upstream of the confluence with Cypress Creek Tributary 1	1.36	*	*	749	*
Dark Branch					
Just upstream of the confluence with Northeast Cape Fear River	7.84	*	*	2019	*
Approximately 0.3 mile upstream of the confluence with Northeast Cape Fear River	4.54	*	*	1481	*
Just upstream of the confluence of Welch Branch	2.86	*	*	1139	*
Approximately 0.6 mile upstream of Dark Branch Road	2.01	*	*	934	*
Doctors Creek					
Approximately 1.1 miles upstream of the confluence with Rockfish Creek	49.79	*	*	5760	*
At confluence with Bull Branch	49.06	*	*	5642	*
Approximately 1.3 mile downstream of Alderman Road	46.49	*	*	5465	*
Approximately 0.78 mile downstream of Alderman Road	45.51	*	*	5396	*
Just upstream of the confluence of Mill Creek	22.73	*	*	3690	*
Approximately 1.0 mile upstream of the confluence of Mill Creek	21.69	*	*	3590	*
Approximately 0.2 mile downstream of NC Highway 41	20.75	*	*	3510	*
Just upstream of the confluence with Bulltail Creek	6.72	*	*	1850	*
Approximately 0.3 mile upstream of Bull Tail Road	5.39	*	*	1630	*
Approximately 1.0 mile upstream of Bull Tail Road	4.26	*	*	1430	*
Approximately 0.3 mile upstream of Leighton Hall Road	2.20	*	*	980	*
Dufis Creek					
Just upstream of the confluence with Rockfish Creek	21.62	*	*	3590	*
Just upstream of the confluence of Taylor Creek	7.31	*	*	1940	*
Approximately 1.1 miles upstream of the confluence of Taylor Creek	5.54	*	*	1660	*
Approximately 0.2 mile downstream of Wells Town Road	3.55	*	*	1290	*
Elder Branch					

Table 13 - Summary of Discharges

Flooding Source		Discharges (cfs)			
Location	Drainage Area (square miles)	10% Annual Chance	2% Annual Chance	1% Annual Chance	0.2% Annual Chance
Just upstream of the confluence with Maxwell Creek	10.43	*	*	2373	*
Approximately 1.7 miles upstream of the confluence with Maxwell Creek	8.87	*	*	2165	*
Approximately 0.3 mile downstream of NC Highway 11	7.12	*	*	1911	*
Approximately 0.7 mile upstream of NC Highway 11	6.40	*	*	1799	*
Approximately 0.7 mile downstream of State Route 1921	4.47	*	*	1467	*
Approximately 0.8 mile upstream of State Route 1921	3.49	*	*	1275	*
Fussell Mill Branch					
Just upstream of the confluence with Rockfish Creek	2.64	*	*	1090	*
Approximately 0.6 mile upstream of Cornwallis Road	1.76	*	*	866	*
Goshen Swamp					
Just upstream of the confluence with Northeast Cape Fear River	185.58	*	*	9000	*
Approximately 1.4 miles upstream of NC Highway 11 and NC Highway 903	181.06	*	*	8880	*
Approximately 2.7 miles upstream of NC Highway 11 and NC Highway 903	176.34	*	*	8740	*
Approximately 3.7 miles upstream of NC Highway 11 and NC Highway 903	173.39	*	*	8660	*
Just upstream of the confluence of Herring Marsh Run	161.19	*	*	8310	*
Just upstream of the confluence of Maple Branch	152.13	*	*	8040	*
Approximately 1.0 mile upstream of the confluence of Maple Branch	149.49	*	*	7960	*
Just upstream of the confluence of Nahunga Creek	125.52	*	*	7210	*
Approximately 2.0 miles upstream of the confluence of Nahunga Creek	121.07	*	*	7070	*
Approximately 2.9 miles upstream of the confluence of Nahunga Creek	111.19	*	*	6730	*
Approximately 0.4 mile downstream of Tear Shirt Road	104.14	*	*	6490	*
Just upstream of the confluence of Bear Swamp	79.42	*	*	5570	*
Just upstream of the confluence of Bear Marsh Branch	72.52	*	*	5290	*
Just upstream of the confluence of Cow Hole Branch	68.98	*	*	5140	*
Just upstream of the confluence of White Oak Branch	62.47	*	*	4860	*
At NC Highway 403	60.68	*	*	4780	*
Just upstream of the confluence of Reedy Branch (near Faison)	52.73	*	*	4420	*
Just upstream of the confluence of Panther Branch (near Faison)	44.57	*	*	4010	*
Approximately 0.2 mile downstream of Bennett Road	39.16	*	*	3730	*
Just upstream of the confluence of Youngs Swamp	21.39	*	*	2650	*
Great Branch					
Just upstream of the confluence with Northeast Cape Fear River	10.68	*	*	1788	*
Just downstream of NC Highway 111	7.83	*	*	1500	*
Approximately 0.7 mile upstream of NC Highway 903	5.85	*	*	1272	*
Grove Creek					
Just upstream of the confluence with Northeast Cape Fear River	38.26	*	*	4959	*
Approximately 0.9 mile upstream of the confluence with Northeast Cape Fear River	37.59	*	*	4909	*
Approximately 2.7 miles upstream of the confluence with Northeast Cape Fear River	35.93	*	*	4785	*
Approximately 3.3 miles upstream of the confluence with Northeast Cape Fear River	33.98	*	*	4636	*
Approximately 4.0 miles upstream of the confluence with Northeast Cape Fear River	32.36	*	*	4509	*
1.6 miles downstream of Main Street	26.35	*	*	4014	*
Approximately 0.4 mile downstream of Main Street	22.48	*	*	3668	*
Approximately 0.6 mile downstream of Stokes Street	21.10	*	*	3539	*
Just upstream of the confluence of Marsh Branch	12.53	*	*	2634	*

Table 13 - Summary of Discharges

Flooding Source		Discharges (cfs)			
Location	Drainage Area (square miles)	10% Annual Chance	2% Annual Chance	1% Annual Chance	0.2% Annual Chance
Approximately 0.5 mile upstream of Faison McGowan Road	11.69	*	*	2532	*
Approximately 0.8 mile upstream of Faison McGowan Road	9.69	*	*	2277	*
Approximately 1.6 miles upstream of Faison McGowan Road	8.09	*	*	2055	*
Approximately 290 feet downstream of Abner Phillips Road	6.26	*	*	1777	*
Approximately 0.8 mile upstream of Abner Phillips Road	5.61	*	*	1670	*
Approximately 1.9 miles upstream of Abner Phillips Road	3.73	*	*	1324	*
Approximately 2.5 miles upstream of Abner Phillips Road	2.34	*	*	1017	*
Herring Marsh Run					
Just upstream of the confluence with Goshen Swamp	10.30	*	*	1750	*
Approximately 500 feet upstream of Red Hill Road	9.04	*	*	1630	*
Approximately 0.9 mile upstream of Red Hill Road	5.82	*	*	1270	*
Approximately 1.6 miles upstream of Red Hill Road	2.84	*	*	845	*
Approximately 0.2 mile upstream of Kinsey Mill Road	1.84	*	*	661	*
Island Creek					
Just upstream of the confluence with Northeast Cape Fear River	27.37	*	*	4101	*
Approximately 160 feet downstream of NC Highway 41	26.85	*	*	4057	*
Just upstream of the confluence of Island Creek Tributary	19.38	*	*	3372	*
Approximately 0.2 mile downstream of NC Highway 11	15.60	*	*	2982	*
Approximately 1.2 miles upstream of NC Highway 11	13.82	*	*	2783	*
Approximately 320 feet downstream of Bay Road	11.82	*	*	2547	*
Approximately 0.5 mile upstream of Bay Road	6.05	*	*	1742	*
Approximately 1.6 miles upstream of Bay Road	5.30	*	*	1617	*
Approximately 2.1 miles upstream of Bay Road	1.42	*	*	767	*
Island Creek Tributary					
Just upstream of the confluence with Island Creek	6.41	*	*	1801	*
Approximately 0.9 mile upstream of the confluence with Island Creek	4.96	*	*	1557	*
Approximately 0.9 mile upstream of the confluence with Island Creek	3.01	*	*	1173	*
Approximately 1.8 miles upstream of the confluence with Island Creek	2.00	*	*	931	*
Juniper Branch					
Just upstream of the confluence with Matthews Creek	1.03	*	*	476	*
Approximately 0.4 mile upstream of the confluence with Matthews Branch	0.86	*	*	429	*
King Branch					
Just upstream of the confluence with Nahunga Creek	6.55	*	*	1360	*
Approximately 1.3 miles upstream of the confluence with Nahunga Creek	5.66	*	*	1250	*
Approximately 0.3 mile downstream of Veachs Mill Road	4.26	*	*	1060	*
Approximately 0.6 mile upstream of Veachs Mill Road	3.01	*	*	874	*
Ladds Branch					
Just upstream of the confluence with Wolfscap Branch and Polly Run Creek	5.14	*	*	1180	*
Approximately 550 feet upstream of Oak Ridge Avenue	2.89	*	*	853	*
Approximately 0.8 mile upstream of Oak Ridge Avenue	1.55	*	*	599	*
Limestone Creek					
Just upstream of the confluence with Northeast Cape Fear River	61.32	*	*	7249	*
Just upstream of the confluence of Maple Creek	58.28	*	*	7159	*
Approximately 1.1 miles upstream of the confluence of Maple Creek	57.44	*	*	7133	*

Table 13 - Summary of Discharges

Flooding Source		Discharges (cfs)			
Location	Drainage Area (square miles)	10% Annual Chance	2% Annual Chance	1% Annual Chance	0.2% Annual Chance
Approximately 1.6 miles downstream of NC Highway 24	55.68	*	*	7074	*
Approximately 270 feet upstream of NC Highway 24	53.83	*	*	7008	*
Approximately 0.3 mile downstream of the confluence of Cabin Creek	47.46	*	*	6306	*
Just upstream of the confluence of Cabin Creek	42.17	*	*	5729	*
Approximately 0.2 miles upstream of NC Highway 111	36.59	*	*	5121	*
Approximately 0.4 mile downstream of NC Highway 241	34.93	*	*	4940	*
Approximately 1.1 miles upstream of NC Highway 241	30.99	*	*	4510	*
Approximately 0.3 mile upstream of NC Highway 41	29.22	*	*	4316	*
Just upstream of the confluence of Little Limestone Creek	12.51	*	*	2631	*
Approximately 0.3 mile upstream of Wagon Ford Road	11.18	*	*	2469	*
Approximately 1.5 miles upstream of Wagon Ford Road	4.13	*	*	1404	*
Approximately 1.0 mile upstream of NC Highway 24	2.83	*	*	1133	*
Little Beaverdam Creek					
Just upstream of the confluence with Big Beaverdam Creek	4.40	*	*	1460	*
Approximately 390 feet upstream of NC Highway 903	3.47	*	*	1270	*
Little Limestone Creek					
Just upstream of the confluence with Limestone Creek	14.72	*	*	2886	*
Approximately 0.4 mile downstream of Lester Houston Road	14.41	*	*	2850	*
Approximately 1.7 miles upstream of Lester Houston Road	9.59	*	*	2262	*
Just upstream of NC Highway 41	6.87	*	*	1873	*
Approximately 1.9 miles upstream of NC Highway 41	6.05	*	*	1742	*
Approximately 0.4 mile downstream of Sumner Road	4.11	*	*	1400	*
Approximately 0.9 mile downstream of Sumner Road	2.15	*	*	970	*
Little Rockfish Creek					
Above confluence with Rockfish Creek	9.43	*	*	2119	*
Approximately 0.78 mile upstream of N.C. Highway 11	8.78	*	*	2031	*
Approximately 0.45 mile downstream of Southerland Street	8.20	*	*	1949	*
Approximately 0.05 mile downstream of Southerland Street	7.98	*	*	1919	*
Maple Branch					
Just upstream of the confluence with Goshen Swamp	7.83	*	*	1500	*
Approximately 420 feet downstream of Ward Bridge Road	7.43	*	*	1460	*
Approximately 0.5 mile upstream of Ward Bridge Road	6.52	*	*	1350	*
Maple Creek					
Just upstream of the confluence with Limestone Creek	2.67	*	*	1095	*
Approximately 1.0 mile upstream of Hallsville Road	2.02	*	*	935	*
Marsh Branch					
Just upstream of the confluence with Grove Creek	6.72	*	*	1849	*
Approximately 250 feet upstream of Mallard Road	4.71	*	*	1512	*
Approximately 0.9 mile upstream of Mallard Road	4.13	*	*	1404	*
Approximately 1.5 miles upstream of Mallard Road	2.03	*	*	937	*
Matthews Creek					
Just upstream of the confluence with Northeast Cape Fear River	8.51	*	*	1573	*
Approximately 0.3 mile upstream of NC Highway 111 and NC Highway 903	7.28	*	*	1439	*
Approximately 0.9 mile upstream of NC Highway 111 and NC Highway 903	6.17	*	*	1311	*

Table 13 - Summary of Discharges

Flooding Source		Discharges (cfs)			
Location	Drainage Area (square miles)	10% Annual Chance	2% Annual Chance	1% Annual Chance	0.2% Annual Chance
Just upstream of the confluence of Juniper Branch	3.97	*	*	1022	*
Just upstream of the confluence of Sawyer Branch	1.50	*	*	589	*
Approximately 0.8 mile upstream of the confluence of Sawyer Branch	0.48	*	*	311	*
Maxwell Creek					
Just upstream of the confluence with Stocking Head Creek	53.53	*	*	5999	*
Approximately 1.1 miles upstream of the confluence with Stocking Head Creek	52.39	*	*	5926	*
Approximately 1.9 miles upstream of the confluence with Stocking Head Creek	51.13	*	*	5845	*
Just upstream of the confluence of Maxwell Creek Tributary	48.56	*	*	5676	*
Approximately 0.5 mile downstream of Stocking Head Road	46.59	*	*	5545	*
Just upstream of the confluence of Elder Branch	34.45	*	*	4672	*
Approximately 0.8 mile downstream of NC Highway 11	32.94	*	*	4556	*
Just upstream of NC Highway 11	32.08	*	*	4488	*
Just upstream of the confluence of Big Beaverdam Branch	16.03	*	*	3028	*
Approximately 0.4 mile downstream of I-40 (first crossing)	15.70	*	*	2993	*
Approximately 0.7 mile upstream of Blind Bridge Road	13.70	*	*	2770	*
Approximately 0.8 mile downstream of NC Highway 903	11.73	*	*	2536	*
Just upstream of NC Highway 903	8.07	*	*	2052	*
Approximately 0.6 mile upstream of NC Highway 903	7.43	*	*	1958	*
Approximately 0.9 mile upstream of NC Highway 903	5.78	*	*	1699	*
Approximately 0.4 mile downstream of I-40 (second crossing)	4.37	*	*	1449	*
Just upstream of I-40 (second crossing)	3.13	*	*	1199	*
Approximately 1.0 mile upstream of I-40 (second crossing)	1.98	*	*	925	*
Mill Branch (near Kornegay)					
Just upstream of the confluence with Burn Coat Creek	1.70	*	*	632	*
Approximately 0.3 mile upstream of Burncoat Road	1.18	*	*	514	*
Mill Branch (near Teachey)					
Just upstream of the confluence with Little Rockfish Creek	4.99	*	*	1560	*
Approximately 1.3 miles upstream of the confluence with Little Rockfish Creek	3.96	*	*	1370	*
Mill Creek					
Just above confluence with Doctors Creek	9.20	*	*	2210	*
Approximately 0.4 mile downstream of Newkirk-Highsmith Road	8.40	*	*	2090	*
Miller's Creek					
Just upstream of the confluence with Stewarts Creek	13.06	*	*	2000	*
Approximately 0.4 mile downstream of Carlton Chapel Church	12.87	*	*	1990	*
Approximately 0.6 mile upstream of Carlton Chapel Church	11.93	*	*	1900	*
Approximately 0.7 mile upstream of Carlton Chapel Church	10.60	*	*	1780	*
Approximately 1.1 miles upstream of Carlton Chapel Church	10.44	*	*	1770	*
Approximately 1.2 miles upstream of Carlton Chapel Church	9.26	*	*	1650	*
Approximately 0.6 mile downstream of Beasley's Mill Road	8.54	*	*	1580	*
Approximately 0.2 mile upstream of Beasley's Mill Road	7.90	*	*	1510	*
Approximately 1.0 mile upstream of Beasley's Mill Road	6.91	*	*	1400	*
Approximately 1.1 miles upstream of Beasley's Mill Road	5.31	*	*	1200	*
Approximately 1.2 miles upstream of Beasley's Mill Road	1.96	*	*	684	*
Mire Branch					

Table 13 - Summary of Discharges

Flooding Source		Discharges (cfs)			
Location	Drainage Area (square miles)	10% Annual Chance	2% Annual Chance	1% Annual Chance	0.2% Annual Chance
Just upstream of the confluence with Northeast Cape Fear River	4.00	*	*	1026	*
Approximately 0.3 mile upstream of Garner Chapel Road	3.34	*	*	927	*
Approximately 0.9 mile upstream of Garner Chapel Road	2.95	*	*	863	*
Just upstream of the confluence of Reedy Branch (near Blizzards Crossroads)	1.17	*	*	512	*
Muddy Creek					
Just upstream of confluence with Northeast Cape Fear River	46.03	2360	4354	5433	8614
Approximately 0.85 mile upstream of Durwood Evans Rd	44.47	2310	4265	5323	8443
Approximately 0.95 mile downstream of NC Highways 41 and 111	42.49	2246	4150	5181	8221
Approximately 2,500 feet downstream of NC Highway 41 and 111	41.27	2206	4078	5092	8083
Approximately 1,362 feet upstream of NC Highways 41 and 111	40.02	2164	4004	5000	7939
Approximately 1.35 mile upstream of NC Highways 41 and 111	37.13	2067	3828	4782	7599
Approximately 2,100 feet downstream of Jackson Store Road	27.16	1704	3173	3971	6333
Approximately 1 mile upstream of Jackson Store Road	12.21	1041	1964	2470	3974
Approximately 0.45 mile downstream of Quinn Store Road	9.59	897	1699	2140	3453
Approximately 0.8 mile upstream of Quinn Store Road	5.20	614	1177	1488	2416
Approximately 1,175 feet upstream of Lyman Road	3.99	522	1003	1270	2069
Approximately 2,350 feet downstream of Edwards Road	2.04	345	671	852	1399
Muddy Creek Tributary					
Just upstream of the confluence with Muddy Creek	8.17	*	*	2067	*
Approximately 200 feet upstream of Lyman Road	3.54	*	*	1287	*
Approximately 1.8 miles upstream of Lyman Road	2.11	*	*	960	*
Muddy Creek Tributary 1					
At confluence with Muddy Creek	13.68	*	*	2643	*
At the confluence with Muddy Creek Tributary 2	9.12	*	*	2076	*
Approximately 625 feet downstream of Lyman Road	8.96	*	*	2055	*
Approximately 2,860 feet upstream of Lyman Road	8.42	*	*	1981	*
Approximately 0.95 mile upstream of Lyman Road	7.85	*	*	1900	*
Approximately 1.38 miles upstream of Lyman Road	7.00	*	*	1775	*
Approximately 1,890 feet downstream of Fountaintown Road	4.71	*	*	1403	*
Approximately 220 feet downstream of Fountaintown Road	4.35	*	*	1339	*
Muddy Creek Tributary 2					
At the confluence with Muddy Creek Tributary 1	4.33	*	*	1335	*
Approximately 2,685 feet downstream of Lyman Road	3.91	*	*	1256	*
Approximately 340 feet downstream of Lyman Road	3.37	*	*	1151	*
Approximately 275 feet downstream of C R Edwards Road	2.83	*	*	1036	*
Murpheys Creek					
Just upstream of the confluence with Rockfish Creek	11.79	*	*	2540	*
Approximately 0.2 mile upstream of NC Highway 903	10.94	*	*	2440	*
Just upstream of the confluence with Murpheys Creek Tributary	3.88	*	*	1360	*
Approximately 1.1 miles upstream of Waycross Road	3.01	*	*	1170	*
Murpheys Creek Tributary					
Just upstream of the confluence with Murpheys Creek	4.50	*	*	1470	*
Approximately 0.4 mile upstream of the confluence with Murpheys Creek	4.37	*	*	1450	*
Approximately 0.2 mile upstream of Bonham Road	2.95	*	*	1160	*

Table 13 - Summary of Discharges

Flooding Source		Discharges (cfs)			
Location	Drainage Area (square miles)	10% Annual Chance	2% Annual Chance	1% Annual Chance	0.2% Annual Chance
Approximately 0.4 mile upstream of Bonham Road	2.31	*	*	1010	*
Approximately 0.8 mile upstream of Bonham Road	1.89	*	*	901	*
Nahunga Creek					
Just upstream of the confluence with Goshen Swamp	23.14	*	*	2770	*
Approximately 0.4 mile upstream of Veachs Mill Road	21.80	*	*	2680	*
Just upstream of the confluence of Stewarts Creek	18.56	*	*	2450	*
Approximately 1.5 miles upstream of the confluence of Stewarts Creek	15.71	*	*	2220	*
Just upstream of the confluence of King Branch	8.34	*	*	1550	*
Approximately 0.8 mile upstream of Bowdens Road	7.16	*	*	1430	*
Approximately 1.8 miles upstream of Bowdens Road	5.74	*	*	1260	*
Just upstream of the confluence of Nahunga Creek Tributary	2.94	*	*	861	*
Ninemile Creek					
Just upstream of the confluence with Cypress Creek and Back Swamp	18.27	*	*	3260	*
Approximately 0.5 mile upstream of Back Swamp Road	17.24	*	*	3160	*
Northeast Cape Fear River					
At confluence with Rockfish Creek	763.33	*	*	27189	*
Just downstream of confluence with Rockfish Creek	761.40	12979	22412	27348	41717
At confluence with Oakie Branch	745.15	*	*	26599	*
Approximately 0.8 mile upstream of confluence with Oakie Branch	715.13	*	*	25628	*
Approximately 2.3 miles downstream of Deep Bottom Road	705.45	*	*	25317	*
Just downstream of Deep Bottom Road	699.49	*	*	25125	*
Approximately 1.5 miles upstream of Deep Bottom Road	606.94	*	*	22175	*
Approximately 480 feet downstream of N.C. Highway 41 and 50	603.75	10764	18195	22075	33409
Approximately 770 feet upstream of the confluence of Stocking Head Creek	482.21	*	*	19745	*
Approximately 2.6 miles upstream of the confluence of Stocking Head Creek	480.63	*	*	19718	*
Approximately 3.2 miles upstream of the confluence of Stocking Head Creek	478.82	*	*	19687	*
Approximately 3.8 miles upstream of the confluence of Stocking Head Creek	477.14	*	*	19658	*
Approximately 3.7 miles downstream of the confluence of Limestone Creek	475.21	*	*	19625	*
Approximately 1.3 miles downstream of the confluence of Limestone Creek	473.55	*	*	19596	*
Just upstream of the confluence of Limestone Creek	411.80	*	*	18453	*
Just upstream of the confluence of Persimmons Branch	401.03	*	*	18238	*
Approximately 0.8 mile upstream of the confluence of Persimmons Branch	395.32	*	*	18122	*
Approximately 0.7 mile downstream of the confluence of NC Highway 24	393.51	*	*	18084	*
Approximately 435 feet upstream of the confluence of NC Highway 24	391.68	*	*	18047	*
Approximately 41.1 mile upstream of the confluence of NC Highway 24	390.37	*	*	18020	*
Approximately 2.0 miles downstream of the confluence of Grove Creek	388.88	*	*	17989	*
Just upstream of the confluence of Grove Creek	349.01	*	*	17124	*
Approximately 0.3 miles upstream of the confluence of Grove Creek	347.66	*	*	17094	*
Approximately 0.7 miles upstream of the confluence of Grove Creek	345.88	*	*	17053	*
Just upstream of the confluence of Dark Branch	337.07	*	*	16850	*
Approximately 1.8 miles downstream of the confluence of Dark Branch	336.52	*	*	16837	*
Approximately 2.6 miles downstream of the confluence of Goshen Swamp	334.53	*	*	16790	*
Approximately 1.2 miles downstream of the confluence of Goshen Swamp	330.15	*	*	16687	*
Just upstream of the confluence of Goshen Swamp	143.07	*	*	7767	*

Table 13 - Summary of Discharges

Flooding Source		Discharges (cfs)			
Location	Drainage Area (square miles)	10% Annual Chance	2% Annual Chance	1% Annual Chance	0.2% Annual Chance
Just upstream of the confluence of Burn Coat Creek	129.91	*	*	7355	*
Just upstream of the confluence of Burn Coat Creek	118.16	*	*	6971	*
Approximately 0.5 miles downstream of NC Highway 11	117.16	*	*	6937	*
Just upstream of the confluence of Camp Branch	113.22	*	*	6804	*
Just upstream of Matthews Creek	103.11	*	*	6453	*
Approximately 540 feet upstream of the confluence of Matthews Creek	101.93	*	*	6411	*
Just upstream of the confluence of Great Branch	89.33	*	*	5950	*
Just upstream of the confluence of Beaverdam Branch (near Scotts Store)	83.91	*	*	5743	*
Just upstream of the confluence of Mire Branch	61.11	*	*	4829	*
Just upstream of the confluence of Mire Branch	57.02	*	*	4654	*
Approximately 0.4 mile downstream of Bennets Bridge Road	55.70	2190	3540	4210	5850
Approximately 1.8 miles upstream of the confluence of Mire Branch	54.72	*	*	4553	*
Approximately 2.0 miles upstream of the confluence of Mire Branch	54.64	*	*	4550	*
At Wayne-Duplin County boundary	54.10	2210	4080	5150	8400
At USGS gage at Bennetts Bridge Road	47.10	2050	3800	4800	4860
Approximately 350 feet upstream of the confluence of Jumping Branch	44.47	1930	3120	3700	5160
At confluence of Polly Run Creek	31.65	1510	2490	2980	4160
At confluence of Rattlesnake Branch	24.47	1250	2110	2540	3550
At confluence of Lewis Branch	14.36	901	1530	1850	2600
Approximately 0.8 mile downstream of Kelly Spring Road	10.94	761	1300	1570	2220
Approximately 0.7 mile upstream of Kelly Spring Road	6.44	549	945	1150	1630
At confluence of Pasture Branch River	3.86	400	695	848	1210
Oakie Branch					
Just upstream of the confluence with Northeast Cape Fear River	3.35	*	*	1247	*
Approximately 0.8 mile upstream of the confluence with Northeast Cape Fear River	3.09	*	*	1191	*
Approximately 0.5 mile upstream of Jack Dale Road	2.05	*	*	943	*
Paget Branch					
Just upstream of the confluence with Little Rockfish Creek and Mill Branch	1.78	*	*	871	*
Approximately 0.2 mile downstream of High School Road	0.78	*	*	544	*
Panther Branch (near Faison)					
Just upstream of the confluence with Goshen Swamp	7.52	*	*	1470	*
Approximately 0.8 mile upstream of the confluence with Goshen Swamp	6.46	*	*	1340	*
Approximately 1.4 miles upstream of the confluence with Goshen Swamp	5.73	*	*	1260	*
Just downstream of NC Highway 50	5.14	*	*	1180	*
Approximately 475 feet downstream of I-40	3.49	*	*	949	*
Panther Creek					
Just upstream of the confluence with Northeast Cape Fear River	13.14	*	*	2011	*
Approximately 1.0 mile upstream of the confluence with Northeast Cape Fear River	12.47	*	*	1952	*
Just upstream of the confluence of White Oak Branch	9.89	*	*	1712	*
Approximately 0.2 mile upstream of Panther Creek Road	8.48	*	*	1569	*
Approximately 1.2 miles upstream of Panther Creek Road	7.05	*	*	1414	*
Approximately 0.2 mile upstream of Kitty Noecker Road	5.10	*	*	1177	*
Approximately 1.0 mile upstream of Kitty Noecker Road	3.36	*	*	930	*
Approximately 2.1 miles upstream of Kitty Noecker Road	2.28	*	*	747	*

Table 13 - Summary of Discharges

Flooding Source		Discharges (cfs)			
Location	Drainage Area (square miles)	10% Annual Chance	2% Annual Chance	1% Annual Chance	0.2% Annual Chance
Persimmon Branch					
Just upstream of the confluence with Northeast Cape Fear River	9.07	*	*	2193	*
Approximately 1.5 miles upstream of the confluence with Northeast Cape Fear River	7.87	*	*	2023	*
Approximately 0.2 mile downstream of Dobson Chapel Road	6.06	*	*	1744	*
Approximately 0.7 mile upstream of Dobson Chapel Road	4.09	*	*	1396	*
Approximately 2.5 miles upstream of Dobson Chapel Road	2.11	*	*	959	*
Pharisee Creek					
Just upstream of the confluence with Bulltail Creek	4.80	*	*	1520	*
Poley Branch					
Just upstream of the confluence with Buck Marsh Branch	5.14	*	*	1180	*
Approximately 530 feet upstream of Drummersville Road	4.14	*	*	1050	*
Approximately 1.1 miles upstream of Drummersville Road	1.98	*	*	689	*
Polly Run Creek					
Just upstream of the confluence with Northeast Cape Fear River	9.46	*	*	1670	*
Approximately 0.8 mile upstream of Whitfield Road	8.26	*	*	1550	*
Pudding Branch					
Just upstream of the confluence with Maple Branch and Beaverdam Branch (near Kenansville)	2.98	*	*	868	*
Approximately 0.5 mile upstream of the confluence with Maple Branch and Beaverdam Branch (near Kena*)	2.65	*	*	813	*
Approximately 0.5 mile downstream of Summerlinns Crossroads	1.97	*	*	688	*
Rattlesnake Branch					
Approximately 0.2 mile upstream of the confluence with Northeast Cape Fear River	6.36	*	*	1330	*
Approximately 0.5 mile upstream of the confluence with Northeast Cape Fear River	4.91	*	*	1150	*
Approximately 1.6 miles upstream of the confluence with Northeast Cape Fear River	2.57	*	*	799	*
Reedy Branch (near Blizzards Crossroads)					
Just upstream of the confluence with Mire Branch	1.17	*	*	512	*
Reedy Branch (near Faison)					
Just upstream of the confluence with Goshen Swamp	3.96	*	*	1020	*
Approximately 0.7 mile upstream of the confluence with Goshen Swamp	3.21	*	*	906	*
Approximately 200 feet upstream of Main Street	2.89	*	*	853	*
Approximately 1.0 mile upstream of Main Street	2.11	*	*	715	*
Rockfish Creek					
At the confluence with Northeast Cape Fear River	178.50	5429	9774	12089	18863
Just upstream of confluence with Northeast Cape Fear River	178.49	5429	9774	12089	18863
At Confluence with Northeast Cape Fear River	177.78	*	*	12123	*
Approximately 0.75 mile upstream of Interstate 40	174.10	5346	9628	11911	18590
Approximately 1.4 miles upstream of Interstate 40	173.00	5325	9591	11865	18520
Approximately 0.95 mile downstream of US Highway 117	162.40	5122	9236	11430	17854
At the confluence of Little Rockfish Creek	161.42	*	*	11448	*
Approximately 0.3 mile upstream of Railroad	132.95	4527	8190	10148	15887
At the confluence with Sills Creek	132.81	*	*	10195	*
At confluence with Rockfish Creek Tributary	129.32	*	*	10035	*
Approximately 1.1 miles upstream of Wallace Airport Road	128.86	*	*	9870	*

Table 13 - Summary of Discharges

Flooding Source		Discharges (cfs)			
Location	Drainage Area (square miles)	10% Annual Chance	2% Annual Chance	1% Annual Chance	0.2% Annual Chance
Approximately 1.4 miles upstream of Wallace Airport Road	126.38	*	*	9760	*
Approximately 2.2 miles upstream of Wallace Airport Road	124.95	*	*	9700	*
Approximately 0.8 mile downstream of the confluence of Doctors Creek	123.47	*	*	9640	*
Just upstream of the confluence of Doctors Creek	72.06	*	*	7260	*
Approximately 0.7 mile upstream of the confluence of Doctors Creek	71.23	*	*	7220	*
Just downstream of NC Highway 41	70.22	*	*	7170	*
Approximately 0.5 mile upstream of NC Highway 41	69.48	*	*	7120	*
Just upstream of the confluence of Fussell Mill Branch	66.30	*	*	6920	*
Just upstream of the confluence of Dufis Creek	44.66	*	*	5450	*
Approximately 1.4 miles upstream of Butterball Road	43.59	*	*	5370	*
Approximately 2.0 miles upstream of Butterball Road	41.62	*	*	5220	*
Approximately 0.2 mile downstream of Providence Church Road	40.33	*	*	5130	*
Approximately 1.1 miles upstream of Providence Church Road	37.53	*	*	4910	*
Approximately 2.2 miles upstream of Providence Church Road	31.49	*	*	4440	*
Approximately 0.6 mile downstream of Wards Road	29.28	*	*	4260	*
Approximately 470 feet downstream of the confluence of Big Beaverdam Branch	15.66	*	*	2990	*
Just upstream of the confluence of Murpheys Creek	3.59	*	*	1300	*
Approximately 0.4 mile upstream of Blue Newkirk Road	1.82	*	*	882	*
Approximately 0.6 mile upstream of Blue Newkirk Road	1.47	*	*	780	*
Approximately 0.9 mile upstream of Blue Newkirk Road	1.34	*	*	740	*
Rockfish Creek Tributary					
At the confluence with Rockfish Creek	1.63	*	*	1081	*
Approximately 0.37 mile upstream of N.C. 41/ Main Street	1.14	*	*	603	*
Sawyer Branch					
Just upstream of the confluence with Matthews Creek	1.68	*	*	627	*
Sawyer Creek					
The confluence with Sills Creek	6.13	*	*	1760	*
Sills Creek					
Approximately 200 feet upstream of confluence with Rockfish Creek	20.30	1420	2652	3323	5311
Stewarts Creek					
Approximately 320 feet downstream of Cornwallis Road crossing	47.90	*	*	4184	*
Approximately 0.2 mile downstream of the confluence of Miller's Creek	46.20	*	*	4096	*
Just upstream of the confluence of Miller's Creek	33.00	*	*	3384	*
Approximately 1.0 mile upstream of the confluence of Miller's Creek	32.37	*	*	3350	*
Approximately 1.2 miles upstream of the confluence of Miller's Creek	30.10	*	*	3216	*
Approximately 1.5 miles upstream of the confluence of Miller's Creek	29.30	*	*	3169	*
Approximately 1.8 miles upstream of the confluence of Miller's Creek	28.42	*	*	3110	*
Approximately 1.9 miles upstream of the confluence of Miller's Creek	22.57	*	*	2730	*
Just upstream of the confluence of Buckhall Creek	13.94	*	*	2080	*
Approximately 0.2 mile upstream of the confluence of Buckhall Creek	13.89	*	*	2080	*
Approximately 0.5 mile upstream of NC Highway 1105	12.92	*	*	1990	*
Approximately 0.7 mile upstream of NC Highway 1105	11.38	*	*	1850	*
Approximately 1.3 mile upstream of NC Highway 1105	10.80	*	*	1800	*
At Interstate 40	9.80	*	*	1700	*

Table 13 - Summary of Discharges

Flooding Source		Discharges (cfs)			
Location	Drainage Area (square miles)	10% Annual Chance	2% Annual Chance	1% Annual Chance	0.2% Annual Chance
Approximately 0.3 mile upstream of Interstate 40	8.86	*	*	1610	*
Approximately 0.4 mile upstream of Interstate 40	6.18	*	*	1310	*
Approximately 0.4 mile downstream of US Highway 117	5.42	*	*	1220	*
Approximately 0.6 mile upstream of US Highway 117	4.92	*	*	1150	*
Approximately 1.0 mile upstream of US Highway 117	3.92	*	*	1010	*
Approximately 0.94 mile downstream of Best Street	2.94	*	*	1383	*
Approximately 0.63 mile downstream of Best Street	2.51	*	*	1244	*
Approximately 0.5 mile downstream of Best Street	2.22	*	*	1166	*
Just upstream of Best Street	1.81	*	*	1064	*
Approximately 825 feet downstream of College Road	0.63	*	*	789	*
Stewarts Creek (near Friendship)					
Just upstream of the confluence with Nahunga Creek	2.02	*	*	697	*
Approximately 0.9 mile above confluence with Nahunga Creek	1.68	*	*	628	*
Stocking Head Creek					
Just upstream of the confluence with Northeast Cape Fear River	67.64	*	*	6850	*
Approximately 1.3 miles upstream of the confluence with Northeast Cape Fear River	66.65	*	*	6793	*
Approximately 0.9 mile downstream of Pasture Branch Road	64.71	*	*	6680	*
Approximately 0.6 mile upstream of Pasture Branch Road	62.95	*	*	6576	*
Just upstream of the confluence of Maxwell Creek	7.95	*	*	2035	*
Approximately 765 feet upstream of the confluence of Maxwell Creek	7.84	*	*	2019	*
Approximately 0.3 mile upstream of Stocking Head Road	5.85	*	*	1709	*
Approximately 1.1 miles upstream of Stocking Head Road	3.99	*	*	1376	*
Approximately 0.4 mile upstream of Dobson Chapel Road	3.20	*	*	1215	*
Taylor Creek					
Just upstream of the confluence with Dufis Creek	13.25	*	*	2720	*
Approximately 530 feet downstream of Corinth Church Road	11.44	*	*	2500	*
Approximately 0.5 mile upstream of Corinth Church Road	9.81	*	*	2290	*
Approximately 1.5 miles upstream of Corinth Church Road	8.53	*	*	2120	*
Approximately 0.6 mile upstream of Williams Mill Pond Road	7.45	*	*	1960	*
Approximately 0.6 mile upstream of Brices Store Road	4.06	*	*	1390	*
Approximately 530 feet downstream of Merritt Road	1.69	*	*	846	*
Turkey Creek					
Approximately 0.8 mile downstream of Old Courthouse Road	10.20	*	*	1820	*
Approximately 530 feet upstream of Old Courthouse Road	9.60	*	*	1740	*
Approximately 0.2 mile upstream of Old Courthouse Road	8.08	*	*	1540	*
Approximately 530 feet downstream of I-40	7.77	*	*	1500	*
Approximately 0.2 mile upstream of I-40	4.69	*	*	1120	*
Approximately 530 feet downstream of Blackmore Road	3.90	*	*	1010	*
Approximately 0.4 mile upstream of Blackmore Road	2.90	*	*	855	*
Approximately 1.1 miles upstream of Blackmore Road	1.93	*	*	678	*
Welch Branch					
Just upstream of the confluence with Dark Branch	1.61	*	*	822	*
Approximately 0.7 mile upstream of the confluence with Dark Branch	1.50	*	*	790	*
White Oak Branch					

Table 13 - Summary of Discharges

Flooding Source		Discharges (cfs)			
Location	Drainage Area (square miles)	10% Annual Chance	2% Annual Chance	1% Annual Chance	0.2% Annual Chance
Just upstream of the confluence with Panther Creek	1.84	*	*	662	*
Approximately 1.1 miles upstream of the confluence with Panther Creek	1.23	*	*	526	*
Approximately 2.3 miles upstream of the confluence with Panther Creek	0.44	*	*	296	*
Whiteoak Branch					
Just upstream of the confluence with Goshen Swamp	5.17	*	*	1190	*
Approximately 110 feet downstream of White Oak Bridge Road	4.46	*	*	1090	*
Just upstream of Albritton Road	2.66	*	*	814	*
Approximately 130 feet upstream of Old Mount Olive Highway	1.50	*	*	978	*
At Broadhurst Road	1.49	*	*	587	*
Wolfscape Branch					
Just upstream of the confluence with Ladds Branch and Polly Run Creek	2.12	*	*	716	*
Approximately 0.3 mile upstream of Bethel Church Road	1.54	*	*	598	*

Table 14, "Summary of Stillwater Elevations" is not applicable in Duplin County.

