

PRELIMINARY FLOOD INSURANCE STUDY

FEDERAL EMERGENCY MANAGEMENT AGENCY

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



Community Name	Community Number
ORANGE COUNTY	370342
TOWN OF CARRBORO	370275
TOWN OF CHAPEL HILL	370180
TOWN OF HILLSBOROUGH	370343



PRELIMINARY: 8/30/2013

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Federal Emergency Management Agency

State of North Carolina

Flood Insurance Study Number

37135CV000

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
2/2/2007	Initial Countywide FIS Report Effective Date

This FIS has been produced as part of the North Carolina Floodplain Mapping Program. Orange 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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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 Orange County and the jurisdictions therein (hereinafter referred to collectively as Orange 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 Orange County, North Carolina, including the jurisdictions listed in Table 1.

Table 1 - Jurisdictions in Orange County

Community	Included in this FIS	If Not Included, Location of Flood Hazard/Flood Insurance Rate Data
ORANGE COUNTY	Yes	*
TOWN OF CARRBORO	Yes	*
TOWN OF CHAPEL HILL	Yes	*
TOWN OF HILLSBOROUGH	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.

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.

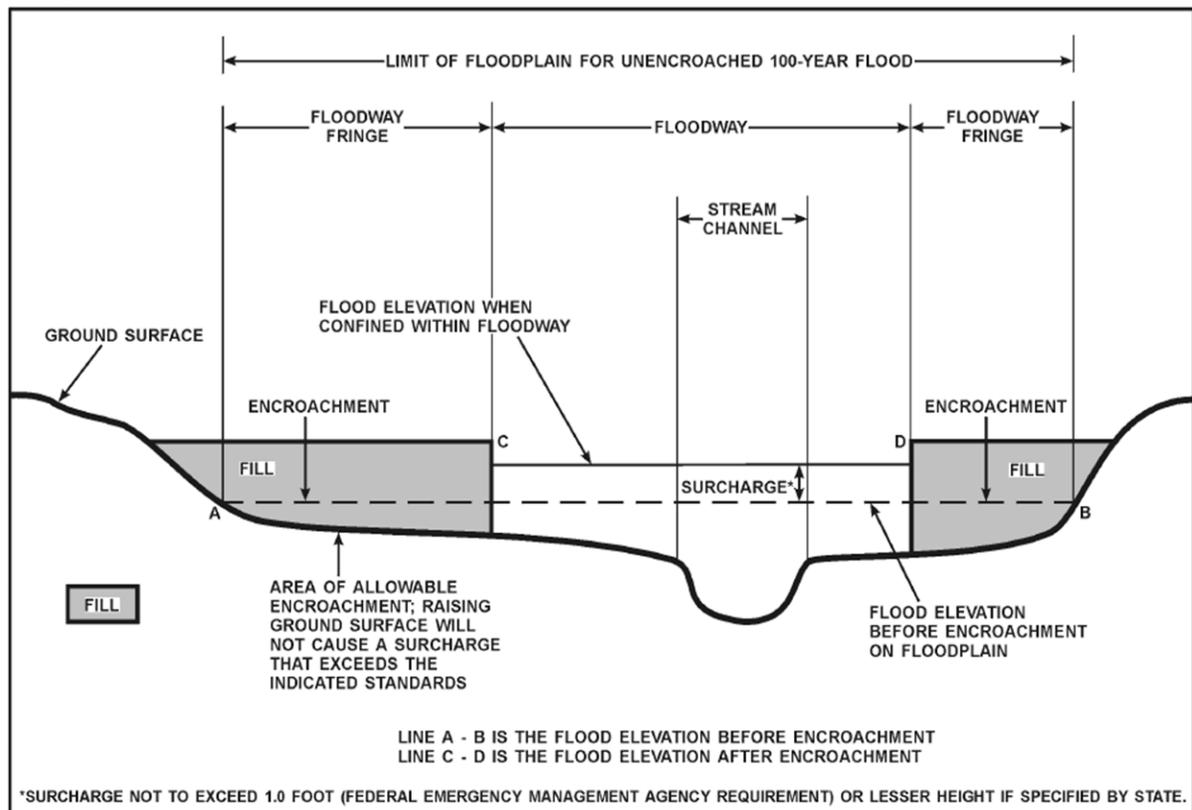


Figure 1- Floodway Schematic

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.

3.0 Insurance Applications

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.

3.1 Coastal Barrier Resources System

This section is not applicable to this FIS project.

4.0 Area Studied

Orange County is found in the Piedmont region of North Carolina. It is surrounded by Person County to the north, Durham County to the east, Chatham County to the south, Alamance 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)
Haw	03030002	Haw River	The Haw River Basin begins in eastern Forsyth County, flowing across low, rolling hills. The basin drains large portions of Guilford, Alamance, and Chatham counties before entering B. Everett Jordan Lake at the headwaters of the Cape Fear River.	1,707
Lower Dan	03010104	Dan River	The Lower Dan Basin begins in eastern Rockingham County and flows northeast into southern Virginia. The basin drains parts of Rockingham, Caswell, and Person counties.	1,284
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" is not applicable in Orange County.

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" is not applicable in Orange County.

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" is not applicable in Orange County.

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

4.5 Scope of Study

For this map maintenance revision, a scoping meeting was held in Orange 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 Orange 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 Orange 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	
Bolin Creek Tributary	The confluence with Bolin Creek	Approximately 0.5 mile upstream from confluence with Bolin Creek	Orange County Town Of Carrboro
Buckwater Creek	The confluence with Eno River	Approximately 0.2 mile upstream of Walnut Hill Drive	Orange County
Buckwater Creek Tributary 1	The confluence with Buckwater Creek	Approximately 150 feet upstream of Saint Mary's Road	Orange County
Buckwater Creek Tributary 2	The confluence with Buckwater Creek	Approximately 175 feet upstream of St. Mary's Road	Orange County
Cates Creek ¹	The confluence with Eno River	Approximately 200 feet upstream of Elizabeth Brady Rd	Orange County Town Of Hillsborough
Cedar Fork	Approximately 240 feet downstream of Cross Creek Drive	Approximately 0.2 mile upstream of Kingston Drive	Town Of Chapel Hill
Collins Creek Tributary 1	At the confluence with Collins Creek	Approximately 700 feet upstream of Gait Way	Orange County
Dry Branch ¹	The confluence with New Hope Creek Tributary 1	Approximately 0.1 mile upstream of the confluence with New Hope Creek	Town Of Chapel Hill
East Fork Eno River	At the confluence with Eno River	Approximately 0.1 mile upstream of Carr Store Road	Orange County
East Price Creek	The confluence with Price Creek	Approximately 0.3 mile upstream of Booth Road	Orange County
Eno River	At the Orange County boundary	Approximately 0.5 miles upstream of Halls Mill Road	Orange County Town Of Hillsborough
Fan Branch	The confluence with Wilson Creek	Approximately 0.4 mile upstream of Dogwood Acres Drive	Town Of Chapel Hill
Fan Branch Tributary	The confluence with Fan Branch	Approximately 0.1 mile upstream of Carlton Drive	Town Of Chapel Hill
Forrest Creek	The confluence with Little River	Approximately 150 feet upstream of State Highway 57	Orange County
Forrest Creek	The confluence with Little River South Fork	Approximately 0.1 mile upstream of Phelps Road	Orange County
Haw River	Jordan Lake	Approximately 0.5 mile upstream of the Guilford/Alamance County boundary	Orange County
Jones Creek	The confluence with Bolin Creek	Approximately 0.5 mile upstream of Turtleback Crossing Drive	Town Of Carrboro
Little Creek	Approximately 800 feet downstream of Pinehurst Drive	The confluence of Bolin Creek and Booker Creek	Town Of Chapel Hill
Little Creek (Near Hillsborough)	The confluence with Eno River	Approximately 0.3 miles upstream of Farm Gate Drive	Orange County
Little River North Fork	At the Orange County Boundary	Approximately 200 feet upstream of NC 57 HWY	Orange County
McGowan Creek ¹	The confluence with Eno River	Approximately 1,200 feet upstream of the confluence with Eno River	Orange County
Mill Creek	Approximately 50 feet upstream of the confluence of Lake Michael Tributary	Approximately 1.4 miles upstream of Mill Creek Road	City Of Mebane Orange County
Morgan Creek	Approximately 0.7 miles downstream of SW of Friday Center Dr.	Approximately 1.7 miles upstream of Greensboro Street	Orange County Town Of Carrboro Town Of Chapel Hill
Morgan Creek	Approximately 2.2 miles downstream of NC 54 Highway	Approximately 270 feet upstream of Dairyland (US) Road	Orange County Town Of Carrboro
Morgan Creek Tributary	The confluence with Morgan Creek	Approximately 0.3 miles upstream of NC 54 HWY	Town Of Carrboro
Neville Creek	The confluence with Phils Creek	Approximately 190 feet upstream of Bowden Road	Orange County

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

Source	Riverine Sources		Affected Communities
	From	To	
New Hope Creek	The Orange County Boundary	Approximately 360 feet upstream of Old NC 86 Highway	Orange County
New Hope Creek Tributary 1	Approximately 350 feet downstream I-40	Approximately 1,800 feet upstream of confluence of Dry Branch	Town Of Chapel Hill
Old Field Creek	The confluence with New Hope Creek	Approximately 430 feet upstream of Millhouse Road	Orange County Town Of Chapel Hill
Phils Creek	At the confluence with Morgan Creek	Approximately 230 feet upstream of American Stone Quarry Road	Orange County
Piney Mountain Creek	The confluence with New Hope Creek	Approximately 0.1 mile upstream of Friends School Road	Orange County
Rhodes Creek	The confluence with Eno River	Approximately 800 feet downstream of University Station Road	Orange County
Rocky Run	The confluence with Sevenmile Creek	Approximately 200 feet upstream of Moorefield Road	Orange County
Sevenmile Creek	The confluence with Eno River	Approximately 0.2 mile upstream of I-85N I-40E HWY	Orange County
Spring Valley Creek	The confluence of Eno River	Approximately 200 feet upstream of US Highway 70	Orange County
Stony Creek	The confluence with Eno River	Approximately 0.4 miles upstream of Duke Forest Drive	Orange County
Stony Creek Tributary	The confluence with Stony Creek	Approximately 360 feet upstream of Rowan Walk	Orange County
Strouds Creek ¹	The confluence with Eno River	Approximately 1,500 feet upstream of the confluence with Eno River	Orange County Town Of Hillsborough
Strouds Creek Tributary 1	The confluence with Strouds Creek	Approximately 1.4 miles upstream of Governor Burke Road	Orange County Town Of Chapel Hill
Toms Creek	The confluence with Morgan Creek DS	Approximately 0.1 mile upstream of James Street	Town Of Carrboro
Unnamed Urban Creek	The confluence with Morgan Creek	Approximately 0.2 mile upstream of NC 54 HWY	Town Of Carrboro Town Of Chapel Hill
West Fork Eno River	At the confluence with Eno River	Approximately 460 feet upstream of Efland Cedar Grove Road	Orange County
West Price Creek	The confluence with Price Creek	Approximately 0.4 mile upstream of Price Creek Road	Orange County
Wilson Creek	The confluence with Morgan Creek	Approximately 560 feet upstream of Wave Road	Town Of Chapel Hill

¹Revised to reflect backwater effects from new detailed study

Table 9P, "Scope of Revisions: Redelineated - Preliminary" is not applicable in Orange 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	
Buckhorn Branch ¹	The confluence with Jones Creek	Approximately 770 feet upstream of Morgan Creek	Town Of Carrboro
Chapel Creek ¹	The confluence with Morgan Creek	Approximately 2280 feet upstream of Morgan Creek	Town Of Chapel Hill
Dry Creek ¹	The confluence with Eno River	Approximately 760 feet upstream of the confluence with Eno River	Orange County
East Fork Eno River	Approximately 150 feet upstream of Carr Store Road	Approximately 100 feet downstream of State Highway 86	Orange County
East Fork Eno River Tributary 1 ¹	The confluence with East Fork Eno River	Approximately 920 feet upstream of the confluence with East Fork Eno River	Orange County
East Fork Eno River Tributary 2 ¹	Approximately 0.3 mile upstream of the confluence of East Fork Eno River	Approximately 0.7 mile upstream of the confluence of East Fork Eno River	Orange County
High Rock Creek ¹	The confluence with Eno River	Approximately 800 feet upstream of the confluence with Eno River	Orange County
Jones Creek	Approximately 0.5 mile upstream of confluence with Bolin Creek	Approximately 0.2 mile upstream of Lucy Lane	Town Of Carrboro
Little River North Fork	Approximately 280 feet upstream of State Highway 57	Approximately 0.3 mile upstream of Hester Road	Orange County
Little River North Fork Tributary 3 ¹	The confluence with Little River North Fork	Approximately 900 feet upstream of the confluence with Little River North Fork	Orange County
Meeting of the Waters Creek ¹	The confluence with Morgan Creek	Approximately 620 feet upstream of Morgan Creek	Town Of Chapel Hill

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

Source	Riverine Sources		Affected Communities
	From	To	
Morgan Creek	The University Lake Dam	Approximately 0.2 mile upstream of Jones Ferry Road	Orange County Town Of Carrboro
Mountain Creek	The confluence with New Hope Creek	Approximately 1.9 miles upstream of confluence with New Hope Creek	Orange County
New Hope Creek	Approximately 350 feet upstream of Old NC 86	Approximately 0.4 mile upstream of Union Grove Church Road	Orange County
Sevenmile Creek	Approximately 350 feet upstream of Interstate 85	Approximately 1.6 miles upstream of the confluence of Sevenmile Creek Tributary 2	Orange County
Strouds Creek Tributary 1	Approximately 1.4 miles upstream of the confluence with Strouds Creek	Approximately 0.2 mile upstream of Phelps Road	Orange County
Unnamed Stream	The confluence with Bolin Creek	Approximately 0.2 miles upstream of Cates Farm Road	Town Of Carrboro
Unnamed Tributary to Bolin Creek	The confluence with Bolin Creek	Approximately 370 feet upstream of Tallyho Trail	Town Of Carrboro
West Fork Eno River	Approximately 100 feet upstream of N. Efland Cedar Grove Road	Approximately 350 feet upstream of McDade Store Road	Orange County
West Fork Eno River Tributary 1 ¹	The confluence with West Fork Eno River	Approximately 430 feet upstream of the confluence with West Fork Eno River	Orange County

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	
Bolin Creek	The confluence with Little Creek (Chapel Hill) and Booker Creek	Approximately 200 feet upstream of Old NC 86	Town Of Carrboro Town Of Chapel Hill
Bolin Creek Tributary	The confluence with Bolin Creek	Approximately 0.5 mile upstream from confluence with Bolin Creek	Orange County Town Of Carrboro
Booker Creek	The confluence with Little Creek (Chapel Hill) and Bolin Creek	Approximately 600 feet upstream of Martin Luther King Jr. Boulevard	Town Of Chapel Hill
Buckwater Creek	The confluence with Eno River	Approximately 0.2 mile upstream of Walnut Hill Drive	Orange County
Buckwater Creek Tributary 1	The confluence with Buckwater Creek	Approximately 150 feet upstream of Saint Mary's Road	Orange County
Buckwater Creek Tributary 2	The confluence with Buckwater Creek	Approximately 175 feet upstream of St. Mary's Road	Orange County
Cates Creek	The confluence with Eno River	Approximately 1.0 mile upstream of Interstate 40	Orange County Town Of Hillsborough
Cates Creek Tributary	The confluence with Cates Creek	Approximately 0.6 mile upstream of Davis Road	Orange County
Cedar Fork	Approximately 240 feet downstream of Cross Creek Drive	Approximately 0.2 mile upstream of Kingston Drive	Town Of Chapel Hill
Cedar Fork	The confluence with Booker Creek	Approximately 600 feet upstream of Cedar Hills Drive	Town Of Chapel Hill
Collins Creek Tributary 1	At the confluence with Collins Creek	Approximately 700 feet upstream of Gait Way	Orange County
Dry Branch	The confluence with New Hope Creek Tributary 1	Approximately 840 feet upstream of Silver Creek Trail	Town Of Chapel Hill
East Fork Eno River	At the confluence with Eno River	Approximately 0.1 mile upstream of Carr Store Road	Orange County
East Price Creek	The confluence with Price Creek	Approximately 0.3 mile upstream of Booth Road	Orange County
Eno River	At the Orange County boundary	Approximately 0.5 miles upstream of Halls Mill Road	Orange County Town Of Hillsborough
Eno River	Just upstream of Old Oxford Road	Approximately 2.2 miles upstream of Cole Mill Road	City Of Durham Orange County
Fan Branch	The confluence with Wilson Creek	Approximately 0.4 mile upstream of Dogwood Acres Drive	Town Of Chapel Hill
Fan Branch Tributary	The confluence with Fan Branch	Approximately 0.1 mile upstream of Carlton Drive	Town Of Chapel Hill
Forrest Creek	The confluence with Little River South Fork	Approximately 0.1 mile upstream of Phelps Road	Orange County
Jones Creek	The confluence with Bolin Creek	Approximately 0.5 mile upstream of Turtleback Crossing Drive	Town Of Carrboro
Lake Michael Tributary	Confluence with Mill Creek	Approximately 0.2 mile upstream of Lancaster Road	City Of Mebane Orange County

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

Source	Riverine Sources		Affected Communities
	From	To	
Lake Michael Tributary 2	The confluence with Lake Michael Tributary	Approximately 1.2 miles upstream of confluence with Lake Michael Tributary	Orange County
Little Creek	Approximately 800 feet downstream of Pinehurst Drive	The confluence of Bolin Creek and Booker Creek	Town Of Chapel Hill
Little Creek (Near Hillsborough)	The confluence with Eno River	Approximately 0.3 miles upstream of Farm Gate Drive	Orange County
Little River North Fork	At the Orange County Boundary	Approximately 200 feet upstream of NC 57 HWY	Orange County
Little River South Fork	The confluence with Little River	Approximately 150 feet upstream of State Highway 57	Orange County
McGowan Creek	The confluence with Eno River	Approximately 300 feet upstream of Frazier Road	Orange County
Mill Creek	Approximately 50 feet upstream of the confluence of Lake Michael Tributary	Approximately 1.4 miles upstream of Mill Creek Road	City Of Mebane Orange County
Morgan Creek	Approximately 0.7 miles downstream of SW of Friday Center Dr.	Approximately 1.7 miles upstream of Greensboro Street	Orange County Town Of Carrboro Town Of Chapel Hill
Morgan Creek	Approximately 2.2 miles downstream of NC 54 Highway	Approximately 270 feet upstream of Dairyland (US) Road	Orange County Town Of Carrboro
Morgan Creek Tributary	The confluence with Morgan Creek	Approximately 0.3 miles upstream of NC 54 HWY	Town Of Carrboro
Neville Creek	The confluence with Phils Creek	Approximately 190 feet upstream of Bowden Road	Orange County
New Hope Creek	The Orange County Boundary	Approximately 360 feet upstream of Old NC 86 Highway	Orange County
New Hope Creek Tributary 1	Approximately 350 feet downstream I-40	Approximately 1,800 feet upstream of confluence of Dry Branch	Town Of Chapel Hill
New Hope Creek Tributary 1	Approximately 400 feet downstream of Orange County/Durham County boundary	Approximately 1,800 feet upstream of confluence of Dry Branch	City Of Durham Town Of Chapel Hill
Old Field Creek	The confluence with New Hope Creek	Approximately 430 feet upstream of Millhouse Road	Orange County Town Of Chapel Hill
Phils Creek	At the confluence with Morgan Creek	Approximately 230 feet upstream of American Stone Quarry Road	Orange County
Piney Mountain Creek	The confluence with New Hope Creek	Approximately 0.1 mile upstream of Friends School Road	Orange County
Rhodes Creek	The confluence with Eno River	Approximately 800 feet downstream of University Station Road	Orange County
Rocky Run	The confluence with Sevenmile Creek	Approximately 200 feet upstream of Moorefield Road	Orange County
Sevenmile Creek	The confluence with Eno River	Approximately 0.2 mile upstream of I-85N I-40E HWY	Orange County
Spring Valley Creek	The confluence of Eno River	Approximately 200 feet upstream of US Highway 70	Orange County
Stony Creek	The confluence with Eno River	Approximately 0.4 miles upstream of Duke Forest Drive	Orange County
Stony Creek Tributary	The confluence with Stony Creek	Approximately 360 feet upstream of Rowan Walk	Orange County
Strouds Creek	The confluence with Eno River	Approximately 0.6 mile upstream State Highway 57	Orange County Town Of Hillsborough
Strouds Creek Tributary 1	The confluence with Strouds Creek	Approximately 1.4 miles upstream of Governor Burke Road	Orange County Town Of Chapel Hill
Toms Creek	The confluence with Morgan Creek DS	Approximately 0.1 mile upstream of James Street	Town Of Carrboro
Unnamed Urban Creek	The confluence with Morgan Creek	Approximately 0.2 mile upstream of NC 54 HWY	Town Of Carrboro Town Of Chapel Hill
West Fork Eno River	At the confluence with Eno River	Approximately 460 feet upstream of Efland Cedar Grove Road	Orange County
West Price Creek	The confluence with Price Creek	Approximately 0.4 mile upstream of Price Creek Road	Orange County
Wilson Creek	The confluence with Morgan Creek	Approximately 560 feet upstream of Wave Road	Town Of Chapel Hill

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	
East Price Creek	The confluence with Price Creek and West Price Creek	The Orange County/Chatham County boundary	Orange County

Table 9 - Flooding Sources Studied by Detailed Methods: Redelineated

Source	Riverine Sources		Affected Communities
	From	To	
Little River North Fork	The Orange County/Durham County boundary	Approximately 280 feet upstream of State Highway 57	Orange County
Little River South Fork	The confluence with Little River	Approximately 230 feet upstream of State Highway 57	Orange County
New Hope Creek	Approximately 1,400 feet downstream of Old Chapel Hill Road	Just upstream of Old NC 86	City Of Durham Orange County Town Of Chapel Hill
New Hope Creek Tributary 1	The confluence with New Hope Creek	Approximately 200 feet upstream of the Durham/Orange County Boundary	City Of Durham Town Of Chapel Hill
West Price Creek	The confluence with Price Creek and East Price Creek	The Orange County/Chatham County boundary	Orange 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	
Back Creek Tributary 3	The confluence with Back Creek	Approximately 2.2 miles upstream of confluence with Back Creek	Orange County
Battle Branch	The confluence with Bolin Creek	Approximately 1.5 miles upstream of confluence with Bolin Creek	Town Of Chapel Hill
Bolin Creek	Approximately 200 feet upstream of Old NC 86	Approximately 0.2 mile upstream of Talbryn Way	Town Of Carrboro
Bolin Creek Tributary 2	The confluence with Bolin Creek	Approximately 0.2 miles upstream of Cates Farm Road	Town Of Carrboro
Buckhorn Branch	The confluence with Jones Creek	Approximately 500 feet upstream of Unnamed Road	Town Of Carrboro
Buffalo Creek Tributary 2	The confluence with Buffalo Creek (into North Fork Little River)	The Durham/Orange County boundary	Orange County
Cane Creek (North)	Approximately 1.5 miles upstream of confluence of Well Creek	Alamance County (UNIncorporated Areas)	Orange County
Cane Creek (North) Tributary 5	The confluence with Cane Creek	Approximately 0.2 mile upstream of Orange Grove Road	Orange County
Cedar Fork	Approximately 600 feet upstream of Cedar Hills Drive	Approximately 0.1 mile upstream of Kingston Drive	Town Of Chapel Hill
Chapel Creek	Approximately 0.23 mile downstream of South Fordham Boulevard	Approximately 0.3 mile upstream of Purt Near Lane	Town Of Chapel Hill
Collins Creek	Confluence with Haw River	Approximately 0.8 mile upstream of Orange Grove Road	Orange County
Crabtree Creek	The confluence with Sevenmile Creek	Approximately 1.8 miles upstream of confluence with Sevenmile Creek	Orange County
Crow Branch	The confluence with Booker Creek	Approximately 1.1 miles upstream of Airport Road	Town Of Chapel Hill
Dry Creek	The confluence with Eno River	Approximately 0.3 mile upstream of Altman Road	Orange County
East Back Creek	Confluence with Graham-Mebane Lake	Just downstream of Carr Store Road	City Of Mebane Orange County
East Fork Eno River	Approximately 150 feet upstream of Carr Store Road	Approximately 100 feet downstream of State Highway 86	Orange County
East Fork Eno River Tributary 1	The confluence with East Fork Eno River	Approximately 1.1 miles upstream of confluence of East Fork Eno River	Orange County
East Fork Eno River Tributary 2	Approximately 0.3 mile upstream of the confluence of East Fork Eno River	Approximately 0.5 mile upstream of Carr Store Road	Orange County
High Rock Creek	The confluence with Eno River	Approximately 0.3 mile upstream of Elland-Cedar Grove Road	Orange County
Jones Creek	Approximately 0.5 mile upstream of confluence with Bolin Creek	Approximately 0.2 mile upstream of Lucy Lane	Town Of Carrboro
Lick Creek	The Orange/Person County Boundary	Approximately 0.3 mile upstream of Holly Ridge Road	Orange County
Little Creek Tributary 3 (Chapel Hill)	The confluence with Little Creek (Chapel Hill)	Approximately 0.5 mile upstream of Ephesus Church Road	Town Of Chapel Hill
Little River North Fork	Approximately 0.4 mile upstream of South Lowell Road	The Orange/Durham County boundary	Orange County
Little River North Fork	Approximately 280 feet upstream of State Highway 57	Approximately 0.3 mile upstream of Hester Road	Orange County
Little River North Fork Tributary 2	The confluence with Little River North Fork	Approximately 1.3 miles upstream of Gates Road	Orange County

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

Source	Riverine Sources		Affected Communities
	From	To	
Little River North Fork Tributary 3	The confluence with Little River North Fork	Approximately 0.7 mile upstream of Sneed Road	Orange County
Little River South Fork	Approximately 230 feet upstream of State Highway 57	Approximately 100 feet upstream of Hawkins Road	Orange County
Meeting of the Waters Creek	The confluence with Morgan Creek	Approximately 0.7 mile upstream of Fordham Boulevard South	Town Of Chapel Hill
Mill Creek Tributary	The confluence with Mill Creek	Approximately 0.5 mile upstream of	Orange County
Morgan Creek	The confluence with Jordan Lake	The Durham/Orange County boundary	City Of Durham Orange County Town Of Chapel Hill
Morgan Creek	The University Lake Dam	Approximately 0.2 mile upstream of Jones Ferry Road	Orange County Town Of Carrboro
Mountain Creek	The confluence with New Hope Creek	Approximately 1.9 miles upstream of confluence with New Hope Creek	Orange County
New Hope Creek	Approximately 350 feet upstream of Old NC 86	Approximately 0.4 mile upstream of Union Grove Church Road	Orange County
North Fork Little River Tributary 2	The confluence with North Fork Little River	The Durham/Orange County boundary	Orange County
Price Creek	The confluence with University Lake	The confluence with East Branch Price Creek and West Branch Price Creek	Orange County Town Of Carrboro
Rays Creek	The confluence with South Fork Little River	Approximately 1.1 miles upstream of Wilkerson Road	Orange County
Rays Creek Tributary	The confluence with Rays Creek	Approximately 1.0 mile upstream of Wilkerson Road	Orange County
Sevenmile Creek	Approximately 350 feet upstream of Interstate 85	Approximately 1.6 miles upstream of the confluence of Sevenmile Creek Tributary 2	Orange County
Sevenmile Creek Tributary 1	The confluence with Sevenmile Creek	Approximately 1.5 miles upstream of confluence of Sevenmile Creek	Orange County
Sevenmile Creek Tributary 2	The confluence with Sevenmile Creek	Approximately 0.3 mile upstream of Bushy Cook Road	Orange County
Stagg Creek	Approximately 1.0 mile downstream of NC 119	Approximately 0.5 mile upstream of Atkins Road	Orange County
Stagg Creek Tributary 2	Confluence with Stagg Creek	Alamance/Orange County boundary	Orange County
Strouds Creek	Approximately 0.6 mile upstream State Highway 57	Approximately 0.4 mile upstream of State Highway 86	Orange County
Strouds Creek Tributary 1	Approximately 1.4 miles upstream of the confluence with Strouds Creek	Approximately 0.2 mile upstream of Phelps Road	Orange County
Strouds Creek Tributary 2	The confluence with Strouds Creek	Approximately 0.7 mile upstream of Miller Road	Orange County
Strouds Creek Tributary 3	The confluence with Strouds Creek	Approximately 0.5 mile State Highway 57	Orange County Town Of Hillsborough
Terrells Creek	The confluence with Haw River	The Chatham/Orange County boundary	Orange County
Toms Creek (Apple Pond)	The confluence with Cane Creek Reservoir	Approximately 1,800 feet upstream of Nicks Road	Orange County
Tributary 1 to Sevenmile Creek Tributary 2	The confluence with Sevenmile Creek Tributary 2	Approximately 0.2 mile upstream of Bushy Cook Road	Orange County
Turkey Hill Creek	The confluence with Cane Creek	Approximately 0.8 mile upstream of an unnamed road	Orange County
Unnamed Tributary to Bolin Creek	The confluence with Bolin Creek	Approximately 370 feet upstream of Tallyho Trail	Town Of Carrboro
Watery Fork	The confluence with Cane Creek Reservoir	Approximately 0.1 mile upstream of Dairyland Road	Orange County
West Fork Eno River	Approximately 100 feet upstream of N. Efland Cedar Grove Road	Approximately 350 feet upstream of McDade Store Road	Orange County
West Fork Eno River Tributary 1	The confluence with West Fork Eno River	Approximately 0.6 mile upstream of Harmony Church Road	Orange County
West Fork Eno River Tributary 2	The confluence with West Fork Eno River	Approximately 1,600 feet upstream of Governor Scott Road	Orange County
West Fork Eno River Tributary 3	The confluence with West Fork Eno River	Approximately 1.7 miles upstream of the confluence of West Fork Eno River	Orange County
West Price Creek	The Chatham/Orange County boundary	Approximately 1,920 feet upstream of Chatham/Orange County boundary	Orange County
Wildcat Branch	The confluence with Collins Creek	Approximately 0.2 mile upstream of Wildcat Creek Road	Orange County

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

This FIS also incorporates the determinations of letters issued by FEMA resulting in map changes (Letters of Map Revision [LOMRs]), as shown in Table

Table 12 - Letters of Map Revision

Case Number	Date Issued	Flooding Source/Description	Communities
09-04-1756P	7/31/2009	Bolin Creek / 09-04-1756P	Town Of Chapel Hill
NP	3/29/2012	Chapel Creek / NP	Town Of Carrboro
NP	3/29/2012	Chapel Creek / NP	Town Of Hillsborough
08-04-1666P	12/22/2009	Strouds Creek / 08-04-1666P	Orange 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
Back Creek Tributary 3					
At the confluence with Back Creek	3.00	*	*	1,495	*
Approximately 0.95 mile upstream of confluence with Back Creek	2.80	*	*	1,403	*
Approximately 1.01 mile upstream of confluence with Back Creek	1.70	*	*	1,028	*
Battle Branch					
At the confluence with Bolin Creek	0.70	*	*	584	*
Approximately 1.37 miles upstream of confluence with Bolin Creek	0.20	*	*	270	*
Bolin Creek					
At the confluence with Little Creek (Chapel Hill) and Booker Creek	11.70	4,850	6,410	6,780	7,730
Approximately 0.04 mile upstream of Shepard Lane	10.70	4,550	6,050	6,410	7,330
Approximately 0.28 mile upstream of East Franklin Street	10.20	4,370	5,840	6,190	7,090
Approximately 0.52 mile upstream of East Franklin Street	9.70	4,200	5,630	5,980	6,860
Approximately 0.02 mile upstream of Bolinwood Drive	9.10	3,810	5,190	5,530	6,420
Approximately 0.31 mile upstream of Pritchard Avenue Ext.	7.90	2,940	4,200	4,540	5,440
Approximately 0.05 mile upstream of Village Drive	7.70	2,840	4,070	4,410	5,300
Approximately 0.79 mile upstream of Estes Drive Ext.	6.30	2,200	3,280	3,600	4,430

