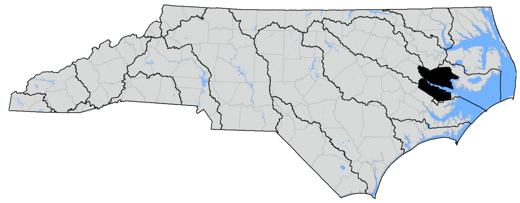
PRELIMINARY FLOOD INSURANCE STUDY

FEDERAL EMERGENCY MANAGEMENT AGENCY

A Report of Flood Hazards in

BEAUFORT COUNTY, NORTH CAROLINA AND INCORPORATED AREAS



Community Name	Community Number
BEAUFORT COUNTY	370013
CITY OF WASHINGTON	370017
TOWN OF AURORA	370014
TOWN OF BATH	370288
TOWN OF BELHAVEN	370015
TOWN OF CHOCOWINITY	370289
TOWN OF PANTEGO	370016
TOWN OF WASHINGTON PARK	370268

NORTH CAROLINA
Cooperating Technical State
FEMA'S COOPERATING TECHNICAL PARTNER

PRELIMINARY: 6/30/2016

REVISED: 6/30/2016

Federal Emergency Management Agency

State of North Carolina

Flood Insurance Study Number

37013CV000

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
5/15/2003	Initial Countywide FIS Report Effective Date

This FIS has been produced as part of the North Carolina Floodplain Mapping Program. Beaufort 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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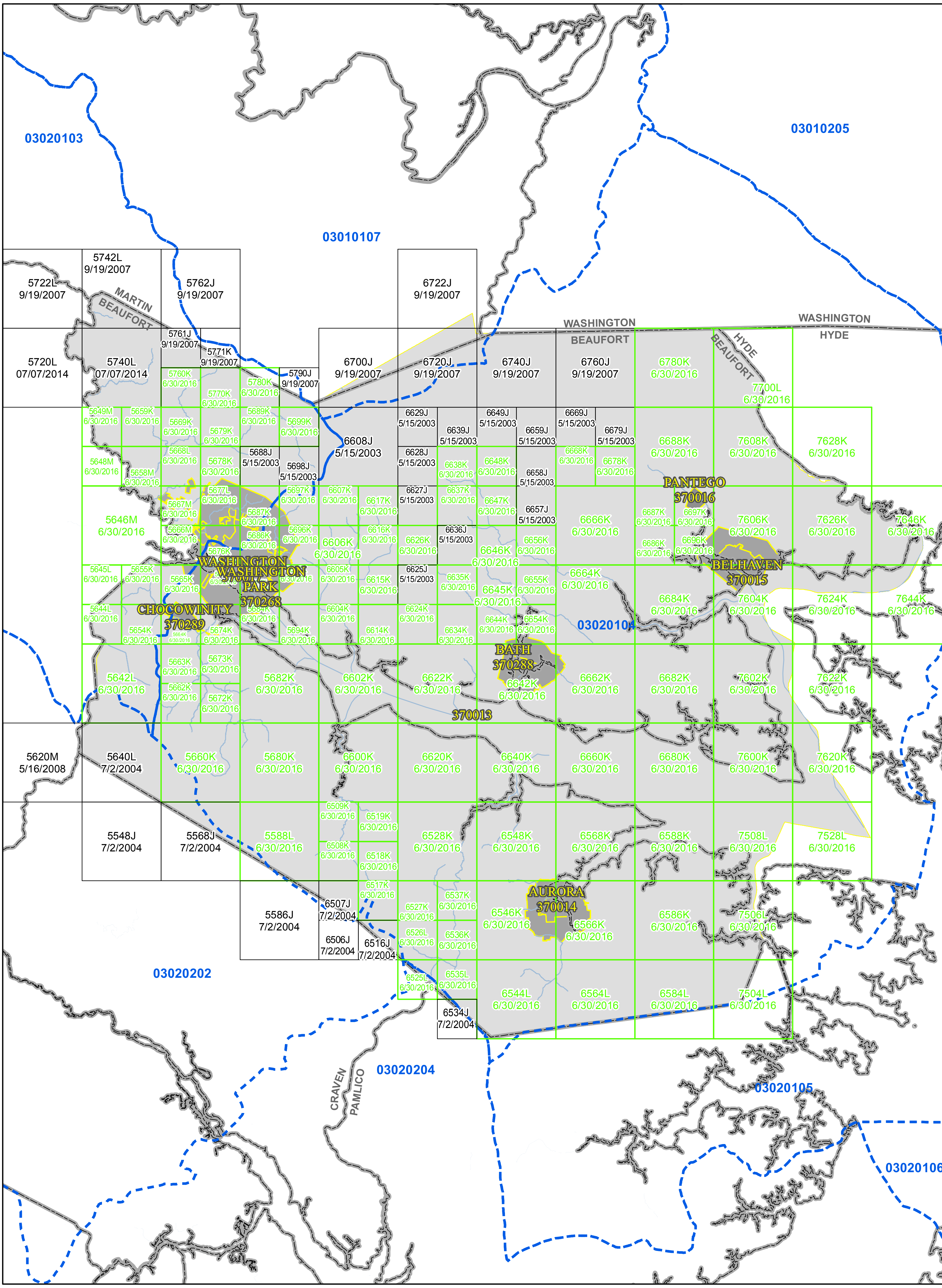


1 in = 5 miles

0 0.75 1.5 3 4.5 Miles

N

Map Projection:
Lambert Conformal Conic
North American Datum 1983

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

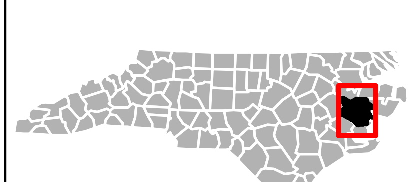
HTTP://FRIS.NC.GOV/FRIS

SEE FLOOD INSURANCE STUDY FOR ADDITIONAL INFORMATION

PRELIMINARY

06/30/2016

COUNTY LOCATOR



NATIONAL FLOOD INSURANCE PROGRAM

FLOOD INSURANCE RATE MAP INDEX

BEAUFORT COUNTY, NORTH CAROLINA And Incorporated Areas

PANELS PRINTED:

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FEMA

MAP NUMBER
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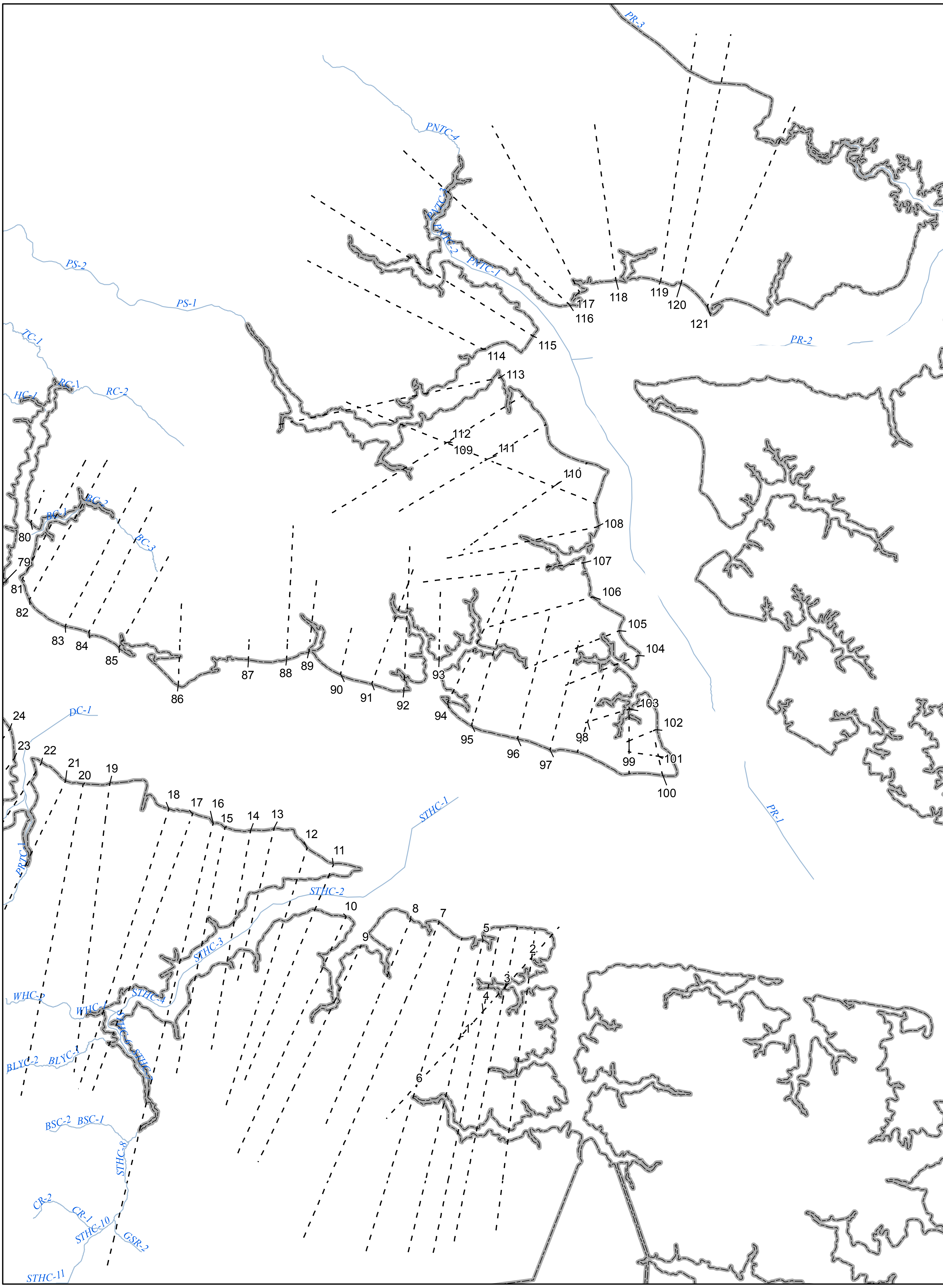

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1 in = 2 miles

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Map Projection:
Lambert Conformal Conic
North American Datum 1983

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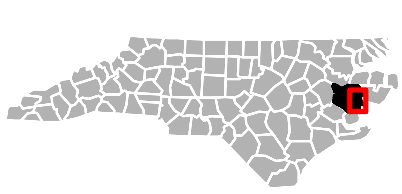
COUNTY LOCATOR



NATIONAL FLOOD INSURANCE PROGRAM

TRANSECT LOCATOR MAP

BEAUFORT COUNTY, NORTH CAROLINA
PANELS WITH TRANSECTS:

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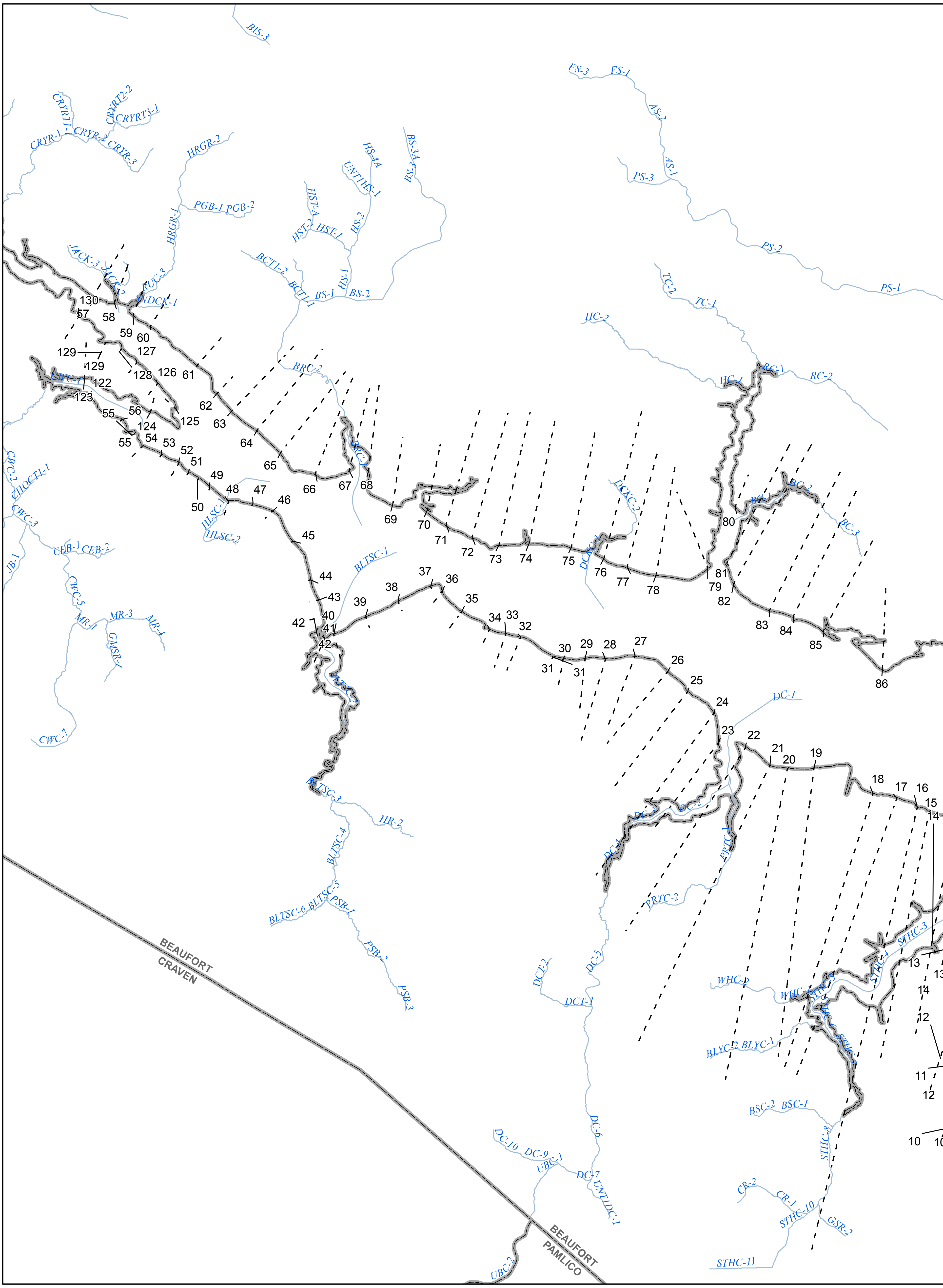
FEMA



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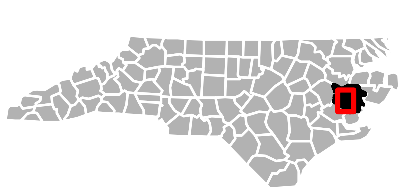

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BEAUFORT COUNTY, NORTH CAROLINA

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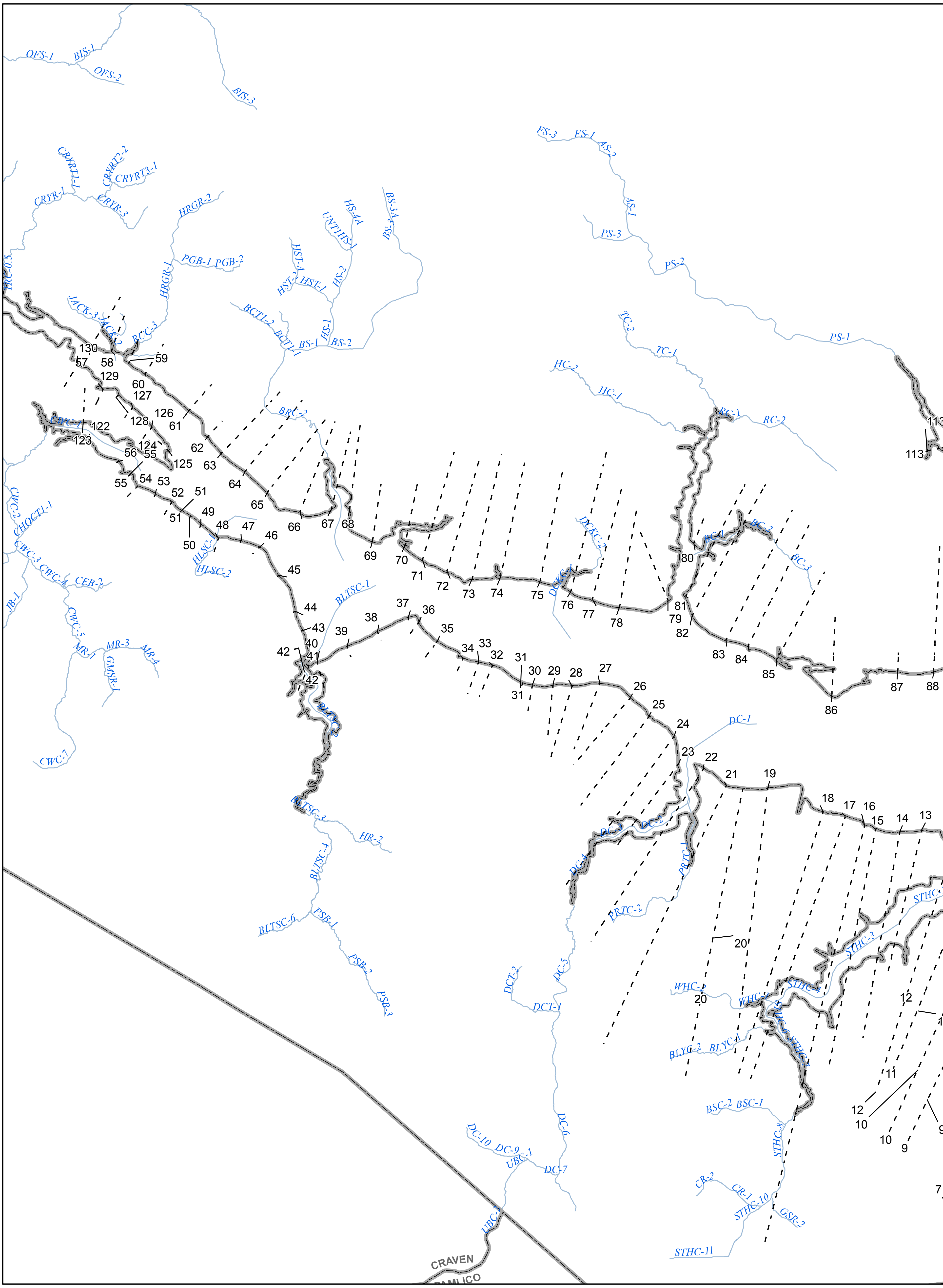
FEMA



1 in = 2 miles

0 0.425 0.85 1.7 2.55 Miles

Map Projection:
Lambert Conformal Conic
North American Datum 1983

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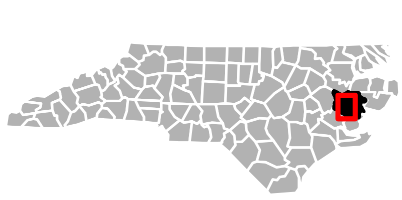
COUNTY LOCATOR



NATIONAL FLOOD INSURANCE PROGRAM

TRANSECT LOCATOR MAP

BEAUFORT COUNTY, NORTH CAROLINA

PANELS WITH TRANSECTS:

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FEMA

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 Beaufort County and the jurisdictions therein (hereinafter referred to collectively as Beaufort 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 Beaufort County, North Carolina, including the jurisdictions listed in Table 1.