Table 15, "Gage Information", lists the stream gages located in Duplin County, including the drainage area of the flooding source at the gage and the period of record available at the time of the publication of this FIS Report.

Table 15 - Gage Information

Gage Number	Flooding Source	Site Name	Drainage Area (square miles)	Period of Record	
				From	To
02107980	Limestone Creek	LIMESTONE CREEK NEAR BEULAVILLE, NC	49.70	1953	1971
02108548	Little Rockfish Creek	LITTLE ROCKFISH CREEK AT WALLACE, NC	7.80	1976	1992
02107620	Matthews Creek	MATHEWS CREEK NEAR PINK HILL, NC	8.61	1953	1976
02108000	Northeast Cape Fear River	NORTHEAST CAPE FEAR RIVER NEAR CHINQUAPIN, N C	599.00	1941	2013
02108000	Northeast Cape Fear River	NORTHEAST CAPE FEAR RIVER NEAR SEVEN SPRINGS, NC	47.50	1940	2013
02108500	Rockfish Creek	ROCKFISH CREEK NEAR WALLACE, NC	69.30	1955	1981
02106410	Stewarts Creek	STEWARTS CREEK TRIB NEAR WARSAW, N. C.	0.46	1955	1971
02106240	Turkey Creek	TURKEY CREEK NEAR TURKEY, NC	15.70	1953	1973
NP	Unnamed Stream	LITTLE ROCKFISH CREEK AT WALLACE, N. C.	69.30	1955	1981

5.2 Hydraulic Analyses

Analyses of the hydraulic characteristics of flooding from the sources studied were carried out to provide estimates of the flood elevations for the selected recurrence intervals. Locations of selected cross sections used in the hydraulic analyses are shown on the Flood Profiles and/or Water-surface elevation rasters. For stream segments for which BFEs were computed, selected cross-section locations are also shown on the FIRM. Flood Profiles and/or Water-surface elevation rasters were developed showing computed water-surface elevations for floods of the selected recurrence intervals.

Users should be aware that flood elevations shown on the FIRM represent rounded whole-foot elevations and may not exactly reflect the elevations shown on the Flood Profiles and/or Water-surface elevation rasters or in the Floodway Data tables in the FIS Report. For construction and/or floodplain management purposes, users are encouraged to use the flood elevation data presented in the FIS 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 Flood Profiles are thus considered valid only if hydraulic structures remain unobstructed, operate properly, and do not fail.

For details on the county's hydraulic analyses, the hydraulic report is available by request.

For the streams studied by detailed methods, water surface elevations of floods of the selected recurrence intervals were computed through use of the Army Corps of Engineers' HEC RAS step backwater computer program . The hydraulic analyses were based on unobstructed flow. The flood elevations shown on the Profiles and/or Water-surface elevation rasters are thus considered valid only if hydraulic structures remain unobstructed, operate properly, and do not fail. The computer models were calibrated using historic high water data collected during field investigations.

The cross section geometries were obtained from a combination of digital elevation data obtained by Light Detection and Ranging (LIDAR) and field surveys. All bridges, dams, and culverts were field surveyed to obtain elevation data and structural geometry. Natural floodplain cross sections were surveyed approximately every 4000 feet along the detail study reaches to obtain the channel geometry between bridges and culverts. Overbank cross section data for the backwater analyses were obtained from recently flown LIDAR data.

Channel roughness factors (Manning's "n") used in the hydraulic computations were made in the field by an engineer where stream access was possible, with orthophotos used to supplement areas that could not be accessed. The channel and overbank "n" values for all of the streams studied by detailed methods are shown in Table 16, "Roughness Coefficients".

Table 16 - Roughness Coefficients

Stream	Channel "n"	Overbank "n"
Angola Creek	0.042 to 0.050	0.110 to 0.150
Back Swamp	0.040 to 0.050	0.110 to 0.150
Back Swamp Tributary 2	0.042	0.120
Back Swamp Tributary 3	0.035 to 0.040	0.110
Back Swamp Tributary 4	0.042	0.110
Back Swamp Tributary 5	0.040 to 0.045	0.110 to 0.120
Bear Marsh Branch	0.045	0.120 to 0.165
Bear Swamp	0.045	0.150 to 0.165
Bear Swamp Tributary	0.045	0.120 to 0.165
Beaverdam Branch (near Gracys Crossroads)	0.045	0.100 to 1.150
Beaverdam Branch (near Kenansville)	0.045	0.150 to 0.165
Beaverdam Branch (near Scotts Store)	0.025 to 0.045	0.150
Big Beaverdam Branch	0.013 to 0.045	0.100 to 0.150
Big Beaverdam Creek	0.045 to 0.050	0.130 to 0.150
Big Branch	0.045	0.140
Buck Marsh Branch	0.045	0.160
Buckhall Creek	0.040 to 0.045	0.130 to 0.140
Burn Coat Creek	0.045	0.120 to 0.130
Cabin Creek	0.040	0.110
Camp Branch	0.024 to 0.045	0.110 to 0.130
Cow Hole Branch	0.045	0.150 to 0.170
Cowhole Branch	0.025 to 0.045	0.140 to 0.170
Cypress Creek	0.050	0.110 to 0.150
Cypress Creek Tributary 1	0.045 to 0.050	0.110 to 0.150
Cypress Creek Tributary 2	0.045	0.110 to 0.150
Dark Branch	0.025 to 0.045	0.080 to 0.130
Doctors Creek	0.025 to 0.090	0.060 to 0.200
Dufis Creek	0.045	0.120
Elder Branch	0.025 to 0.045	0.140
Fussell Mill Branch	0.045	0.140
Goshen Swamp	0.054 to 0.060	0.180
Great Branch	0.013 to 0.045	0.150
Grove Creek	0.045	0.078 to 0.130
Herring Marsh Run	0.036 to 0.040	0.150 to 0.170
Island Creek	0.045	0.101 to 0.130
Island Creek Tributary	0.025 to 0.045	0.100 to 0.170
Juniper Branch	0.045	0.170
King Branch	0.041 to 0.045	0.120 to 0.170
Ladds Branch	0.045	0.070 to 0.130
Limestone Creek	0.030	0.060
Little Beaverdam Creek	0.045	0.161

Table 16 - Roughness Coefficients

Stream	Channel "n"	Overbank "n"
Little Limestone Creek	0.038	0.101 to 0.130
Little Rockfish Creek	0.030 to 0.080	0.030 to 0.150
Maple Branch	0.045	0.110 to 0.150
Maple Creek	0.013 to 0.045	0.100 to 0.170
Marsh Branch	0.045	0.080 to 0.150
Matthews Creek	0.045	0.140
Maxwell Creek	0.015 to 0.045	0.100 to 0.130
Mill Branch (near Kornegay)	0.045	0.130
Mill Branch (near Teachey)	0.045	0.150
Mill Creek	0.045	0.140
Miller's Creek	0.040 to 0.045	0.120 to 0.150
Mire Branch	0.046	0.150
Moore's Creek Tributary 6	0.042	0.130
Muddy Creek	0.065 to 0.650	0.180
Muddy Creek Tributary	0.045	0.112 to 0.140
Muddy Creek Tributary 1	0.045 to 0.050	0.035 to 0.150
Muddy Creek Tributary 2	0.050	0.070 to 0.150
Murpheys Creek	0.037	0.125
Murpheys Creek Tributary	0.037	0.125
Nahunga Creek	0.060	0.180
Ninemile Creek	0.045 to 0.050	0.110 to 0.150
Northeast Cape Fear River	0.030 to 0.090	0.035 to 0.240
Oakie Branch	0.013 to 0.045	0.080 to 0.140
Paget Branch	0.045	0.110 to 0.170
Panther Branch (near Faison)	0.012 to 0.045	0.130
Panther Creek	0.017 to 0.060	0.140 to 0.180
Persimmon Branch	0.013 to 0.045	0.150
Pharisee Creek	0.035	0.120 to 0.160
Poley Branch	0.045	0.160
Polly Run Creek	0.045	0.100 to 0.120
Pudding Branch	0.023 to 0.045	0.120 to 0.140
Rattlesnake Branch	0.045	0.100 to 0.130
Reedy Branch (near Blizzards Crossroads)	0.045	0.110 to 0.150
Reedy Branch (near Faison)	0.045	0.140
Rockfish Creek	0.013 to 0.090	0.030 to 0.200
Rockfish Creek Tributary	0.040	0.040 to 0.120
Sawyer Branch	0.025 to 0.045	0.170
Stewarts Creek	0.040 to 0.050	0.060 to 0.150
Stewarts Creek (near Friendship)	0.041 to 0.045	0.130
Stocking Head Creek	0.013 to 0.045	0.110 to 0.150
Taylor Creek	0.045	0.140
Turkey Creek	0.045 to 0.050	0.120 to 0.140
Welch Branch	0.045	0.080 to 0.150
White Oak Branch	0.024 to 0.045	0.080 to 0.120
Whiteoak Branch	0.045	0.100 to 0.130
Wolfscape Branch	0.045	0.140

For flooding sources studied by limited detailed methods in the county, standard hydrologic and hydraulic study methods were used to determine the flood hazard data required for this report and the FIRM panels. This method entails developing a HEC-RAS hydraulic model, resulting in the calculation of BFEs and the delineation of the 1% annual chance floodplain (designated as Zone AE). Cross sections for the flooding sources studied by limited detailed methods were obtained using digital elevation data obtained with LIDAR technology developed as part of the North Carolina Statewide Floodplain Mapping Program. The hydraulic model is prepared using this digital elevation data, without surveying bathymetric or structural data. Where bridge or culvert data are readily available, such as from the North Carolina Department of Transportation, these data have been reflected in the hydraulic model. If these structural data are not readily available, field measurements of these structures were made to approximate their geometry in the hydraulic models. In addition, this method does not include field surveys that determine specifics on channel and floodplain characteristics. A limited detailed study is

a “buildable” product that can be upgraded to a fully detailed study at a later date by verifying stream channel characteristics, bridge and culvert opening geometry, and by analyzing multiple recurrence intervals.

The results of the HEC-RAS computations are tabulated for all cross sections (Table 17, “Limited Detailed Flood Hazard Data”). Flood Profiles have not been developed for streams studied by limited detailed methods. Water-surface elevation rasters were developed for streams studied by limited detailed methods. In addition, floodways for streams studied by limited detailed methods are not delineated on the FIRM. However, the 1% annual chance water-surface elevations, flood discharges, and non-encroachment widths from the limited detailed studies for every modeled cross section are given in Table 17. The non-encroachment widths given at modeled cross sections can be used by communities to enforce floodplain management ordinances that meet the requirement defined in 44 CFR 60.3(c)(10).

Between cross sections for streams studied by limited detailed methods, 1% annual chance water-surface elevations can be calculated by mathematical interpolation using the distance along the stream centerline. Non-encroachment widths and, therefore, the location of a non-encroachment area boundary between cross sections should be determined based on either 1) mathematical interpolation, or 2) the non-encroachment width at the upstream or downstream cross section, whichever is larger. If the width determined by this second method is wider than the Special Flood Hazard Area (SFHA) or the 1% annual chance floodplain delineated on the FIRM for this location along the stream, the non-encroachment area shall be considered to be coincident with the SFHA. A full detailed study incorporating field survey data in the HEC-RAS hydraulic model may be submitted for a Letter of Map Revision (LOMR) request to map a regulatory floodway along a section of a stream in lieu of applying the non-encroachment widths listed in Table 17.

Table 17 - Limited Detailed Flood Hazard Data

Cross Section	Stream Station	Flood Discharge (cfs)	1% Annual Chance Water-Surface Elevation (feet NAVD 88)	Non-Encroachment Width (feet) Left/Right from Stream Centerline
Angola Creek				
350	35,020	3,050	30.8	790 / 840
359	35,915	2,900	30.9	745 / 825
369	36,882	2,900	31.0	721 / 813
380	37,959	2,900	31.1	749 / 811
397	39,694	2,900	31.4	725 / 784
Angola Creek				
003	292	1,340	48.7 ¹	701 / 892
011	1,101	1,340	48.7 ¹	404 / 880
021	2,070	1,340	48.7 ¹	178 / 767
028	2,818	1,340	48.7 ¹	271 / 32
033	3,311	1,340	48.7 ¹	98 / 205
036	3,609	1,340	48.0	411 / 24
037	3,679	1,340	48.0	411 / 24
043	4,280	1,020	48.8	129 / 62
050	5,001	1,020	51.1	153 / 60
Back Swamp				
004	360	4,810	51.4	1,002 / 1,080
010	1,031	4,810	51.5	802 / 416
017	1,696	4,810	51.6	914 / 34
029	2,940	4,810	52.1	1,330 / 54
038	3,816	4,810	52.2	1,242 / 34
049	4,880	4,810	52.5	1,105 / 34
058	5,833	4,810	52.7	996 / 553
066	6,575	4,720	52.8	1,112 / 531
072	7,217	4,720	53.0	1,018 / 34
083	8,313	4,720	53.4	658 / 770
092	9,237	4,620	53.6	586 / 757

Table 17 - Limited Detailed Flood Hazard Data

Cross Section	Stream Station	Flood Discharge (cfs)	1% Annual Chance Water-Surface Elevation (feet NAVD 88)	Non-Encroachment Width (feet) Left/Right from Stream Centerline
100	10,008	4,620	53.8	904 / 725
108	10,807	4,620	54.0	614 / 762
118	11,781	4,620	54.2	716 / 649
126	12,560	4,480	54.5	289 / 477
135	13,518	4,410	55.0	242 / 1,266
143	14,318	4,410	55.1	203 / 1,258
153	15,301	4,170	55.3	508 / 1,171
161	16,050	4,140	55.5	612 / 720
169	16,904	4,140	55.6	857 / 295
179	17,937	4,140	55.9	307 / 848
187	18,742	4,140	56.1	102 / 1,257
199	19,928	4,140	56.4	31 / 1,248
207	20,714	4,060	56.6	175 / 1,108
214	21,398	4,060	56.8	30 / 1,051
224	22,363	4,060	57.1	407 / 1,172
233	23,293	4,060	57.2	115 / 227
243	24,252	3,650	58.3	370 / 380
248	24,828	3,650	58.7	258 / 393
252	25,162	3,650	58.8	257 / 749
259	25,935	3,480	59.0	98 / 1,035
277	27,656	3,480	59.7	398 / 983
282	28,192	3,480	59.8	106 / 787
292	29,202	3,480	60.0	393 / 936
299	29,919	3,480	60.1	200 / 1,177
694	69,353	771	89.8	233 / 14
Back Swamp Tributary 2				
008	833	820	58.9 ¹	110 / 192
014	1,408	820	59.2	192 / 137
020	2,011	820	60.4	202 / 13
026	2,598	820	61.8	53 / 122
030	3,031	820	62.3	434 / 13
034	3,441	820	62.6	59 / 152
037	3,668	820	63.1	170 / 17
037	3,740	688	63.2	170 / 17
039	3,913	688	63.7	157 / 13
043	4,325	688	65.1	57 / 102
048	4,788	688	66.8	119 / 12
052	5,250	688	69.0	36 / 17
056	5,574	688	70.6	56 / 12
060	6,026	688	72.2	74 / 13
Back Swamp Tributary 3				
028	2,846	1,400	61.7	37 / 245
032	3,150	1,400	67.1	191 / 191
039	3,862	1,400	67.1	180 / 210
048	4,837	632	67.1	110 / 160
Back Swamp Tributary 4				

Table 17 - Limited Detailed Flood Hazard Data

Cross Section	Stream Station	Flood Discharge (cfs)	1% Annual Chance Water-Surface Elevation (feet NAVD 88)	Non-Encroachment Width (feet) Left/Right from Stream Centerline
002	233	1,030	67.1 ¹	201 / 106
009	904	1,030	67.4	199 / 41
014	1,390	1,030	67.9	147 / 182
019	1,899	1,030	68.4	65 / 140
028	2,786	513	70.7	92 / 12
032	3,172	513	72.0	37 / 18
036	3,598	513	73.8	40 / 86
039	3,888	513	74.3	49 / 14
040	3,970	513	75.8	49 / 14
040	4,020	513	75.8	160 / 66
045	4,468	513	75.9	145 / 12
047	4,681	513	76.0	24 / 24
047	4,705	513	76.1	24 / 24
048	4,760	513	75.8	12 / 12
048	4,838	513	76.7	18 / 18
049	4,913	513	79.3	18 / 18
050	4,954	513	79.3	12 / 12
055	5,471	333	80.5	76 / 18
060	5,970	333	81.3	11 / 11
067	6,650	333	83.7	71 / 11
071	7,073	333	84.7	22 / 11
076	7,551	333	86.0	147 / 12
082	8,157	333	86.5	65 / 158
086	8,619	333	86.8	11 / 175
Back Swamp Tributary 5				
002	240	358	70.0 ¹	14 / 108
005	515	358	70.0 ¹	63 / 125
010	963	358	70.5	21 / 41
014	1,408	358	72.3	14 / 31
018	1,792	358	73.6	84 / 21
021	2,059	358	74.2	23 / 20
021	2,134	358	78.2	50 / 25
022	2,169	358	78.2	80 / 29
027	2,701	358	78.5	20 / 18
032	3,240	358	79.9	18 / 59
038	3,787	358	81.6	69 / 15
044	4,398	282	82.3	125 / 186
051	5,085	282	83.1	11 / 26
060	5,990	282	88.8	118 / 12
Bear Marsh Branch				
010	1,014	1,320	93.8 ¹	129 / 12
012	1,182	1,320	94.0	138 / 179
017	1,723	1,320	95.7	133 / 70
021	2,118	1,320	97.1	60 / 150
022	2,227	1,320	98.2	20 / 120

Table 17 - Limited Detailed Flood Hazard Data

Cross Section	Stream Station	Flood Discharge (cfs)	1% Annual Chance Water-Surface Elevation (feet NAVD 88)	Non-Encroachment Width (feet) Left/Right from Stream Centerline
023	2,268	1,320	99.5	20 / 120
030	2,978	1,320	101.6	40 / 210
032	3,224	1,320	102.8	50 / 210
034	3,369	1,320	102.9	50 / 210
040	3,977	1,320	103.1	241 / 18
045	4,492	1,320	103.6	298 / 93
050	4,956	1,290	104.0	262 / 104
055	5,486	1,290	104.9	364 / 18
060	5,953	1,290	105.7	291 / 37
065	6,473	1,290	106.6	197 / 155
070	6,967	1,290	107.6	209 / 56
074	7,443	1,290	109.0	250 / 18
079	7,921	1,290	110.4	50 / 50
080	8,021	1,290	115.8	50 / 50
085	8,475	1,290	116.0	140 / 290
090	8,971	1,190	116.1	161 / 346
096	9,567	1,190	116.1	97 / 257
101	10,085	1,190	116.2	141 / 302
108	10,769	1,290	116.4	290 / 195
114	11,360	1,190	116.7	136 / 235
120	11,955	1,190	117.5	17 / 216
126	12,572	1,190	119.7	187 / 18
131	13,112	939	120.8	274 / 15
136	13,620	939	121.4	249 / 15
141	14,101	939	122.8	15 / 116
142	14,201	939	126.4	15 / 116
147	14,654	939	126.9	15 / 211
152	15,178	939	127.6	66 / 181
158	15,751	939	128.4	163 / 152
163	16,292	939	129.1	116 / 15
168	16,818	808	131.0	49 / 102
173	17,336	808	133.3	74 / 57
179	17,871	808	135.3	126 / 14
184	18,425	808	136.5	182 / 56
Bear Swamp				
034	3,371	2,510	92.9 ¹	43 / 957
048	4,804	2,510	93.9	214 / 382
060	6,019	2,510	95.2	285 / 375
070	6,956	2,510	96.3	43 / 43
070	7,002	2,510	96.8	43 / 43
084	8,372	2,510	98.8	228 / 319
100	10,006	2,400	99.8	676 / 25
115	11,495	2,400	100.9	552 / 270
132	13,235	2,400	102.1	479 / 222
145	14,547	2,400	103.2	326 / 308

Table 17 - Limited Detailed Flood Hazard Data

Cross Section	Stream Station	Flood Discharge (cfs)	1% Annual Chance Water-Surface Elevation (feet NAVD 88)	Non-Encroachment Width (feet) Left/Right from Stream Centerline
157	15,744	2,400	104.8	294 / 28
158	15,790	2,080	106.5	294 / 28
167	16,707	2,080	106.9	382 / 176
179	17,910	2,080	107.2	725 / 22
190	18,954	2,080	107.4	631 / 318
200	19,979	1,750	107.7	489 / 261
210	21,011	1,750	108.2	321 / 470
220	22,014	1,750	109.0	20 / 346
226	22,641	1,750	109.9	20 / 454
235	23,480	1,750	110.6	121 / 325
240	24,009	1,230	111.0	122 / 205
245	24,505	1,230	111.5	78 / 216
250	24,997	1,230	111.9	88 / 282
255	25,499	1,230	112.5	178 / 109
260	26,001	1,230	113.3	49 / 231
265	26,508	1,230	113.9	140 / 142
270	27,013	1,230	114.4	17 / 287
275	27,549	1,230	115.1	147 / 159
280	28,015	1,150	115.9	127 / 167
285	28,523	1,150	116.9	30 / 30
286	28,587	1,150	119.4	30 / 30
288	28,837	1,150	119.8	184 / 70
289	28,892	1,150	121.3	184 / 70
294	29,379	1,150	121.4	276 / 80
300	29,952	1,150	121.6	17 / 145
307	30,735	1,150	121.9	145 / 103
311	31,132	1,150	121.9	124 / 92
316	31,578	1,150	121.9	21 / 246
321	32,131	1,150	122.7	267 / 132
326	32,610	1,050	123.0	230 / 186
332	33,180	1,050	123.6	93 / 111
337	33,672	1,050	124.4	119 / 113
340	34,018	1,050	124.9	127 / 138
345	34,494	1,050	125.6	174 / 61
348	34,765	1,050	126.0	35 / 34
348	34,811	1,050	126.6	35 / 34
351	35,137	1,050	127.5	24 / 223
357	35,735	1,050	128.5	206 / 41
361	36,124	1,050	129.3	91 / 140
367	36,707	704	130.5	67 / 180
372	37,199	704	131.3	26 / 99
Bear Swamp Tributary				
012	1,243	768	107.7 ¹	62 / 195
019	1,942	768	108.9	41 / 183
025	2,485	768	110.8	33 / 120

Table 17 - Limited Detailed Flood Hazard Data

Cross Section	Stream Station	Flood Discharge (cfs)	1% Annual Chance Water-Surface Elevation (feet NAVD 88)	Non-Encroachment Width (feet) Left/Right from Stream Centerline
030	3,020	768	112.4	207 / 12
034	3,385	768	113.8	28 / 68
039	3,855	768	116.5	118 / 30
042	4,226	768	117.5	215 / 20
047	4,660	768	118.8	106 / 40
052	5,171	768	121.1	104 / 21
053	5,293	768	137.3	1,070 / 380
056	5,644	768	137.3	735 / 246
061	6,107	665	137.3	311 / 289
064	6,397	665	137.3	208 / 250
068	6,751	665	137.3	158 / 154
072	7,199	665	137.3	157 / 153
077	7,724	665	137.3	137 / 187
082	8,219	665	137.3	140 / 130
088	8,752	665	137.3	30 / 30
088	8,815	665	138.1	30 / 30
088	8,821	665	138.1	150 / 66
089	8,876	665	138.3	150 / 66
093	9,297	665	138.5	106 / 19
097	9,699	665	139.7	117 / 6
102	10,178	665	141.4	13 / 96
107	10,745	665	142.3	12 / 97
112	11,227	665	143.0	34 / 45
117	11,712	665	144.0	70 / 29
122	12,219	665	145.7	110 / 79
127	12,724	665	148.3	63 / 49
132	13,212	665	149.6	35 / 75
137	13,741	369	150.6	77 / 32
142	14,238	369	151.6	81 / 15
147	14,716	369	153.6	28 / 28
152	15,217	369	154.6	95 / 73
157	15,721	369	155.6	30 / 74
162	16,203	369	157.6	28 / 33
171	17,081	369	160.3	13 / 12
173	17,268	369	161.1	12 / 199
178	17,796	369	161.9	12 / 47
182	18,246	369	163.0	12 / 12
186	18,644	369	164.0	12 / 89
Beaverdam Branch (near Gracys Crossroads)				
000	7	697	94.9 ¹	140 / 61
005	467	697	95.0	18 / 228
011	1,096	697	96.2	59 / 61
016	1,577	697	97.4	18 / 126
019	1,913	697	98.4	86 / 65
021	2,086	697	99.1	18 / 158

Table 17 - Limited Detailed Flood Hazard Data

Cross Section	Stream Station	Flood Discharge (cfs)	1% Annual Chance Water-Surface Elevation (feet NAVD 88)	Non-Encroachment Width (feet) Left/Right from Stream Centerline
021	2,088	697	99.4	275 / 260
022	2,158	697	107.4	275 / 260
027	2,705	697	107.4	325 / 184
034	3,402	697	107.4	428 / 65
038	3,830	697	107.4	150 / 79
044	4,365	697	108.4	20 / 20
Beaverdam Branch (near Kenansville)				
000	4	1,350	85.9	427 / 14
007	750	828	86.9	293 / 58
013	1,277	828	87.6	14 / 121
019	1,901	828	88.9	56 / 104
024	2,440	828	89.9	124 / 25
027	2,677	746	90.1	32 / 32
028	2,753	746	91.2	32 / 32
029	2,923	746	91.4	98 / 105
034	3,365	746	91.8	96 / 134
038	3,833	746	92.3	113 / 82
044	4,353	746	93.0	86 / 116
Beaverdam Branch (near Scotts Store)				
017	1,737	988	79.7 ¹	200 / 50
022	2,207	988	80.0	293 / 52
029	2,857	988	81.4	205 / 21
033	3,349	988	82.3	171 / 52
041	4,056	988	83.4	53 / 161
045	4,517	988	84.2	36 / 101
051	5,108	988	85.9	123 / 21
054	5,395	988	86.2	100 / 21
055	5,470	988	89.6	100 / 21
058	5,790	988	89.7	260 / 100
063	6,337	988	89.8	160 / 54
068	6,772	988	90.1	86 / 83
071	7,075	803	90.3	39 / 117
077	7,678	803	90.9	37 / 30
081	8,072	803	91.8	93 / 22
086	8,584	803	92.8	40 / 21
088	8,791	803	93.0	35 / 35
089	8,866	803	98.1	35 / 35
093	9,254	803	98.2	200 / 150
097	9,724	803	98.3	100 / 150
101	10,053	803	98.6	151 / 21
105	10,522	803	99.2	93 / 25
111	11,063	803	100.1	21 / 21
Big Beaverdam Branch				
016	1,639	2,810	66.4 ¹	813 / 230
032	3,163	2,810	66.4 ¹	577 / 247
045	4,470	2,810	66.8	400 / 187

Table 17 - Limited Detailed Flood Hazard Data

Cross Section	Stream Station	Flood Discharge (cfs)	1% Annual Chance Water-Surface Elevation (feet NAVD 88)	Non-Encroachment Width (feet) Left/Right from Stream Centerline
054	5,396	2,810	66.9	950 / 450
056	5,561	2,810	72.6	950 / 450
059	5,917	2,810	72.7	490 / 367
068	6,775	2,810	72.8	354 / 415
077	7,720	2,630	72.8	432 / 314
085	8,492	2,630	72.9	830 / 134
085	8,536	2,630	72.9	830 / 134
088	8,753	2,630	72.9	695 / 407
098	9,796	2,630	73.0	337 / 429
109	10,888	2,630	73.1	398 / 339
117	11,671	2,320	73.2	529 / 21
122	12,242	2,320	73.2	427 / 21
131	13,079	2,320	73.3	403 / 152
132	13,196	2,320	73.3	334 / 102
132	13,240	2,320	73.6	334 / 102
135	13,488	2,320	73.6	392 / 355
144	14,374	2,320	73.6	519 / 391
149	14,907	1,510	73.6	490 / 500
154	15,439	1,270	73.6	664 / 52
160	15,989	1,270	73.9	479 / 76
164	16,438	1,270	74.4	168 / 20
170	16,998	1,270	75.7	98 / 20
175	17,541	1,270	76.3	50 / 50
176	17,619	1,270	80.4	50 / 50
178	17,817	1,270	80.4	502 / 94
186	18,648	1,270	80.6	127 / 201
191	19,072	1,270	80.8	158 / 84
199	19,940	1,270	82.0	14 / 261
201	20,118	1,270	81.7	25 / 25
202	20,180	1,270	84.0	25 / 25
205	20,527	1,060	84.8	209 / 100
206	20,589	1,060	84.8	885 / 465
207	20,659	1,060	98.1	885 / 465
214	21,406	1,060	98.1	688 / 385
219	21,935	1,060	98.1	534 / 344
225	22,494	1,060	98.1	226 / 505
233	23,268	1,060	98.1	218 / 546
238	23,757	1,060	98.1	344 / 293
242	24,238	1,060	98.1	322 / 215
Big Beaverdam Creek				
005	493	2,580	68.7 ¹	615 / 60
008	806	2,580	68.7 ¹	518 / 55
013	1,314	2,580	68.7 ¹	318 / 56
018	1,818	2,580	69.0	143 / 120
023	2,293	2,580	69.4	247 / 143