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 0.86 mile downstream of Homestead Road	5.40	1,840	2,820	3,110	3,900
Approximately 0.15 mile downstream of Homestead Road	4.80	1,620	2,520	2,790	3,540
Approximately 0.63 mile upstream of Homestead Road	3.70	1,230	2,000	2,240	2,900
Approximately 0.96 mile upstream of Homestead Road	2.90	1,020	1,680	1,890	2,480
Approximately 0.32 mile downstream of Lake Hogan Farm Dam	1.60	924	1,470	1,630	2,060
Approximately 0.33 mile upstream of Lake Hogan Farm Road	1.30	529	942	1,080	1,480
Approximately 0.04 mile upstream of Old NC 86	1.00	330	595	736	1,150
Approximately 0.28 mile downstream of Talbryn Way	0.20	*	*	252	*
Bolin Creek Tributary					
At the confluence with Bolin Creek	0.38	218	368	434	607
Approximately 820 feet upstream of the confluence with Bolin Creek	0.32	198	335	396	554
Approximately 820 feet upstream of the confluence with Bolin Creek	0.28	181	308	364	510
Bolin Creek Tributary 2					
NP	0.56	369	654	744	1,020
NP	0.46	319	575	656	904
NP	0.42	298	540	618	852
NP	0.40	280	512	587	812
Booker Creek					
At the confluence with Little Creek (Chapel Hill) and Bolin Creek	6.30	1,670	2,660	2,970	3,840
Approximately 0.02 mile upstream of South Elliot Road	6.00	1,600	2,560	2,860	3,710
Approximately 0.17 mile upstream of East Franklin Street	5.50	1,470	2,380	2,670	3,480
Approximately 0.05 mile upstream of Daley Road	4.60	1,210	2,010	2,280	3,020
Approximately 0.36 mile upstream of Daley Road	3.10	964	1,620	1,840	2,450
Approximately 0.28 mile upstream of North Lakeshore Drive	2.50	833	1,420	1,610	2,160
Approximately 0.06 mile downstream of Piney Mountain Road	1.40	622	1,070	1,210	1,620
Approximately 0.21 mile downstream of Martin Luther King Jr. Boulevard	1.10	503	886	1,010	1,360
Buckhorn Branch					
At the confluence with Jones Creek	0.50	*	*	453	*
Buckwater Creek					
At the confluence with Eno River	9.19	1,570	2,500	2,900	3,910
Approximately 1,460 feet upstream of the confluence with Eno River	9.09	1,550	2,490	2,880	3,880
Approximately 0.5 mile upstream of the confluence with Eno River	8.90	1,530	2,450	2,840	3,840
Approximately 0.7 mile upstream of the confluence with Eno River	8.69	1,510	2,420	2,800	3,780
Approximately 1 mile upstream of the confluence with Eno River	8.46	1,490	2,380	2,760	3,720
Approximately 1.3 miles upstream of the confluence with Eno River	7.98	1,430	2,300	2,670	3,600
Approximately 1.8 miles upstream of the confluence with Eno River	7.64	1,400	2,240	2,600	3,510
Approximately 830 feet downstream of the confluence of Buckwater Creek Tributary 1	5.74	1,170	1,890	2,190	2,970
Just upstream of the confluence of Buckwater Creek Tributary 1	4.18	1,090	1,800	2,100	2,880
Approximately 880 feet upstream of the confluence of Buckwater Creek Tributary 1	4.02	1,090	1,800	2,100	2,880
Approximately 1,350 feet upstream of the confluence of Buckwater Creek Tributary 1	3.81	1,090	1,800	2,100	2,880
Approximately 0.4 mile downstream of the confluence of Buckwater Creek Tributary 2	3.68	1,090	1,800	2,100	2,880
Approximately 780 feet downstream of the confluence of Buckwater Creek Tributary 2	3.48	1,090	1,800	2,100	2,880
Just upstream of the confluence of Buckwater Creek Tributary 2	1.58	528	870	1,020	1,400
Approximately 330 feet downstream of Walnut Hill Drive	1.24	455	752	882	1,220

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
Buckwater Creek Tributary 1					
At the confluence with Buckwater Creek	1.54	519	856	1,000	1,380
Approximately 1,060 feet upstream of the confluence with Buckwater Creek	1.26	459	759	889	1,230
Approximately 290 feet downstream of Saint Marys Road	1.22	450	745	874	1,200
Buckwater Creek Tributary 2					
At the confluence with Buckwater Creek	1.88	587	965	1,130	1,550
At the confluence with Buckwater Creek	1.86	584	959	1,120	1,540
Cane Creek (North)					
Approximately 0.64 mile downstream of Morrow Mill Road	36.90	*	*	7,080	*
Approximately 0.61 mile upstream of Morrow Mill Road	35.30	*	*	6,900	*
Approximately 1.05 mile downstream of Buckhorn Road	13.90	*	*	3,860	*
Approximately 0.03 mile downstream of Buckhorn Road	7.60	*	*	2,810	*
Approximately 0.54 mile downstream of Bradshaw Quarry Road	3.90	*	*	1,740	*
Approximately 0.03 mile upstream of Bradshaw Quarry Road	3.60	*	*	1,650	*
Approximately 0.78 mile downstream of Borland Road	2.60	*	*	1,360	*
Approximately 0.69 mile downstream of Borland Road	1.60	*	*	1,010	*
Approximately 13 feet downstream of Borland Road	1.00	*	*	747	*
Cane Creek (North) Tributary 5					
At the confluence with Cane Creek	2.70	*	*	1,398	*
Approximately 0.30 mile upstream of the confluence with Cane Creek	2.10	*	*	1,200	*
Cates Creek					
Approximately 0.13 mile downstream of Elizabeth Brady Road	5.09	*	*	2,530	*
Approximately 0.19 mile upstream of Valley Forge Road	4.44	*	*	2,320	*
Approximately 0.16 mile upstream of Old NC 86	3.58	*	*	2,030	*
Approximately 0.16 mile downstream of I-40	1.25	*	*	1,060	*
Approximately 1.06 miles upstream of I-40	1.00	*	*	916	*
Cates Creek Tributary					
Approximately 0.03 mile upstream of I-40	1.46	*	*	1,160	*
Approximately 0.55 mile upstream of Davis Road	1.00	*	*	916	*
Cedar Fork					
At the confluence with Booker Creek	1.40	539	964	1,110	1,520
Approximately 0.05 mile upstream of Brookview Drive	0.90	471	827	940	1,260
Approximately 0.20 mile downstream of Cedar Hills Drive	0.50	369	646	731	971
Approximately 250 feet upstream of Cedar Hills Drive	0.22	299	507	565	763
Overland flow section downstream of Weaver Dairy Road	0.12	234	396	438	591
Approximately 120 feet downstream of Kingston Drive	0.05	133	235	263	361
Chapel Creek					
Approximately 0.25 mile downstream of Carmichael Road	0.60	*	*	567	*
Approximately 0.16 mile downstream of Purt Near Lane	0.20	*	*	278	*
Collins Creek					
At the Chatham/Orange County boundary	16.20	*	*	4,253	*
Approximately 0.48 mile upstream of Orange/Chatham County Boundary	15.40	*	*	4,117	*
Approximately 0.23 mile downstream of Old Greensboro	14.60	*	*	3,982	*
Approximately 0.34 mile upstream of Old Greensboro	13.60	*	*	3,811	*

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 1.39 miles upstream of Old Greensboro	11.60	*	*	3,440	*
Approximately 1.64 miles upstream of Old Greensboro	11.50	*	*	3,435	*
Approximately 2.06 miles upstream of Old Greensboro	10.50	*	*	3,246	*
Approximately 1.10 miles downstream of NC 54	4.30	*	*	1,854	*
Approximately 0.78 mile downstream of NC 54	3.50	*	*	1,626	*
Approximately 0.41 mile upstream of NC 54	3.00	*	*	1,469	*
Approximately 0.70 mile upstream of NC 54	2.00	*	*	1,141	*
Approximately 0.67 mile upstream of Orange Grove Road	1.40	*	*	900	*
Collins Creek Tributary 1					
Immediately upstream of confluence with Collins Creek	5.26	1,110	1,790	2,080	2,820
Immediately downstream of NC Highway 54	4.26	974	1,580	1,840	2,490
Approximately 0.7 mile upstream of NC Highway 54	2.68	731	1,190	1,390	1,900
Approximately 0.7 mile downstream of Gait Way	1.96	603	989	1,160	1,590
Approximately 100 feet downstream of Gait Way	1.69	550	905	1,060	1,450
Crabtree Creek					
At confluence with Sevenmile Creek	1.65	*	*	1,020	*
Approximately 1.79 miles upstream of confluence with Sevenmile Creek	1.00	*	*	745	*
Crow Branch					
At the confluence with Booker Creek	0.60	*	*	561	*
Approximately 0.89 mile upstream of Airport Road	0.20	*	*	255	*
Cub Creek					
Approximately 0.16 mile upstream of Orange-Chatham County boundary	5.80	*	*	2,228	*
Approximately 0.6 mile upstream of Nature Trail Road	5.00	*	*	2,026	*
Dry Branch					
At the confluence with New Hope Creek Tributary 1	0.40	259	480	551	759
Approximately 70 feet downstream of Perry Creek Drive	0.30	237	443	511	708
Approximately 840 feet downstream of Silver Creek Trail	0.20	177	339	393	552
Dry Creek					
Approximately 0.29 mile upstream of Altman Road	1.74	*	*	1,050	*
East Back Creek					
Approximately 0.14 mile upstream of High Rock Road	11.50	*	*	3,438	*
Approximately 0.79 mile upstream of High Rock Road	8.00	*	*	2,732	*
Approximately 1.65 miles upstream of High Rock Road	7.60	*	*	2,646	*
Approximately 1.86 miles upstream of High Rock Road	6.60	*	*	2,424	*
Approximately 0.56 mile downstream of Harmony Church Road	6.10	*	*	2,305	*
Approximately 0.41 mile upstream of Harmony Church Road	4.10	*	*	1,807	*
Approximately 0.07 mile upstream of Pentecost Road	3.20	*	*	1,535	*
Approximately 0.13 mile upstream of Allie Mae Road	2.80	*	*	1,421	*
Approximately 0.35 mile upstream of Allie Mae Road	1.80	*	*	1,080	*
East Fork Eno River					
At the confluence with Eno River	12.23	1,870	2,970	3,430	4,620
Approximately 1,680 feet upstream of the confluence with Eno River	11.56	1,800	2,870	3,320	4,470
Approximately 420 feet downstream of Highland Farm Road	11.44	1,790	2,850	3,300	4,440
Approximately 420 feet downstream of Highland Farm Road	11.36	1,780	2,840	3,290	4,420

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 Highland Farm Road	9.63	1,610	2,570	2,980	4,010
Approximately 260 feet downstream of Lake Orange Road	9.09	1,550	2,490	2,880	3,880
Approximately 0.6 mile upstream of Lake Orange Road	6.39	1,250	2,010	2,330	3,160
Approximately 1 mile upstream of Lake Orange Road	5.86	1,190	1,910	2,220	3,010
Approximately 0.9 mile downstream of Carr Store Road	5.77	1,170	1,890	2,200	2,980
Approximately 0.6 mile downstream of Carr Store Road	5.52	1,140	1,840	2,140	2,900
Approximately 0.4 mile downstream of Carr Store Road	5.22	1,100	1,780	2,070	2,810
Approximately 360 feet downstream of Carr Store Road	5.12	1,090	1,760	2,050	2,780
Approximately 90 feet upstream of Compton Road	4.14	*	*	1,810	*
Approximately 0.54 mile upstream of Compton Road	3.26	*	*	1,560	*
Approximately 1.29 miles upstream of Compton Road	2.48	*	*	1,310	*
East Fork Eno River Tributary 1					
Approximately 1.18 miles upstream of confluence with East Fork Eno River	1.64	*	*	1,010	*
Approximately 0.98 mile upstream of confluence with East Fork Eno River	1.28	*	*	870	*
East Fork Eno River Tributary 2					
Approximately 0.60 mile downstream of Carr Store Road	1.08	*	*	783	*
Approximately 0.56 mile upstream of Carr Store Road	1.01	*	*	747	*
East Price Creek					
At the confluence with Price Creek	2.25	708	1,240	1,420	1,940
Approximately 0.35 miles upstream of the confluence with Price Creek	1.95	680	1,180	1,350	1,840
Approximately 430 feet downstream of Brandywine Road	1.88	672	1,170	1,340	1,820
Just downstream of Yorktown Drive	1.55	528	954	1,100	1,520
Just downstream of Booth Road	1.43	512	923	1,060	1,470
Eno River					
Approximately 0.40 miles upstream of the Orange County-Durham County border	119.55	7,620	11,700	13,300	17,400
Approximately 0.70 miles upstream of the Orange County-Durham County border	119.43	7,610	11,700	13,300	17,400
Approximately 0.60 miles downstream of the confluence of Rhodes Creek	118.85	7,590	11,600	13,300	17,400
Approximately 1,830 feet downstream of the confluence of Rhodes Creek	118.61	7,580	11,600	13,200	17,400
Just upstream of the confluence of Rhodes Creek	114.41	7,410	11,400	13,000	17,000
NP	114.20	7,400	11,300	12,900	17,000
NP	113.93	7,390	11,300	12,900	17,000
Approximately 1,400 feet downstream from Pleasant Green Road	113.84	7,390	11,300	12,900	16,900
Approximately 1,400 feet downstream from Pleasant Green Road	113.78	7,390	11,300	12,900	16,900
Just upstream of the confluence of Stony Creek	104.72	7,020	10,800	12,300	16,100
Approximately 1,800 feet upstream of the confluence of Stony Creek	104.39	7,010	10,800	12,300	16,100
Approximately 0.70 miles upstream of the confluence of Stony Creek	103.65	6,970	10,700	12,200	16,000
Approximately 1.10 miles upstream of the confluence of Stony Creek	103.15	6,950	10,700	12,200	16,000
Approximately 1.40 miles upstream of the confluence of Stony Creek	102.52	6,930	10,600	12,100	15,900
Approximately 1.60 miles upstream of the confluence of Stony Creek	101.22	6,870	10,600	12,100	15,800
Approximately 1.80 miles upstream of the confluence of Stony Creek	100.41	6,840	10,500	12,000	15,700
Approximately 1.20 miles downstream of the confluence of Buckwater Creek	100.17	6,830	10,500	12,000	15,700
Approximately 0.90 miles downstream of the confluence of Stony Creek	100.13	6,830	10,500	12,000	15,700
Approximately 0.70 miles downstream of the confluence of Buckwater Creek	99.92	6,820	10,500	12,000	15,700
Approximately 0.50 miles downstream of the confluence of Buckwater Creek	99.83	6,810	10,500	12,000	15,700
Just upstream of the confluence of Buckwater Creek	90.47	6,450	9,840	11,300	14,800

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 1,550 feet upstream of the confluence of Buckwater Creek	90.36	6,450	9,830	11,200	14,800
Approximately 0.70 miles upstream of the confluence of Buckwater Creek	89.86	6,430	9,800	11,200	14,800
Approximately 1.00 miles upstream of the confluence of Buckwater Creek	89.57	6,410	9,780	11,200	14,700
Approximately 1.30 miles downstream of the confluence of Spring Valley Creek	89.32	6,400	9,760	11,200	14,700
Approximately 0.80 miles downstream of the confluence of Spring Valley Creek	88.83	6,390	9,720	11,100	14,700
Approximately 0.60 miles downstream of the confluence of Spring Valley Creek	88.24	6,360	9,680	11,100	14,600
Just upstream of the confluence of Spring Valley Creek	85.87	6,270	9,520	10,900	14,400
Approximately 1,300 feet upstream of the confluence of Spring Valley Creek	85.79	6,260	9,510	10,900	14,400
Approximately 1,700 feet downstream of the confluence of Little Creek (Near Hillsborough)	85.68	6,260	9,510	10,900	14,300
Upstream of the confluence of Little Creek (Near Hillsborough)	83.02	6,150	9,320	10,700	14,100
Approximately 900 feet downstream of Lawrence Road	82.92	6,140	9,310	10,700	14,100
Approximately 1,400 feet upstream of Lawrence Road	73.85	5,760	8,660	9,940	13,200
Approximately 1,400 feet upstream of Lawrence Road	73.76	5,750	8,650	9,940	13,100
Approximately 0.40 miles downstream of US Highway 70	73.54	5,740	8,640	9,920	13,100
Approximately 260 feet downstream of US Highway 70	73.42	5,740	8,630	9,910	13,100
Approximately 200 feet upstream of US Highway 70	73.12	5,720	8,610	9,880	13,100
Approximately 1,500 feet upstream of US Highway 70	72.85	5,710	8,590	9,860	13,000
Approximately 0.70 miles upstream of US Highway 70	67.63	5,470	8,200	9,430	12,500
Approximately 1.10 miles upstream of US Highway 70	67.52	5,470	8,190	9,420	12,500
Approximately 1.40 miles upstream of US Highway 70	67.42	5,460	8,180	9,410	12,500
Approximately 1.2 miles downstream of Churton Street	66.45	5,420	8,110	9,330	12,400
Approximately 1.2 miles downstream of Churton Street	66.39	5,420	8,100	9,320	12,400
Approximately 1 mile downstream of Churton Street	66.32	5,410	8,100	9,320	12,300
Approximately 0.6 mile downstream of Churton Street	66.23	5,410	8,090	9,310	12,300
Approximately 1,790 feet downstream of Churton Street	66.05	5,400	8,080	9,290	12,300
Approximately 1,790 feet downstream of Churton Street	66.02	5,400	8,080	9,290	12,300
Approximately 100 feet downstream of Churton Street	65.77	5,390	8,060	9,270	12,300
Approximately 360 feet upstream of Exchange Park Lane	64.23	5,300	7,950	9,140	12,100
Approximately 1,560 feet upstream of Exchange Park Lane	64.04	5,290	7,940	9,130	12,100
Approximately 0.6 mile upstream of Exchange Park Lane	63.84	5,280	7,920	9,110	12,100
Approximately 1,690 feet downstream of Eno Mountain Road	62.65	5,220	7,830	9,010	11,900
Approximately 300 feet downstream of Eno Mountain Road	62.52	5,210	7,830	9,000	11,900
Approximately 1,210 feet upstream of Eno Mountain Road	62.24	5,190	7,810	8,980	11,900
Approximately 1,210 feet upstream of Eno Mountain Road	62.17	5,190	7,800	8,970	11,900
Approximately 1,930 feet downstream of Dimmocks Mill Road	60.59	5,100	7,690	8,840	11,700
Approximately 730 feet downstream of Dimmocks Mill Road	60.48	5,100	7,680	8,830	11,700
Approximately 1,090 feet downstream of the confluence of Sevenmile Creek	60.08	5,070	7,650	8,790	11,700
Just upstream of the confluence of Sevenmile Creek	43.02	4,080	6,290	7,240	9,600
Just upstream of the confluence of Sevenmile Creek	42.98	4,080	6,290	7,230	9,600
Approximately 0.5 mile upstream of Ben Johnston Road	42.86	4,070	6,280	7,220	9,580
Approximately 0.66 mile downstream of US 70 HWY	42.66	4,060	6,260	7,200	9,560
Approximately 1,890 feet downstream of US 70 HWY	42.26	4,030	6,230	7,160	9,500
Approximately 430 feet downstream of US 70 HWY	42.13	4,030	6,220	7,150	9,490
Approximately 390 feet upstream of US 70 HWY	41.47	3,990	6,160	7,080	9,400

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 2,000 feet upstream of US 70 HWY	35.18	3,590	5,590	6,430	8,540
Approximately 0.7 mile upstream of US 70 HWY	35.08	3,580	5,580	6,420	8,530
Approximately 0.9 mile upstream of US 70 HWY	33.92	3,500	5,470	6,290	8,360
Approximately 1.3 miles upstream of US 70 HWY	33.77	3,490	5,460	6,280	8,340
Approximately 1.8 miles downstream of Clark Farm Road	33.67	3,490	5,450	6,270	8,330
Approximately 1.4 miles downstream of Clark Farm Road	31.74	3,360	5,260	6,050	8,050
Approximately 1.1 miles downstream of Clark Farm Road	31.53	3,350	5,240	6,030	8,020
Approximately 0.9 mile downstream of Clark Farm Road	28.43	3,140	4,930	5,670	7,550
Approximately 0.9 mile downstream of Clark Farm Road	28.36	3,130	4,920	5,660	7,540
Approximately 790 feet downstream of Clark Farm Road	27.88	3,100	4,870	5,600	7,460
Approximately 170 feet downstream of Clark Farm Road	27.72	3,090	4,850	5,580	7,440
Approximately 1,490 feet downstream of Halls Mill Road	27.48	3,070	4,830	5,550	7,400
Approximately 370 feet downstream of Halls Mill Road	26.82	3,030	4,760	5,480	7,290
Approximately 1,170 feet upstream of Halls Mill Road	26.72	3,020	4,750	5,460	7,280
Fan Branch					
At the confluence with Wilson Creek	1.41	728	1,310	1,490	2,060
Approximately 150 feet downstream of Parkview Crescent Drive	1.29	728	1,310	1,490	2,060
Just upstream of the confluence of Fan Branch Tributary	0.61	364	653	746	1,030
Just upstream of the confluence of Fan Branch Tributary	0.58	332	605	695	960
Just downstream of Dogwood Acres Drive	0.41	229	386	456	636
Approximately 1100 feet upstream of Dogwood Acres Drive	0.27	178	302	358	501
Fan Branch Tributary					
At the confluence with Fan Branch	0.60	428	814	940	1,310
Approximately 300 feet downstream of Carlton drive	0.30	255	464	529	731
Approximately 300 feet downstream of Carlton drive	0.17	168	319	367	513
Forrest Creek					
At the confluence with Little River South Fork	8.17	871	1,370	1,700	2,650
At Schley Road	7.18	668	1,310	1,630	2,550
Just downstream of Canter Drive	6.11	644	1,260	1,570	2,440
Approximately 1,790 feet upstream of Ericka Drive	5.05	626	1,210	1,510	2,360
Approximately 0.9 mile downstream of NC 57 HWY	4.09	606	1,200	1,490	2,320
Just downstream of NC 57 HWY	3.48	549	1,060	1,340	2,130
Approximately 1,400 feet downstream of Edmund Latta Road	2.98	525	1,050	1,320	2,120
Approximately 0.9 mile downstream of Brooks Road	2.15	476	984	1,250	2,020
Approximately 610 feet downstream of Oma Lane	1.17	497	974	1,210	1,810
Approximately 110 feet downstream of Phelps Road	0.70	396	794	985	1,490
High Rock Creek					
Approximately 0.80 mile upstream of confluence with Eno River	3.05	*	*	1,500	*
Approximately 0.34 mile upstream of Brookhollow Road	2.91	*	*	1,450	*
Approximately 0.29 mile upstream of N. Efland Cedar Grove Road	1.91	*	*	1,120	*
Jones Creek					
At Mouth	1.20	345	695	905	1,610
Approximately 320 feet downstream of Turtleback Crossing Drive	1.19	443	734	860	1,190
Approximately 1250 feet upstream of Turtleback Crossing Drive	1.11	423	702	823	1,140

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
Below confluence of Buckhorn Creek	1.10	325	655	850	1,515
Approximately 0.46 mile upstream of confluence with Bolin Creek	0.60	*	*	548	*
Approximately 0.07 mile upstream of Old NC 86	0.20	*	*	297	*
Lake Michael Tributary					
Confluence with Mill Creek	3.30	730	1,270	1,560	2,370
Approximately 25 feet upstream of confluence of Lake Michael Tributary 2	1.30	398	712	878	1,360
Approximately 0.03 mile downstream of Lancaster Road	0.10	89	169	213	346
Lake Michael Tributary 2					
At the confluence with Lake Michael Tributary	0.60	238	435	542	852
Lick Creek					
Approximately 0.58 mile downstream of Holly Ridge Road	3.59	*	*	1,660	*
Approximately 0.39 mile downstream of Holly Ridge Road	2.71	*	*	1,388	*
Approximately 0.17 mile upstream of Holly Ridge Road	1.72	*	*	1,045	*
Approximately 0.32 mile upstream of Holly Ridge Road	1.46	*	*	945	*
Little Creek (Near Hillsborough)					
At the confluence with Eno River	2.51	703	1,150	1,340	1,830
NP	2.45	692	1,130	1,320	1,810
Approximately 410 feet downstream of Saint Marys Road	2.04	618	1,010	1,190	1,620
Approximately 1,290 feet upstream of Saint Marys Road	1.84	580	953	1,120	1,530
Approximately 0.5 miles upstream of Saint Marys Road	1.69	549	904	1,060	1,450
NP	1.52	515	850	995	1,370
Approximately 265 feet downstream of Farm Gate Road	1.29	466	770	902	1,240
Approximately 1,250 feet upstream of Farm Gate Road	1.12	428	709	832	1,150
Little Creek Tributary 3 (Chapel Hill)					
At the confluence with Little Creek (Chapel Hill)	1.00	*	*	766	*
Approximately 0.10 mile downstream of Boxwood Place	0.60	*	*	524	*
Little River North Fork					
Approximately 1.72 mile upstream of South Lowell Road	21.93	2,510	4,320	5,290	7,820
Approximately 1.2 miles downstream of New Sharon Church Road	21.67	2,660	4,190	4,820	6,440
NP	21.45	2,640	4,160	4,790	6,400
Approximately 0.6 mile downstream of New Sharon Church Road	21.30	2,630	4,140	4,780	6,380
Approximately 0.5 mile downstream of New Sharon Church Road	20.50	2,570	4,050	4,670	6,240
Approximately 1,160 feet downstream of New Sharon Church Road	20.40	2,560	4,040	4,650	6,220
Approximately 650 feet downstream of New Sharon Church Road	20.29	2,550	4,020	4,640	6,200
NP	20.16	2,540	4,010	4,620	6,180
Approximately 800 feet upstream of New Sharon Church Road	19.57	2,490	3,940	4,540	6,070
Approximately 0.5 mile upstream of New Sharon Church Road	19.49	2,490	3,930	4,530	6,060
Approximately 0.8 mile upstream of New Sharon Church Road	19.31	2,470	3,910	4,500	6,020
Approximately 1 mile upstream of New Sharon Church Road	19.21	2,470	3,890	4,490	6,010
Approximately 1.3 miles upstream of New Sharon Church Road	18.16	2,380	3,760	4,340	5,810
Approximately 1.3 miles upstream of New Sharon Church Road	18.15	2,380	3,760	4,340	5,810
Approximately 1.4 miles upstream of New Sharon Church Road	18.07	2,370	3,750	4,330	5,790
Approximately 1.43 miles upstream of New Sharon Church Road	18.03	2,370	3,750	4,330	5,790
Approximately 1.43 miles upstream of New Sharon Church Road	17.98	2,370	3,740	4,320	5,780

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 Guess Road	14.74	2,090	3,310	3,830	5,130
Approximately 1.7 miles downstream of Guess Road	14.74	2,090	3,320	3,840	5,150
Approximately 1.7 miles downstream of Guess Road	14.68	2,090	3,310	3,830	5,130
Approximately 1.2 miles downstream of Guess Road	14.59	2,080	3,300	3,810	5,110
Approximately 1 mile downstream of Guess Road	14.51	2,070	3,290	3,800	5,100
Approximately 0.5 mile downstream of Guess Road	14.25	2,050	3,260	3,760	5,050
Approximately 0.5 mile downstream of Guess Road	14.24	2,050	3,250	3,760	5,040
Approximately 840 feet downstream of Guess Road	13.99	2,030	3,220	3,720	4,990
Approximately 930 feet upstream of Guess Road	13.83	2,010	3,200	3,690	4,960
Approximately 0.5 mile upstream of Guess Road	13.58	1,990	3,160	3,660	4,910
Approximately 0.6 mile upstream of Guess Road	13.53	1,990	3,160	3,650	4,900
Approximately 0.9 mile downstream of NC 57 HWY	13.43	1,980	3,140	3,630	4,870
Approximately 0.9 mile downstream of NC 57 HWY	13.36	1,970	3,130	3,620	4,860
Approximately 270 feet downstream of NC 57 HWY	13.29	1,960	3,120	3,610	4,840
Approximately 1.13 miles downstream of Gates Road	11.80	*	*	3,480	*
Approximately 0.11 mile downstream of Gates Road	7.84	*	*	2,700	*
Approximately 0.12 mile downstream of Laws Store Road	7.04	*	*	2,520	*
Approximately 0.15 mile downstream of Brown Road	6.05	*	*	2,290	*
Approximately 0.43 mile upstream of Brown Road	5.14	*	*	2,070	*
Approximately 0.63 mile upstream of Walnut Grove Church Road	4.30	*	*	1,860	*
Approximately 0.67 mile downstream of Tapp Road	3.50	*	*	1,630	*
Approximately 0.33 mile downstream of Tapp Road	2.50	*	*	1,320	*
Approximately 0.06 mile downstream of Hester Road	1.63	*	*	1,010	*
Approximately 0.39 mile upstream of Hester Road	1.03	*	*	759	*
Little River North Fork Tributary 2					
Approximately 0.15 mile upstream of confluence with Little River North Fork	2.97	*	*	1,470	*
Approximately 1.13 miles upstream of Gates Road	2.87	*	*	1,441	*
Little River North Fork Tributary 3					
Approximately 0.10 mile upstream of Sneed Road	3.22	*	*	1,550	*
Approximately 0.58 mile upstream of Sneed Road	2.99	*	*	1,480	*
Approximately 0.69 mile upstream of Sneed Road	1.97	*	*	1,139	*
Little River South Fork					
Approximately 1.4 miles downstream of New Sharon Church Road	36.22	3,060	5,760	7,130	10,800
Approximately 0.6 mile downstream of New Sharon Church Road	35.05	3,050	5,750	7,120	10,800
Just downstream of New Sharon Church Road	33.74	3,070	5,790	7,180	11,000
Approximately 0.8 mile upstream of New Sharon Church Road	31.40	3,020	5,720	7,100	10,900
Just upstream of the confluence of Forrest Creek	22.85	2,390	4,530	5,630	8,580
Approximately 0.8 mile upstream of Hunt Road	21.44	2,360	4,490	5,580	8,540
Approximately 2.7 miles downstream of NC 57 HWY	18.43	2,310	4,400	5,490	8,420
Approximately 1.2 miles downstream of NC 57 HWY	17.45	2,360	4,560	5,730	8,870
Approximately 130 feet downstream of NC 57 HWY	16.28	2,530	4,850	6,100	9,410
Approximately 0.86 mile upstream of Brock Drive	15.67	*	*	4,159	*
Approximately 0.03 mile downstream of Pearson Road	14.79	*	*	4,010	*
Approximately 0.30 mile upstream of Pearson Road	6.88	*	*	2,490	*
Approximately 0.23 mile downstream of Wilkerson Road	6.05	*	*	2,300	*

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 0.63 mile upstream of Wilkerson Road	3.70	*	*	1,690	*
Approximately 55 feet downstream of Hawkins Road	2.78	*	*	1,410	*
Approximately 0.02 mile upstream of Hawkins Road	1.80	*	*	1,080	*
McGowan Creek					
Approximately 1.74 miles downstream of Brookhollow Road	6.22	*	*	2,870	*
Approximately 0.53 mile downstream of Brookhollow Road	5.48	*	*	2,650	*
Approximately 0.26 miles downstream of S. Efland Cedar Grove Road	4.86	*	*	2,460	*
Approximately 0.49 mile downstream of Richmond Road	3.90	*	*	2,140	*
Approximately 0.13 mile downstream of Richmond Road	2.95	*	*	1,800	*
Approximately 0.79 mile upstream of Richmond Road	1.95	*	*	1,390	*
Approximately 0.07 mile upstream of Frazier Road	1.15	*	*	999	*
Meeting of the Waters Creek					
At the confluence with Morgan Creek	1.00	*	*	767	*
Approximately 0.38 mile upstream of Fordham Boulevard South	0.40	*	*	418	*
Mill Creek					
Approximately 30 feet upstream of confluence of Mill Creek Tributary	2.70	759	1,330	1,530	2,090
Mill Creek Tributary					
At the confluence with Mill Creek	0.70	*	*	709	*
Approximately 0.36 mile upstream of Lee Street	0.10	*	*	289	*
Morgan Creek					
Approximately 1.58 miles downstream of the Orange/Durham County boundary	42.60	*	*	10,900	*
Approximately 3.7 miles downstream of US 15 501 HWY	40.93	5,010	7,420	8,250	10,600
Approximately 3.5 miles downstream of US 15 501 HWY	40.78	5,000	7,400	8,230	10,600
Approximately 3.2 miles downstream of US 15 501 HWY	40.74	4,990	7,400	8,220	10,600
Approximately 2.9 miles downstream of US 15 501 HWY	39.91	4,870	7,240	8,060	10,400
Approximately 2.6 miles downstream of US 15 501 HWY	38.82	4,630	6,950	7,750	10,000
Approximately 2.6 miles downstream of US 15 501 HWY	38.77	4,620	6,940	7,740	10,000
Approximately 1.8 miles downstream of US 15 501 HWY	38.16	4,560	6,860	7,650	9,890
NP	38.05	4,540	6,840	7,630	9,870
Approximately 1.3 miles downstream of US 15 501 HWY	37.93	4,530	6,810	7,610	9,840
Approximately 1.1 mile downstream of US 15 501 HWY	37.79	4,500	6,780	7,580	9,800
Approximately 0.5 mile downstream of US 15 501 HWY	37.51	4,480	6,750	7,540	9,750
Approximately 870 feet downstream of US 15 501 HWY	36.96	4,380	6,630	7,410	9,600
NP	33.39	4,000	6,120	6,860	8,930
Approximately 600 feet upstream of the confluence of Wilson Creek	33.32	3,980	6,090	6,830	8,900
Approximately 600 feet upstream of the confluence of Wilson Creek	33.29	3,970	6,090	6,830	8,890
Approximately 0.6 mile upstream of the confluence of Wilson Creek	33.10	3,930	6,030	6,770	8,820
Approximately 0.7 mile downstream of Smith Level Road	32.76	3,860	5,950	6,680	8,710
Approximately 900 feet downstream of Smith Level Road	32.49	3,810	5,880	6,610	8,630
Just upstream of the confluence of Unnamed Urban Creek	31.89	3,370	5,280	6,070	8,070
Approximately 1,300 feet upstream of the confluence of Unnamed Urban Creek	31.80	3,360	5,270	6,060	8,060
Approximately 0.5 mile upstream of the confluence of Unnamed Urban Creek	31.62	3,350	5,250	6,040	8,030
Approximately 0.5 mile downstream of the confluence of Toms Creek	31.54	3,350	5,240	6,030	8,020
Approximately 1,500 feet downstream of the confluence of Toms Creek	31.43	3,340	5,230	6,020	8,000