Table 1 - Jurisdictions in Beaufort County

Community	Included in this FIS	If Not Included, Location of Flood Hazard/Flood Insurance Rate Data
BEAUFORT COUNTY	Yes	*
CITY OF WASHINGTON	Yes	*
TOWN OF AURORA	Yes	*
TOWN OF BATH	Yes	*
TOWN OF BELHAVEN	Yes	*
TOWN OF CHOCOWINITY	Yes	*
TOWN OF PANTEGO	Yes	*
TOWN OF WASHINGTON PARK	Yes	*

1.3 FIS Components

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

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

1.4 Considerations for Using this Flood Insurance Study Report

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

It is, therefore, the responsibility of the user to consult with community officials by contacting the community repository to obtain the most current FIS Report components. Communities participating in the NFIP have established repositories of flood hazard data for floodplain management and flood insurance purposes. Community map repository addresses are provided in Table 27, “Map Repositories,” within this FIS Report.

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

The Initial Countywide FIS Report for Beaufort became Effective on 5/15/2003. Refer to Table XX for information about subsequent revisions to FIRMs.

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

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

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

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

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

“Mapping of Areas Protected by Levee Systems.

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

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

2.0 Floodplain Management Applications

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

2.1 Floodplains

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

2.2 Floodways

Encroachment on floodplains such as that caused by placement of structures and fill reduces flood-carrying capacity, increases flood heights and velocities, and increases flood hazards in areas beyond the encroachment itself. One aspect of floodplain management involves balancing the economic gain from floodplain development against the resulting increase in flood hazard. For purposes of the NFIP, floodways are provided as a tool to assist local communities in this aspect of floodplain management. Under this concept, the 1% annual chance riverine floodplain is divided into a floodway and a floodway fringe. The floodway is the channel of a stream, plus any adjacent floodplain areas, that must be kept free of encroachment so that the 1% annual chance flood can be carried without substantial increases in flood heights. Figure 1, “Floodway Schematic,” illustrates this principle. Minimum Federal standards limit such increases to 1.0 foot, provided that hazardous velocities are not produced. The floodways in this FIS are presented to local agencies as a minimum standard that can be adopted directly or that can be used as a basis for additional encroachment studies.

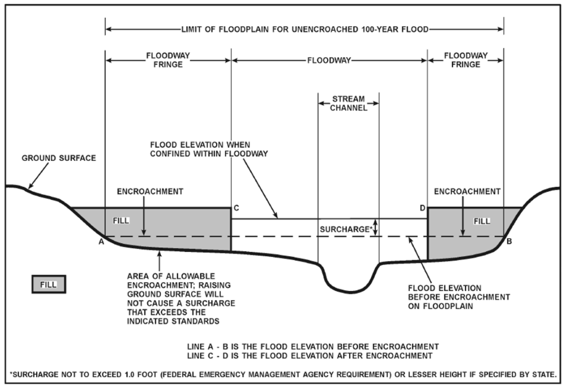

Figure 1- Floodway Schematic

2.3 Base Flood Elevations

The hydraulic characteristics of flooding sources were analyzed to provide estimates of the elevations of floods of the selected recurrence intervals. The Base Flood Elevation (BFE) is the elevation of the 1% annual chance flood. These BFEs are most commonly rounded to the whole foot, as shown on the FIRM, but in certain circumstances or locations they may be rounded to 0.1 foot. Cross section lines shown on the FIRM may also be labeled with the BFE rounded to 0.1 foot. Whole-foot BFEs derived from engineering analyses that apply to coastal areas, areas of ponding, or other static areas with little elevation change may also be shown at selected intervals on the FIRM. Cross sections with BFEs shown on the FIRM correspond to the cross sections shown in the Floodway Data table and Flood Profiles in this FIS Report. BFEs are primarily intended for flood insurance rating purposes. For construction and/or floodplain management purposes, users are cautioned to use the flood elevation data presented in this FIS Report in conjunction with the data shown on the FIRM.

Coastal flood elevations are provided in the Summary of Coastal Stillwater Elevations table in this report. If the elevation on the FIRM is higher than the elevation shown in this table, a wave height, wave runup and/or wave setup component likely exists, in which case, the higher elevation should be used for construction and/or floodplain management purposes.

2.4 Watershed Characteristics

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

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

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

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

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

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

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

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

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

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

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

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

Meandering and Lateral Migration

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

2.5 Coastal Flood Hazard Areas

For most areas along rivers, streams, and small lakes, BFEs and floodplain boundaries are based on the amount of water expected to enter the area during a 1% annual chance flood and the geometry of the floodplain. Floods in these areas are typically caused by storm events. However, for areas on or near ocean coasts, large rivers, or large bodies of water, BFE and floodplain boundaries may need to be based on additional components, including storm surges and waves. Communities on or near ocean coasts face flood hazards caused by offshore seismic events as well as storm events.

Coastal flooding sources that are included in this Flood Risk Project are shown in Table XX.

2.5.1 Water Elevations and the Effects of Waves

Specific terminology is used in coastal analyses to indicate which components have been included in evaluating flood hazards.

The stillwater elevation (SWEL or still water level) is the surface of the water resulting from astronomical tides, storm surge, and freshwater inputs, but excluding wave setup contribution or the effects of waves.

- *Astronomical tides* are periodic rises and falls in large bodies of water caused by the rotation of the earth and by the gravitational forces exerted by the earth, moon and sun.
- *Storm surge* is the additional water depth that occurs during large storm events. These events can bring air pressure changes and strong winds that force water up against the shore.
- *Freshwater inputs* include rainfall that falls directly on the body of water, runoff from surfaces and overland flow, and inputs from rivers.

The 1% annual chance stillwater elevation is the stillwater elevation that has been calculated for a storm surge from a 1% annual chance storm. The 1% annual chance storm surge can be determined from analyses of tidal gage records, statistical study of regional historical storms, or other modeling approaches. Stillwater elevations for storms of other frequencies can be developed using similar approaches.

The total stillwater elevation (also referred to as the mean water level) is the stillwater elevation plus wave setup contribution but excluding the effects of waves.

- *Wave setup* is the increase in stillwater elevation at the shoreline caused by the reduction of waves in shallow water. It occurs as breaking wave momentum is transferred to the water column.

Like the stillwater elevation, the total stillwater elevation is based on a storm of a particular frequency, such as the 1% annual chance storm. Wave setup is typically estimated using standard engineering practices or calculated using models, since tidal gages are often sited in areas sheltered from wave action and do not capture this information.

Coastal analyses may examine the effects of overland waves by analyzing storm-induced erosion, overland wave propagation, wave runup, and/or wave overtopping.

- *Storm-induced erosion* is the modification of existing topography by erosion caused by a specific storm event, as opposed to general erosion that occurs at a more constant rate.
- *Overland wave propagation* describes the combined effects of variation in ground elevation, vegetation, and physical features on wave characteristics as waves move onshore.

- *Wave runup* is the uprush of water from wave action on a shore barrier. It is a function of the roughness and geometry of the shoreline at the point where the stillwater elevation intersects the land.
- *Wave overtopping* refers to wave runup that occurs when waves pass over the crest of a barrier.

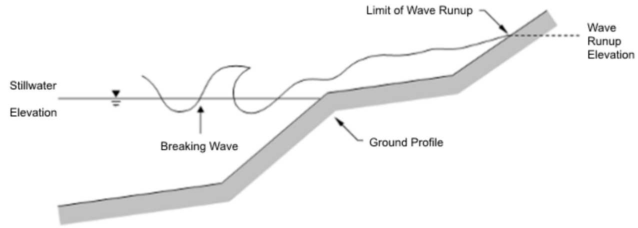

Figure 5: Wave Runup Transect Schematic

2.5.2 Floodplain Boundaries and BFEs for Coastal Areas

For coastal communities along the Atlantic and Pacific Oceans, the Gulf of Mexico, the Great Lakes, and the Caribbean Sea, flood hazards must take into account how storm surges, waves, and extreme tides interact with factors such as topography and vegetation. Storm surge and waves must also be considered in assessing flood risk for certain communities on rivers or large inland bodies of water.

Beyond areas that are affected by waves and tides, coastal communities can also have riverine floodplains with designated floodways, as described in previous sections.

Floodplain Boundaries

In many coastal areas, storm surge is the principle component of flooding. The extent of the 1% annual chance floodplain in these areas is derived from the total stillwater elevation (stillwater elevation including storm surge plus wave setup) for the 1% annual chance storm. The methods that were used for calculation of total stillwater elevations for coastal areas are described in Section 5.3 of this FIS Report. Location of total stillwater elevations for coastal areas are shown in Figure 8, “1% Annual Chance Total Stillwater Levels for Coastal Areas.

In some areas, the 1% annual chance floodplain is determined based on the limit of wave runup or wave overtopping for the 1% annual chance storm surge. The methods that were used for calculation of wave hazards are described in Section 5.3 of this FIS Report.

Table 18 and 18P presents the types of coastal analyses that were used in mapping the 1% annual chance floodplain in coastal areas.

Coastal BFEs

CWhere they apply, coastal BFEs are calculated along transects extending from offshore to the limit of coastal flooding onshore. Results of these analyses are accurate until local topography, vegetation, or development type and density within the community undergoes major changes.

Parameters that were included in calculating coastal BFEs for each transect included in this FIS Report are presented in Table 20, “Coastal Transect Parameters.” The locations of transects are shown in Figure 9, “Transect Location Map.” More detailed information about the methods used in coastal analyses and the results of intermediate steps in the coastal analyses are presented in Section 5.3 of this FIS Report. Additional information on specific mapping methods is provided in Section 6.4 of this FIS Report.

2.5.3 Coastal High Hazard Areas

Certain areas along the open coast and other areas may have higher risk of experiencing structural damage caused by wave action and/or high-velocity water during the 1% annual chance flood. These areas will be identified on the FIRM as Coastal High Hazard Areas.

- *Coastal High Hazard Area (CHHA)* is a SFHA extending from offshore to the inland limit of the primary frontal dune (PFD) or any other area subject to damages caused by wave action and/or high-velocity water during the 1% annual chance flood.
- *Primary Frontal Dune (PFD)* is a continuous or nearly continuous mound or ridge of sand with relatively steep slopes

immediately landward and adjacent to the beach. The PFD is subject to erosion and overtopping from high tides and waves during major coastal storms.

CHHAs are designated as “V” zones (for “velocity wave zones”) and are subject to more stringent regulatory requirements and a different flood insurance rate structure. The areas of greatest risk are shown as VE on the FIRM. Zone VE is further subdivided into elevation zones and shown with BFEs on the FIRM.

The landward limit of the PFD occurs at a point where there is a distinct change from a relatively steep slope to a relatively mild slope; this point represents the landward extension of Zone VE. Areas of lower risk in the CHHA are designated with Zone V on the FIRM. More detailed information about the identification and designation of Zone VE is presented in Section 6.4 of this FIS Report.

Areas that are not within the CHHA but are SFHAs may still be impacted by coastal flooding and damaging waves; these areas are shown as “A” zones on the FIRM.

Figure 6, “Coastal Transect Schematic,” illustrates the relationship between the base flood elevation, the 1% annual chance stillwater elevation, and the ground profile as well as the location of the Zone VE and Zone AE areas in an area without a PFD subject to overland wave propagation. This figure also illustrates energy dissipation and regeneration of a wave as it moves inland.

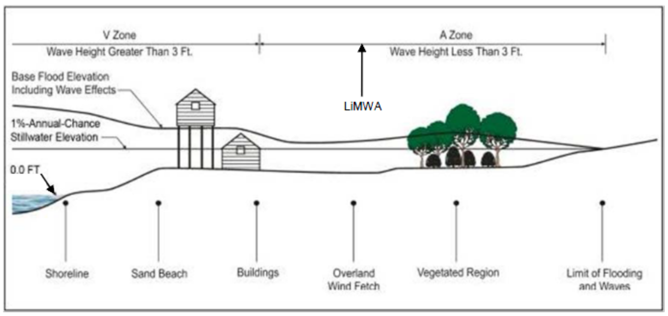

Figure 6: Coastal Transect Schematic

Methods used in coastal analyses in this Flood Risk Project are presented in Section 5.3 and mapping methods are provided in Section 6.4 of this FIS Report.

Coastal floodplains are shown on the FIRM using the symbology described in Figure 3, “Map Legend for FIRM.” In many cases, the BFE on the FIRM is higher than the stillwater elevations shown in Table 17 due to the presence of wave effects. The higher elevation should be used for construction and/or floodplain management purposes.

2.5.4 Limit of Moderate Wave Action

Laboratory tests and field investigations have shown that wave heights as little as 1.5 feet can cause damage to and failure of typical Zone AE building construction. Wood-frame, light gage steel, or masonry walls on shallow footings or slabs are subject to damage when exposed to waves less than 3 feet in height. Other flood hazards associated with coastal waves (floating debris, high velocity flow, erosion, and scour) can also damage Zone AE construction.

Therefore, a LiMWA boundary may be shown on the FIRM as an informational layer to assist coastal communities in safe rebuilding practices. The LiMWA represents the approximate landward limit of the 1.5-foot breaking wave. The location of the LiMWA relative to Zone VE and Zone AE is shown in Figure 6.

The effects of wave hazards in Zone AE between Zone VE (or the shoreline where Zone VE is not identified) and the limit of the LiMWA boundary are similar to, but less severe than, those in Zone VE where 3-foot or greater breaking waves are projected to occur during the 1% annual chance flooding event. Communities are therefore encouraged to adopt and enforce more stringent floodplain management requirements than the minimum NFIP requirements in the LiMWA. The NFIP Community Rating System provides credits for these actions.

Where wave runup elevations dominate over wave heights, there is no evidence to date of significant damage to residential structures by runup depths less than 3 feet. Examples of these areas include areas with steeply sloped beaches, bluffs, or flood protection structures that lie parallel to the shore. In these areas, the FIRM shows the LiMWA immediately landward of the VE/AE boundary. Similarly, in areas where the zone VE designation is based on the presence of a primary frontal dune or wave overtopping, the LiMWA is delineated immediately landward of the Zone VE/AE boundary.

3.0 Insurance Applications

3.1 National Flood Insurance Program Insurance Zones

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

Table 2 - Flood Designations

Zone	Description
A	Zone A is the flood insurance rate zone that corresponds to the 1% annual chance floodplains that are determined in the FIS Report by approximate methods. Because detailed hydraulic analyses are not performed for such areas, no Base Flood Elevations or depths are shown within this zone.
AE	Zone AE is the flood insurance rate zone that corresponds to the 1% annual chance floodplains that are determined in the FIS Report by detailed methods. In most instances, whole-foot Base Flood Elevations derived from the detailed hydraulic analyses are shown at selected intervals within this zone.
AH	Zone AH is the flood insurance rate zone that corresponds to the areas of 1% annual chance shallow flooding (usually areas of ponding) where average depths are between 1 and 3 feet. Whole-foot Base Flood Elevations derived from the detailed hydraulic analyses are shown at selected intervals within this zone.
AO	Zone AO is the flood insurance rate zone that corresponds to the areas of 1% annual chance shallow flooding (usually sheet flow on sloping terrain) where average depths are between 1 and 3 feet. Average whole-foot depths derived from the detailed hydraulic analyses are shown within this zone.
AR	Zone AR is the flood insurance rate zone that corresponds to areas that were formerly protected from the 1% annual chance flood by a flood control system that was subsequently decertified. Zone AR indicates that the former flood control system is being restored to provide protection from the 1% annual chance or greater flood.
A99	Zone A99 is the flood insurance rate zone that corresponds to areas of the 1% annual chance floodplain that will be protected by a Federal flood protection system where construction has reached specified statutory milestones. No Base Flood Elevations or depths are shown within this zone.
V	Zone V is the flood insurance rate zone that corresponds to the 1% annual chance coastal floodplains that have additional hazards associated with storm waves. Because approximate hydraulic analyses are performed for such areas, no Base Flood Elevations are shown within this zone.
VE	Zone VE is the flood insurance rate zone that corresponds to the 1% annual chance coastal floodplains that have additional hazards associated with storm waves. Whole-foot Base Flood Elevations derived from the detailed hydraulic analyses are shown at selected intervals within this zone.
X	Zone X is the flood insurance rate zone that corresponds to areas outside the 0.2% annual chance floodplain, areas within the 0.2% annual chance floodplain, and to areas of 1% annual chance flooding where average depths are less than 1 foot, areas of 1% annual chance flooding where the contributing drainage area is less than 1 square mile, and areas protected from the 1% annual chance flood by levees. No Base Flood Elevations or depths are shown within this zone.
X (Future)	Zone X (Future Base Flood) is the flood insurance risk zone that corresponds to the 1-percent-annual-chance floodplains that are determined based on future-conditions hydrology. No BFEs or base flood depths are shown within this zone.
D	Zone D is the flood insurance rate zone that corresponds to unstudied areas where flood hazards are undetermined, but possible.

3.2 Coastal Barrier Resources System

3.2 Coastal Barrier Resources System

The Coastal Barrier Resources Act (CBRA) of 1982 was established by Congress to create areas along the Atlantic and Gulf coasts and the Great Lakes, where restrictions for Federal financial assistance including flood insurance are prohibited. In 1990, Congress passed the Coastal Barrier Improvement Act (CBIA), which increased the extent of areas established by the CBRA and added “Otherwise Protected Areas” (OPA) to the system. These areas are collectively referred to as the John. H Chafee Coastal Barrier Resources System (CBRS). The CBRS boundaries that have been identified in the project area are in Table 4: Coastal Barrier Resource System Information.

Table 4: “Coastal Barrier Resources System Information” is not applicable in Beaufort County.

4.0 Area Studied

Beaufort County is found in the Coastal Plain region of North Carolina. It is surrounded by Martin and Washington Counties to the north, Hyde County to the east, Pamlico and Craven Counties to the south, and Pitt 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)
Lower Neuse	03020204	Neuse River	The Lower Neuse River Basin reaches up into Lenoir County, North Carolina and then drains east into the Pamlico Sound. The basin drains significant portions of Cartaret, Craven, Jones, and Pamlico Counties.	1,583
Lower Roanoke	03010107	Roanoke River	The Lower Roanoke River Basin begins in Ronoake Rapids, North Carolina and drains significant portions of Bertie, Halifax, Martin, and Northampton Counties. This basin ends where Roanoke River empties into the Albemarle Sound.	1,310
Lower Tar	03020103	Tar River	The Lower Tar River Basin begins in Edgecombe County near Tarboro, North Carolina. The basin drains significant portions of Martin, Pitt, and Wilson Counties before emptying into the Pamlico River in Beaufort County.	960
Middle Neuse	03020202	Neuse River	The Middle Neuse River Basin headwaters are in Wayne and Pitt Counties. The basin also drains significant portions of Beaufort, Greene, Jones, and Lenoir Counties and ends near New Bern, North Carolina in Craven County.	1,065
Pamlico	03020104	Pamlico River	The Pamlico River Basin covers the reach of Pamlico River in Beaufort County between Tar River and the Pamlico Sound. The basin also drains significant portions of Hyde, Pamlico, Tyrell, and Washington Counties.	1,306

4.2 Principal Flood Problems

Table 4, “Principal Flood Problems” contains a list of principal flooding problems in Beaufort County.