Table 17 - Limited Detailed Flood Hazard Data

Cross Section	Stream Station	Flood Discharge (cfs)	1% Annual Chance Water-Surface Elevation (feet NAVD 88)	Non-Encroachment Width (feet) Left/Right from Stream Centerline
028	2,785	2,580	69.8	176 / 197
033	3,314	2,580	70.1	294 / 116
038	3,823	2,580	70.4	228 / 347
043	4,324	2,580	70.8	185 / 161
048	4,805	2,580	71.5	268 / 352
053	5,330	2,440	72.2	234 / 200
058	5,786	2,440	72.9	122 / 259
063	6,291	2,440	73.3	50 / 373
068	6,794	2,440	73.7	50 / 266
073	7,291	2,440	74.2	56 / 227
078	7,804	2,440	74.7	50 / 295
083	8,330	1,720	75.1	149 / 297
088	8,811	1,720	75.4	50 / 224
094	9,380	1,720	76.3	50 / 175
098	9,798	1,720	77.4	417 / 150
103	10,309	1,720	78.2	480 / 50
108	10,836	1,720	78.7	539 / 50
113	11,328	1,720	79.3	346 / 50
117	11,749	1,720	79.8	129 / 144
122	12,171	1,720	80.3	25 / 25
122	12,218	1,720	81.1	25 / 25
128	12,814	1,720	81.6	97 / 415
133	13,324	1,720	81.8	75 / 233
138	13,807	1,720	82.3	124 / 129
143	14,312	1,720	82.9	120 / 220
148	14,772	1,720	83.4	50 / 362
153	15,304	1,520	83.9	90 / 83
158	15,811	1,520	85.1	186 / 54
163	16,314	1,520	85.9	138 / 133
168	16,816	1,520	86.8	50 / 104
174	17,372	1,520	88.4	66 / 131
178	17,803	1,520	89.2	53 / 121
183	18,327	1,520	90.3	171 / 35
188	18,813	1,520	91.3	73 / 64
193	19,339	725	92.4	58 / 146
198	19,822	725	93.2	60 / 67
203	20,315	725	94.6	89 / 50
210	20,968	725	97.0	55 / 45
Big Branch				
005	539	978	110.5	30 / 252
010	1,014	978	111.2	20 / 153
015	1,481	978	112.1	168 / 78
020	2,017	978	113.1	169 / 91
025	2,508	978	115.0	116 / 15
030	2,986	978	116.8	196 / 127

Table 17 - Limited Detailed Flood Hazard Data

Cross Section	Stream Station	Flood Discharge (cfs)	1% Annual Chance Water-Surface Elevation (feet NAVD 88)	Non-Encroachment Width (feet) Left/Right from Stream Centerline
035	3,469	978	117.4	107 / 206
040	3,953	978	118.0	32 / 31
040	3,999	978	118.5	32 / 31
045	4,472	863	119.3	82 / 14
050	4,980	863	119.7	208 / 93
055	5,464	863	120.8	132 / 19
060	5,986	863	121.9	108 / 70
065	6,472	863	122.8	295 / 19
070	6,983	863	124.0	139 / 21
075	7,476	713	125.0	74 / 75
080	8,002	713	125.7	91 / 65
084	8,390	713	126.4	41 / 18
088	8,831	713	127.6	50 / 99
092	9,228	713	128.2	54 / 63
096	9,569	713	129.0	38 / 73
Buck Marsh Branch				
015	1,505	2,655	82.7 ¹	592 / 193
020	2,024	2,655	82.7 ¹	712 / 55
025	2,453	2,655	83.0	338 / 129
029	2,898	2,655	83.8	413 / 27
030	3,037	2,655	83.9	37 / 36
031	3,093	2,655	84.5	37 / 36
033	3,339	2,655	85.2	239 / 352
043	4,287	2,231	85.9	250 / 308
047	4,738	2,231	86.2	212 / 138
051	5,050	2,231	86.5	258 / 223
054	5,428	2,231	86.9	244 / 61
057	5,682	2,231	87.2	77 / 76
057	5,746	2,231	89.8	77 / 76
060	5,976	2,231	90.0	434 / 205
065	6,482	2,231	90.1	465 / 219
070	6,994	2,231	90.2	338 / 284
075	7,466	2,231	90.4	157 / 359
080	8,038	2,231	90.7	275 / 180
086	8,556	2,231	91.1	356 / 181
089	8,941	2,231	91.3	354 / 117
095	9,490	2,231	91.5	497 / 197
101	10,097	2,117	91.8	341 / 186
106	10,575	2,117	92.0	463 / 180
110	11,022	2,117	92.2	417 / 94
115	11,495	2,117	92.5	268 / 125
120	12,012	2,117	93.0	231 / 269
126	12,555	2,117	93.3	257 / 23
129	12,904	2,117	93.8	123 / 113
Buckhall Creek				

Table 17 - Limited Detailed Flood Hazard Data

Cross Section	Stream Station	Flood Discharge (cfs)	1% Annual Chance Water-Surface Elevation (feet NAVD 88)	Non-Encroachment Width (feet) Left/Right from Stream Centerline
005	488	1,501	92.2 ¹	187 / 154
012	1,245	1,501	92.2 ¹	159 / 172
018	1,787	1,501	92.3	25 / 25
019	1,862	1,501	95.0	25 / 25
024	2,377	1,501	95.6	206 / 110
029	2,939	1,501	95.7	125 / 302
036	3,561	1,501	95.8	85 / 261
041	4,088	1,430	96.0	221 / 104
047	4,727	890	96.3	201 / 66
054	5,396	890	96.8	101 / 54
060	6,000	890	98.1	92 / 122
065	6,500	890	99.4	88 / 85
070	7,000	890	100.5	61 / 149
076	7,562	847	101.4	20 / 120
080	8,000	847	102.2	140 / 25
085	8,465	847	102.8	160 / 30
Bulltail Creek				
006	570	1,920	57.6 ¹	770 / 166
011	1,113	1,920	57.6 ¹	491 / 450
017	1,675	1,920	57.6 ¹	639 / 536
024	2,411	1,790	57.8	633 / 149
030	3,024	1,790	58.0	1,000 / 300
035	3,530	1,790	58.4	395 / 210
040	4,005	1,790	59.0	250 / 394
047	4,737	1,790	59.8	400 / 350
048	4,783	1,790	59.8	400 / 350
053	5,283	1,790	60.4	300 / 200
059	5,896	1,450	61.4	297 / 200
065	6,460	1,450	61.9	429 / 60
070	7,025	1,450	62.2	514 / 63
074	7,447	1,450	62.5	56 / 182
Burn Coat Creek				
014	1,372	1,790	63.5 ¹	20 / 1,144
025	2,547	1,790	63.7	117 / 20
032	3,210	1,760	65.9	200 / 370
044	4,398	1,760	67.3	235 / 20
055	5,454	1,760	68.8	269 / 248
060	6,046	1,760	69.5	20 / 161
071	7,064	1,760	71.1	63 / 554
072	7,184	1,760	71.1	52 / 52
072	7,234	1,760	71.5	52 / 52
080	8,017	1,760	72.3	20 / 534
089	8,868	1,700	72.7	20 / 322
095	9,463	1,700	73.3	20 / 229
101	10,137	1,700	74.2	120 / 350

Table 17 - Limited Detailed Flood Hazard Data

Cross Section	Stream Station	Flood Discharge (cfs)	1% Annual Chance Water-Surface Elevation (feet NAVD 88)	Non-Encroachment Width (feet) Left/Right from Stream Centerline
109	10,936	1,700	75.1	245 / 41
117	11,739	1,700	76.2	284 / 92
120	12,022	1,700	76.4	47 / 46
121	12,072	1,700	76.8	47 / 46
125	12,530	1,570	77.6	116 / 277
133	13,301	1,570	78.2	132 / 180
138	13,835	1,570	78.9	38 / 254
143	14,317	1,570	79.5	110 / 164
147	14,741	1,570	80.0	184 / 104
152	15,223	1,570	80.4	347 / 20
161	16,060	1,570	81.1	795 / 20
167	16,652	1,570	81.5	569 / 20
171	17,097	1,420	81.8	198 / 99
178	17,809	1,420	83.1	28 / 150
185	18,526	1,200	83.9	114 / 298
191	19,136	1,200	84.3	106 / 20
194	19,404	1,200	85.1	23 / 23
194	19,449	1,200	86.2	26 / 26
196	19,629	1,200	93.0	215 / 304
208	20,790	1,200	93.0	100 / 250
220	22,013	1,200	93.0	134 / 190
227	22,678	1,200	93.0	282 / 241
235	23,503	1,200	93.0	327 / 295
Cabin Creek				
009	936	1,580	54.4	56 / 446
014	1,357	1,580	54.7	356 / 207
020	2,039	1,580	55.4	97 / 203
026	2,580	1,580	56.1	212 / 102
030	2,979	1,580	56.4	158 / 81
037	3,678	1,540	57.0	138 / 172
044	4,414	1,540	57.6	144 / 26
051	5,054	1,540	58.3	216 / 17
055	5,502	1,540	58.8	97 / 145
056	5,617	1,540	58.9	40 / 39
057	5,663	1,540	59.3	40 / 39
061	6,121	1,540	59.7	25 / 240
066	6,639	1,140	60.0	45 / 385
073	7,284	1,140	60.4	14 / 338
077	7,744	1,140	61.4	14 / 158
082	8,212	1,140	62.6	24 / 113
089	8,940	1,140	63.8	14 / 144
092	9,200	1,140	64.0	22 / 22
093	9,266	1,140	69.8	22 / 22
095	9,516	1,140	69.9	100 / 217
100	9,971	1,140	69.9	132 / 149

Table 17 - Limited Detailed Flood Hazard Data

Cross Section	Stream Station	Flood Discharge (cfs)	1% Annual Chance Water-Surface Elevation (feet NAVD 88)	Non-Encroachment Width (feet) Left/Right from Stream Centerline
108	10,828	1,140	70.0	83 / 219
113	11,331	1,140	70.0	92 / 128
119	11,913	1,140	70.2	80 / 54
127	12,716	1,140	72.7	20 / 14
127	12,738	1,140	76.9	64 / 14
128	12,838	1,140	82.5	92 / 128
132	13,199	1,140	82.6	103 / 90
132	13,245	1,140	82.7	38 / 38
138	13,816	1,140	82.7	338 / 13
Camp Branch				
012	1,168	746	69.2	13 / 32
017	1,679	746	71.0	20 / 231
021	2,114	746	71.2	115 / 15
025	2,526	746	73.5	30 / 76
030	2,956	746	74.0	26 / 60
030	2,998	746	73.9	26 / 60
033	3,345	746	75.2	60 / 35
037	3,748	746	76.0	60 / 30
040	3,955	746	76.2	22 / 22
040	4,035	746	79.7	22 / 22
044	4,424	695	80.1	100 / 40
048	4,828	695	80.2	61 / 80
054	5,374	695	80.9	55 / 13
058	5,845	695	82.5	28 / 64
066	6,556	695	85.0	86 / 13
072	7,216	695	87.0	19 / 70
076	7,637	695	88.8	30 / 48
082	8,165	587	91.1	40 / 40
Cow Hole Branch				
025	2,473	867	95.8 ¹	89 / 182
032	3,185	867	95.9	19 / 174
035	3,539	867	96.4	14 / 244
040	4,031	867	96.9	212 / 80
045	4,534	867	97.4	47 / 216
051	5,070	692	97.6	62 / 356
055	5,510	692	97.8	52 / 357
060	6,035	692	98.0	138 / 164
065	6,498	692	98.4	232 / 13
071	7,092	692	99.4	13 / 195
075	7,525	692	100.4	13 / 148
080	8,034	692	101.7	13 / 159
085	8,519	692	103.0	13 / 200
090	9,030	596	104.3	145 / 102
095	9,517	596	105.8	75 / 12
Cowhole Branch				
000	35	1,200	93.0	327 / 295

Table 17 - Limited Detailed Flood Hazard Data

Cross Section	Stream Station	Flood Discharge (cfs)	1% Annual Chance Water-Surface Elevation (feet NAVD 88)	Non-Encroachment Width (feet) Left/Right from Stream Centerline
005	500	830	93.6	51 / 239
009	926	830	94.1	28 / 160
012	1,218	830	94.2	35 / 35
013	1,291	830	97.2	35 / 35
016	1,633	830	97.2	76 / 157
021	2,099	830	97.4	162 / 58
025	2,478	830	97.6	120 / 102
029	2,851	830	97.8	136 / 61
033	3,311	794	98.3	68 / 93
037	3,669	794	99.1	57 / 52
041	4,106	794	100.3	79 / 19
045	4,509	794	101.5	19 / 48
051	5,113	794	103.6	19 / 79
056	5,565	794	105.0	99 / 39
059	5,888	794	107.0	100 / 100
060	5,973	794	113.9	100 / 100
061	6,057	794	113.9	121 / 146
064	6,434	794	113.9	146 / 109
070	7,025	794	114.0	74 / 87
Cypress Creek				
000	0	6,180	51.4	394 / 1,472
020	2,002	8,000	28.6	221 / 1,950
028	2,831	8,000	28.7	114 / 1,564
044	4,410	8,000	29.1	214 / 1,321
049	4,902	8,000	29.2	469 / 1,008
063	6,326	8,000	29.6	572 / 990
076	7,581	8,000	30.0	667 / 841
084	8,362	8,000	30.3	667 / 315
088	8,850	8,000	30.6	763 / 281
094	9,372	8,000	31.0	235 / 500
102	10,202	8,000	31.5	270 / 486
103	10,336	8,000	31.6	887 / 804
104	10,386	7,910	32.7	887 / 804
111	11,131	7,910	32.8	1,348 / 334
118	11,824	7,910	33.0	818 / 853
128	12,776	7,910	33.2	552 / 226
133	13,257	7,910	33.4	251 / 1,246
139	13,904	7,910	33.6	177 / 1,176
144	14,378	7,910	33.8	121 / 1,144
157	15,681	7,830	34.2	488 / 791
163	16,338	7,830	34.4	230 / 1,246
170	17,031	7,830	34.7	46 / 1,343
179	17,886	7,830	35.0	317 / 1,146
188	18,816	7,830	35.4	392 / 717
196	19,594	7,830	35.8	758 / 520

Table 17 - Limited Detailed Flood Hazard Data

Cross Section	Stream Station	Flood Discharge (cfs)	1% Annual Chance Water-Surface Elevation (feet NAVD 88)	Non-Encroachment Width (feet) Left/Right from Stream Centerline
207	20,687	7,830	36.2	1,110 / 46
214	21,435	7,830	36.5	1,253 / 110
220	21,971	7,830	36.8	1,465 / 46
225	22,458	7,830	37.0	1,330 / 46
227	22,729	7,410	37.1	1,905 / 434
236	23,637	7,410	37.3	1,606 / 44
246	24,604	7,410	37.6	1,480 / 188
259	25,900	7,280	38.2	1,397 / 44
269	26,920	7,280	38.7	857 / 685
280	28,046	7,280	39.2	503 / 1,175
301	30,119	7,280	39.9	587 / 1,265
310	30,966	7,280	40.2	848 / 800
321	32,091	7,280	40.6	1,374 / 654
336	33,618	7,280	40.9	1,665 / 462
342	34,174	7,280	41.0	95 / 95
342	34,224	7,190	41.1	95 / 95
356	35,553	7,190	41.8	801 / 44
367	36,682	7,190	42.3	2,618 / 70
385	38,477	7,190	42.6	1,943 / 44
404	40,396	7,190	43.0	1,656 / 44
418	41,819	7,070	43.3	1,856 / 378
430	43,023	6,960	43.6	1,864 / 554
445	44,525	6,960	43.9	1,553 / 1,487
456	45,562	6,880	44.2	1,195 / 1,301
474	47,351	6,880	45.2	43 / 1,388
489	48,859	6,880	46.0	43 / 1,255
497	49,726	6,880	46.4	43 / 892
524	52,425	6,830	46.9	1,503 / 1,460
535	53,532	6,680	47.0	1,162 / 665
546	54,609	6,680	47.2	1,151 / 763
559	55,943	6,680	47.4	1,577 / 624
575	57,482	6,590	47.6	1,404 / 42
587	58,690	6,590	47.9	1,549 / 329
602	60,229	6,590	48.2	1,820 / 42
614	61,398	6,590	48.4	1,413 / 622
625	62,549	6,590	48.6	1,446 / 513
634	63,419	6,180	48.7	1,600 / 1,146
639	63,886	6,180	48.8	1,160 / 1,339
645	64,534	6,180	48.9	977 / 559
655	65,497	6,180	49.2	344 / 2,070
664	66,363	6,180	49.4	255 / 1,061
672	67,173	6,180	49.8	91 / 1,667
678	67,839	6,180	50.0	65 / 1,002
679	67,884	6,180	50.5	65 / 1,002
685	68,550	6,180	50.6	461 / 843

Table 17 - Limited Detailed Flood Hazard Data

Cross Section	Stream Station	Flood Discharge (cfs)	1% Annual Chance Water-Surface Elevation (feet NAVD 88)	Non-Encroachment Width (feet) Left/Right from Stream Centerline
695	69,494	6,180	50.9	512 / 1,115
705	70,520	6,180	51.2	731 / 1,149
712	71,248	6,180	51.4	394 / 1,472
Cypress Creek Tributary 1				
007	722	1,830	37.3 ¹	340 / 100
017	1,702	1,830	37.5	111 / 105
025	2,548	1,830	38.4	18 / 274
037	3,685	1,830	39.5	213 / 135
043	4,324	1,830	40.1	294 / 38
050	4,970	1,830	40.8	127 / 141
055	5,503	1,830	41.2	128 / 142
056	5,577	1,830	42.7	129 / 143
057	5,655	1,830	42.7	198 / 300
063	6,288	1,830	43.1	200 / 302
064	6,361	1,330	43.2	199 / 303
068	6,823	1,330	43.5	83 / 222
072	7,223	1,330	43.8	48 / 251
077	7,691	1,330	44.5	15 / 282
083	8,327	1,330	45.4	126 / 147
089	8,947	1,330	46.2	15 / 236
095	9,503	1,330	46.8	134 / 136
101	10,125	1,330	47.4	245 / 29
105	10,474	1,330	47.8	93 / 202
112	11,232	1,330	48.6	100 / 200
116	11,625	1,330	49.0	159 / 107
121	12,138	1,330	49.5	105 / 140
126	12,612	1,330	50.1	133 / 122
130	12,984	1,330	50.3	134 / 123
131	13,057	1,330	52.4	135 / 124
134	13,378	1,330	52.4	96 / 281
138	13,796	1,330	52.6	216 / 74
144	14,378	1,330	52.8	297 / 136
150	14,973	1,190	53.0	13 / 294
159	15,881	1,190	53.3	183 / 155
164	16,387	1,190	53.5	151 / 211
170	16,979	1,190	54.2	148 / 132
176	17,646	1,190	55.1	190 / 120
180	18,003	1,190	55.6	192 / 122
180	18,048	955	56.4	193 / 123
185	18,460	955	56.7	13 / 272
191	19,069	955	57.2	244 / 127
196	19,555	955	57.9	207 / 13
201	20,130	540	60.0	113 / 60
208	20,780	540	61.9	95 / 16
214	21,406	540	64.3	113 / 11

Table 17 - Limited Detailed Flood Hazard Data

Cross Section	Stream Station	Flood Discharge (cfs)	1% Annual Chance Water-Surface Elevation (feet NAVD 88)	Non-Encroachment Width (feet) Left/Right from Stream Centerline
220	21,989	540	65.8	17 / 127
224	22,399	540	67.2	11 / 96
230	22,999	540	69.3	71 / 43
235	23,545	540	71.4	46 / 11
240	24,027	540	72.7	110 / 115
Cypress Creek Tributary 2				
002	210	1,020	43.5 ¹	42 / 187
007	660	1,020	43.5 ¹	33 / 88
012	1,160	1,020	43.5 ¹	31 / 144
017	1,678	1,020	44.4	90 / 46
022	2,159	1,020	45.2	112 / 73
027	2,707	1,020	45.9	117 / 87
032	3,190	1,020	46.6	187 / 181
039	3,884	1,020	47.8	150 / 60
045	4,467	1,020	48.8	89 / 100
050	5,000	1,020	49.7	91 / 37
056	5,554	1,020	50.7	105 / 37
062	6,173	749	51.6	87 / 100
068	6,787	749	52.5	54 / 56
070	7,049	749	53.0	32 / 42
Dark Branch				
029	2,868	1,480	52.7 ¹	760 / 200
042	4,224	1,140	52.7 ¹	193 / 27
051	5,092	1,140	53.5	60 / 404
059	5,876	1,140	54.6	300 / 30
079	7,901	1,140	59.1	18 / 75
091	9,138	1,140	60.8	28 / 28
103	10,329	1,140	64.2	61 / 32
109	10,932	1,140	65.2	33 / 126
119	11,946	1,140	67.0	28 / 154
125	12,498	1,140	67.4	60 / 65
126	12,570	1,140	69.5	60 / 65
135	13,509	1,140	69.7	100 / 200
142	14,234	1,140	70.7	100 / 100
149	14,926	1,140	72.6	100 / 50
158	15,802	934	74.3	109 / 63
167	16,700	934	75.9	97 / 37
177	17,744	934	78.8	31 / 62
185	18,471	934	81.1	39 / 28
191	19,116	934	83.2	42 / 28
199	19,866	934	84.9	28 / 68
202	20,222	934	85.6	28 / 28
Doctors Creek				
005	481	5,820	39.3 ¹	188 / 143
008	766	5,820	39.3 ¹	190 / 269
010	1,050	5,820	39.3 ¹	46 / 46

Table 17 - Limited Detailed Flood Hazard Data

Cross Section	Stream Station	Flood Discharge (cfs)	1% Annual Chance Water-Surface Elevation (feet NAVD 88)	Non-Encroachment Width (feet) Left/Right from Stream Centerline
017	1,730	5,820	39.3 ¹	363 / 55
022	2,242	5,820	39.3 ¹	46 / 46
027	2,715	5,820	39.3 ¹	263 / 46
031	3,078	5,820	39.3 ¹	387 / 46
037	3,708	5,820	39.3 ¹	319 / 46
041	4,133	5,820	39.3 ¹	925 / 126
046	4,594	5,820	39.3 ¹	46 / 46
051	5,125	5,820	39.3 ¹	88 / 46
056	5,609	5,820	39.3 ¹	136 / 46
061	6,057	5,760	39.3 ¹	46 / 152
065	6,489	5,760	39.3 ¹	150 / 150
065	6,535	5,760	39.3 ¹	150 / 150
069	6,858	5,760	39.3 ¹	200 / 100
072	7,243	5,760	39.3 ¹	200 / 200
079	7,865	5,760	39.3 ¹	200 / 200
083	8,350	5,760	39.3 ¹	200 / 200
089	8,902	5,760	39.3	200 / 100
093	9,347	5,760	39.5	200 / 100
100	9,977	5,760	39.6	137 / 544
104	10,389	5,760	39.7	400 / 83
109	10,949	5,760	40.0	300 / 200
115	11,452	5,760	40.2	150 / 200
246	24,643	5,430	50.2	486 / 160
247	24,719	5,430	50.2	260 / 300
248	24,775	5,430	50.6	260 / 300
254	25,438	5,430	50.8	425 / 450
260	25,956	5,430	51.0	475 / 400
266	26,625	3,690	51.2	800 / 600
273	27,319	3,690	51.4	800 / 450
278	27,843	3,690	51.6	800 / 600
283	28,335	3,690	51.8	704 / 137
289	28,859	3,690	52.0	342 / 361
293	29,321	3,690	52.3	434 / 228
298	29,815	3,690	52.5	347 / 432
303	30,336	3,690	52.7	294 / 502
308	30,843	3,690	53.0	406 / 300
314	31,359	3,690	53.2	699 / 291
318	31,826	3,590	53.3	564 / 71
323	32,330	3,590	53.6	577 / 137
328	32,786	3,590	53.8	546 / 111
333	33,336	3,590	54.0	383 / 127
338	33,825	3,590	54.3	561 / 27
344	34,367	3,590	54.5	696 / 89
348	34,824	3,590	54.7	760 / 64
353	35,332	3,590	54.9	694 / 150

Table 17 - Limited Detailed Flood Hazard Data

Cross Section	Stream Station	Flood Discharge (cfs)	1% Annual Chance Water-Surface Elevation (feet NAVD 88)	Non-Encroachment Width (feet) Left/Right from Stream Centerline
358	35,831	3,510	55.1	682 / 221
363	36,339	3,510	55.3	744 / 346
369	36,903	3,510	55.5	100 / 100
370	36,959	3,510	56.4	100 / 100
373	37,327	3,510	56.9	418 / 250
378	37,848	3,510	57.1	423 / 310
384	38,352	3,510	57.2	516 / 429
388	38,840	3,510	57.4	452 / 370
393	39,347	3,510	57.5	761 / 477
399	39,875	3,510	57.6	901 / 769
405	40,493	3,510	57.6	1,382 / 441
414	41,354	1,850	57.7	1,381 / 1,612
419	41,864	1,850	57.7	887 / 1,404
424	42,351	1,850	57.8	1,041 / 953
428	42,837	1,850	57.8	330 / 210
433	43,304	1,850	58.3	88 / 830
438	43,819	1,850	58.7	330 / 910
443	44,333	1,850	59.2	321 / 171
448	44,840	1,850	59.6	493 / 139
453	45,318	1,850	59.8	481 / 50
458	45,814	1,850	60.0	635 / 50
463	46,312	1,850	60.3	18 / 412
468	46,820	1,850	61.4	547 / 50
473	47,299	1,850	62.1	155 / 370
478	47,814	1,850	62.8	94 / 358
483	48,319	1,850	63.4	245 / 93
488	48,828	1,850	64.2	189 / 91
493	49,321	1,850	65.0	165 / 118
498	49,821	1,850	65.5	209 / 283
503	50,303	1,850	65.7	65 / 65
504	50,373	1,850	65.9	65 / 65
508	50,829	1,850	67.8	197 / 180
513	51,311	1,850	68.0	405 / 87
518	51,780	1,850	68.2	249 / 266
523	52,290	1,630	68.6	123 / 123
528	52,784	1,630	69.1	114 / 242
533	53,287	1,630	69.5	63 / 264
538	53,818	1,630	70.1	50 / 271
543	54,296	1,630	70.8	50 / 204
548	54,800	1,630	71.6	257 / 114
553	55,300	1,630	72.1	50 / 268
558	55,821	1,430	72.8	154 / 263
563	56,334	1,430	73.5	198 / 50
568	56,802	1,430	74.7	191 / 127
573	57,307	1,430	75.5	282 / 83

Table 17 - Limited Detailed Flood Hazard Data

Cross Section	Stream Station	Flood Discharge (cfs)	1% Annual Chance Water-Surface Elevation (feet NAVD 88)	Non-Encroachment Width (feet) Left/Right from Stream Centerline
578	57,803	1,430	76.0	225 / 144
583	58,299	1,430	76.8	97 / 82
588	58,816	1,430	78.4	50 / 131
592	59,235	1,430	78.8	70 / 70
593	59,315	1,430	81.2	70 / 70
598	59,797	1,430	81.5	246 / 110
603	60,330	1,430	81.8	193 / 101
608	60,816	980	82.3	50 / 138
613	61,298	980	83.7	50 / 140
618	61,808	980	85.0	52 / 139
623	62,309	980	86.1	50 / 192
Dufis Creek				
010	1,034	3,590	46.0 ¹	67 / 320
019	1,939	3,590	46.0 ¹	100 / 120
020	1,989	3,590	46.0 ¹	100 / 120
030	3,027	3,590	46.0 ¹	347 / 215
035	3,507	3,590	46.0	431 / 117
040	4,014	3,590	46.4	320 / 186
045	4,512	3,590	46.7	138 / 297
050	4,997	3,590	47.1	67 / 588
054	5,429	3,590	47.3	59 / 514
060	5,952	3,590	47.6	100 / 764
065	6,484	3,590	48.0	67 / 484
070	6,990	3,590	48.4	249 / 858
075	7,484	3,590	48.7	67 / 692
080	7,990	3,590	49.0	67 / 530
086	8,616	3,590	49.4	424 / 144
089	8,859	3,590	49.4	72 / 72
089	8,909	3,590	49.7	72 / 72
093	9,343	3,590	50.4	600 / 85
103	10,331	1,940	50.6	235 / 821
111	11,105	1,940	50.7	237 / 1,564
120	11,985	1,940	50.8	86 / 1,210
130	12,980	1,940	51.0	82 / 318
136	13,558	1,940	51.8	246 / 74
140	13,997	1,940	52.7	146 / 112
145	14,491	1,940	53.6	98 / 159
150	14,988	1,940	54.4	58 / 235
155	15,478	1,660	54.8	91 / 294
160	15,996	1,660	55.0	174 / 149
165	16,483	1,660	55.2	167 / 233
170	16,992	1,660	55.4	79 / 311
175	17,469	1,660	55.6	57 / 345
180	17,967	1,660	55.9	57 / 207
185	18,501	1,660	56.5	57 / 299

Table 17 - Limited Detailed Flood Hazard Data

Cross Section	Stream Station	Flood Discharge (cfs)	1% Annual Chance Water-Surface Elevation (feet NAVD 88)	Non-Encroachment Width (feet) Left/Right from Stream Centerline
190	18,980	1,660	57.2	70 / 174
195	19,496	1,660	58.0	117 / 190
200	20,006	1,660	58.8	94 / 131
205	20,489	1,660	59.6	94 / 142
210	21,042	1,290	60.1	225 / 73
215	21,513	1,290	60.6	106 / 78
219	21,850	1,290	60.8	60 / 127
219	21,920	1,290	61.0	60 / 127
224	22,431	1,290	61.5	55 / 100
Elder Branch				
019	1,922	2,370	59.7 ¹	200 / 250
026	2,605	2,370	59.7 ¹	200 / 400
043	4,303	2,370	61.2	300 / 200
052	5,155	2,370	61.9	300 / 400
063	6,303	2,370	62.4	500 / 300
074	7,385	2,370	63.0	300 / 100
084	8,374	2,370	64.8	300 / 65
097	9,651	2,160	65.9	300 / 120
106	10,580	1,910	66.7	200 / 82
111	11,054	1,910	67.4	200 / 22
115	11,497	1,910	68.2	50 / 50
115	11,546	1,910	69.8	50 / 50
119	11,873	1,910	70.5	272 / 100
126	12,629	1,910	70.7	330 / 100
130	13,037	1,910	70.8	286 / 100
136	13,638	1,910	71.0	301 / 40
144	14,429	1,910	71.4	136 / 106
149	14,926	1,910	71.8	208 / 148
153	15,340	1,910	72.0	58 / 108
158	15,833	1,800	72.9	66 / 139
165	16,472	1,800	73.6	70 / 166
172	17,158	1,800	74.1	209 / 193
177	17,730	1,470	74.4	69 / 165
182	18,190	1,470	74.8	40 / 145
187	18,686	1,470	75.3	61 / 163
191	19,058	1,470	75.7	32 / 103
195	19,492	1,470	76.4	143 / 23
198	19,823	1,470	76.8	50 / 221
203	20,263	1,470	77.2	50 / 174
208	20,791	1,470	78.0	40 / 100
211	21,121	1,470	78.7	50 / 130
215	21,533	1,470	79.0	50 / 50
216	21,598	1,470	79.8	50 / 50
217	21,717	1,470	80.1	200 / 150
222	22,150	1,470	80.4	200 / 150

Table 17 - Limited Detailed Flood Hazard Data

Cross Section	Stream Station	Flood Discharge (cfs)	1% Annual Chance Water-Surface Elevation (feet NAVD 88)	Non-Encroachment Width (feet) Left/Right from Stream Centerline
227	22,746	1,470	80.9	200 / 150
Fussell Mill Branch				
008	790	1,090	45.0 ¹	74 / 52
014	1,389	1,090	45.0	57 / 109
019	1,946	1,090	46.6	54 / 117
024	2,406	1,090	48.1	54 / 76
030	3,013	1,090	50.4	54 / 125
035	3,455	1,090	51.7	54 / 135
040	4,019	1,090	52.7	110 / 110
044	4,421	1,090	53.1	125 / 78
049	4,947	1,090	53.5	50 / 50
050	5,020	1,090	55.1	50 / 50
054	5,432	1,090	55.5	80 / 70
059	5,939	1,090	56.0	123 / 54
064	6,444	1,090	56.7	97 / 54
070	6,951	1,090	57.5	54 / 100
074	7,449	1,090	58.4	54 / 79
080	7,977	866	60.2	52 / 52
086	8,600	866	62.0	86 / 52
091	9,140	866	63.0	122 / 52
097	9,667	866	64.0	52 / 52
Goshen Swamp				
007	670	9,000	60.0 ¹	1,568 / 747
039	3,919	9,000	63.1	90 / 63
040	3,970	9,000	63.5	120 / 120
057	5,708	9,000	64.4	1,875 / 1,479
078	7,806	9,000	64.6	2,261 / 1,037
098	9,812	9,000	64.9	2,733 / 887
117	11,692	8,880	65.2	1,889 / 999
138	13,783	8,880	65.8	1,225 / 1,433
159	15,903	8,880	66.6	1,153 / 1,374
178	17,850	8,880	67.4	2,270 / 892
199	19,898	8,740	68.0	1,751 / 736
219	21,942	8,740	68.8	1,342 / 540
245	24,506	8,660	69.7	1,459 / 2,153
266	26,618	8,660	70.2	1,727 / 1,311
288	28,764	8,310	71.0	1,050 / 2,096
308	30,782	8,310	71.7	64 / 2,959
331	33,054	8,310	72.5	948 / 1,559
352	35,220	8,040	73.4	901 / 1,372
375	37,530	8,040	74.5	729 / 1,885
408	40,825	7,960	76.2	89 / 89
409	40,880	7,960	77.0	89 / 89
425	42,524	7,960	77.6	354 / 2,450
437	43,707	7,960	77.8	1,396 / 1,689