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 Toms Creek	30.04	3,250	5,090	5,860	7,790
Approximately 0.5 mile upstream of the confluence of Toms Creek	29.79	3,230	5,070	5,830	7,760
Approximately 600 feet upstream of Jones Ferry Road	9.93	1,810	2,980	3,490	4,760
Approximately 600 feet upstream of Jones Ferry Road	9.86	1,800	2,980	3,490	4,760
Approximately 0.6 mile upstream of Jones Ferry Road	9.62	1,790	2,970	3,480	4,760
Approximately 1,200 feet downstream of the confluence of Morgan Creek Tributary	9.49	1,790	2,970	3,480	4,760
Just upstream of the confluence of Morgan Creek Tributary	8.93	1,760	2,940	3,450	4,740
Approximately 0.9 mile downstream of NC 54 HWY	8.84	1,750	2,930	3,440	4,730
Approximately 0.6 mile downstream of NC 54 HWY	8.69	1,740	2,920	3,430	4,720
Approximately 1,400 feet downstream of NC 54 HWY	8.62	1,740	2,920	3,430	4,720
At Orange/Durham County boundary	8.40	1,890	3,750	4,600	8,400
Just downstream of NC 54 Highway	8.26	1,710	2,890	3,400	4,690
Approximately 1,570 feet upstream of NC 54 HWY	8.10	1,690	2,840	3,340	4,600
At NC 54	7.80	1,750	3,500	4,200	7,800
Approximately 0.5 mile upstream of NC 54 HWY	7.61	1,590	2,670	3,140	4,320
At Cheekie Boy Lane	7.48	1,570	2,630	3,090	4,250
Approximately 1.2 miles downstream of the intersection of Dairyland Road and Yorkshire Lane	6.76	1,430	2,390	2,800	3,840
Approximately 0.8 mile downstream of the intersection of Dairyland Road and Yorkshire Lane	6.33	1,360	2,250	2,630	3,610
At NC Secondary Road 1105	6.30	1,480	3,000	3,600	6,700
Approximately 670 feet downstream of the intersection of Dairyland Road and Yorkshire Lane	5.65	1,230	2,030	2,370	3,240
At Dairyland Road downstream	5.20	1,270	2,550	3,150	5,800
Approximately 1.2 mile downstream of the intersection of Dairyland Road and Marison Road	3.23	820	1,340	1,560	2,120
Approximately 0.7 mile downstream of the intersection of Dairyland Road and Marison Road	2.98	780	1,270	1,480	2,030
Approximately 1,200 feet upstream of Dairyland Road	2.80	795	1,600	1,980	3,650
Approximately 1,150 feet downstream of the intersection of Dairyland Road and Marison Road	2.53	706	1,150	1,350	1,840
Just upstream of the intersection of Dairyland Road and Marison Road	2.16	640	1,050	1,230	1,680
Approximately 850 feet upstream of the intersection of Dairyland Road and Marison Road	2.02	614	1,010	1,180	1,610
Approximately 1,630 feet upstream of the intersection of Dairyland Road and Marison Road	1.93	598	982	1,150	1,570
At Dairyland Road	1.80	560	1,120	1,420	2,600
Approximately 0.6 mile upstream of the intersection of Dairyland Road and Marison Road	1.72	556	915	1,070	1,470
Approximately 1.0 mile downstream of Dairyland Road	1.55	522	861	1,010	1,390
Approximately 0.71 mile downstream of Dairyland Road	1.22	450	745	874	1,210
Approximately 0.43 mile downstream of Dairyland Road	0.90	372	619	727	1,010
At Dairyland Road upstream crossing	0.60	220	450	580	1,050
Approximately 1010 feet downstream of Dairyland Road	0.58	284	476	561	780
Morgan Creek Tributary					
At the confluence with Morgan Creek	0.53	287	537	622	865
Approximately 1,050 feet downstream of NC 54 HWY	0.42	260	487	562	781

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 140 feet downstream of NC 54 Highway	0.24	170	332	387	544
Mountain Creek					
At the confluence with New Hope Creek	2.60	*	*	1,354	*
Approximately 0.85 mile upstream of confluence with New Hope Creek	2.20	*	*	1,220	*
Neville Creek					
At the confluence with Phils Creek	3.94	927	1,510	1,750	2,380
Approximately 840 feet upstream of the confluence with Phils Creek	3.08	796	1,300	1,510	2,060
Approximately 0.4 mile upstream of the confluence with Phils Creek	2.95	776	1,270	1,480	2,020
Approximately 0.7 mile upstream of the confluence with Phils Creek	2.91	770	1,260	1,470	2,000
Approximately 1.1 miles upstream of the confluence with Phils Creek	2.79	750	1,220	1,430	1,950
Approximately 1,340 feet downstream of Stansbury Road	2.41	685	1,120	1,310	1,790
Approximately 270 feet downstream of Stansbury Road	2.34	672	1,100	1,290	1,760
Approximately 270 feet downstream of Stansbury Road	2.27	660	1,080	1,260	1,730
Approximately 1,500 feet downstream of Bowden Road	2.17	641	1,050	1,230	1,680
Approximately 130 feet downstream of Bowden Road	1.87	587	964	1,130	1,550
New Hope Creek					
At Orange County boundary	32.36	3,630	6,510	7,740	10,800
Approximately 0.6 mile downstream of Erwin Road	31.34	3,960	7,320	8,680	12,200
At Erwin Road	26.46	3,270	5,160	6,080	8,640
Just upstream of the confluence of Piney Mountain Creek	25.87	3,230	5,100	6,010	8,540
Approximately 0.8 mile upstream of the confluence of Piney Mountain Creek	25.49	3,200	5,050	5,960	8,470
Approximately 1.2 miles upstream of the confluence of Piney Mountain Creek	24.02	3,070	4,870	5,740	8,160
Approximately 1.8 miles upstream of the confluence of Piney Mountain Creek	23.71	3,050	4,840	5,710	8,140
Approximately 1.1 mile downstream of Turkey Farm Road	22.92	2,990	4,740	5,600	7,970
Just downstream of Turkey Farm Road	22.41	2,960	4,750	5,600	7,950
Just upstream of the confluence of Old Field Creek	17.82	1,760	3,140	3,880	5,650
Approximately 150 feet downstream of Mt Sinai Road	17.48	1,750	2,940	3,690	5,530
Approximately 0.7 mile upstream of Mt Sinai Road	16.34	1,690	2,840	3,430	5,160
Approximately 0.6 mile downstream of NC 86 HWY	15.96	1,670	2,810	3,390	5,110
Approximately 400 feet downstream of I-40 HWY	15.17	1,710	2,810	3,370	5,060
Approximately 0.6 mile upstream of I-40 HWY	12.24	1,580	2,510	2,970	4,350
Approximately 650 feet downstream of New Hope Church Road	11.31	1,600	2,650	3,190	4,590
Approximately 200 feet downstream of Foxlair Road	9.02	*	*	2,910	*
At Old NC 86 HWY	8.12	*	*	2,860	*
New Hope Creek Tributary 1					
Approximately 900 feet downstream of Interstate 40	2.10	1,230	1,880	2,060	2,540
Approximately 350 feet downstream of Interstate 40	1.60	1,050	1,620	1,780	2,210
Approximately 0.5 mile upstream of Interstate 40	1.10	827	1,310	1,440	1,800
Approximately 1,140 feet upstream of Erwin Road	0.70	599	973	1,080	1,360
Old Field Creek					
At the confluence with New Hope Creek	4.20	1,490	2,600	3,150	4,590
Approximately 0.6 mile downstream of NC 86 HWY	3.30	1,330	2,340	2,810	4,010
Approximately 0.6 mile downstream of NC 86 HWY	3.25	1,330	2,340	2,810	4,010
Approximately 380 feet downstream of NC 86 HWY	2.33	1,080	1,850	2,220	3,160

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 310 feet downstream of I-40 HWY	1.90	907	1,580	1,900	2,740
Approximately 220 feet downstream of Mill House Road	1.30	589	1,070	1,300	1,910
Phils Creek					
Approximately 620 feet downstream of Jones Ferry Road	11.17	1,760	2,810	3,250	4,380
Approximately 620 feet downstream of Jones Ferry Road	11.16	1,760	2,810	3,250	4,370
Just upstream of the confluence of Neville Creek	7.11	1,330	2,140	2,490	3,360
Approximately 670 feet downstream of Old Greensboro Road	6.86	1,310	2,100	2,440	3,290
Approximately 1,000 feet upstream of Old Greensboro Road	6.75	1,290	2,080	2,410	3,260
Approximately 0.6 mile upstream of Old Greensboro Road	6.22	1,230	1,980	2,300	3,110
Approximately 2,000 feet downstream of Neville Road	5.53	1,140	1,840	2,140	2,910
Approximately 1,100 feet downstream of Neville Road	5.16	1,100	1,770	2,060	2,790
Just downstream of Neville Road	5.03	1,080	1,740	2,030	2,750
Approximately 1,370 feet upstream of Neville Road	4.86	1,060	1,710	1,980	2,690
NP	4.15	958	1,550	1,810	2,460
Approximately 1.2 mile downstream of NC 54 HWY	3.96	930	1,510	1,760	2,390
Approximately 1.0 mile downstream of NC 54 HWY	3.87	917	1,490	1,730	2,360
Approximately 0.9 mile downstream of NC 54 HWY	2.08	721	1,250	1,420	1,930
Approximately 0.8 mile downstream of NC 54 HWY	1.80	687	1,180	1,350	1,830
Approximately 0.5 mile downstream of NC 54 HWY	1.74	684	1,180	1,340	1,820
Approximately 300 feet downstream of NC 54 HWY	1.59	674	1,150	1,310	1,770
Approximately 100 feet upstream of NC 54 HWY	1.27	616	1,050	1,190	1,610
Approximately 680 feet downstream of Bethel Hickory Grove Church Road	1.21	583	1,000	1,140	1,550
Piney Mountain Creek					
At Mouth	4.40	740	1,470	1,905	3,350
At the confluence with New Hope Creek	4.40	1,520	2,770	3,390	5,020
At Mineral Springs Road	4.20	715	1,425	1,850	3,250
At Mt Sinai Road	4.18	1,530	2,800	3,430	5,080
Approximately 0.4 mile upstream of Mt Sinai Road	3.89	1,510	2,800	3,420	5,080
Below Tributary near station 8000	3.00	585	1,170	1,520	2,685
Approximately 1.1 mile upstream of Mt Sinai Road	2.43	872	1,620	2,010	3,000
Above Tributary near station 8000	2.40	520	1,040	1,355	2,400
Approximately 1.1 mile downstream of Friends School Road	1.38	580	1,020	1,240	1,810
Approximately 0.6 mile downstream of Friends School Road	1.03	478	858	1,040	1,500
At SR 1719	0.90	280	570	750	1,335
Approximately 240 feet upstream of Friends School Road	0.80	417	746	902	1,300
Price Creek					
Approximately 0.34 mile downstream of Damascus Church Road	3.90	*	*	1,860	*
Rays Creek					
Approximately 0.43 mile upstream of confluence with South Fork Little River	4.83	*	*	1,990	*
Approximately 0.35 mile downstream of Wilkerson Road	4.67	*	*	1,950	*
Approximately 0.68 mile upstream of Wilkerson Road	1.79	*	*	1,070	*
Approximately 1.13 miles upstream of Wilkerson Road	1.27	*	*	867	*
Rays Creek Tributary					
Approximately 0.78 mile upstream of Wilkerson Road	1.97	*	*	1,140	*

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 1.07 miles upstream of Wilkerson Road	1.06	*	*	772	*
Rhodes Creek					
At the confluence with Eno River	4.12	1,230	2,020	2,270	3,030
Approximately 1,350 feet upstream of the confluence with Eno River	3.99	1,210	1,980	2,230	2,980
Approximately 0.5 feet upstream of the confluence with Eno River	3.58	1,090	1,810	2,040	2,740
Approximately 720 feet downstream of Highway I-85	3.52	1,090	1,800	2,030	2,730
Approximately 140 feet downstream of Groucho Road	3.40	987	1,670	1,890	2,550
Approximately 880 feet upstream of Groucho Road	2.10	709	1,230	1,410	1,920
Approximately 1,030 feet upstream of Groucho Road	1.95	664	1,160	1,330	1,820
Approximately 150feet downstream of a rail road crossing	1.90	656	1,150	1,320	1,800
Approximately 150feet downstream of a rail road crossing	1.87	630	1,110	1,280	1,750
Approximately 50 feet downstream of Old NC 10 Highway	1.57	526	866	1,010	1,390
Approximately 880 feet downstream of Mount Hermon Church Road	1.36	482	796	933	1,290
Approximately 200 feet downstream of Mount Hermon Church Road	1.31	469	776	910	1,250
Approximately 830 feet upstream of Mount Hermon Church Road	0.73	328	548	645	894
Approximately 830 feet upstream of Mount Hermon Church Road	0.68	314	525	618	857
Approximately 1,000 feet upstream of Yonder Trail	0.48	254	435	509	702
Approximately 1,720 feet downstream to the N. of High Meadow Road	0.44	224	435	509	715
Approximately 1,720 feet downstream to the N. of High Meadow Road	0.41	221	428	500	702
Approximately 120 feet downstream to the N. of High Meadow Road	0.04	85	164	189	266
Rocky Run					
At the confluence with Sevenmile Creek	2.60	718	1,170	1,370	1,870
At the confluence with Sevenmile Creek	2.55	710	1,160	1,360	1,850
Approximately 0.5 miles upstream of Interstate 40 Highway	2.45	691	1,130	1,320	1,810
Approximately 0.5 miles upstream of Interstate 40 Highway	2.38	679	1,110	1,300	1,780
Approximately 250 feet upstream of Moorefields Road	2.14	636	1,040	1,220	1,670
Approximately 100 feet downstream of 1825 Dimmock's Mill Road	2.01	613	1,010	1,180	1,610
Approximately 730 feet upstream of 1825 Dimmock's Mill Road	1.90	592	973	1,140	1,560
Approximately 0.42 miles downstream of Moorefields Road	1.73	558	917	1,070	1,470
Approximately 0.42 miles downstream of Moorefields Road	1.68	548	902	1,060	1,450
Sevenmile Creek					
At the confluence with Eno River	17.03	2,300	3,550	4,100	5,500
Approximately 1,710 feet downstream of the confluence of Rocky Run	16.91	2,290	3,530	4,080	5,470
Just upstream of the confluence of Rocky Run	14.23	2,070	3,140	3,630	4,890
Approximately 830 feet downstream of I-40 HWY	14.05	2,060	3,110	3,600	4,850
Approximately 830 feet downstream of I-40 HWY	13.98	2,050	3,100	3,590	4,830
Approximately 0.38 mile downstream of Mt Willing Road	10.22	*	*	3,180	*
Approximately 20 feet downstream of confluence of Sevenmile Creek Tributary 2	9.26	*	*	3,000	*
Approximately 1.25 miles upstream of confluence of Sevenmile Creek Tributary 2	3.10	*	*	1,510	*
Approximately 1.64 miles upstream of confluence of Sevenmile Creek Tributary 2	1.04	*	*	764	*
Sevenmile Creek Tributary 1					
Approximately 1.52 miles upstream of confluence with Sevenmile Creek	1.79	*	*	1,070	*
Sevenmile Creek Tributary 2					
Approximately 0.06 mile downstream of confluence of Tributary 1 to Sevenmile Creek Tributary 2	3.77	*	*	1,710	*

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 0.27 mile upstream of Bushy Cook Road	1.01	*	*	749	*
Spring Valley Creek					
At the confluence with Eno River	2.21	649	1,060	1,240	1,700
Approximately 0.60 miles upstream of the confluence with Eno River	2.01	612	1,010	1,180	1,610
Approximately 1,290 feet downstream of the first crossing with Jack Franklin Road	1.73	558	918	1,080	1,480
Approximately 1,290 feet downstream of the first crossing with Jack Franklin Road	1.70	552	908	1,060	1,460
Approximately 540 feet downstream of the second crossing with Jack Franklin Road	1.63	538	886	1,040	1,420
Approximately 700 feet downstream of Palmers Grove Church Road	1.47	504	831	974	1,340
Approximately 150 feet upstream of Palmers Grove Church Road	1.41	492	812	952	1,310
Approximately 150 feet upstream of Palmers Grove Church Road	1.36	481	794	931	1,280
Approximately 0.40 miles upstream of Palmers Grove Church Road	1.21	448	741	869	1,200
Approximately 1,560 feet downstream of US Highway 70	0.97	389	647	760	1,050
Approximately 100 feet downstream of US Highway 70	0.89	370	615	723	999
Stagg Creek					
At the Alamance/Orange County boundary	2.60	*	*	1,354	*
At confluence of Stagg Creek Tributary 2	2.10	*	*	1,171	*
Stony Creek					
At the confluence with Eno River	9.00	1,760	2,860	3,240	4,310
Approximately 0.40 miles upstream of the confluence with Eno River	8.89	1,730	2,820	3,200	4,260
Approximately 130 feet downstream from US Highway 70	8.74	1,700	2,780	3,150	4,200
Approximately 400 feet upstream from the confluence with Stony Creek Tributary	7.33	1,550	2,540	2,880	3,840
Approximately 400 feet upstream from the confluence with Stony Creek Tributary	7.27	1,540	2,530	2,860	3,830
NP	7.15	1,510	2,490	2,820	3,770
Approximately 780 feet upstream of Interstate 85	7.04	1,480	2,440	2,770	3,710
Approximately 620 feet downstream of University Station Road	6.73	1,420	2,360	2,680	3,590
Approximately 620 feet downstream of University Station Road	6.70	1,410	2,350	2,670	3,570
Approximately 1,740 feet upstream of a railroad crossing	6.48	1,360	2,270	2,590	3,480
Approximately 0.51 miles upstream of a railroad crossing	6.32	1,340	2,240	2,550	3,430
NP	5.85	1,300	2,180	2,470	3,320
Approximately 70 feet downstream of Old NC 10 Highway	5.66	1,280	2,140	2,440	3,280
Approximately 1,190 feet upstream from Old NC 10 Highway	5.59	1,280	2,130	2,420	3,260
Approximately 0.40 miles upstream of Old NC 10 Highway	5.38	1,240	2,080	2,370	3,180
NP	5.15	1,230	2,060	2,340	3,140
Approximately 1,520 feet downstream of New Hope Church Road	4.19	1,140	1,900	2,150	2,890
Approximately 300 feet downstream of new Hope Church Road	4.13	1,140	1,890	2,140	2,880
Approximately 1,280 feet upstream of New Hope Church Road	2.71	936	1,560	1,770	2,380
Approximately 1,280 feet upstream of New Hope Church Road	2.67	934	1,560	1,760	2,370
Approximately 0.65 miles upstream of New Hope Church Road	2.62	929	1,550	1,750	2,350
Approximately 990 feet downstream of Duke Forest Drive	2.44	918	1,530	1,720	2,310
Approximately 990 feet downstream of Duke Forest Drive	2.42	917	1,520	1,720	2,300
Approximately 150 feet upstream of Duke Forest Drive	1.57	684	1,170	1,320	1,790
Approximately 500 feet upstream of Duke Forest Drive	1.53	682	1,160	1,310	1,770
Approximately 500 feet upstream of Duke Forest Drive	1.51	681	1,160	1,310	1,770
Stony Creek Tributary					
At the confluence with Stony Creek	1.32	473	782	917	1,260

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
At the confluence with Stony Creek	1.29	466	771	904	1,250
Approximately 650 feet upstream of University Station Road	1.20	446	738	865	1,190
Approximately 650 feet upstream of University Station Road	1.17	438	725	850	1,170
Strouds Creek					
Approximately 160 feet upstream of St. Marys Road	9.03	*	*	3,620	*
Approximately 20 feet upstream of confluence of Strouds Creek Tributary 2	8.89	*	*	3,591	*
Approximately 0.19 mile upstream of Miller Road	6.56	*	*	2,970	*
Approximately 50 feet upstream of Governor Burke Road	4.32	*	*	2,290	*
Approximately 0.49 mile upstream of State HWY 57	2.85	*	*	1,760	*
Approximately 0.39 mile downstream of State HWY 86	2.02	*	*	1,156	*
Approximately 0.64 mile upstream of State HWY 57	2.02	*	*	1,420	*
Approximately 0.38 mile upstream of State HWY 86	1.02	*	*	927	*
Strouds Creek Tributary 1					
Approximately 540 feet downstream of Governor Burke Road	2.09	628	1,030	1,200	1,650
Approximately 0.5 miles upstream of Governor Burke Road	1.80	573	941	1,100	1,510
Approximately 0.9 miles upstream of Governor Burke Road	1.71	555	913	1,070	1,470
Approximately 1.3 miles upstream of Governor Burke Road	1.60	532	876	1,030	1,410
Approximately 0.21 mile upstream of Phelps Road	1.46	*	*	942	*
Strouds Creek Tributary 2					
Approximately 0.24 mile upstream of Farmview Road	1.35	*	*	897	*
Approximately 0.71 mile upstream of Miller Road	1.08	*	*	783	*
Strouds Creek Tributary 3					
Approximately 0.49 mile upstream of State HWY 57	0.70	*	*	598	*
Terrells Creek					
At the Chatham/Orange County boundary	5.60	*	*	2,193	*
Approximately 0.50 mile upstream of Orange/Chatham County Boundary	4.60	*	*	1,943	*
Approximately 0.52 mile upstream of Orange/Chatham County Boundary	1.90	*	*	1,121	*
Approximately 2.30 miles upstream of Orange/Chatham County Boundary	1.30	*	*	882	*
Toms Creek					
At the confluence with Morgan Creek	1.21	864	1,360	1,500	1,970
At the confluence with Morgan Creek	1.19	856	1,350	1,480	1,950
Approximately 700 feet downstream of Jones Ferry Road	1.10	807	1,280	1,410	1,860
Just upstream of Jones Ferry Road	1.02	749	1,200	1,330	1,750
Approximately 300 feet downstream of NC 54 HWY	0.90	677	1,090	1,210	1,610
Just downstream of Poplar Avenue	0.72	577	947	1,050	1,410
Approximately 200 feet downstream of Main Street	0.43	359	625	705	961
Approximately 200 feet downstream of Main Street	0.40	336	591	668	913
Approximately 150 feet downstream of Carol Street	0.21	214	390	445	615
Approximately 200 feet upstream of Rainbow Drive	0.08	111	214	247	346
Toms Creek (Apple Pond)					
Approximately 0.91 mile downstream of Bradshaw Quarry Road	7.50	*	*	2,629	*
Approximately 0.17 mile downstream of Bradshaw Quarry Road	6.60	*	*	2,413	*
Approximately 0.55 mile upstream of Bradshaw Quarry Road	5.70	*	*	2,214	*
Approximately 0.58 mile downstream of Nicks Road	5.10	*	*	2,051	*

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 0.13 mile upstream of Nicks Road	2.20	*	*	1,208	*
Tributary 1 to Sevenmile Creek Tributary 2					
Approximately 0.18 mile upstream of Bushy Cook Road	2.11	*	*	1,190	*
Turkey Hill Creek					
At the confluence with Cane Creek	5.70	*	*	2,209	*
Approximately 0.09 mile upstream of Bradshaw Quarry Road	4.90	*	*	2,009	*
Approximately 1.60 miles upstream of Bradshaw Quarry Road	2.80	*	*	1,408	*
Approximately 3.00 miles upstream of Bradshaw Quarry Road	2.00	*	*	1,147	*
Unnamed Tributary to Bolin Creek					
Approximately 0.7 mile downstream of Tallyho Trail	0.75	334	558	656	909
Approximately 0.5 mile downstream of Tallyho Trail	0.72	325	542	638	884
At the confluence with Morgan Creek	0.50	529	854	943	1,250
Approximately 1,300 feet downstream of Tallyho Trail	0.44	241	406	480	668
Approximately 1,300 feet downstream of Tallyho Trail	0.40	226	381	450	628
Unnamed Urban Creek					
NP	0.55	572	915	1,010	1,330
NP	0.30	206	394	456	638
Watery Fork					
At the confluence with Cane Creek	2.60	*	*	1,362	*
Approximately 0.05 mile upstream of Orange Grove Road	1.90	*	*	1,111	*
Approximately 0.06 mile downstream of Dairyland Road	1.00	*	*	745	*
West Fork Eno River					
Approximately 140 feet upstream of the confluence with Eno River	14.47	2,070	3,280	3,790	5,090
Approximately 0.40 miles upstream of the confluence with Eno River	11.52	1,800	2,870	3,320	4,460
Approximately 0.70 miles downstream of Efland Cedar Grove Road	11.45	1,790	2,850	3,300	4,440
Approximately 1,400 feet downstream of Efland Cedar Grove Road	11.30	1,780	2,830	3,280	4,410
Approximately 550 feet downstream of Efland Cedar Grove Road	11.05	1,750	2,790	3,230	4,350
Approximately 1.31 miles downstream of Carr Store Road	8.78	*	*	2,900	*
Approximately 1.06 miles downstream of Carr Store Road	7.78	*	*	2,690	*
Approximately 0.88 mile downstream of Carr Store Road	7.00	*	*	2,510	*
Approximately 150 feet upstream of Carr Store Road	6.49	*	*	2,400	*
Approximately 35 feet downstream of confluence of West Fork Eno River Tributary 3	5.53	*	*	2,170	*
Approximately 0.27 mile upstream of confluence of West Fork Eno River Tributary 3	3.05	*	*	1,500	*
Approximately 40 feet downstream of McDade Store Road	3.01	*	*	1,480	*
Approximately 0.06 mile upstream of McDade Store Road	1.46	*	*	942	*
West Fork Eno River Tributary 1					
Approximately 0.07 mile downstream of N. Efland Cedar Grove Road	2.83	*	*	1,430	*
Approximately 0.02 mile upstream of Harmony Church Road	2.41	*	*	1,290	*
Approximately 0.50 mile upstream of Harmony Church Road	1.44	*	*	934	*
West Fork Eno River Tributary 2					
Approximately 110 feet upstream of Governor Scott Road	1.24	*	*	853	*
Approximately 0.35 mile upstream of Governor Scott Road	1.00	*	*	745	*
West Fork Eno River Tributary 3					
Approximately 0.92 mile upstream of confluence with West Fork Eno River	1.59	*	*	997	*

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 1.70 miles upstream of confluence with West Fork Eno River	1.02	*	*	756	*
West Price Creek					
At the confluence with Price Creek	1.36	481	795	931	1,280
Approximately 1,350 feet downstream of Price Creek Road	1.25	457	757	887	1,220
Approximately 1,350 feet downstream of Price Creek Road	1.20	444	736	863	1,190
Approximately 330 feet downstream of Price Creek Road	1.06	412	683	802	1,110
The Chatham/Orange County boundary	0.90	*	*	903	*
At Chatham County limits	0.80	280	570	745	1,325
Wildcat Branch					
At the confluence with Collins Creek	1.50	*	*	945	*
Approximately 0.23 mile downstream of Wildcat Creek Road	1.00	*	*	747	*
Wilson Creek					
At the confluence with Morgan Creek	3.54	1,120	1,850	2,080	2,780
At the confluence with Morgan Creek	3.50	1,110	1,820	2,060	2,750
Just upstream of the confluence of Fan Branch	2.04	659	1,160	1,330	1,820
Approximately 200 feet downstream of US 15 501 HWY	1.80	571	939	1,100	1,510
Approximately 600 feet upstream of US 15 501 HWY	1.71	553	911	1,070	1,460
Approximately 0.5 mile upstream of US 15 501 HWY	1.41	492	812	951	1,310
Approximately 1,500 feet downstream of Wave Road	1.24	454	751	881	1,210
Approximately 1,500 feet downstream of Wave Road	1.16	436	722	847	1,170

The stillwater elevations have been determined for the 1% [add 10%, 2%, and 0.2% here if that data is available] annual chance flood for the flooding sources studied by detailed methods and are summarized in Table 14, "Summary of Stillwater Elevations."