Table 4 - Principal Flood Problems

Flooding Source	Problem
All Sources	The dominant sources of flooding in Beaufort County are storm surge generated in the Atlantic Ocean by tropical storms and hurricanes and riverine flooding (FEMA, 1987). This storm surge propagates into Pamlico Sound and propagates further into Back Creek, Bailey Creek, Bath Creek, Jacks Creek and its tributaries, Pamlico River, Pantego Creek, Pungo River, Rowland Creek, Snode Creek and South Creek. In addition, riverine flooding from heavy rainfall occurs on Acre Swamp, Aggie Run/Old Ford Swamp/Big Swamp, Bailey Creek, Bear Creek, Bounts Creek, Broad Creek/Beaverdam Swamp, Broad Creek Tributaries, Chapel Branch, Cherry Run and Tributaries, Chocowinity Creek and Tributaries, Cindy Edwards Branch, Cypress Run, Durham Creek and Tributary, Fork Swamp, Hall Swamp and its tributaries, Tributary A, Harvey Creek, Herring Run, Horse Branch and Tributary, Joe Branch, Latham Creek/Gum Swamp, Maple Branch and Tributary, Mitchell Branch, Morris Run, Pantego Creek, Pineygrove Branch, Poundpole Swamp Branch, Pungo Swamp, Runyon Creek/Herring Run, Tankard Creek, Tranters Creek, and White Branch. Not all storms which pass close to the study area produce extremely high surge. Similarly, storms which produce flooding conditions in one area may not necessarily produce flooding conditions in other parts of the study area. North Carolina experiences hurricanes, tropical storms, and severe extratropical cyclones usually referred to as northeasters. Unlike a hurricane which may pass over a coastal location in a fraction of a day, a northeaster may blow from the same direction and over a long distance for several days (Baker, 1978). The contribution from the northeasters to the overall storm surge elevation in Beaufort County area was found to be insignificant compared to hurricanes; therefore, only the effects of hurricane and Tropical storm induced surge elevations were considered. In other areas of North Carolina, particularly the Outer Banks area of the northern part of the State, northeasters were found to provide a significant contribution to the overall storm surge. Storms passing North Carolina in the vicinity of Beaufort County have produced severe floods as well as extensive structural damage. Brief descriptions of several significant storms provide historical information to which coastal flood hazard and flood depths can be compared (U.S. Army Corps of Engineers, 1977).

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 Ione 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.

Hurricane Donna
(8/29/1960)

Hurricane Donna crossed the North Carolina coast between Wilmington and Morehead City of September 11, 1960. The center of the storm passed a few miles east of Wrightsville Beach, although Wilmington and Wrightsville Beach were each in the eye for about an hour. The lowest barometric pressure recorded during this storm was 962 mb at Wilmington. High tides, 6 to 8 feet above normal, together with high winds, caused severe damage at many points. Winds of hurricane force, up to 97 mph, were reported from Wilmington. During the night of September 11, the storm center moved northward, parallel, and slightly east of a line drawn between Wilmington and Norfolk. Wind gusts were in excess of 97 mph and tides were 4 to 8 feet above normal. High tides of 10.3 and 8.3 feet

NGVD were reported at Atlantic Beach and Wrightsville Beach, respectively. Coastal communities from Wilmington to Nags Head suffered heavy structural damage and considerable beach erosion. Eight deaths and approximately 100 injuries were attributed to the storm. Damages were estimated at millions of dollars.

Hurricane Helene
(9/21/1958)
Hurricane Helene was one of the most powerful storms of recent history. Fortunately for the people of North Carolina, the storm center was well out at sea as it moved north on September 26 and 27. Nevertheless, high winds were recorded at Wilmington, with the highest winds measured at 85 mph and peak gusts recorded at 135 mph. The lowest reported central pressure of the storm was 932 mb; this measurement was recorded south-southeast of Cape Fear early on the morning of September 27. There was some beach erosion due to seas and tides, but this erosion was minimized by the fact that the storm occurred at the time of low astronomical tides. High tides were estimated at 3 to 5 feet above normal; a high tide of 5.1 feet NGVD was reported at Wrightsville Beach. Tides were higher on the southern edge of Pamlico Sound, when the wind shift as the storm center passed brought the tides 7 to 8 feet above normal.

Hurricane Ione
(9/10/1955)
Hurricane Ione moved up from the south and crossed the North Carolina coast near Salter Path, 10 miles west of Morehead City, at about 5 a.m. on September 19. It then slowly curved to the northeast and went out to sea near the Virginia border early on September 20. When Ione entered North Carolina, winds gusted to over 100 mph. Wind speeds of 75 mph with gusts to 107 mph were recorded at Cherry Point. The minimum barometric pressure recorded over North Carolina during this storm was 960 mb. Heavy rains also accompanied Ione. At the same time, prolonged easterly winds drove tidal water onto beaches and into sounds and estuaries to heights of 3 to 10 feet above normal. The result was the largest inundation of eastern North Carolina ever known to have occurred. At New Bern, the depth of the flood was the greatest ever recorded, about 10.5 feet above mean low water; forty city blocks were flooded, several hundred homes were washed away, and thousands more were flooded with up to 4 feet of water. A high tide of 6.9 feet NGVD was reported at Atlantic Beach, North Carolina, and an estimated 5.3 feet NGVD at Wrightsville Beach.

Hurricane Diane
(8/7/1955)
Five days after Hurricane Connie, and before the damage from that storm could be estimated, Hurricane Diane struck the coast near Carolina Beach about 6 a.m. on August 17. The highest wind speed reported during this storm was 74 mph at Wilmington Airport. Storm tides ranged from 5 to 9 feet above mean low water on the beaches (6.8 feet NGVD at Wrightsville Beach), and in some areas of sounds and rivers emptying into sounds, estimated water levels were 5 to 9 feet above normal. Water was 3 feet above flood level in the business district of Belhaven and "waist deep" in parts of Washington and New Bern. Diane caused severe beach erosion along the North Carolina coast. The total damage caused in North Carolina by both Connie and Diane was estimated to be in excess of $90 million. No deaths or injuries in North Carolina were attributed to either of the storms.

Hurricane Connie
(8/3/1955)
Hurricane Connie entered North Carolina close to Cape Lookout at about 8:30 a.m. on August 12. The prolonged pounding of high waves against the coast caused tremendous beach erosion, probably worse than that caused by Hazel in 1954. Storm tides along the coast from Southport to Nags Head were reported to be about 7 feet NGVD (6.9 feet NGVD at Wrightsville Beach and 7.5 feet NGVD at Kure Beach). Water in sounds and near the mouths of rivers was 5 to 8 feet above normal. At Wilmington, winds were reported at 72 mph, gusting to 83 mph. At Fort Macon, winds of 75 mph, gusts of 100 mph, and barometric pressure of 962 mb were reported. The storm also brought torrential rains with the maximum rainfall, around 12 inches in 48 hours, occurring near Morehead City. Total damage throughout the state was estimated at $50 million.

Hurricane Hazel
(10/5/1954)
Hurricane Hazel was the most destructive storm in the history of North Carolina. The storm crossed the coast just north of Myrtle Beach, South Carolina, as hurricane winds hit the Atlantic coast between Georgetown, South Carolina, and Cape Lookout, North Carolina. Storm tides (i.e., hurricane surge) devastated the immediate ocean front of this stretch of coast. Every fishing pier along 170 miles of coast, from Myrtle Beach to Cedar Island, North Carolina, was destroyed. The waterfront between the South Carolina/North

Carolina state boundary and Cape Fear was destroyed. Beach homes, which had been built in a continuous line five miles long behind and along grass-covered dunes (some of which were 20 feet high), simply disappeared – dunes, houses, and all. From Cape Fear to Cape Lookout, the degree of devastation was not as great, but oceanfront property was damaged an average of 50 percent along this entire stretch. To the north of Cape Lookout, the damage was relatively light. Storm surges of 16.6 feet above NGVD were observed at Holden Beach Bridge and Calabash, North Carolina. The highest tide of record was observed during Hurricane Hazel, when ocean tide levels reached approximately 10 feet NGVD at Wrightsville Beach and 11 feet NGVD at Carolina Beach. The lowest recorded barometric pressure of the storm was 938 millibars (mb), reported at Little River Inlet on the North Carolina/South Carolina border. Maximum wind speeds were 83 miles per hour (mph), with gusts recorded at 98 mph at Wilmington, North Carolina, 106 mph at Myrtle Beach, South Carolina, and an estimated 150 mph at Cape Fear. The storm continued inland through North Carolina, causing widespread damage due to high winds and record rainfalls. Nineteen people were killed and 200 injured during this storm.

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

Table 5 - Historic Flood Elevations

Flooding Source/Tropical Storm	Location Description	Approx. Stream Station	Historic Peak (Feet NAVD 88)	Date	Approximate Recurrence Interval (in years)
Chicod Creek / Unknown storm	Unknown	29910	19.6	9/1/1999	*
Chicod Creek / Unknown storm	Unknown	29827	20.4	9/1/1999	*
Runyon Creek / Unknown storm	Upstream of Hootentown Road	4212	8.0	9/1/1999	*
Tar River / Unknown storm	Upstream face of Enon Road, Oxford	952391	392.2	9/1/1996	100
Tar River / Unknown storm	Upstream face of Goochs Mill Road	960799	402.5	9/1/1996	100
Tar River / Unknown storm	Upstream face of Tar River Dam, 5109 Goochs Mill Road, Oxford	961210	405.3	9/1/1996	100
Tar River / Unknown storm	Upstream face of Moriah Road	980814	427.3	9/1/1996	100
Tar River / Unknown storm	Unknown	31359	15.0	9/1/1999	*
Tar River / Unknown storm	Unknown	66300	20.2	9/1/1999	*

* Data Not Available

4.4 Flood Protection Measures

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

Table 6, “Non-Levee Flood Protection Measures” is not applicable in Beaufort County.

Table 7, “Levees” is not applicable in Beaufort County.

4.5 Scope of Study

For this map maintenance revision, a scoping meeting was held in Beaufort 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 Beaufort 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 Beaufort 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 Communties
	From	To	
Acre Swamp	Approximately 1.5 miles downstream of the confluence of Fork Swamp	The downstream face of NC Highway 32	Beaufort County
Aggie Run	The confluence with Tranters Creek	The confluence of Latham Creek	Beaufort County
Bailey Creek	The confluence with South Creek	Approximately 570 feet upstream of Railroad	Beaufort County Town Of Aurora
Bear Creek	Approximately 0.7 mile downstream of the confluence of Chapel Branch	Approximately 450 feet upstream of NC Highway 33	Beaufort County
Beaverdam Swamp	The confluence with Broad Creek	Approximately 520 feet upstream of Slatestone Road	Beaufort County
Big Swamp	The confluence with Old Ford Swamp	Approximately 460 feet upstream of Market Street Extension	Beaufort County
Blounts Creek	The confluence with Pamlico River	Approximately 410 feet upstream of Railroad	Beaufort County
Broad Creek	The confluence with Pamlico River	Approximately 70 feet upstream of U.S. Highway 264	Beaufort County
Broad Creek Tributary 1[1]	The confluence with Broad Creek	Approximately 955 feet upstream of confluence with Broad Creek	Beaufort County
Broad Creek Tributary 2	The confluence with Broad Creek Tributary 1	Approximately 1,630 feet upstream of Cherry Road	Beaufort County
Broomfield Swamp Creek	The confluence with South Creek	The downstream face of Broome Road	Beaufort County Town Of Aurora
Chapel Branch	The confluence with Bear Creek	Approximately 220 feet upstream of Taylor Road	Beaufort County Town Of Chocowinity
Cherry Run	The confluence with Tranters Creek	Approximately 0.7 mile upstream of Market Street	City Of Washington
Cherry Run Tributary 1	The confluence with Cherry Run	Approximately 1.2 miles upstream of the confluence with Cherry Run	City Of Washington
Cherry Run Tributary 2	The confluence with Cherry Run	Approximately 170 feet upstream of Wares Chapel Road	City Of Washington
Cherry Run Tributary 3	The confluence with Cherry Run Tributary 2	Approximately 80 feet upstream of Market Street Extension	City Of Washington
Chocowinity Creek	Approximately 1,890 feet downstream of Railroad	Approximately 0.5 mile upstream of Possum Track Road	Beaufort County Town Of Chocowinity
Chocowinity Creek Tributary 1	The confluence with Chocowinity Creek	Approximately 340 feet upstream of NC Highway 33	Beaufort County
Chocowinity Creek Tributary 2	The confluence with Chocowinity Creek	Approximately 460 feet upstream of NC Highway 33	Beaufort County
Cindy Edwards Branch	The confluence with Chocowinity Creek	Approximately 1.2 miles upstream of NC Highway 33	Beaufort County
Cypress Run	The confluence with South Creek	Approximately 0.7 mile upstream of Sparrow Road	Beaufort County
Duck Creek	The confluence with Pamlico River	Approximately 0.5 mile upstream of Hawkins Beach Road	Beaufort County
Durham Creek	Approximately 600 feet upstream of the confluence of Durham Creek Tributary 2	Approximately 360 feet upstream of Walker Road	Beaufort County
Durham Creek	The confluence with Pamlico River	Approximately 1.4 miles upstream of Minor Run Road	Beaufort County
Durham Creek Tributary	The confluence with Durham Creek	Approximately 440 feet upstream of NC Highway 33	Beaufort County
Fork Swamp	The confluence with Acre Swamp	Approximately 410 feet upstream of Railroad	Beaufort County
Gum Swamp	The confluence with Latham Creek	Approximately 30 feet upstream of U.S. Highway 17	Beaufort County
Hall Swamp	The confluence with Beaverdam Swamp	Approximately 380 feet upstream of Slatestone Road	Beaufort County
Hall Swamp Tributary 1	The confluence with Hall Swamp	Approximately 1,290 feet upstream of the confluence of Hall Swamp Tributary A	Beaufort County
Hall Swamp Tributary 2	The confluence with Hall Swamp	Approximately 330 feet upstream of Slatestone Road	Beaufort County
Hall Swamp Tributary A	The confluence with Hall Swamp Tributary 1	Approximately 330 feet upstream of Slatestone Road	Beaufort County
Harvey Creek	The confluence with Bath Creek	Approximately 0.6 mile upstream of Boyd Swamp Hunting Club Road	Beaufort County
Herring Run	The confluence with Runyon Creek	Approximately 0.5 mile upstream of Cherry Road	Beaufort County City Of Washington

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

Source	Riverine Sources		Affected Communties
	From	To	
Horse Branch	The confluence with White Branch	Approximately 350 feet upstream of U.S. Highway 17	Beaufort County
Horse Branch Tributary	The confluence with Horse Branch	Approximately 0.7 mile upstream of the confluence with Horse Branch	Beaufort County
Jacks Creek	The confluence with Pamlico River	Approximately 300 feet upstream of Boston Avenue	City Of Washington
Jacks Creek Tributary 1	The confluence with Jacks Creek	Approximately 480 feet upstream of John Small Avenue	City Of Washington
Jacks Creek Tributary 2	The confluence with Jacks Creek	Approximately 380 feet upstream of 8th Street	City Of Washington
Joe Branch	The confluence with Chocowinity Creek	Approximately 0.9 mile upstream of Possum Track Road	Beaufort County
Latham Creek	The confluence with Old Ford Swamp	The confluence of Gum Swamp	Beaufort County
Maple Branch[1]	The confluence with Tranters Creek	Just downstream of U.S. Highway 264 (Pactolus Highway)	Beaufort County City Of Washington
Maple Branch (Near Chocowinity)	The confluence with Chocowinity Creek	Approximately 710 feet upstream of Williamson Lane	Beaufort County Town Of Chocowinity
Maple Branch Tributary (Near Chocowinity)	The confluence with Maple Branch (near Chocowinity)	Approximately 380 feet upstream of U.S. Highway 17	Beaufort County
Mitchell Branch[1]	The confluence with Tranters Creek	Approximately 1,790 feet upstream of Railroad	Beaufort County City Of Washington
Morris Run	The confluence with Chocowinity Creek	Approximately 450 upstream of NC Highway 33	Beaufort County
Old Ford Swamp	The confluence with Aggie Run	Approximately 0.4 mile upstream of U.S. Highway 17	Beaufort County
Pineygrove Branch	The confluence with Herring Run	Approximately 410 feet upstream of Corsica Road	Beaufort County City Of Washington
Porter Creek	The confluence with Durham Creek	Approximately 1.7 miles upstream of the confluence with Durham Creek	Beaufort County
Poundpole Swamp Branch	The confluence with Blounts Creek	Approximately 0.6 mile upstream of Little Egypt Road	Beaufort County
Pungo River Canal	Approximately 5.1 miles upstream of US Highway 264	Approximately 1.4 miles upstream of Oregon Canal	Beaufort County
Pungo Swamp	The confluence with Pungo River	Approximately 0.5 mile upstream of Jones Bridge Road	Beaufort County
Rowland Creek	The confluence with Bath Creek	Approximately 0.8 mile upstream of Jackson Swamp Road	Beaufort County
Runyon Creek	The confluence with Herring Run	Approximately 0.6 mile upstream of Old Bath Highway	City Of Washington
Snode Creek	The confluence with Runyon Creek	Approximately 350 feet upstream of Brick Kiln Road	City Of Washington Town Of Washington Park
South Creek	Approximately 600 feet upstream of the confluence of Broomfield Swamp Creek	Approximately 1,660 feet upstream of the confluence of Cypress Run	Beaufort County
Tankard Creek	The confluence of Bath Creek	Approximately 710 feet upstream of Boyd Loop Road	Beaufort County
Tranters Creek[1]	The confluence with the Tar River	Approximately 2.6 miles upstream of U.S. Highway 264	Beaufort County
White Branch	The confluence of Chocowinity Creek	Approximately 0.8 mile upstream of Langley Road	Beaufort County
Whitehurst Creek	The confluence with South Creek	Approximately 1.0 mile upstream of NC Highway 306	Beaufort County Town Of Aurora

[1]**Revised to reflect backwater effects from new detailed study**

Table 9P, “Scope of Revisions: Redelineated - Preliminary”, contains a list of flooding sources that were studied by detailed methods for previous FISs, but were only partially revised in the current study. There effective analyses remain valid; however, their floodplain delineations have been revised on the current FIRM.