Table 17 - Limited Detailed Flood Hazard Data

Cross Section	Stream Station	Flood Discharge (cfs)	1% Annual Chance Water-Surface Elevation (feet NAVD 88)	Non-Encroachment Width (feet) Left/Right from Stream Centerline
455	45,509	7,210	78.0	1,466 / 1,109
477	47,716	7,210	78.5	495 / 1,545
497	49,697	7,210	79.1	1,297 / 601
517	51,735	7,210	79.8	1,874 / 38
535	53,467	7,210	80.4	2,040 / 152
556	55,590	7,070	81.1	724 / 1,596
575	57,534	7,070	81.7	712 / 1,048
594	59,385	6,730	82.4	832 / 903
614	61,365	6,730	83.1	1,291 / 775
633	63,318	6,730	83.7	1,428 / 1,122
653	65,328	6,730	84.5	1,325 / 996
674	67,443	6,730	85.7	193 / 1,133
694	69,422	6,730	86.6	36 / 2,042
730	73,024	6,490	88.0	48 / 1,804
731	73,069	6,490	89.3	48 / 1,804
747	74,651	6,490	89.7	360 / 1,237
764	76,425	6,490	90.2	94 / 1,698
782	78,194	6,490	90.6	54 / 1,758
803	80,317	6,490	91.2	249 / 1,472
825	82,460	6,490	91.9	590 / 1,226
849	84,888	5,570	92.9	33 / 1,570
868	86,840	5,290	93.8	202 / 1,279
890	89,001	5,290	95.0	275 / 821
907	90,656	5,290	95.8	584 / 749
926	92,599	5,140	96.4	868 / 822
944	94,386	5,140	97.0	548 / 928
958	95,807	5,140	97.5	475 / 1,140
974	97,445	4,860	98.3	382 / 666
994	99,446	4,860	99.7	764 / 597
1016	101,604	4,780	101.2	1,274 / 31
1036	103,591	4,780	102.1	1,220 / 463
1057	105,676	4,780	102.9	1,091 / 391
1077	107,724	4,780	103.8	483 / 602
1095	109,537	4,780	104.7	513 / 787
1113	111,302	4,780	105.3	94 / 94
1114	111,354	4,420	105.5	94 / 94
1114	111,400	4,420	105.5	95 / 92
1114	111,430	4,420	105.9	95 / 92
1133	113,279	4,010	106.8	581 / 408
1143	114,340	4,010	107.2	698 / 122
1153	115,285	4,010	107.8	456 / 606
1156	115,641	4,010	108.0	100 / 100
1158	115,791	4,010	108.4	100 / 100
1161	116,110	4,010	108.6	660 / 284
1172	117,198	4,010	109.0	286 / 610

Table 17 - Limited Detailed Flood Hazard Data

Cross Section	Stream Station	Flood Discharge (cfs)	1% Annual Chance Water-Surface Elevation (feet NAVD 88)	Non-Encroachment Width (feet) Left/Right from Stream Centerline
1181	118,104	4,010	109.4	390 / 465
1193	119,272	4,010	109.8	448 / 386
1204	120,397	4,010	110.3	358 / 669
1215	121,491	4,010	110.7	599 / 445
1226	122,577	4,010	111.1	310 / 544
1238	123,753	4,010	111.7	350 / 466
1249	124,887	4,010	112.3	192 / 727
1261	126,099	3,730	112.8	554 / 478
1269	126,929	3,730	113.1	79 / 79
1270	126,977	3,730	113.3	79 / 79
1274	127,424	3,730	113.7	173 / 755
1283	128,307	3,730	114.0	355 / 538
1294	129,442	3,730	114.7	116 / 428
1309	130,881	3,730	115.4	936 / 99
1320	131,975	3,730	115.7	874 / 291
1330	133,011	3,730	116.0	670 / 413
1340	134,032	3,730	116.4	734 / 425
1350	134,962	3,730	116.9	685 / 270
1362	136,211	2,650	117.6	232 / 429
1373	137,270	2,650	118.2	159 / 522
1385	138,469	2,650	119.0	397 / 459
Great Branch				
033	3,307	1,790	77.1 ¹	27 / 299
038	3,834	1,790	78.0	27 / 337
041	4,060	1,790	78.3	55 / 55
041	4,112	1,790	78.6	55 / 55
044	4,416	1,790	79.0	193 / 117
051	5,114	1,790	80.0	133 / 177
058	5,792	1,790	80.5	37 / 422
064	6,434	1,790	81.0	149 / 188
069	6,910	1,790	81.5	228 / 159
072	7,245	1,790	81.4	35 / 35
073	7,301	1,500	82.0	35 / 35
079	7,928	1,500	82.7	182 / 209
086	8,589	1,500	83.6	27 / 238
092	9,155	1,500	84.5	46 / 267
096	9,639	1,500	84.8	161 / 344
099	9,907	1,500	84.8	278 / 254
105	10,532	1,500	85.1	68 / 274
108	10,791	1,500	85.2	50 / 50
108	10,844	1,500	85.5	50 / 50
112	11,191	1,500	85.8	70 / 70
118	11,798	1,500	86.2	100 / 100
122	12,236	1,500	86.4	171 / 177
129	12,869	1,500	86.9	27 / 207

Table 17 - Limited Detailed Flood Hazard Data

Cross Section	Stream Station	Flood Discharge (cfs)	1% Annual Chance Water-Surface Elevation (feet NAVD 88)	Non-Encroachment Width (feet) Left/Right from Stream Centerline
134	13,383	1,500	87.4	27 / 100
137	13,735	1,500	87.8	66 / 210
141	14,097	1,500	88.2	91 / 209
145	14,539	1,270	88.5	146 / 229
150	14,991	1,270	88.8	27 / 186
156	15,551	1,270	89.7	27 / 184
161	16,095	1,270	90.5	100 / 145
167	16,690	1,270	91.1	33 / 181
173	17,311	1,270	91.8	77 / 109
183	18,329	1,270	92.9	27 / 148
188	18,805	1,270	93.3	100 / 77
194	19,423	1,270	93.8	100 / 85
202	20,234	1,270	94.8	100 / 40
Grove Creek				
028	2,847	4,960	51.6 ¹	700 / 85
040	4,018	4,960	51.6 ¹	700 / 85
050	5,002	4,960	52.1	700 / 205
066	6,559	4,910	54.0	713 / 325
077	7,703	4,910	55.0	476 / 44
089	8,912	4,910	55.9	860 / 121
103	10,252	4,910	56.8	559 / 183
115	11,499	4,910	57.8	575 / 295
127	12,711	4,910	58.5	44 / 1,076
139	13,908	4,910	59.0	773 / 329
150	15,013	4,790	59.5	475 / 422
163	16,254	4,790	60.1	477 / 266
176	17,634	4,790	60.8	483 / 615
188	18,813	4,640	61.4	249 / 443
206	20,603	4,640	62.4	836 / 44
220	22,025	4,510	63.1	1,003 / 114
231	23,085	4,510	63.6	966 / 44
241	24,144	4,510	64.2	522 / 332
253	25,322	4,010	65.0	708 / 283
261	26,110	4,010	65.4	588 / 145
267	26,738	4,010	65.7	958 / 45
271	27,120	4,010	65.9	576 / 439
272	27,241	4,010	66.5	576 / 429
279	27,917	4,010	66.7	1,375 / 155
282	28,168	4,010	66.7	909 / 160
287	28,667	4,010	66.9	323 / 33
292	29,156	4,010	67.7	1,194 / 85
300	29,984	4,010	68.3	563 / 23
306	30,566	4,010	68.7	760 / 23
313	31,292	4,010	69.1	596 / 144
317	31,705	4,010	69.3	927 / 160

Table 17 - Limited Detailed Flood Hazard Data

Cross Section	Stream Station	Flood Discharge (cfs)	1% Annual Chance Water-Surface Elevation (feet NAVD 88)	Non-Encroachment Width (feet) Left/Right from Stream Centerline
324	32,430	3,670	69.5	272 / 363
330	33,042	3,670	69.8	23 / 546
335	33,453	3,670	70.0	23 / 534
336	33,600	3,670	70.0	136 / 84
337	33,650	3,670	70.6	129 / 128
341	34,086	3,670	71.3	384 / 258
348	34,807	3,670	71.5	993 / 33
353	35,262	3,670	71.7	653 / 146
360	35,989	3,540	72.0	467 / 470
365	36,471	3,540	72.2	644 / 97
371	37,109	3,540	72.7	1,036 / 155
378	37,807	3,540	73.0	619 / 302
385	38,538	3,540	73.3	409 / 216
391	39,076	3,540	73.8	946 / 209
393	39,285	3,540	73.6	47 / 46
393	39,326	3,540	74.7	47 / 46
397	39,714	3,540	76.0	333 / 255
406	40,622	3,540	76.2	467 / 461
412	41,245	3,540	76.4	608 / 166
420	41,979	3,540	76.6	835 / 22
425	42,474	3,540	76.8	465 / 160
430	43,037	3,540	77.1	470 / 318
437	43,717	3,540	77.4	209 / 696
446	44,621	2,630	77.6	488 / 465
451	45,111	2,630	77.7	344 / 408
458	45,821	2,630	78.0	92 / 190
460	45,979	2,630	78.0	35 / 35
460	46,024	2,630	78.8	35 / 35
464	46,380	2,630	79.6	57 / 491
470	46,978	2,630	79.8	140 / 245
478	47,753	2,630	80.1	193 / 203
484	48,398	2,630	80.4	328 / 21
490	49,039	2,530	80.8	325 / 49
497	49,652	2,530	81.4	111 / 216
502	50,209	2,530	81.9	253 / 281
512	51,166	2,280	82.4	186 / 259
518	51,815	2,280	82.7	286 / 69
527	52,700	2,280	83.1	22 / 260
535	53,509	2,280	83.6	51 / 281
541	54,079	2,280	83.9	89 / 213
548	54,754	2,060	84.4	76 / 307
556	55,552	2,060	85.0	69 / 157
562	56,215	2,060	85.6	174 / 83
568	56,809	2,060	86.2	286 / 44
572	57,205	2,060	86.5	27 / 27

Table 17 - Limited Detailed Flood Hazard Data

Cross Section	Stream Station	Flood Discharge (cfs)	1% Annual Chance Water-Surface Elevation (feet NAVD 88)	Non-Encroachment Width (feet) Left/Right from Stream Centerline
572	57,249	2,060	87.8	27 / 27
577	57,748	1,780	89.1	760 / 52
585	58,517	1,780	89.4	146 / 22
592	59,199	1,780	89.9	189 / 111
598	59,788	1,780	90.4	302 / 99
606	60,596	1,780	91.3	79 / 33
613	61,306	1,780	92.6	423 / 11
622	62,163	1,670	93.3	152 / 134
628	62,754	1,670	93.6	245 / 103
634	63,367	1,670	94.0	12 / 200
640	63,992	1,670	95.0	22 / 138
646	64,572	1,670	95.9	139 / 118
652	65,202	1,670	96.8	142 / 22
660	65,972	1,670	97.8	235 / 22
668	66,790	1,670	98.8	60 / 80
674	67,423	1,670	99.7	97 / 99
680	67,957	1,320	100.2	22 / 176
684	68,397	1,320	100.6	42 / 101
689	68,911	1,320	101.3	133 / 66
697	69,709	1,320	102.5	22 / 45
704	70,368	1,320	103.9	61 / 196
711	71,127	1,020	104.8	22 / 25
717	71,655	1,020	105.9	22 / 22
Herring Marsh Run				
017	1,694	1,750	70.7 ¹	316 / 639
024	2,411	1,750	70.7 ¹	176 / 348
029	2,885	1,750	70.7 ¹	505 / 229
034	3,381	1,750	70.7 ¹	213 / 25
039	3,914	1,750	71.3	25 / 25
046	4,598	1,750	72.9	116 / 63
051	5,106	1,750	73.2	73 / 63
057	5,695	1,750	73.8	200 / 82
061	6,114	1,750	74.1	119 / 61
067	6,662	1,750	74.7	161 / 45
072	7,165	1,750	75.1	156 / 66
077	7,733	1,750	75.7	208 / 45
082	8,243	1,750	76.2	62 / 137
088	8,787	1,750	76.8	5 / 129
093	9,271	1,750	77.7	195 / 20
098	9,790	1,750	78.2	-5 / 232
103	10,288	1,750	78.9	-5 / 247
108	10,759	1,750	79.6	83 / 38
109	10,888	1,750	79.5	4 / 53
109	10,937	1,750	81.2	4 / 53
113	11,320	1,750	82.2	190 / 55

Table 17 - Limited Detailed Flood Hazard Data

Cross Section	Stream Station	Flood Discharge (cfs)	1% Annual Chance Water-Surface Elevation (feet NAVD 88)	Non-Encroachment Width (feet) Left/Right from Stream Centerline
118	11,834	1,630	82.3	140 / 108
123	12,340	1,630	82.6	199 / 20
130	12,955	1,630	83.3	147 / 27
135	13,478	1,630	84.1	106 / 164
141	14,075	1,630	85.0	188 / 100
147	14,709	1,630	85.8	142 / 139
153	15,314	1,630	86.6	174 / 191
159	15,910	1,630	87.4	96 / 207
165	16,474	1,270	88.0	147 / 266
170	16,989	1,270	88.4	50 / 270
175	17,498	1,270	89.1	99 / 177
180	18,003	1,270	89.9	176 / 18
185	18,523	1,270	90.9	149 / 37
190	19,008	1,270	91.8	121 / 91
195	19,517	1,270	92.9	148 / 65
200	20,034	845	94.2	53 / 84
206	20,591	845	95.4	131 / 52
211	21,103	845	97.2	15 / 151
215	21,510	845	99.0	141 / 70
219	21,931	845	99.8	114 / 47
225	22,452	845	100.6	60 / 136
229	22,925	845	101.1	46 / 95
233	23,319	845	102.7	20 / 50
234	23,359	845	103.6	45 / 45
234	23,432	845	106.8	45 / 45
238	23,759	845	106.8	100 / 27
243	24,257	845	106.9	111 / 124
248	24,791	661	107.3	13 / 71
252	25,232	661	109.2	46 / 56
257	25,670	661	110.2	74 / 49
Island Creek				
091	9,077	4,100	29.1 ¹	415 / 30
095	9,533	4,100	29.1 ¹	43 / 49
096	9,588	4,060	29.1 ¹	43 / 49
100	9,987	4,060	29.1 ¹	185 / 101
107	10,727	4,060	29.1 ¹	276 / 134
114	11,426	4,060	29.1 ¹	41 / 360
122	12,163	4,060	29.1 ¹	271 / 142
125	12,502	4,060	29.1 ¹	123 / 162
132	13,152	4,060	29.1 ¹	191 / 284
137	13,700	4,060	29.1 ¹	300 / 386
144	14,445	4,060	29.1 ¹	162 / 421
151	15,117	4,060	29.2	98 / 259
157	15,691	4,060	29.6	69 / 417
162	16,245	4,060	29.9	220 / 276

Table 17 - Limited Detailed Flood Hazard Data

Cross Section	Stream Station	Flood Discharge (cfs)	1% Annual Chance Water-Surface Elevation (feet NAVD 88)	Non-Encroachment Width (feet) Left/Right from Stream Centerline
168	16,796	4,060	30.2	108 / 296
178	17,804	3,370	30.7	269 / 804
185	18,456	3,370	31.0	100 / 214
191	19,135	3,370	31.3	103 / 445
199	19,866	3,370	31.7	198 / 228
204	20,438	3,370	32.0	220 / 144
208	20,763	3,370	32.2	69 / 449
208	20,808	3,370	33.2	743 / 50
211	21,082	3,370	33.2	573 / 315
221	22,053	3,370	33.5	651 / 310
228	22,808	3,370	33.7	176 / 347
235	23,515	3,370	33.9	239 / 306
243	24,296	3,370	34.2	314 / 145
250	24,989	3,370	34.6	109 / 166
254	25,376	3,370	34.9	157 / 287
261	26,057	3,370	35.2	344 / 195
269	26,918	3,370	35.5	198 / 293
274	27,394	3,370	35.7	162 / 207
282	28,163	3,370	36.1	289 / 173
287	28,748	3,370	36.4	69 / 414
298	29,762	3,370	37.0	47 / 47
298	29,807	3,370	37.2	47 / 47
300	30,010	3,370	38.0	360 / 242
307	30,658	3,370	38.1	855 / 324
317	31,681	2,980	38.4	654 / 70
321	32,095	2,980	38.5	65 / 66
321	32,147	2,980	38.7	65 / 66
324	32,388	2,980	39.2	562 / 149
329	32,905	2,980	39.4	403 / 343
335	33,481	2,980	39.8	582 / 305
341	34,079	2,980	40.2	176 / 452
345	34,506	2,980	40.5	557 / 252
352	35,187	2,980	40.9	1,053 / 24
357	35,699	2,980	41.2	969 / 136
363	36,342	2,980	41.6	417 / 354
370	36,964	2,980	42.0	203 / 386
376	37,635	2,980	42.4	232 / 306
385	38,482	2,980	42.8	339 / 333
392	39,168	2,780	43.0	522 / 273
400	40,008	2,780	43.4	747 / 415
406	40,634	2,780	43.7	386 / 337
413	41,288	2,780	44.0	555 / 218
419	41,851	2,780	44.4	482 / 386
427	42,677	2,780	44.9	411 / 455
434	43,355	2,780	45.3	1,434 / 448

Table 17 - Limited Detailed Flood Hazard Data

Cross Section	Stream Station	Flood Discharge (cfs)	1% Annual Chance Water-Surface Elevation (feet NAVD 88)	Non-Encroachment Width (feet) Left/Right from Stream Centerline
436	43,553	2,780	45.4	1,563 / 85
440	43,981	2,780	45.7	58 / 58
440	44,031	2,550	46.1	58 / 58
445	44,525	2,550	46.8	50 / 267
450	44,983	2,550	47.0	359 / 263
455	45,526	2,550	47.2	614 / 42
456	45,576	2,550	47.4	614 / 42
458	45,817	2,550	47.5	843 / 28
466	46,581	2,550	47.9	401 / 74
470	46,966	1,740	48.1	27 / 446
476	47,619	1,740	48.6	248 / 142
482	48,176	1,740	49.1	123 / 212
489	48,936	1,740	49.7	18 / 338
496	49,615	1,740	50.1	446 / 31
501	50,101	1,740	50.3	197 / 301
507	50,669	1,740	50.6	483 / 60
513	51,254	1,740	50.9	137 / 203
518	51,776	1,740	51.6	157 / 225
Island Creek Tributary				
005	497	1,800	30.4 ¹	90 / 102
008	830	1,800	30.4 ¹	135 / 55
013	1,334	1,800	30.4 ¹	113 / 130
016	1,553	1,800	30.4 ¹	23 / 149
016	1,624	1,800	30.8	23 / 149
019	1,866	1,800	31.1	80 / 143
023	2,309	1,800	31.5	426 / 82
028	2,756	1,800	31.8	125 / 200
034	3,389	1,800	32.7	500 / 200
039	3,913	1,800	33.4	500 / 900
044	4,378	1,800	33.6	450 / 680
050	4,967	1,170	33.7	1,436 / 1,687
054	5,425	1,170	33.7	1,216 / 1,879
061	6,089	1,170	33.8	1,218 / 1,498
065	6,481	1,170	33.8	1,123 / 868
073	7,317	1,170	33.8	728 / 322
078	7,776	1,170	34.0	643 / 129
082	8,236	1,170	34.1	724 / 299
087	8,676	1,170	34.3	719 / 39
092	9,250	1,170	34.5	655 / 39
Juniper Branch				
002	200	476	91.4 ¹	41 / 60
007	701	476	92.8	89 / 11
007	724	476	93.0	266 / 154
008	774	476	102.5	266 / 154
012	1,186	476	102.5	10 / 276

Table 17 - Limited Detailed Flood Hazard Data

Cross Section	Stream Station	Flood Discharge (cfs)	1% Annual Chance Water-Surface Elevation (feet NAVD 88)	Non-Encroachment Width (feet) Left/Right from Stream Centerline
016	1,615	476	102.5	68 / 132
King Branch				
015	1,525	1,360	93.2 ¹	589 / 20
020	2,006	1,360	93.3	185 / 20
025	2,486	1,360	94.4	201 / 20
030	3,011	1,360	95.5	237 / 19
035	3,472	1,360	96.6	175 / 50
040	4,014	1,360	97.6	226 / 42
045	4,529	1,360	98.4	213 / 117
050	5,003	1,360	99.1	70 / 224
055	5,511	1,360	100.0	170 / 124
060	6,034	1,360	100.9	23 / 264
065	6,505	1,360	101.9	143 / 116
070	6,992	1,250	102.8	135 / 207
075	7,455	1,250	103.2	17 / 310
080	7,990	1,250	103.8	17 / 186
085	8,495	1,250	104.5	116 / 43
090	9,005	1,250	105.4	17 / 229
095	9,532	1,250	106.0	90 / 159
100	10,010	1,060	106.9	54 / 184
105	10,501	1,060	107.9	128 / 62
110	11,032	1,060	108.8	240 / 16
113	11,264	1,060	108.9	40 / 40
113	11,331	1,060	111.4	40 / 40
115	11,526	1,060	111.4	204 / 146
120	12,015	1,060	111.5	203 / 16
125	12,508	1,060	111.8	225 / 16
130	13,009	1,060	112.1	211 / 61
135	13,506	1,060	112.6	81 / 101
140	14,003	1,060	113.6	18 / 102
145	14,486	874	115.0	80 / 64
150	15,005	874	117.0	59 / 14
156	15,623	874	119.2	120 / 17
Ladds Branch				
007	660	1,182	112.8 ¹	50 / 259
010	1,016	1,182	112.9	22 / 284
015	1,519	1,182	113.4	22 / 321
019	1,875	1,182	113.7	134 / 192
026	2,598	1,182	114.1	171 / 284
032	3,179	1,182	114.5	144 / 207
037	3,722	1,182	115.1	35 / 243
040	4,035	1,182	115.6	40 / 40
041	4,110	1,182	122.3	40 / 40
047	4,700	853	122.3	134 / 581
051	5,106	853	122.3	129 / 330

Table 17 - Limited Detailed Flood Hazard Data

Cross Section	Stream Station	Flood Discharge (cfs)	1% Annual Chance Water-Surface Elevation (feet NAVD 88)	Non-Encroachment Width (feet) Left/Right from Stream Centerline
057	5,658	853	122.3	110 / 251
062	6,198	853	122.4	109 / 101
067	6,734	853	122.5	399 / 151
072	7,165	853	122.6	110 / 120
077	7,685	853	122.7	233 / 75
082	8,200	599	122.9	139 / 127
087	8,655	599	123.0	52 / 163
092	9,199	599	123.3	39 / 254
102	10,221	599	125.0	45 / 66
Limestone Creek				
011	1,066	7,250	45.8 ¹	91 / 89
011	1,118	7,250	45.8 ¹	91 / 89
013	1,348	7,250	45.8 ¹	90 / 240
024	2,356	7,250	45.8 ¹	451 / 368
034	3,382	7,250	45.8 ¹	619 / 526
040	3,973	7,250	45.8 ¹	720 / 329
052	5,177	7,160	45.8 ¹	170 / 564
062	6,184	7,160	45.8 ¹	618 / 88
077	7,714	7,160	45.8 ¹	229 / 548
088	8,842	7,160	45.8 ¹	695 / 332
103	10,336	7,160	45.8 ¹	643 / 294
113	11,331	7,130	45.8 ¹	791 / 124
128	12,760	7,130	45.8 ¹	279 / 403
143	14,272	7,070	46.2	182 / 1,001
156	15,564	7,070	46.6	271 / 453
167	16,733	7,070	47.2	261 / 668
180	18,025	7,070	47.9	603 / 381
194	19,354	7,070	48.5	587 / 41
205	20,468	7,070	49.2	734 / 41
214	21,356	7,070	49.8	794 / 251
222	22,157	7,070	49.7	79 / 100
223	22,259	7,070	50.4	81 / 100
228	22,819	7,010	52.3	81 / 666
236	23,622	7,010	52.4	903 / 561
241	24,099	7,010	52.4	814 / 567
247	24,704	7,010	52.5	548 / 680
254	25,427	7,010	52.6	581 / 575
260	26,043	7,010	52.8	618 / 510
268	26,793	7,010	52.9	523 / 772
275	27,514	7,010	53.1	832 / 237
283	28,279	7,010	53.2	940 / 570
290	29,025	7,010	53.4	708 / 986
297	29,744	7,010	53.5	771 / 645
304	30,427	7,010	53.7	41 / 913
311	31,129	6,310	54.0	69 / 1,254

Table 17 - Limited Detailed Flood Hazard Data

Cross Section	Stream Station	Flood Discharge (cfs)	1% Annual Chance Water-Surface Elevation (feet NAVD 88)	Non-Encroachment Width (feet) Left/Right from Stream Centerline
320	32,021	6,310	54.2	515 / 646
328	32,835	5,730	54.4	939 / 176
335	33,476	5,730	54.6	808 / 37
340	33,994	5,730	54.4	74 / 73
340	34,045	5,730	55.0	74 / 73
341	34,144	5,730	56.4	814 / 433
346	34,612	5,730	56.4	677 / 665
353	35,268	5,120	56.5	293 / 679
357	35,749	5,120	56.6	169 / 643
363	36,284	5,120	56.6	450 / 739
368	36,844	5,120	56.7	221 / 728
374	37,417	5,120	56.8	302 / 590
383	38,282	5,120	56.9	848 / 34
388	38,799	5,120	57.0	1,328 / 273
394	39,433	5,120	57.1	917 / 758
403	40,283	5,120	57.2	598 / 309
410	40,980	4,940	57.4	947 / 220
417	41,667	4,940	57.5	438 / 259
422	42,194	4,940	57.7	323 / 1,506
427	42,748	4,940	57.7	90 / 89
428	42,802	4,940	58.0	90 / 89
429	42,901	4,940	58.5	90 / 3,128
433	43,307	4,940	58.5	34 / 3,162
441	44,098	4,940	58.6	426 / 1,929
445	44,541	4,940	58.6	319 / 1,115
454	45,360	4,940	58.8	564 / 1,365
464	46,438	4,940	59.0	372 / 1,064
472	47,173	4,940	59.2	34 / 873
476	47,618	4,940	59.4	55 / 868
482	48,241	4,940	59.6	252 / 675
491	49,134	4,510	59.9	32 / 910
498	49,826	4,510	60.1	32 / 1,139
506	50,612	4,510	60.2	201 / 1,062
513	51,251	4,510	60.3	311 / 644
521	52,092	4,510	60.6	478 / 168
526	52,599	4,510	60.8	650 / 250
528	52,764	4,510	59.8	67 / 65
528	52,816	4,510	62.0	67 / 65
533	53,314	4,510	63.4	532 / 736
540	53,960	4,510	63.4	604 / 408
546	54,644	4,320	63.4	689 / 432
555	55,546	4,320	63.4	784 / 221
562	56,175	4,320	63.5	428 / 243
569	56,908	4,320	63.6	783 / 369
577	57,660	4,320	63.6	987 / 212

Table 17 - Limited Detailed Flood Hazard Data

Cross Section	Stream Station	Flood Discharge (cfs)	1% Annual Chance Water-Surface Elevation (feet NAVD 88)	Non-Encroachment Width (feet) Left/Right from Stream Centerline
584	58,422	4,320	63.6	828 / 543
589	58,945	4,320	63.7	593 / 706
598	59,758	4,320	63.7	386 / 858
605	60,457	4,320	63.8	780 / 469
611	61,086	4,320	63.9	852 / 31
614	61,445	4,320	64.0	729 / 257
620	61,977	4,320	64.0	661 / 173
626	62,552	2,630	64.2	343 / 1,172
640	63,992	2,630	64.2	1,010 / 324
649	64,851	2,630	64.2	130 / 33
656	65,631	2,630	65.1	195 / 193
660	66,048	2,630	65.3	22 / 295
667	66,729	2,630	65.7	263 / 326
669	66,851	2,630	65.7	109 / 109
669	66,897	2,630	67.0	109 / 109
673	67,299	2,630	67.2	129 / 433
679	67,896	2,630	67.3	259 / 772
689	68,856	2,470	67.4	487 / 772
695	69,531	2,470	67.4	487 / 489
703	70,255	2,470	67.6	492 / 638
709	70,919	2,470	67.7	106 / 483
717	71,670	2,470	68.0	412 / 233
728	72,799	2,470	68.5	458 / 331
736	73,559	2,470	68.7	397 / 636
740	73,991	2,470	68.8	350 / 732
746	74,562	2,470	68.9	317 / 650
759	75,862	1,400	69.3	316 / 371
763	76,308	1,400	69.4	17 / 204
769	76,853	1,400	70.2	16 / 239
774	77,355	1,400	70.6	31 / 205
778	77,828	1,400	71.1	65 / 206
783	78,298	1,400	71.4	144 / 67
788	78,797	1,400	71.7	346 / 44
789	78,898	1,400	71.4	29 / 29
790	79,023	1,400	75.8	29 / 29
794	79,438	1,400	75.8	408 / 68
800	79,976	1,400	75.8	156 / 243
805	80,522	1,400	75.9	225 / 118
810	80,954	1,400	75.9	47 / 318
815	81,519	1,400	76.0	173 / 140
819	81,938	1,400	76.1	220 / 115
824	82,412	1,400	76.2	320 / 74
828	82,831	1,400	76.3	252 / 39
833	83,264	1,400	76.6	140 / 191
837	83,700	1,400	76.8	61 / 184

Table 17 - Limited Detailed Flood Hazard Data

Cross Section	Stream Station	Flood Discharge (cfs)	1% Annual Chance Water-Surface Elevation (feet NAVD 88)	Non-Encroachment Width (feet) Left/Right from Stream Centerline
841	84,082	1,400	77.2	192 / 17
844	84,397	1,130	77.8	14 / 147
848	84,789	1,130	78.5	80 / 201
851	85,134	1,130	78.8	93 / 82
856	85,583	1,130	79.8	234 / 14
861	86,116	1,130	81.0	14 / 191
868	86,784	1,130	82.5	127 / 14
873	87,326	1,130	84.1	115 / 22
878	87,779	1,130	85.0	83 / 75
883	88,257	1,130	86.0	28 / 88
Little Beaverdam Creek				
008	764	1,270	74.7 ¹	600 / 50
010	1,047	1,270	74.7 ¹	600 / 230
016	1,579	1,270	75.1	600 / 300
020	2,001	1,270	75.8	195 / 100
025	2,537	1,270	77.2	230 / 130
030	2,985	1,270	77.9	50 / 173
035	3,495	1,270	78.8	59 / 100
040	4,023	1,270	79.8	50 / 191
045	4,484	1,270	80.6	50 / 176
049	4,927	1,270	81.4	83 / 127
052	5,185	1,270	81.8	38 / 37
052	5,231	1,270	83.6	38 / 37
056	5,551	1,270	84.6	84 / 201
063	6,277	1,460	85.0	85 / 146
068	6,759	1,460	85.3	50 / 258
Little Limestone Creek				
015	1,479	2,890	64.2 ¹	501 / 13
029	2,917	2,890	65.3	83 / 241
037	3,727	2,890	65.7	246 / 675
044	4,417	2,850	66.0	305 / 578
050	5,024	2,850	66.2	127 / 638
057	5,723	2,850	66.4	725 / 145
062	6,227	2,850	66.5	450 / 200
063	6,331	2,850	66.4	63 / 63
064	6,381	2,850	66.8	63 / 63
069	6,935	2,850	67.9	345 / 96
076	7,589	2,850	68.2	355 / 156
082	8,226	2,850	68.5	209 / 340
088	8,771	2,850	68.6	220 / 528
096	9,572	2,850	68.8	42 / 756
102	10,150	2,850	68.9	259 / 594
108	10,762	2,850	69.0	275 / 279
112	11,198	2,850	69.2	29 / 712
118	11,797	2,850	69.4	222 / 605

Table 17 - Limited Detailed Flood Hazard Data

Cross Section	Stream Station	Flood Discharge (cfs)	1% Annual Chance Water-Surface Elevation (feet NAVD 88)	Non-Encroachment Width (feet) Left/Right from Stream Centerline
123	12,310	2,850	69.4	438 / 388
130	13,019	2,850	69.6	366 / 185
135	13,549	2,850	69.9	23 / 472
140	14,016	2,850	70.1	23 / 450
146	14,633	2,850	70.6	278 / 244
152	15,230	2,850	71.0	243 / 386
159	15,941	2,850	71.4	39 / 41
160	16,005	2,260	73.2	39 / 41
163	16,291	1,870	73.2	890 / 294
177	17,738	1,870	73.2	744 / 18
182	18,152	1,870	73.2	701 / 41
189	18,947	1,870	73.4	283 / 352
199	19,858	1,870	73.7	68 / 291
207	20,710	1,870	74.3	114 / 246
211	21,133	1,870	74.5	302 / 382
216	21,561	1,870	74.7	128 / 207
223	22,269	1,870	75.2	220 / 120
228	22,780	1,870	75.6	18 / 324
234	23,436	1,870	76.1	18 / 294
241	24,089	1,870	76.6	276 / 81
248	24,775	1,870	77.0	56 / 288
256	25,553	1,870	77.4	141 / 171
261	26,131	1,740	77.8	260 / 165
269	26,938	1,740	78.2	174 / 102
275	27,542	1,740	78.7	154 / 287
281	28,142	1,740	79.1	320 / 108
288	28,827	1,740	80.0	161 / 131
293	29,335	1,740	80.9	162 / 131
299	29,909	1,740	81.6	42 / 228
306	30,635	1,740	82.3	285 / 423
312	31,188	1,740	82.6	250 / 217
320	31,965	1,740	83.2	162 / 222
326	32,610	1,740	83.8	99 / 111
334	33,357	1,740	84.8	31 / 262
339	33,895	1,400	85.3	16 / 265
344	34,416	1,400	85.7	71 / 146
348	34,833	1,400	86.3	138 / 142
357	35,703	1,400	87.6	50 / 151
359	35,880	1,400	87.9	194 / 44
359	35,950	1,400	89.7	194 / 44
364	36,361	1,400	89.8	86 / 166
367	36,750	1,400	90.1	275 / 58
373	37,297	1,400	90.6	166 / 58
376	37,622	1,400	91.0	58 / 58
377	37,667	1,400	91.2	58 / 58

Table 17 - Limited Detailed Flood Hazard Data

Cross Section	Stream Station	Flood Discharge (cfs)	1% Annual Chance Water-Surface Elevation (feet NAVD 88)	Non-Encroachment Width (feet) Left/Right from Stream Centerline
379	37,934	1,400	91.4	175 / 248
385	38,545	1,400	92.8	73 / 78
391	39,059	1,400	94.1	72 / 80
395	39,537	1,400	95.2	37 / 37
396	39,565	1,400	95.5	37 / 37
397	39,690	1,400	96.1	65 / 91
402	40,233	1,400	97.0	98 / 66
Little Rockfish Creek				
141	14,075	1,990	44.0	217 / 182
145	14,475	1,990	44.3	282 / 103
150	15,000	1,990	44.7	127 / 225
155	15,517	1,990	45.1	250 / 150
161	16,068	1,990	45.4	200 / 250
Maple Branch				
033	3,269	1,500	72.8 ¹	19 / 1,116
037	3,666	1,500	72.8 ¹	19 / 763
043	4,277	1,500	73.4	28 / 809
052	5,153	1,500	74.4	129 / 471
057	5,728	1,500	75.2	268 / 149
062	6,249	1,500	76.1	119 / 183
067	6,724	1,500	76.6	30 / 335
072	7,211	1,460	77.0	18 / 418
074	7,352	1,460	77.0	58 / 50
074	7,403	1,460	77.9	58 / 50
077	7,749	1,460	78.9	115 / 246
084	8,360	1,460	79.4	74 / 178
090	9,014	1,460	80.0	189 / 245
095	9,521	1,460	80.3	134 / 245
102	10,173	1,350	80.6	231 / 210
103	10,296	1,350	80.6	369 / 132
103	10,341	1,350	80.9	369 / 132
108	10,831	1,350	81.0	246 / 74
115	11,512	1,350	81.3	212 / 33
119	11,876	1,350	81.6	41 / 40
119	11,921	1,350	81.8	41 / 40
121	12,092	1,350	82.1	40 / 130
126	12,597	1,350	83.0	40 / 40
131	13,093	1,350	83.5	200 / 99
137	13,658	1,350	84.0	385 / 20
143	14,293	1,350	84.8	181 / 153
151	15,098	1,350	85.9	247 / 18
Maple Creek				
004	437	1,090	45.8 ¹	23 / 170
010	1,022	1,090	45.8 ¹	91 / 19
018	1,770	1,090	45.8 ¹	15 / 18
018	1,835	1,090	45.8 ¹	18 / 18