Table 14 - Summary of Stillwater Elevations

Flooding Source	FIRM Panel Number(s)	Elevations (feet NAVD)			
		10% Annual Chance	2% Annual Chance	1% Annual Chance	0.2% Annual Chance
Cane Creek (North) Reservoir	3710982000	*	*	501	*

Table 15, "Gage Information", lists the stream gages located in Orange 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
02096846	Cane Creek (North)	CANE CREEK NEAR ORANGE GROVE, NC	7.54	1989	2002
02096850	Cane Creek (North)	CANE CREEK NEAR TEER, NC	33.70	1960	1973
02085000	Eno River	USGS 02085000	66.00	1928	2012
02097464	Morgan Creek	USGS 02097464	8.35	1989	2012
NP	Morgan Creek	MORGAN CREEK NEAR CHAPEL HILL, NC	41.00	1983	2003
02084909	Sevenmile Creek	USGS 02084909	14.10	1988	2012

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"
Back Creek Tributary 3	0.045 to 0.050	0.120 to 0.150
Battle Branch	0.040 to 0.045	0.130 to 0.140
Bolin Creek	0.040 to 0.050	0.100 to 0.200
Bolin Creek Tributary	0.035 to 0.060	0.060 to 0.130
Bolin Creek Tributary 2	0.037 to 0.048	0.100 to 0.140
Booker Creek	0.040 to 0.055	0.100 to 0.200
Buckhorn Branch	0.040 to 0.045	0.120 to 0.150
Buckwater Creek	0.035 to 0.040	0.037 to 0.130
Buckwater Creek Tributary 1	0.037 to 0.120	0.037 to 0.120
Buckwater Creek Tributary 2	0.037 to 0.110	0.060 to 0.120
Buffalo Creek Tributary 2	0.050	0.150
Cane Creek (North)	0.040 to 0.050	0.100 to 0.150
Cane Creek (North) Tributary 5	0.045	0.100 to 0.140
Cates Creek	0.035 to 0.050	0.110 to 0.150
Cates Creek Tributary	0.040 to 0.050	0.140 to 0.150
Cedar Fork	0.037 to 0.055	0.035 to 0.190
Chapel Creek	0.040 to 0.045	0.100 to 0.150
Collins Creek	0.040 to 0.050	0.100 to 0.150
Collins Creek Tributary 1	0.045 to 0.060	0.050 to 0.200
Crabtree Creek	0.040 to 0.045	0.140 to 0.150
Crow Branch	0.040 to 0.045	0.120 to 0.150
Dry Branch	0.055 to 0.060	0.080 to 0.160
Dry Creek	0.045	0.140 to 0.150
East Back Creek	0.040 to 0.055	0.050 to 0.190
East Fork Eno River	0.015 to 0.060	0.050 to 0.140
East Fork Eno River Tributary 1	0.045 to 0.050	0.150
East Fork Eno River Tributary 2	0.040 to 0.045	0.110 to 0.150
East Price Creek	0.034 to 0.060	0.050 to 0.150
Eno River	0.038 to 0.065	0.040 to 0.200
Fan Branch	0.030 to 0.042	0.045 to 0.130
Fan Branch Tributary	0.034 to 0.035	0.100 to 0.120
Forrest Creek	0.030 to 0.060	0.050 to 0.150
High Rock Creek	0.040 to 0.050	0.110 to 0.140
Jones Creek	0.037 to 0.055	0.060 to 0.150
Lake Michael Tributary	0.040 to 0.055	0.100 to 0.150

Table 16 - Roughness Coefficients

Stream	Channel "n"	Overbank "n"
Lake Michael Tributary 2	0.045 to 0.050	0.140 to 0.150
Lick Creek	0.045 to 0.050	0.110 to 0.150
Little Creek	0.040 to 0.050	0.140
Little Creek (Near Hillsborough)	0.045	0.050 to 0.130
Little Creek Tributary 3 (Chapel Hill)	0.040 to 0.045	0.130 to 0.150
Little River North Fork	0.034 to 0.075	0.035 to 0.155
Little River North Fork Tributary 2	0.045 to 0.050	0.140 to 0.150
Little River North Fork Tributary 3	0.045 to 0.050	0.110 to 0.140
Little River South Fork	0.040 to 0.060	0.040 to 0.150
Lynch Creek	0.039 to 0.040	0.045 to 0.120
McGowan Creek	0.035 to 0.045	0.100 to 0.150
Meeting of the Waters Creek	0.040 to 0.045	0.140
Mill Creek	0.044 to 0.055	0.050 to 0.200
Mill Creek Tributary	0.050	0.130 to 0.150
Morgan Creek	0.037 to 0.061	0.045 to 0.910
Morgan Creek Tributary	0.035 to 0.052	0.060 to 0.130
Mountain Creek	0.040 to 0.050	0.100 to 0.150
Neville Creek	0.045 to 0.060	0.060 to 0.130
New Hope Creek	0.035 to 0.060	0.050 to 0.180
New Hope Creek Tributary 1	0.046 to 0.059	0.090 to 0.180
North Fork Little River Tributary 2	0.045 to 0.075	0.035 to 0.120
Old Field Creek	0.035 to 0.060	0.050 to 0.130
Phils Creek	0.045 to 0.060	0.050 to 0.130
Piney Mountain Creek	0.035 to 0.060	0.100 to 0.140
Price Creek	0.045	0.130 to 0.140
Rays Creek	0.045 to 0.050	0.110 to 0.150
Rays Creek Tributary	0.050	0.120 to 0.140
Rhodes Creek	0.040 to 0.060	0.060 to 0.150
Rocky Run	0.050 to 0.060	0.060 to 0.120
Sevenmile Creek	0.040 to 0.060	0.100 to 0.150
Sevenmile Creek Tributary 1	0.040 to 0.045	0.130 to 0.150
Sevenmile Creek Tributary 2	0.040 to 0.045	0.110 to 0.140
South Hyco Creek	0.040 to 0.050	0.110 to 0.150
South Hyco Creek Tributary 8	0.050	0.120 to 0.150
Spring Valley Creek	0.040 to 0.043	0.060 to 0.120
Stagg Creek	0.040 to 0.050	0.110 to 0.150
Stagg Creek Tributary 2	0.040	0.100
Stony Creek	0.032 to 0.050	0.044 to 0.130
Stony Creek Tributary	0.054	0.100 to 0.130
Strouds Creek	0.040 to 0.050	0.100 to 0.150
Strouds Creek Tributary 1	0.040 to 0.057	0.040 to 0.150
Strouds Creek Tributary 2	0.040 to 0.060	0.100 to 0.150
Strouds Creek Tributary 3	0.040 to 0.045	0.120 to 0.150
Terrells Creek	0.040 to 0.050	0.100 to 0.150
Toms Creek	0.037 to 0.055	0.050 to 0.130
Toms Creek (Apple Pond)	0.045 to 0.050	0.110 to 0.150
Tributary 1 to Sevenmile Creek Tributary 2	0.040	0.110
Turkey Hill Creek	0.040 to 0.050	0.100 to 0.150
Unnamed Tributary to Bolin Creek	0.045 to 0.046	0.050 to 0.120
Unnamed Urban Creek	0.045	0.060 to 0.130
Watery Fork	0.040 to 0.050	0.110 to 0.150
West Fork Eno River	0.040 to 0.060	0.100 to 0.150
West Fork Eno River Tributary 1	0.040 to 0.050	0.110 to 0.150
West Fork Eno River Tributary 2	0.040 to 0.045	0.110 to 0.150
West Fork Eno River Tributary 3	0.040 to 0.045	0.100 to 0.150
West Price Creek	0.046 to 0.060	0.060 to 0.140
Wildcat Branch	0.045 to 0.050	0.100 to 0.150
Wilson Creek	0.034 to 0.050	0.050 to 0.130

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
Back Creek Tributary 3				
005	500	1,495	575.0 ¹	14 / 110
010	1,000	1,495	576.2	98 / 14
015	1,500	1,495	578.3	40 / 63
020	1,987	1,495	580.6	25 / 25
025	2,500	1,495	588.6	70 / 70
029	2,902	1,495	591.9	84 / 133
036	3,551	1,495	593.8	110 / 37
041	4,115	1,495	595.9	59 / 42
047	4,661	1,495	598.7	69 / 15
052	5,161	1,403	601.3	23 / 46
057	5,661	1,028	604.2	41 / 34
062	6,161	1,028	608.1	21 / 24
066	6,596	1,028	613.1	7 / 52
072	7,161	1,028	617.3	94 / 20
077	7,661	1,028	621.2	29 / 45
082	8,161	1,028	624.1	103 / 34
087	8,661	1,028	627.0	37 / 27
092	9,161	888	630.9	17 / 95
097	9,661	888	633.7	5 / 139
102	10,161	888	637.4	72 / 71
107	10,661	888	640.6	73 / 81
112	11,161	648	643.2	101 / 51
117	11,661	648	645.6	70 / 24

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
Battle Branch				
014	1,412	948	266.0	13 / 67
020	2,000	872	270.4	60 / 12
025	2,454	872	272.9	17 / 83
030	3,000	872	276.3	52 / 69
034	3,376	872	279.2	113 / 11
039	3,889	777	283.8	16 / 45
045	4,457	777	292.7	16 / 35
050	5,000	777	301.6	21 / 26
055	5,500	777	311.8	44 / 4
060	6,050	777	327.9	53 / 7
065	6,505	627	338.8	9 / 16
071	7,112	627	359.7	19 / 10
077	7,720	574	386.5	22 / 4
Bolin Creek				
433	43,350	736	495.8	40 / 50
440	43,951	736	499.0	80 / 70
440	44,011	736	509.1	80 / 70
446	44,554	736	509.1	70 / 90
453	45,256	736	509.3	75 / 118
458	45,801	555	509.8	55 / 52
465	46,521	555	512.1	65 / 65
466	46,571	555	518.8	65 / 65
471	47,085	555	518.9	50 / 80
478	47,790	492	521.4	58 / 20
484	48,357	492	525.7	15 / 20
490	48,970	492	532.3	42 / 22
497	49,742	492	541.1	23 / 10
504	50,398	252	556.7	30 / 30
504	50,448	252	558.8	30 / 30
509	50,929	252	560.8	17 / 17
513	51,255	252	563.4	10 / 15
513	51,295	252	565.0	10 / 15
516	51,619	252	567.0	2 / 15
520	52,000	252	572.1	14 / 10
525	52,500	252	578.0	11 / 11
Bolin Creek Tributary 2				
000	36	744	430.8 ¹	98 / 77
003	301	744	431.6	80 / 14
007	661	744	434.8	65 / 60
009	889	744	438.6	15 / 25
010	1,027	656	442.6	35 / 25
013	1,264	656	447.0	19 / 19
014	1,355	656	454.1	40 / 40
015	1,509	656	454.1	25 / 15
017	1,723	656	454.1	15 / 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
019	1,910	656	456.5	25 / 25
022	2,239	618	459.8	13 / 35
025	2,464	618	463.0	30 / 30
026	2,572	618	464.0	15 / 14
027	2,687	618	475.1	50 / 23
029	2,899	618	475.1	45 / 30
031	3,092	587	475.1	45 / 35
034	3,407	587	475.2	45 / 35
Buckhorn Branch				
002	247	453	483.1	20 / 20
008	769	453	487.8	10 / 52
014	1,401	453	491.3	24 / 12
021	2,076	288	495.8	20 / 20
021	2,126	288	500.7	20 / 20
025	2,515	288	503.6	30 / 24
026	2,555	288	508.9	20 / 20
029	2,870	288	509.0	21 / 30
Cane Creek (North)				
009	938	7,360	427.6 ¹	35 / 50
014	1,404	7,360	427.6 ¹	40 / 35
020	2,000	7,360	427.6 ¹	44 / 40
025	2,523	7,360	427.6 ¹	40 / 70
031	3,072	7,360	427.6 ¹	55 / 56
036	3,622	7,360	427.6 ¹	33 / 65
041	4,113	7,360	427.6 ¹	33 / 37
046	4,614	7,360	427.6 ¹	27 / 39
051	5,079	7,360	427.6 ¹	37 / 40
056	5,589	7,360	427.6 ¹	67 / 47
061	6,053	7,360	427.6 ¹	36 / 50
065	6,521	7,360	427.6 ¹	36 / 55
070	7,040	7,360	427.6 ¹	42 / 35
075	7,540	7,080	427.6 ¹	36 / 53
081	8,092	7,080	427.6 ¹	35 / 35
087	8,653	7,080	427.6 ¹	40 / 40
091	9,098	7,080	427.6 ¹	35 / 35
096	9,644	7,080	427.6 ¹	40 / 50
101	10,141	7,080	427.6 ¹	35 / 44
108	10,803	7,080	427.6	75 / 75
108	10,839	7,080	428.0	75 / 75
116	11,580	7,080	429.2	40 / 40
120	12,019	7,080	431.0	37 / 57
121	12,054	7,080	439.3	85 / 57
126	12,612	7,080	440.7	53 / 50
132	13,173	7,080	441.4	87 / 122
137	13,679	7,080	442.0	211 / 45
142	14,206	6,900	442.4	99 / 34

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
148	14,769	6,900	442.9	115 / 33
154	15,353	6,900	443.5	45 / 249
158	15,849	6,900	444.7	300 / 57
164	16,406	6,900	444.0	380 / 50
169	16,948	6,900	444.3	284 / 35
174	17,427	6,900	445.3	34 / 44
179	17,928	6,900	445.0	60 / 30
185	18,512	6,900	445.8	33 / 50
191	19,056	6,900	446.5	32 / 65
197	19,653	6,900	447.3	75 / 47
203	20,310	6,900	447.9	37 / 136
208	20,775	6,900	448.3	40 / 60
213	21,333	6,900	449.3	139 / 40
219	21,882	6,900	450.0	71 / 64
223	22,263	6,900	450.5	54 / 90
223	22,328	6,900	451.0	54 / 90
230	22,960	6,900	452.1	211 / 69
235	23,490	6,900	452.5	68 / 162
240	24,028	6,900	452.7	35 / 36
245	24,460	6,900	454.6	94 / 85
247	24,709	6,900	454.2	73 / 113
444	44,398	3,860	501.1	40 / 325
450	45,020	3,860	501.7	132 / 78
455	45,463	3,860	502.5	64 / 48
459	45,899	3,860	503.5	25 / 46
464	46,394	3,860	504.9	19 / 43
480	47,963	2,810	516.4	29 / 28
490	49,033	2,810	523.6	50 / 100
495	49,547	2,810	526.9	20 / 127
507	50,730	2,810	531.2	32 / 16
512	51,243	2,810	534.7	127 / 15
519	51,882	2,810	537.5	70 / 20
524	52,356	2,810	539.2	31 / 115
529	52,864	2,810	540.3	138 / 108
533	53,333	2,810	540.7	75 / 30
539	53,857	2,810	542.5	20 / 161
543	54,263	1,740	543.5	25 / 189
548	54,766	1,740	544.4	9 / 148
553	55,271	1,740	546.8	12 / 182
558	55,769	1,740	548.6	25 / 101
563	56,271	1,740	551.3	53 / 19
567	56,701	1,740	553.5	18 / 85
570	56,961	1,740	554.4	40 / 35
570	57,007	1,740	555.4	40 / 35
573	57,334	1,650	555.6	47 / 9

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	57,842	1,650	558.8	25 / 26
583	58,345	1,650	560.8	56 / 13
588	58,776	1,650	561.9	108 / 17
593	59,262	1,650	562.4	16 / 113
598	59,832	1,650	563.5	56 / 18
603	60,322	1,650	565.5	24 / 48
608	60,822	1,650	567.5	16 / 70
613	61,284	1,650	569.1	15 / 82
618	61,770	1,650	571.1	64 / 45
623	62,264	1,650	573.4	10 / 83
628	62,770	1,650	576.1	95 / 23
633	63,255	1,650	577.5	60 / 153
638	63,765	1,650	579.1	30 / 102
643	64,281	1,650	581.4	96 / 53
647	64,731	1,360	582.5	41 / 22
652	65,232	1,010	585.2	46 / 78
657	65,678	1,010	586.6	47 / 84
662	66,155	1,010	588.8	140 / 25
667	66,735	1,010	591.9	66 / 29
673	67,274	1,010	594.5	14 / 93
678	67,787	1,010	597.0	75 / 29
684	68,378	747	600.0	30 / 20
685	68,464	747	606.2	30 / 20
685	68,531	747	606.2	76 / 98
Cane Creek (North) Tributary 5				
001	81	1,398	543.1 ¹	30 / 35
005	476	1,398	545.9	20 / 25
010	1,011	1,398	549.9	34 / 11
016	1,600	1,200	553.6	87 / 61
022	2,172	1,200	555.8	17 / 28
028	2,845	1,200	563.4	74 / 8
035	3,458	1,200	567.8	13 / 43
043	4,307	1,200	571.2	19 / 84
048	4,790	1,200	571.9	25 / 20
048	4,850	1,200	574.0	25 / 20
054	5,374	1,200	574.3	55 / 120
060	6,001	1,200	575.1	40 / 100
Chapel Creek				
023	2,282	567	258.8	22 / 8
023	2,312	567	259.6	29 / 16
023	2,326	567	261.0	13 / 33
024	2,380	567	261.2	10 / 36
025	2,480	567	261.8	17 / 33
027	2,728	567	262.5	32 / 18
029	2,933	567	264.1	30 / 20
030	3,043	567	265.9	25 / 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
031	3,135	390	266.6	21 / 24
032	3,192	390	267.4	58 / 17
032	3,212	390	267.9	60 / 21
032	3,242	390	268.3	33 / 21
033	3,280	390	269.1	17 / 17
033	3,294	390	270.3	19 / 20
034	3,350	390	270.9	22 / 46
034	3,397	390	271.4	4 / 7
036	3,591	390	277.2	6 / 13
041	4,068	390	278.2	8 / 10
046	4,582	390	285.0	25 / 10
050	4,992	390	289.7	50 / 20
055	5,463	278	298.0	5 / 30
059	5,936	141	309.5	13 / 15
061	6,139	141	321.6	5 / 5
062	6,219	141	336.5	10 / 10
065	6,479	141	345.9	12 / 8
070	6,962	141	387.4	9 / 5
075	7,544	141	418.4	13 / 7
Collins Creek				
137	13,737	4,253	450.9	53 / 48
145	14,464	4,253	451.9	43 / 247
153	15,339	4,253	452.4	206 / 66
158	15,783	4,253	452.7	128 / 160
163	16,325	4,253	453.1	77 / 341
168	16,850	4,117	453.3	360 / 56
175	17,450	4,117	453.8	331 / 14
180	17,988	4,117	454.4	150 / 107
186	18,593	4,117	455.5	20 / 141
192	19,220	4,117	456.4	109 / 612
199	19,894	4,117	456.6	201 / 50
205	20,464	4,117	457.6	13 / 108
210	20,990	4,117	458.8	128 / 57
215	21,513	4,117	459.7	224 / 20
220	21,957	4,117	460.3	271 / 41
224	22,374	4,117	460.8	415 / 13
229	22,874	4,117	461.2	417 / 51
234	23,366	4,117	461.5	124 / 93
240	24,008	4,117	462.4	29 / 557
245	24,537	4,117	462.7	35 / 162
252	25,163	3,982	463.6	42 / 250
257	25,710	3,982	464.2	89 / 93
260	26,031	3,982	464.8	55 / 55
261	26,079	3,982	465.6	55 / 55
267	26,692	3,982	467.4	219 / 116

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
272	27,172	3,982	467.6	509 / 38
278	27,787	3,982	467.9	294 / 354
283	28,336	3,811	468.1	300 / 30
290	28,966	3,811	468.8	350 / 50
297	29,661	3,811	469.9	30 / 298
303	30,281	3,811	470.6	39 / 414
308	30,801	3,811	471.1	40 / 258
314	31,388	3,811	471.7	264 / 48
320	31,969	3,811	472.4	99 / 53
324	32,398	3,811	473.4	55 / 60
325	32,468	3,811	473.3	55 / 60
331	33,083	3,811	474.7	25 / 243
337	33,660	3,440	475.4	36 / 146
343	34,319	3,440	476.4	20 / 263
350	34,963	3,435	477.0	309 / 35
356	35,587	3,435	477.5	176 / 328
362	36,160	3,435	477.8	441 / 37
367	36,719	3,435	478.1	231 / 144
372	37,216	3,246	478.5	224 / 159
378	37,792	3,246	479.0	271 / 227
384	38,421	3,246	479.4	20 / 284
390	39,041	3,246	480.6	66 / 151
395	39,533	3,246	481.6	42 / 201
403	40,343	3,246	483.2	201 / 96
411	41,090	3,246	484.1	169 / 103
416	41,629	3,246	484.7	221 / 23
425	42,474	3,246	485.8	30 / 304
430	43,016	3,246	486.4	114 / 52
436	43,569	3,246	487.2	260 / 59
442	44,158	1,854	487.7	212 / 8
447	44,702	1,854	488.2	226 / 26
453	45,323	1,854	488.9	26 / 227
461	46,053	1,626	490.4	33 / 210
466	46,556	1,626	491.4	140 / 20
472	47,194	1,626	493.4	34 / 98
478	47,802	1,626	495.3	138 / 20
486	48,554	1,626	497.0	20 / 229
492	49,231	1,626	498.3	42 / 111
496	49,556	1,626	499.1	20 / 18
497	49,671	1,626	502.8	20 / 18
503	50,286	1,626	503.8	164 / 80
507	50,669	1,626	504.0	15 / 121
512	51,236	1,626	505.1	51 / 115
518	51,788	1,626	506.4	10 / 107
523	52,336	1,469	508.3	140 / 20

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
529	52,915	1,469	509.5	15 / 119
536	53,569	1,141	510.7	13 / 287
542	54,176	1,141	511.4	6 / 256
547	54,730	1,141	512.9	84 / 50
554	55,362	1,141	515.1	105 / 20
559	55,919	1,141	516.7	48 / 23
565	56,510	1,141	519.2	15 / 99
570	57,018	1,141	521.0	15 / 15
571	57,074	1,141	523.3	15 / 15
576	57,607	1,141	524.7	48 / 134
580	58,011	1,141	525.0	65 / 69
581	58,053	1,141	524.9	65 / 69
586	58,577	1,141	525.9	97 / 51
590	58,993	1,141	527.8	129 / 20
593	59,314	1,141	528.6	114 / 20
593	59,348	1,141	528.6	114 / 20
600	60,048	1,141	530.2	21 / 55
608	60,759	900	533.4	41 / 109
614	61,432	900	535.7	12 / 86
Crabtree Creek				
001	125	1,017	539.0 ¹	20 / 20
005	531	1,017	541.5	15 / 20
010	1,000	1,017	548.8	10 / 29
015	1,481	1,017	553.4	5 / 67
019	1,878	1,017	556.4	25 / 86
026	2,572	1,017	561.8	75 / 56
030	2,986	1,017	563.9	10 / 90
035	3,500	1,017	567.6	15 / 75
042	4,161	1,017	571.4	10 / 60
049	4,888	1,017	576.0	8 / 38
053	5,258	1,017	577.8	12 / 111
059	5,895	1,017	581.3	80 / 6
064	6,422	1,017	585.3	79 / 8
068	6,799	1,017	587.4	105 / 5
073	7,254	1,017	590.0	8 / 111
078	7,756	1,017	592.9	10 / 110
082	8,220	1,017	595.3	29 / 22
089	8,859	745	598.7	38 / 6
095	9,459	745	602.0	10 / 48
Crow Branch				
002	205	561	399.9 ¹	5 / 7
008	754	561	417.5	6 / 5
014	1,355	561	433.4	20 / 10
018	1,799	561	438.0	12 / 30
023	2,286	561	442.9	15 / 9
026	2,573	561	445.3	9 / 9

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
027	2,693	561	447.5	9 / 9
030	2,961	561	448.0	6 / 8
034	3,385	561	452.0	44 / 10
040	4,000	561	457.4	9 / 59
045	4,500	446	461.3	50 / 15
050	5,000	446	468.7	10 / 20
057	5,697	446	474.4	10 / 117
057	5,742	446	480.9	10 / 117
062	6,200	446	480.9	125 / 140
067	6,677	446	481.0	100 / 50
071	7,122	446	481.7	15 / 20
077	7,714	255	489.9	15 / 5
083	8,317	255	499.8	14 / 21
Cub Creek				
211	21,065	2,228	257.1	209 / 13
214	21,443	2,228	259.3	263 / 13
218	21,809	2,228	260.6	15 / 100
224	22,432	2,026	263.4	31 / 161
229	22,855	2,026	265.0	18 / 229
Dry Creek				
001	75	1,052	552.4 ¹	20 / 10
003	257	1,052	552.4 ¹	92 / 37
005	500	1,052	552.4 ¹	34 / 53
008	846	1,052	556.4	21 / 12
013	1,319	1,052	560.7	20 / 71
018	1,796	1,052	562.6	9 / 79
023	2,251	1,052	565.7	11 / 17
028	2,798	1,052	570.5	21 / 26
035	3,513	1,052	575.9	30 / 20
039	3,910	1,052	578.2	81 / 5
044	4,362	1,052	583.2	65 / 12
050	5,000	1,052	588.6	17 / 23
East Back Creek				
690	69,000	3,795	558.6	26 / 88
695	69,500	3,620	559.8	47 / 53
700	70,000	3,620	560.6	15 / 62
705	70,500	3,620	561.7	101 / 67
710	71,000	3,620	562.3	34 / 24
715	71,500	3,620	563.7	34 / 62
717	71,694	3,620	564.1	47 / 47
717	71,740	3,620	565.6	47 / 47
725	72,500	3,438	566.5	24 / 20
730	73,000	3,438	569.8	24 / 14
735	73,464	3,438	571.6	28 / 49
740	74,000	3,438	572.6	25 / 77
745	74,500	3,438	573.4	74 / 62

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
750	75,000	3,438	573.6	26 / 36
755	75,500	3,438	574.6	88 / 48
765	76,500	2,732	576.1	118 / 60
770	77,000	2,732	576.2	11 / 20
775	77,500	2,732	580.0	70 / 19
780	78,000	2,732	581.1	37 / 49
785	78,500	2,732	581.9	64 / 22
790	79,000	2,732	582.9	11 / 118
795	79,500	2,732	583.6	32 / 72
800	80,000	2,732	584.3	27 / 42
805	80,500	2,646	586.0	65 / 30
810	81,000	2,646	587.3	81 / 209
814	81,401	2,646	587.8	47 / 291
820	82,000	2,424	589.0	21 / 52
825	82,500	2,424	591.0	50 / 17
831	83,072	2,424	593.7	44 / 88
835	83,500	2,424	594.7	39 / 124
840	84,000	2,424	595.9	25 / 62
845	84,500	2,305	597.3	78 / 22
849	84,930	2,305	598.2	59 / 20
855	85,500	2,305	599.4	37 / 41
860	86,000	2,305	600.5	17 / 57
865	86,546	2,305	601.7	29 / 50
866	86,594	2,305	601.9	29 / 50
870	87,000	2,305	603.0	63 / 54
875	87,500	2,305	604.0	18 / 49
880	88,000	2,305	606.1	84 / 32
885	88,500	2,305	607.6	32 / 59
890	89,000	1,807	608.7	137 / 60
895	89,500	1,807	609.4	65 / 92
900	90,000	1,807	610.1	184 / 47
905	90,500	1,807	610.6	53 / 82
908	90,808	1,807	611.4	33 / 33
909	90,890	1,807	617.1	33 / 33
915	91,500	1,535	617.3	213 / 40
920	92,000	1,535	617.4	72 / 175
925	92,500	1,535	617.5	134 / 134
928	92,783	1,535	617.6	116 / 25
929	92,859	1,535	617.8	116 / 25
935	93,500	1,421	618.2	72 / 80
940	94,000	1,421	619.6	150 / 61
945	94,500	1,421	620.5	247 / 20
950	95,000	1,080	622.2	90 / 36
955	95,485	1,080	625.6	60 / 38
960	96,000	1,080	627.9	49 / 44

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
965	96,500	1,080	629.6	22 / 113
970	97,000	1,080	631.0	60 / 119
975	97,500	1,080	633.5	65 / 51
980	98,000	1,080	638.0	14 / 80
985	98,500	1,080	641.2	57 / 13
990	99,000	1,080	643.5	111 / 17
995	99,500	1,080	645.0	15 / 199
1000	100,000	1,080	647.5	71 / 13
East Fork Eno River				
213	21,332	2,072	626.5	207 / 107
220	22,000	2,072	627.1	90 / 20
224	22,430	2,072	629.7	95 / 30
229	22,890	2,072	631.1	140 / 27
233	23,302	2,072	639.8	10 / 11
234	23,372	2,072	651.4	10 / 11
241	24,082	2,072	651.7	280 / 300
246	24,617	2,072	651.7	200 / 300
250	25,036	2,072	651.7	200 / 200
256	25,613	2,072	651.7	224 / 144
262	26,199	2,072	651.7	200 / 277
267	26,681	2,072	651.8	315 / 123
270	27,039	2,072	651.8	287 / 148
278	27,798	1,811	651.8	173 / 255
285	28,481	1,811	651.9	166 / 310
290	29,028	1,811	651.9	98 / 55
297	29,685	1,811	652.2	135 / 35
297	29,726	1,811	652.4	135 / 35
304	30,390	1,560	652.6	39 / 108
309	30,879	1,560	653.0	30 / 93
318	31,752	1,560	654.5	90 / 20
325	32,535	1,560	657.2	105 / 20
330	33,037	1,315	658.6	125 / 20
335	33,537	1,315	660.0	83 / 99
341	34,063	1,315	661.3	152 / 85
346	34,550	1,315	662.8	19 / 61
350	35,000	1,315	664.8	102 / 59
355	35,540	1,315	666.4	10 / 140
360	35,966	1,315	667.4	82 / 174
364	36,376	1,315	668.2	43 / 79
East Fork Eno River Tributary 1				
003	274	1,014	590.0 ¹	31 / 20
006	621	1,014	590.0 ¹	27 / 17
010	1,043	1,014	592.2	85 / 10
014	1,446	1,014	594.6	16 / 38
017	1,719	1,014	596.4	114 / 6
022	2,188	1,014	599.5	14 / 24

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	2,777	1,014	603.6	76 / 11
032	3,203	1,014	605.7	54 / 20
039	3,947	1,014	611.0	16 / 55
044	4,426	1,014	614.2	108 / 36
049	4,949	1,014	617.2	25 / 45
055	5,463	870	622.4	84 / 7
061	6,070	870	627.2	17 / 60
East Fork Eno River Tributary 2				
025	2,521	783	618.6 ¹	50 / 50
028	2,849	783	618.6 ¹	99 / 61
031	3,141	783	618.6 ¹	75 / 2
035	3,500	783	619.6	60 / 67
039	3,947	783	621.8	59 / 15
045	4,494	747	624.4	41 / 17
050	4,952	747	626.3	15 / 46
054	5,393	721	628.6	20 / 8
060	6,000	721	631.8	32 / 10
064	6,432	721	633.6	20 / 20
073	7,344	655	640.8	110 / 6
078	7,842	655	641.2	15 / 25
084	8,352	655	646.2	30 / 25
090	8,954	582	649.1	35 / 50
095	9,473	582	650.5	10 / 60
100	10,000	582	654.3	10 / 10
High Rock Creek				
005	500	1,497	560.6	21 / 20
009	902	1,497	563.3	90 / 16
019	1,887	1,497	566.0	350 / 11
030	2,959	1,497	569.9	200 / 25
035	3,469	1,497	574.2	24 / 37
040	3,962	1,497	577.9	20 / 20
046	4,551	1,452	584.0	22 / 35
052	5,169	1,452	589.0	15 / 32
055	5,539	1,452	593.5	45 / 43
060	6,000	1,452	595.4	57 / 20
066	6,565	1,452	597.6	68 / 44
069	6,937	1,452	598.6	127 / 76
077	7,680	1,452	601.8	30 / 68
081	8,097	1,452	609.5	19 / 60
085	8,527	1,452	609.7	71 / 36
090	9,032	1,452	610.2	72 / 68
094	9,417	1,452	610.7	53 / 65
101	10,145	1,118	612.7	102 / 6
105	10,509	1,118	615.6	55 / 30
111	11,104	1,118	619.2	60 / 50
117	11,662	1,118	621.1	12 / 44

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
119	11,900	1,118	623.3	14 / 98
125	12,500	1,118	624.6	66 / 149
130	13,000	1,118	626.2	41 / 45
135	13,477	1,118	629.8	18 / 18
139	13,924	1,118	631.4	26 / 37
150	14,965	1,118	639.8	112 / 15
Jones Creek				
027	2,722	548	484.0	47 / 40
034	3,381	548	488.6	10 / 25
040	4,000	548	495.0	18 / 15
045	4,500	548	499.8	45 / 14
050	5,000	484	503.7	47 / 26
055	5,544	484	508.3	10 / 50
061	6,116	484	517.7	16 / 11
066	6,616	484	523.8	50 / 43
071	7,121	484	529.5	27 / 15
074	7,429	484	532.9	21 / 30
075	7,503	484	536.0	21 / 30
078	7,822	484	536.4	65 / 20
083	8,251	297	541.1	13 / 4
085	8,500	1,182	589.0	43 / 80
086	8,649	297	547.9	9 / 30
090	9,000	297	551.9	9 / 12
090	9,041	739	591.6	7 / 80
093	9,331	297	554.2	20 / 20
094	9,371	297	554.8	20 / 20
096	9,587	739	593.4	25 / 7
097	9,697	297	557.1	30 / 15
100	10,049	297	562.6	6 / 33
101	10,145	739	599.0	14 / 22
102	10,245	739	611.2	14 / 22
105	10,500	297	571.4	11 / 17
107	10,735	739	611.2	32 / 75
115	11,477	739	611.3	9 / 98
121	12,053	739	611.4	62 / 39
128	12,779	454	612.6	7 / 17
135	13,500	454	619.5	8 / 51
139	13,929	454	622.1	45 / 7
144	14,402	333	625.7	13 / 12
150	15,000	333	630.2	43 / 7
157	15,657	333	638.1	27 / 7
159	15,910	194	642.1	35 / 25
160	15,994	194	649.0	90 / 25
164	16,417	194	650.6	18 / 11
170	17,048	194	655.6	5 / 2
Lick 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
089	8,918	1,657	544.7	59 / 40
096	9,621	1,657	547.1	44 / 47
103	10,311	1,657	548.1	25 / 116
107	10,710	1,657	550.3	118 / 16
114	11,350	1,657	552.8	58 / 56
118	11,838	1,657	554.2	15 / 233
124	12,364	1,657	555.4	45 / 29
129	12,911	1,388	557.6	132 / 12
135	13,460	1,388	559.0	87 / 61
139	13,911	1,045	560.8	44 / 41
144	14,378	1,045	563.1	113 / 10
151	15,071	1,045	565.7	150 / 32
158	15,770	1,045	569.9	15 / 15
162	16,227	1,045	570.9	27 / 94
170	16,981	945	574.0	21 / 55
174	17,395	945	576.4	97 / 9
Little Creek				
280	28,000	8,320	248.2	513 / 101
Little Creek Tributary 3 (Chapel Hill)				
010	1,000	1,180	253.0 ¹	35 / 395
015	1,500	1,180	253.0 ¹	15 / 184
020	2,000	1,180	253.0 ¹	117 / 29
025	2,500	1,060	253.2	83 / 11
028	2,844	1,060	253.7	30 / 35
029	2,926	1,060	255.1	30 / 35
032	3,214	1,060	255.2	5 / 50
036	3,563	1,060	257.0	78 / 20
040	4,000	1,060	259.1	15 / 54
045	4,500	840	261.2	61 / 28
049	4,864	840	261.4	22 / 22
050	4,960	840	262.3	22 / 22
052	5,202	414	262.3	16 / 12
056	5,611	414	268.0	2 / 28
060	6,031	414	276.1	18 / 27
063	6,346	414	277.1	15 / 40
064	6,367	414	279.2	15 / 40
066	6,596	414	279.2	40 / 30
070	7,000	414	279.2	10 / 15
075	7,500	285	287.6	20 / 12
080	7,977	285	296.6	17 / 8
084	8,369	285	304.2	17 / 17
084	8,422	285	306.0	17 / 17
088	8,766	285	308.9	10 / 25
Little River North Fork				
145	14,495	5,157	492.0	200 / 20
544	54,351	3,804	579.0	239 / 38