Table 9P - Scope of Revisions: Redelineated - Preliminary

Source	Riverine Sources		Affected Communties
	From	To	
Pantego Creek[1]	Approximately 0.90 mile upstream of the confluence with Cuckolds Creek	Approximately 4,750 feet downstream of Railroad	Beaufort County Town Of Pantego

[1]**Revised to reflect backwater effects from new detailed study**

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 Communties
	From	To	
Acre Swamp	The confluence with Pungo Swamp	Approximately 1.5 miles downstream of the confluence of Fork Swamp	Beaufort County
Back Creek	Approximately 100 feet downstream of Possum Hill Road	Approximately 1.2 miles upstream of Possum Hill Road	Beaufort County
Duck Creek	Approximately 0.5 mile upstream of Hawkins Beach Road	Approximately 200 feet upstream of Hawkins Beach Road	Beaufort County
Durham Creek	Approximately 1.4 miles upstream of Minor Run Road	Approximately 2,400 feet downstream of Main Street	Beaufort County
Gum Swamp Run East	Approximately 0.42 mile upstream of the confluence with South Creek	Approximately 0.98 mile upstream of the confluence with South Creek	Beaufort County
Gum Swamp Run West[1]	The confluence with Morris Run	Approximately 400 feet upstream of confluence with Morris Run	Beaufort County
Herring Run[1]	Approximately 100 feet downstream of Herring Run Road	Approximately 3,050 feet upstream of confluence with Blounts Creek	Beaufort County
Hills Creek[1]	Approximately 0.83 mile upstream of Gilead Shores Road	Approximately 2,550 feet upstream of Gilead Shores Road	Beaufort County
Old Ford Swamp[1]	The confluence with Aggie Run	Approximately 570 feet upstream of confluence with Aggie Run	Beaufort County
Porter Creek[1]	Approximately 50 feet downstream of Bonnerton Road	Approximately 0.66 mile upstream of most upstream Louden Road	Beaufort County
Pungo Swamp	Approximately 0.5 mile upstream of Jones Bridge Road	Approximately 275 feet downstream of the confluence with Acre Swamp	Beaufort County
Pungo Swamp[1]	Approximately 275 feet downstream of the confluence with Acre Swamp	Approximately 1,300 feet upstream of confluence with Pungo Swamp	Beaufort County
South Creek	Approximately 1,660 feet upstream of the confluence of Cypress Run	Approximately 1.25 miles upstream of the confluence of Cypress Run	Beaufort County
Tar River	Approximately 0.6 mile upstream of the confluence of Tranters Creek	Approximately 0.4 mile downstream of Grimesland Bridge	Beaufort County
Upper Broad Creek	The confluence with Durham Creek	Approximately 3.3 miles upstream of the confluence with Durham Creek	Beaufort County
Whitehurst Creek[1]	Approximately 1.8 miles upstream of the confluence with South Creek	Approximately 0.46 mile upstream of Mining Road	Beaufort County

[1]Revised 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 Communties
	From	To	
Acre Swamp	Approximately 1.5 miles downstream of the confluence of Fork Swamp	The downstream face of NC Highway 32	Beaufort County
Aggie Run	The confluence with Tranters Creek	The confluence of Latham Creek	Beaufort County
Bailey Creek	The confluence with South Creek	Approximately 570 feet upstream of Railroad	Beaufort County Town Of Aurora
Bear Creek	Approximately 0.7 mile downstream of the confluence of Chapel Branch	Approximately 450 feet upstream of NC Highway 33	Beaufort County
Beaverdam Swamp	The confluence with Broad Creek	Approximately 520 feet upstream of Slatestone Road	Beaufort County
Big Swamp	The confluence with Old Ford Swamp	Approximately 460 feet upstream of Market Street Extension	Beaufort County
Blounts Creek	The confluence with Pamlico River	Approximately 410 feet upstream of Railroad	Beaufort County
Broad Creek	The confluence with Pamlico River	Approximately 70 feet upstream of U.S. Highway 264	Beaufort County
Broad Creek Tributary 1	The confluence with Broad Creek	Approximately 1.6 miles upstream of the confluence with Broad Creek	Beaufort County
Broad Creek Tributary 2	The confluence with Broad Creek Tributary 1	Approximately 1,630 feet upstream of Cherry Road	Beaufort County
Broomfield Swamp Creek	The confluence with South Creek	The downstream face of Broome Road	Beaufort County Town Of Aurora

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

Source	Riverine Sources		Affected Communties
	From	To	
Chapel Branch	The confluence with Bear Creek	Approximately 220 feet upstream of Taylor Road	Beaufort County Town Of Chocowinity
Cherry Run	The confluence with Tranters Creek	Approximately 0.7 mile upstream of Market Street	City Of Washington
Cherry Run Tributary 1	The confluence with Cherry Run	Approximately 1.2 miles upstream of the confluence with Cherry Run	City Of Washington
Cherry Run Tributary 2	The confluence with Cherry Run	Approximately 170 feet upstream of Wares Chapel Road	City Of Washington
Cherry Run Tributary 3	The confluence with Cherry Run Tributary 2	Approximately 80 feet upstream of Market Street Extension	City Of Washington
Chocowinity Creek	Approximately 1,890 feet downstream of Railroad	Approximately 0.5 mile upstream of Possum Track Road	Beaufort County Town Of Chocowinity
Chocowinity Creek Tributary 1	The confluence with Chocowinity Creek	Approximately 340 feet upstream of NC Highway 33	Beaufort County
Chocowinity Creek Tributary 2	The confluence with Chocowinity Creek	Approximately 460 feet upstream of NC Highway 33	Beaufort County
Cindy Edwards Branch	The confluence with Chocowinity Creek	Approximately 1.2 miles upstream of NC Highway 33	Beaufort County
Cypress Run	The confluence with South Creek	Approximately 0.7 mile upstream of Sparrow Road	Beaufort County
Duck Creek	The confluence with Pamlico River	Approximately 0.5 mile upstream of Hawkins Beach Road	Beaufort County
Durham Creek	Approximately 600 feet upstream of the confluence of Durham Creek Tributary 2	Approximately 360 feet upstream of Walker Road	Beaufort County
Durham Creek	The confluence with Pamlico River	Approximately 1.4 miles upstream of Minor Run Road	Beaufort County
Durham Creek Tributary	The confluence with Durham Creek	Approximately 440 feet upstream of NC Highway 33	Beaufort County
Fork Swamp	The confluence with Acre Swamp	Approximately 410 feet upstream of Railroad	Beaufort County
Gum Swamp	The confluence with Latham Creek	Approximately 30 feet upstream of U.S. Highway 17	Beaufort County
Hall Swamp	The confluence with Beaverdam Swamp	Approximately 380 feet upstream of Slatestone Road	Beaufort County
Hall Swamp Tributary 1	The confluence with Hall Swamp	Approximately 1,290 feet upstream of the confluence of Hall Swamp Tributary A	Beaufort County
Hall Swamp Tributary 2	The confluence with Hall Swamp	Approximately 330 feet upstream of Slatestone Road	Beaufort County
Hall Swamp Tributary A	The confluence with Hall Swamp Tributary 1	Approximately 330 feet upstream of Slatestone Road	Beaufort County
Harvey Creek	The confluence with Bath Creek	Approximately 0.6 mile upstream of Boyd Swamp Hunting Club Road	Beaufort County
Herring Run	The confluence with Runyon Creek	Approximately 0.5 mile upstream of Cherry Road	Beaufort County City Of Washington
Horse Branch	The confluence with White Branch	Approximately 350 feet upstream of U.S. Highway 17	Beaufort County
Horse Branch Tributary	The confluence with Horse Branch	Approximately 0.7 mile upstream of the confluence with Horse Branch	Beaufort County
Jacks Creek	The confluence with Pamlico River	Approximately 300 feet upstream of Boston Avenue	City Of Washington
Jacks Creek Tributary 1	The confluence with Jacks Creek	Approximately 480 feet upstream of John Small Avenue	City Of Washington
Jacks Creek Tributary 2	The confluence with Jacks Creek	Approximately 380 feet upstream of 8th Street	City Of Washington
Joe Branch	The confluence with Chocowinity Creek	Approximately 0.9 mile upstream of Possum Track Road	Beaufort County
Latham Creek	The confluence with Old Ford Swamp	The confluence of Gum Swamp	Beaufort County
Maple Branch	The confluence with Tranters Creek	Approximately 1.3 miles upstream of U.S. Highway 264	Beaufort County City Of Washington
Maple Branch (Near Chocowinity)	The confluence with Chocowinity Creek	Approximately 710 feet upstream of Williamson Lane	Beaufort County Town Of Chocowinity
Maple Branch Tributary (Near Chocowinity)	The confluence with Maple Branch (near Chocowinity)	Approximately 380 feet upstream of U.S. Highway 17	Beaufort County
Mitchell Branch	The confluence with Tranters Creek	Approximately 1,100 feet upstream of Cherry Run Road	Beaufort County City Of Washington
Morris Run	The confluence with Chocowinity Creek	Approximately 450 upstream of NC Highway 33	Beaufort County
Old Ford Swamp	The confluence with Aggie Run	Approximately 0.4 mile upstream of U.S. Highway 17	Beaufort County
Pineygrove Branch	The confluence with Herring Run	Approximately 410 feet upstream of Corsica Road	Beaufort County City Of Washington
Porter Creek	The confluence with Durham Creek	Approximately 1.7 miles upstream of the confluence with Durham Creek	Beaufort County

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

Source	Riverine Sources		Affected Communties
	From	To	
Poundpole Swamp Branch	The confluence with Blounts Creek	Approximately 0.6 mile upstream of Little Egypt Road	Beaufort County
Pungo River Canal	Approximately 5.1 miles upstream of US Highway 264	Approximately 1.4 miles upstream of Oregon Canal	Beaufort County
Pungo Swamp	The confluence with Pungo River	Approximately 0.5 mile upstream of Jones Bridge Road	Beaufort County
Rowland Creek	The confluence with Bath Creek	Approximately 0.8 mile upstream of Jackson Swamp Road	Beaufort County
Runyon Creek	The confluence with Herring Run	Approximately 0.6 mile upstream of Old Bath Highway	City Of Washington
Snode Creek	The confluence with Runyon Creek	Approximately 350 feet upstream of Brick Kiln Road	City Of Washington Town Of Washington Park
South Creek	Approximately 600 feet upstream of the confluence of Broomfield Swamp Creek	Approximately 1,660 feet upstream of the confluence of Cypress Run	Beaufort County
Tankard Creek	The confluence of Bath Creek	Approximately 710 feet upstream of Boyd Loop Road	Beaufort County
Tranters Creek	The confluence with the Tar River	Approximately 2.6 miles upstream of U.S. Highway 264	Beaufort County
White Branch	The confluence of Chocowinity Creek	Approximately 0.8 mile upstream of Langley Road	Beaufort County
Whitehurst Creek	The confluence with South Creek	Approximately 1.0 mile upstream of NC Highway 306	Beaufort County Town Of Aurora

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 Communties
	From	To	
Pantego Creek	Approximately 0.90 mile upstream of the confluence with Cuckolds Creek	Approximately 0.14 mile upstream of Railroad	Beaufort County Town Of Pantego

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 Communties
	From	To	
Acre Swamp	The confluence with Pungo Swamp	Approximately 1.5 miles downstream of the confluence of Fork Swamp	Beaufort County
Back Creek	Approximately 100 feet downstream of Possum Hill Road	Approximately 1.2 miles upstream of Possum Hill Road	Beaufort County
Bailey Creek	Approximately 2.4 miles upstream of the confluence with South Creek	Approximately 3.1 miles upstream of the confluence with South Creek	Beaufort County
Bear Grass Swamp	At confluence with Tranters Creek	Approximately 0.5 mile upstream of Lee Road	Beaufort County
Beaverdam Swamp	Approximately 50 feet upstream of Slatestone Road crossing	Approximately 1.0 mile upstream of Slatestone Road crossing	Beaufort County
Big Swamp	At confluence with Old Ford Swamp	Approximately 1,000 feet upstream of J and W Tram Road	Beaufort County
Blounts Creek	Approximately 400 feet downstream of the confluence with Poundpole Swamp Branch	Approximately 1.7 miles upstream of the confluence with Poundpole Swamp Branch	Beaufort County
Broomfield Swamp Creek	Approximately 200 feet downstream of Broome Road crossing	Approximately 0.45 mile upstream of Broome Road crossing	Beaufort County Town Of Aurora
Chicod Creek	Approximately 0.9 mile upstream of Dixon Road	At confluence of Harding Swamp	Beaufort County
Chocowinity Creek	Approximately 300 feet downstream of the confluence with Morris Run	Approximately 3.8 miles upstream of the confluence with Morris Run	Beaufort County
Creeping Swamp	Confluence with Clayroot Swamp	Approximately 0.9 mile upstream of Cayton Road	Beaufort County
Duck Creek	Approximately 0.5 mile upstream of Hawkins Beach Road	Approximately 200 feet upstream of Hawkins Beach Road	Beaufort County

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

Source	Riverine Sources		Affected Communties
	From	To	
Durham Creek	Approximately 1.4 miles upstream of Minor Run Road	Approximately 2,400 feet downstream of Main Street	Beaufort County
Durham Creek	Approximately 2.1 miles downstream of Main Street Road crossing	Approximately 600 feet upstream of the confluence with Durham Creek Tributary 2	Beaufort County
Durham Creek	Upstream side of Walker Road crossing	Approximately 0.79 miles upstream of Walker Road crossing	Beaufort County
Durham Creek Tributary 2	At the confluence with Durham Creek	Approximately 0.35 mile upstream of Fork Road crossing	Beaufort County
Gum Swamp	At the upstream side of NC 17	Approximately 1.5 mile upstream of NC 1	Beaufort County
Gum Swamp Run East	Approximately 0.42 mile upstream of the confluence with South Creek	Approximately 0.98 mile upstream of the confluence with South Creek	Beaufort County
Gum Swamp Run West	The confluence with Morris Run	Approximately 1.5 miles upstream of the confluence with Morris Run	Beaufort County
Harding Swamp	At confluence with Chicod Creek	Approximately 0.7 mile upstream of confluence with Chicod Creek	Beaufort County
Hardison Mill Creek Tributary 2	The confluence with Hardison Mill Creek	Approximately 1,100 feet upstream of Beasley Road	Beaufort County
Herring Run	Approximately 100 feet downstream of Herring Run Road	Approximately 1.0 mile upstream of Core Point Road	Beaufort County
Hills Creek	Approximately 0.83 mile upstream of Gilead Shores Road	Approximately 100 feet downstream of Gilead Shores Road	Beaufort County
Horsepen Swamp	At confluence with Tranters Creek	Approximately 1.7 miles upstream of Cherry Run Road	Beaufort County
Morris Run	At the confluence with Chocowinity Creek	Approximately 0.26 mile upstream of the confluence with Chocowinity Creek	Beaufort County
Old Ford Swamp	The confluence with Aggie Run	Approximately 0.7 mile upstream of Calf Branch Road	Beaufort County
Pinelog Branch	At confluence with Tranters Creek	Approximately 0.8 mile upstream of Cherry Run Road	Beaufort County
Pineygrove Branch	Approximately 200 feet upstream of Corsica Road crossing	Approximately 0.38 mile upstream of Singleton Road crossing	Beaufort County City Of Washington
Porter Creek	Approximately 50 feet downstream of Bonnerton Road	Approximately 0.66 mile upstream of most upstream Louden Road	Beaufort County
Pungo Swamp	Approximately 0.5 mile upstream of Jones Bridge Road	Approximately 275 feet downstream of the confluence with Acre Swamp	Beaufort County
Pungo Swamp	Approximately 275 feet downstream of the confluence with Acre Swamp	Approximately 150 feet upstream of NC State Route 32	Beaufort County
Snoad Branch	The confluence with Aggie Run	Approximately 1.4 miles upstream of WDA Road	Beaufort County
South Creek	Approximately 0.35 mile upstream of the confluence with Cypress Run	Approximately 2.8 miles upstream of the confluence with Cypress Run	Beaufort County
South Creek	Approximately 1,660 feet upstream of the confluence of Cypress Run	Approximately 1.25 miles upstream of the confluence of Cypress Run	Beaufort County
Tankard Creek	Upstream face of Boyd Loop Road crossing	Approximately 1.1 miles upstream of Boyd Loop Road crossing	Beaufort County
Tar River	Approximately 0.6 mile upstream of the confluence of Tranters Creek	Approximately 0.4 mile downstream of Grimesland Bridge	Beaufort County
Tranters Creek	Approximately 2.6 miles upstream of U.S. Highway 264	Approximately 790 feet downstream of Horse Pen Swamp Road	Beaufort County
Tranters Creek	At the confluence of Maple Branch	Approximately 2,000 feet upstream of Sheppard Mill Road	Beaufort County City Of Washington
Upper Broad Creek	At the confluence with Durham Creek	Approximately 3.3 miles upstream of the confluence with Durham Creek	Beaufort County
Upper Broad Creek	The confluence with Durham Creek	Approximately 3.3 miles upstream of the confluence with Durham Creek	Beaufort County
Whitehurst Creek	Approximately 1.8 miles upstream of the confluence with South Creek	Approximately 0.46 mile upstream of Mining Road	Beaufort County

Table 11, “Stream Name Changes” is not applicable in Beaufort County.

Table 12, “Letters of Map Revision” is not applicable in Beaufort 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
Acre Swamp					
Just upstream of confluence with Pungo Swamp	34.18	1913	3357	4096	6135
Just upstream of NC Highway 32	33.57	1754	3133	3850	5840
Approximately 1,730 feet upstream of NC Highway 32	31.60	1671	2995	3686	5605
Approximately 0.94 mile upstream of NC Highway 32	30.24	1639	2935	3610	5485
Approximately 325 feet upstream of confluence with Fork Swamp	22.58	1428	2545	3124	4728
Aggie Run					
At confluence with Tranters Creek	45.99	2298	4012	4886	7295
Approximately 1 mile upstream of Voa Road	44.95	2266	3957	4820	7198
Approximately 1.5 miles upstream of Voa Road	44.36	2247	3926	4782	7143
Approximately 1.8 miles upstream of Voa Road	43.24	2212	3866	4710	7037
At VOA Road	41.40	1890	3520	4460	7320
At the confluecne with Snoad Branch	40.76	2133	3732	4548	6799
Approximately 0.82 mile upstream of Cherry Run Road	39.91	2105	3685	4491	6715
Approximately 1.2 miles upstream of Cherry Run Road	38.99	2075	3633	4429	6625
Back Creek					
Approximately 100 feet upstream of intersection with Possum Hill Rd.	8.07	*	*	1840	*
Approximately 11,500 feet upstream of intersection with NC 92	4.17	*	*	1290	*
Approximately 10,000 feet upstream of intersection with NC 92	2.60	*	*	1000	*
Approximately 1,100 feet upstream of intersection with NC 92	1.63	*	*	778	*
Bailey Creek					
At mouth	6.85	710	1280	1576	2403
Approximately 1,725 feet downstream of NC Highway 306	6.08	659	1192	1469	2243
Approximately 1,400 feet upstream of NC Highway 306	5.61	628	1136	1401	2140
Approximately 4,400 feet upstream of NC Highway 306	5.16	596	1080	1332	2038
Approximately 285 feet downstream of Railroad	4.66	560	1016	1254	1920

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
Bear Creek					
Approximately 1.4 miles downstream of confluence with Chapel Branch	6.82	708	1277	1573	2398
Approximately 3,000 feet downstream of confluence with Chapel Branch	6.02	655	1184	1460	2229
Approximately 25 feet upstream of confluence with Chapel Branch	3.57	475	866	1071	1645
Approximately 305 feet downstream of Railroad	2.98	425	777	962	1480
Just upstream of NC Highway 33	2.64	394	722	894	1377
Approximately 2,500 feet upstream of NC Highway 33	1.82	314	579	719	1112
Approximately 700 feet downstream of intersection with Hodges Road	1.03	*	*	607	*
Bear Grass Swamp					
At confluence with Turkey Swamp	9.76	*	*	2550	*
Beaverdam Swamp					
Just upstream of confluence with Broad Creek and Broad Creek Tributary 1	16.88	1238	2199	2694	4067
Approximately 2,250 feet upstream of confluence with Broad Creek and Broad Creek Tributary 1	16.56	1223	2173	2663	4021
Approximately 75 feet upstream of confluence with Hall Swamp	9.63	876	1570	1930	2932
Approximately 680 feet upstream of Mill Hole Road	9.04	842	1512	1859	2825
Approximately 2,685 feet upstream of Mill Hole Road	8.61	817	1468	1806	2746
Approximately 5,425 feet downstream of Terrapin Track Road	8.11	788	1417	1743	2653
Approximately 4,025 feet downstream of Terrapin Track Road	7.66	761	1369	1685	2566
Approximately 435 feet downstream of Terrapin Track Road	5.40	613	1109	1369	2092
Approximately 1,885 feet downstream of Railroad	4.68	561	1019	1258	1925
At Railroad	3.89	501	912	1127	1728
At Slatestone Road	3.46	466	850	1051	1615
Approximately 4,865 feet upstream of Slatestone Road	2.40	372	683	847	1306
Big Swamp					
At confluence with Old Ford Swamp	20.90	1413	2499	3058	4606
Approximately 0.82 mile upstream of the confluence with Old Ford Swamp	20.04	1376	2437	2983	4494
Approximately 1.25 miles upstream of the confluence with Old Ford Swamp	19.57	1356	2403	2941	4432
Approximately 1.45 miles upstream of the confluence with Old Ford Swamp	19.07	1335	2366	2896	4366
Approximately 3,900 feet downstream of Market Street Extension	18.41	1306	2317	2837	4278
Approximately 1,440 feet downstream of Market Street Extension	17.19	1252	2223	2723	4110
Approximately 110 feet downstream of Market Street Extension	17.12	1249	2218	2717	4100
Approximately 450 feet upstream of Market Street Extension	16.99	1243	2207	2704	4082
Approximately 600 feet upstream of intersection with Avenue Road	6.66	*	*	1369	*
Approximately 6,200 feet upstream of intersection with Avenue Road	5.12	*	*	1180	*
Approximately 4,800 feet downstream of intersection with J and W Tram Road	2.50	*	*	786	*
Approximately 3,800 feet downstream of intersection with J and W Tram Road	0.96	*	*	457	*
Approximately 300 feet upstream of intersection with J and W Tram Road	0.48	*	*	308	*
Blounts Creek					
At mouth	54.76	2559	4455	5419	8076
Approximately 4,835 feet upstream of Mouth of Creek Road	49.40	2401	4188	5098	7605
Approximately 2,050 feet downstream of confluence with Sheppard Run	45.86	2294	4005	4878	7283
Approximately 1,440 feet upstream of confluence with Sheppard Run	41.04	2142	3747	4566	6826
At confluence with Nancy Run	31.70	1826	3209	3917	5872