Table 17 - Limited Detailed Flood Hazard Data

Cross Section	Stream Station	Flood Discharge (cfs)	1% Annual Chance Water-Surface Elevation (feet NAVD 88)	Non-Encroachment Width (feet) Left/Right from Stream Centerline
025	2,533	1,090	46.1	86 / 19
036	3,560	1,090	50.2	19 / 147
045	4,476	1,090	51.7	170 / 48
056	5,567	1,090	53.1	145 / 54
065	6,451	1,090	54.8	111 / 97
068	6,847	1,090	55.5	159 / 75
074	7,439	935	56.6	47 / 149
081	8,092	935	57.7	134 / 81
086	8,645	935	58.4	114 / 27
094	9,430	935	60.5	123 / 33
104	10,412	935	62.1	146 / 19
116	11,591	935	63.7	124 / 20
Marsh Branch				
005	538	1,850	77.6 ¹	280 / 154
010	1,006	1,850	77.6 ¹	28 / 146
020	2,013	1,850	78.1	969 / 120
030	2,964	1,850	78.9	651 / 139
040	4,009	1,850	80.0	102 / 139
047	4,656	1,850	80.5	40 / 40
047	4,701	1,850	80.8	40 / 40
050	5,026	1,850	81.2	200 / 28
055	5,487	1,510	81.3	200 / 126
060	6,046	1,510	81.4	176 / 28
066	6,618	1,510	81.6	47 / 132
072	7,164	1,510	82.0	190 / 28
076	7,633	1,510	82.2	100 / 176
082	8,192	1,510	82.7	12 / 128
088	8,825	1,510	84.6	28 / 182
096	9,632	1,510	86.8	200 / 100
102	10,246	1,400	87.9	223 / 210
107	10,660	1,400	88.5	54 / 392
112	11,226	1,400	89.3	332 / 28
117	11,744	1,400	90.0	205 / 28
123	12,272	1,400	90.8	158 / 59
127	12,724	1,400	91.4	198 / 37
133	13,290	937	92.0	59 / 136
137	13,715	937	92.5	90 / 45
141	14,145	937	93.5	92 / 61
Matthews Creek				
018	1,818	1,570	73.2 ¹	800 / 61
022	2,198	1,570	73.2 ¹	264 / 61
032	3,169	1,570	74.4	110 / 125
040	4,008	1,570	75.7	164 / 72
046	4,550	1,570	76.5	181 / 102
051	5,069	1,570	77.6	64 / 63

Table 17 - Limited Detailed Flood Hazard Data

Cross Section	Stream Station	Flood Discharge (cfs)	1% Annual Chance Water-Surface Elevation (feet NAVD 88)	Non-Encroachment Width (feet) Left/Right from Stream Centerline
051	5,133	1,570	78.8	64 / 63
054	5,433	1,570	79.7	156 / 188
060	6,022	1,570	80.4	29 / 201
065	6,502	1,570	81.3	46 / 211
070	7,024	1,440	82.2	64 / 161
074	7,443	1,440	82.9	50 / 219
080	8,029	1,440	83.6	18 / 250
085	8,541	1,440	84.5	95 / 129
090	9,024	1,440	85.2	121 / 135
095	9,544	1,440	85.8	166 / 82
101	10,061	1,310	86.4	163 / 90
105	10,483	1,310	87.1	227 / 43
110	11,036	1,310	87.7	250 / 18
115	11,499	1,310	88.2	192 / 33
120	12,035	1,310	88.6	115 / 83
125	12,507	1,310	89.1	21 / 149
130	13,037	1,310	89.6	44 / 186
135	13,523	1,310	90.0	119 / 54
140	14,044	1,310	90.5	81 / 88
145	14,512	1,310	90.9	33 / 209
151	15,051	1,020	91.4	85 / 41
155	15,547	1,020	92.4	86 / 34
160	15,986	1,020	93.1	63 / 84
165	16,489	1,020	93.6	78 / 196
170	17,018	1,020	94.2	67 / 75
175	17,481	1,020	95.0	16 / 140
180	17,997	1,020	95.8	22 / 109
185	18,543	1,020	96.7	62 / 102
190	18,983	1,020	97.4	40 / 103
194	19,395	1,020	98.2	121 / 76
199	19,853	1,020	99.2	159 / 101
203	20,348	589	100.4	129 / 12
207	20,676	589	101.5	82 / 12
210	21,026	589	102.3	141 / 36
214	21,441	589	103.1	34 / 88
218	21,850	589	104.7	52 / 12
222	22,170	589	106.5	54 / 12
Maxwell Creek				
025	2,512	6,000	47.2 ¹	594 / 53
030	3,039	6,000	47.2 ¹	780 / 93
043	4,272	6,000	47.2 ¹	818 / 63
055	5,498	6,000	47.7	744 / 55
069	6,884	5,930	48.5	652 / 468
083	8,273	5,930	49.2	266 / 674
098	9,839	5,930	50.2	178 / 449

Table 17 - Limited Detailed Flood Hazard Data

Cross Section	Stream Station	Flood Discharge (cfs)	1% Annual Chance Water-Surface Elevation (feet NAVD 88)	Non-Encroachment Width (feet) Left/Right from Stream Centerline
108	10,824	5,840	50.8	466 / 583
118	11,828	5,840	51.1	773 / 277
129	12,854	5,840	51.5	972 / 411
141	14,096	5,840	51.9	1,313 / 184
151	15,056	5,680	52.4	1,030 / 65
161	16,133	5,680	53.1	1,232 / 65
171	17,126	5,680	53.7	707 / 348
182	18,153	5,680	54.1	50 / 1,083
192	19,190	5,680	54.5	50 / 979
201	20,114	5,540	54.9	365 / 792
218	21,826	5,540	55.6	65 / 65
219	21,871	5,540	56.1	65 / 65
232	23,190	5,540	56.9	897 / 189
246	24,589	5,540	57.3	1,163 / 74
257	25,737	5,540	57.7	973 / 128
268	26,757	5,540	58.0	821 / 765
291	29,095	4,670	58.7	1,935 / 73
302	30,159	4,560	59.1	910 / 220
312	31,231	4,560	59.7	788 / 513
330	32,979	4,560	60.6	591 / 443
341	34,115	4,560	61.2	60 / 60
342	34,163	4,560	61.5	60 / 60
347	34,745	4,490	62.2	868 / 119
354	35,354	4,490	62.4	592 / 154
358	35,790	4,490	62.6	707 / 45
364	36,371	4,490	62.7	1,086 / 24
367	36,691	4,490	62.8	1,098 / 45
371	37,147	4,490	62.9	1,159 / 73
377	37,661	4,490	63.0	1,325 / 231
386	38,569	4,490	63.2	1,192 / 213
390	39,046	4,490	63.4	1,369 / 38
396	39,579	4,490	63.5	1,065 / 311
401	40,058	4,490	63.7	532 / 310
406	40,565	4,490	64.0	602 / 42
410	41,018	4,490	64.2	753 / 42
415	41,526	4,490	64.4	1,011 / 42
421	42,130	4,490	64.6	757 / 203
425	42,527	3,030	64.7	691 / 352
431	43,065	3,030	64.8	481 / 536
436	43,587	3,030	64.9	66 / 1,056
441	44,104	3,030	65.0	34 / 1,190
446	44,566	3,030	65.0	78 / 1,407
453	45,337	3,030	65.4	458 / 147
463	46,296	3,030	66.4	23 / 508
473	47,290	3,030	67.3	67 / 288

Table 17 - Limited Detailed Flood Hazard Data

Cross Section	Stream Station	Flood Discharge (cfs)	1% Annual Chance Water-Surface Elevation (feet NAVD 88)	Non-Encroachment Width (feet) Left/Right from Stream Centerline
479	47,892	2,990	67.8	59 / 334
484	48,369	2,990	68.0	34 / 481
490	49,006	2,990	68.3	127 / 475
497	49,725	2,990	68.4	120 / 120
499	49,907	2,990	73.9	120 / 120
506	50,630	2,990	74.0	1,000 / 300
513	51,321	2,990	74.0	100 / 75
514	51,374	2,990	74.0	100 / 75
524	52,351	2,990	74.0	1,000 / 300
531	53,068	2,990	74.1	1,000 / 75
539	53,855	2,990	74.1	1,000 / 130
546	54,603	2,990	74.2	900 / 300
550	55,028	2,990	74.3	800 / 200
556	55,564	2,990	74.4	655 / 302
561	56,117	2,990	74.4	404 / 379
567	56,668	2,990	74.6	148 / 350
571	57,103	2,990	74.7	300 / 300
581	58,081	2,990	75.1	400 / 300
586	58,576	2,990	75.3	400 / 300
591	59,055	2,990	75.5	400 / 220
595	59,505	2,990	75.8	250 / 300
601	60,131	2,990	76.1	95 / 600
606	60,559	2,990	76.3	250 / 500
610	61,037	2,990	76.5	250 / 450
615	61,523	2,770	76.8	300 / 300
619	61,863	2,770	77.0	60 / 60
619	61,908	2,770	77.3	60 / 60
622	62,226	2,770	77.9	379 / 300
626	62,580	2,770	78.0	384 / 300
631	63,097	2,770	78.3	450 / 98
636	63,589	2,770	78.6	400 / 230
641	64,052	2,770	78.7	400 / 200
646	64,584	2,770	79.0	300 / 300
651	65,096	2,770	79.4	300 / 300
655	65,532	2,770	79.8	400 / 300
660	66,015	2,540	80.1	100 / 400
666	66,569	2,540	80.5	116 / 282
670	67,047	2,540	80.8	426 / 193
676	67,601	2,540	81.0	88 / 386
681	68,119	2,540	81.4	168 / 268
685	68,526	2,540	81.7	245 / 162
690	68,973	2,540	82.1	275 / 171
695	69,492	2,540	82.0	40 / 40
696	69,565	2,540	83.3	40 / 40
701	70,064	2,540	84.2	178 / 284

Table 17 - Limited Detailed Flood Hazard Data

Cross Section	Stream Station	Flood Discharge (cfs)	1% Annual Chance Water-Surface Elevation (feet NAVD 88)	Non-Encroachment Width (feet) Left/Right from Stream Centerline
706	70,622	1,960	84.4	256 / 179
711	71,137	1,960	84.6	202 / 191
717	71,657	1,960	84.9	192 / 170
721	72,125	1,960	85.4	139 / 185
726	72,633	1,960	85.9	218 / 108
731	73,129	1,960	86.2	97 / 314
736	73,619	1,960	86.4	90 / 395
743	74,251	1,960	86.8	20 / 331
747	74,657	1,960	87.1	124 / 201
751	75,126	1,700	87.3	450 / 193
757	75,650	1,700	87.5	180 / 164
762	76,181	1,700	87.8	75 / 230
768	76,756	1,700	88.4	42 / 199
772	77,199	1,700	88.9	20 / 441
777	77,721	1,450	89.4	231 / 17
782	78,249	1,450	90.2	61 / 167
788	78,781	1,450	91.0	126 / 93
792	79,196	1,450	91.1	65 / 65
793	79,259	1,450	94.6	65 / 65
794	79,392	1,450	94.7	30 / 30
796	79,568	1,450	100.6	30 / 30
798	79,780	1,200	100.6	195 / 749
803	80,283	1,200	100.6	101 / 608
806	80,645	1,200	100.6	207 / 158
809	80,858	1,200	100.6	30 / 30
809	80,932	1,200	100.6	30 / 30
813	81,313	1,200	100.7	157 / 219
818	81,838	1,200	100.7	422 / 168
823	82,339	1,200	100.7	199 / 22
828	82,795	1,200	100.8	117 / 248
832	83,238	1,200	100.9	165 / 55
Mill Branch (near Kornegay)				
004	419	632	93.0 ¹	118 / 112
007	656	632	93.2	48 / 97
011	1,099	632	94.0	27 / 29
012	1,172	632	96.0	32 / 32
016	1,556	632	96.2	12 / 200
020	2,044	632	96.4	89 / 31
025	2,548	632	97.3	125 / 52
030	3,045	514	98.0	75 / 28
036	3,600	514	99.2	25 / 64
043	4,254	514	100.4	68 / 29
047	4,708	514	101.3	81 / 37
051	5,060	514	102.2	43 / 15
055	5,536	514	103.9	90 / 12

Table 17 - Limited Detailed Flood Hazard Data

Cross Section	Stream Station	Flood Discharge (cfs)	1% Annual Chance Water-Surface Elevation (feet NAVD 88)	Non-Encroachment Width (feet) Left/Right from Stream Centerline
057	5,737	514	104.7	12 / 66
Mill Branch (near Teachey)				
000	1	1,560	45.4	225 / 225
006	600	1,560	45.4	300 / 100
010	1,033	1,560	45.7	260 / 67
015	1,507	1,560	46.0	207 / 78
020	2,024	1,560	46.3	187 / 102
024	2,434	1,560	46.7	227 / 102
030	3,024	1,560	47.2	137 / 160
035	3,518	1,560	47.8	145 / 160
040	3,953	1,560	48.4	57 / 186
044	4,449	1,560	48.9	57 / 198
050	5,008	1,560	49.3	90 / 240
055	5,506	1,560	49.7	133 / 142
060	5,983	1,560	50.3	57 / 312
065	6,496	1,560	51.2	187 / 113
070	7,020	1,370	51.8	73 / 244
075	7,503	1,370	52.1	56 / 232
Mill Creek				
005	501	2,210	51.1 ¹	459 / 20
010	1,013	2,210	51.1 ¹	286 / 20
014	1,421	2,210	51.1 ¹	382 / 20
019	1,914	2,210	51.1 ¹	87 / 87
020	1,959	2,210	51.1 ¹	87 / 87
021	2,112	2,210	51.1	266 / 62
025	2,537	2,210	51.4	182 / 176
031	3,060	2,210	51.8	90 / 227
035	3,496	2,210	52.3	274 / 28
040	3,993	2,210	52.7	400 / 39
045	4,492	2,210	53.0	367 / 90
051	5,099	2,210	53.4	255 / 44
056	5,593	2,210	53.8	302 / 81
061	6,125	2,090	54.1	297 / 104
067	6,670	2,090	54.4	217 / 180
071	7,143	2,090	54.6	143 / 204
076	7,647	2,090	54.9	231 / 177
080	7,955	2,090	55.0	87 / 87
080	8,000	2,090	55.2	87 / 87
083	8,320	2,090	55.4	438 / 19
Miller's Creek				
022	2,160	2,004	83.3 ¹	242 / 148
027	2,711	2,004	83.3 ¹	242 / 113
034	3,373	1,987	83.3 ¹	300 / 50
039	3,942	1,987	83.8	300 / 55
045	4,451	1,987	84.2	280 / 60
049	4,908	1,987	84.9	260 / 90

Table 17 - Limited Detailed Flood Hazard Data

Cross Section	Stream Station	Flood Discharge (cfs)	1% Annual Chance Water-Surface Elevation (feet NAVD 88)	Non-Encroachment Width (feet) Left/Right from Stream Centerline
054	5,363	1,987	85.5	60 / 60
054	5,414	1,987	85.6	60 / 60
060	6,000	1,987	86.7	185 / 164
064	6,439	1,987	87.0	185 / 186
069	6,939	1,987	87.6	264 / 124
074	7,408	1,987	88.1	67 / 294
079	7,881	1,987	88.7	174 / 241
084	8,398	1,987	89.1	113 / 335
089	8,869	1,903	89.4	326 / 173
093	9,306	1,781	89.7	398 / 130
099	9,906	1,781	90.3	60 / 400
105	10,500	1,781	90.9	55 / 320
110	11,000	1,781	91.3	244 / 192
115	11,549	1,766	91.6	229 / 127
120	12,041	1,649	92.0	195 / 158
125	12,500	1,649	92.3	24 / 237
130	13,022	1,649	92.6	278 / 143
135	13,477	1,649	92.8	340 / 196
141	14,082	1,576	93.0	131 / 523
146	14,625	1,576	93.4	237 / 319
151	15,093	1,576	93.8	154 / 163
156	15,632	1,576	94.2	32 / 238
162	16,178	1,576	94.6	250 / 40
164	16,421	1,576	94.8	150 / 50
165	16,497	1,576	97.2	150 / 50
170	17,000	1,576	97.2	94 / 150
175	17,507	1,576	97.3	124 / 350
180	18,029	1,508	97.4	150 / 320
187	18,668	1,508	97.5	329 / 109
192	19,150	1,508	97.6	274 / 189
196	19,612	1,508	97.8	285 / 30
201	20,107	1,398	98.3	246 / 145
207	20,743	1,205	98.8	80 / 240
215	21,511	684	99.0	281 / 96
222	22,184	684	99.4	35 / 150
227	22,656	684	100.0	140 / 30
231	23,115	684	100.7	30 / 180
235	23,545	684	101.1	15 / 250
240	24,000	684	101.5	25 / 150
Mire Branch				
005	489	1,030	82.8 ¹	518 / 164
010	1,006	1,030	82.8 ¹	238 / 16
015	1,542	1,030	83.9	49 / 295
020	2,015	1,030	85.4	87 / 481
025	2,507	1,030	86.3	157 / 412

Table 17 - Limited Detailed Flood Hazard Data

Cross Section	Stream Station	Flood Discharge (cfs)	1% Annual Chance Water-Surface Elevation (feet NAVD 88)	Non-Encroachment Width (feet) Left/Right from Stream Centerline
028	2,823	1,030	86.5	20 / 10
029	2,895	1,030	90.4	55 / 50
032	3,227	1,030	90.5	161 / 211
037	3,722	1,030	90.7	166 / 78
042	4,181	1,030	90.8	113 / 40
047	4,711	927	91.5	15 / 92
053	5,281	927	92.7	15 / 49
058	5,756	927	93.9	15 / 105
062	6,208	927	94.9	15 / 70
068	6,848	927	97.3	50 / 137
073	7,314	927	98.1	15 / 140
078	7,807	863	99.3	51 / 118
083	8,303	863	101.0	76 / 66
087	8,740	863	103.0	31 / 104
093	9,260	863	105.0	14 / 175
096	9,648	863	106.6	44 / 41
100	9,953	512	108.0	12 / 112
102	10,186	512	108.8	45 / 59
Moore's Creek Tributary 6				
097	9,678	807	50.3	39 / 134
Muddy Creek				
010	961	5,433	36.0 ¹	150 / 804
021	2,116	5,433	36.0 ¹	170 / 574
032	3,231	5,433	36.0 ¹	340 / 319
041	4,063	5,433	36.0 ¹	270 / 475
048	4,807	5,433	36.0 ¹	400 / 409
049	4,855	5,433	36.0 ¹	400 / 409
056	5,587	5,433	36.0 ¹	84 / 1,200
065	6,529	5,433	36.0 ¹	200 / 1,000
076	7,617	5,433	36.2	200 / 900
087	8,653	5,433	36.7	300 / 399
095	9,531	5,323	37.2	276 / 516
108	10,773	5,323	37.8	402 / 482
118	11,769	5,323	38.3	530 / 386
129	12,925	5,323	39.0	420 / 458
135	13,539	5,323	39.3	499 / 694
150	14,981	5,323	39.9	88 / 766
161	16,128	5,181	40.5	78 / 1,327
172	17,197	5,181	41.1	87 / 866
183	18,316	5,181	42.0	490 / 464
195	19,542	5,092	42.5	584 / 1,223
208	20,766	5,092	42.8	650 / 100
214	21,379	5,092	43.0	75 / 102
215	21,430	5,092	43.4	75 / 102
226	22,636	5,092	44.0	321 / 545

Table 17 - Limited Detailed Flood Hazard Data

Cross Section	Stream Station	Flood Discharge (cfs)	1% Annual Chance Water-Surface Elevation (feet NAVD 88)	Non-Encroachment Width (feet) Left/Right from Stream Centerline
238	23,799	5,000	44.3	571 / 478
256	25,557	5,000	44.8	511 / 556
267	26,726	5,000	45.2	741 / 510
278	27,820	5,000	45.4	625 / 587
292	29,155	4,782	45.7	1,199 / 168
306	30,626	4,782	46.0	1,298 / 465
318	31,829	4,782	46.2	1,206 / 519
329	32,884	4,782	46.4	1,193 / 513
343	34,258	4,782	46.8	1,263 / 337
356	35,639	4,782	47.3	600 / 751
383	38,332	3,971	48.5	430 / 430
398	39,799	3,971	48.8	500 / 1,065
411	41,124	3,971	49.1	668 / 1,355
422	42,222	3,971	49.4	543 / 733
433	43,307	3,971	49.9	252 / 863
444	44,364	2,470	50.3	344 / 408
455	45,475	2,470	50.6	1,513 / 331
467	46,696	2,470	51.1	93 / 424
476	47,580	2,470	52.0	77 / 318
486	48,550	2,140	52.8	55 / 874
502	50,168	2,140	53.8	269 / 154
507	50,737	2,140	56.4	78 / 78
517	51,737	2,140	56.7	179 / 412
530	53,003	2,140	57.1	434 / 281
540	53,995	2,140	57.4	244 / 168
551	55,130	2,140	57.9	80 / 588
566	56,568	1,488	58.4	204 / 204
571	57,058	1,488	58.8	218 / 103
576	57,559	1,488	59.2	163 / 224
580	58,047	1,488	59.6	183 / 139
585	58,536	1,488	60.0	87 / 241
590	59,049	1,488	60.4	202 / 131
593	59,321	1,488	61.5	123 / 123
596	59,589	1,488	61.7	183 / 223
601	60,112	1,488	61.9	74 / 364
606	60,580	1,270	62.1	93 / 317
611	61,058	1,270	62.4	77 / 294
615	61,533	1,270	62.6	35 / 428
621	62,098	1,270	63.0	106 / 203
627	62,724	1,270	64.0	109 / 151
Muddy Creek Tributary				
010	1,030	2,070	48.0 ¹	151 / 320
015	1,541	2,070	48.0 ¹	267 / 217
025	2,502	2,070	48.0 ¹	478 / 177
035	3,480	2,070	48.0 ¹	222 / 257

Table 17 - Limited Detailed Flood Hazard Data

Cross Section	Stream Station	Flood Discharge (cfs)	1% Annual Chance Water-Surface Elevation (feet NAVD 88)	Non-Encroachment Width (feet) Left/Right from Stream Centerline
042	4,200	2,070	48.5	94 / 94
043	4,257	2,070	51.9	94 / 94
050	5,047	2,070	51.9	636 / 189
057	5,672	2,070	52.0	51 / 581
062	6,201	2,070	52.1	108 / 108
063	6,273	2,070	57.4	108 / 108
070	7,018	1,290	57.4	77 / 396
078	7,845	1,290	57.4	163 / 387
090	9,038	1,290	57.4	173 / 317
100	9,976	1,290	57.5	342 / 15
110	10,995	1,290	58.0	359 / 47
120	12,016	1,290	58.8	14 / 272
130	12,972	1,290	60.7	14 / 280
139	13,943	1,290	62.2	206 / 101
150	15,037	1,290	63.6	30 / 161
153	15,345	1,290	64.0	109 / 108
154	15,395	1,290	63.6	109 / 108
161	16,070	960	66.1	236 / 42
170	16,980	960	67.7	51 / 52
180	18,040	960	70.0	97 / 184
191	19,059	960	71.3	91 / 49
191	19,109	960	73.0	91 / 49
192	19,212	960	73.7	167 / 31
195	19,513	960	75.3	205 / 14
200	20,005	960	76.3	186 / 264
205	20,497	960	77.1	378 / 46
211	21,054	960	78.1	137 / 139
215	21,498	960	79.1	123 / 13
225	22,487	960	80.9	85 / 139
230	23,025	960	82.1	106 / 19
Muddy Creek Tributary 1				
002	200	2,643	50.8 ¹	230 / 1,225
008	769	2,643	50.8 ¹	340 / 755
011	1,074	2,643	50.8 ¹	196 / 700
015	1,513	2,643	50.8 ¹	373 / 358
019	1,860	2,643	50.8 ¹	180 / 500
022	2,181	2,643	50.8 ¹	135 / 500
026	2,600	2,643	50.8 ¹	185 / 365
031	3,093	2,076	50.8 ¹	91 / 453
038	3,771	2,076	50.9	261 / 146
043	4,285	2,076	51.4	90 / 240
049	4,885	2,076	51.8	300 / 170
054	5,426	2,076	52.1	399 / 20
060	6,009	2,055	52.7	100 / 210
063	6,324	2,055	53.2	100 / 210

Table 17 - Limited Detailed Flood Hazard Data

Cross Section	Stream Station	Flood Discharge (cfs)	1% Annual Chance Water-Surface Elevation (feet NAVD 88)	Non-Encroachment Width (feet) Left/Right from Stream Centerline
069	6,906	2,055	53.6	115 / 317
075	7,513	2,055	53.8	316 / 154
081	8,054	2,055	54.0	326 / 214
085	8,455	2,055	54.2	361 / 144
090	9,044	2,055	54.5	276 / 262
096	9,615	1,981	54.8	150 / 286
100	10,030	1,981	55.0	347 / 75
108	10,784	1,981	55.6	171 / 183
113	11,260	1,981	56.0	225 / 171
119	11,858	1,981	56.3	428 / 71
123	12,338	1,900	56.6	219 / 48
130	12,951	1,900	57.1	311 / 225
135	13,525	1,900	57.5	327 / 111
140	13,974	1,900	57.8	185 / 212
147	14,678	1,775	58.2	333 / 175
153	15,258	1,775	58.5	274 / 277
158	15,783	1,775	58.7	125 / 361
164	16,398	1,775	59.1	18 / 464
170	17,043	1,775	59.5	83 / 285
174	17,394	1,775	59.8	80 / 248
181	18,067	1,403	60.5	85 / 278
187	18,692	1,403	60.9	112 / 219
193	19,283	1,339	61.3	176 / 230
194	19,426	1,339	61.3	176 / 231
195	19,514	1,339	61.3	176 / 231
197	19,726	1,339	61.4	184 / 107
Muddy Creek Tributary 2				
010	1,030	1,355	50.8 ¹	360 / 260
016	1,606	1,355	50.8 ¹	330 / 20
022	2,167	1,355	51.5	135 / 95
026	2,565	1,355	52.1	25 / 320
029	2,923	1,355	52.6	75 / 230
035	3,479	1,355	53.3	20 / 245
038	3,834	1,355	53.7	55 / 215
044	4,367	1,256	54.1	340 / 20
050	5,007	1,256	54.7	150 / 195
054	5,406	1,256	55.0	20 / 245
059	5,907	1,256	55.5	105 / 225
063	6,312	1,256	55.8	115 / 175
066	6,604	1,256	56.1	50 / 245
069	6,885	1,151	56.3	25 / 175
071	7,054	1,151	56.6	25 / 175
071	7,122	1,151	56.6	25 / 175
074	7,355	1,151	56.7	90 / 150
078	7,804	1,151	56.9	190 / 25

Table 17 - Limited Detailed Flood Hazard Data

Cross Section	Stream Station	Flood Discharge (cfs)	1% Annual Chance Water-Surface Elevation (feet NAVD 88)	Non-Encroachment Width (feet) Left/Right from Stream Centerline
082	8,234	1,151	57.3	165 / 35
086	8,607	1,151	57.7	190 / 50
089	8,908	1,036	57.9	150 / 25
091	9,074	1,036	59.0	150 / 25
092	9,152	1,036	59.0	150 / 25
092	9,230	1,036	59.1	150 / 25
Murpheys Creek				
002	248	2,540	72.1 ¹	303 / 182
005	480	2,540	72.1 ¹	148 / 152
010	1,014	2,540	72.1 ¹	73 / 216
015	1,519	2,540	72.2	319 / 101
019	1,950	2,540	72.5	212 / 252
026	2,585	2,540	72.8	116 / 207
030	3,001	2,540	73.3	47 / 253
035	3,513	2,540	73.8	193 / 111
040	3,988	2,540	74.2	183 / 192
045	4,519	2,540	74.8	147 / 146
050	5,006	2,540	75.6	191 / 263
054	5,445	2,540	75.8	51 / 50
055	5,499	2,540	76.2	51 / 50
060	6,016	2,540	76.7	216 / 150
065	6,525	2,440	76.9	138 / 226
070	6,960	2,440	77.2	21 / 390
073	7,334	2,440	77.4	21 / 284
080	8,006	2,440	78.2	66 / 188
085	8,535	2,440	78.9	168 / 65
089	8,911	2,440	79.8	156 / 62
094	9,394	2,440	80.4	127 / 245
101	10,078	1,360	80.7	302 / 151
106	10,631	1,360	80.9	99 / 151
110	11,046	1,360	81.3	40 / 130
115	11,492	1,360	81.9	146 / 110
118	11,800	1,360	81.8	24 / 24
119	11,870	1,360	83.6	24 / 24
120	12,026	1,360	83.9	61 / 179
125	12,512	1,360	84.2	15 / 181
130	13,024	1,360	84.7	15 / 164
135	13,538	1,360	85.2	19 / 216
141	14,058	1,360	85.8	79 / 85
145	14,487	1,360	86.4	47 / 190
150	15,001	1,360	87.0	77 / 28
155	15,496	1,360	88.9	146 / 70
160	16,005	1,360	89.5	142 / 35
165	16,522	1,360	90.4	44 / 89
170	17,003	1,360	91.2	61 / 105

Table 17 - Limited Detailed Flood Hazard Data

Cross Section	Stream Station	Flood Discharge (cfs)	1% Annual Chance Water-Surface Elevation (feet NAVD 88)	Non-Encroachment Width (feet) Left/Right from Stream Centerline
176	17,560	1,170	92.2	55 / 66
180	18,016	1,170	93.2	19 / 150
185	18,537	1,170	94.2	14 / 69
189	18,944	1,170	95.9	24 / 76
Murpheys Creek Tributary				
006	648	1,470	80.9 ¹	96 / 129
010	1,022	1,470	80.9 ¹	34 / 146
015	1,458	1,470	81.8	67 / 100
020	1,996	1,470	82.6	62 / 143
025	2,517	1,450	83.4	51 / 55
030	2,982	1,450	84.4	11 / 82
036	3,554	1,450	85.3	41 / 39
036	3,617	1,450	85.1	50 / 50
037	3,705	1,450	89.1	50 / 50
040	3,992	1,450	89.3	24 / 200
045	4,520	1,450	89.4	354 / 200
050	4,979	1,160	89.4	100 / 137
055	5,528	1,160	89.6	106 / 200
060	5,989	1,010	89.8	267 / 25
065	6,506	1,010	90.4	225 / 25
070	7,045	1,010	91.3	37 / 177
Nahunga Creek				
033	3,348	2,770	77.8 ¹	350 / 400
037	3,698	2,770	77.8 ¹	218 / 141
037	3,743	2,770	79.3	609 / 577
040	3,976	2,770	79.5	28 / 232
045	4,453	2,770	79.6	488 / 682
049	4,940	2,770	79.8	303 / 422
056	5,636	2,770	80.2	70 / 621
061	6,110	2,680	80.6	200 / 567
066	6,584	2,680	80.8	335 / 515
073	7,262	2,680	81.2	286 / 441
078	7,790	2,680	81.4	68 / 662
084	8,445	2,680	81.7	422 / 540
090	8,974	2,680	82.0	646 / 425
096	9,636	2,680	82.3	901 / 93
102	10,160	2,680	82.6	902 / 250
106	10,649	2,680	82.9	282 / 283
113	11,264	2,680	83.4	715 / 176
118	11,779	2,680	83.7	620 / 89
121	12,120	2,680	83.9	493 / 316
126	12,631	2,450	84.2	372 / 182
132	13,231	2,450	84.6	393 / 196
138	13,757	2,450	84.9	532 / 60
143	14,337	2,450	85.3	453 / 136

Table 17 - Limited Detailed Flood Hazard Data

Cross Section	Stream Station	Flood Discharge (cfs)	1% Annual Chance Water-Surface Elevation (feet NAVD 88)	Non-Encroachment Width (feet) Left/Right from Stream Centerline
150	14,980	2,450	85.8	502 / 25
155	15,542	2,450	86.3	412 / 212
161	16,085	2,450	86.6	398 / 219
166	16,646	2,450	87.0	347 / 280
173	17,268	2,450	87.3	215 / 426
178	17,761	2,450	87.5	594 / 173
185	18,512	2,450	87.8	790 / 257
191	19,108	2,450	88.0	678 / 126
196	19,583	2,450	88.3	502 / 260
200	20,006	2,450	88.6	616 / 226
206	20,617	2,220	88.9	254 / 430
211	21,112	2,220	89.2	284 / 306
217	21,736	2,220	89.6	427 / 217
223	22,291	2,220	90.1	513 / 24
228	22,845	2,220	90.6	653 / 362
234	23,445	2,220	90.9	467 / 576
239	23,929	2,220	91.1	285 / 362
246	24,607	2,220	91.6	328 / 398
251	25,076	2,220	92.1	60 / 355
254	25,418	2,220	92.5	46 / 520
263	26,274	1,550	93.2	634 / 19
268	26,778	1,550	93.8	108 / 21
269	26,905	1,550	94.7	46 / 43
270	26,950	1,550	94.8	46 / 43
274	27,360	1,550	95.3	403 / 107
280	28,012	1,550	95.9	281 / 146
286	28,586	1,550	96.4	215 / 253
290	29,006	1,550	96.8	349 / 127
296	29,556	1,550	97.3	282 / 19
301	30,118	1,550	98.2	550 / 100
307	30,721	1,550	99.0	512 / 96
311	31,127	1,550	99.4	401 / 195
317	31,655	1,430	99.7	503 / 142
323	32,280	1,430	100.1	334 / 18
327	32,745	1,430	100.6	511 / 18
334	33,426	1,430	101.3	413 / 146
339	33,912	1,430	101.8	212 / 286
345	34,460	1,430	102.2	208 / 164
351	35,070	1,430	102.9	346 / 104
356	35,647	1,430	103.4	437 / 129
362	36,234	1,430	103.9	305 / 246
368	36,839	1,260	104.4	160 / 199
374	37,376	1,260	105.1	76 / 148
379	37,917	1,260	105.8	230 / 110
384	38,419	1,260	106.4	263 / 143