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
549	54,887	3,645	579.7	56 / 70
556	55,579	3,645	580.4	174 / 390
563	56,254	3,645	580.6	101 / 408
568	56,825	3,645	580.9	652 / 43
572	57,208	3,645	581.0	660 / 24
580	58,014	3,645	581.2	860 / 99
587	58,663	3,645	581.4	467 / 193
590	59,029	3,645	581.6	28 / 293
591	59,069	3,645	582.0	28 / 293
596	59,611	3,645	582.4	224 / 480
602	60,192	3,645	582.8	67 / 177
608	60,810	3,484	583.7	410 / 171
614	61,440	3,484	584.1	11 / 589
619	61,909	3,484	584.4	27 / 316
624	62,369	3,484	585.2	133 / 40
630	62,979	3,484	586.7	160 / 20
636	63,566	3,484	587.7	41 / 246
642	64,178	3,484	588.3	25 / 457
647	64,690	3,484	589.1	63 / 248
653	65,310	3,484	589.9	83 / 35
658	65,810	3,484	590.6	134 / 30
664	66,399	3,484	591.4	76 / 137
669	66,933	2,699	591.8	138 / 88
675	67,542	2,699	592.2	25 / 93
685	68,528	2,699	593.4	144 / 31
692	69,215	2,699	594.0	56 / 29
697	69,694	2,699	595.0	77 / 30
702	70,250	2,699	596.0	36 / 102
708	70,843	2,699	596.7	20 / 150
714	71,377	2,699	597.3	259 / 78
719	71,941	2,524	597.7	166 / 104
725	72,459	2,524	598.0	48 / 45
725	72,507	2,524	598.4	48 / 45
732	73,161	2,524	599.0	197 / 20
738	73,810	2,524	599.8	25 / 378
744	74,358	2,524	600.4	138 / 217
748	74,828	2,524	601.0	99 / 274
752	75,245	2,524	601.5	160 / 133
758	75,810	2,524	602.4	30 / 198
763	76,310	2,295	603.4	89 / 143
768	76,764	2,295	604.1	155 / 51
768	76,805	2,295	604.7	155 / 51
773	77,342	2,295	605.5	172 / 20
778	77,753	2,295	606.2	56 / 235
783	78,310	2,295	606.7	465 / 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
788	78,771	2,295	607.2	290 / 30
794	79,443	2,295	608.0	17 / 194
798	79,810	2,295	608.5	48 / 147
803	80,283	2,295	609.8	93 / 155
808	80,756	2,295	610.7	160 / 16
813	81,272	2,295	612.0	112 / 46
818	81,810	2,295	613.1	20 / 116
824	82,363	2,295	614.1	116 / 31
832	83,237	2,295	615.8	59 / 65
838	83,810	2,073	616.8	78 / 21
843	84,341	2,073	617.7	38 / 38
844	84,382	2,073	617.9	38 / 38
848	84,831	2,073	618.4	55 / 81
853	85,310	2,073	619.3	49 / 46
859	85,923	2,073	620.9	39 / 65
864	86,352	2,073	621.9	44 / 61
868	86,763	1,855	622.8	104 / 29
875	87,461	1,855	623.9	135 / 114
880	88,000	1,855	624.4	25 / 150
884	88,440	1,855	625.2	83 / 160
889	88,897	1,855	625.8	89 / 123
893	89,310	1,855	626.6	135 / 48
899	89,887	1,855	627.7	30 / 223
903	90,314	1,855	628.1	27 / 28
904	90,355	1,855	628.7	27 / 28
912	91,165	1,855	630.6	88 / 28
918	91,810	1,855	631.7	43 / 36
924	92,408	1,855	633.1	110 / 37
928	92,810	1,855	633.5	137 / 78
933	93,297	1,855	634.2	11 / 172
943	94,250	1,630	635.6	93 / 128
949	94,919	1,630	636.3	162 / 152
953	95,310	1,630	636.7	276 / 52
962	96,197	1,630	637.6	267 / 40
967	96,745	1,630	638.2	161 / 181
973	97,339	1,321	638.9	58 / 203
979	97,898	1,321	640.0	224 / 102
987	98,672	1,321	641.6	230 / 15
993	99,257	1,010	643.2	25 / 240
998	99,810	1,010	644.6	161 / 29
1003	100,260	1,010	646.4	44 / 42
1007	100,740	1,010	648.3	16 / 135
1008	100,800	1,010	650.0	16 / 135
1013	101,261	1,010	650.8	18 / 84
1018	101,763	1,010	651.8	66 / 48

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
1024	102,439	1,010	653.0	55 / 60
1032	103,215	917	655.0	70 / 12
1038	103,759	917	656.5	75 / 50
1043	104,310	917	657.9	15 / 95
1048	104,777	784	660.2	40 / 25
1052	105,245	784	661.7	15 / 100
1058	105,767	784	663.1	40 / 25
1062	106,171	644	664.6	11 / 13
1062	106,231	644	667.5	35 / 18
1067	106,724	644	668.3	40 / 40
1074	107,425	644	669.1	50 / 14
1079	107,886	644	670.8	10 / 10
Little River North Fork Tributary 2				
000	44	1,471	591.3 ¹	60 / 120
004	416	1,471	591.3 ¹	55 / 40
007	699	1,471	593.5	56 / 18
013	1,250	1,441	593.8	165 / 71
017	1,670	1,441	594.1	111 / 40
021	2,060	1,441	594.7	190 / 10
025	2,455	1,441	595.2	27 / 162
029	2,867	1,441	596.3	20 / 150
034	3,446	1,441	597.8	152 / 42
040	4,000	1,441	599.3	178 / 85
046	4,578	1,441	601.2	103 / 43
050	5,000	1,441	602.4	36 / 124
055	5,500	1,441	604.0	106 / 108
061	6,053	1,441	605.6	30 / 260
066	6,620	1,441	607.2	39 / 164
Little River North Fork Tributary 3				
001	145	1,547	543.0 ¹	10 / 95
005	500	1,547	543.0 ¹	7 / 95
010	1,000	1,547	545.0	100 / 8
015	1,504	1,547	546.5	25 / 32
020	1,979	1,547	548.8	68 / 12
024	2,353	1,547	550.2	25 / 25
029	2,882	1,547	551.4	62 / 19
035	3,533	1,478	554.6	11 / 53
041	4,095	1,478	557.8	46 / 28
046	4,628	1,478	559.6	53 / 67
054	5,419	1,478	561.7	51 / 77
060	5,979	1,139	563.9	42 / 95
Little River South Fork				
553	55,299	4,282	551.8	33 / 62
560	55,966	4,282	553.0	17 / 61
567	56,679	4,282	554.9	31 / 30
567	56,697	4,282	554.9	31 / 30

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
574	57,380	4,159	555.5	24 / 31
580	58,000	4,159	557.8	32 / 37
585	58,500	4,159	559.2	46 / 39
590	59,033	4,159	560.1	19 / 87
595	59,500	4,159	561.0	89 / 26
600	60,000	4,159	562.4	42 / 36
605	60,500	4,159	563.7	57 / 25
609	60,934	4,159	564.7	24 / 250
615	61,500	4,012	565.1	14 / 72
620	62,000	4,012	565.2	20 / 30
624	62,447	4,012	568.9	35 / 40
630	62,959	4,012	572.0	17 / 24
634	63,396	4,012	574.5	73 / 19
640	63,955	4,012	576.2	164 / 27
644	64,372	4,012	577.0	88 / 27
650	65,000	4,012	578.5	123 / 31
654	65,393	4,012	578.5	34 / 17
660	66,000	4,012	581.6	69 / 29
667	66,668	4,012	584.1	251 / 31
674	67,427	4,012	585.0	504 / 39
680	68,000	4,012	585.3	265 / 30
686	68,558	4,012	586.3	323 / 30
694	69,369	4,012	587.4	30 / 135
700	70,000	4,012	588.3	18 / 89
705	70,500	4,012	589.4	19 / 91
709	70,855	4,012	590.2	25 / 68
713	71,319	4,012	591.3	64 / 37
717	71,732	2,487	592.8	125 / 50
718	71,752	2,487	592.8	125 / 50
724	72,408	2,487	593.2	180 / 50
729	72,925	2,487	593.6	201 / 173
734	73,433	2,296	593.8	233 / 15
740	74,000	2,296	594.3	294 / 30
744	74,399	2,296	594.6	401 / 16
751	75,097	2,296	595.4	342 / 84
755	75,500	2,296	596.1	230 / 83
761	76,117	2,296	598.1	19 / 391
765	76,474	2,296	599.2	31 / 30
770	77,000	2,296	600.5	13 / 263
775	77,500	2,296	601.6	65 / 70
780	78,000	2,296	603.3	39 / 132
785	78,500	2,296	604.0	18 / 257
791	79,079	2,296	604.8	158 / 153
794	79,449	2,296	605.2	161 / 168
803	80,303	2,296	606.5	101 / 38

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
810	81,000	1,688	609.1	85 / 87
815	81,500	1,688	610.0	185 / 8
819	81,858	1,688	611.2	28 / 27
825	82,500	1,688	612.4	183 / 32
831	83,112	1,688	613.2	29 / 185
835	83,500	1,688	613.8	58 / 11
841	84,105	1,688	616.9	16 / 27
846	84,552	1,688	619.8	10 / 16
850	85,041	1,688	624.0	50 / 45
856	85,568	1,410	625.8	38 / 28
860	86,000	1,410	627.0	30 / 25
866	86,554	1,410	628.9	5 / 59
872	87,155	1,410	631.9	42 / 68
875	87,500	1,410	632.6	145 / 15
880	88,000	1,410	633.5	101 / 55
885	88,500	1,410	634.4	147 / 49
891	89,107	1,410	635.6	121 / 24
897	89,671	1,075	636.6	31 / 23
897	89,691	1,075	636.6	31 / 23
898	89,760	1,075	637.4	20 / 41
Lynch Creek Tributary 2				
071	7,080	288	621.0	20 / 14
Meeting of the Waters Creek				
006	622	1,350	261.6	13 / 37
012	1,152	1,350	265.9	10 / 147
017	1,690	1,350	269.8	2 / 82
023	2,311	1,350	274.0	220 / 5
028	2,772	1,350	275.4	20 / 15
028	2,847	1,350	277.8	20 / 15
032	3,151	1,350	278.5	41 / 74
034	3,437	1,290	281.5	9 / 20
036	3,619	1,290	299.1	9 / 20
040	4,040	1,290	299.1	60 / 70
045	4,500	1,290	299.2	32 / 55
056	5,637	838	311.3	20 / 40
060	6,007	838	316.6	30 / 8
065	6,499	838	327.4	10 / 22
072	7,220	838	342.5	16 / 37
Mill Creek Tributary				
003	318	709	612.8 ¹	27 / 79
010	1,000	709	617.5	32 / 55
015	1,500	709	621.3	26 / 39
018	1,844	709	624.3	18 / 61
023	2,277	709	627.4	18 / 30
023	2,319	709	627.0	18 / 30
030	3,000	709	634.3	25 / 44

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
034	3,402	709	637.0	70 / 12
040	4,000	709	643.6	12 / 35
041	4,148	709	651.0	10 / 122
042	4,228	709	656.2	10 / 122
045	4,500	289	656.2	72 / 54
050	5,000	289	656.4	25 / 25
Morgan Creek				
270	27,000	11,100	237.8 ¹	557 / 528
290	29,044	11,100	237.8 ¹	549 / 548
306	30,622	11,100	238.5	531 / 533
310	31,026	11,100	239.0	235 / 542
315	31,500	11,100	239.6	523 / 532
323	32,256	11,100	240.4	542 / 536
340	34,000	10,900	242.3	190 / 588
351	35,064	10,900	243.4	160 / 615
365	36,500	10,900	244.6	458 / 590
380	38,000	10,900	245.6	552 / 555
395	39,500	10,500	247.2	517 / 552
407	40,663	10,500	248.7	527 / 530
415	41,468	10,500	249.9	528 / 527
791	79,125	6,210	328.2	26 / 44
793	79,252	6,210	328.2	105 / 85
793	79,342	6,210	358.0	105 / 85
797	79,679	6,210	358.0	447 / 319
802	80,245	5,180	358.0	342 / 364
808	80,778	3,790	358.0	373 / 486
814	81,389	3,790	358.1	394 / 280
822	82,200	3,790	358.1	288 / 368
822	82,248	3,790	358.1	288 / 368
827	82,703	3,790	358.1	142 / 206
831	83,098	3,790	358.1	44 / 152
835	83,494	3,790	358.2	50 / 130
Mountain Creek				
003	299	1,354	475.8 ¹	35 / 90
010	1,026	1,354	475.8 ¹	141 / 34
016	1,626	1,354	479.3	15 / 59
020	2,000	1,354	480.8	153 / 154
025	2,500	1,354	481.1	156 / 23
030	3,000	1,354	481.7	81 / 65
034	3,417	1,354	482.5	31 / 62
040	4,000	1,354	485.3	20 / 43
045	4,500	1,220	487.2	102 / 46
051	5,120	1,220	489.1	6 / 70
055	5,500	1,220	491.5	51 / 17
060	6,000	1,220	493.3	83 / 37
065	6,500	1,220	494.6	49 / 36

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
068	6,823	1,220	495.7	104 / 53
075	7,500	1,220	497.2	53 / 121
080	8,000	1,220	498.7	30 / 95
085	8,500	1,220	501.1	85 / 61
089	8,856	1,220	501.9	66 / 52
094	9,351	1,220	503.0	20 / 94
100	10,000	1,220	505.5	30 / 74
New Hope Creek				
1330	133,000	2,864	500.5	141 / 42
1335	133,500	2,864	501.0	14 / 48
1343	134,348	2,864	503.0	284 / 20
1350	135,048	2,864	504.0	22 / 280
1355	135,549	2,864	504.7	21 / 313
1365	136,500	2,864	506.0	175 / 20
1370	136,970	2,864	506.7	116 / 64
1376	137,578	2,864	507.6	212 / 33
1377	137,682	2,864	508.2	90 / 24
1377	137,726	2,864	507.6	90 / 44
1380	138,000	2,864	508.4	253 / 50
1385	138,500	2,864	508.8	322 / 20
1390	139,000	2,864	509.3	178 / 121
1395	139,500	2,864	509.8	30 / 162
1404	140,362	2,508	511.2	156 / 57
1410	141,000	1,317	512.6	24 / 137
1415	141,500	1,317	513.8	146 / 20
1420	142,000	1,317	515.5	129 / 20
1425	142,527	1,317	517.0	74 / 69
1430	143,000	1,317	517.8	69 / 101
1436	143,562	1,317	519.1	106 / 20
1439	143,939	1,317	520.8	25 / 30
1440	143,999	1,317	522.0	25 / 30
1445	144,500	1,317	523.6	140 / 4
1451	145,101	504	525.2	10 / 123
1455	145,500	504	526.1	42 / 15
1461	146,094	504	529.1	22 / 91
North Fork Little River Tributary 2				
024	2,419	381	500.2	32 / 4
027	2,701	381	503.5	44 / 8
031	3,121	381	508.9	25 / 33
Price Creek				
073	7,296	1,860	358.0 ¹	110 / 45
078	7,831	1,860	358.0 ¹	60 / 120
081	8,142	1,860	358.0 ¹	30 / 30
082	8,220	1,860	358.6	30 / 30
085	8,533	1,860	359.1	40 / 40
Rays 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
001	70	1,994	592.7 ¹	100 / 7
005	500	1,994	592.9	26 / 99
010	952	1,994	593.3	140 / 14
015	1,525	1,994	593.7	106 / 50
020	1,962	1,994	594.3	200 / 39
025	2,500	1,952	595.0	172 / 51
030	3,000	1,952	595.9	118 / 157
035	3,532	1,952	596.8	154 / 28
040	4,035	1,952	598.3	62 / 55
045	4,542	1,952	600.4	17 / 113
050	5,037	1,952	601.8	106 / 27
054	5,418	1,952	602.6	162 / 18
058	5,827	1,952	603.4	209 / 25
064	6,415	1,952	604.8	47 / 49
069	6,933	1,952	606.2	194 / 15
074	7,418	1,071	607.3	194 / 13
082	8,166	1,071	610.0	31 / 74
088	8,793	1,071	614.9	18 / 19
093	9,266	1,071	615.1	113 / 17
098	9,835	1,071	616.8	78 / 37
105	10,500	1,071	618.8	11 / 142
109	10,946	1,071	620.1	19 / 17
115	11,500	1,071	622.6	14 / 63
120	12,000	1,071	624.3	105 / 13
126	12,621	867	626.6	10 / 184
131	13,094	867	627.6	12 / 8
135	13,455	867	630.0	10 / 13
142	14,155	867	631.6	3 / 27
146	14,564	867	632.4	17 / 21
Rays Creek Tributary				
005	500	1,138	606.6 ¹	100 / 100
011	1,082	1,138	610.0	200 / 20
015	1,478	1,138	610.3	204 / 108
020	2,000	1,138	611.0	195 / 20
025	2,500	1,138	613.0	199 / 25
030	3,004	1,138	614.6	205 / 20
036	3,556	1,138	617.0	141 / 15
041	4,075	1,138	618.9	130 / 10
045	4,500	1,138	620.7	146 / 7
049	4,928	1,138	623.0	127 / 7
054	5,408	772	624.7	175 / 20
059	5,945	772	625.9	105 / 10
065	6,500	772	628.3	128 / 8
Sevenmile Creek				
084	8,443	3,920	531.8	85 / 37
088	8,840	3,920	532.5	47 / 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
092	9,207	3,920	533.4	29 / 75
099	9,897	3,920	535.0	102 / 35
105	10,504	3,920	536.0	25 / 39
110	10,966	3,920	537.1	17 / 40
114	11,410	3,920	538.2	54 / 33
119	11,924	3,184	539.3	81 / 13
126	12,590	3,184	540.7	20 / 152
129	12,949	3,184	541.4	22 / 35
134	13,425	3,184	542.9	54 / 36
141	14,098	3,184	544.3	155 / 20
145	14,540	3,184	545.8	20 / 55
149	14,887	3,184	547.7	119 / 80
156	15,619	3,184	549.0	25 / 358
164	16,385	3,184	550.2	270 / 23
167	16,710	3,184	550.9	27 / 25
170	17,000	3,184	552.8	15 / 53
176	17,606	3,184	555.1	20 / 145
181	18,066	3,184	556.8	20 / 83
184	18,437	3,184	558.8	12 / 51
189	18,870	3,184	560.4	66 / 19
194	19,408	2,995	562.4	286 / 33
200	19,999	2,995	563.0	37 / 17
207	20,701	2,995	566.7	55 / 31
211	21,090	2,995	567.8	55 / 45
211	21,136	2,995	569.2	55 / 45
217	21,679	2,995	572.8	95 / 18
225	22,529	2,995	579.8	40 / 47
230	23,000	2,995	581.6	55 / 20
237	23,749	2,995	584.0	30 / 75
241	24,132	2,995	584.7	61 / 62
246	24,555	2,995	585.4	27 / 53
254	25,413	2,995	586.8	165 / 20
257	25,717	2,995	587.0	113 / 10
267	26,669	2,995	588.6	92 / 37
272	27,150	2,995	589.4	60 / 90
275	27,500	2,995	589.9	118 / 25
280	28,012	1,510	591.1	89 / 82
284	28,389	1,510	591.5	119 / 54
290	29,000	1,510	592.5	59 / 126
295	29,500	1,510	594.1	62 / 99
299	29,931	1,510	595.5	31 / 82
304	30,409	1,510	597.0	174 / 24
311	31,050	1,510	598.8	71 / 15
320	31,976	1,510	603.2	176 / 12
327	32,676	1,510	605.1	49 / 71

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
332	33,203	1,510	608.6	72 / 41
338	33,791	1,510	611.3	61 / 85
341	34,121	1,510	612.7	80 / 123
348	34,756	764	614.6	15 / 40
357	35,684	764	618.2	42 / 84
359	35,935	764	618.4	11 / 9
365	36,464	764	622.1	129 / 13
Sevenmile Creek Tributary 1				
001	112	1,070	539.2 ¹	18 / 60
005	546	1,070	543.8	29 / 15
011	1,130	1,070	548.9	17 / 96
015	1,479	1,070	551.0	28 / 9
020	2,000	1,070	555.8	43 / 18
024	2,425	1,070	558.0	10 / 52
030	3,029	1,070	562.8	5 / 49
036	3,628	1,070	567.6	41 / 51
041	4,102	1,070	570.1	27 / 66
044	4,383	1,070	572.0	12 / 60
048	4,841	1,070	576.2	50 / 70
054	5,439	885	579.4	30 / 39
060	6,011	885	583.3	25 / 65
066	6,606	885	586.4	13 / 35
070	6,986	885	589.5	65 / 7
075	7,529	885	593.8	35 / 10
079	7,887	254	595.9	16 / 24
080	8,000	885	597.0	16 / 8
Sevenmile Creek Tributary 2				
004	388	1,710	590.6 ¹	30 / 50
009	870	1,710	592.5	30 / 25
015	1,500	1,710	598.5	40 / 25
019	1,896	1,710	603.2	50 / 11
025	2,498	1,710	613.0	52 / 15
029	2,936	1,710	616.3	40 / 95
033	3,260	1,710	617.3	16 / 16
039	3,869	1,710	622.8	15 / 16
046	4,580	1,710	626.6	150 / 50
053	5,311	749	627.7	99 / 20
060	5,967	749	630.4	35 / 50
065	6,471	749	631.1	35 / 45
069	6,867	749	632.1	50 / 7
074	7,438	749	633.9	75 / 12
078	7,846	749	635.8	80 / 20
086	8,603	689	640.4	15 / 60
094	9,433	689	641.1	61 / 43
100	10,000	689	642.1	85 / 9
South Hyco 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
1215	121,529	1,390	589.7	36 / 15
Stagg Creek				
395	39,500	1,171	613.4	70 / 65
400	40,000	1,171	613.5	20 / 140
405	40,517	1,171	613.6	110 / 25
409	40,935	1,171	614.2	25 / 50
415	41,500	1,171	616.6	65 / 50
420	42,000	1,171	618.1	99 / 30
425	42,500	1,171	619.7	51 / 81
430	43,000	1,171	621.4	100 / 15
437	43,688	1,171	623.3	28 / 28
437	43,729	1,171	623.8	33 / 33
440	44,000	1,171	623.9	30 / 45
445	44,500	935	627.4	55 / 80
450	45,000	809	628.6	30 / 10
455	45,512	809	631.3	8 / 30
460	46,000	809	634.0	35 / 10
465	46,500	809	638.2	16 / 13
Stagg Creek Tributary 2				
002	185	1,678	607.3	61 / 22
005	450	1,678	608.0	28 / 56
Strouds Creek				
216	21,570	1,420	597.0	19 / 20
220	22,037	1,420	601.6	12 / 95
225	22,475	1,420	603.7	16 / 29
229	22,922	1,420	606.7	15 / 85
236	23,635	1,420	609.9	15 / 135
240	23,993	1,420	611.8	10 / 120
246	24,623	1,420	617.4	45 / 40
250	24,964	1,420	620.4	25 / 65
255	25,500	1,420	624.4	15 / 50
261	26,057	927	627.4	55 / 50
265	26,500	927	628.3	12 / 35
269	26,871	927	635.7	20 / 50
272	27,159	737	635.8	30 / 50
276	27,597	737	641.1	49 / 22
279	27,900	737	641.3	27 / 30
282	28,154	401	644.0	41 / 17
285	28,500	401	646.1	45 / 9
289	28,913	229	649.4	9 / 9
296	29,569	229	659.2	4 / 30
Strouds Creek Tributary 2				
003	340	897	519.2	10 / 50
010	1,000	897	525.4	13 / 44
015	1,500	897	530.0	45 / 13
020	2,015	897	538.3	12 / 10

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	2,500	897	539.0	8 / 67
029	2,945	897	541.4	78 / 58
036	3,607	783	545.4	57 / 14
040	4,009	783	553.9	50 / 44
044	4,370	783	554.1	5 / 61
049	4,942	783	556.7	107 / 10
054	5,432	547	559.7	20 / 50
060	5,963	547	563.5	30 / 20
065	6,500	547	567.2	25 / 12
071	7,085	547	571.0	55 / 20
076	7,570	547	574.0	20 / 25
Strouds Creek Tributary 3				
001	146	598	550.5 ¹	8 / 7
003	253	598	553.2	7 / 20
004	355	598	553.7	32 / 30
004	366	598	553.7	32 / 30
006	591	598	553.8	65 / 64
010	1,000	598	554.5	7 / 50
015	1,500	598	559.6	23 / 13
020	2,000	549	562.1	9 / 27
025	2,500	549	565.6	9 / 8
030	3,000	549	571.1	9 / 20
035	3,500	488	573.2	9 / 9
040	4,000	488	577.6	9 / 9
045	4,500	488	580.6	9 / 9
050	5,000	488	583.8	9 / 9
055	5,536	297	589.0	9 / 9
060	5,969	297	602.1	13 / 12
065	6,500	297	602.1	9 / 8
070	7,000	167	606.0	9 / 9
075	7,500	167	615.4	4 / 4
080	8,000	167	626.5	9 / 6
085	8,500	167	636.2	4 / 5
Terrells Creek				
235	23,460	2,193	419.5	15 / 16
239	23,943	2,193	425.8	21 / 18
243	24,314	2,193	427.2	17 / 10
248	24,768	2,193	429.6	18 / 21
253	25,285	2,193	432.2	23 / 55
258	25,790	2,193	435.6	28 / 24
260	26,001	2,193	437.0	31 / 33
261	26,050	2,193	437.0	31 / 33
263	26,258	1,943	437.7	106 / 21
268	26,782	1,121	440.3	16 / 12
274	27,350	1,121	445.8	23 / 15
280	27,967	1,121	450.2	23 / 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
285	28,505	1,121	454.0	24 / 15
291	29,106	1,121	460.3	14 / 11
297	29,685	1,121	465.2	23 / 14
302	30,220	1,121	469.6	12 / 16
310	30,981	1,121	475.4	54 / 24
316	31,586	1,121	478.4	16 / 44
321	32,084	1,121	481.9	24 / 19
326	32,646	1,121	485.8	18 / 45
332	33,219	1,121	488.1	46 / 17
338	33,797	1,121	490.2	35 / 55
343	34,278	1,121	491.5	19 / 20
353	35,320	1,121	495.6	65 / 25
358	35,838	882	497.6	19 / 40
Toms Creek (Apple Pond)				
050	5,022	2,629	501.3	8 / 69
056	5,624	2,629	508.7	32 / 54
066	6,582	2,629	514.0	171 / 94
071	7,079	2,629	515.1	47 / 175
074	7,406	2,629	515.7	156 / 43
079	7,880	2,629	516.4	220 / 36
084	8,424	2,629	516.9	312 / 79
091	9,119	2,413	517.4	41 / 50
095	9,508	2,413	518.8	70 / 50
097	9,704	2,413	519.2	23 / 20
098	9,752	2,413	519.6	23 / 20
102	10,174	2,413	520.0	23 / 120
107	10,693	2,413	520.8	47 / 27
112	11,235	2,413	522.1	66 / 73
119	11,939	2,413	523.2	19 / 75
123	12,347	2,214	524.4	57 / 29
129	12,850	2,214	526.1	15 / 66
132	13,205	2,214	527.9	15 / 174
136	13,557	2,214	529.1	21 / 38
141	14,094	2,214	531.9	182 / 10
149	14,889	2,214	533.7	66 / 138
153	15,329	2,214	534.6	23 / 133
161	16,055	2,214	536.4	34 / 53
167	16,738	2,214	538.6	68 / 15
175	17,465	2,051	540.7	122 / 102
179	17,940	2,051	541.5	121 / 56
185	18,542	2,051	543.0	21 / 70
192	19,181	2,051	544.9	127 / 32
195	19,475	2,051	545.7	213 / 10
199	19,945	2,051	546.9	124 / 80
201	20,139	2,051	547.1	50 / 77

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
202	20,231	2,051	552.1	50 / 77
214	21,355	1,208	553.0	34 / 77
215	21,476	1,208	554.2	15 / 14
216	21,568	1,208	556.7	16 / 18
220	22,011	1,208	557.5	106 / 85
Tributary 1 to Sevenmile Creek Tributary 2				
000	25	1,188	627.1 ¹	150 / 80
002	190	1,188	627.1 ¹	29 / 29
007	707	1,188	628.3	70 / 15
011	1,068	1,188	630.7	125 / 15
Tributary A to Haw Creek				
109	10,887	1,570	571.7	27 / 48
Turkey Hill Creek				
003	261	2,209	511.3	9 / 9
008	784	2,209	517.8	9 / 9
010	1,047	2,209	531.0	56 / 80
011	1,117	2,209	536.8	56 / 80
012	1,244	2,209	536.8	45 / 33
019	1,899	2,209	538.4	41 / 73
024	2,447	2,209	541.2	17 / 109
032	3,166	2,209	542.0	86 / 75
035	3,487	2,209	542.3	47 / 48
035	3,534	2,209	542.4	47 / 48
042	4,201	2,009	543.4	20 / 27
048	4,762	2,009	545.4	38 / 10
053	5,271	2,009	549.0	37 / 21
058	5,759	2,009	551.2	16 / 20
063	6,315	2,009	555.6	42 / 71
069	6,862	2,009	556.9	19 / 134
074	7,355	2,009	558.1	206 / 19
080	8,048	2,009	559.7	29 / 73
092	9,165	2,009	563.2	159 / 19
096	9,630	2,009	564.2	88 / 146
106	10,615	2,009	566.9	127 / 185
114	11,440	2,009	570.4	59 / 147
122	12,188	1,408	572.5	61 / 141
130	12,968	1,408	575.0	17 / 73
135	13,509	1,408	577.2	131 / 20
142	14,237	1,408	580.0	116 / 19
152	15,195	1,408	583.7	47 / 187
161	16,070	1,408	586.9	35 / 39
166	16,594	1,408	588.4	47 / 26
166	16,641	1,408	588.8	47 / 26
169	16,882	1,408	589.9	18 / 11
175	17,497	1,408	595.2	60 / 94
182	18,178	1,408	598.3	60 / 40

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
187	18,725	1,408	601.5	18 / 62
196	19,613	1,147	605.6	66 / 61
208	20,751	1,147	609.8	74 / 17
Unnamed Tributary to Bolin Creek				
002	165	656	458.3 ¹	30 / 23
006	636	656	461.6	40 / 50
010	985	656	463.7	45 / 12
012	1,248	656	466.0	12 / 40
016	1,579	638	468.3	28 / 16
020	1,960	638	471.5	35 / 25
023	2,312	638	473.7	40 / 14
027	2,670	480	475.9	20 / 15
029	2,904	480	476.8	11 / 54
029	2,941	480	478.6	21 / 55
031	3,074	480	478.6	20 / 50
034	3,381	480	479.8	40 / 14
036	3,639	450	481.6	30 / 20
039	3,935	450	482.6	70 / 9
040	4,021	450	485.2	90 / 20
041	4,144	450	485.4	25 / 35
043	4,344	450	486.7	25 / 16
Watery Fork				
016	1,593	1,362	501.2 ¹	77 / 14
020	1,984	1,362	501.4	48 / 72
024	2,433	1,362	502.4	15 / 94
031	3,130	1,362	507.2	63 / 46
042	4,175	1,362	510.4	19 / 156
051	5,070	1,362	513.4	27 / 75
056	5,580	1,362	516.2	23 / 114
061	6,086	1,362	517.6	15 / 15
061	6,143	1,362	518.4	15 / 15
066	6,649	1,111	521.9	37 / 11
073	7,316	1,111	525.7	16 / 114
079	7,931	1,111	527.6	106 / 11
083	8,347	1,111	529.5	64 / 55
093	9,269	1,111	533.7	96 / 43
097	9,680	1,111	536.8	52 / 33
103	10,308	1,111	540.0	16 / 129
110	11,002	1,111	543.8	14 / 42
114	11,381	1,111	547.7	48 / 37
120	11,983	1,111	550.3	12 / 12
120	12,040	745	550.7	12 / 12
124	12,355	745	552.6	14 / 12
West Fork Eno River				
085	8,481	3,434	593.1	390 / 20
090	8,969	3,434	593.3	36 / 77