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 confluence with Herring Run	21.93	1455	2573	3147	4737
Approximately 1,115 feet upstream of NC Highway 33	21.11	1421	2514	3077	4633
Approximately 1,950 feet upstream of NC Highway 33	20.61	1401	2479	3033	4569
Approximately 1,265 feet downstream of Tripp road	20.38	1391	2462	3013	4538
Approximately 365 feet upstream of Tripp Road	19.91	1371	2427	2971	4477
At confluence with Poundpole Swamp Branch	11.11	956	1711	2101	3186
Approximately 0.7 mile upstream of Railroad	10.61	930	1664	2045	3102
Broad Creek					
Approximately 1.7 miles downstream of NC Highway 32	30.91	1798	3161	3858	5786
Approximately 4,750 feet downstream of NC Highway 32	24.42	1555	2744	3355	5044
Approximately 2,500 feet upstream of NC Highway 32	22.87	1493	2638	3227	4854
Approximately 4,975 feet upstream of NC Highway 32	21.46	1436	2539	3106	4677
Approximately 1,030 feet downstream of Turkey Trot Road	20.91	1413	2500	3059	4607
Approximately 4,025 feet downstream of U.S. Highway 264	19.79	1366	2419	2961	4461
Broad Creek Tributary 1					
Just upstream of confluence with Broad Creek and Beaverdam Swamp	2.40	372	683	846	1305
Approximately 4,980 feet upstream of confluence with Mouth of Broad Creek	0.94	*	*	574	*
Approximately 6,180 feet upstream of confluence with Mouth of Broad Creek	0.75	*	*	507	*
Approximately 8,060 feet upstream of confluence with Mouth of Broad Creek	0.32	*	*	320	*
Broad Creek Tributary 2					
Just upstream of confluence with Broad Creek Tributary 1	1.07	226	420	523	814
Just upstream of Cherry Road	0.58	155	291	363	569
Broomfield Swamp Creek					
Just upstream of confluene with South Creek	4.74	566	1027	1268	1940
Approximately 345 feet upstream of Idalia Road	4.26	529	962	1189	1821
Approximately 865 feet upstream of Idalia Road	3.77	491	894	1105	1696
Approximately 560 feet downstream of Broome Road	3.28	451	823	1018	1564
Chapel Branch					
Approximately 25 feet upstream of confluence with Bear Creek	2.05	337	621	770	1190
Approximately 775 feet upstream of Railroad	1.72	303	559	694	1074
Just upstream of NC Highway 33	1.24	248	460	572	889
Approximately 1,950 feet downstream of Taylor Road	0.78	186	347	433	677
Cherry Run					
At confluence with Tranters Creek	11.40	972	1737	2134	3235
Approximately 760 feet upstream of U.S. Highway 264	8.93	836	1501	1846	2806
Approximately 1,830 feet upstream of U.S. Highway 264	8.10	787	1415	1741	2649
Approximately 1,625 feet downstream of U.S. Highway 17	7.51	751	1353	1665	2537
At confluence with Cherry Run Tributary 1	4.97	583	1056	1304	1995
Just downstream of confluence with Cherry Run Tributary 2	1.75	306	564	700	1084
Approximately 2,500 feet downstream of N Market Street	1.28	252	468	583	905
Approximately 1,920 feet downstream of N Market Street	0.87	199	372	464	724
Approximately 450 feet downstream of Dan Taylor Road	0.60	158	297	371	581
Cherry Run Tributary 1					
Just upstream of confluence with Cherry Run Creek	2.04	336	618	767	1185

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 4,000 feet upstream of confluence with Cherry Run	1.56	285	527	655	1015
Approximately 1.1 miles upstream of confluene with Cherry Run	1.11	231	430	536	833
Cherry Run Tributary 2					
Approximately 165 feet upstream of confluence with Cherry Run	2.88	416	762	943	1452
Just upstream of confluence with Cherry Run Tributary 3	1.70	301	555	689	1067
Approximately 420 feet upstream of Wares Chapel Road	1.25	249	462	575	893
Cherry Run Tributary 3					
Just upstream of confluence with Cherry Run Tributary 2	1.04	222	413	514	801
Approximately 300 feet downstream of Hardison Lane	0.58	154	289	362	567
Chicod Creek					
Approximately 7,300 feet downstream of intersection with Hodges Road	13.22	*	*	2020	*
Approximately 4,400 feet downstream of intersection with Hodges Road	10.97	*	*	1820	*
Approximately 400 feet downstream of intersection with Carrow Road	9.70	*	*	1690	*
Approximately 3,200 feet downstream of intersection with Carrow Road	7.93	*	*	1510	*
Chocowinity Creek					
Approximately 2,925 feet downstream of Railroad	38.46	2058	3603	4393	6572
Approximately 300 feet downstream of Railroad	37.43	2024	3545	4323	6469
Just upstream of confluence with Maple Branch (Near Chocowinity)	36.33	1987	3483	4247	6358
Approximately 3,075 feet upstream of confluence with Maple Branch (Near Chocowinity)	35.85	1970	3455	4214	6308
Approximately 4,465 feet upstream of confluence with Maple Branch (Near Chocowinity)	35.42	1956	3430	4184	6264
Approximately 3,600 feet downstream of the confluence with Chocowinity Creek Tributary 1	34.96	1940	3403	4152	6217
Just upstream of confluence with Chocowinity Creek Tributary 1	33.42	1887	3312	4042	6055
Just upstream of confluence with White Branch	27.06	1657	2918	3566	5354
Approximately 100 feet upstream of the confluence with Joe Branch	24.34	1552	2739	3348	5034
Approximately 3,265 feet downstream of Dixon Road	23.51	1519	2682	3279	4932
Just upstream of the confluence with Chocowinity Creek Tributary 2	19.23	1342	2377	2910	4387
Approximately 4,900 feet downsteam of Possum Track road	18.83	1325	2348	2875	4334
Approximately 1,850 feet downsteam of Possum Track road	11.74	989	1768	2171	3290
At Possum Track Road	10.50	850	1650	2125	3620
Chocowinity Creek Tributary 1					
Just upstream of confluence with Chocowinity Creek	1.07	226	421	524	816
Approximately 1,670 feet downstream of NC Highway 33	0.70	174	326	407	636
Chocowinity Creek Tributary 2					
Just upstream of the confluence with Cindy Edwards Branch	0.68	171	320	400	625
Approximately 1,150 feet downstream of NC Highway 33	0.67	168	316	395	618
Approximately 715 feet upstream of NC Highway 33	0.50	142	268	335	525
Cindy Edwards Branch					
Just upstream of the confluence with Chocowinity Creek	3.74	489	890	1101	1689
Just upstream of the confluence with Chocowinity Creek Tributary 2	3.06	432	789	977	1503
Approximately 4,125 feet upstream of NC Highway 33	1.18	240	447	556	864
Approximately 5,530 feet upstream of NC Highway 33	1.03	221	411	512	797

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
Creeping Swamp					
Confluence with Clayroot Swamp	32.31	*	*	3590	*
Intersects with NC 43	30.19	*	*	3490	*
Approximately 3,700 feet upstream of NC 43	27.86	*	*	3430	*
Approximately 6,800 feet upstream of NC 43	24.83	*	*	3040	*
Approximately 400 feet upstream of confluence with Polland Swamp	15.38	*	*	2630	*
Approximately 3,700 feet downstream of NC 102	12.92	*	*	2180	*
Intersects with NC 102	12.37	*	*	1960	*
Approximately 4,800 feet downstream of Leary Mills Rd.	10.43	*	*	1910	*
Approximately 3,200 feet downstream of Leary Mills Rd.	4.80	*	*	1730	*
Approximately 1,900 feet upstream of Leary Mills Rd.	4.14	*	*	1060	*
Approximately 4,500 feet upstream of Leary Mills Rd.	2.16	*	*	723	*
Cypress Run					
Just upstream of confluence with South Creek	4.65	559	1014	1252	1917
Approximately 3,440 feet downstream of Idalia Road	4.13	519	945	1167	1790
Approximately 715 feet upstream of Idalia Road	3.18	442	807	999	1536
Duck Creek					
At mouth	4.67	560	1017	1255	1922
Approximately 3,000 feet upstream of confluence with Pamlico River	2.66	396	726	1020	1385
Approximately 4,500 feet upstream of confluence with Pamlico River	2.55	386	708	877	1352
Approximately 3,500 feet downstream of Hawkins Beach Road	1.70	300	555	689	1066
Approximately 1,550 feet downstream of Hawkin's Beach Road	0.97	213	396	494	769
Approximately 245 feet upstream of Hawkin's Beach Road	0.34	111	210	263	415
Durham Creek					
At mouth	64.45	2830	4912	5970	8881
Approximately 2,345 feet upstream of confluence with Porter Creek	54.94	2564	4463	5430	8091
Approximately 2 miles upream of confluence with Porter Creek	51.22	2401	4199	5118	7651
Approximately 2.6 miles upream of confluence with Porter Creek	47.01	2103	3731	4573	6904
Approximately 1,340 feet downstream of Bonnerton Road	41.59	1743	3158	3905	5980
Approximately 2,415 feet upstream of Bonnerton Road	41.12	1713	3110	3849	5903
Approximately 5,000 feet upstream of Bonnerton Road	40.61	1680	3059	3789	5818
Approximately 6,600 feet downstream of Main Street	40.13	1650	3010	3732	5739
Just upstream of confluence with Durham Creek Tributary	34.98	1339	2508	3142	4913
Just upstream of confluence with Durham Creek Tributary 2	12.45	1026	1832	2248	3405
Just downstream of confluence with Upper Broad Creek	4.16	522	949	1173	1798
Approximately 1,600 feet downstream of Walker Road	3.48	468	853	1055	1620
Approximately 330 feet upstream of Walker Road	3.08	433	792	980	1507
Approximately 1,815 feet upstream of Walker Road	2.58	388	712	882	1360
Durham Creek Tributary					
Just upstream of confluence with Durham Creek	3.56	474	865	1069	1642
Approximately 1,900 feet upstream of Railroad	3.38	459	838	1037	1593
Approximately 900 feet upstream of Main Street	2.89	417	763	944	1453
Approximately 1,250 feet downstream of Labor Camp Road	0.85	196	366	456	711
Approximately 1,000 feet downstream of NC Highway 33	0.56	152	285	357	559

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
Durham Creek Tributary 2					
Approximately 3,800 feet upstream of confluence with Durham Creek	6.37	*	*	1620	*
At confluence with Durham Creek	5.89	*	*	1560	*
Fork Swamp					
Approximately 260 feet upstream of confluence with Acre Swamp	7.36	742	1336	1645	2506
Approximately 180 feet downstream of Long Ridge Road	7.03	721	1300	1602	2441
Approximately 65 feet downstream of Railroad	6.75	703	1268	1563	2383
Approximately 2,565 feet upstream of Railroad	6.16	665	1201	1480	2259
Gum Swamp					
Just upstream of confluence with Aggie Run and Old Ford Swamp	12.35	1021	1823	2237	3389
Approximately 0.52 mile upstream of confluence with Aggie Run and Old Ford Swamp	11.61	983	1756	2157	3269
Approximately 3,150 feet downstream of Voa Road	9.50	869	1558	1915	2909
Approximately 1,275 feet downstream of Voa Road	8.91	835	1498	1843	2802
Approximately 2,240 feet upstream of Voa Road	8.41	805	1447	1781	2709
Approximately 4,150 feet upstream of Voa Road	7.92	776	1396	1718	2616
Approximately 4,450 feet downstream U.S. Highway 17	7.31	739	1331	1639	2497
Approximately 1,500 feet downstream U.S. Highway 17	6.12	662	1196	1474	2250
Approximately 150 feet downstream U.S. Highway 17	5.86	644	1165	1436	2194
Approximately 900 feet upstream of intersection with US 17	4.49	*	*	1090	*
Approximately 4,100 feet upstream of intersection with US 17	4.07	*	*	1040	*
Approximately 7,700 feet upstream of intersection with US 17	3.26	*	*	914	*
Gum Swamp Run East					
Approximately 3,000 feet downstream of intersection with Bay City Rd.	4.83	*	*	1400	*
Gum Swamp Run West					
Approximately 300 feet upstream of intersection with NC 33	2.57	*	*	993	*
Approximately 3,300 feet upstream of intersection with NC 33	2.38	*	*	953	*
Approximately 6,000 feet upstream of intersection with NC 33	0.84	*	*	545	*
Hall Swamp					
At confluence with Beaverdam Swamp	6.47	685	1237	1524	2325
Approximately 1,460 feet downstream of Railroad	6.25	671	1211	1493	2278
At confluence with Hall Swamp Tributary 1	3.88	500	910	1124	1725
Approximately 640 feet upstream of Terrapin Track Road	2.48	379	696	862	1329
Just upstream of confluence with Hall Swamp Tributary 2	1.12	232	432	538	836
At Slatestone Road	0.89	201	375	468	730
Hall Swamp Tributary 1					
At confluence with Hall Swamp	1.87	319	587	729	1128
Approximately 2,065 feet upstream of Lizard Slip Road	1.70	300	555	689	1067
At confluence with Hall Swamp Tributary A	0.05	33	64	81	131
Hall Swamp Tributary 2					
Just upstream of confluence with Hall Swamp	1.10	230	428	533	830
Approximately 1,740 feet downstream of Slatestone Road	0.90	203	378	472	735
Hall Swamp Tributary A					

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 confluence with Hall Swamp Tributary 1	1.22	245	456	567	881
Approximately 1,245 feet upstream of Terrapin Track Road	0.95	210	391	487	759
Approximately 140 feet downstream of Alligood Lane	0.71	175	327	409	639
Harvey Creek					
Approximately 550 feet upstream of confluence with Bath Creek	5.67	632	1143	1409	2153
Approximately 230 feet downstream of Creek Road	5.21	599	1085	1339	2048
Approximately 0.67 mile downstream of S White Post Road	4.43	542	985	1216	1863
Approximately 1,630 feet downstream of S White Post Road	3.97	507	923	1141	1749
Approximately 1,125 feet upstream of S White Post Road	2.93	421	769	953	1466
Approximately 2,155 feet upstream of S White Post Road	2.48	379	696	863	1330
Approximately 125 feet downstream of U.S. Highway 264	2.23	355	653	810	1250
Approximately 0.99 mile upstream of U.S. Highway 264	1.80	311	573	712	1101
Approximately 1.13 miles upstream of U.S. Highway 264	1.17	239	443	552	858
Approximately 1.4 miles upstream of U.S. Highway 264	0.73	178	333	415	649
Approximately 1.86 miles upstream of U.S. Highway 264	0.28	98	187	235	371
Herring Run					
Just upstream of confluence with Runyon Creek	10.22	909	1628	2000	3036
Just down from confluence with Brick Kiln Branch	8.70	793	1409	1729	2619
Just upstream of confluence with Pineygrove Branch	6.21	549	927	1127	1677
Approximately 1,100 feet downstream of Corsica Road	5.64	538	923	1127	1689
Approximately 270 feet upstream of Corsica Road	5.14	525	914	1118	1685
Approximately 2,380 feet upstream of Corsica Road	4.79	514	903	1107	1675
Approximately 1,010 feet downstream of Cherry Road	4.29	496	881	1084	1648
Approximately 2,235 feet upstream of Cherry Road	3.83	475	854	1053	1608
Hills Creek					
At mouth	4.00	509	927	1146	1757
Approximately 620 feet upstream of mouth	3.58	476	867	1073	1647
Approximately 200 fet downstream of Gilead Shores Road	3.16	440	804	996	1531
Approximately 400 feet upstream of intersection with Gilead Shores Rd.	1.22	*	*	665	*
Approximately 2,300 feet upstream of intersection with Gilead Shores Rd.	1.07	*	*	618	*
Horse Branch					
At confluence with White Branch	3.91	502	915	1131	1734
Approximately 3,025 feet upstream of Gray Road	3.42	462	843	1043	1603
Approximately 1.19 miles upstream of Gray Road	2.94	421	770	954	1468
Approximately 1.35 miles upstream of Gray Road	2.44	376	689	854	1317
Just upstream of confluence with Horse Branch Tributary	0.68	170	319	398	623
Approximately 2,700 feet downstream of U.S. Highway 17	0.53	147	277	347	543
Horse Branch Tributary					
Approximately 125 feet upstream of confluence with Horse Branch	1.41	267	495	616	955
Approximately 700 feet upstream of Nelson Farm Road	1.15	237	440	547	851
Horsepen Swamp					
At confluence with Tranters Creek	11.44	*	*	1860	*
Approximately 5,200 feet upstream of intersection with Cherry Run Road	10.40	*	*	1760	*
Approximately 4,100 feet downstream of intersection with Horsepen Swamp Road	7.55	*	*	1470	*

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 2,300 feet downstream of intersection with Horsepen Swamp Road	6.18	*	*	1310	*
Approximately 1,600 feet upstream of intersection with Horsepen Swamp Road	5.76	*	*	1260	*
Approximately 6,000 feet upstream of intersection with Horsepen Swamp Road	1.66	*	*	624	*
Jacks Creek					
Upstream of confluence with Pamlico Sound	2.30	1098	1764	1986	2608
Just upstream of confluence with Jacks Creek Tributary 1	1.49	902	1467	1650	2162
Upstream of confluence with Jacks Creek Tributary 2	0.95	684	1145	1294	1713
Approximately 135 feet downstream of U.S. Highway 17/ N Bridge Street	0.65	519	899	1022	1376
Jacks Creek Tributary 1					
Upstream of confluence with Jacks Creek	0.71	431	785	908	1270
Jacks Creek Tributary 2					
Upstream of confluence with Jacks Creek	0.70	*	*	493	*
Upstream of confluence with Jacks Creek	0.49	452	791	901	1214
Joe Branch					
Approximately 160 feet upstream of the confluence with Chocowinity Creek	2.55	385	707	876	1350
Approximately 2,480 feet upstream of Dixon Road	1.88	320	589	731	1131
Approximately 860 feet downstream of Gray Road	1.38	264	490	610	946
Approximately 2,300 feet upstream of Possum Track Road	0.92	206	384	479	746
Approximately 2,685 feet upstream of Possum Track Road	0.52	145	274	343	537
Maple Branch					
At confluence with Tranters Creek	2.68	345	649	818	1315
Approximatley 630 feet upstream of Railroad crossing	2.24	309	586	739	1194
Approximately 1,600 feet upstream of U.S. Highway 264	1.84	274	523	661	1075
Approximately 0.77 mile upstream of U.S. Highway 264	1.43	234	451	573	937
Approximately 1.25 miles upstream of U.S. Highway 264	1.14	204	396	504	830
Maple Branch (Near Chocowinity)					
At State Route 1149	2.40	360	740	960	1705
Maple Branch Tributary (Near Chocowinity)					
At confluence with Maple Branch (Near Chocowinity)	2.10	343	630	782	1208
Approximately 2,025 feet downstream of Price Road	1.63	293	541	672	1041
Approximately 400 feet upstream of Price Road	1.39	266	492	612	950
Just downstream of U.S. Highway 17	1.15	237	440	548	851
Mitchell Branch					
At confluence with Tranters Creek	3.37	508	1004	1213	1873
Approximately 2,350 feet upstream of confluence with Tranters Creek	2.98	475	946	1143	1766
Approximately 750 feet downstream of U.S. Highway 264	2.19	357	740	904	1431
Approximately 910 feet upstream of U.S. Highway 264	2.05	301	647	798	1293
Approximately 3,000 feet upstream of U.S. Highway 264	1.47	239	459	583	953
Just downstream of Cherry Run Road	0.84	169	331	423	703
Morris Run					
At the confluence with Chocowinity Creek	6.76	704	1270	1564	2385
At the confluence with Gum Swamp Run West	3.96	506	922	1139	1747
Approximately 700 feet upstream of NC Highway 33	3.63	480	874	1081	1660