Table 17 - Limited Detailed Flood Hazard Data

Cross Section	Stream Station	Flood Discharge (cfs)	1% Annual Chance Water-Surface Elevation (feet NAVD 88)	Non-Encroachment Width (feet) Left/Right from Stream Centerline
388	38,762	1,260	106.7	314 / 78
394	39,438	1,260	107.5	53 / 123
400	40,019	1,260	109.0	96 / 167
405	40,509	1,260	109.9	78 / 167
412	41,213	1,260	110.8	72 / 202
419	41,896	1,260	112.0	34 / 202
425	42,519	861	113.0	85 / 89
430	43,034	861	113.6	14 / 185
434	43,418	861	114.1	14 / 154
438	43,776	861	114.5	21 / 156
441	44,132	861	115.0	218 / 14
446	44,566	861	116.3	42 / 107
Ninemile Creek				
002	170	3,260	51.4 ¹	249 / 1,000
007	670	3,260	51.4 ¹	25 / 1,000
012	1,154	3,260	51.4 ¹	25 / 1,100
017	1,734	3,260	51.4 ¹	100 / 800
020	1,974	3,260	51.2	40 / 40
020	2,020	3,260	51.9	40 / 40
023	2,270	3,260	52.8	58 / 784
028	2,804	3,260	53.0	25 / 765
032	3,243	3,260	53.1	300 / 716
039	3,874	3,260	53.2	405 / 472
044	4,405	3,260	53.3	707 / 389
055	5,467	3,160	53.5	398 / 432
060	6,018	3,160	53.6	626 / 173
065	6,516	3,160	53.7	151 / 458
069	6,857	3,160	53.8	539 / 481
072	7,191	3,160	53.9	518 / 175
077	7,742	3,160	54.1	564 / 95
083	8,252	3,160	54.3	90 / 354
088	8,750	3,160	54.6	288 / 149
095	9,472	2,300	54.9	429 / 357
104	10,359	2,300	55.0	199 / 624
110	11,025	2,300	55.1	20 / 358
119	11,911	2,300	55.5	125 / 324
Northeast Cape Fear River				
3512	351,194	30,400	26.1	2,580 / 4,344
3519	351,947	30,400	26.1	2,791 / 4,001
3528	352,788	30,400	26.1	2,177 / 2,886
3538	353,818	-8,888	26.2	2,280 / 3,179
4363	436,269	24,200	31.7	866 / 1,869
4380	438,024	24,200	31.8	427 / 3,495
4394	439,350	24,200	31.8	527 / 3,521
4408	440,837	24,200	31.9	174 / 3,247

Table 17 - Limited Detailed Flood Hazard Data

Cross Section	Stream Station	Flood Discharge (cfs)	1% Annual Chance Water-Surface Elevation (feet NAVD 88)	Non-Encroachment Width (feet) Left/Right from Stream Centerline
4426	442,631	21,700	31.9	532 / 2,372
4437	443,683	21,700	32.0	1,479 / 1,166
4444	444,401	21,700	32.0	2,133 / 1,666
4469	446,881	21,600	32.1	2,517 / 1,558
4487	448,660	21,600	32.2	2,225 / 2,370
4511	451,068	21,600	32.6	2,245 / 1,536
4522	452,250	21,600	32.9	2,706 / 609
4536	453,571	21,600	33.2	1,693 / 924
4568	456,819	21,600	35.8	1,958 / 1,032
4594	459,358	20,900	36.3	818 / 1,118
4610	460,978	20,900	36.6	356 / 1,687
4623	462,277	20,900	36.9	1,948 / 1,004
4639	463,922	20,800	37.1	1,207 / 2,517
4659	465,891	20,800	37.3	943 / 4,217
4673	467,306	20,800	37.4	1,637 / 4,634
4688	468,807	20,800	37.6	1,073 / 3,014
4698	469,754	19,800	37.7	2,674 / 603
4707	470,680	19,700	37.7	1,522 / 255
4732	473,196	19,700	38.2	631 / 5,449
4754	475,416	19,700	38.4	862 / 2,799
4759	475,924	19,700	38.4	2,199 / 1,435
4771	477,056	19,700	38.6	2,199 / 935
4796	479,609	19,700	39.1	2,869 / 612
4840	484,048	19,700	39.9	1,979 / 999
4857	485,670	19,700	40.2	106 / 646
4883	488,287	19,700	40.9	2,106 / 647
4918	491,762	19,700	41.5	2,171 / 605
4979	497,944	19,700	42.6	1,789 / 732
5020	501,980	19,700	43.3	2,112 / 2,102
5032	503,223	19,600	43.5	2,347 / 1,022
5043	504,281	19,600	43.7	2,606 / 1,462
5074	507,428	19,600	44.3	185 / 3,030
5097	509,726	19,600	44.8	387 / 4,451
5111	511,139	18,500	45.8	637 / 2,500
5138	513,790	18,500	46.2	637 / 1,295
5167	516,749	18,500	46.7	894 / 2,500
5192	519,242	18,500	47.0	1,796 / 1,772
5214	521,416	18,200	47.4	2,351 / 3,381
5237	523,705	18,200	47.8	4,256 / 3,758
5259	525,890	18,100	48.0	5,082 / 2,370
5282	528,237	18,100	48.0	4,184 / 4,570
5298	529,844	18,100	48.1	2,421 / 3,954
5314	531,448	18,100	48.2	2,238 / 5,188
5343	534,280	18,100	50.3	835 / 1,557
5356	535,633	18,000	50.4	1,135 / 1,166

Table 17 - Limited Detailed Flood Hazard Data

Cross Section	Stream Station	Flood Discharge (cfs)	1% Annual Chance Water-Surface Elevation (feet NAVD 88)	Non-Encroachment Width (feet) Left/Right from Stream Centerline
5378	537,791	18,000	50.5	907 / 1,420
5395	539,479	18,000	50.6	1,662 / 762
5407	540,732	18,000	50.7	2,090 / 639
5422	542,208	18,000	50.8	2,349 / 942
5432	543,179	18,000	50.8	1,447 / 1,121
5460	546,016	18,000	51.0	1,140 / 1,902
5472	547,177	18,000	51.1	288 / 2,294
5486	548,586	18,000	51.3	433 / 2,053
5497	549,719	18,000	51.4	513 / 2,194
5519	551,860	17,100	51.6	427 / 2,527
5550	555,020	17,100	52.0	277 / 1,581
5556	555,646	17,100	52.1	116 / 1,064
5585	558,457	16,800	52.7	177 / 1,530
5629	562,876	16,800	54.5	84 / 3,307
5655	565,533	16,800	54.8	249 / 2,517
5673	567,297	16,800	55.0	698 / 3,667
5690	568,981	16,800	55.2	1,351 / 1,681
5708	570,816	16,800	55.5	2,027 / 888
5727	572,674	16,800	55.8	2,254 / 369
5759	575,911	16,800	56.5	2,402 / 1,095
5785	578,539	16,800	56.9	2,227 / 1,669
5810	581,021	16,700	57.3	2,148 / 1,073
5831	583,071	16,700	57.9	2,804 / 1,489
5861	586,140	7,770	59.1	2,214 / 1,636
5883	588,272	7,350	59.5	2,238 / 2,823
5905	590,517	7,350	60.0	2,187 / 641
5934	593,368	7,350	61.2	2,503 / 52
5955	595,454	7,350	61.6	4,354 / 605
5976	597,577	7,350	62.2	855 / 847
5996	599,617	6,970	63.5	1,046 / 663
6019	601,917	6,970	67.5	795 / 1,380
6030	603,008	6,940	67.6	862 / 1,222
6050	605,017	6,940	67.9	504 / 1,575
6063	606,282	6,940	68.0	1,085 / 1,117
6078	607,768	6,940	68.3	1,024 / 745
6092	609,208	6,940	68.7	1,370 / 185
6106	610,622	6,800	69.2	1,651 / 101
6121	612,105	6,800	69.8	1,661 / 130
6142	614,172	6,800	70.6	1,547 / 264
6162	616,183	6,800	71.3	1,038 / 761
6177	617,663	6,800	71.9	855 / 505
6190	619,025	6,800	72.5	1,035 / 554
6200	619,988	6,450	72.9	1,040 / 864
6210	620,991	6,410	73.2	1,324 / 359
6228	622,763	6,410	73.9	511 / 1,094

Table 17 - Limited Detailed Flood Hazard Data

Cross Section	Stream Station	Flood Discharge (cfs)	1% Annual Chance Water-Surface Elevation (feet NAVD 88)	Non-Encroachment Width (feet) Left/Right from Stream Centerline
6256	625,552	6,410	75.1	227 / 973
6276	627,563	6,410	75.9	955 / 1,041
6287	628,702	6,410	76.3	1,621 / 297
6300	629,998	5,950	76.8	1,687 / 795
6307	630,732	5,950	77.1	1,621 / 1,006
6321	632,057	5,950	77.5	1,336 / 1,026
6341	634,061	5,950	78.3	308 / 1,767
6359	635,883	5,950	79.0	481 / 1,419
6373	637,312	5,740	79.7	583 / 1,615
6391	639,113	5,740	80.5	185 / 1,777
6420	642,009	5,740	82.2	277 / 991
6434	643,420	5,740	82.4	129 / 971
6446	644,582	5,740	82.6	204 / 1,269
6456	645,645	4,830	82.7	1,182 / 683
6466	646,584	4,650	82.8	835 / 1,038
6480	647,981	4,650	83.0	135 / 1,052
6495	649,525	4,650	83.5	112 / 943
6512	651,247	4,650	84.2	135 / 727
6525	652,479	4,650	84.9	135 / 820
6546	654,621	4,650	86.0	476 / 496
6563	656,262	4,550	86.7	391 / 572
Oakie Branch				
049	4,919	1,190	28.5 ¹	69 / 189
054	5,371	1,190	28.8	53 / 106
059	5,856	1,190	29.4	50 / 250
064	6,367	1,190	30.2	220 / 100
069	6,879	1,190	30.5	200 / 200
074	7,382	1,190	31.0	15 / 150
079	7,914	1,190	33.1	200 / 50
084	8,351	1,190	33.2	100 / 21
084	8,417	1,190	33.6	100 / 21
089	8,928	1,190	34.9	80 / 54
093	9,328	1,190	37.4	69 / 29
099	9,938	1,190	39.3	78 / 29
104	10,381	1,190	40.0	113 / 29
108	10,830	1,190	40.6	125 / 17
113	11,338	1,190	41.1	102 / 90
117	11,685	1,190	41.3	50 / 40
118	11,755	1,190	44.0	50 / 40
123	12,332	1,190	44.4	166 / 50
129	12,856	1,190	44.9	95 / 95
133	13,326	1,190	45.3	26 / 34
138	13,842	1,190	49.6	30 / 30
143	14,340	1,190	50.1	100 / 100
147	14,682	943	50.2	100 / 100

Table 17 - Limited Detailed Flood Hazard Data

Cross Section	Stream Station	Flood Discharge (cfs)	1% Annual Chance Water-Surface Elevation (feet NAVD 88)	Non-Encroachment Width (feet) Left/Right from Stream Centerline
Paget Branch				
005	452	871	45.4 ¹	114 / 241
011	1,068	871	45.4 ¹	119 / 211
015	1,502	871	45.4 ¹	69 / 153
020	1,956	871	45.5	96 / 193
025	2,504	871	46.0	183 / 50
031	3,098	871	47.0	50 / 163
032	3,240	871	46.9	40 / 40
033	3,323	871	49.2	40 / 40
035	3,490	871	49.3	143 / 210
040	4,047	871	49.9	127 / 98
044	4,407	871	49.9	50 / 50
045	4,490	871	50.2	50 / 50
051	5,066	871	50.2	40 / 67
056	5,562	871	51.1	87 / 262
061	6,064	871	51.9	47 / 82
066	6,559	871	54.9	50 / 125
071	7,070	871	56.5	123 / 50
075	7,549	871	58.0	135 / 50
080	8,043	871	59.4	53 / 107
085	8,543	544	60.6	91 / 50
090	9,001	544	61.0	75 / 75
091	9,071	544	61.7	75 / 75
095	9,545	544	62.8	50 / 100
100	10,005	544	65.9	50 / 100
105	10,496	544	67.3	47 / 113
Panther Branch (near Faison)				
008	821	1,470	106.8 ¹	19 / 381
014	1,366	1,470	106.8 ¹	73 / 255
018	1,806	1,470	106.8 ¹	239 / 204
024	2,399	1,470	107.7	398 / 83
030	2,961	1,470	108.5	336 / 81
035	3,467	1,470	109.4	296 / 18
040	3,995	1,470	111.2	102 / 115
046	4,583	1,340	112.4	261 / 56
050	5,042	1,340	112.8	171 / 216
056	5,559	1,340	113.1	119 / 268
061	6,063	1,340	113.4	58 / 277
065	6,529	1,340	113.8	88 / 178
070	7,031	1,340	114.4	33 / 235
075	7,547	1,340	115.0	18 / 319
080	7,994	1,260	115.6	76 / 201
086	8,596	1,260	116.9	77 / 251
092	9,196	1,260	117.8	18 / 299
097	9,665	1,260	118.6	25 / 186

Table 17 - Limited Detailed Flood Hazard Data

Cross Section	Stream Station	Flood Discharge (cfs)	1% Annual Chance Water-Surface Elevation (feet NAVD 88)	Non-Encroachment Width (feet) Left/Right from Stream Centerline
101	10,112	1,260	120.0	95 / 90
105	10,548	1,260	120.9	50 / 301
111	11,054	1,260	121.6	112 / 163
113	11,282	1,260	121.6	27 / 27
113	11,338	1,180	123.1	27 / 27
117	11,668	1,180	123.5	207 / 132
121	12,055	1,180	123.7	190 / 139
126	12,595	1,180	124.5	17 / 231
132	13,172	1,180	125.4	137 / 92
136	13,615	1,180	126.0	221 / 17
141	14,124	1,180	126.0	32 / 31
144	14,404	949	126.5	32 / 31
148	14,850	949	127.2	92 / 17
154	15,376	949	129.2	141 / 102
158	15,828	949	130.0	142 / 15
Panther Creek				
044	4,368	2,010	62.2 ¹	31 / 1,281
048	4,811	2,010	62.2 ¹	150 / 1,250
057	5,696	1,950	62.2 ¹	300 / 1,400
071	7,084	1,950	62.2 ¹	300 / 1,100
075	7,524	1,950	62.3	250 / 760
083	8,280	1,950	63.1	301 / 591
091	9,118	1,950	64.0	200 / 500
102	10,217	1,950	65.1	40 / 80
103	10,263	1,950	65.5	40 / 80
106	10,620	1,950	65.6	200 / 250
115	11,530	1,710	66.2	131 / 466
121	12,053	1,710	66.6	131 / 384
125	12,518	1,710	67.2	110 / 229
130	12,985	1,710	67.2	81 / 162
131	13,056	1,710	68.1	81 / 162
136	13,597	1,710	68.4	312 / 707
149	14,895	1,570	70.5	27 / 649
155	15,491	1,570	71.6	49 / 658
160	15,991	1,570	72.1	207 / 563
165	16,533	1,570	72.6	173 / 746
170	17,008	1,570	72.9	402 / 1,111
175	17,525	1,570	73.3	173 / 512
181	18,050	1,570	74.0	191 / 483
185	18,534	1,570	74.7	91 / 381
190	18,991	1,570	75.3	144 / 376
195	19,506	1,410	75.6	398 / 544
200	20,040	1,410	75.9	226 / 449
205	20,547	1,410	76.1	231 / 545
211	21,099	1,410	76.4	163 / 619

Table 17 - Limited Detailed Flood Hazard Data

Cross Section	Stream Station	Flood Discharge (cfs)	1% Annual Chance Water-Surface Elevation (feet NAVD 88)	Non-Encroachment Width (feet) Left/Right from Stream Centerline
216	21,616	1,410	76.7	296 / 800
222	22,215	1,410	77.2	39 / 78
223	22,261	1,410	77.6	39 / 78
226	22,612	1,410	78.2	343 / 549
231	23,133	1,410	78.7	144 / 351
239	23,879	1,180	79.8	155 / 361
244	24,372	1,180	80.6	20 / 193
248	24,773	1,180	81.3	144 / 195
254	25,368	1,180	82.2	98 / 175
259	25,860	1,180	82.8	22 / 200
263	26,258	1,180	83.3	55 / 300
266	26,634	1,180	83.7	63 / 292
271	27,082	1,180	84.2	20 / 294
275	27,536	1,180	84.7	276 / 295
281	28,079	930	85.3	175 / 257
285	28,502	930	85.7	155 / 244
290	28,998	930	86.4	47 / 196
295	29,492	930	87.5	20 / 244
300	29,975	930	88.3	20 / 151
305	30,511	930	89.0	130 / 208
310	30,992	930	89.4	120 / 203
315	31,484	930	89.9	106 / 153
320	32,042	930	90.4	102 / 175
325	32,502	930	90.9	45 / 169
330	33,016	930	91.6	151 / 171
335	33,505	747	92.3	109 / 129
340	34,008	747	93.0	15 / 127
345	34,497	747	94.2	20 / 40
350	35,007	747	96.3	12 / 139
355	35,493	747	97.0	27 / 153
360	36,022	747	97.7	126 / 146
365	36,507	747	98.5	95 / 115
370	36,952	747	99.8	62 / 82
372	37,240	747	100.9	20 / 75
Persimmon Branch				
015	1,544	2,190	47.4 ¹	24 / 905
026	2,623	2,190	47.4 ¹	162 / 596
038	3,768	2,190	48.5	24 / 803
048	4,818	2,190	49.6	123 / 623
054	5,434	2,190	50.1	94 / 679
065	6,545	2,190	51.1	120 / 308
077	7,661	2,190	52.0	228 / 187
088	8,814	2,020	52.8	185 / 201
099	9,884	2,020	53.6	36 / 548
108	10,841	2,020	54.3	198 / 227

Table 17 - Limited Detailed Flood Hazard Data

Cross Section	Stream Station	Flood Discharge (cfs)	1% Annual Chance Water-Surface Elevation (feet NAVD 88)	Non-Encroachment Width (feet) Left/Right from Stream Centerline
121	12,052	2,020	55.5	242 / 360
134	13,442	2,020	56.4	283 / 168
145	14,471	2,020	57.2	221 / 60
154	15,401	2,020	58.3	269 / 37
169	16,894	2,020	59.8	467 / 24
180	18,041	2,020	60.3	214 / 404
192	19,201	2,020	60.8	250 / 267
203	20,333	2,020	61.3	179 / 368
219	21,882	1,740	62.2	339 / 59
229	22,907	1,740	62.4	30 / 30
230	22,988	1,740	63.3	30 / 30
241	24,102	1,740	64.0	221 / 213
249	24,941	1,740	64.7	83 / 278
260	26,038	1,740	65.5	659 / 24
270	27,039	1,400	66.0	162 / 217
280	28,023	1,400	66.9	105 / 290
291	29,111	1,400	68.0	418 / 24
300	30,030	1,400	69.2	171 / 24
308	30,789	1,400	70.3	352 / 38
315	31,497	1,400	71.0	69 / 119
325	32,516	1,400	72.7	289 / 163
330	32,965	1,400	73.2	106 / 40
334	33,390	1,400	74.4	48 / 177
339	33,912	1,400	75.3	49 / 162
347	34,705	1,400	76.8	24 / 112
Pharisee Creek				
016	1,556	1,520	57.5	180 / 44
Poley Branch				
009	875	1,181	85.2 ¹	464 / 289
011	1,146	1,181	86.1	150 / 135
015	1,544	1,181	87.4	95 / 371
020	2,015	1,181	88.0	100 / 268
025	2,502	1,181	88.8	116 / 232
030	2,975	1,181	89.6	113 / 224
035	3,464	1,181	90.4	102 / 227
040	3,974	1,181	91.2	140 / 171
045	4,463	1,181	92.1	196 / 151
049	4,854	1,181	92.9	52 / 51
049	4,903	1,181	93.0	52 / 51
054	5,415	1,181	94.1	188 / 151
060	5,977	1,046	94.5	95 / 126
065	6,486	1,046	95.3	46 / 135
069	6,949	1,046	96.6	82 / 58
075	7,509	1,046	97.8	83 / 99
081	8,088	1,046	98.8	102 / 137

Table 17 - Limited Detailed Flood Hazard Data

Cross Section	Stream Station	Flood Discharge (cfs)	1% Annual Chance Water-Surface Elevation (feet NAVD 88)	Non-Encroachment Width (feet) Left/Right from Stream Centerline
086	8,583	1,046	99.8	46 / 133
090	9,007	1,046	100.6	16 / 180
096	9,583	1,046	101.9	68 / 80
101	10,075	1,046	103.2	106 / 68
106	10,589	1,046	104.1	74 / 114
112	11,158	689	105.3	40 / 76
Polly Run Creek				
009	896	1,670	103.1 ¹	25 / 160
013	1,328	1,670	104.3	35 / 35
014	1,401	1,670	106.8	35 / 35
020	1,991	1,670	107.4	503 / 413
025	2,497	1,670	107.6	253 / 314
030	3,007	1,670	107.8	384 / 145
035	3,483	1,670	108.0	344 / 25
040	3,973	1,670	108.2	394 / 41
046	4,563	1,670	108.6	305 / 51
050	4,981	1,670	108.8	265 / 153
055	5,505	1,670	109.2	224 / 129
060	5,986	1,546	109.4	175 / 243
065	6,484	1,546	109.5	289 / 328
070	6,992	1,546	109.7	79 / 372
077	7,657	1,546	109.9	45 / 45
077	7,725	1,546	112.3	45 / 45
080	8,000	1,546	112.4	133 / 548
085	8,489	1,546	112.4	264 / 81
090	8,967	1,546	112.7	373 / 151
094	9,385	1,546	112.8	340 / 251
Pudding Branch				
001	110	868	85.9 ¹	256 / 14
004	382	868	86.1	17 / 117
009	878	868	86.8	69 / 69
014	1,436	868	87.4	106 / 28
019	1,949	868	88.1	116 / 14
024	2,440	868	88.7	80 / 64
030	3,017	813	89.1	111 / 35
036	3,609	813	89.6	151 / 33
041	4,101	813	90.1	172 / 20
047	4,654	813	90.5	221 / 14
051	5,099	813	90.9	189 / 14
056	5,606	813	91.5	118 / 72
060	6,030	813	91.9	171 / 14
065	6,466	813	92.6	92 / 70
069	6,892	688	93.4	173 / 13
074	7,375	688	94.4	100 / 13
079	7,901	688	95.8	13 / 83

Table 17 - Limited Detailed Flood Hazard Data

Cross Section	Stream Station	Flood Discharge (cfs)	1% Annual Chance Water-Surface Elevation (feet NAVD 88)	Non-Encroachment Width (feet) Left/Right from Stream Centerline
083	8,346	688	96.7	113 / 13
089	8,878	688	98.0	18 / 88
093	9,251	688	98.5	48 / 48
093	9,333	688	103.1	48 / 48
094	9,354	688	103.1	163 / 65
099	9,915	688	103.2	58 / 37
104	10,441	688	103.7	61 / 19
110	10,989	688	104.8	14 / 105
Rattlesnake Branch				
015	1,509	1,334	106.9	130 / 155
020	2,000	1,334	107.7	197 / 148
025	2,497	1,152	108.1	231 / 221
031	3,128	1,152	108.4	367 / 132
036	3,648	1,152	108.7	620 / 22
041	4,147	1,152	109.5	96 / 163
046	4,649	1,152	110.2	74 / 158
052	5,153	1,152	111.2	218 / 75
057	5,677	1,152	112.7	266 / 30
061	6,148	1,152	114.0	126 / 136
067	6,665	1,152	115.0	84 / 206
072	7,193	1,152	115.9	177 / 22
077	7,686	1,152	117.3	178 / 22
082	8,182	1,152	118.4	142 / 26
088	8,817	1,152	120.2	22 / 123
093	9,302	799	121.4	19 / 147
097	9,653	799	121.9	10 / 21
Reedy Branch (near Blizzards Crossroads)				
001	107	512	106.6 ¹	21 / 22
005	503	512	109.3	20 / 45
010	995	512	111.5	19 / 39
014	1,421	512	112.6	52 / 23
017	1,713	512	113.6	52 / 40
Reedy Branch (near Faison)				
015	1,492	1,020	104.7 ¹	16 / 202
020	1,971	1,020	106.0	123 / 78
025	2,505	1,020	107.3	172 / 88
030	2,996	1,020	108.2	58 / 143
035	3,503	1,020	109.4	107 / 113
040	3,983	906	111.0	87 / 133
045	4,548	906	112.2	179 / 59
050	5,009	906	112.9	195 / 57
056	5,610	906	113.9	14 / 142
062	6,162	906	115.9	56 / 87
064	6,411	906	116.3	27 / 26
065	6,491	906	119.5	27 / 26
071	7,064	853	119.7	122 / 63

Table 17 - Limited Detailed Flood Hazard Data

Cross Section	Stream Station	Flood Discharge (cfs)	1% Annual Chance Water-Surface Elevation (feet NAVD 88)	Non-Encroachment Width (feet) Left/Right from Stream Centerline
076	7,568	853	120.1	139 / 24
080	8,046	853	120.8	66 / 61
086	8,566	853	121.7	72 / 16
091	9,054	853	123.0	14 / 114
096	9,630	853	124.1	20 / 110
101	10,086	853	125.5	52 / 14
105	10,539	853	128.0	36 / 99
111	11,058	853	129.4	44 / 89
115	11,498	853	130.5	36 / 117
120	12,038	715	131.9	27 / 89
126	12,584	715	133.5	187 / 13
130	13,041	715	134.1	80 / 75
Rockfish Creek				
266	26,582	11,430	26.6	1,279 / 68
272	27,222	11,430	26.7	1,455 / 57
286	28,555	11,430	26.8	632 / 1,001
293	29,262	11,430	26.6	114 / 114
293	29,318	11,430	26.9	114 / 114
294	29,398	11,430	26.9	114 / 114
305	30,510	11,430	27.8	920 / 160
325	32,473	11,430	28.0	919 / 729
335	33,518	11,430	28.0	962 / 220
356	35,594	11,430	28.3	214 / 1,428
535	53,513	9,760	34.6	557 / 1,198
557	55,658	9,760	35.2	142 / 1,282
574	57,414	9,700	35.8	919 / 1,459
597	59,668	9,700	36.4	1,300 / 147
616	61,635	9,700	37.0	1,091 / 924
635	63,532	9,700	37.5	307 / 1,141
654	65,430	9,640	38.2	141 / 672
671	67,123	9,640	38.8	937 / 542
690	69,026	9,640	39.3	643 / 336
708	70,792	9,640	39.8	1,481 / 230
708	70,840	7,260	40.2	1,481 / 230
719	71,882	7,260	40.4	1,547 / 284
739	73,860	7,220	41.0	568 / 406
759	75,943	7,220	41.7	676 / 258
769	76,918	7,220	42.0	328 / 811
777	77,691	7,220	42.4	287 / 286
778	77,753	7,170	43.2	287 / 286
786	78,603	7,170	43.8	133 / 1,244
796	79,568	7,170	44.0	381 / 916
803	80,294	7,120	44.2	641 / 687
819	81,859	7,120	44.5	326 / 1,056
826	82,614	7,120	44.7	552 / 949

Table 17 - Limited Detailed Flood Hazard Data

Cross Section	Stream Station	Flood Discharge (cfs)	1% Annual Chance Water-Surface Elevation (feet NAVD 88)	Non-Encroachment Width (feet) Left/Right from Stream Centerline
836	83,616	7,120	45.0	430 / 725
850	84,993	7,120	45.5	422 / 991
866	86,631	5,450	46.0	900 / 280
868	86,768	5,450	46.0	684 / 482
868	86,818	5,450	46.4	684 / 482
881	88,114	5,450	47.0	128 / 486
894	89,438	5,450	47.5	801 / 128
907	90,699	5,450	47.9	507 / 621
918	91,773	5,450	48.3	494 / 548
924	92,420	5,450	48.5	386 / 651
934	93,430	5,450	48.9	186 / 725
945	94,477	5,370	49.3	560 / 438
957	95,682	5,370	49.7	426 / 558
967	96,692	5,370	50.1	633 / 127
979	97,852	5,220	50.5	875 / 126
987	98,674	5,220	50.9	674 / 250
997	99,679	5,220	51.3	948 / 187
1009	100,877	5,220	51.8	347 / 338
1019	101,939	5,220	52.4	184 / 643
1028	102,784	5,220	52.9	110 / 681
1037	103,712	5,220	53.5	150 / 603
1047	104,744	5,220	53.9	510 / 533
1059	105,915	5,220	54.3	842 / 139
1067	106,693	5,220	54.7	619 / 302
1073	107,263	5,220	55.0	685 / 236
1078	107,770	5,130	55.3	737 / 189
1083	108,298	5,130	55.5	632 / 266
1090	108,976	5,130	56.0	250 / 303
1090	109,028	5,130	56.3	250 / 303
1097	109,687	5,130	56.7	148 / 677
1102	110,246	5,130	56.9	204 / 686
1106	110,572	5,130	57.0	617 / 350
1114	111,409	5,130	57.3	956 / 126
1118	111,818	5,130	57.5	699 / 126
1123	112,308	5,130	57.7	702 / 448
1128	112,791	5,130	57.9	492 / 503
1132	113,226	5,130	58.1	399 / 543
1138	113,831	5,130	58.4	243 / 668
1142	114,219	5,130	58.6	154 / 630
1147	114,746	4,910	59.0	125 / 493
1152	115,245	4,910	59.4	437 / 340
1158	115,752	4,910	59.6	390 / 349
1163	116,304	4,910	60.0	316 / 546
1168	116,798	4,910	60.3	414 / 534
1174	117,355	4,910	60.6	295 / 589

Table 17 - Limited Detailed Flood Hazard Data

Cross Section	Stream Station	Flood Discharge (cfs)	1% Annual Chance Water-Surface Elevation (feet NAVD 88)	Non-Encroachment Width (feet) Left/Right from Stream Centerline
1178	117,754	4,910	60.8	180 / 884
1183	118,261	4,910	61.0	204 / 635
1188	118,751	4,910	61.2	125 / 780
1192	119,217	4,910	61.4	304 / 559
1198	119,831	4,910	61.7	173 / 798
1203	120,310	4,910	61.9	125 / 876
1208	120,766	4,440	62.2	141 / 764
1213	121,256	4,440	62.5	322 / 546
1218	121,786	4,440	62.8	374 / 464
1223	122,273	4,440	63.1	317 / 571
1228	122,834	4,440	63.5	430 / 326
1232	123,229	4,440	63.7	583 / 188
1237	123,716	4,440	64.0	663 / 277
1242	124,247	4,440	64.2	733 / 466
1248	124,788	4,260	64.4	942 / 367
1254	125,366	4,260	64.7	838 / 168
1258	125,770	4,260	65.0	728 / 277
1262	126,233	4,260	65.4	219 / 397
1267	126,708	4,260	65.9	396 / 354
1273	127,253	4,260	66.4	359 / 658
1279	127,922	4,260	66.8	108 / 574
1280	127,974	4,260	66.9	108 / 574
1282	128,175	4,260	67.0	106 / 750
1289	128,877	4,260	67.4	659 / 466
1293	129,334	4,260	67.6	847 / 119
1297	129,735	4,260	67.8	859 / 188
1303	130,277	4,260	68.0	728 / 453
1307	130,656	4,260	68.2	807 / 129
1313	131,298	2,990	68.6	534 / 662
1318	131,790	2,990	68.9	233 / 643
1322	132,195	2,990	69.2	109 / 542
1328	132,822	2,990	69.7	278 / 164
1333	133,342	2,990	70.2	284 / 262
1338	133,793	2,990	70.4	292 / 247
1342	134,225	2,990	70.8	235 / 217
1346	134,593	2,990	71.3	252 / 263
1352	135,238	1,300	72.1	110 / 195
1358	135,787	1,300	72.6	105 / 160
1366	136,593	1,300	73.7	180 / 189
1366	136,639	1,300	74.2	180 / 189
1372	137,195	1,300	74.8	105 / 236
1377	137,726	1,300	75.4	149 / 142
1382	138,208	1,300	76.3	17 / 135
1382	138,244	1,300	76.5	0 / 320
1383	138,334	1,300	83.0	0 / 320

Table 17 - Limited Detailed Flood Hazard Data

Cross Section	Stream Station	Flood Discharge (cfs)	1% Annual Chance Water-Surface Elevation (feet NAVD 88)	Non-Encroachment Width (feet) Left/Right from Stream Centerline
1387	138,716	1,300	83.0	210 / 210
1392	139,217	1,300	83.0	215 / 225
1397	139,701	1,300	83.0	203 / 225
1403	140,296	1,300	83.0	175 / 245
1407	140,743	1,300	83.0	150 / 215
1412	141,217	1,300	83.0	192 / 115
1417	141,694	1,300	83.1	232 / 110
1423	142,276	1,300	83.6	176 / 131
1428	142,765	1,300	84.2	79 / 142
1432	143,225	1,300	84.2	30 / 30
1433	143,292	1,300	86.8	30 / 30
1437	143,729	1,300	87.0	105 / 118
1442	144,212	1,300	87.5	105 / 120
1448	144,752	1,300	88.2	114 / 91
1452	145,240	1,300	89.0	80 / 128
1457	145,735	882	90.3	79 / 87
1462	146,214	882	90.8	79 / 200
1467	146,705	780	91.2	79 / 149
1472	147,227	780	91.8	79 / 149
1478	147,750	780	92.4	79 / 84
1482	148,210	740	93.1	96 / 79
Sawyer Branch				
001	81	627	100.4 ¹	100 / 100
006	552	627	100.8	171 / 73
009	890	627	101.4	50 / 50
010	970	627	107.7	50 / 50
016	1,604	627	107.8	216 / 67
019	1,933	627	107.8	191 / 97
026	2,552	627	108.2	50 / 25
032	3,152	627	112.8	94 / 18
036	3,600	627	114.1	24 / 85
040	4,014	627	115.8	54 / 21
046	4,579	627	119.5	45 / 22
048	4,832	627	121.4	17 / 67
Stewarts Creek				
263	26,289	4,096	83.1	350 / 400
275	27,548	3,384	83.3	600 / 295
285	28,500	3,384	83.4	350 / 350
295	29,500	3,384	83.9	80 / 500
305	30,500	3,384	84.6	261 / 508
319	31,907	3,384	85.4	53 / 465
329	32,874	3,216	86.0	97 / 572
340	34,000	3,216	86.9	150 / 400
350	35,000	3,169	87.6	258 / 265
360	36,000	3,169	88.2	675 / 88