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
094	9,418	3,434	594.0	110 / 20
100	9,991	3,083	595.0	126 / 15
110	10,980	3,083	596.8	141 / 37
115	11,500	3,083	597.6	218 / 162
120	12,000	3,083	597.9	266 / 157
124	12,361	3,083	598.3	44 / 320
128	12,759	3,083	598.7	13 / 65
140	14,022	3,083	608.4	122 / 53
142	14,162	3,083	633.8	130 / 130
156	15,558	3,083	633.8	259 / 136
160	15,972	3,083	633.8	265 / 245
164	16,430	2,897	633.9	266 / 231
170	17,024	2,897	633.9	160 / 81
177	17,677	2,897	633.9	84 / 126
185	18,466	2,897	633.9	195 / 159
190	19,024	2,897	633.9	133 / 261
194	19,432	2,897	633.9	340 / 262
199	19,871	2,897	633.9	147 / 311
209	20,867	2,897	633.9	164 / 57
215	21,491	2,686	633.9	97 / 129
218	21,848	2,686	633.9	74 / 112
223	22,270	2,686	634.0	285 / 57
231	23,083	2,515	634.0	137 / 195
239	23,871	2,398	634.0	78 / 171
246	24,646	2,398	634.1	182 / 60
251	25,121	2,398	634.2	149 / 246
256	25,649	2,398	634.2	94 / 32
262	26,174	2,398	634.4	47 / 73
267	26,744	2,398	634.7	108 / 40
273	27,330	2,398	635.0	123 / 20
281	28,068	2,398	635.5	28 / 28
281	28,124	2,398	636.3	28 / 28
288	28,837	2,170	637.0	15 / 75
291	29,149	2,170	638.2	42 / 43
295	29,461	2,170	639.3	75 / 12
300	30,024	2,170	640.9	75 / 19
305	30,512	2,170	641.8	103 / 131
310	30,990	2,170	642.3	163 / 24
314	31,423	2,170	643.0	16 / 192
321	32,144	1,496	644.8	94 / 84
326	32,615	1,496	645.9	79 / 12
330	33,024	1,483	647.2	47 / 99
335	33,524	1,483	648.2	99 / 21
340	33,992	1,483	649.2	84 / 63
345	34,451	1,483	650.2	52 / 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
350	35,001	1,483	651.7	93 / 65
356	35,562	1,483	653.2	63 / 51
361	36,094	1,483	654.7	110 / 87
361	36,139	1,483	659.4	110 / 87
367	36,719	1,483	659.5	153 / 80
371	37,129	1,483	659.6	259 / 10
375	37,451	1,483	659.8	186 / 10
379	37,926	1,483	660.2	129 / 70
385	38,524	1,483	661.0	120 / 35
390	39,024	1,483	662.8	91 / 76
398	39,767	1,483	664.7	123 / 77
404	40,387	1,483	665.9	80 / 25
404	40,447	1,483	667.9	80 / 25
410	40,970	1,483	668.6	40 / 185
415	41,493	1,483	670.5	88 / 83
420	41,985	942	672.3	149 / 7
420	42,045	942	671.3	135 / 51
423	42,346	942	671.8	135 / 51
West Fork Eno River Tributary 1				
006	556	1,427	578.9 ¹	17 / 17
010	1,022	1,427	579.3	12 / 29
015	1,461	1,427	581.8	29 / 58
021	2,149	1,427	584.0	40 / 100
024	2,403	1,427	584.9	10 / 23
027	2,733	1,427	587.3	13 / 67
033	3,308	1,427	589.1	22 / 142
038	3,799	1,427	590.2	8 / 26
045	4,517	1,427	594.4	133 / 12
052	5,162	1,427	596.2	13 / 16
054	5,396	1,427	598.5	19 / 14
059	5,942	1,427	601.9	30 / 30
066	6,557	1,290	603.8	15 / 20
070	7,033	1,290	610.0	27 / 6
075	7,468	1,290	615.4	57 / 34
079	7,942	1,290	617.2	127 / 5
083	8,257	1,290	617.9	19 / 20
088	8,842	1,290	624.1	16 / 48
095	9,526	1,290	626.6	20 / 20
100	10,000	1,290	629.0	15 / 20
106	10,638	1,290	633.3	10 / 166
112	11,195	1,290	634.6	121 / 10
115	11,489	1,290	635.4	47 / 51
121	12,133	1,290	636.8	50 / 115
125	12,520	1,290	637.8	10 / 79
129	12,885	934	643.1	100 / 35

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
137	13,685	934	643.4	173 / 13
143	14,347	934	644.3	39 / 170
151	15,071	934	646.0	140 / 9
155	15,477	934	647.8	120 / 10
160	16,000	934	650.1	87 / 39
West Fork Eno River Tributary 2				
000	46	853	594.6 ¹	7 / 131
004	399	853	594.6 ¹	54 / 27
009	856	853	595.3	10 / 14
013	1,271	853	601.1	13 / 18
016	1,643	853	603.4	6 / 12
026	2,578	853	607.9	8 / 16
032	3,199	853	622.4	60 / 9
038	3,824	745	622.4	10 / 18
048	4,757	745	622.5	22 / 5
West Fork Eno River Tributary 3				
005	500	997	643.4	123 / 20
010	1,027	997	645.6	100 / 6
014	1,362	997	647.3	71 / 22
020	2,034	997	649.8	44 / 89
024	2,416	997	650.9	120 / 10
030	2,984	997	653.0	46 / 45
034	3,420	997	654.6	30 / 48
040	4,000	997	656.9	17 / 86
044	4,425	997	658.9	14 / 65
050	5,020	756	661.0	22 / 70
059	5,895	756	663.6	10 / 90
066	6,574	756	668.2	43 / 92
070	7,012	756	670.3	35 / 45
079	7,885	756	675.5	40 / 58
086	8,589	756	678.6	12 / 77
090	9,000	756	681.1	10 / 64
West Price Creek				
070	7,037	903	466.5	6 / 88
Wildcat Branch				
005	485	945	475.1 ¹	50 / 20
012	1,170	945	477.6	110 / 15
017	1,709	945	479.5	35 / 15
024	2,427	945	483.5	50 / 15
030	3,028	767	486.7	20 / 15
037	3,667	767	490.6	29 / 11
042	4,238	747	493.3	10 / 60
049	4,928	747	495.7	12 / 13
050	4,965	747	496.7	12 / 13
052	5,212	747	497.8	15 / 15
053	5,297	747	500.8	15 / 15

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
060	5,971	747	501.8	15 / 20
065	6,539	607	506.0	25 / 35

¹Elevation includes backwater effects

5.3 Coastal Analyses

This section is not applicable to this FIS project. Table 18 “Summary of Coastal Stillwater Elevations” and Table 19 “Summary of Coastal Analyses” do not apply to Orange 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 Orange 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 Orange 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 20, “Datum Conversion Locations and Values,” is shown below.

Table 20, “Datum Conversion Locations and Values.”

Table 20 - Datum Conversion Locations and Values

Latitude	Longitude	Conversion from NGVD29 to NAVD88 (feet)
36.13	-79.25	-0.81
36.13	-79.00	-0.79
36.00	-79.25	-0.79
36.00	-79.00	-0.80
36.12	-79.12	-0.78
36.00	-79.12	-0.78
35.87	-79.12	-0.80
Average conversion in Orange County from NGVD 29 to NAVD 88 = -0.79 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

Vertical Control Monuments

Qualifying bench marks within Orange 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 (FIPSZONE 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.

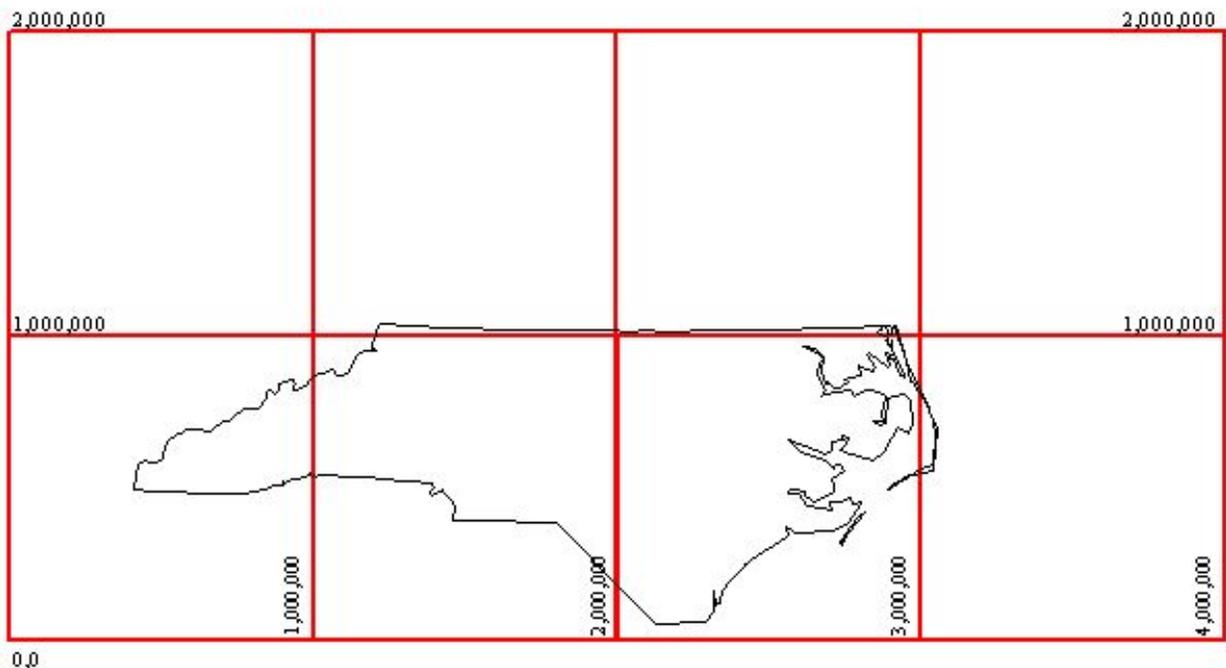


Figure 3 - North Carolina's State Plane Coordinate System

6.3 Floodplain and Floodway Delineation

Floodplain Delineation

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 21, "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 21 - 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
Battle Branch								
007	709	*	*	*	261.3 ¹	261.3	*	*
Bolin Creek								
005	500	1,469	15,089	0.5	254.8	254.8	255.8	1.0
014	1,383	845	6,753	1.0	254.9	254.9	255.9	1.0
025	2,511	643	3,985	1.7	261.1	261.1	261.2	0.1
050	4,987	223	1,869	3.4	267.8	267.8	268.4	0.6
060	6,000	310	3,706	1.7	273.7	273.7	274.7	1.0
070	7,000	302	2,737	2.3	274.2	274.2	275.2	1.0
075	7,500	210	2,034	3.0	274.5	274.5	275.5	1.0
080	8,000	308	2,356	2.6	275.3	275.3	276.1	0.8
091	9,146	260	1,273	4.7	277.9	277.9	278.7	0.8
095	9,500	235	1,316	4.6	279.8	279.8	280.6	0.8
100	10,000	160	887	6.7	281.6	281.6	282.5	0.9
105	10,500	295	1,288	4.6	285.0	285.0	285.5	0.5
115	11,500	200	975	5.7	295.3	295.3	295.5	0.2
120	12,000	225	1,073	5.2	305.0	305.0	305.0	0.0
136	13,602	75	606	9.1	324.5	324.5	324.5	0.0
142	14,152	105	1,015	5.5	330.8	330.8	331.4	0.6
150	15,000	180	1,786	3.1	336.2	336.2	336.5	0.3
173	17,324	100	732	6.0	347.2	347.2	347.2	0.0
180	17,954	68	447	9.9	351.1	351.1	351.2	0.1
189	18,939	45	662	6.7	369.9	369.9	370.3	0.4
200	20,000	60	477	9.2	377.7	377.7	378.6	0.9
205	20,500	85	553	8.0	382.1	382.1	382.9	0.8

Table 21 - 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
210	21,000	50	498	8.9	384.8	384.8	385.8	1.0
215	21,500	50	521	8.5	388.2	388.2	388.6	0.4
220	22,000	50	516	8.5	390.3	390.3	391.1	0.8
224	22,434	80	650	6.8	393.1	393.1	393.5	0.4
230	23,000	62	447	8.0	395.9	395.9	396.8	0.9
235	23,500	90	467	7.7	399.9	399.9	400.0	0.1
240	24,000	70	533	6.8	402.7	402.7	403.6	0.9
244	24,402	45	340	10.6	405.5	405.5	405.5	0.0
247	24,713	45	274	13.1	410.5	410.5	410.7	0.2
254	25,370	70	523	6.9	419.2	419.2	420.0	0.8
260	26,000	80	616	5.8	424.0	424.0	424.8	0.8
265	26,500	95	462	7.8	429.5	429.5	429.6	0.1
271	27,124	290	1,829	1.7	433.4	433.4	434.4	1.0
275	27,500	160	958	3.3	434.0	434.0	434.9	0.9
279	27,904	105	761	4.1	435.3	435.3	436.3	1.0
285	28,477	105	804	3.9	437.5	437.5	438.3	0.8
290	28,977	145	1,170	2.7	438.8	438.8	439.8	1.0
295	29,545	250	1,697	1.8	439.7	439.7	440.7	1.0
300	29,977	310	1,637	1.9	440.2	440.2	441.1	0.9
305	30,477	440	2,046	1.5	441.1	441.1	441.9	0.8
310	30,976	100	491	5.7	442.0	442.0	442.2	0.2
315	31,477	160	1,275	2.2	448.4	448.4	448.4	0.0
320	31,977	210	1,597	1.8	449.0	449.0	449.0	0.0
325	32,477	165	1,330	2.1	449.3	449.3	449.4	0.1
330	32,986	160	1,033	2.7	449.6	449.6	449.8	0.2
334	33,410	247	1,386	2.0	450.1	450.1	450.5	0.4
340	33,954	55	465	6.0	451.0	451.0	451.1	0.1
345	34,477	40	390	7.2	452.0	452.0	452.8	0.8
350	34,977	32	333	6.7	453.8	453.8	454.5	0.7
355	35,477	32	311	7.2	455.1	455.1	455.8	0.7
360	35,977	32	273	8.2	457.0	457.0	457.5	0.5
365	36,477	70	385	4.9	459.1	459.1	459.8	0.7
370	36,977	90	465	4.1	460.7	460.7	461.6	0.9
375	37,541	85	334	5.7	463.3	463.3	464.1	0.8
380	37,977	95	499	3.3	466.5	466.5	467.2	0.7
385	38,477	80	264	6.2	468.5	468.5	469.0	0.5
390	38,977	80	475	3.4	472.4	472.4	473.2	0.8
395	39,515	90	669	2.4	476.7	476.7	477.4	0.7
400	39,995	263	1,192	1.4	477.4	477.4	478.3	0.9
405	40,514	300	1,346	1.2	488.4	488.4	488.4	0.0
410	40,977	360	1,673	1.0	488.9	488.9	488.9	0.0
415	41,477	330	1,470	0.7	489.2	489.2	489.2	0.0
420	41,977	105	540	2.0	489.5	489.5	489.5	0.0
424	42,417	100	448	2.4	490.1	490.1	490.4	0.3

Table 21 - 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
428	42,821	95	378	2.9	490.9	490.9	491.4	0.5
433	43,327	90	607	1.2	495.8	495.8	496.7	0.9
Bolin Creek Tributary								
001	72	39	80	5.5	393.5 ¹	389.7	389.7	0.0
007	659	18	54	8.1	398.6	398.6	398.6	0.0
013	1,284	15	45	8.8	422.6	422.6	422.7	0.1
018	1,752	14	44	9.1	439.0	439.0	439.0	0.0
024	2,388	12	38	9.6	454.9	454.9	454.9	0.0
Booker Creek								
009	921	825	6,286	0.5	254.7 ¹	254.6	255.6	1.0
017	1,662	850	5,065	0.6	254.8	254.8	255.7	1.0
024	2,363	615	3,644	0.8	255.0	255.0	255.9	0.9
030	2,957	690	4,303	0.7	255.3	255.3	256.1	0.8
035	3,500	350	1,965	1.5	257.7	257.7	258.2	0.5
040	4,000	375	1,927	1.5	258.0	258.0	259.0	1.0
050	5,024	142	1,243	2.3	262.4	262.4	262.8	0.4
055	5,455	150	915	3.1	262.7	262.7	263.3	0.6
070	7,024	373	3,103	0.9	264.7	264.7	265.7	0.9
075	7,524	494	3,503	0.8	264.8	264.8	265.8	0.9
080	8,024	318	1,570	1.8	264.9	264.9	265.8	0.9
086	8,589	90	527	5.2	265.5	265.5	266.2	0.7
090	9,024	68	501	5.3	267.5	267.5	268.2	0.7
095	9,524	278	1,218	2.2	269.5	269.5	270.2	0.7
100	10,024	392	1,870	1.4	270.6	270.6	271.3	0.7
105	10,524	49	212	5.0	270.8	270.8	271.0	0.3
110	10,952	37	192	11.9	276.8	276.8	277.2	0.5
112	11,228	29	182	12.6	282.6	282.6	282.6	0.0
117	11,747	1,069	19,842	0.1	297.4	297.4	297.4	0.0
120	12,024	320	14,448	0.1	297.4	297.4	297.4	0.0
125	12,524	459	7,708	0.2	297.4	297.4	297.5	0.1
130	13,024	386	5,084	0.4	297.5	297.5	297.7	0.2
136	13,556	385	3,330	0.6	297.6	297.6	298.0	0.3
140	14,035	367	1,578	0.9	297.7	297.7	297.4	-0.3
145	14,524	189	612	1.8	297.8	297.8	298.2	0.4
150	15,024	175	587	3.1	299.0	299.0	300.0	1.0
155	15,524	140	609	3.0	303.2	303.2	304.0	0.7
160	16,024	34	155	11.9	311.0	311.0	311.0	0.0
165	16,524	111	253	7.3	321.0	321.0	321.0	0.0
170	17,020	42	198	8.2	327.9	327.9	328.0	0.2
175	17,524	33	249	6.5	331.5	331.5	332.5	0.9
180	18,024	33	154	10.5	335.3	335.3	335.3	0.0
185	18,524	33	205	7.9	341.5	341.5	341.6	0.0
190	19,024	35	133	12.1	349.4	349.4	349.4	0.0
195	19,524	60	195	8.4	363.1	363.1	363.2	0.1
200	20,024	29	138	12.5	373.0	373.0	372.9	0.0

Table 21 - 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
206	20,583	173	1,503	1.1	387.3	387.3	388.0	0.7
210	21,024	220	1,243	1.3	387.4	387.4	388.1	0.6
216	21,577	124	285	5.7	390.0	390.0	390.0	0.0
221	22,061	24	102	11.8	406.1	406.1	406.1	0.0
225	22,524	109	861	1.4	433.9	433.9	434.0	0.0
230	23,024	290	1,550	0.8	434.2	434.2	434.2	0.0
235	23,524	145	799	1.5	434.4	434.4	434.4	0.0
240	23,991	142	603	2.0	434.8	434.8	434.9	0.1
245	24,505	61	162	7.5	442.3	442.3	442.4	0.0
250	24,963	31	109	9.3	449.4	449.4	449.6	0.1
255	25,524	32	100	10.1	461.3	461.3	461.3	0.0
267	26,670	70	389	2.6	479.2	479.2	479.5	0.3
Buckwater Creek								
015	1,472	180	751	3.8	428.7 ¹	426.7	427.5	0.8
032	3,182	100	469	6.1	432.4	432.4	433.0	0.6
045	4,529	198	988	2.8	437.8	437.8	438.5	0.7
060	5,994	156	485	5.7	440.7	440.7	441.5	0.7
072	7,249	151	698	3.8	445.1	445.1	445.3	0.2
084	8,379	160	677	3.9	447.9	447.9	448.2	0.3
099	9,872	190	870	3.0	451.5	451.5	452.4	0.9
110	11,035	135	513	5.1	455.6	455.6	456.4	0.8
123	12,253	145	610	3.6	461.7	461.7	462.2	0.5
129	12,874	65	297	7.1	465.1	465.1	465.4	0.3
136	13,627	44	250	8.4	469.2	469.2	469.4	0.2
150	14,978	230	481	4.4	475.0	475.0	475.0	0.0
165	16,477	150	536	3.9	481.7	481.7	481.8	0.1
180	18,041	128	542	3.9	488.7	488.7	489.1	0.4
189	18,929	111	443	2.3	491.2	491.2	491.9	0.7
199	19,908	115	537	1.6	496.8	496.8	497.2	0.4
208	20,807	102	191	4.6	502.8	502.8	502.8	0.0
Buckwater Creek Tributary 1								
006	604	58	167	6.0	465.2	465.2	465.6	0.4
012	1,243	54	140	6.4	471.5	471.5	471.9	0.4
017	1,657	70	163	5.4	475.3	475.3	475.8	0.5
023	2,300	90	557	1.6	483.9	483.9	484.2	0.4
025	2,531	75	343	2.6	483.9	483.9	484.3	0.4
Buckwater Creek Tributary 2								
004	431	101	319	3.5	490.5 ¹	489.9	490.8	0.9
008	842	200	910	1.2	494.7	494.7	494.7	0.0
Cates Creek								
004	358	110	596	4.2	499.3 ¹	489.4	490.4	1.0
009	866	140	653	3.9	499.3 ¹	492.7	492.9	0.2
015	1,511	210	697	3.3	499.3 ¹	495.6	496.0	0.4
031	3,051	92	363	6.4	508.0	508.0	508.0	0.0
035	3,510	50	369	6.3	511.3	511.3	512.2	0.9

Table 21 - 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
047	4,731	60	299	7.8	524.0	524.0	524.0	0.0
053	5,292	145	749	3.1	527.9	527.9	528.9	1.0
056	5,627	100	392	5.9	530.9	530.9	531.3	0.4
070	6,973	52	490	4.7	543.9	543.9	544.8	0.9
085	8,542	128	593	3.4	558.2	558.2	558.2	0.0
090	8,981	65	236	8.6	559.8	559.8	559.8	0.0
101	10,070	49	230	8.8	568.8	568.8	568.8	0.1
105	10,528	55	362	5.6	573.6	573.6	573.8	0.2
109	10,920	72	407	5.0	575.2	575.2	576.2	0.9
114	11,434	80	486	4.2	578.5	578.5	578.9	0.5
120	11,973	120	624	3.0	580.7	580.7	581.3	0.7
126	12,558	125	658	2.8	582.5	582.5	583.4	0.9
130	12,970	65	373	5.0	583.8	583.8	584.8	1.0
135	13,488	40	280	6.7	585.9	585.9	586.9	1.0
150	15,009	180	1,196	1.6	594.8	594.8	595.8	1.0
155	15,466	53	306	3.5	595.0	595.0	596.0	1.0
159	15,922	35	126	8.4	596.1	596.1	596.2	0.1
165	16,466	27	129	8.2	600.8	600.8	600.8	0.0
170	16,966	30	161	6.6	604.4	604.4	604.5	0.1
175	17,466	24	119	8.9	608.6	608.6	609.0	0.4
180	17,966	24	140	7.6	614.5	614.5	614.5	0.0
202	20,219	375	2,750	0.3	637.7	637.7	637.7	0.0
205	20,466	255	1,841	0.5	637.7	637.7	637.7	0.0
208	20,806	90	601	0.9	637.7	637.7	637.7	0.0
215	21,466	40	146	3.6	637.7	637.7	637.7	0.0
220	21,966	39	118	4.5	642.0	642.0	642.1	0.0
225	22,492	80	249	2.1	645.7	645.7	646.7	1.0
229	22,895	30	100	5.3	649.3	649.3	649.5	0.2
234	23,360	53	159	3.3	654.8	654.8	655.7	1.0
239	23,862	37	134	4.0	658.9	658.9	659.9	1.0
Cates Creek Tributary								
001	140	49	211	5.5	595.1 ¹	591.4	592.4	1.0
005	507	104	389	3.0	595.1 ¹	593.6	593.9	0.3
010	986	48	200	5.8	595.1 ¹	594.8	595.1	0.3
015	1,492	75	246	4.7	596.8	596.8	597.0	0.2
039	3,907	348	4,932	0.2	630.0	630.0	630.4	0.4
045	4,488	392	3,956	0.2	630.0	630.0	630.4	0.4
049	4,945	164	1,108	0.8	630.0	630.0	630.4	0.4
055	5,541	65	330	2.8	630.2	630.2	630.6	0.4
062	6,172	21	95	9.7	631.9	631.9	632.2	0.3
067	6,696	34	186	4.9	635.4	635.4	636.3	0.9
070	6,993	20	111	8.2	636.7	636.7	637.6	0.9
080	7,994	70	382	1.9	648.0	648.0	649.0	1.0
083	8,344	90	369	1.9	649.2	649.2	649.9	0.7
087	8,666	115	380	1.9	650.4	650.4	651.3	0.9

Table 21 - 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
091	9,101	65	277	2.6	652.5	652.5	653.5	1.0
095	9,509	60	216	2.5	654.7	654.7	655.6	0.9
100	10,009	30	115	4.7	657.8	657.8	658.8	1.0
105	10,504	20	101	5.4	662.9	662.9	663.5	0.6
Cedar Fork								
007	668	565	1,115	1.0	293.7 ¹	293.1	294.1	1.0
013	1,315	49	158	7.0	298.3	298.3	298.5	0.1
019	1,882	36	169	6.6	304.4	304.4	305.3	0.9
022	2,215	32	192	5.8	311.4	311.4	312.8	1.4
024	2,412	31	104	10.6	314.3	314.3	314.3	0.0
026	2,576	35	111	10.0	319.4	319.4	319.4	0.0
028	2,839	31	205	5.4	328.4	328.4	329.3	1.0
031	3,050	65	149	6.3	333.6	333.6	333.6	0.0
033	3,252	38	110	8.5	337.8	337.8	337.8	0.0
034	3,434	25	93	10.1	341.4	341.4	341.4	0.0
036	3,631	39	119	7.9	353.2	353.2	353.2	0.0
039	3,897	45	129	7.3	367.6	367.6	367.6	0.0
041	4,143	36	107	8.8	379.3	379.3	379.3	0.0
044	4,365	40	111	8.4	383.7	383.7	383.6	0.0
046	4,595	49	130	7.2	393.0	393.0	393.0	0.0
048	4,762	84	154	6.1	398.9	398.9	398.9	0.0
049	4,944	56	129	7.3	405.1	405.1	405.1	0.0
052	5,190	74	142	6.6	415.3	415.3	415.3	0.0
055	5,482	24	86	10.9	425.2	425.2	425.2	0.0
057	5,732	59	310	3.0	435.4	435.4	435.4	0.0
061	6,061	32	100	9.4	441.2	441.2	441.2	0.0
063	6,308	27	106	8.8	445.5	445.5	446.1	0.6
068	6,796	40	103	9.2	458.3	458.3	458.3	0.0
073	7,325	43	117	6.3	467.4	467.4	467.4	0.0
079	7,865	43	234	3.1	477.2	477.2	477.8	0.7
082	8,152	95	759	1.0	484.3	484.3	485.1	0.8
085	8,500	46	121	5.0	484.2	484.2	484.2	0.0
085	8,509	46	187	3.0	484.3	484.3	485.1	0.8
088	8,809	50	157	3.6	489.9	489.9	489.9	0.0
092	9,176	167	496	1.1	498.3	498.3	498.3	0.0
099	9,943	87	652	0.9	516.1	516.1	516.3	0.3
103	10,283	80	86	4.7	516.6	516.6	516.7	0.2
108	10,821	49	271	1.6	524.6	524.6	524.8	0.2
112	11,232	208	639	0.7	531.8	531.8	531.8	0.0
117	11,665	80	383	0.4	537.0	537.0	537.9	0.9
126	12,565	73	242	1.1	554.7	554.7	555.2	0.5
Collins Creek Tributary 1								
013	1,291	177	795	2.6	488.6	488.6	489.4	0.8
025	2,485	140	805	2.6	490.9	490.9	491.8	0.9
038	3,834	80	499	4.2	493.3	493.3	494.2	0.9

Table 21 - 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
047	4,707	215	1,162	1.8	495.3	495.3	496.2	1.0
059	5,860	129	483	3.8	497.0	497.0	497.9	1.0
065	6,458	78	1,113	1.6	508.2	508.2	508.4	0.2
078	7,821	80	872	2.1	508.4	508.4	508.8	0.4
091	9,105	170	1,464	1.3	508.5	508.5	509.4	0.9
100	10,032	185	1,358	1.0	508.9	508.9	509.9	1.0
113	11,269	214	1,146	1.2	509.8	509.8	510.6	0.8
125	12,527	114	356	3.9	511.0	511.0	511.8	0.7
135	13,485	130	575	2.0	514.2	514.2	515.0	0.8
147	14,714	110	489	2.4	516.6	516.6	517.4	0.8
159	15,919	170	639	1.8	518.6	518.6	519.5	0.8
170	17,008	77	412	2.6	522.0	522.0	522.6	0.7
173	17,308	151	682	1.6	522.3	522.3	523.2	0.9
177	17,713	54	287	3.7	522.8	522.8	523.8	1.0
Dry Branch								
000	37	75	265	2.1	286.7 ¹	285.1	286.0	1.0
009	898	55	234	2.4	289.8	289.8	290.8	1.0
014	1,355	75	347	1.5	294.1	294.1	294.1	0.0
023	2,255	22	71	7.2	302.9	302.9	303.4	0.5
028	2,769	22	64	6.2	312.4	312.4	312.5	0.1
032	3,192	18	51	7.7	323.2	323.2	323.5	0.3
036	3,567	19	53	7.5	355.4	355.4	356.2	0.8
039	3,946	21	52	7.6	388.2	388.2	388.6	0.4
041	4,140	21	61	6.5	396.6	396.6	397.3	0.7
East Fork Eno River								
009	881	168	934	3.7	577.6 ¹	573.8	574.3	0.5
022	2,188	250	1,441	2.3	577.6 ¹	576.4	577.4	0.9
035	3,514	180	984	3.4	580.1	580.1	580.6	0.6
047	4,694	220	1,550	2.1	583.3	583.3	583.8	0.5
051	5,058	92	686	4.8	584.3	584.3	585.3	1.0
062	6,205	80	672	4.9	587.1	587.1	587.9	0.8
075	7,524	200	1,836	1.6	590.3	590.3	591.0	0.7
087	8,701	175	1,078	2.8	591.0	591.0	591.8	0.8
118	11,804	737	14,478	0.2	618.6	618.6	618.6	0.0
139	13,936	692	13,411	0.2	618.6	618.6	618.6	0.0
160	16,004	634	11,626	0.2	618.6	618.6	618.6	0.0
180	17,956	465	5,481	0.4	618.6	618.6	618.6	0.0
200	19,984	210	984	2.1	621.2	621.2	621.3	0.1
East Price Creek								
000	0	80	543	2.6	359.1	359.1	359.1	0.0
007	663	306	1,144	1.2	359.5	359.5	360.5	1.0
015	1,543	195	587	2.4	364.0	364.0	365.0	0.9
024	2,415	50	240	5.6	374.1	374.1	375.1	1.0
031	3,141	40	261	5.2	382.8	382.8	383.0	0.2
038	3,841	65	282	4.8	389.1	389.1	389.3	0.2

Table 21 - 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
042	4,192	98	429	3.1	391.0	391.0	391.4	0.5
054	5,380	76	400	2.6	396.7	396.7	397.6	0.9
060	5,955	96	702	1.5	403.1	403.1	403.4	0.3
Eno River								
832	83,191	145	1,960	8.3	366.2	366.2	366.8	0.6
846	84,600	175	2,380	5.6	369.1	369.1	369.8	0.8
862	86,248	404	3,754	3.6	371.5	371.5	372.2	0.7
876	87,612	123	1,366	9.7	372.5	372.5	373.2	0.7
891	89,095	215	1,886	7.0	377.3	377.3	377.7	0.4
907	90,679	157	2,094	6.3	383.2	383.2	384.2	0.9
916	91,619	99	1,140	11.6	384.7	384.7	385.6	0.9
926	92,625	170	1,812	7.2	392.1	392.1	392.1	0.0
937	93,711	140	1,744	7.4	394.2	394.2	394.6	0.4
951	95,096	180	1,860	6.9	397.3	397.3	397.5	0.2
963	96,267	150	2,105	6.1	399.2	399.2	399.5	0.2
975	97,538	125	2,012	6.4	401.8	401.8	401.9	0.2
987	98,658	195	2,328	5.5	403.1	403.1	403.3	0.3
1000	99,962	215	3,159	4.1	405.4	405.4	405.8	0.4
1009	100,947	185	2,015	6.1	406.4	406.4	406.9	0.5
1026	102,599	215	2,829	4.4	409.0	409.0	409.6	0.6
1049	104,877	212	2,694	4.5	411.0	411.0	411.7	0.7
1071	107,099	273	3,883	3.1	412.8	412.8	413.6	0.8
1092	109,206	326	3,938	3.1	413.6	413.6	414.5	0.9
1112	111,178	290	3,328	3.6	415.2	415.2	416.0	0.8
1130	113,050	184	2,427	5.0	416.9	416.9	417.7	0.8
1151	115,128	150	2,152	5.6	419.8	419.8	420.6	0.9
1172	117,229	345	2,816	4.3	428.2	428.2	428.4	0.2
1181	118,072	275	2,277	5.0	429.4	429.4	429.8	0.4
1202	120,210	112	945	11.9	436.9	436.9	437.0	0.1
1221	122,144	92	1,093	10.2	448.0	448.0	448.7	0.7
1242	124,230	185	2,020	5.5	455.6	455.6	456.5	0.9
1259	125,910	224	2,947	3.8	459.6	459.6	460.3	0.6
1280	128,048	190	2,567	4.3	462.0	462.0	462.6	0.6
1300	130,027	140	1,643	6.8	464.2	464.2	464.9	0.6
1322	132,191	150	2,011	5.4	468.2	468.2	469.1	1.0
1341	134,128	125	1,172	9.3	473.9	473.9	474.4	0.4
1361	136,128	165	1,907	5.6	484.0	484.0	484.4	0.5
1380	137,953	205	2,474	4.3	487.1	487.1	487.8	0.7
1396	139,640	162	1,974	5.0	488.8	488.8	489.4	0.6
1416	141,567	110	1,669	5.9	490.9	490.9	491.7	0.8
1446	144,599	135	1,660	6.0	495.2	495.2	495.8	0.6
1466	146,564	431	4,818	2.0	499.2	499.2	499.9	0.7
1485	148,479	225	2,276	4.1	499.5	499.5	500.3	0.8
1507	150,746	654	5,499	1.7	501.3	501.3	502.2	0.9
1526	152,574	569	4,962	1.9	502.0	502.0	503.0	1.0