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 1,675 feet upstream of Woolard Road	3.25	448	819	1013	1557
Approximately 1,200 feet downstream of Woolard Road	2.13	345	635	788	1216
Old Ford Swamp					
Just upstream of confluence with Aggie Run and Latham Creek	26.53	1637	2884	3524	5293
Approximately 6,200 feet downstream of U.S. Highway 17	25.34	1591	2806	3429	5154
Approximately 4,175 feet downstream of U.S. Highway 17	24.45	1556	2746	3357	5047
Approximately 1,290 feet downstream of U.S. Highway 17	23.89	1534	2708	3311	4979
Approximately 675 feet upstream of U.S. Highway 17	23.27	1509	2666	3260	4903
Approximately 3,200 feet upstream of intersection with SR 1512	1.55	*	*	600	*
Pinelog Branch					
Approximately 900 feet downstream of intersection with Cherry Run Road	3.60	*	*	967	*
Approximately 2,500 feet upstream of intersection with Cherry Run Road	3.09	*	*	885	*
Pineygrove Branch					
Just upstream of confluence with Herring Run	2.17	349	642	797	1230
At Corsica Road	1.58	287	530	659	1021
Approximately 2,050 feet upstream of Singleton Road	0.94	209	390	486	757
Porter Creek					
At mouth	7.69	762	1372	1689	2572
Approximately 6,615 feet downstream of intersection with Louden Road	7.13	727	1311	1614	2460
Approximately 4,500 feet downstream of intersection with Louden Road	6.88	712	1283	1581	2410
Approximately 2,900 feet downstream of intersection with Louden Road	6.67	698	1260	1552	2367
Approximately 800 feet downstream of intersection with Louden Road	2.90	417	764	946	1455
Approximately 700 feet downstream of intersection with Louden Road	2.44	375	688	853	1316
Approximately 600 feet downstream of intersection with Louden Road	1.81	312	576	715	1107
Poundpole Swamp Branch					
Just upstream of confluence with Blounts Creek	8.63	819	1470	1809	2750
Approximately 80 feet downstream of Over the Swamp Road	8.08	786	1413	1739	2646
Approximately 2,055 feet downstream of Flat Swamp Road	6.96	717	1292	1592	2427
Approximately 1,415 feet upstream of Flat Swamp Road	2.37	368	677	839	1294
Approximately 2,130 feet downstream of Little Egypt Road	2.23	355	653	810	1250
At Little Egypt Road	0.59	156	293	367	575
Approximately 1,500 feet upstream of Little Egypt Road	0.16	69	133	168	267
Pungo Creek					
Approximately 2.55 miles downstream of NC Highway 99	86.55	3394	5863	7113	10546
Approximately 725 feet downstream of NC Highway 99	79.80	3229	5584	6778	10058
Approximately 1 mile upstream of NC Highway 99	73.79	3076	5327	6470	9609
Approximately 2.68 miles upstream of NC Highway 99	67.20	2904	5037	6120	9099
Approximately 0.85 mile downstream of U.S. Highway 64	64.09	2820	4896	5950	8851
Approximately 0.57 mile downstream of U.S. Highway 64	62.84	2786	4838	5881	8750
Approximately 165 feet upstream of U.S. Highway 264	61.54	2750	4778	5808	8644
Approximately 0.73 mile upstream of U.S. Highway 264	60.02	2708	4707	5723	8519
Approximately 1.05 mile upstream of U.S. Highway 264	57.86	2648	4604	5600	8339
Approximately 0.85 mile downstream of Jones Bridge Road	56.31	2604	4530	5510	8208
Approximately 0.58 mile downstream of Jones Bridge Road	55.47	2580	4489	5461	8137

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
Pungo River					
Approximately 5 miles downstream of U.S. Highway 264	241.56	5492	8799	10448	14881
Approximately 2.4 miles downstream of U.S. Highway 264	184.81	4658	7535	8979	12881
Approximately 0.6 miles upstream of U.S. Highway 264	150.38	4103	6688	7990	11526
Approximately 1.4 miles upstream of U.S. Highway 264	148.08	4065	6628	7920	11431
Approximately 3.6 miles upstream of U.S. Highway 264	146.14	4032	6578	7861	11350
Approximately 4.6 miles upstream of U.S. Highway 264	142.82	3975	6491	7760	11210
Pungo River Canal					
Approximately 5.2 miles upstream of U.S. Highway 264	126.91	3697	6062	7258	10519
Approximately 6.5 miles upstream of U.S. Highway 264	107.94	3346	5519	6622	9640
Approximately 10.1 miles upstream of U.S. Highway 264	97.03	3134	5189	6235	9102
Approximately 12.8 miles upstream of U.S. Highway 264	58.55	2297	3873	4684	6932
Approximately 14.1 miles upstream of U.S. Highway 264	41.90	1870	3191	3876	5788
Pungo Swamp					
Approximately 2,540 feet upstream of Jones Bridge Road	54.35	2547	4435	5396	8041
Approximately 1.55 miles upstream of Jones Bridge Road	52.07	2481	4322	5260	7842
Approximately 2 miles downstream of confluence with Acre Swamp	48.96	2388	4165	5071	7565
Just upstream of confluence with Acre Swamp	12.40	1024	1827	2243	3397
Approximately 705 feet downstream of N Boyd Road	11.50	977	1746	2144	3250
Approximately 370 feet upstream of NC Highway 32	10.10	902	1616	1986	3015
Rowland Creek					
Approximately 325 feet upstream of confluence with Tankard Creek and Bath Creek	7.02	721	1299	1600	2438
Approximately 1,565 feet downstream of Post Road	5.97	652	1179	1453	2219
Approximately 215 feet downstream of Post Road	5.34	609	1102	1360	2079
Approximately 0.25 mile upstream of Post Road	4.93	580	1051	1297	1985
Approximately 0.6 mile upstream of Post Road	4.44	543	987	1219	1868
Approximately 1.2 mile downstream of Jackson Swamp Road	4.07	515	936	1157	1774
Approximately 0.88 mile downstream of Jackson Swamp Road	3.13	438	800	990	1523
Approximately 0.55 mile downstream of Jackson Swamp Road	2.27	359	660	819	1263
Approximately 950 feet upstream of Jackson Swamp Road	1.79	310	572	710	1099
Approximately 3,150 feet upstream of Jackson Swamp Road	1.33	258	478	595	924
Runyon Creek					
At mouth	13.48	1078	1921	2357	3566
Just below confluence with Snode Creek	11.85	995	1778	2184	3309
Approximately 3,800 feet upstream of confluence with Snode Creek	11.42	973	1740	2136	3239
Just upstream of confluence with Herring Run	0.75	182	340	425	663
Approximately 1,050 feet downstream of Old Bath Highway	0.67	168	316	395	618
Approximately 1,550 feet upstream of Old Bath Highway	0.22	86	164	206	326
Snoad Branch					
At confluence with Aggie Run	1.89	*	*	671	*
At intersection with Voa Road	1.74	*	*	640	*
Approximately 2,600 feet upstream of intersection with Voa Road	1.25	*	*	531	*
Approximately 3,400 feet upstream of intersection with Voa Road	0.54	*	*	330	*
Snode Creek					

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 above confluence with Runyon Creek	1.51	279	517	642	996
Approximately 3,600 feet upstream of the confluence with Runyon Creek	1.35	261	483	601	933
South Creek					
At NC 33	32.50	1640	3080	3910	6415
At confluence with Broomfield Swamp Creek	26.87	1649	2906	3550	5332
Approximately 2,465 feet upstream of West Road	25.72	1605	2831	3459	5198
Approximately 810 feet downstream of Bateman Road	22.73	1488	2629	3215	4837
Approximately 3,100 feet upstream of Bateman Road	19.13	1337	2370	2902	4374
Approximately 75 feet upstream of confluence with Cypress Run	14.43	1124	2001	2455	3712
Approximately 425 feet upstream of confluence with Cypress Run	8.27	797	1433	1764	2683
Approximately 0.83 mile downstream of Bonner Road	6.64	696	1256	1548	2360
Approximately 2,410 feet downstream of Bonner Road	1.83	314	579	719	1112
Approximately 3,415 feet upstream of Bonner Road	0.72	176	330	412	644
Tankard Creek					
Approximately 125 feet upstream of confluence with Bath Creek and Rowland Creek	9.28	856	1536	1889	2870
Approximately 1,250 feet upstream of confluence with Bath Creek and Rowland Creek	8.90	834	1498	1842	2800
Approximately 50 feet downstream of U.S. Highway 264	8.53	812	1459	1795	2731
Approximately 1,065 feet upstream of U.S. Highway 264	8.03	783	1407	1732	2636
Approximately 0.93 mile upstream of U.S. Highway 264	7.36	742	1336	1645	2507
Approximately 1.1 mile upstream of U.S. Highway 264	5.72	635	1149	1417	2165
Approximately 1,500 feet downstream of Boyd Loop Road	5.45	616	1116	1377	2104
Approximately 1,210 feet upstream of Boyd Loop Road	4.68	561	1018	1257	1924
Tar River					
Downstream Study Limit	3238.44	32400	49700	58600	82900
Just above confluence of Rice Creek	3190.94	32100	49300	58000	82200
Just below confluence with Runyon Creek	3185.12	32100	49300	58000	82200
At gage at Washington (U.S. Highway 17)	3166.54	31900	49000	57800	81800
At confluence with Tranters Creek	2917.54	30400	46700	55000	77900
Tranters Creek					
Approximately 1.1 miles upstream of Clarks Neck Road (SR 1567)	237.00	5380	8631	10253	14616
Approximately 4.6 miles downstream of U.S. Highway 264	228.08	5301	8511	10114	14427
Approximately 0.9 mile downstream of U.S. Highway 264	225.19	5260	8449	10041	14329
Approximately 0.7 mile upstream of U.S. Highway 264	171.73	4452	7222	8613	12381
Approximately 10,300 feet upstream of confluence with Aggie Run	170.33	*	*	8570	*
Approximately 1.8 miles upstream of U.S. Highway 264	169.90	4423	7177	8561	12310
Approximately 18,500 feet upstream of confluence with Aggie Run	168.59	*	*	8520	*
Approximately 13,000 feet downstream of confluence with Horsepen Branch	161.02	*	*	8300	*
Approximately 4,900 feet downstream of confluence with Horsepen Branch	157.47	*	*	8201	*
At confluence with Horsepen Swamp	145.45	*	*	7840	*
Approximately 900 feet upstream of intersection with SR 1414	145.30	*	*	7840	*
Approximately 6,100 feet upstream of intersection with SR 1414	142.27	*	*	7740	*
Approximately 20,000 feet upstream of intersection with SR 1414	116.74	*	*	6920	*
Approximately 12,200 feet downstream of confluence with Pinelog Branch	115.46	*	*	6880	*

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 5,700 feet downstream of confluence with Pinelog Branch	114.48	*	*	6850	*
At confluence with Pinelog Branch	110.26	*	*	6700	*
Upper Broad Creek					
Approximately 1,700 feet upstream of intersection with Walls Mill Rd.	6.61	*	*	1660	*
Approximately 6,200 feet upstream of intersection with Walls Mill Rd.	4.94	*	*	1420	*
Approximately 10,600 feet upstream of intersection with Walls Mill Rd.	3.83	*	*	1230	*
Approximately 13,200 feet upstream of intersection with Walls Mill Rd.	1.02	*	*	604	*
White Branch					
Just upstream of conflluence with Chocowinity Creek	6.10	660	1193	1471	2246
At confluence with Horse Branch	2.16	348	641	795	1227
Approximately 1,030 feet upstream of Gray Road	0.95	210	392	489	761
Approximately 2,385 feet upstream of Langley Road	0.50	142	267	334	524
Whitehurst Creek					
At mouth	7.39	743	1339	1649	2511
Approximately 180 feet upstream of Railroad	7.26	735	1325	1632	2486
Approximately 2,600 feet upstream of NC Highway 306	4.00	509	926	1220	1756
Approximately 2,650 feet downstream of Brantley Swamp Road	3.89	500	911	1220	1727

Table 14, “Summary of Stillwater Elevations” is not applicable in Beaufort County.

Table 15, “Gage Information”, lists the stream gages located in Beaufort 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
02084570	Acre Swamp	ACRE SWAMP NEAR PINETOWN, NC	32.20	1953	1969
02084540	Durham Creek	DURHAM CREEK AT EDWARD, NC	26.00	1950	1994
02084500	Herring Run	HERRING RUN NEAR WASHINGTON, NC	9.59	1951	1980

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"
Acre Swamp	0.040 to 0.060	0.080 to 0.180
Aggie Run	0.055	0.080 to 0.140
Back Creek	0.048	0.140
Bailey Creek	0.020 to 0.060	0.035 to 0.200
Bear Creek	0.020 to 0.060	0.060 to 0.200
Bear Grass Swamp	0.050	0.120 to 0.141
Beaverdam Swamp	0.020 to 0.060	0.080 to 0.200
Big Swamp	0.020 to 0.060	0.060 to 0.200
Blounts Creek	0.020 to 0.060	0.050 to 0.200
Broad Creek	0.020 to 0.060	0.040 to 0.200
Broad Creek Tributary 1	0.045 to 0.052	0.100 to 1.000
Broad Creek Tributary 2	0.020 to 0.140	0.080 to 0.200
Broomfield Swamp Creek	0.040 to 0.050	0.070 to 0.140
Chapel Branch	0.020 to 0.060	0.080 to 0.200
Cherry Run	0.013 to 0.070	0.035 to 0.140
Cherry Run Tributary 1	0.013 to 0.060	0.045 to 0.140
Cherry Run Tributary 2	0.013 to 0.060	0.035 to 0.140
Cherry Run Tributary 3	0.013 to 0.060	0.045 to 0.140
Chicod Creek	0.045 to 0.055	0.100 to 0.165
Chocowinity Creek	0.020 to 0.060	0.035 to 0.200
Chocowinity Creek Tributary 1	0.020 to 0.060	0.080 to 0.200
Chocowinity Creek Tributary 2	0.020 to 0.060	0.080 to 0.200
Cindy Edwards Branch	0.020 to 0.060	0.080 to 0.200
Creeping Swamp	0.047	0.130 to 0.150
Cypress Run	0.020 to 0.060	0.045 to 0.200
Duck Creek	0.035 to 0.050	0.080 to 0.150
Durham Creek	0.020 to 0.060	0.012 to 0.200
Durham Creek Tributary	0.020 to 0.060	0.080 to 0.200
Durham Creek Tributary 2	0.050	0.150
Fork Swamp	0.020 to 0.060	0.080 to 0.200
Gum Swamp	0.042 to 0.053	0.080 to 0.140
Gum Swamp Run East	0.048	0.130
Gum Swamp Run West	0.048	0.110 to 0.140
Hall Swamp	0.020 to 0.060	0.060 to 0.200
Hall Swamp Tributary 1	0.020 to 0.060	0.080 to 0.200
Hall Swamp Tributary 2	0.020 to 0.060	0.080 to 0.200
Hall Swamp Tributary A	0.020 to 0.060	0.080 to 0.200
Harding Swamp	0.050	0.120 to 0.150
Hardison Mill Creek Tributary 2	0.040	0.080 to 0.150
Harvey Creek	0.020 to 0.060	0.080 to 0.200
Herring Run	0.020 to 0.060	0.080 to 0.200
Hills Creek	0.050	0.150
Horse Branch	0.020 to 0.060	0.080 to 0.200

Table 16 - Roughness Coefficients

Stream	Channel "n"	Overbank "n"
Horse Branch Tributary	0.020 to 0.060	0.045 to 0.200
Horsepen Swamp	0.050	0.130 to 0.150
Jacks Creek	0.013 to 0.060	0.045 to 0.120
Jacks Creek Tributary 1	0.013 to 0.060	0.045 to 0.120
Jacks Creek Tributary 2	0.013 to 0.060	0.045 to 0.120
Joe Branch	0.020 to 0.060	0.080 to 0.200
Latham Creek	0.053	0.080 to 0.140
Maple Branch	0.040 to 0.550	0.080 to 0.200
Maple Branch (Near Chocowinity)	0.020 to 0.060	0.040 to 0.200
Maple Branch Tributary (Near Chocowinity)	0.020 to 0.060	0.080 to 0.200
Mitchell Branch	0.040 to 0.055	0.080 to 1.000
Morris Run	0.020 to 0.060	0.035 to 0.200
Old Ford Swamp	0.020 to 0.060	0.080 to 0.200
Pantego Creek	0.045 to 0.060	0.020
Pinelog Branch	0.050 to 0.090	0.100 to 0.160
Pineygrove Branch	0.013 to 0.060	0.045 to 0.140
Pollard Swamp	0.041 to 0.050	0.120 to 0.150
Porter Creek	0.045 to 0.055	0.130 to 0.140
Poundpole Swamp Branch	0.020 to 0.060	0.045 to 0.200
Pungo River	0.040 to 0.130	0.035 to 0.160
Pungo River Canal	0.037 to 0.130	0.035 to 0.150
Pungo Swamp	0.020 to 0.060	0.100 to 1.000
Rowland Creek	0.020 to 0.060	0.060 to 0.200
Runyon Creek	0.035 to 0.048	0.080 to 0.140
Snoad Branch	0.050	0.130 to 0.140
Snode Creek	0.013 to 0.060	0.045 to 0.140
South Creek	0.020 to 0.060	0.080 to 0.200
Tankard Creek	0.020 to 0.060	0.080 to 0.200
Tar River	0.020 to 0.080	0.030 to 1.000
Tranters Creek	0.020 to 0.060	0.035 to 0.450
Upper Broad Creek	0.040 to 0.045	0.130 to 0.150
White Branch	0.020 to 0.060	0.080 to 0.200
Whitehurst Creek	0.040 to 0.055	0.035 to 0.150