Table 17 - Limited Detailed Flood Hazard Data

Cross Section	Stream Station	Flood Discharge (cfs)	1% Annual Chance Water-Surface Elevation (feet NAVD 88)	Non-Encroachment Width (feet) Left/Right from Stream Centerline
370	37,000	2,731	88.6	278 / 360
380	38,000	2,731	89.1	80 / 400
390	39,000	2,731	89.8	258 / 373
400	40,000	2,731	90.5	373 / 210
410	41,000	2,731	91.3	212 / 182
423	42,330	2,079	92.2	100 / 350
434	43,377	2,075	92.6	171 / 352
443	44,345	2,075	93.2	105 / 298
453	45,274	2,075	93.8	45 / 45
453	45,319	2,075	94.1	45 / 45
460	46,000	2,075	94.6	269 / 240
465	46,500	2,075	94.9	288 / 98
470	47,000	2,075	95.4	248 / 127
476	47,569	2,075	95.9	368 / 87
480	48,000	2,075	96.2	93 / 437
484	48,399	1,992	96.6	137 / 286
490	49,000	1,854	97.0	274 / 465
495	49,500	1,854	97.4	114 / 135
501	50,141	1,854	98.2	112 / 349
509	50,851	1,854	98.7	60 / 180
515	51,500	1,854	99.3	30 / 450
520	52,000	1,854	99.6	111 / 431
526	52,588	1,799	99.9	157 / 689
535	53,500	1,799	100.3	400 / 120
545	54,500	1,799	100.9	304 / 342
552	55,169	1,703	101.1	25 / 700
554	55,359	1,703	104.4	25 / 700
554	55,399	1,703	104.4	160 / 200
554	55,449	1,703	104.9	160 / 200
560	56,000	1,703	105.0	100 / 250
565	56,500	1,609	105.0	105 / 300
570	57,000	1,312	105.2	46 / 250
575	57,500	1,312	105.4	207 / 291
580	58,000	1,312	105.5	40 / 200
586	58,581	1,312	105.8	138 / 62
590	59,000	1,218	106.1	100 / 195
595	59,500	1,218	106.4	250 / 50
600	60,000	1,218	106.7	306 / 302
605	60,500	1,218	107.0	56 / 25
608	60,795	1,218	107.3	55 / 55
608	60,829	1,218	107.5	55 / 55
609	60,873	1,218	107.4	22 / 22
609	60,942	1,218	108.7	22 / 22
616	61,586	1,218	109.4	80 / 80
620	62,000	1,218	109.3	50 / 50

Table 17 - Limited Detailed Flood Hazard Data

Cross Section	Stream Station	Flood Discharge (cfs)	1% Annual Chance Water-Surface Elevation (feet NAVD 88)	Non-Encroachment Width (feet) Left/Right from Stream Centerline
625	62,500	1,218	112.0	32 / 179
630	63,000	1,218	112.9	178 / 105
635	63,500	1,218	113.4	77 / 163
640	64,000	1,153	113.9	96 / 164
645	64,500	1,153	114.4	67 / 214
650	65,000	1,153	115.0	16 / 142
656	65,591	1,153	115.8	29 / 209
660	66,000	1,153	116.3	74 / 145
665	66,500	1,014	117.1	134 / 44
670	67,000	1,014	117.8	74 / 170
675	67,500	1,014	118.6	77 / 93
680	68,000	1,014	119.9	102 / 75
685	68,500	1,014	120.9	79 / 132
690	69,000	1,014	121.8	48 / 97
696	69,564	1,014	122.6	105 / 189
701	70,105	1,014	123.4	117 / 56
706	70,603	1,383	125.7	45 / 160
710	71,040	1,383	126.8	65 / 180
715	71,477	1,383	127.3	165 / 85
719	71,941	1,244	128.0	35 / 230
723	72,321	1,166	128.7	70 / 310
728	72,831	1,166	129.6	75 / 115
733	73,268	1,166	130.6	35 / 150
737	73,702	1,166	131.5	45 / 150
742	74,150	1,166	132.6	150 / 35
746	74,609	1,166	133.6	120 / 35
749	74,910	1,166	133.8	125 / 27
750	74,986	1,166	134.2	150 / 27
750	75,024	1,166	134.2	150 / 27
752	75,234	1,064	134.4	155 / 35
755	75,462	1,064	134.9	50 / 110
759	75,907	1,064	135.5	90 / 70
764	76,427	1,064	136.2	155 / 30
769	76,851	1,064	136.8	130 / 15
773	77,269	789	137.4	110 / 35
778	77,769	789	137.9	313 / 32
Stewarts Creek (near Friendship)				
008	809	697	83.9 ¹	146 / 172
013	1,268	697	83.9 ¹	13 / 138
016	1,646	697	84.0	28 / 165
023	2,275	697	85.2	67 / 139
028	2,804	697	86.4	51 / 76
033	3,310	697	87.7	45 / 85
036	3,615	697	88.1	32 / 32
037	3,691	697	91.6	32 / 32

Table 17 - Limited Detailed Flood Hazard Data

Cross Section	Stream Station	Flood Discharge (cfs)	1% Annual Chance Water-Surface Elevation (feet NAVD 88)	Non-Encroachment Width (feet) Left/Right from Stream Centerline
040	3,983	697	91.7	137 / 64
045	4,509	697	91.9	81 / 118
050	4,999	697	92.2	93 / 143
056	5,580	628	92.5	34 / 241
060	6,019	628	92.9	16 / 80
064	6,396	628	94.1	39 / 17
070	7,011	628	96.2	97 / 31
079	7,880	628	99.9	69 / 17
Stocking Head Creek				
047	4,698	6,850	38.4 ¹	588 / 996
062	6,207	6,850	38.4 ¹	691 / 44
068	6,783	6,790	38.4 ¹	352 / 206
074	7,378	6,790	38.4 ¹	352 / 168
080	8,001	6,790	38.4 ¹	353 / 44
087	8,666	6,790	38.4 ¹	837 / 856
096	9,625	6,790	38.4 ¹	733 / 591
102	10,222	6,790	38.4 ¹	582 / 689
109	10,933	6,680	38.4 ¹	694 / 359
118	11,833	6,680	38.5	506 / 465
126	12,612	6,680	39.0	585 / 381
136	13,601	6,680	39.6	295 / 624
142	14,153	6,680	39.9	341 / 420
151	15,072	6,680	40.6	755 / 162
155	15,478	6,680	40.9	300 / 300
155	15,523	6,680	41.4	300 / 300
160	16,026	6,680	41.8	900 / 300
166	16,627	6,680	42.0	512 / 445
172	17,161	6,680	42.3	390 / 886
177	17,720	6,680	42.5	556 / 799
185	18,488	6,680	42.8	721 / 481
190	19,028	6,580	43.0	805 / 353
196	19,582	6,580	43.3	913 / 42
200	19,993	6,580	43.5	988 / 42
205	20,468	6,580	43.8	830 / 272
211	21,101	6,580	44.1	1,067 / 131
215	21,490	6,580	44.3	977 / 42
220	22,011	6,580	44.6	949 / 42
226	22,591	6,580	45.0	675 / 90
230	23,016	6,580	45.2	727 / 125
237	23,662	6,580	45.5	693 / 283
240	24,029	6,580	45.7	546 / 374
245	24,508	6,580	45.9	626 / 475
250	24,965	6,580	46.1	476 / 504
255	25,484	6,580	46.3	485 / 477
260	26,027	2,030	46.5	292 / 833

Table 17 - Limited Detailed Flood Hazard Data

Cross Section	Stream Station	Flood Discharge (cfs)	1% Annual Chance Water-Surface Elevation (feet NAVD 88)	Non-Encroachment Width (feet) Left/Right from Stream Centerline
266	26,567	2,020	46.6	219 / 985
269	26,881	2,020	46.5	40 / 40
270	26,961	2,020	46.8	40 / 40
274	27,428	2,020	47.1	19 / 932
280	28,014	2,020	47.2	45 / 1,174
291	29,087	2,020	47.2	180 / 113
295	29,525	2,020	48.4	167 / 250
300	30,042	2,020	49.0	107 / 217
306	30,595	2,020	49.7	263 / 55
310	31,033	2,020	50.0	423 / 46
315	31,531	2,020	50.3	173 / 240
320	32,008	2,020	50.7	165 / 200
325	32,495	2,020	51.0	398 / 19
329	32,886	2,020	51.3	388 / 44
332	33,197	2,020	51.5	40 / 45
332	33,244	2,020	52.0	40 / 45
335	33,511	2,020	52.2	255 / 174
341	34,053	2,020	52.6	130 / 156
346	34,615	2,020	53.4	346 / 18
350	34,995	1,710	53.9	184 / 55
355	35,482	1,710	54.5	81 / 320
360	36,003	1,710	54.9	18 / 391
365	36,473	1,710	55.3	105 / 294
370	36,970	1,710	55.7	411 / 18
374	37,449	1,710	56.0	336 / 150
380	38,017	1,710	56.5	200 / 200
385	38,466	1,710	57.3	150 / 270
389	38,942	1,710	58.0	150 / 353
394	39,395	1,380	58.2	132 / 205
401	40,052	1,380	58.6	194 / 50
405	40,537	1,380	59.2	119 / 50
409	40,945	1,380	59.9	96 / 93
416	41,554	1,380	60.7	300 / 200
422	42,232	1,380	61.3	283 / 55
427	42,747	1,380	61.4	40 / 40
428	42,817	1,380	64.5	40 / 40
434	43,439	1,380	64.6	82 / 203
Taylor Creek				
017	1,749	2,720	51.0 ¹	583 / 62
021	2,115	2,720	51.0 ¹	437 / 62
026	2,558	2,720	51.1	222 / 62
027	2,702	2,720	51.3	43 / 43
028	2,752	2,720	51.7	43 / 43
030	3,006	2,720	52.1	226 / 295
035	3,530	2,720	52.5	349 / 174

Table 17 - Limited Detailed Flood Hazard Data

Cross Section	Stream Station	Flood Discharge (cfs)	1% Annual Chance Water-Surface Elevation (feet NAVD 88)	Non-Encroachment Width (feet) Left/Right from Stream Centerline
040	4,017	2,720	52.9	396 / 62
045	4,550	2,720	53.5	527 / 138
050	5,033	2,720	53.9	287 / 147
056	5,611	2,720	54.6	100 / 175
061	6,062	2,720	55.2	478 / 62
065	6,502	2,720	55.5	477 / 62
070	6,961	2,720	55.8	380 / 62
075	7,482	2,720	56.1	368 / 97
080	7,997	2,720	56.5	194 / 238
085	8,548	2,720	56.8	241 / 240
090	8,953	2,720	57.0	288 / 397
096	9,575	2,500	57.1	462 / 96
100	9,958	2,500	57.2	238 / 77
100	10,003	2,500	57.2	238 / 77
106	10,581	2,500	57.6	240 / 200
111	11,066	2,500	57.9	360 / 82
115	11,539	2,500	58.2	108 / 135
121	12,054	2,500	58.7	160 / 288
125	12,533	2,500	59.0	107 / 187
130	13,022	2,290	59.5	97 / 354
136	13,587	2,290	59.8	246 / 139
140	14,003	2,290	60.0	131 / 312
145	14,542	2,290	60.3	213 / 249
151	15,072	2,290	60.6	116 / 317
155	15,504	2,290	60.9	60 / 404
161	16,074	2,290	61.3	132 / 267
165	16,526	2,290	61.6	320 / 109
170	17,025	2,290	61.9	249 / 161
175	17,494	2,290	62.3	178 / 215
179	17,944	2,120	62.6	59 / 235
185	18,501	2,120	63.3	59 / 200
190	18,968	2,120	63.9	70 / 187
195	19,523	2,120	64.6	59 / 306
200	19,982	2,120	64.9	155 / 185
205	20,491	2,120	65.2	66 / 240
206	20,604	2,120	65.3	52 / 51
207	20,650	2,120	65.5	52 / 51
210	20,978	2,120	65.7	203 / 131
215	21,484	2,120	66.0	160 / 181
220	22,009	2,120	66.4	151 / 182
225	22,473	2,120	66.8	238 / 112
230	23,030	2,120	67.3	96 / 233
235	23,472	2,120	67.7	59 / 368
240	23,994	1,960	68.0	58 / 391
244	24,414	1,960	68.3	148 / 383

Table 17 - Limited Detailed Flood Hazard Data

Cross Section	Stream Station	Flood Discharge (cfs)	1% Annual Chance Water-Surface Elevation (feet NAVD 88)	Non-Encroachment Width (feet) Left/Right from Stream Centerline
249	24,875	1,960	68.4	41 / 31
249	24,920	1,960	68.6	41 / 31
255	25,458	1,960	68.9	274 / 250
260	26,045	1,960	69.3	193 / 180
265	26,508	1,960	69.9	58 / 188
271	27,137	1,960	71.1	207 / 60
275	27,545	1,960	72.0	128 / 114
280	27,993	1,390	72.9	180 / 121
285	28,484	1,390	73.4	141 / 125
290	28,991	1,390	74.0	174 / 56
295	29,497	1,390	74.8	69 / 182
300	29,987	1,390	75.2	56 / 234
305	30,467	1,390	75.5	78 / 206
310	31,010	1,390	75.8	103 / 142
316	31,573	1,390	76.3	84 / 128
320	32,027	1,390	77.0	68 / 144
325	32,502	1,390	77.8	56 / 139
330	32,987	1,390	78.5	115 / 94
335	33,515	1,390	79.2	56 / 148
340	33,978	1,390	79.7	124 / 105
345	34,504	1,390	80.4	56 / 100
350	34,986	846	81.6	60 / 55
353	35,261	846	81.8	70 / 70
353	35,331	846	82.4	70 / 70
355	35,515	846	82.7	52 / 86
360	35,999	846	83.5	52 / 149
365	36,478	846	84.6	66 / 67
370	37,020	846	86.2	71 / 97
377	37,747	846	87.3	300 / 52
Turkey Creek				
323	32,328	1,820	117.2	40 / 40
324	32,378	1,820	118.3	40 / 40
332	33,222	1,740	119.2	145 / 476
340	34,000	1,540	119.4	25 / 280
350	35,000	1,540	119.9	112 / 154
359	35,935	1,540	120.5	25 / 300
368	36,808	1,540	121.0	50 / 300
375	37,461	1,500	121.3	25 / 25
377	37,661	1,500	128.2	25 / 25
383	38,314	1,120	128.6	286 / 161
390	39,000	1,120	128.6	137 / 308
395	39,500	1,120	128.6	71 / 311
400	40,000	1,120	128.6	44 / 278
405	40,500	1,120	128.6	116 / 217
410	41,000	1,120	128.7	81 / 212

Table 17 - Limited Detailed Flood Hazard Data

Cross Section	Stream Station	Flood Discharge (cfs)	1% Annual Chance Water-Surface Elevation (feet NAVD 88)	Non-Encroachment Width (feet) Left/Right from Stream Centerline
415	41,500	1,120	128.8	125 / 135
420	42,000	1,120	128.9	210 / 42
425	42,531	1,010	129.1	60 / 200
430	42,950	1,010	129.3	24 / 24
430	43,021	1,010	130.2	24 / 24
437	43,676	1,010	130.8	56 / 206
443	44,308	1,010	131.0	170 / 30
449	44,936	855	131.2	30 / 140
455	45,500	855	131.4	150 / 25
460	46,000	855	131.9	80 / 30
465	46,500	855	132.3	169 / 52
470	47,000	855	132.6	149 / 63
474	47,418	855	132.9	164 / 50
Welch Branch				
005	508	822	52.7 ¹	699 / 17
010	1,043	822	52.7 ¹	613 / 17
017	1,653	822	52.7 ¹	286 / 17
025	2,524	822	53.0	630 / 55
030	3,033	822	53.3	294 / 20
035	3,510	822	53.8	590 / 29
040	4,047	790	54.5	314 / 29
046	4,563	790	55.5	427 / 35
051	5,068	790	57.0	294 / 45
055	5,547	790	59.5	51 / 72
061	6,059	790	60.8	49 / 93
066	6,564	790	62.1	93 / 42
070	7,029	790	63.6	79 / 34
075	7,476	790	64.8	102 / 18
081	8,120	790	66.2	27 / 117
086	8,625	790	67.2	93 / 17
091	9,149	790	68.5	112 / 29
096	9,616	790	69.4	236 / 17
102	10,184	790	70.6	67 / 74
108	10,775	790	72.1	114 / 32
112	11,201	790	73.1	45 / 58
117	11,680	790	74.4	18 / 65
121	12,142	790	75.8	42 / 36
127	12,675	790	77.2	100 / 17
132	13,187	790	78.5	29 / 30
138	13,762	790	80.3	75 / 19
142	14,190	790	81.7	22 / 17
147	14,680	790	83.7	58 / 17
152	15,175	790	85.1	17 / 84
155	15,490	790	86.1	48 / 17
White Oak Branch				

Table 17 - Limited Detailed Flood Hazard Data

Cross Section	Stream Station	Flood Discharge (cfs)	1% Annual Chance Water-Surface Elevation (feet NAVD 88)	Non-Encroachment Width (feet) Left/Right from Stream Centerline
005	465	662	65.6 ¹	226 / 15
009	872	662	65.6 ¹	178 / 15
011	1,092	662	65.6 ¹	164 / 20
011	1,132	662	66.3	164 / 20
014	1,424	662	66.6	45 / 15
019	1,925	662	68.3	268 / 20
020	1,965	662	68.7	268 / 20
025	2,540	662	69.8	160 / 30
030	3,045	662	71.2	30 / 56
035	3,528	662	72.8	30 / 54
040	3,956	662	74.1	15 / 77
045	4,521	662	75.3	65 / 30
051	5,074	662	76.8	57 / 14
055	5,506	662	78.3	32 / 29
060	5,986	526	79.8	28 / 29
065	6,484	526	81.0	13 / 37
070	6,980	526	82.8	29 / 74
075	7,473	526	84.3	18 / 74
080	8,011	526	86.5	10 / 102
083	8,344	526	87.6	28 / 28
091	9,126	526	89.5	111 / 20
Whiteoak Branch				
013	1,330	1,186	97.5 ¹	17 / 261
020	1,993	1,186	98.0	57 / 240
027	2,695	1,186	99.1	125 / 80
033	3,300	1,186	100.4	25 / 85
033	3,345	1,186	104.1	121 / 166
038	3,785	1,186	104.2	127 / 121
043	4,336	1,186	104.5	156 / 32
049	4,871	1,186	105.2	160 / 42
054	5,426	1,186	106.5	163 / 86
059	5,901	1,186	108.0	97 / 93
065	6,510	1,186	109.3	107 / 142
072	7,227	1,186	110.8	84 / 83
073	7,273	1,186	112.5	84 / 83
076	7,627	1,186	112.9	17 / 112
082	8,167	1,186	113.4	27 / 254
087	8,680	1,186	114.4	22 / 22
087	8,747	1,091	118.8	22 / 22
093	9,305	1,091	118.8	287 / 23
098	9,779	1,091	119.0	226 / 24
104	10,424	1,091	119.4	135 / 49
110	10,972	1,091	120.4	123 / 16
115	11,530	1,091	122.1	173 / 16
119	11,926	1,091	123.0	139 / 16

Table 17 - Limited Detailed Flood Hazard Data

Cross Section	Stream Station	Flood Discharge (cfs)	1% Annual Chance Water-Surface Elevation (feet NAVD 88)	Non-Encroachment Width (feet) Left/Right from Stream Centerline
122	12,158	1,091	123.5	122 / 122
122	12,230	1,091	128.1	122 / 122
126	12,576	1,091	128.1	90 / 166
131	13,064	1,091	128.2	16 / 161
135	13,519	1,091	128.4	133 / 30
141	14,062	1,091	129.0	90 / 80
144	14,413	1,091	129.6	25 / 61
145	14,476	814	132.6	49 / 49
148	14,782	814	132.7	147 / 81
153	15,304	814	132.9	28 / 133
158	15,800	814	133.7	24 / 127
162	16,173	814	134.9	49 / 49
162	16,213	814	134.9	49 / 49
165	16,536	814	135.7	24 / 33
170	17,023	814	137.4	16 / 79
176	17,569	814	139.1	24 / 51
181	18,090	814	141.0	63 / 66
186	18,640	814	143.7	50 / 36
192	19,190	814	146.1	56 / 94
194	19,383	814	146.6	20 / 20
195	19,463	587	152.8	20 / 20
197	19,715	587	152.8	71 / 176
201	20,127	587	152.9	74 / 196
204	20,367	587	152.9	158 / 127
Wolfscape Branch				
005	511	716	112.8	128 / 170
010	1,016	716	113.1	115 / 39
015	1,529	716	113.6	182 / 125
020	2,006	716	114.2	124 / 84
025	2,486	716	115.6	49 / 114
030	3,030	716	117.1	93 / 62
033	3,276	716	117.7	59 / 59
033	3,348	716	123.0	59 / 59
035	3,535	716	123.0	159 / 120
041	4,053	716	123.1	80 / 195
046	4,570	716	123.3	21 / 87
051	5,093	598	125.3	75 / 45
056	5,621	598	126.9	20 / 110
062	6,156	598	129.5	12 / 88

¹Elevation includes backwater effects

5.3 Coastal Analyses

This section is not applicable to this FIS project. Table 18 "Summary of Coastal Analyses" does not apply to Duplin County.

6.0 Mapping Methods

6.1 Vertical and Horizontal Control

Vertical Datum

All FISs are referenced to a specific vertical datum. The vertical datum provides a starting point against which flood, ground, and structure elevations can be referenced and compared. With the finalization of the North American Vertical Datum of 1988 (NAVD 88), all North Carolina FISs have been prepared using NAVD 88 as the referenced vertical datum.

All flood elevations shown on the FIRM for Duplin County are referenced to NAVD 88. Structure and ground elevations in the county must, therefore, be referenced to NAVD 88. It is important to note that FISs for adjacent communities in neighboring states may be referenced to NGVD 29. This may result in BFE differences across political boundaries between the communities.

As noted above, the elevations shown in this FIS are referenced to NAVD 88. Ground, structure, and flood elevations may be compared and/or referenced to NGVD 29 by applying a standard conversion factor. The conversion factor for Duplin County is # feet. The locations used to establish the conversion factor were USGS quadrangle corners that fell within the county, as well as those that were within 2.5 miles outside the county. The benchmarks are referenced to NAVD 88. Table 21, "Datum Conversion Locations and Values," is shown below.

Table 21, "Datum Conversion Locations and Values."

Table 21 - Datum Conversion Locations and Values

Latitude	Longitude	Conversion from NGVD29 to NAVD88 (feet)
35.12	-78.13	-0.91
35.13	-78.00	-0.94
35.13	-77.87	-1.00
35.00	-78.12	-0.88
35.00	-78.00	-0.90
35.00	-77.87	-0.96
35.00	-77.75	-1.01
34.88	-78.12	-0.87
34.88	-78.00	-0.90
34.87	-77.88	-0.94
34.87	-77.75	-0.97
34.75	-78.12	-0.83
34.75	-78.00	-0.89
34.75	-77.87	-0.96
34.75	-77.75	-0.98
Average conversion in Duplin County from NGVD 29 to NAVD 88 = -0.93 feet		

The vertical datum conversion factor for all flooding sources which run along a county boundary are in accordance with the conversion factor used in those contiguous counties.

BFEs shown on the FIRM represent whole-foot rounded values. For example, a 1% annual chance water-surface elevation of 102.4 feet will appear as 102 on the FIRM and 102.6 feet will appear as 103. Therefore, users who wish to convert the elevations in this FIS to NGVD 29 should apply the stated conversion factor(s) to elevations shown on the Flood Profiles and/or Water-surface elevation rasters and supporting data tables in the FIS Report, which are shown, at a minimum, to the nearest 0.1 foot.

For more information on NAVD 88, see Converting the National Flood Insurance Program to the North American Vertical Datum of 1988, or contact the Vertical Network Branch, National Geodetic Survey, Coast and Geodetic Survey, National Oceanic and Atmospheric Administration, Rockville, Maryland 20910 (<http://www.ngs.noaa.gov>).

Vertical Control Monuments

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

The National Geodetic Survey establishes precisely located monuments on the North Carolina Grid System and Bench Marks referenced to a vertical datum (NGVD 1929 and NAVD 1988).

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

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

Monuments with a Stability D classification may be used as Elevation Reference Marks (ERMs) when a Stability C or better monument is not an option. These ERMs must be approved by NCGS and can be set and used as elevation bench marks to establish vertical control and produce NC DFIRMs. Including such ERMs will greatly augment North Carolina's useable vertical control network.

In addition, when local jurisdictions have established their own vertical monument network, these monuments may also be shown on the FIRM with the appropriate designations. Local monuments will be placed on the FIRM if the community has requested that they be included and if the monuments meet the aforementioned criteria.

North Carolina Geodetic Survey (NCGS) and contractor surveyed vertical control monuments will be shown on the FIRM panels. Those cataloged by NCGS meet similar requirements to the NGS monuments as described above. Most monuments that have been cataloged by NCGS have been established to NGS standards, but have not been submitted to NGS for inclusion into the NSRS. The qualifying criteria for depicting bench marks established by the State's contractors on the new digital FIRM panels include:

- GPS surveying of permanent 3-D survey monuments to 5-centimeter or better local network accuracy guidelines, in accordance with NOAA Technical Memorandum NOS NGS-58 "Guidelines for Establishing GPS-Derived Ellipsoid Heights (Standards: 2 cm and 5 cm)," and conversion to NAVD 88 orthometric heights using NGS' latest geoid mode;
- Requiring a stability classification of "C" or better; and
- Submitting GPS files and station descriptions to NCGS.

To obtain current information for cataloging local bench marks in the NSRS, please visit the Data Sheet page of the NGS website at <http://www.ngs.noaa.gov/cgi-bin/datasheet.prl>, or contact the NGS Information Services Branch at:

**NGS Information Services
NOAA, N/NGS12
National Geodetic Survey
SSMC-3, #9202
1315 East-West Highway
Silver Spring, Maryland 20910-32822
(301) 713-3242**

Information regarding the NCGS or State contractor bench marks can be obtained through the NCGS website at www.ncgs.state.nc.us, or by phone at (919) 733-3836.

It is important to note that temporary vertical monuments, sometimes called Elevation Reference Marks, are often established during the preparation of a flood hazard analysis for the purpose of establishing local vertical control. Although these monuments are not shown on the FIRM, interested individuals may contact FEMA to access this information.

Horizontal Datum and Control

The digital files that comprise the FIRM are georeferenced to an established coordinate system. The coordinate system used for the production of this FIRM is North Carolina State Plane (FIPZONE 3200) referenced to the North American Datum of 1983 (NAD83), GRS80 ellipsoid.

6.2 Base Map

The FIRMs and FIS Report for this project have been produced in a digital format. The flood hazard information was converted to a Geographic Information System (GIS) format that meets FEMA's FIRM database specifications and geographic information standards. This information is provided in a digital format so that it can be incorporated into a local GIS and be accessed more easily by the community. The FIRM Database includes most of the tabular information contained in the FIS Report in such a way that the data can be associated with pertinent spatial features.

The projection used in the preparation of this map was the North Carolina State Plane Coordinate System. The horizontal datum was NAD83, GRS80 spheroid. Differences in datum, spheroid, or projection used in the production of FIRMs for adjacent states may result in slight positional differences in map features across the state boundary. These differences do not affect the accuracy of this FIRM.

As part of the North Carolina CTS Initiative, North Carolina digital FIRM panel numbers are consistent with the North Carolina Land Records Management Program (LRMP).

The 11-digit digital FIRM panel numbering system for North Carolina is: SS MM LLLL PP X, where SS = State Federal Information Processing Code (37); MM = Easting-Northing (EN) 1,000,000-foot coordinates; LLLL = LRMP map numbers to include the EN 100,000-foot coordinates, and the EN 10,000-foot coordinates; PP = place holders for additional EN 1,000-foot coordinates; and X = suffix ("J" for the initial edition). North Carolina's State Plane Coordinate System origin is outside the State boundary to the southwest (in Georgia), the eastings range from approximately 0,404,000 (Tennessee border) to 3,040,000 (Atlantic Ocean); and the northings range from approximately 0,045,000 (South Carolina border) to 1,043,000 (Virginia border). Digital FIRM panels were compiled at either 1"=1,000', covering an area of 20,000 feet x 20,000 feet (20" x 20" panels); or at 1"=500', covering an area of 10,000 feet x 10,000 feet (20" x 20" panels). An additional 2 digits (both zeros) are held in reserve as a "place holder" in the event that future FIRMs are printed at a larger scale; e.g., 1"=250', covering an area of 5,000 feet x 5,000 feet for which the 1,000-foot coordinates would either be 0 or 5.

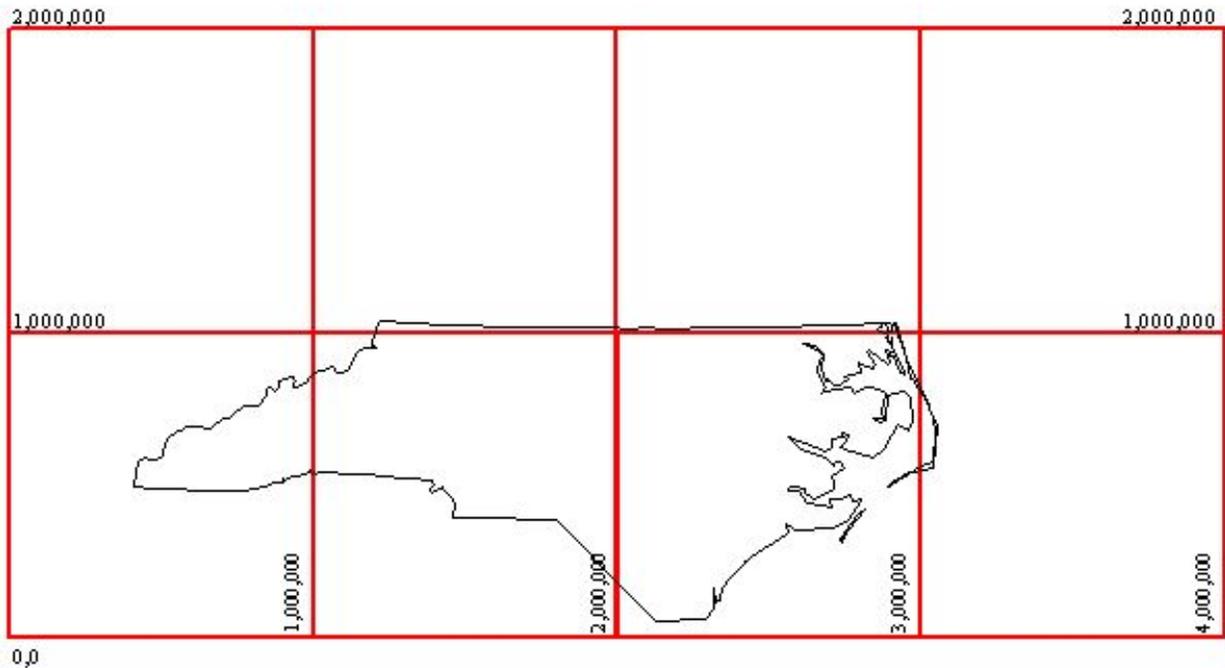


Figure 3 - North Carolina's State Plane Coordinate System

6.3 Floodplain and Floodway Delineation

Floodplain Boundaries

For streams restudied by detailed and limited detailed methods, the 1% and 0.2% annual chance floodplains were delineated using flood elevations determined at each cross section. Between cross sections, the boundaries were interpolated using topographic data acquired using airborne Light Detection and Ranging (LIDAR). This LIDAR data was acquired during the (insert date from basin plan and update for map maintenance, if necessary) flying season.

The topographic data satisfies a vertical root-mean-square error (RMSE) accuracy standard of 20 cm (1.3 feet accuracy at the 95% confidence limit) for the Outer Banks and 25 cm (1.6 feet accuracy at the 95% confidence limit) for those portions of the basin lying west of the Outer Banks. These data could be contoured at roughly a 2-foot vertical contour interval. All elevations were referenced to the NAVD 88 and reflect orthometric heights. Variably spaced, bare-earth digital topographic data in ASCII point file format were combined with imagery (either flown concurrently with the LIDAR data or using existing digital orthophotos) to establish a Triangulated Irregular Network (TIN) of digital elevation points, which include selected breaklines to be used for hydraulic modeling. Furthermore, a uniformly spaced sampling of the TIN resulted in uniformly spaced Digital Elevation Models (DEMs), with 20 ft x 20 ft post spacing, which was generated in multiple file formats.

The 1% annual chance floodplain boundary corresponds to the boundary of the areas of special flood hazards (Zones VE, AO, AH, A99, AR, A, and AE), and the 0.2% annual chance floodplain boundary corresponds to the boundary of areas of moderate flood hazards. In cases where the 1% and 0.2% annual chance floodplain boundaries are close together, only the 1% annual chance floodplain boundaries have been shown.

Floodway Delineation

The floodways presented in this FIS were computed for certain stream segments on the basis of equal conveyance reduction from each side of the floodplain. Floodway widths were computed at cross sections. Between cross sections, the floodway boundaries were interpolated. The results of the floodway computations are tabulated for selected cross sections (Table 22, "Floodway Data"). The computed floodway is shown on the FIRM. In cases where the floodway and 1% annual chance floodplain boundaries are either close together or collinear, only the floodway boundary is shown. In areas where the top of the bridge or road is higher than the 1.0-percent annual chance (100-year) flood, the FIRM will show the flood discharge as contained within the structure for emergency management purposes. It is important to note that FEMA and community floodway regulations still apply in and around those areas.