Table 21 - 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
1567	156,700	1,272	7,401	1.3	504.2	504.2	505.1	0.9
1590	158,987	245	2,270	4.1	505.5	505.5	506.3	0.8
1598	159,753	192	2,149	4.3	506.7	506.7	507.4	0.6
1606	160,590	235	2,548	3.6	508.9	508.9	508.9	0.0
1627	162,664	180	2,133	4.3	511.5	511.5	511.6	0.1
1632	163,201	158	2,082	4.4	512.2	512.2	512.5	0.3
1646	164,633	336	3,414	2.6	513.3	513.3	513.8	0.6
1671	167,101	235	2,382	3.8	515.3	515.3	515.8	0.4
1692	169,202	260	3,369	2.7	518.4	518.4	518.9	0.5
1711	171,134	130	1,933	4.6	519.1	519.1	519.7	0.6
1718	171,797	155	2,539	3.5	520.2	520.2	520.7	0.5
1723	172,270	175	2,298	3.8	523.0	523.0	523.0	0.0
1739	173,881	136	1,382	5.2	525.0	525.0	525.0	0.0
1746	174,563	240	2,225	3.2	526.2	526.2	526.3	0.0
1753	175,294	135	1,386	5.2	526.8	526.8	526.8	0.1
1764	176,436	185	1,982	3.6	528.7	528.7	528.9	0.3
1776	177,550	115	1,346	5.4	529.8	529.8	530.2	0.4
1790	179,002	120	1,527	4.7	531.4	531.4	531.9	0.5
1806	180,628	90	816	8.7	534.1	534.1	534.3	0.2
1813	181,285	192	2,521	2.8	547.0	547.0	547.0	0.0
1831	183,117	290	2,495	2.6	547.6	547.6	547.6	0.0
1851	185,109	316	2,734	2.4	549.4	549.4	549.4	0.0
1872	187,246	245	2,186	2.9	550.6	550.6	550.8	0.3
1894	189,351	328	2,864	2.2	552.0	552.0	552.6	0.6
1906	190,596	105	883	6.8	552.6	552.6	553.4	0.8
1915	191,490	100	882	6.9	558.2	558.2	558.2	0.0
1932	193,177	129	1,155	4.9	562.1	562.1	562.3	0.2
1948	194,797	200	1,519	3.7	565.2	565.2	565.4	0.2
1961	196,126	95	962	5.9	567.0	567.0	567.5	0.5
1977	197,698	145	1,580	3.5	569.9	569.9	570.4	0.5
1991	199,103	335	2,853	2.0	571.6	571.6	572.1	0.5
2007	200,659	305	2,331	2.4	572.5	572.5	572.9	0.4
2013	201,292	125	1,355	4.0	573.5	573.5	573.6	0.1
2026	202,621	211	1,749	3.1	576.4	576.4	576.8	0.3
Fan Branch								
008	801	65	438	3.4	324.0	324.0	324.0	0.0
015	1,470	52	186	8.0	330.3	330.3	330.3	0.0
023	2,326	33	178	8.4	337.4	337.4	337.5	0.2
027	2,709	60	439	3.4	343.3	343.3	344.0	0.8
036	3,550	70	412	3.6	346.7	346.7	346.8	0.1
044	4,397	45	140	5.3	354.7	354.7	354.9	0.2
057	5,726	61	143	4.9	368.2	368.2	368.2	0.0
068	6,775	19	61	7.5	378.1	378.1	378.1	0.0
073	7,280	75	480	1.0	391.3	391.3	391.7	0.4
081	8,083	19	60	7.7	395.8	395.8	395.8	0.1

Table 21 - 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
086	8,607	37	72	5.0	405.5	405.5	405.5	0.0
092	9,157	16	47	7.7	413.1	413.1	413.2	0.1
Fan Branch Tributary								
002	232	41	197	4.8	348.4	348.4	348.6	0.2
007	682	27	84	6.3	353.4	353.4	353.5	0.2
013	1,283	27	77	4.8	363.9	363.9	364.5	0.6
016	1,562	75	253	1.4	375.0	375.0	375.3	0.3
017	1,731	26	70	5.3	375.8	375.8	375.9	0.1
019	1,915	26	71	5.2	378.0	378.0	378.4	0.4
023	2,260	11	44	8.4	386.9	386.9	387.0	0.2
Forrest Creek								
009	944	170	843	2.0	505.6 ¹	500.4	501.0	0.6
020	1,981	117	499	3.4	505.6 ¹	502.2	502.8	0.6
030	2,987	120	442	3.8	505.9	505.9	506.5	0.6
041	4,057	152	518	3.3	509.5	509.5	510.5	1.0
050	5,025	135	395	4.3	512.5	512.5	513.2	0.7
060	5,995	44	277	6.1	517.3	517.3	517.6	0.3
069	6,904	56	321	5.3	523.2	523.2	523.5	0.4
077	7,748	80	370	4.6	531.3	531.3	531.4	0.1
087	8,721	88	602	2.7	540.6	540.6	540.6	0.0
096	9,588	90	491	3.3	541.6	541.6	541.9	0.3
108	10,790	85	478	3.4	547.5	547.5	548.1	0.6
117	11,683	115	593	2.8	549.8	549.8	550.7	0.9
126	12,629	225	632	2.6	552.0	552.0	552.6	0.6
138	13,762	170	699	2.3	554.3	554.3	555.1	0.8
147	14,735	215	868	1.9	556.8	556.8	557.6	0.8
154	15,381	250	931	1.7	558.8	558.8	559.3	0.4
158	15,836	160	599	2.6	559.6	559.6	560.0	0.4
170	17,025	260	923	1.7	562.0	562.0	562.8	0.9
185	18,504	350	1,012	1.6	564.3	564.3	565.0	0.7
191	19,098	260	908	1.7	565.7	565.7	566.0	0.3
203	20,254	130	527	3.0	567.7	567.7	568.4	0.7
216	21,647	74	436	3.5	571.5	571.5	572.1	0.6
231	23,082	193	751	2.0	574.9	574.9	575.6	0.8
246	24,645	216	819	1.8	577.0	577.0	577.8	0.8
261	26,094	123	492	3.1	579.4	579.4	580.1	0.7
275	27,498	130	577	2.6	581.5	581.5	582.3	0.8
294	29,443	200	745	2.0	585.2	585.2	585.8	0.6
308	30,809	160	665	2.2	588.2	588.2	588.9	0.7
324	32,422	100	551	2.4	591.6	591.6	592.1	0.5
332	33,235	120	431	3.1	593.0	593.0	593.5	0.4
338	33,813	115	441	3.0	595.1	595.1	595.5	0.4
351	35,110	160	574	2.3	597.8	597.8	598.7	0.9
360	36,023	120	612	2.2	603.2	603.2	603.5	0.4
364	36,426	105	469	2.8	603.6	603.6	604.0	0.4

Table 21 - 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
373	37,305	120	541	2.4	605.4	605.4	606.0	0.6
385	38,473	75	470	2.8	609.2	609.2	609.6	0.4
393	39,303	118	396	3.3	612.1	612.1	612.7	0.6
403	40,253	85	498	2.6	616.2	616.2	616.8	0.7
419	41,926	50	244	5.1	619.4	619.4	620.0	0.6
433	43,333	110	484	2.6	623.9	623.9	624.5	0.6
445	44,542	160	595	2.1	626.2	626.2	627.1	0.9
456	45,606	169	709	1.8	628.3	628.3	629.2	0.9
462	46,210	107	399	3.1	628.9	628.9	629.9	0.9
476	47,599	135	508	2.5	632.8	632.8	633.7	0.9
493	49,316	170	625	2.0	636.7	636.7	637.5	0.8
500	50,007	148	636	1.9	638.5	638.5	639.1	0.6
503	50,309	91	355	3.4	639.1	639.1	639.8	0.7
507	50,660	85	699	1.4	644.4	644.4	644.6	0.3
512	51,171	105	849	1.2	644.4	644.4	644.8	0.4
Haw River								
1318	131,804	588	12,081	5.3	416.8	416.8	417.5	0.7
1365	136,539	763	13,122	4.6	420.2	420.2	421.1	0.8
1388	138,837	569	12,335	4.8	422.9	422.9	423.7	0.8
1406	140,649	587	13,191	4.5	424.5	424.5	425.3	0.8
1428	142,798	767	16,455	3.6	426.2	426.2	427.0	0.8
1455	145,460	658	15,280	3.9	427.5	427.5	428.4	1.0
Jones Creek								
001	106	85	204	4.2	464.7 ¹	462.3	462.7	0.4
011	1,111	47	189	4.6	469.3	469.3	469.3	0.0
019	1,931	55	130	6.3	475.6	475.6	475.7	0.1
029	2,939	87	261	3.2	484.0	484.0	484.3	0.3
Lake Michael Tributary								
114	11,399	171	881	1.0	636.5	636.5	636.8	0.2
123	12,291	209	1,410	0.6	643.0	643.0	643.1	0.1
128	12,838	80	364	2.4	643.2	643.2	643.2	0.1
140	13,979	98	360	2.4	649.4	649.4	650.3	1.0
145	14,479	60	201	2.8	651.7	651.7	652.7	1.0
150	14,979	40	130	4.3	654.7	654.7	655.5	0.8
165	16,479	60	234	2.4	663.9	663.9	664.8	1.0
186	18,601	36	40	5.3	685.7	685.7	685.7	0.0
191	19,147	20	52	4.1	693.4	693.4	693.8	0.4
Lake Michael Tributary 2								
005	475	49	166	3.3	636.5 ¹	635.7	636.7	1.0
010	1,000	33	136	4.0	640.0	640.0	640.9	0.9
016	1,641	45	133	4.1	646.7	646.7	647.2	0.4
020	2,000	55	191	2.8	650.0	650.0	650.6	0.6
025	2,500	40	138	2.3	652.2	652.2	653.1	1.0
030	3,000	24	53	5.9	656.3	656.3	656.3	0.0
035	3,500	21	82	3.8	662.7	662.7	663.4	0.7

Table 21 - 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
039	3,945	35	120	2.6	666.7	666.7	667.7	1.0
045	4,500	35	111	2.8	672.2	672.2	673.2	0.9
050	5,000	25	73	4.3	680.3	680.3	680.3	0.0
056	5,632	34	128	2.4	686.4	686.4	687.4	1.0
063	6,273	14	47	6.7	694.0	694.0	694.0	0.0
Little Creek								
285	28,500	890	9,167	1.0	248.7	248.7	249.6	0.8
301	30,094	203	1,494	5.5	250.9	250.9	251.4	0.5
318	31,783	970	8,239	1.0	253.2	253.2	254.1	0.9
330	33,000	1,100	8,614	0.9	254.0	254.0	254.8	0.8
330	33,000	1,100	8,616	0.9	254.0	254.0	254.8	0.8
Little Creek (Near Hillsborough)								
010	991	113	374	3.5	484.1	484.1	484.6	0.5
019	1,887	169	384	3.4	488.7	488.7	488.8	0.1
024	2,420	64	383	3.1	494.8	494.8	494.8	0.0
035	3,486	60	315	3.8	498.8	498.8	499.4	0.6
049	4,878	38	198	5.6	506.4	506.4	506.9	0.4
059	5,920	29	153	6.9	517.2	517.2	517.2	0.0
069	6,882	35	267	3.4	523.3	523.3	523.8	0.5
080	7,965	52	193	4.7	530.4	530.4	530.9	0.5
087	8,707	47	398	2.1	539.4	539.4	540.1	0.7
Little River North Fork								
176	17,600	250	1,228	5.2	492.8	492.8	492.8	0.0
182	18,222	137	681	7.1	491.5	491.5	491.5	0.0
193	19,254	75	437	11.0	500.8	500.8	500.8	0.0
200	20,041	91	743	6.4	511.5	511.5	511.8	0.3
209	20,942	202	1,789	2.7	513.8	513.8	514.7	0.9
223	22,320	215	1,825	2.6	515.4	515.4	516.2	0.8
240	24,003	165	1,160	4.0	517.8	517.8	518.5	0.7
247	24,687	125	1,156	4.0	520.4	520.4	520.4	0.0
254	25,448	334	1,660	2.7	521.3	521.3	521.4	0.0
270	27,023	195	1,089	4.2	523.5	523.5	524.3	0.8
287	28,670	156	1,111	4.1	527.8	527.8	528.2	0.4
302	30,185	107	1,106	4.1	530.6	530.6	531.3	0.6
317	31,696	89	676	6.4	531.9	531.9	532.6	0.7
334	33,398	195	1,161	3.7	538.0	538.0	538.7	0.7
353	35,298	300	1,927	2.2	542.2	542.2	542.7	0.5
368	36,827	220	1,238	3.1	543.9	543.9	544.9	0.9
376	37,635	135	975	3.9	548.2	548.2	548.5	0.3
388	38,764	119	908	4.2	552.2	552.2	552.4	0.2
404	40,433	115	737	5.2	555.6	555.6	556.3	0.7
417	41,745	152	1,356	2.8	557.8	557.8	558.7	0.9
434	43,387	257	1,722	2.2	558.8	558.8	559.7	0.9
450	45,006	146	1,512	2.5	567.2	567.2	567.2	0.0
459	45,859	185	1,703	2.2	567.6	567.6	567.6	0.0

Table 21 - 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
477	47,653	188	1,614	2.3	568.4	568.4	568.5	0.1
486	48,609	125	1,097	3.3	569.5	569.5	570.1	0.6
495	49,467	290	2,337	1.6	571.0	571.0	571.6	0.6
506	50,592	160	1,168	3.1	572.1	572.1	572.8	0.7
519	51,944	214	2,053	1.8	575.9	575.9	576.4	0.4
528	52,777	67	820	4.4	577.2	577.2	577.6	0.4
535	53,486	180	1,734	2.1	577.8	577.8	578.7	0.9
543	54,322	278	1,817	2.0	579.0	579.0	579.7	0.7
Little River South Fork								
097	9,687	250	2,585	3.2	469.2	469.2	469.8	0.6
100	9,950	180	1,792	4.7	467.6	467.6	468.6	1.0
109	10,933	125	1,141	7.2	471.4	471.4	471.9	0.5
125	12,528	173	1,612	5.1	477.7	477.7	478.0	0.3
139	13,946	300	3,273	2.5	481.2	481.2	481.7	0.5
156	15,562	404	3,649	2.2	482.6	482.6	483.2	0.6
170	16,986	350	3,325	2.5	483.9	483.9	484.6	0.7
186	18,572	170	1,416	5.8	486.8	486.8	487.5	0.7
200	19,963	265	2,374	3.5	491.2	491.2	492.1	1.0
216	21,562	200	2,350	3.5	495.2	495.2	495.6	0.4
236	23,622	595	4,924	1.7	495.8	495.8	496.7	0.9
249	24,882	420	3,589	2.3	497.1	497.1	497.9	0.8
264	26,377	259	2,206	3.7	499.0	499.0	499.7	0.7
278	27,838	240	2,314	3.6	501.6	501.6	502.2	0.6
294	29,376	315	3,315	2.5	504.8	504.8	505.7	0.9
308	30,843	345	3,111	2.1	506.0	506.0	506.9	0.9
322	32,191	114	1,165	5.5	508.6	508.6	509.6	0.9
331	33,059	142	1,326	4.9	513.5	513.5	513.9	0.4
344	34,398	260	2,025	3.2	517.2	517.2	517.9	0.6
356	35,632	323	3,323	1.9	520.0	520.0	520.9	0.9
375	37,494	430	4,081	1.6	520.8	520.8	521.7	1.0
389	38,861	160	1,413	4.5	522.3	522.3	523.2	1.0
399	39,860	321	3,476	1.8	524.2	524.2	525.2	1.0
404	40,439	225	2,049	3.1	524.8	524.8	525.8	0.9
424	42,352	214	1,983	3.2	527.4	527.4	528.4	1.0
434	43,398	200	1,798	3.6	529.4	529.4	530.2	0.8
448	44,802	119	1,341	4.7	533.8	533.8	534.6	0.8
464	46,359	156	1,739	3.6	536.6	536.6	537.6	1.0
480	47,995	139	1,141	5.5	538.7	538.7	539.6	0.9
493	49,343	231	2,281	2.8	541.1	541.1	542.0	0.9
500	49,967	142	1,495	4.2	541.8	541.8	542.7	1.0
510	50,984	307	2,599	2.4	544.0	544.0	544.9	0.9
519	51,913	710	6,512	1.0	544.8	544.8	545.8	1.0
540	53,959	365	2,420	2.7	545.3	545.3	546.2	0.8
562	56,199	443	3,141	2.1	549.7	549.7	550.3	0.6
569	56,890	95	854	6.1	551.8	551.8	552.4	0.6

Table 21 - 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
576	57,628	85	1,111	5.9	552.1	552.1	552.8	0.7
McGowan Creek								
003	284	180	810	3.6	547.2 ¹	540.5	541.5	1.0
006	582	55	298	9.6	547.2 ¹	541.5	542.2	0.7
010	985	150	601	4.4	547.2 ¹	545.6	546.3	0.7
014	1,425	105	483	5.5	548.0	548.0	548.4	0.4
018	1,765	50	340	7.8	549.4	549.4	549.9	0.5
026	2,561	40	315	8.4	553.1	553.1	553.4	0.3
030	2,978	40	271	9.8	554.9	554.9	555.2	0.3
036	3,556	90	442	6.0	558.9	558.9	558.9	0.0
040	4,018	125	409	6.5	560.8	560.8	561.0	0.1
044	4,442	136	405	6.6	563.2	563.2	563.4	0.1
052	5,220	150	657	4.0	568.9	568.9	568.9	0.0
057	5,668	111	580	4.6	569.7	569.7	570.0	0.3
061	6,087	150	766	3.5	570.7	570.7	571.2	0.6
067	6,729	125	609	4.4	572.4	572.4	572.6	0.2
073	7,333	65	307	8.0	573.5	573.5	574.5	1.0
076	7,641	140	537	4.6	577.3	577.3	577.3	0.0
081	8,099	102	506	4.9	579.4	579.4	579.9	0.5
085	8,500	76	437	5.6	580.5	580.5	581.5	1.0
088	8,755	75	487	5.0	582.0	582.0	582.5	0.5
090	8,983	78	559	4.4	582.9	582.9	583.2	0.3
094	9,404	80	444	5.5	584.0	584.0	584.1	0.1
100	9,986	85	712	3.5	588.6	588.6	589.2	0.6
106	10,554	70	670	3.7	589.1	589.1	589.6	0.5
110	10,967	60	579	4.2	589.4	589.4	589.9	0.5
114	11,357	59	468	4.6	589.6	589.6	590.2	0.6
118	11,783	59	362	5.9	590.3	590.3	590.7	0.4
122	12,168	56	283	7.6	591.6	591.6	591.8	0.3
127	12,723	160	921	2.3	600.2	600.2	600.2	0.0
136	13,569	69	276	7.8	602.8	602.8	602.9	0.2
141	14,059	70	512	4.2	607.3	607.3	607.6	0.2
145	14,452	85	387	5.5	608.1	608.1	608.8	0.7
148	14,799	100	587	3.6	610.6	610.6	611.6	1.0
153	15,263	135	716	3.0	612.9	612.9	613.5	0.6
156	15,603	150	907	2.4	614.0	614.0	614.6	0.6
162	16,175	160	821	2.6	615.1	615.1	615.9	0.8
167	16,663	170	884	2.4	616.4	616.4	617.3	0.9
173	17,269	105	533	4.0	617.8	617.8	618.8	1.0
179	17,921	170	985	1.8	620.8	620.8	621.4	0.6
185	18,516	190	992	1.8	621.4	621.4	622.3	0.9
196	19,596	168	531	2.6	623.2	623.2	624.2	1.0
203	20,311	107	599	2.3	627.2	627.2	627.6	0.4
209	20,920	110	349	4.0	627.2	627.2	627.8	0.6
214	21,396	120	206	6.8	630.8	630.8	630.8	0.0

Table 21 - 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
224	22,442	150	590	2.4	637.6	637.6	638.2	0.6
230	23,000	205	839	1.7	639.6	639.6	640.5	1.0
236	23,571	170	645	2.2	641.8	641.8	642.3	0.6
239	23,925	155	673	2.1	643.1	643.1	643.8	0.7
245	24,500	130	371	2.7	645.6	645.6	645.9	0.3
248	24,779	113	545	1.8	646.6	646.6	647.5	0.9
255	25,500	40	177	3.8	648.1	648.1	649.0	0.9
260	26,000	23	153	4.4	650.4	650.4	651.3	0.9
265	26,485	20	118	5.8	652.7	652.7	653.6	0.9
269	26,879	28	175	3.9	655.1	655.1	656.1	1.0
273	27,263	35	115	5.9	657.4	657.4	657.5	0.1
279	27,875	21	76	5.5	663.7	663.7	664.1	0.4
283	28,272	19	56	7.4	668.8	668.8	668.9	0.1
290	29,000	41	146	2.8	674.2	674.2	675.2	1.0
295	29,479	24	67	6.2	678.2	678.2	678.2	0.0
303	30,260	40	232	1.8	689.5	689.5	690.5	1.0
Mill Creek								
240	24,000	27	273	8.2	587.1	587.1	588.1	1.0
253	25,300	130	839	2.7	593.6	593.6	594.1	0.6
263	26,261	51	386	5.8	595.8	595.8	596.8	1.0
266	26,555	100	641	3.5	598.1	598.1	598.5	0.4
285	28,500	116	727	2.8	604.6	604.6	605.5	0.9
299	29,899	160	862	2.4	610.8	610.8	611.7	0.9
313	31,323	88	439	3.5	614.2	614.2	615.2	1.0
316	31,571	130	809	1.9	615.8	615.8	616.7	1.0
333	33,349	55	357	4.0	621.4	621.4	622.4	1.0
345	34,500	231	821	1.8	625.6	625.6	626.5	0.9
360	36,000	100	460	3.1	633.5	633.5	634.5	1.0
374	37,382	135	535	2.7	641.3	641.3	642.1	0.8
390	39,000	95	331	2.6	648.6	648.6	649.2	0.6
404	40,363	50	205	4.1	657.8	657.8	658.8	1.0
Morgan Creek								
415	41,468	1,066	9,133	1.3	250.4	250.4	251.2	0.7
432	43,204	675	4,250	1.9	250.6	250.6	251.5	1.0
454	45,423	240	2,513	3.3	257.1	257.1	258.0	0.9
474	47,450	930	7,421	1.1	258.6	258.6	259.4	0.9
485	48,456	147	1,295	6.2	260.0	260.0	260.6	0.6
500	49,956	86	1,223	6.3	266.7	266.7	266.7	0.0
515	51,458	110	1,007	7.7	269.7	269.7	270.1	0.4
529	52,916	89	875	8.8	274.8	274.8	275.5	0.7
541	54,064	194	1,443	5.3	277.8	277.8	278.7	0.9
556	55,576	130	1,530	5.0	280.9	280.9	281.9	0.9
570	56,955	88	1,006	7.6	284.1	284.1	284.5	0.4
580	57,950	88	843	9.0	287.6	287.6	288.4	0.9
587	58,739	78	742	10.2	292.1	292.1	292.3	0.2

Table 21 - 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
595	59,503	88	987	7.7	295.3	295.3	296.0	0.6
609	60,924	124	1,524	5.0	298.9	298.9	299.7	0.8
624	62,440	103	1,345	5.5	300.3	300.3	301.2	0.9
631	63,064	151	1,551	4.8	302.4	302.4	302.8	0.4
642	64,197	160	1,410	4.8	303.6	303.6	304.0	0.4
656	65,586	210	1,625	4.2	305.0	305.0	305.9	0.9
667	66,738	240	2,160	3.1	306.3	306.3	307.2	0.9
680	68,003	125	1,178	5.7	307.9	307.9	308.8	0.9
694	69,369	121	1,137	5.9	310.8	310.8	311.6	0.8
709	70,942	239	1,540	3.9	314.5	314.5	315.0	0.6
729	72,925	77	780	7.8	316.5	316.5	317.2	0.8
751	75,125	72	835	7.2	320.0	320.0	320.8	0.9
763	76,255	177	1,578	3.8	322.7	322.7	323.7	1.0
774	77,432	147	1,247	4.7	324.4	324.4	325.4	1.0
789	78,883	75	831	7.0	326.0	326.0	326.9	0.9
835	83,494	180	2,198	1.6	358.2	358.2	359.2	1.0
845	84,524	52	329	10.6	360.2	360.2	360.4	0.2
853	85,344	75	594	5.9	368.4	368.4	368.5	0.2
864	86,405	73	568	6.1	374.4	374.4	375.1	0.7
874	87,430	80	595	5.8	380.6	380.6	381.2	0.6
889	88,949	115	583	5.9	386.3	386.3	387.2	0.9
899	89,888	60	490	7.0	390.9	390.9	391.2	0.3
907	90,718	46	322	10.7	394.5	394.5	394.8	0.3
918	91,830	95	468	7.3	402.0	402.0	402.4	0.3
933	93,346	70	571	6.0	410.9	410.9	411.4	0.5
947	94,691	185	1,019	3.4	418.6	418.6	419.3	0.6
964	96,408	70	502	6.8	425.0	425.0	425.2	0.2
978	97,784	75	419	8.0	431.6	431.6	431.9	0.4
992	99,228	61	392	7.9	439.8	439.8	440.5	0.7
1005	100,492	103	445	7.0	446.1	446.1	446.2	0.1
1019	101,872	80	465	6.0	451.7	451.7	452.4	0.7
1034	103,405	160	815	3.2	457.4	457.4	457.8	0.4
1051	105,056	59	455	5.8	463.0	463.0	463.4	0.4
1063	106,348	75	377	6.3	467.1	467.1	467.3	0.3
1069	106,949	65	523	4.5	471.1	471.1	471.3	0.2
1078	107,820	125	564	4.2	473.6	473.6	474.0	0.4
1094	109,370	70	434	3.6	479.9	479.9	480.6	0.7
1109	110,877	62	307	5.1	482.9	482.9	483.5	0.6
1121	112,145	110	233	6.3	489.9	489.9	489.9	0.0
1134	113,402	70	330	4.5	496.4	496.4	496.8	0.4
1148	114,775	90	375	3.6	502.6	502.6	503.1	0.6
1153	115,317	53	349	3.5	508.5	508.5	508.6	0.2
1164	116,386	91	417	2.8	511.2	511.2	512.1	0.9
1180	117,993	131	484	2.4	516.0	516.0	516.7	0.7

Table 21 - 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
1194	119,431	112	382	2.6	523.8	523.8	524.5	0.6
1205	120,530	105	202	5.0	534.2	534.2	534.2	0.1
1214	121,407	80	282	3.1	538.4	538.4	539.0	0.6
1225	122,486	60	208	4.2	544.1	544.1	544.6	0.5
1235	123,507	49	147	4.9	550.9	550.9	551.2	0.3
1246	124,646	44	135	4.2	557.5	557.5	557.9	0.4
1251	125,147	60	94	6.0	563.0	563.0	563.0	0.0
Morgan Creek Tributary								
003	311	32	128	4.9	386.4	386.4	386.5	0.1
009	885	24	89	7.0	404.5	404.5	404.8	0.3
013	1,282	39	101	6.1	421.8	421.8	422.4	0.6
018	1,799	27	87	6.5	445.8	445.8	445.8	0.0
025	2,458	60	167	3.4	461.3	461.3	461.4	0.1
030	3,013	100	1,821	0.2	483.9	483.9	483.9	0.0
043	4,265	99	515	0.8	483.9	483.9	483.9	0.0
Neville Creek								
002	215	38	220	7.9	364.6 ¹	362.5	362.7	0.1
013	1,317	37	182	8.3	372.0	372.0	372.7	0.7
021	2,077	96	380	4.0	380.9	380.9	381.7	0.8
025	2,548	48	246	6.0	382.8	382.8	383.4	0.6
035	3,497	52	214	6.9	390.8	390.8	390.8	0.0
045	4,476	64	339	4.3	401.5	401.5	402.5	1.0
054	5,416	45	247	5.9	408.1	408.1	408.6	0.6
064	6,414	93	383	3.7	412.9	412.9	413.2	0.3
074	7,432	71	373	3.5	418.7	418.7	419.6	1.0
085	8,478	149	573	2.2	422.8	422.8	423.6	0.8
095	9,522	43	247	5.1	427.0	427.0	427.8	0.8
104	10,397	62	277	4.4	430.9	430.9	431.6	0.7
109	10,905	78	260	4.7	432.9	432.9	433.5	0.6
115	11,470	51	214	5.3	436.2	436.2	436.3	0.1
New Hope Creek								
731	73,108	687	3,226	2.6	265.0	265.0	265.4	0.4
748	74,820	390	3,424	2.7	271.2	271.2	271.2	0.1
770	76,998	437	3,126	2.9	275.1	275.1	276.0	1.0
804	80,381	169	1,131	6.8	290.6	290.6	291.4	0.7
827	82,699	150	1,329	5.8	307.2	307.2	308.1	0.9
844	84,440	75	887	8.6	325.4	325.4	326.4	1.0
858	85,817	107	972	7.8	335.6	335.6	336.4	0.8
868	86,786	170	1,246	6.0	344.5	344.5	344.9	0.4
878	87,809	130	1,172	6.4	349.9	349.9	350.1	0.1
889	88,910	135	1,130	6.7	358.4	358.4	359.2	0.8
905	90,474	150	1,604	4.6	369.4	369.4	369.9	0.5
927	92,685	135	1,262	5.8	376.9	376.9	377.8	0.9
933	93,315	168	1,565	4.7	379.8	379.8	380.6	0.7
942	94,225	135	1,336	5.5	383.4	383.4	384.2	0.8

Table 21 - 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
952	95,247	100	1,197	6.1	390.2	390.2	391.2	1.0
968	96,779	147	1,887	3.9	395.5	395.5	396.4	0.9
984	98,442	132	1,447	5.0	399.2	399.2	399.9	0.7
1002	100,164	175	1,900	3.8	403.0	403.0	403.7	0.7
1015	101,487	318	2,633	2.8	405.7	405.7	406.3	0.6
1026	102,649	235	2,278	3.2	408.2	408.2	409.2	1.0
1055	105,489	910	5,577	1.3	410.4	410.4	411.4	1.0
1073	107,273	100	1,003	6.2	415.1	415.1	415.8	0.6
1092	109,216	165	1,307	4.7	424.4	424.4	425.4	1.0
1110	111,021	69	662	9.3	434.0	434.0	434.3	0.3
1128	112,786	128	1,139	5.3	457.2	457.2	457.2	0.0
1148	114,840	143	1,473	4.1	464.0	464.0	464.2	0.2
1169	116,856	355	3,006	2.0	468.1	468.1	468.7	0.5
1187	118,710	499	4,332	1.4	471.9	471.9	472.4	0.5
1218	121,773	330	3,454	1.7	475.6	475.6	476.1	0.5
1237	123,707	386	3,132	1.7	477.0	477.0	477.7	0.7
1259	125,865	489	2,748	2.0	480.7	480.7	481.4	0.7
1274	127,385	137	1,152	4.7	485.0	485.0	485.5	0.5
1286	128,581	111	1,152	4.7	488.6	488.6	489.4	0.8
1299	129,858	331	2,895	1.8	491.6	491.6	492.3	0.7
1311	131,080	340	2,424	2.1	493.1	493.1	493.8	0.6
1323	132,305	320	1,727	3.0	495.5	495.5	495.7	0.2
1340	134,017	180	1,353	3.8	499.6	499.6	500.5	0.9
1928	192,819	1,934	15,961	0.6	259.8	259.8	260.7	0.9
1939	193,912	1,850	11,949	0.8	260.1	260.1	261.0	0.9
1961	196,077	1,800	9,681	1.0	261.0	261.0	261.8	0.8
New Hope Creek Tributary 1								
055	5,529	332	1,856	1.2	263.5	263.5	263.8	0.3
060	5,974	400	1,841	1.1	264.0	264.0	264.4	0.4
065	6,526	270	1,130	1.6	264.9	264.9	265.4	0.5
065	6,526	311	1,555	1.6	265.2	265.2	266.1	0.9
071	7,144	369	8,220	0.2	285.6	285.6	285.6	0.0
085	8,542	375	6,502	0.3	285.6	285.6	285.6	0.0
105	10,531	120	1,039	1.4	286.1	286.1	286.9	0.8
121	12,112	150	620	1.7	289.4	289.4	290.0	0.6
132	13,250	160	379	2.8	296.6	296.6	297.6	1.0
Old Field Creek								
006	645	140	966	3.6	412.3	412.3	412.6	0.4
020	1,976	153	1,082	3.2	416.6	416.6	417.1	0.6
031	3,113	196	1,220	2.9	418.8	418.8	419.7	0.9
045	4,462	189	1,194	2.5	424.1	424.1	424.9	0.8
057	5,728	240	1,317	2.3	427.8	427.8	428.4	0.7
072	7,241	170	1,127	2.7	434.0	434.0	434.6	0.6
087	8,723	95	846	2.8	442.6	442.6	443.2	0.6
102	10,218	95	516	4.6	448.7	448.7	449.2	0.5