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 steams 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
Acre Swamp				
003	293	3,850	19.9[1]	34 / 531
008	798	3,850	19.9[1]	34 / 376
016	1,599	3,850	19.9[2]	27 / 235
023	2,270	3,850	19.9[2]	34 / 207
031	3,074	3,850	19.9[2]	35 / 89
039	3,851	3,850	19.9[2]	30 / 33
048	4,759	3,850	20.3	29 / 28
Back Creek				
164	16,381	1,290	5.0[2]	108 / 65
175	17,462	1,290	5.8	81 / 70
184	18,372	1,000	6.4	21 / 96
193	19,301	1,000	7.0	21 / 78
201	20,063	1,000	8.9	70 / 42
211	21,108	1,000	9.6	21 / 442
Bailey Creek				
137	13,656	1,240	9.6	25 / 100
142	14,200	1,240	9.9	25 / 50
148	14,769	1,240	10.2	51 / 67
153	15,312	1,240	10.4	50 / 85
157	15,742	1,240	10.5	85 / 100
161	16,082	1,240	10.6	20 / 20
162	16,171	1,240	11.8	10 / 25
Bear Grass Swamp				
017	1,691	2,551	31.0[2]	595 / 460
023	2,294	2,551	31.0[2]	597 / 396
032	3,162	2,551	31.0[2]	438 / 362
036	3,618	2,551	31.0[2]	391 / 267
048	4,800	1,699	31.0[2]	250 / 158
Beaverdam Swamp				
309	30,937	869	38.3	88 / 100
317	31,744	869	39.4	100 / 50
327	32,716	869	41.3	100 / 10
334	33,402	869	42.5	50 / 50
336	33,565	869	43.0	100 / 100
345	34,464	546	45.6	100 / 100
Big Swamp				
199	19,878	1,730	34.0	218 / 215
203	20,312	1,730	34.9	56 / 56

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
208	20,769	1,730	35.6	203 / 276
216	21,592	1,369	36.0	269 / 247
220	22,010	1,369	36.2	256 / 261
227	22,653	1,369	36.4	229 / 242
230	22,957	1,369	36.5	186 / 265
238	23,777	1,369	37.0	118 / 279
246	24,615	1,369	37.5	153 / 265
257	25,728	1,369	38.0	250 / 235
268	26,782	1,180	38.3	138 / 256
276	27,561	1,180	38.7	238 / 148
284	28,448	1,180	39.3	263 / 288
301	30,107	1,180	40.2	277 / 249
310	30,993	786	40.6	211 / 172
321	32,095	457	41.0	114 / 114
328	32,812	457	41.2	114 / 114
335	33,460	457	41.4	114 / 114
342	34,246	457	41.6	114 / 114
353	35,292	457	44.1	114 / 114
362	36,169	308	44.4	77 / 77
Blounts Creek				
641	64,072	2,290	19.8	63 / 242
644	64,413	2,290	20.2	125 / 40
650	64,985	2,240	21.1	88 / 89
655	65,495	2,240	21.8	200 / 25
660	65,955	2,240	22.3	52 / 211
665	66,527	2,240	22.9	20 / 175
Broomfield Swamp Creek				
081	8,126	1,060	7.6	60 / 50
083	8,266	1,060	7.6	10 / 20
087	8,659	1,060	9.5	15 / 25
090	9,047	1,060	10.4	15 / 50
094	9,440	1,060	10.8	15 / 50
098	9,838	1,060	11.2	25 / 110
103	10,312	1,060	11.3	20 / 40
Chicod Creek				
575	57,537	2,018	30.4	132 / 188
586	58,560	1,816	30.9	226 / 446
592	59,206	1,816	31.1	227 / 112
602	60,163	1,816	31.6	169 / 140
615	61,475	1,816	32.3	38 / 528
621	62,099	1,816	32.5	204 / 291
627	62,659	1,816	32.9	156 / 83
634	63,422	1,816	33.4	262 / 118
639	63,909	1,816	33.6	164 / 163
646	64,590	1,816	34.1	265 / 93
655	65,456	1,816	34.8	396 / 103

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
673	67,280	1,510	36.3	134 / 278
682	68,242	1,510	37.2	79 / 150
692	69,174	1,510	39.1	405 / 185
697	69,707	1,510	39.2	243 / 57
704	70,396	1,253	39.4	324 / 175
712	71,169	1,253	39.5	85 / 770
720	72,032	1,253	39.7	600 / 142
726	72,566	1,253	39.8	250 / 550
733	73,276	1,253	40.0	100 / 285
750	74,981	1,253	40.5	14 / 750
765	76,456	1,253	42.1	184 / 440
772	77,157	1,253	42.3	620 / 326
778	77,828	1,253	42.4	350 / 600
784	78,380	1,253	42.5	400 / 360
790	78,958	1,253	42.5	350 / 350
795	79,493	1,253	42.6	250 / 250
Chocowinity Creek				
385	38,469	2,180	22.5	262 / 297
391	39,094	2,180	22.7	350 / 75
396	39,573	2,180	22.9	364 / 46
404	40,446	2,180	23.4	169 / 159
412	41,150	2,040	23.7	230 / 193
420	41,968	2,040	24.0	202 / 272
426	42,649	2,040	24.3	250 / 196
433	43,290	2,040	24.7	50 / 350
441	44,143	2,040	25.4	50 / 400
447	44,733	1,940	25.9	349 / 292
456	45,579	1,940	26.6	224 / 315
465	46,530	1,940	28.0	234 / 41
472	47,179	1,810	28.5	398 / 254
481	48,113	1,810	28.8	158 / 439
487	48,693	1,810	29.0	215 / 342
498	49,795	1,810	29.8	400 / 100
505	50,507	1,720	30.2	400 / 50
511	51,093	1,720	30.7	142 / 182
517	51,681	1,720	31.2	30 / 506
524	52,417	1,720	31.8	56 / 462
531	53,117	1,720	32.4	20 / 550
532	53,172	1,720	32.5	30 / 500
538	53,770	665	33.1	92 / 217
544	54,440	665	33.5	100 / 160
551	55,056	665	34.1	100 / 150
557	55,731	665	35.0	50 / 250
562	56,246	665	35.8	114 / 116
567	56,741	665	36.8	100 / 200

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
573	57,253	665	38.0	50 / 125
578	57,765	665	40.2	50 / 50
Creeping Swamp				
276	27,643	2,630	33.6	364 / 205
293	29,302	2,180	34.6	364 / 205
303	30,276	2,180	35.0	383 / 208
336	33,575	1,960	37.8	661 / 45
371	37,147	1,910	39.4	493 / 545
393	39,259	1,730	40.9	26 / 413
426	42,643	1,730	46.6	219 / 219
439	43,921	1,060	46.6	44 / 726
458	45,802	760	46.7	500 / 400
Duck Creek				
078	7,793	1,020	5.2	192 / 190
089	8,881	877	5.2	56 / 182
101	10,128	689	5.2	134 / 49
109	10,900	689	5.7	151 / 51
121	12,111	494	6.7	125 / 50
127	12,697	494	7.2	227 / 13
133	13,295	494	7.8	400 / 12
134	13,408	494	8.8	400 / 12
135	13,535	494	8.8	405 / 16
Durham Creek				
464	46,444	3,789	7.4	472 / 113
472	47,163	3,789	7.7	27 / 364
475	47,539	3,732	7.8	302 / 173
480	47,968	3,732	7.9	557 / 23
486	48,617	3,732	8.1	222 / 239
492	49,170	3,732	8.2	23 / 468
496	49,559	3,732	8.4	242 / 450
500	50,012	3,732	8.4	359 / 224
505	50,459	3,732	8.5	271 / 104
509	50,950	3,732	8.8	84 / 422
515	51,509	3,732	9.0	406 / 143
520	51,972	3,732	9.2	273 / 150
522	52,220	3,580	9.9	248 / 167
525	52,505	3,580	9.5	255 / 134
527	52,711	3,490	10.0	35 / 382
532	53,239	3,490	10.2	30 / 500
538	53,781	3,490	10.4	35 / 400
543	54,265	3,490	10.5	73 / 230
546	54,558	3,490	10.7	102 / 264
553	55,285	3,490	11.0	200 / 200
559	55,868	3,490	11.2	70 / 70
561	56,149	3,490	11.5	261 / 415
568	56,810	3,490	12.2	650 / 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
571	57,052	3,210	12.6	568 / 294
578	57,788	3,210	12.6	171 / 628
583	58,343	3,210	12.7	154 / 603
590	59,008	3,210	12.8	162 / 444
596	59,579	3,210	12.9	400 / 325
602	60,237	3,160	13.0	430 / 387
609	60,889	3,160	13.2	281 / 679
615	61,497	3,160	13.3	147 / 390
620	62,012	3,160	13.6	502 / 222
626	62,610	3,160	13.8	359 / 316
632	63,161	3,160	14.1	223 / 328
637	63,703	2,950	14.6	272 / 223
643	64,284	2,950	15.0	378 / 292
649	64,858	2,950	15.2	323 / 316
657	65,738	2,950	15.9	55 / 55
660	65,985	2,950	16.2	100 / 200
666	66,616	2,950	16.4	200 / 300
671	67,091	2,950	16.6	350 / 300
676	67,609	2,950	16.8	350 / 400
681	68,077	2,950	16.9	111 / 525
685	68,535	2,950	17.1	304 / 128
690	68,950	2,950	17.3	496 / 246
694	69,385	2,790	17.4	165 / 354
698	69,796	2,790	17.6	218 / 346
703	70,337	2,790	17.7	185 / 635
708	70,800	2,790	17.8	144 / 826
713	71,259	2,790	17.8	42 / 862
718	71,810	2,790	18.0	524 / 107
722	72,172	2,790	18.1	616 / 169
727	72,673	2,720	18.2	552 / 207
732	73,204	2,720	18.5	329 / 310
738	73,770	2,720	18.9	318 / 237
743	74,348	2,720	19.3	259 / 440
748	74,837	2,720	20.1	50 / 250
753	75,330	2,720	20.4	381 / 325
760	76,011	2,720	20.6	518 / 317
766	76,591	2,720	20.7	500 / 400
771	77,135	2,720	20.8	300 / 500
781	78,122	1,980	21.4	70 / 405
881	88,077	784	33.3	96 / 93
887	88,675	784	33.5	32 / 96
892	89,183	784	34.0	100 / 50
897	89,727	784	34.7	40 / 50
905	90,531	784	36.3	30 / 30
912	91,172	784	37.1	40 / 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
Durham Creek Tributary 2				
008	795	1,620	20.9[2]	40 / 250
016	1,595	1,620	21.4	105 / 242
021	2,143	1,620	21.9	40 / 300
027	2,719	1,620	22.5	58 / 350
032	3,229	1,560	23.1	160 / 184
037	3,744	1,560	25.3	50 / 150
039	3,920	1,560	25.4	100 / 200
043	4,272	1,560	25.6	200 / 200
049	4,894	1,560	26.0	100 / 300
055	5,546	1,560	26.6	55 / 301
Gum Swamp				
229	22,871	1,094	37.7	250 / 210
235	23,541	1,094	37.8	225 / 175
244	24,385	1,094	38.2	200 / 140
252	25,161	1,094	38.8	120 / 215
262	26,166	1,035	39.7	150 / 210
266	26,603	1,035	40.1	125 / 150
275	27,515	1,035	41.0	180 / 130
281	28,105	1,035	41.4	210 / 118
291	29,097	1,035	41.9	220 / 115
299	29,935	914	42.2	233 / 91
Gum Swamp Run East				
027	2,711	1,400	6.6	98 / 260
034	3,392	1,400	7.2	100 / 200
040	4,027	1,400	7.6	185 / 300
046	4,591	1,400	8.0	219 / 120
051	5,148	1,400	8.4	160 / 77
Gum Swamp Run West				
000	38	993	24.8	151 / 21
005	469	993	25.1	120 / 20
010	1,005	993	25.6	97 / 39
015	1,512	993	26.1	100 / 30
021	2,093	993	26.7	45 / 119
026	2,576	993	27.0	100 / 125
036	3,577	953	27.6	253 / 88
041	4,074	953	27.8	422 / 49
046	4,602	953	28.0	400 / 30
052	5,239	953	28.3	400 / 60
058	5,815	545	28.5	350 / 100
063	6,285	545	28.6	250 / 100
067	6,714	545	29.0	50 / 75
071	7,100	545	30.0	50 / 50
075	7,493	545	30.8	40 / 50
079	7,914	545	31.4	25 / 55
080	8,040	545	31.7	25 / 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
Harding Swamp				
013	1,277	750	42.6[2]	100 / 150
019	1,910	750	43.5	30 / 200
023	2,349	750	44.5	153 / 110
030	3,014	656	45.6	150 / 40
033	3,320	656	46.0	160 / 45
038	3,829	656	46.6	75 / 25
Hardison Mill Creek Tributary 2				
292	29,172	1,417	43.0	17 / 300
Herring Run				
008	752	2,310	5.4[2]	277 / 144
009	889	2,310	5.4[2]	78 / 248
013	1,341	2,310	5.4[2]	140 / 164
018	1,777	2,310	5.4[2]	199 / 191
022	2,243	2,310	5.5	307 / 143
027	2,731	2,310	5.7	214 / 461
033	3,296	2,310	5.8	139 / 431
038	3,837	1,950	6.1	210 / 164
044	4,372	1,950	6.4	250 / 50
050	4,975	1,950	6.8	111 / 244
057	5,686	1,950	7.4	106 / 111
060	5,953	1,950	7.8	259 / 59
066	6,620	1,760	8.4	200 / 20
072	7,154	1,760	12.0	31 / 31
072	7,235	1,760	12.7	150 / 100
077	7,685	1,760	12.8	200 / 150
082	8,222	1,760	12.9	142 / 156
087	8,743	1,760	13.2	64 / 142
092	9,208	1,760	13.5	130 / 136
098	9,804	1,760	13.9	153 / 59
107	10,698	1,760	15.0	71 / 67
112	11,153	1,760	15.6	79 / 152
117	11,698	1,760	16.2	49 / 123
123	12,305	1,760	17.2	100 / 30
Hills Creek				
117	11,685	1,130	6.0[2]	25 / 50
118	11,763	1,130	6.0[2]	35 / 117
121	12,066	665	6.1	81 / 81
126	12,635	665	6.3	83 / 78
131	13,140	665	6.6	61 / 77
136	13,630	665	7.1	47 / 68
142	14,159	618	8.1	28 / 21
147	14,703	618	9.6	15 / 60
153	15,281	618	11.0	75 / 10
157	15,746	618	12.5	60 / 15
Horsepen Swamp				

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	2,720	1,859	15.7[2]	187 / 209
032	3,215	1,859	15.7[2]	180 / 100
035	3,549	1,859	15.7[2]	150 / 100
040	4,017	1,859	16.1	184 / 119
046	4,557	1,859	17.0	50 / 50
051	5,092	1,859	17.9	170 / 96
056	5,622	1,859	18.3	182 / 64
061	6,077	1,859	18.6	85 / 200
066	6,554	1,859	18.9	123 / 238
072	7,177	1,859	19.3	31 / 233
076	7,613	1,859	19.6	95 / 235
082	8,231	1,859	20.1	152 / 215
089	8,867	1,859	20.5	70 / 179
097	9,666	1,761	21.1	115 / 163
102	10,207	1,761	21.4	222 / 21
107	10,718	1,761	21.7	122 / 112
113	11,250	1,761	22.1	95 / 227
118	11,760	1,761	22.4	133 / 100
123	12,292	1,761	22.7	85 / 170
128	12,772	1,761	23.0	65 / 228
134	13,410	1,761	23.5	51 / 160
139	13,930	1,761	24.1	140 / 142
147	14,698	1,761	25.0	64 / 36
154	15,384	1,761	26.4	34 / 56
159	15,877	1,761	27.1	111 / 82
164	16,413	1,761	27.5	155 / 91
169	16,948	1,761	27.8	146 / 159
175	17,493	1,470	28.1	110 / 114
181	18,145	1,470	28.7	84 / 146
187	18,707	1,470	29.3	53 / 162
194	19,403	1,313	30.0	52 / 128
197	19,729	1,313	30.3	141 / 51
202	20,208	1,313	30.8	89 / 79
207	20,707	1,313	31.4	143 / 58
212	21,178	1,313	31.9	120 / 65
212	21,223	1,313	32.4	120 / 65
217	21,696	1,313	32.7	112 / 84
227	22,684	1,313	33.3	185 / 89
232	23,160	1,261	33.6	135 / 90
237	23,700	1,261	33.9	180 / 43
242	24,180	1,261	34.2	105 / 91
247	24,732	1,261	34.7	74 / 100
252	25,221	1,261	35.2	74 / 96
258	25,807	1,261	35.7	109 / 60
263	26,284	1,261	36.1	67 / 100

Table 17 - Limited Detailed Flood Hazard Data

Cross Section	Stream Station	Flood Discharge (cfs)	1% Annual Chance Water-Surface Elevation (feet NAVD 88)	Non-Encroachment Width (feet) Left/Right from Stream Centerline
263	26,329	1,261	37.0	67 / 100
268	26,810	1,261	37.2	120 / 127
276	27,637	624	37.7	106 / 49
281	28,145	624	38.8	92 / 61
288	28,752	624	39.4	73 / 69
288	28,797	624	39.4	73 / 69
291	29,109	624	39.6	98 / 49
Old Ford Swamp				
136	13,589	698	25.1[2]	48 / 80
142	14,213	698	25.1[2]	96 / 72
148	14,755	698	26.6	13 / 117
153	15,311	698	28.6	116 / 30
158	15,811	698	33.2	12 / 17
160	15,983	698	33.3	119 / 179
164	16,410	698	33.3	135 / 87
168	16,822	698	33.4	158 / 133
174	17,372	698	33.6	124 / 111
178	17,820	698	33.9	108 / 99
183	18,277	698	34.3	102 / 34
188	18,769	698	35.1	116 / 16
194	19,368	600	35.9	112 / 41
Pinelog Branch				
031	3,063	967	27.2	150 / 170
036	3,582	967	29.4	140 / 115
042	4,186	967	29.4	135 / 157
047	4,666	967	29.5	140 / 145
052	5,247	967	29.5	128 / 130
057	5,681	967	29.6	100 / 135
061	6,137	885	29.6	110 / 100
067	6,674	885	29.8	75 / 105
072	7,189	885	30.0	95 / 105
078	7,767	885	30.2	110 / 95
Pineygrove Branch				
067	6,748	744	28.1	52 / 49
072	7,164	744	29.4	30 / 50
077	7,713	744	30.1	20 / 100
084	8,382	744	31.0	28 / 23
092	9,163	744	32.9	50 / 100
Pollard Swamp				
110	11,000	775	39.4	191 / 146
118	11,806	775	40.0	209 / 85
124	12,368	775	40.6	300 / 50
Porter Creek				
109	10,861	1,076	5.4	110 / 99
109	10,907	1,076	5.7	100 / 80
110	10,966	1,076	5.7	124 / 169

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
116	11,564	1,076	5.8	41 / 158
122	12,237	1,076	5.9	129 / 131
130	13,016	1,043	6.0	154 / 39
136	13,566	1,043	6.2	135 / 78
142	14,158	1,043	6.3	67 / 131
148	14,779	917	6.5	40 / 100
153	15,337	917	7.1	70 / 50
155	15,471	917	7.2	100 / 70
157	15,701	917	7.3	100 / 50
164	16,359	917	7.6	20 / 150
169	16,903	758	8.1	67 / 44
173	17,342	758	8.5	25 / 50
175	17,483	758	8.6	44 / 68
178	17,839	758	9.1	80 / 78
184	18,447	758	10.0	137 / 41
191	19,144	679	11.0	97 / 37
195	19,515	679	11.2	200 / 50
196	19,595	679	11.2	200 / 50
198	19,845	679	11.3	60 / 100
204	20,442	679	11.8	30 / 15
210	20,977	679	13.7	100 / 80
219	21,867	679	14.1	200 / 80
225	22,464	679	14.7	200 / 100
230	23,026	679	15.7	122 / 164
Pungo Swamp				
410	41,015	4,520	19.6	59 / 64
417	41,681	1,750	20.2	29 / 49
421	42,104	1,750	20.3	50 / 80
428	42,751	1,750	20.4	32 / 400
435	43,476	1,750	20.5	27 / 290
442	44,179	1,750	20.7	40 / 400
448	44,831	1,670	20.8	40 / 250
454	45,435	1,670	21.8	100 / 150
456	45,613	1,670	21.9	40 / 150
462	46,212	1,670	22.0	29 / 98
468	46,808	1,670	22.3	55 / 100
474	47,427	1,670	22.5	55 / 100
479	47,914	1,670	22.9	100 / 50
480	48,046	1,670	22.9	66 / 50
488	48,805	1,670	23.3	30 / 50
491	49,076	1,670	25.3	50 / 50
492	49,196	1,670	25.3	47 / 50
633	63,268	5,396	8.6	770 / 400
645	64,486	5,396	9.3	95 / 380
663	66,267	5,396	10.1	500 / 350