Table 22 - Floodway Data

Floodway Source		Floodway			Water Surface Elevation			
Cross Section	Distance (Feet Above Mouth)	Width (Feet)	Section Area (Square Feet)	Mean Velocity (Feet Per Second)	Regulatory	Without Floodway	With Floodway	Increase
Doctors Creek								
124	12,430	2,059	7,903	0.5	49.9	49.9	50.9	1.0
128	12,784	630	2,815	2.0	41.3	41.3	42.3	1.0
132	13,220	1,172	5,015	0.8	50.2	50.2	51.2	1.0
134	13,431	540	2,873	2.0	42.3	42.3	43.3	1.0
140	14,028	500	3,151	1.8	43.1	43.1	44.0	1.0
155	15,453	900	4,970	1.1	44.1	44.1	45.0	0.9
168	16,771	600	3,684	1.5	44.9	44.9	45.8	0.9
179	17,877	975	6,041	0.9	45.5	45.5	46.4	0.9
181	18,082	900	5,094	1.1	45.6	45.6	46.5	0.9
190	19,036	1,100	5,895	0.9	46.0	46.0	46.9	1.0
197	19,706	1,140	6,213	0.9	46.2	46.2	47.2	1.0
208	20,806	1,325	5,425	1.0	46.6	46.6	47.6	1.0
216	21,595	1,220	6,125	0.9	47.2	47.2	48.2	1.0
225	22,521	1,110	6,449	0.8	47.8	47.8	48.8	1.0
227	22,700	1,095	6,404	0.8	47.9	47.9	48.9	1.0
Little Rockfish Creek								
041	4,107	194	813	2.7	27.0	27.0	27.5	0.5
043	4,348	82	519	4.1	27.5	27.5	27.8	0.2
046	4,560	77	616	3.4	28.0	28.0	28.3	0.4
051	5,111	127	704	3.0	28.7	28.7	29.2	0.6
054	5,365	89	518	4.1	29.0	29.0	29.6	0.6
058	5,759	85	625	3.4	29.6	29.6	30.5	0.9
063	6,349	100	600	3.5	30.5	30.5	31.4	0.9
066	6,611	135	784	2.7	31.0	31.0	31.9	0.9
068	6,810	115	713	3.0	31.2	31.2	32.1	0.9
072	7,166	150	907	2.3	31.7	31.7	32.6	0.9
079	7,891	156	861	2.5	32.4	32.4	33.4	1.0
082	8,249	47	369	5.5	32.8	32.8	33.7	0.9
085	8,502	47	458	4.4	33.7	33.7	34.3	0.6
088	8,844	59	507	4.0	33.9	33.9	34.7	0.8
091	9,094	126	1,015	2.0	34.3	34.3	35.3	1.0
095	9,487	76	580	3.5	34.6	34.6	35.5	0.9
098	9,782	70	442	4.4	35.0	35.0	35.9	0.9
102	10,241	85	645	3.0	35.7	35.7	36.6	0.9
106	10,650	90	705	2.8	35.9	35.9	36.9	1.0
109	10,942	95	686	2.8	36.1	36.1	37.0	0.9
115	11,454	90	724	2.7	36.4	36.4	37.3	1.0
120	11,980	87	621	3.1	36.6	36.6	37.6	1.0
122	12,151	66	553	3.5	36.8	36.8	37.7	1.0
123	12,284	96	705	2.7	37.2	37.2	38.0	0.9
124	12,366	96	743	2.6	37.3	37.3	38.1	0.8
124	12,419	118	706	2.7	37.3	37.3	38.2	0.8
125	12,500	662	5,279	0.4	44.0	44.0	44.1	0.1
131	13,080	648	5,310	0.4	44.0	44.0	44.1	0.1

Table 22 - Floodway Data

Floodway Source		Floodway			Water Surface Elevation			
Cross Section	Distance (Feet Above Mouth)	Width (Feet)	Section Area (Square Feet)	Mean Velocity (Feet Per Second)	Regulatory	Without Floodway	With Floodway	Increase
136	13,591	335	1,588	1.2	44.0	44.0	44.0	0.1
Northeast Cape Fear River								
3556	355,629	3,970	42,609	0.6	26.7	26.7	27.0	0.3
3576	357,624	2,820	27,543	1.0	26.8	26.8	27.0	0.3
3628	362,794	2,987	27,591	1.0	27.2	27.2	27.6	0.4
3657	365,695	2,775	21,863	1.2	27.5	27.5	27.9	0.4
3727	372,691	3,800	35,575	0.8	28.0	28.0	28.6	0.6
3770	377,000	2,295	18,283	1.5	28.2	28.2	28.8	0.7
3801	380,061	3,295	36,488	0.8	28.5	28.5	29.2	0.7
3849	384,865	2,055	28,152	1.0	28.7	28.7	29.5	0.7
3894	389,443	4,120	54,445	0.5	28.9	28.9	29.7	0.8
3920	391,981	3,500	47,546	0.6	28.9	28.9	29.7	0.8
3951	395,060	2,985	43,855	0.6	29.1	29.1	29.9	0.8
3975	397,515	3,135	42,754	0.6	29.2	29.2	30.0	0.8
4026	402,584	2,785	35,396	0.7	29.4	29.4	30.2	0.8
4049	404,864	3,650	43,903	0.6	29.5	29.5	30.3	0.8
4073	407,269	3,450	41,497	0.6	29.6	29.6	30.4	0.8
4120	412,008	2,345	28,560	0.9	29.7	29.7	30.6	0.8
4165	416,522	2,510	27,517	0.9	30.1	30.1	30.9	0.8
4229	422,896	2,610	26,644	1.0	30.5	30.5	31.3	0.8
4289	428,868	2,150	22,561	1.1	30.9	30.9	31.7	0.8
4306	430,609	1,675	15,100	1.7	31.0	31.0	31.9	0.9
4330	432,950	3,563	20,724	1.2	31.5	31.5	32.3	0.8
4331	433,146	3,608	22,521	1.1	31.6	31.6	32.4	0.9
4363	436,269	2,735	27,330	0.9	31.8	31.8	32.7	0.9
6574	657,427	720	2,717	1.7	87.4	87.4	87.9	0.5
6600	659,980	446	2,606	1.6	89.9	89.9	90.7	0.8
6641	664,099	834	3,626	1.2	91.3	91.3	92.3	1.0
6678	667,803	942	4,450	1.0	93.2	93.2	93.9	0.8
6731	673,088	770	4,341	1.0	95.8	95.8	96.2	0.4
6771	677,146	667	2,867	1.5	97.0	97.0	97.7	0.7
6805	680,488	113	1,030	4.1	99.2	99.2	100.0	0.9
6836	683,563	894	4,717	0.8	100.2	100.2	101.2	1.0
6875	687,523	684	3,404	1.1	101.5	101.5	102.5	1.0
6912	691,202	881	3,428	0.9	103.0	103.0	103.7	0.8
6951	695,126	846	2,601	1.2	104.0	104.0	104.9	0.8
6997	699,729	583	1,819	1.4	106.3	106.3	106.9	0.6
7011	701,117	106	702	3.6	107.3	107.3	107.8	0.5
7030	703,036	372	1,433	1.8	109.6	109.6	110.0	0.4
7061	706,095	374	1,521	1.2	111.8	111.8	112.4	0.6
7085	708,544	355	1,378	1.3	113.1	113.1	113.7	0.6
7106	710,553	349	1,288	1.4	114.0	114.0	114.6	0.6
7121	712,147	344	1,262	1.2	115.0	115.0	115.6	0.6
7133	713,272	290	740	2.1	116.0	116.0	116.6	0.6
7151	715,117	276	878	1.8	117.7	117.7	118.2	0.6

Table 22 - Floodway Data

Floodway Source		Floodway			Water Surface Elevation			
Cross Section	Distance (Feet Above Mouth)	Width (Feet)	Section Area (Square Feet)	Mean Velocity (Feet Per Second)	Regulatory	Without Floodway	With Floodway	Increase
7163	716,334	233	1,100	1.4	120.0	120.0	120.5	0.6
7182	718,225	293	1,012	1.6	121.0	121.0	121.6	0.6
7209	720,897	195	856	1.3	124.1	124.1	124.7	0.6
7228	722,774	229	905	1.3	126.0	126.0	126.6	0.7
7245	724,483	170	630	1.8	127.4	127.4	128.3	0.9
7260	726,025	250	782	1.1	128.8	128.8	129.7	0.8
7269	726,940	186	581	1.5	131.0	131.0	131.4	0.4
7271	727,108	126	339	2.5	131.2	131.2	131.6	0.4
7277	727,680	67	263	3.2	132.6	132.6	133.0	0.4
7281	728,111	59	260	3.3	133.4	133.4	133.8	0.4
7286	728,633	88	320	2.6	134.0	134.0	134.7	0.7
7292	729,241	51	207	4.1	135.4	135.4	136.2	0.8
7298	729,797	77	333	2.6	137.2	137.2	138.1	0.9
7305	730,458	48	268	3.2	138.2	138.2	139.2	0.9
7310	731,034	60	216	3.9	139.3	139.3	140.2	0.8
7315	731,524	80	326	2.6	141.3	141.3	142.3	1.0
Rockfish Creek								
781	781	2,371	13,864	0.9	26.2 ¹	19.1	20.0	0.9
038	3,789	489	3,539	3.4	26.2 ¹	19.9	20.8	0.9
061	6,079	1,226	6,714	1.8	26.2 ¹	21.8	22.8	0.9
101	10,068	1,301	8,780	1.4	26.2 ¹	23.2	24.2	1.0
130	12,961	1,429	8,796	1.4	26.2 ¹	25.0	25.8	0.8
155	15,515	1,541	10,118	1.2	26.2 ¹	25.3	26.2	0.8
199	19,919	1,889	17,771	0.7	26.2 ¹	25.8	26.7	0.9
235	23,505	1,038	7,667	1.6	26.2 ¹	26.1	27.0	0.9
266	26,582	1,347	15,255	0.8	26.6	26.6	27.6	1.0
356	35,592	1,642	9,918	1.1	28.8	28.8	29.5	0.7
358	35,794	1,160	8,041	1.4	28.8	28.8	29.5	0.7
361	36,054	750	6,304	1.8	29.0	29.0	29.6	0.7
363	36,286	735	6,926	1.6	29.0	29.0	29.9	0.9
366	36,609	680	6,270	1.8	29.0	29.0	29.9	0.9
369	36,884	815	7,037	1.6	29.1	29.1	30.0	0.9
378	37,753	885	8,563	1.3	29.2	29.2	30.1	0.9
386	38,552	815	10,375	1.0	29.4	29.4	30.4	0.9
396	39,574	850	7,020	1.4	29.4	29.4	30.4	1.0
404	40,395	995	6,981	1.5	29.6	29.6	30.6	1.0
415	41,517	633	6,777	1.5	30.0	30.0	31.0	1.0
425	42,468	630	6,084	1.7	30.2	30.2	31.2	1.0
434	43,448	655	5,832	1.8	30.6	30.6	31.5	0.9
445	44,480	710	5,753	1.8	31.0	31.0	32.0	0.9
456	45,631	798	7,689	1.3	31.4	31.4	32.4	1.0
463	46,322	1,193	6,294	1.6	31.7	31.7	32.6	0.9
464	46,425	1,193	7,399	1.4	31.8	31.8	32.8	1.0
468	46,815	1,100	8,559	1.2	31.8	31.8	32.8	1.0
469	46,927	1,085	8,572	1.2	31.9	31.9	32.8	1.0

Table 22 - Floodway Data

Floodway Source		Floodway			Water Surface Elevation			
Cross Section	Distance (Feet Above Mouth)	Width (Feet)	Section Area (Square Feet)	Mean Velocity (Feet Per Second)	Regulatory	Without Floodway	With Floodway	Increase
480	47,952	1,100	6,085	1.7	32.2	32.2	33.2	1.0
491	49,067	1,450	11,417	0.9	32.7	32.7	33.7	1.0
499	49,914	760	6,275	1.6	32.9	32.9	33.8	1.0
508	50,847	1,090	10,818	0.9	33.3	33.3	34.2	0.9
515	51,536	1,175	7,174	1.4	33.5	33.5	34.4	0.9
517	52,545	1,959	10,659	0.9	34.0	34.0	35.0	1.0
Rockfish Creek Tributary								
006	638	58	232	4.7	34.0 ¹	26.7	27.5	0.9
007	736	60	305	3.5	34.0 ¹	27.1	28.0	1.0
009	920	25	118	9.1	34.0 ¹	27.3	28.1	0.8
010	1,039	66	673	1.6	36.2	36.2	37.1	0.9
013	1,278	70	667	1.6	36.2	36.2	37.1	0.9
015	1,539	82	653	1.7	36.3	36.3	37.2	1.0
018	1,793	60	398	2.7	36.2	36.2	37.2	1.0
021	2,087	61	368	2.9	*	*	37.4	*
024	2,394	61	549	2.0	38.3	38.3	39.1	0.8
026	2,626	80	686	1.6	38.3	38.3	39.2	1.0
029	2,933	78	579	1.9	38.3	38.3	39.3	1.0
036	3,556	56	336	3.2	38.7	38.7	39.7	1.0

¹Elevation includes backwater effects

* Values not computed for this station

6.4 Coastal Flood Hazard Mapping

Flood insurance zones and BFEs including the wave effects were identified on each transect based on the results from the onshore wave hazard analyses. Between transects, elevations were interpolated using topographic maps, land-use and land-cover data, and knowledge of coastal flood processes to determine the aerial extent of flooding. Sources for topographic data are shown in Table 23.

Zone VE is subdivided into elevation zones and BFEs are provided on the FIRM.

The limit of Zone VE shown on the FIRM is defined as the farthest inland extent of any of these criteria (determined for the 1% annual chance flood condition):

- *The primary frontal dune zone* is defined in 44 CFR Section 59.1 of the NFIP regulations. The primary frontal dune represents a continuous or nearly continuous mound or ridge of sand with relatively steep seaward and landward slopes that occur immediately landward and adjacent to the beach. The primary frontal dune zone is subject to erosion and overtopping from high tides and waves during major coastal storms. The inland limit of the primary frontal dune zone occurs at the point where there is a distinct change from a relatively steep slope to a relatively mild slope.
- *The wave runup zone* occurs where the (eroded) ground profile is 3.0 feet or more below the 2-percent wave runup elevation.
- *The wave overtopping splash zone* is the area landward of the crest of an overtopped barrier, in cases where the potential 2-percent wave runup exceeds the barrier crest elevation by 3.0 feet or more.

- *The breaking wave height zone* occurs where 3-foot or greater wave heights could occur (this is the area where the wave crest profile is 2.1 feet or more above the total stillwater elevation).
- *The high-velocity flow zone* is landward of the overtopping splash zone (or area on a sloping beach or other shore type), where the product of depth of flow times the flow velocity squared (hv^2) is greater than or equal to 200 ft³/sec². This zone may only be used on the Pacific Coast.

The SFHA boundary indicates the limit of SFHAs shown on the FIRM as either “V” zones or “A” zones.

Table 23, “Summary of Coastal Transect Mapping Considerations” is not applicable in Duplin County.

A LiMWA boundary has also been added in coastal areas subject to wave action for use by local communities in safe rebuilding practices. The LiMWA represents the approximate landward limit of the 1.5-foot breaking wave. In areas where the Zone VE designation is based on the presence of a primary frontal dune the LiMWA was not delineated.

7.0 Revising the FIS

7.1 Letters of Map Amendment and Letters of Map Revision - Based on Fill

LOMAs and LOMR-Fs are documents issued by FEMA that officially remove a property and/or a structure from a Special Flood Hazard Area (SFHA), if data supporting the removal are submitted. LOMAs and LOMR-Fs are generally determinations regarding areas that are too small to be shown on a FIRM panel; consequently, the changes they describe become official without revising the FIRM or the FIS Report.

NFIP regulations require that the lowest adjacent grade (the lowest ground touching the structure) be at or above the 1% annual chance flood elevation for a LOMA to be issued. Currently, there is no fee for FEMA’s review of a LOMA request, but the requester of a LOMA is responsible for providing all the information needed for the review, which may include structure and/or property elevations certified by a licensed land surveyor or professional engineer. Therefore, LOMA requesters may need to retain the services of a land surveyor or engineer.

A LOMA cannot be used for property on which fill has been placed. For those situations, a LOMR-F must be used. As a participant in the NFIP, a local government must adopt ordinances that meet the minimum Federal floodplain management standards, which are outlined in Section 60.3 of the NFIP regulations. For a number of reasons, these ordinances generally vary from community to community. Nonetheless, because the placement of fill within the floodplain can affect flood hazards in the surrounding area, additional information is needed before FEMA can process a LOMR-F request. Among the data required for a LOMR-F is the community acknowledgment form. This form is FEMA’s assurance that all appropriate Federal, State, and local floodplain management requirements have been met. Furthermore, NFIP regulations require that the lowest adjacent grade (the lowest ground touching the structure) be at or above the 1% annual chance flood elevation for a LOMR-F to be issued removing the structure from the floodplain. Because LOMR-F requests are the result of changed physical conditions rather than limitations of scale or topographic definition, FEMA charges a fee for the review of a LOMR-F request. As with the LOMA, the requester of a LOMR-F is responsible for providing all supporting information, including structure and/or property elevation data.

In cases where property owners plan to add fill in the SFHA, NFIP regulations require plans and technical information to be submitted for review by FEMA before construction takes place. FEMA will issue a conditional LOMR-F stating how flood hazards would change and what portions of the property, if any, would remain in the SFHA if the project were built according to the submitted plans.

The issuance of a LOMA or LOMR-F ends the property owner’s obligation to purchase flood insurance as a condition of Federal or federally backed financing. However, the property owner’s mortgage company maintains the prerogative to require flood insurance as

a condition of providing financing. Before attempting to obtain a LOMA or LOMR-F, property owners are advised to consult their mortgage companies regarding this policy. Even if the mortgage company indicates that it will require flood insurance if a LOMA or LOMR-F is issued, it may be advantageous for property owners to request a LOMA or LOMR-F because flood insurance premiums are lower for properties removed from the SFHA than for properties that remain within the SFHA.

For additional information regarding LOMAs, LOMR-Fs, conditional LOMR-Fs, or current application fees, please call the FEMA Map Information eXchange (FMIX) toll-free information line at 1-877-FEMA MAP (1-877-336-2627).

7.2 Letters of Map Revision

A Letter of Map Revision (LOMR) is a document issued by FEMA and the NCFMP that revises an FIS Report and/or FIRM. A LOMR is used to change flood risk zones, floodplain and/or floodway delineations, flood elevations, or planimetric features such as road systems or corporate limits. A LOMR provides FEMA and the NCFMP with a cost-effective means of revising the FIS information without physically changing and reprinting the map or report itself. A portion of the FIRM panel or FIS Report showing the revised information is issued with the LOMR. The LOMR is sent to all affected communities and is archived in the communities' NFIP map repository for public reference.

In cases where a proposed project (such as construction in the 1% annual chance floodplain) would result in a significant rise in 1% annual chance water-surface elevations, NFIP regulations require the community to submit plans and technical information for review by FEMA and the NCFMP before construction takes place. This assures communities participating in the NFIP that proposed projects meet minimum NFIP requirements. The result of FEMA and the NCFMP reviews is documented in a conditional LOMR.

For additional information regarding LOMRs, conditional LOMRs, or current application fees, please call the FEMA Map Assistance Center toll-free information line at 1-877-FEMA MAP (1-877-336-2627) or the NCFMP at 919-715-5711.

7.3 Physical Map Revisions

Physical Map Revisions (PMRs) are processed to incorporate information concerning conditions present in the community that are not reflected in the FIS, and involve distributing republished FISs that supersede the most current NFIP data in the community repository. PMRs may be initiated by a request from a community resident or agency, or FEMA may initiate a PMR to incorporate one or more LOMRs, to reflect significant changes in corporate limits, to correct errors, or to update flood hazards to match new information from an adjacent community's FIS. Due to the costs associated with updating and distributing FISs, map revisions will be processed as LOMRs rather than PMRs whenever possible. For more information regarding PMRs, please contact the FEMA Map Information eXchange (FMIX) toll-free information line at 1-877-FEMA MAP (1-877-336-2627), the FEMA Regional Office at the address listed on the Notice to Flood Insurance Study Users page at the front of this report, or the NCFMP at 919-715-5711.

7.4 Contracted Restudies

The NFIP provides for a periodic review and restudy of flood hazards in a given community. FEMA accomplishes this through a national mapping needs assessment process that assigns priorities and allocates funds to sponsor or subsidize new flood hazard analyses used to update FIS Reports. For map maintenance restudies within the state of North Carolina, scoping will be performed by county approximately 2.5-3.5 years after the previous effective date. Scoping will focus on streams with restudy needs within those previously effective counties rather than on full countywide restudies. A restudy refers specifically to updating or reevaluating engineering analyses that were performed for a flood mapping project that directly impact BFEs and/or flood hazard boundary extents or analysis of previously unstudied flood prone areas. Restudy project evaluation triggers and prioritization values are an essential component of the map maintenance program. For more information regarding NCFMP-contracted restudies, please contact the NCFMP at 919-715-5711 or at www.ncfloodmaps.com. For more information regarding FEMA-contracted restudies, please contact the FEMA Map Information eXchange (FMIX) toll-free information line at 1-877-FEMA MAP(1-877-336-2627) or the FEMA Regional Office at the address listed on the Notice to Flood Insurance Study Users page at the front of this report.

7.5 Map Revision History

The current FIRM is a subset of the Statewide FIRM, showing flood hazard information for the entire geographic area of Duplin County. Previously, separate Flood Hazard Boundary Maps (FHBM), Flood Boundary and Floodway Maps (FBFMs), and/or FIRMs were prepared for each identified flood prone jurisdiction within the county. Historical data relating to the NFIP maps prepared for each community prior to and including the 2/16/2006 North Carolina Statewide FIRM, which includes Duplin County, are presented in Table 22, "Community Map History."

Information pertaining to revised and unrevised flood hazards for each jurisdiction within Duplin County has been compiled into this FIS. Therefore, this FIS supersedes all previously printed FIS Reports, FHBM, FIRMs, and/or FBFMs for all of the incorporated and unincorporated jurisdictions within Duplin County.

Table 24 - Map Revision History

Community	Initial Identification Date	Initial FIRM Effective Date	FIS Revision Date
DUPLIN COUNTY	2/24/1978	7/4/1989	02/16/2006
TOWN OF BEULAVILLE	2/16/2006	2/16/2006	02/16/2006
TOWN OF CALYPSO	2/16/2006	2/16/2006	02/16/2006
TOWN OF FAISON	2/24/1978	7/4/1989	02/16/2006
TOWN OF GREENEVERS	2/16/2006	2/16/2006	02/16/2006
TOWN OF HARRELLS	1/5/2007	1/5/2007	01/05/2007
TOWN OF KENANSVILLE	6/24/1977	7/17/1986	02/16/2006
TOWN OF MAGNOLIA	2/16/2006	2/16/2006	02/16/2006
TOWN OF MOUNT OLIVE	6/17/1977	2/17/1982	04/16/2013
TOWN OF ROSE HILL	2/16/2006	2/16/2006	02/16/2006
TOWN OF TEACHEY	2/16/2006	2/16/2006	02/16/2006
TOWN OF WALLACE	6/14/1974	4/2/1986	02/16/2006
TOWN OF WARSAW	2/16/2006	2/16/2006	02/16/2006

8.0 Study Contracting and Community Coordination

8.1 Authority and Acknowledgments

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

This FIS revises and updates the previous countywide FIS for the geographic area of Duplin County and Incorporated Areas. Table 25, "Authority and Acknowledgments," includes information for the previous countywide FIS and for this revision. This table also includes information for the single-jurisdiction FISs published for each community included in this countywide FIS (if available) as compiled from their previously printed FIS Reports

Table 25 — Authority and Acknowledgments

Community	FIS Dated	Study Contracted By	Data Source	Contract or IAA Number	Work Completed In
DUPLIN COUNTY	2/16/2006	NCFMP	NCFMP	286-000022	3/1/2013
DUPLIN COUNTY	2/16/2006	NCFMP	NCFMP	286-000022	2/5/2014
DUPLIN COUNTY	2/16/2006	NCFMP	NCFMP	286-0000-23	8/8/8888
TOWN OF BEULAVILLE	2/16/2006	NCFMP	NCFMP	286-000022	3/1/2013
TOWN OF BEULAVILLE	2/16/2006	NCFMP	NCFMP	286-000022	2/5/2014
TOWN OF BEULAVILLE	2/16/2006	NCFMP	NCFMP	286-0000-23	8/8/8888
TOWN OF CALYPSO	2/16/2006	NCFMP	NCFMP	286-000022	3/1/2013
TOWN OF CALYPSO	2/16/2006	NCFMP	NCFMP	286-000022	2/5/2014
TOWN OF CALYPSO	2/16/2006	NCFMP	NCFMP	286-0000-23	8/8/8888
TOWN OF FAISON	2/16/2006	NCFMP	NCFMP	286-000022	3/1/2013
TOWN OF FAISON	2/16/2006	NCFMP	NCFMP	286-000022	2/5/2014
TOWN OF FAISON	2/16/2006	NCFMP	NCFMP	286-0000-23	8/8/8888
TOWN OF GREENEVERS	2/16/2006	NCFMP	NCFMP	286-000022	3/1/2013
TOWN OF GREENEVERS	2/16/2006	NCFMP	NCFMP	286-000022	2/5/2014
TOWN OF GREENEVERS	2/16/2006	NCFMP	NCFMP	286-0000-23	8/8/8888

Table 25 — Authority and Acknowledgments

Community	FIS Dated	Study Contracted By	Data Source	Contract or IAA Number	Work Completed In
TOWN OF HARRELLS	2/16/2006	NCFMP	NCFMP	286-000022	3/1/2013
TOWN OF HARRELLS	2/16/2006	NCFMP	NCFMP	286-000022	2/5/2014
TOWN OF HARRELLS	2/16/2006	NCFMP	NCFMP	286-0000-23	8/8/8888
TOWN OF KENANSVILLE	2/16/2006	NCFMP	NCFMP	286-000022	3/1/2013
TOWN OF KENANSVILLE	2/16/2006	NCFMP	NCFMP	286-000022	2/5/2014
TOWN OF KENANSVILLE	2/16/2006	NCFMP	NCFMP	286-0000-23	8/8/8888
TOWN OF MAGNOLIA	2/16/2006	NCFMP	NCFMP	286-000022	3/1/2013
TOWN OF MAGNOLIA	2/16/2006	NCFMP	NCFMP	286-000022	2/5/2014
TOWN OF MAGNOLIA	2/16/2006	NCFMP	NCFMP	286-0000-23	8/8/8888
TOWN OF MOUNT OLIVE	2/16/2006	NCFMP	NCFMP	286-000022	3/1/2013
TOWN OF MOUNT OLIVE	2/16/2006	NCFMP	NCFMP	286-000022	2/5/2014
TOWN OF MOUNT OLIVE	2/16/2006	NCFMP	NCFMP	286-0000-23	8/8/8888
TOWN OF ROSE HILL	2/16/2006	NCFMP	NCFMP	286-000022	3/1/2013
TOWN OF ROSE HILL	2/16/2006	NCFMP	NCFMP	286-000022	2/5/2014
TOWN OF ROSE HILL	2/16/2006	NCFMP	NCFMP	286-0000-23	8/8/8888
TOWN OF TEACHEY	2/16/2006	NCFMP	NCFMP	286-000022	3/1/2013
TOWN OF TEACHEY	2/16/2006	NCFMP	NCFMP	286-000022	2/5/2014
TOWN OF TEACHEY	2/16/2006	NCFMP	NCFMP	286-0000-23	8/8/8888
TOWN OF WALLACE	2/16/2006	NCFMP	NCFMP	286-000022	3/1/2013
TOWN OF WALLACE	2/16/2006	NCFMP	NCFMP	286-000022	2/5/2014
TOWN OF WALLACE	2/16/2006	NCFMP	NCFMP	286-0000-23	8/8/8888
TOWN OF WARSAW	2/16/2006	NCFMP	NCFMP	286-000022	3/1/2013
TOWN OF WARSAW	2/16/2006	NCFMP	NCFMP	286-000022	2/5/2014
TOWN OF WARSAW	2/16/2006	NCFMP	NCFMP	286-0000-23	8/8/8888

This FIS Report was produced through a unique cooperative partnership between the State of North Carolina and FEMA. The State of North Carolina, through FEMA’s Cooperating Technical Partner (CTP) Initiative, has become the first Cooperating Technical State (CTS) and will assume primary ownership of the NFIP FIRM panels for all North Carolina communities. This role has traditionally been fulfilled by FEMA. The North Carolina Floodplain Mapping Program is conducting flood hazard analyses and producing updated, digital FIRM panels. The hydrologic and hydraulic analyses and the FIRM panels for the initial statewide mapping for Duplin County were produced by NCFMP under contract with the State of North Carolina and issued on effective 4/30/2014. For this revision, the hydrologic and hydraulic analyses and the FIRM panels were produced by NCFMP, under contract with the State of North Carolina.

8.2 Consultation Coordination Officer's Meetings/Scoping Meetings

In general, for each FIS an initial Consultation Coordination Officer’s (CCO) meeting is held with representatives from FEMA, the communities, and the study contractors to explain the nature and purpose of the FIS and to identify the streams to be studied by detailed methods. A final CCO meeting is held with representatives from FEMA, the communities, and the study contractors to review the results of the study

The dates of the initial and final CCO meetings held for Duplin County and Incorporated Areas were compiled from the previous countywide FIS Report and are shown in Table 26, “Consultation Coordination Officer’s Meetings

Table 26 — Consultation Coordination Officer’s Meetings

Community	For FIS Dated	Initial CCO Date	Attended By	Final CCO Date	Attended By
TOWN OF MOUNT OLIVE	8/17/1981	12/6/1978	USACE, FEMA, town officials, and local residents	3/5/1981	USACE, FEMA, and local officials
TOWN OF MOUNT OLIVE	8/17/1981	12/6/1978	USACE, FEMA, town officials, and local residents	4/13/1981	Representatives of the U.S. Army Corps of Engineers, FEMA, County officials, and local residents
TOWN OF MOUNT OLIVE ETJ	8/17/1981	12/6/1978	USACE, FEMA, town officials, and local residents	3/5/1981	USACE, FEMA, and local officials
TOWN OF MOUNT OLIVE ETJ	8/17/1981	12/6/1978	USACE, FEMA, town officials, and local residents	4/13/1981	Representatives of the U.S. Army Corps of Engineers, FEMA, County officials, and local residents

For each FIS produced during the initial phase of statewide, an Initial Scoping Meeting was held with representatives from FEMA, the county, the incorporated communities, and the State of North Carolina. A Final Scoping meeting was held to review the Draft Basin Plan and finalize the streams to be studied by detailed methods. This information was then used to create the Final Basin Plan.

For map maintenance revisions, only one scoping meeting was held to identify the streams to be newly studied by detailed methods, redelineated, or to be studied by limited detailed methods. This information was then used to create the Map Maintenance Plan.

The historical dates of the Initial and Final Scoping Meetings held during the first round of statewide mapping for Duplin County are shown in Table 27, "Scoping Meetings." Meetings held for the map maintenance revision are also included below for Duplin County.

Table 27 — Scoping Meetings

Community	Riverbasin	Initial Scoping Date	Attended By	Final Scoping Date	Attended By
DUPLIN COUNTY	CAPE FEAR	12/8/2000	FEMA, State of NC Emergency Management, community officials, and Dewberry	3/8/2001	FEMA, State of NC Emergency Management, community officials, and Dewberry
TOWN OF MOUNT OLIVE	NEUSE	12/14/2000	Representatives of Wayne County and Incorporated Communities, FEMA, NCDEM, NCCGIA, and Dewberry	4/23/2001	Representatives of Wayne County and Incorporated Communities, FEMA, NCDEM, NCCGIA, and Dewberry
TOWN OF MOUNT OLIVE ETJ	NEUSE	12/14/2000	Representatives of Wayne County and Incorporated Communities, FEMA, NCDEM, NCCGIA, and Dewberry	4/23/2001	Representatives of Wayne County and Incorporated Communities, FEMA, NCDEM, NCCGIA, and Dewberry

Preliminary Meetings are held in each county to disseminate and review the FIS Report and FIRM panels. This meeting is required by FEMA. Public Participation Meetings are not required by FEMA, but provide an opportunity to review and discuss the FIS Report and FIRM panels for each jurisdiction in a public setting. The dates for the preliminary and public participation meetings are shown in Table 28, "Preliminary and Public Participation Meetings."

Table 28 — Preliminary and Public Participation Meetings

Community	For FIS Dated	Meeting Location	Preliminary Meeting Date	Attended By	Public Meeting Date	Attended By
TOWN OF KENANSVILLE	2/16/2006	Town of Kenansville	3/31/2005	Officials from Duplin county and NCDEM	4/21/2005	The Public
TOWN OF KENANSVILLE ETJ	2/16/2006	Town of Kenansville	3/31/2005	Officials from Duplin county and NCDEM	4/21/2005	The Public

9.0 Guide to Additional Information

Information concerning the pertinent data used in the preparation of this FIS Report can be obtained by submitting an order with any required payment to the FEMA Engineering Library. For more information on this process, see <http://www.fema.gov>.

The Map Repositories table below lists locations where FIRMs for Duplin County can be viewed. Please note that the maps at these locations are for reference only and are not for distribution. Also, please note that only the maps for the community listed in the table are available at that particular repository. A user may need to visit another repository to view maps from an adjacent community.

Table 27 — Map Repositories

Community	Address	City	State	Zip Code
Town of Wallace	Wallace Town Hall, 316 East Murray Street	Wallace	NC	28466
Duplin County	Duplin County Planning Department, 224 Seminary Street	Kenansville	NC	28349
Town of Harrells	Harrells Town Hall, 372 Tomahawk Highway	Harrells	NC	28444
Town of Teachey	NP	Teachey	NC	NP
Town of Greenevers	NP	Greenevers	NC	NP
Town of Rose Hill	Rose Hill Town Hall, 103 Southeast Railroad Street	Rose Hill	NC	28458

Table 27 — Map Repositories

Town of Warsaw	Warsaw Town Hall, 121 South Front Street	Warsaw	NC	28398
Town of Beulaville	Beulaville, Town Hall, 111 West Quinn Street	Beulaville	NC	28518
Town of Calypso	Calypso Town Hall, 103 West Trade Street	Calypso	NC	28325
Town of Faison	Faison Town Hall, 110 Northeast Center Street	Faison	NC	28341
Town of Kenansville	Kenansville Town Hall, 141 Routledge Road	Kenansville	NC	28349
Town of Magnolia	Magnolia Town Hall, 113 North Railroad Street	Magnolia	NC	28453
Town of Mount Olive	Mount Olive Town Hall, 114 East James Street	Mount Olive	NC	28365

9.1 Additional Information

All FIRM panels created for the State of North Carolina are produced in a seamless statewide format; however, FIS Reports are produced for individual counties.

Copies of FIRM panels are available for a nominal fee. To obtain a copy of the current flood map for a specific community, contact the FEMA Map Service Center at 1-800-358-9616. To facilitate the processing of your request, please review the current flood map on file at your local community repository and obtain the panel number in which you are interested. If necessary, users may also order a FIRM Index from the Map Service Center to determine the appropriate panel numbers. The Map Service Center also accepts orders for the Community Status Book and the Flood Insurance Manual. The FIS Report, FIRM panels, and digital data used to produce the FIRM panels are available online at www.ncfloodmaps.com.

Information concerning the data used in the preparation of this FIS, contained in an Engineering Study Data Package, may be obtained by contacting the FEMA Regional Office at the address listed on the Notice to Flood Insurance Study Users page at the front of this report.

Table 28, "Additional Information" is not applicable in Duplin County.

10.0 Appendix

10.1 Bibliography

All bibliography and reference information associated within this Flood Insurance Study are maintained and accessible within the geodatabase structure and associated metadata. Users requiring more specific information should contact the North Carolina Floodplain Mapping Program (NCFMP) at www.ncfloodmaps.com under the Contacts menu