Table 21 - 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
112	11,239	68	740	1.3	461.4	461.4	461.4	0.0
134	13,383	100	602	3.4	469.4	469.4	469.6	0.3
145	14,462	47	303	4.6	475.2	475.2	475.3	0.1
147	14,684	250	4,374	0.3	489.5	489.5	489.6	0.1
149	14,933	350	5,807	0.2	489.5	489.5	489.6	0.1
Phils Creek								
042	4,161	630	1,287	2.5	358.0 ¹	349.0	349.0	0.0
047	4,732	185	1,066	3.0	358.0 ¹	353.4	353.5	0.0
057	5,691	67	608	5.4	358.0 ¹	357.9	358.6	0.7
060	6,002	57	463	7.0	358.8	358.8	359.2	0.4
072	7,232	44	298	8.4	369.9	369.9	369.9	0.0
079	7,918	46	260	9.6	384.3	384.3	384.4	0.0
089	8,882	100	618	4.0	394.8	394.8	395.1	0.3
100	9,967	78	594	4.1	397.4	397.4	398.2	0.7
110	11,014	104	563	4.3	401.3	401.3	401.8	0.5
125	12,476	109	674	3.6	407.9	407.9	408.5	0.6
139	13,915	133	795	2.9	410.9	410.9	411.2	0.3
149	14,909	143	657	3.5	413.4	413.4	413.8	0.4
163	16,348	73	410	5.2	418.8	418.8	419.0	0.2
174	17,409	144	630	3.2	422.1	422.1	422.4	0.3
179	17,868	100	687	3.0	423.5	423.5	424.4	0.9
189	18,919	78	577	3.5	426.0	426.0	426.8	0.8
204	20,371	85	378	5.2	430.1	430.1	430.5	0.5
216	21,562	135	710	2.6	434.6	434.6	435.1	0.5
229	22,902	100	393	4.5	439.8	439.8	440.5	0.7
238	23,819	97	702	2.5	445.0	445.0	445.2	0.2
250	25,042	44	224	6.0	447.5	447.5	448.2	0.8
261	26,115	71	432	3.1	456.8	456.8	457.5	0.7
273	27,327	65	275	4.9	463.1	463.1	463.3	0.2
285	28,546	91	375	3.6	470.1	470.1	470.4	0.3
293	29,299	66	527	2.5	480.6	480.6	480.6	0.0
299	29,888	766	523	2.3	486.4	486.4	486.4	0.0
306	30,618	178	1,170	1.0	492.7	492.7	493.0	0.3
312	31,194	115	835	1.4	495.1	495.1	495.6	0.5
Piney Mountain Creek								
007	686	145	907	3.7	290.4	290.4	291.0	0.6
021	2,143	136	839	4.0	297.2	297.2	297.8	0.7
030	3,032	140	1,255	2.7	305.5	305.5	306.1	0.6
044	4,439	205	996	3.4	311.2	311.2	312.1	0.9
061	6,116	136	943	3.6	324.6	324.6	325.4	0.8
074	7,388	139	805	4.2	332.0	332.0	332.2	0.2
086	8,649	128	1,141	3.0	338.9	338.9	339.5	0.5
108	10,767	210	1,047	1.9	344.0	344.0	344.6	0.6
120	12,015	180	820	1.5	348.6	348.6	349.0	0.4
133	13,266	55	202	6.1	356.6	356.6	356.8	0.2

Table 21 - 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
142	14,206	89	194	6.4	371.0	371.0	371.0	0.0
150	14,953	71	280	4.4	383.4	383.4	383.5	0.1
157	15,689	75	284	4.4	399.2	399.2	399.2	0.0
161	16,142	70	427	2.9	404.8	404.8	405.7	0.9
174	17,448	33	120	8.7	415.5	415.5	415.5	0.0
188	18,754	94	232	4.5	428.0	428.0	428.3	0.3
196	19,607	135	2,180	0.5	457.4	457.4	457.6	0.1
201	20,111	106	1,561	0.6	457.5	457.5	457.6	0.2
Rhodes Creek								
001	101	38	206	11.0	387.1 ¹	382.0	382.6	0.6
009	898	45	424	5.4	391.4	391.4	391.8	0.4
019	1,923	58	254	8.8	398.2	398.2	398.4	0.2
033	3,305	46	327	6.2	409.6	409.6	409.8	0.2
061	6,080	186	1,746	1.1	428.8	428.8	429.7	0.9
070	7,001	171	1,197	1.2	429.0	429.0	429.9	0.9
084	8,415	50	304	4.4	430.1	430.1	431.0	0.9
099	9,911	134	2,757	0.5	451.4	451.4	451.6	0.2
106	10,570	166	2,844	0.4	451.4	451.4	451.6	0.2
125	12,491	161	2,427	0.4	451.4	451.4	451.6	0.3
133	13,327	135	1,769	0.5	451.4	451.4	451.6	0.3
139	13,925	112	1,155	0.8	451.4	451.4	451.7	0.3
148	14,836	219	1,413	0.5	451.5	451.5	451.8	0.4
156	15,611	119	463	1.4	451.6	451.6	452.0	0.4
162	16,213	59	186	3.3	453.6	453.6	453.8	0.3
165	16,470	69	292	2.1	454.7	454.7	455.7	1.0
173	17,290	64	185	2.8	459.6	459.6	459.9	0.3
189	18,946	39	125	4.1	467.8	467.8	468.4	0.5
201	20,069	186	438	0.4	485.4	485.4	485.4	0.0
207	20,675	66	102	1.8	490.8	490.8	491.5	0.7
207	20,743	500	1,451	0.1	505.2	505.2	505.3	0.0
213	21,267	24	30	6.2	510.0	510.0	510.0	0.0
Rocky Run								
004	443	131	359	3.8	524.0 ¹	521.4	521.9	0.6
031	3,092	81	1,471	0.9	553.6	553.6	553.6	0.0
046	4,599	84	803	1.6	553.8	553.8	553.9	0.1
064	6,357	64	369	3.5	560.0	560.0	560.0	0.0
075	7,461	30	148	8.3	562.1	562.1	562.5	0.4
082	8,223	52	153	8.0	576.2	576.2	576.6	0.4
088	8,762	85	312	3.8	592.1	592.1	592.6	0.5
096	9,625	60	287	4.0	598.3	598.3	598.4	0.1
104	10,429	60	212	5.4	601.4	601.4	602.2	0.8
112	11,197	111	454	2.5	607.0	607.0	607.7	0.6
124	12,362	88	295	3.9	610.3	610.3	611.0	0.7
140	13,985	74	347	3.0	623.8	623.8	624.2	0.4
145	14,524	106	456	2.3	629.0	629.0	629.5	0.5

Table 21 - 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
Sevenmile Creek								
001	104	262	1,615	2.5	523.8 ¹	520.8	521.4	0.6
026	2,582	320	2,465	1.7	523.8 ¹	523.0	523.7	0.7
050	4,966	329	1,742	2.1	524.6	524.6	525.3	0.7
061	6,063	195	1,182	3.0	526.8	526.8	527.4	0.6
078	7,773	232	1,813	2.0	531.2	531.2	531.6	0.4
087	8,655	122	962	3.7	531.8	531.8	532.4	0.6
Spring Valley Creek								
011	1,060	81	235	5.3	469.7	469.7	470.1	0.4
023	2,274	31	129	9.6	486.1	486.1	486.2	0.1
032	3,243	21	103	11.4	519.2	519.2	519.2	0.0
045	4,519	63	193	6.1	522.7	522.7	522.7	0.0
056	5,610	30	118	9.2	534.2	534.2	534.2	0.0
062	6,156	77	297	3.6	539.7	539.7	540.2	0.6
067	6,728	69	168	6.3	548.6	548.6	548.6	0.0
075	7,549	83	286	3.6	553.7	553.7	554.1	0.4
080	8,005	58	306	3.4	558.2	558.2	558.7	0.5
086	8,645	90	395	2.5	560.0	560.0	560.7	0.7
091	9,139	57	338	2.9	565.7	565.7	565.9	0.2
102	10,181	81	252	3.8	574.4	574.4	574.8	0.5
111	11,146	237	2,202	0.4	595.5	595.5	595.5	0.0
122	12,185	218	2,191	0.4	595.5	595.5	595.5	0.0
134	13,437	100	254	2.8	601.8	601.8	602.2	0.4
143	14,304	185	1,316	0.6	609.8	609.8	609.8	0.0
Stony Creek								
006	588	351	2,322	1.4	421.8	421.8	421.9	0.0
015	1,490	346	3,331	1.0	421.9	421.9	421.9	0.0
030	2,986	76	546	5.9	424.3	424.3	424.7	0.4
053	5,304	122	630	4.6	430.8	430.8	431.1	0.3
063	6,288	181	1,008	2.8	434.3	434.3	435.1	0.8
082	8,159	113	818	3.4	440.6	440.6	440.8	0.2
090	9,019	127	569	4.9	441.7	441.7	442.2	0.6
102	10,225	240	639	4.2	446.7	446.7	446.9	0.2
108	10,751	145	1,101	2.4	454.5	454.5	454.5	0.0
113	11,301	130	1,189	2.2	456.1	456.1	456.1	0.0
124	12,381	205	1,145	2.3	456.7	456.7	456.7	0.0
134	13,414	150	752	3.4	459.5	459.5	459.5	0.0
146	14,576	348	1,749	1.5	464.5	464.5	464.7	0.2
153	15,264	200	859	2.8	466.2	466.2	466.8	0.6
158	15,823	150	920	2.6	470.2	470.2	470.2	0.0
168	16,807	218	1,263	1.9	471.3	471.3	471.8	0.4
173	17,255	242	1,218	2.0	472.0	472.0	472.7	0.8
185	18,462	220	1,190	2.0	474.4	474.4	474.9	0.6
195	19,473	223	881	2.7	476.5	476.5	477.4	0.9
209	20,870	206	1,076	2.0	482.2	482.2	482.7	0.5

Table 21 - 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
218	21,804	160	982	2.2	483.3	483.3	484.1	0.8
235	23,510	111	543	3.2	487.1	487.1	488.1	1.0
245	24,525	139	550	3.2	490.5	490.5	491.2	0.6
260	26,002	150	484	3.6	494.8	494.8	495.6	0.9
264	26,446	106	487	3.5	498.6	498.6	499.2	0.6
275	27,497	37	144	9.1	506.5	506.5	506.6	0.1
286	28,649	55	182	7.2	524.1	524.1	524.2	0.1
Stony Creek Tributary								
007	654	87	258	3.6	432.0	432.0	432.7	0.6
017	1,686	232	1,105	0.8	445.3	445.3	445.9	0.6
025	2,460	72	245	3.5	447.7	447.7	448.0	0.3
030	2,961	85	359	2.4	454.8	454.8	455.3	0.5
035	3,488	100	199	4.3	461.2	461.2	461.2	0.0
040	3,993	55	308	2.8	469.7	469.7	470.4	0.6
043	4,321	89	216	3.9	473.2	473.2	473.8	0.6
Strouds Creek								
002	153	65	449	8.1	487.1 ¹	478.6	479.6	1.0
005	529	100	472	7.7	487.1 ¹	481.2	481.2	0.0
012	1,233	100	541	6.7	487.1 ¹	486.0	486.5	0.5
016	1,637	242	1,575	2.3	493.2	493.2	493.2	0.0
022	2,192	100	557	6.4	493.4	493.4	493.6	0.2
026	2,648	120	784	4.6	497.0	497.0	497.2	0.1
032	3,223	100	674	5.3	499.4	499.4	499.6	0.2
038	3,756	105	751	4.8	502.9	502.9	502.9	0.0
041	4,105	130	679	5.3	504.6	504.6	504.6	0.0
045	4,500	130	936	3.8	507.3	507.3	508.0	0.7
052	5,228	125	862	4.2	510.1	510.1	511.0	0.9
058	5,832	135	841	4.3	512.2	512.2	512.8	0.6
061	6,145	115	897	4.0	513.0	513.0	513.8	0.9
065	6,532	120	849	4.2	514.2	514.2	515.0	0.8
071	7,097	140	740	4.8	516.6	516.6	516.9	0.3
074	7,437	120	787	4.6	517.4	517.4	518.3	0.8
081	8,139	180	698	4.2	520.5	520.5	520.5	0.1
085	8,459	170	686	4.3	521.6	521.6	521.7	0.2
090	8,964	160	1,056	2.8	522.8	522.8	523.5	0.7
097	9,664	145	676	4.4	523.7	523.7	524.7	1.0
101	10,110	158	1,042	2.8	527.4	527.4	527.4	0.0
112	11,178	90	669	3.4	528.8	528.8	528.9	0.1
115	11,500	40	358	6.4	529.1	529.1	529.2	0.1
119	11,889	40	337	6.8	529.6	529.6	530.0	0.4
122	12,196	60	319	7.2	530.6	530.6	530.8	0.1
128	12,792	40	256	8.9	533.0	533.0	533.9	0.9
130	13,047	40	288	8.0	535.2	535.2	535.2	0.0
134	13,417	36	211	10.8	537.1	537.1	537.2	0.1
139	13,898	45	368	6.2	541.6	541.6	541.9	0.3

Table 21 - 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
144	14,439	40	355	6.4	543.2	543.2	543.7	0.5
147	14,729	45	354	6.5	544.3	544.3	544.7	0.4
152	15,200	75	686	2.6	550.6	550.6	551.4	0.8
157	15,700	45	381	4.6	550.7	550.7	551.7	1.0
160	16,046	34	235	7.5	551.4	551.4	552.3	0.9
165	16,504	33	188	9.3	554.7	554.7	554.7	0.0
170	17,000	41	214	8.2	559.4	559.4	559.5	0.0
173	17,321	35	204	8.6	562.6	562.6	562.6	0.0
176	17,569	30	173	10.2	564.8	564.8	565.0	0.3
179	17,945	30	174	10.1	569.5	569.5	569.7	0.2
184	18,405	120	604	2.9	576.9	576.9	576.9	0.0
190	19,000	58	305	5.8	577.7	577.7	577.7	0.0
194	19,423	52	179	9.8	579.8	579.8	579.8	0.0
197	19,748	55	199	8.8	585.4	585.4	585.4	0.0
205	20,470	50	322	5.5	590.3	590.3	590.4	0.1
208	20,789	49	251	5.7	591.2	591.2	591.3	0.2
213	21,315	44	167	8.5	594.1	594.1	594.2	0.1
216	21,551	42	223	6.4	596.3	596.3	596.5	0.2
Strouds Creek Tributary 1								
001	114	72	351	3.4	528.6 ¹	526.5	527.5	1.0
007	698	55	433	2.8	536.8	536.8	536.8	0.0
017	1,698	50	245	4.9	540.4	540.4	541.0	0.5
022	2,165	50	229	5.2	543.0	543.0	543.2	0.2
028	2,837	50	263	4.6	546.4	546.4	546.9	0.5
035	3,529	50	263	4.2	550.2	550.2	550.4	0.2
043	4,312	45	204	5.4	559.3	559.3	559.9	0.5
051	5,136	43	199	5.4	569.3	569.3	569.5	0.2
058	5,754	75	165	6.5	578.1	578.1	578.1	0.0
065	6,463	111	405	2.6	582.0	582.0	582.7	0.7
073	7,312	102	468	2.2	584.8	584.8	585.5	0.7
082	8,197	113	435	2.4	586.9	586.9	587.9	0.9
088	8,814	124	392	2.6	589.0	589.0	589.8	0.8
Toms Creek								
016	1,579	115	613	2.4	329.8	329.8	329.8	0.0
024	2,415	38	223	6.6	333.1	333.1	333.4	0.3
033	3,283	60	188	7.9	348.6	348.6	348.6	0.0
042	4,225	37	173	8.2	357.4	357.4	357.8	0.4
048	4,778	114	919	1.5	378.1	378.1	378.6	0.4
052	5,236	27	236	5.6	378.0	378.0	378.3	0.3
062	6,169	91	226	5.9	391.0	391.0	391.1	0.0
070	6,976	36	212	5.7	408.5	408.5	409.2	0.8
072	7,250	90	712	1.7	418.4	418.4	418.4	0.0
081	8,088	45	148	8.2	419.3	419.3	419.3	0.0
086	8,561	49	401	2.6	435.8	435.8	436.3	0.4
091	9,147	25	156	6.7	436.2	436.2	436.8	0.6

Table 21 - 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
101	10,066	107	448	1.6	442.3	442.3	442.7	0.4
104	10,439	235	1,457	0.5	445.9	445.9	446.2	0.3
114	11,368	245	1,362	0.5	450.8	450.8	451.0	0.2
124	12,377	49	111	4.0	453.7	453.7	453.8	0.1
128	12,824	38	155	2.9	461.6	461.6	462.1	0.5
132	13,236	57	238	1.9	465.3	465.3	466.0	0.7
138	13,827	55	149	1.7	475.2	475.2	475.4	0.3
141	14,111	76	90	2.8	479.0	479.0	479.0	0.0
Unnamed Urban Creek								
009	894	61	605	1.7	326.0	326.0	326.0	0.0
013	1,298	48	143	6.6	330.1	330.1	330.6	0.5
017	1,671	64	161	5.8	337.6	337.6	337.6	0.0
West Fork Eno River								
003	266	200	1,742	2.2	578.2	578.2	578.5	0.3
014	1,430	229	2,237	1.7	578.7	578.7	579.3	0.6
023	2,267	250	2,248	1.5	578.9	578.9	579.7	0.8
033	3,333	100	965	3.4	579.3	579.3	580.2	0.9
050	4,969	255	1,671	2.0	580.7	580.7	581.5	0.8
060	5,963	225	1,057	3.1	583.4	583.4	583.8	0.4
074	7,365	250	1,155	2.8	587.7	587.7	588.1	0.4
087	8,680	410	1,896	1.7	593.1	593.1	593.4	0.2
West Price Creek								
009	925	77	271	3.4	362.0	362.0	362.1	0.1
016	1,650	31	152	6.1	369.9	369.9	370.6	0.7
023	2,319	28	102	9.1	391.0	391.0	391.0	0.0
030	2,962	37	97	9.2	416.0	416.0	416.1	0.0
037	3,654	47	257	3.4	436.8	436.8	437.2	0.4
047	4,673	74	299	2.9	442.6	442.6	443.1	0.5
052	5,249	52	125	6.4	446.7	446.7	446.8	0.0
057	5,719	42	231	3.5	449.3	449.3	449.7	0.4
065	6,513	73	160	5.0	458.6	458.6	458.8	0.2
072	7,153	63	242	3.3	463.4	463.4	464.2	0.8
076	7,593	24	155	5.2	466.0	466.0	467.0	1.0
Wilson Creek								
010	975	185	684	3.0	306.5	306.5	306.5	0.0
021	2,077	180	571	3.6	313.6	313.6	313.6	0.0
026	2,558	171	710	1.9	315.4	315.4	315.6	0.3
045	4,477	103	567	2.4	325.8	325.8	326.0	0.2
067	6,700	53	179	6.0	342.6	342.6	342.6	0.1
077	7,721	77	271	3.5	352.4	352.4	352.4	0.0
085	8,536	70	268	3.5	359.6	359.6	360.2	0.6
093	9,260	29	132	7.2	364.6	364.6	364.7	0.1
101	10,057	110	220	4.0	372.1	372.1	372.1	0.0
107	10,737	78	185	4.6	381.5	381.5	381.5	0.0
112	11,205	110	1,045	0.8	394.7	394.7	395.1	0.4

Table 21 - 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
117	11,663	85	563	1.5	394.7	394.7	395.2	0.4

¹Elevation includes backwater effects

* Values not computed for this station

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 Orange County. Previously, separate Flood Hazard Boundary Maps (FHBMs), 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 2/2/2007 North Carolina Statewide FIRM, which includes Orange County, are presented in Table 22, "Community Map History."

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

Table 22 - Map Revision History

Community	Initial Identification Date	Initial FIRM Effective Date	FIS Revision Date
CITY OF DURHAM	1/25/1974	1/17/1979	05/02/2006
CITY OF MEBANE	11/5/1980	11/5/1980	09/06/2006
ORANGE COUNTY	6/16/1978	3/16/1981	02/02/2007
TOWN OF CARRBORO	2/22/1974	6/30/1976	02/02/2007
TOWN OF CHAPEL HILL	6/21/1974	4/17/1978	02/02/2007
TOWN OF HILLSBOROUGH	5/19/1978	5/15/1980	02/02/2007

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 Orange County and Incorporated Areas. Table 23, "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 23 — Authority and Acknowledgments

Community	FIS Dated	Study Contracted By	Data Source	Contract or IAA Number	Work Completed In
CITY OF DURHAM	2/2/2007	NCFMP	NCFMP	206-000-23	6/19/2013
CITY OF DURHAM	2/2/2007	NCFMP	NCFMP	286-0000-23	8/8/8888
CITY OF MEBANE	2/2/2007	NCFMP	NCFMP	206-000-23	6/19/2013
CITY OF MEBANE	2/2/2007	NCFMP	NCFMP	286-0000-23	8/8/8888
ORANGE COUNTY	2/2/2007	NCFMP	NCFMP	206-000-23	6/19/2013
ORANGE COUNTY	2/2/2007	NCFMP	NCFMP	286-0000-23	8/8/8888
TOWN OF CARRBORO	2/2/2007	NCFMP	NCFMP	206-000-23	6/19/2013
TOWN OF CARRBORO	2/2/2007	NCFMP	NCFMP	286-0000-23	8/8/8888
TOWN OF CHAPEL HILL	2/2/2007	NCFMP	NCFMP	206-000-23	6/19/2013
TOWN OF CHAPEL HILL	2/2/2007	NCFMP	NCFMP	286-0000-23	8/8/8888
TOWN OF HILLSBOROUGH	2/2/2007	NCFMP	NCFMP	206-000-23	6/19/2013
TOWN OF HILLSBOROUGH	2/2/2007	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 Orange County were produced by NCFMP under contract with the State of North Carolina and issued on effective 8/30/2013. 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 Orange County and Incorporated Areas were compiled from the previous countywide FIS Report and are shown in Table 24, "Consultation Coordination Officer's Meetings

Table 24 — Consultation Coordination Officer's Meetings

Community	For FIS Dated	Initial CCO Date	Attended By	Final CCO Date	Attended By
CITY OF DURHAM	1/17/1979	12/17/1974	Representatives of City of Durham, the county, the State, HSMM, and FEMA	5/17/1977	Representatives of City of Durham, the county, the State, HSMM, and FEMA
CITY OF DURHAM	1/17/1979	8/27/1975	Representatives of City of Durham, the county, the State, HSMM, and FEMA	5/17/1977	Representatives of City of Durham, the county, the State, HSMM, and FEMA
CITY OF DURHAM	1/17/1979	9/20/1976	Representatives of City of Durham, the county, the State, HSMM, and FEMA	5/17/1977	Representatives of City of Durham, the county, the State, HSMM, and FEMA
ORANGE COUNTY	9/19/1980	9/22/1976	Representatives of FIA, study contractor, town officials, and local residents	4/22/1980	Representatives of FIA, study contractor, and the county
TOWN OF HILLSBOROUGH	11/1/1979	9/22/1976	Representatives of FIA, study contractor, town officials, and local residents	6/6/1978	Representatives from Moore, Gardner & Associates, Inc, the FIA and the City of Salisbury

Table 24 — Consultation Coordination Officer’s Meetings

Community	For FIS Dated	Initial CCO Date	Attended By	Final CCO Date	Attended By
TOWN OF HILLSBOROUGH	11/1/1979	9/22/1976	Representatives of FIA, study contractor, town officials, and local residents	8/11/1978	FIA, USACE, Carteret County
TOWN OF HILLSBOROUGH	11/1/1979	9/22/1976	Representatives of FIA, study contractor, town officials, and local residents	1/11/1979	NP
TOWN OF HILLSBOROUGH	11/1/1979	9/22/1976	Representatives of FIA, study contractor, town officials, and local residents	4/26/1979	FIA, Town of Mooresville, O'Brien & Gere, Inc., and general public
TOWN OF HILLSBOROUGH	11/1/1979	9/22/1976	Representatives of FIA, study contractor, town officials, and local residents	4/27/1979	Representatives from FEMA, Davidson County, and Moore, Gardner, & Associates Inc
TOWN OF HILLSBOROUGH	11/1/1979	9/22/1976	Representatives of FIA, study contractor, town officials, and local residents	5/8/1979	Representatives of FIA, study contractor, and the town
TOWN OF HILLSBOROUGH ETJ	11/1/1979	9/22/1976	Representatives of FIA, study contractor, town officials, and local residents	6/6/1978	Representatives from Moore, Gardner & Associates, Inc, the FIA and the City of Salisbury
TOWN OF HILLSBOROUGH ETJ	11/1/1979	9/22/1976	Representatives of FIA, study contractor, town officials, and local residents	8/11/1978	FIA, USACE, Carteret County
TOWN OF HILLSBOROUGH ETJ	11/1/1979	9/22/1976	Representatives of FIA, study contractor, town officials, and local residents	1/11/1979	NP
TOWN OF HILLSBOROUGH ETJ	11/1/1979	9/22/1976	Representatives of FIA, study contractor, town officials, and local residents	4/26/1979	FIA, Town of Mooresville, O'Brien & Gere, Inc., and general public
TOWN OF HILLSBOROUGH ETJ	11/1/1979	9/22/1976	Representatives of FIA, study contractor, town officials, and local residents	4/27/1979	Representatives from FEMA, Davidson County, and Moore, Gardner, & Associates Inc
TOWN OF HILLSBOROUGH ETJ	11/1/1979	9/22/1976	Representatives of FIA, study contractor, town officials, and local residents	5/8/1979	Representatives of FIA, study contractor, and the town

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 Orange County are shown in Table 25, "Scoping Meetings." Meetings held for the map maintenance revision are also included below for Orange County.

Table 25 — Scoping Meetings

Community	Riverbasin	Initial Scoping Date	Attended By	Final Scoping Date	Attended By
CITY OF DURHAM	CAPE FEAR	11/27/2000	Representatives of the county, FEMA, NCDM, NC CGIA, and Dewberry	4/23/2001	Representatives of the county, FEMA, NCDM, NC CGIA, and Dewberry
CITY OF DURHAM	CAPE FEAR	11/27/2000	Representatives of the county, FEMA, NCDM, NC CGIA, and Dewberry	3/6/2011	Representatives of the county, NCDM, NC CGIA, Dewberry, and Greenhome & O'Mara
CITY OF DURHAM	NEUSE	11/27/2000	Representatives of the county, FEMA, NCDM, NC CGIA, and Dewberry	4/23/2001	Representatives of the county, FEMA, NCDM, NC CGIA, and Dewberry
CITY OF DURHAM	NEUSE	11/27/2000	Representatives of the county, FEMA, NCDM, NC CGIA, and Dewberry	3/6/2011	Representatives of the county, NCDM, NC CGIA, Dewberry, and Greenhome & O'Mara
ORANGE COUNTY	CAPE FEAR	11/16/2000	FEMA, North Carolina Emergency Management, community representatives, and Dewberry	3/6/2001	FEMA, North Carolina Emergency Management, community representatives, and Dewberry
ORANGE COUNTY	CAPE FEAR	11/16/2000	FEMA, North Carolina Emergency Management, community representatives, and Dewberry	4/22/2001	FEMA, North Carolina Emergency Management, community representatives, and Dewberry
ORANGE COUNTY	NEUSE	11/16/2000	FEMA, North Carolina Emergency Management, community representatives, and Dewberry	3/6/2001	FEMA, North Carolina Emergency Management, community representatives, and Dewberry

Table 25 — Scoping Meetings

Community	Riverbasin	Initial Scoping Date	Attended By	Final Scoping Date	Attended By
ORANGE COUNTY	NEUSE	11/16/2000	FEMA, North Carolina Emergency Management, community representatives, and Dewberry	4/22/2001	FEMA, North Carolina Emergency Management, community representatives, and Dewberry
TOWN OF CARRBORO	CAPE FEAR	11/16/2000	FEMA, North Carolina Emergency Management, community representatives, and Dewberry	3/6/2001	FEMA, North Carolina Emergency Management, community representatives, and Dewberry
TOWN OF CARRBORO ETJ	CAPE FEAR	11/16/2000	FEMA, North Carolina Emergency Management, community representatives, and Dewberry	3/6/2001	FEMA, North Carolina Emergency Management, community representatives, and Dewberry
TOWN OF CHAPEL HILL	CAPE FEAR	11/16/2000	FEMA, North Carolina Emergency Management, community representatives, and Dewberry	3/6/2001	FEMA, North Carolina Emergency Management, community representatives, and Dewberry
TOWN OF CHAPEL HILL ETJ	CAPE FEAR	11/16/2000	FEMA, North Carolina Emergency Management, community representatives, and Dewberry	3/6/2001	FEMA, North Carolina Emergency Management, community representatives, and Dewberry
TOWN OF HILLSBOROUGH	NEUSE	11/16/2000	FEMA, North Carolina Emergency Management, community representatives, and Dewberry	4/22/2001	FEMA, North Carolina Emergency Management, community representatives, and Dewberry
TOWN OF HILLSBOROUGH ETJ	NEUSE	11/16/2000	FEMA, North Carolina Emergency Management, community representatives, and Dewberry	4/22/2001	FEMA, North Carolina Emergency Management, community representatives, 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 26, "Preliminary and Public Participation Meetings."

Table 26 — Preliminary and Public Participation Meetings

Community	For FIS Dated	Meeting Location	Preliminary Meeting Date	Attended By	Public Meeting Date	Attended By
TOWN OF HILLSBOROUGH	5/15/2008	Town of Hillsborough	6/18/2004	Officials from Orange county, NCDEM, Dewberry and Watershed Concepts	9/14/2004	The Public
TOWN OF HILLSBOROUGH	5/15/2008	Town of Hillsborough	6/18/2004	Officials from Orange county, NCDEM, Dewberry and Watershed Concepts	6/21/5005	The Public
TOWN OF HILLSBOROUGH	5/15/2008	Town of Hillsborough	6/2/2005	Officials from Orange county, NCDEM, Dewberry and Watershed Concepts	9/14/2004	The Public
TOWN OF HILLSBOROUGH	5/15/2008	Town of Hillsborough	6/2/2005	Officials from Orange county, NCDEM, Dewberry and Watershed Concepts	6/21/5005	The Public
TOWN OF HILLSBOROUGH ETJ	5/15/2008	Town of Hillsborough	6/18/2004	Officials from Orange county, NCDEM, Dewberry and Watershed Concepts	9/14/2004	The Public
TOWN OF HILLSBOROUGH ETJ	5/15/2008	Town of Hillsborough	6/18/2004	Officials from Orange county, NCDEM, Dewberry and Watershed Concepts	6/21/5005	The Public
TOWN OF HILLSBOROUGH ETJ	5/15/2008	Town of Hillsborough	6/2/2005	Officials from Orange county, NCDEM, Dewberry and Watershed Concepts	9/14/2004	The Public
TOWN OF HILLSBOROUGH ETJ	5/15/2008	Town of Hillsborough	6/2/2005	Officials from Orange county, NCDEM, Dewberry and Watershed Concepts	6/21/5005	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 Orange 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
City of Mebane	Mebane Planning Department, 106 East Washington Street	Mebane	NC	27302
Town of Hillsborough	Hillsborough Town Hall, 101 East Orange Street	Hillsborough	NC	27278
City of Durham	City Hall, Public Works Department, 101 City Hall Plaza	Durham	NC	27701
Town of Carrboro	Town of Carrboro Planning Department, 301 West Main Street	Carrboro	NC	27510
Orange County	Orange County Planning Department, 306 East Revere Road	Hillsborough	NC	27278
Town of Chapel Hill	Town of Chapel Hill Stormwater MGMT Program Office, 208 North Columbia Street	Chapel Hill	NC	27514

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 Orange 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