Table 17 - Limited Detailed Flood Hazard Data

Cross Section	Stream Station	Flood Discharge (cfs)	1% Annual Chance Water-Surface Elevation (feet NAVD 88)	Non-Encroachment Width (feet) Left/Right from Stream Centerline
678	67,805	5,396	10.6	34 / 625
685	68,528	5,396	10.9	340 / 185
698	69,785	5,260	11.6	34 / 594
713	71,275	5,260	12.3	195 / 428
727	72,677	5,260	13.0	85 / 583
741	74,058	5,260	13.8	24 / 788
759	75,878	5,260	14.9	24 / 688
776	77,605	5,260	15.8	303 / 436
790	78,961	5,071	16.3	557 / 237
806	80,565	5,071	16.8	763 / 295
826	82,574	5,071	17.3	700 / 109
842	84,193	5,071	17.8	135 / 414
856	85,555	5,071	18.6	227 / 641
868	86,768	5,071	19.1	21 / 740
878	87,807	5,071	19.4	60 / 650
886	88,629	5,071	19.6	66 / 57
Snoad Branch				
033	3,298	671	19.0	100 / 50
039	3,919	640	20.5	18 / 18
044	4,356	640	21.3	61 / 57
048	4,755	640	21.9	48 / 92
053	5,252	640	22.5	92 / 55
059	5,920	640	23.5	71 / 63
065	6,466	531	24.6	49 / 100
072	7,219	531	26.0	50 / 105
081	8,084	531	27.5	50 / 100
087	8,712	531	28.9	12 / 119
093	9,297	531	29.8	100 / 62
099	9,883	531	32.1	30 / 20
104	10,435	531	32.4	130 / 130
109	10,882	330	32.5	80 / 80
114	11,379	330	32.6	80 / 80
South Creek				
825	82,527	1,764	5.9	155 / 1,155
829	82,885	1,764	6.0	336 / 364
833	83,296	1,764	6.0	73 / 905
838	83,777	1,764	6.0	20 / 645
843	84,298	1,764	6.1	128 / 498
848	84,770	1,764	6.1	19 / 520
853	85,270	1,764	6.3	19 / 354
857	85,746	1,764	6.4	19 / 489
863	86,257	1,764	6.6	23 / 506
868	86,770	1,764	6.8	438 / 425
872	87,241	1,764	7.1	278 / 338
878	87,769	1,548	7.3	462 / 282

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
882	88,167	1,548	7.4	582 / 15
888	88,792	1,548	7.8	561 / 15
891	89,148	2,210	8.4	485 / 353
892	89,159	2,210	8.6	487 / 351
902	90,159	2,210	10.3	25 / 1,300
911	91,140	2,210	11.9	400 / 1,600
919	91,937	972	12.5	500 / 1,400
927	92,658	972	12.9	350 / 400
937	93,688	972	13.6	200 / 100
943	94,315	972	14.2	250 / 100
951	95,109	972	14.9	95 / 100
Tankard Creek				
175	17,473	1,510	13.8	200 / 170
182	18,247	1,510	14.0	200 / 300
189	18,889	1,510	14.2	150 / 200
198	19,782	1,510	15.1	100 / 100
208	20,814	1,510	16.5	100 / 100
215	21,524	1,510	17.1	100 / 200
221	22,148	1,510	17.7	100 / 200
Tar River				
120	11,985	55,000	7.0	955 / 3,245
Tranters Creek				
804	80,448	8,573	12.1	890 / 90
811	81,150	8,573	12.2	357 / 425
817	81,650	8,573	12.3	285 / 595
821	82,149	8,573	12.3	481 / 684
827	82,650	8,573	12.4	644 / 589
842	84,150	8,573	12.5	109 / 1,436
849	84,850	8,573	12.6	476 / 1,590
856	85,648	8,573	12.7	903 / 900
864	86,385	8,573	12.8	160 / 412
871	87,146	8,573	13.0	663 / 303
876	87,645	8,573	13.1	472 / 258
881	88,144	8,573	13.1	680 / 237
890	89,036	8,524	13.2	1,110 / 302
899	89,923	8,524	13.4	936 / 547
908	90,818	8,524	13.5	791 / 144
918	91,810	8,524	13.6	289 / 753
926	92,648	8,524	13.7	511 / 463
936	93,650	8,524	14.5	944 / 910
936	93,650	8,524	13.8	944 / 633
941	94,150	8,524	13.8	820 / 1,054
946	94,650	8,524	13.8	718 / 757
955	95,494	8,524	13.9	1,590 / 142
971	97,135	8,305	14.0	1,549 / 402
976	97,636	8,305	14.0	1,185 / 630

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
981	98,136	8,305	14.0	1,020 / 671
986	98,637	8,305	14.1	994 / 763
991	99,138	8,305	14.1	1,290 / 681
1001	100,139	8,305	14.2	1,312 / 420
1010	101,029	8,305	14.2	877 / 951
1018	101,796	8,305	14.3	241 / 864
1026	102,640	8,305	14.4	650 / 1,089
1032	103,235	8,305	14.5	890 / 514
1041	104,140	8,305	14.6	1,132 / 440
1046	104,640	8,305	14.6	711 / 656
1061	106,135	8,201	14.9	173 / 749
1071	107,134	8,201	15.1	167 / 886
1076	107,635	8,201	15.2	47 / 918
1081	108,135	8,201	15.4	47 / 1,112
1089	108,892	8,201	15.5	105 / 1,428
1101	110,087	8,201	15.7	724 / 1,454
1112	111,196	7,840	15.9	1,227 / 630
1121	112,135	7,840	16.2	1,014 / 260
1129	112,922	7,840	16.8	61 / 61
1131	113,136	7,840	17.3	168 / 86
1140	113,951	7,836	17.9	1,369 / 50
1150	114,998	7,836	18.2	226 / 1,371
1156	115,598	7,836	18.3	45 / 1,965
1165	116,476	7,836	18.5	226 / 2,365
1171	117,059	7,836	18.6	45 / 2,269
1181	118,142	7,836	18.8	174 / 2,469
1191	119,066	7,836	19.0	45 / 1,366
1206	120,597	7,743	19.3	342 / 2,228
1227	122,661	7,743	19.6	1,935 / 635
1234	123,370	7,743	19.7	2,557 / 108
1242	124,155	7,743	19.8	1,632 / 248
1252	125,154	7,743	20.0	1,828 / 44
1260	126,039	7,743	20.3	872 / 44
1269	126,907	7,743	20.5	1,474 / 82
1277	127,652	7,743	20.7	1,754 / 44
1283	128,327	7,743	20.8	1,643 / 179
1298	129,828	7,743	21.2	44 / 2,152
1306	130,570	7,743	21.4	44 / 2,033
1313	131,336	7,743	21.6	125 / 1,444
1324	132,386	7,743	21.9	645 / 357
1329	132,915	7,743	22.0	643 / 104
1353	135,292	6,923	22.7	2,232 / 560
1361	136,136	6,923	22.8	1,554 / 703
1372	137,163	6,923	23.2	1,651 / 959
1379	137,889	6,923	23.4	1,961 / 517

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
1384	138,365	6,923	23.4	1,560 / 40
1392	139,231	6,923	23.7	3,628 / 40
1400	139,976	6,923	23.8	3,390 / 40
1411	141,134	6,880	24.2	3,150 / 96
1420	142,032	6,880	24.5	1,456 / 40
1431	143,134	6,880	25.2	1,646 / 40
1441	144,108	6,880	25.9	1,026 / 301
1450	144,968	6,880	26.4	1,794 / 40
1456	145,622	6,880	27.0	2,775 / 89
1466	146,636	6,880	27.3	2,118 / 1,002
1475	147,522	6,847	27.5	1,713 / 1,055
1486	148,635	6,847	27.7	429 / 1,897
1496	149,636	6,847	27.9	40 / 1,995
1504	150,431	6,847	28.2	99 / 3,488
1516	151,636	6,847	28.4	532 / 3,581
1546	154,634	6,703	28.9	227 / 245
1554	155,442	6,703	29.4	274 / 294
1560	155,978	6,703	29.9	1,537 / 139
1565	156,483	6,703	30.1	263 / 39
1571	157,134	6,703	30.7	1,639 / 138
1578	157,767	6,703	30.9	1,708 / 39
Upper Broad Creek				
011	1,103	1,660	25.9	500 / 100
015	1,468	1,660	26.5	559 / 63
023	2,293	1,660	27.9	261 / 468
028	2,817	1,660	28.3	32 / 548
035	3,460	1,660	29.0	50 / 300
040	3,990	1,660	29.7	70 / 400
045	4,541	1,660	30.0	51 / 699
053	5,302	1,660	30.4	57 / 628
057	5,737	1,420	30.5	50 / 750
065	6,500	1,420	30.7	93 / 759
071	7,082	1,420	30.8	35 / 1,041
076	7,583	1,420	30.9	73 / 627
081	8,138	1,420	31.1	108 / 910
Whitehurst Creek				
116	11,596	1,220	7.5	150 / 100
118	11,827	1,220	7.9	100 / 125
119	11,872	1,220	7.9	100 / 125
119	11,924	1,220	7.9	62 / 52
122	12,173	1,220	8.3	40 / 30
123	12,333	1,220	11.2	40 / 30
126	12,571	1,220	11.2	50 / 40
130	13,026	1,220	11.2	50 / 60
135	13,497	1,220	11.2	60 / 80

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
141	14,083	1,220	11.3	60 / 70
147	14,703	1,220	11.3	50 / 60

[1]Pungo Swamp

[2]Elevation includes backwater effects

5.3 Coastal Analyses

For the areas of Beaufort County that are impacted by coastal flooding processes, coastal flood hazard analyses were performed to provide estimates of coastal BFEs. Coastal BFEs reflect the increase in water levels during a flood event due to extreme tides and storm surge as well as overland wave effects.

The following subsections provide summaries of how each coastal process was considered for the FIS Report. Greater detail (including assumptions, analysis, and results) is available in the archived project documentation. Table 15 summarizes the methods and/or models used for each of the coastal analyses. Refer to Section 2.5.1 for descriptions of the terms used in this section.

Table 18P, “Summary of Coastal Analyses - Preliminary: Revised or Newly Studied”

Table 18P - Summary of Coastal Analyses - Preliminary: Revised or Newly Studied

Flooding Source	Study Limits From	Study Limits To	Hazard Evaluated	Model or Method Used	Date Analysis Was Completed	Study Type
Atlantic Ocean	Atlantic Ocean coastline	Pungo River Canal	*	removal/ retreat	1/14/2014	DETAILED STUDY
Atlantic Ocean	Atlantic Ocean coastline	Pungo River Canal	*	ADCIRC	1/22/2013	DETAILED STUDY
Atlantic Ocean	Atlantic Ocean coastline	Pungo River Canal	*	CHAMP 2.0	1/14/2014	DETAILED STUDY
Atlantic Ocean	Atlantic Ocean coastline	Pungo River Canal	*	CHAMP / RUNUP 2.0 (2007)	1/14/2014	DETAILED STUDY
Atlantic Ocean	Atlantic Ocean coastline	Pungo River Canal	*	WHAFIS 4.0	1/14/2014	DETAILED STUDY
Pamlico River	Pamlico/Hyde County Borders	Pamlico River	*	ADCIRC	1/22/2013	DETAILED STUDY
Pamlico River	Pamlico/Hyde County Borders	Pamlico River	*	CHAMP / RUNUP 2.0 (2007)	4/4/2014	DETAILED STUDY
Pamlico River	Pamlico/Hyde County Borders	Pamlico River	*	WHAFIS 4.0	4/4/2014	DETAILED STUDY
Pamlico River	Pamlico/Hyde County Borders	Pamlico River	*	removal/ retreat	4/4/2014	DETAILED STUDY
Pamlico River	Pamlico/Hyde County Borders	Pamlico River	*	CHAMP 2.0	4/4/2014	DETAILED STUDY
Pungo River	Confluence with the Pamlico Sound	Approximately 5.1 miles upstream of US Highway 264	*	CHAMP / RUNUP 2.0 (2007)	1/14/2014	DETAILED STUDY
Pungo River	Confluence with the Pamlico Sound	Approximately 5.1 miles upstream of US Highway 264	*	removal/ retreat	1/14/2014	DETAILED STUDY
Pungo River	Confluence with the Pamlico Sound	Approximately 5.1 miles upstream of US Highway 264	*	WHAFIS 4.0	1/14/2014	DETAILED STUDY
Pungo River	Confluence with the Pamlico Sound	Approximately 5.1 miles upstream of US Highway 264	*	ADCIRC	1/22/2013	DETAILED STUDY
Pungo River	Confluence with the Pamlico Sound	Approximately 5.1 miles upstream of US Highway 264	*	CHAMP 2.0	1/14/2014	DETAILED STUDY

Table 18, “Summary of Coastal Analyses”

Table 18 - Summary of Coastal Analyses

Flooding Source	Study Limits From	Study Limits To	Hazard Evaluated	Model or Method Used	Date Analysis Was Completed
Atlantic Ocean	Atlantic Ocean coastline	Pungo River Canal	*	removal/ retreat	1/14/2014

Table 18 - Summary of Coastal Analyses

Atlantic Ocean	Atlantic Ocean coastline	Pungo River Canal	*	ADCIRC	1/22/2013
Atlantic Ocean	Atlantic Ocean coastline	Pungo River Canal	*	CHAMP 2.0	1/14/2014
Atlantic Ocean	Atlantic Ocean coastline	Pungo River Canal	*	CHAMP / RUNUP 2.0 (2007)	1/14/2014
Atlantic Ocean	Atlantic Ocean coastline	Pungo River Canal	*	WHAFIS 4.0	1/14/2014
Pamlico River	Pamlico/Hyde County Borders	Pamlico River	*	ADCIRC	1/22/2013
Pamlico River	Pamlico/Hyde County Borders	Pamlico River	*	CHAMP / RUNUP 2.0 (2007)	4/4/2014
Pamlico River	Pamlico/Hyde County Borders	Pamlico River	*	WHAFIS 4.0	4/4/2014
Pamlico River	Pamlico/Hyde County Borders	Pamlico River	*	removal/ retreat	4/4/2014
Pamlico River	Pamlico/Hyde County Borders	Pamlico River	*	CHAMP 2.0	4/4/2014
Pungo River	Confluence with the Pamlico Sound	Approximately 5.1 miles upstream of US Highway 264	*	CHAMP / RUNUP 2.0 (2007)	1/14/2014
Pungo River	Confluence with the Pamlico Sound	Approximately 5.1 miles upstream of US Highway 264	*	removal/ retreat	1/14/2014
Pungo River	Confluence with the Pamlico Sound	Approximately 5.1 miles upstream of US Highway 264	*	WHAFIS 4.0	1/14/2014
Pungo River	Confluence with the Pamlico Sound	Approximately 5.1 miles upstream of US Highway 264	*	ADCIRC	1/22/2013
Pungo River	Confluence with the Pamlico Sound	Approximately 5.1 miles upstream of US Highway 264	*	CHAMP 2.0	1/14/2014

5.3.1 Total Stillwater Elevations

The total stillwater elevations (stillwater including storm surge plus wave setup) for the 1% annual chance flood were determined for areas subject to coastal flooding. The models and methods that were used to determine storm surge and wave setup are listed in Table 15. The stillwater elevation that was used for each transect in coastal analyses is shown in Table 20, “Coastal Transect Parameters.”

Astronomical Tide

Astronomical tidal statistics were generated directly from local tidal constituents by sampling the predicted tide at random times throughout the tidal epoch.

Storm Surge Statistics

Storm surge is modeled based on characteristics of actual storms responsible for significant coastal flooding. The characteristics of these storms are typically determined by statistical study of the regional historical record of storms or by statistical study of tidal gages.

When historic records are used to calculate storm surge, characteristics such as the strength, size, track, etc., of storms are identified by site. Storm data was used in conjunction with numerical hydrodynamic models to determine the corresponding storm surge levels. An extreme value analysis was performed on the storm surge modeling results to determine a stillwater elevation for the 1% annual chance event.

Tidal gages can be used instead of historic records of storms when the available tidal gage record for the area represents both the astronomical tide component and the storm surge component. Table 16 provides the gage name, managing agency, gage type, gage identifier, start date, end date, and statistical methodology applied to each gage used to determine the stillwater elevations. For areas between gages, peak stillwater elevations for selected recurrence intervals were estimated by combining interpolation between gages and observed high water marks during major storms. A regionalized statistical approach was applied to the gage data so that stillwater elevations in areas between gages could be identified.

Table 19, “Tide Gage Analysis Specifics” is not applicable in Beaufort County.

Combined Riverine and Tidal Effects

Riverine and surge rates for the lower reaches of the Inundation River were combined by developing curves for rate of occurrence vs. flood level for each flood source.

Wave Setup Analysis
Wave setup was computed during the storm surge modeling through the methods and models listed in Table 15 and included in the frequency analysis for the determination of the total stillwater elevations. The oscillating component of wave setup, dynamic wave setup, was calculated for areas subject to wave runup hazards.

5.3.2 Waves

A coastal wave model (Coastal State University 2007) was used to calculate the nearshore wave fields required for the addition of wave setup effects. Three nested grids were used to obtain sufficient nearshore resolution to represent the radiation stress gradients required as ADCIRC inputs. Radiation stress fields output from the inner grids are used by ADCIRC to estimate the contribution of breaking waves (wave setup effects) to the total stillwater elevation.

5.3.3 Coastal Erosion

A single storm episode can cause extensive erosion in coastal areas. Storm-induced erosion was evaluated to determine the modification to existing topography that is expected to be associated with flooding events. Erosion was evaluated using the methods listed in Table 15. The post-event eroded profile was used for the subsequent transect-based onshore wave hazard analyses.

5.3.4 Wave Hazard Analyses

Overland wave hazards were evaluated to determine the combined effects of ground elevation, vegetation, and physical features on overland wave propagation and wave runup. These analyses were performed at representative transects along all shorelines for which waves were expected to be present during the floods of the selected recurrence intervals. The results of these analyses were used to determine elevations for the 1% annual chance flood.

Transect locations were chosen with consideration given to the physical land characteristics as well as development type and density so that they would closely represent conditions in their locality. Additional consideration was given to changes in the total stillwater elevation. Transects were spaced close together in areas of complex topography and dense development or where total stillwater elevations varied. In areas having more uniform characteristics, transects were spaced at larger intervals. Transects shown in Figure 9, “Transect Location Map,” are also depicted on the FIRM. Table 17 provides the location, stillwater elevations, and starting wave conditions for each transect evaluated for overland wave hazards. In this table, “starting” indicates the parameter value at the beginning of the transect.

Wave Height Analysis
Wave height analyses were performed to determine wave heights and corresponding wave crest elevations for the areas inundated by coastal flooding and subject to overland wave propagation hazards. Refer to Figure 6 for a schematic of a coastal transect evaluated for overland wave propagation hazards.

Wave heights and wave crest elevations were modeled using the methods and models listed in Table 18, “Summary of Coastal Analyses”.

Wave Runup Analysis
Wave runup analyses were performed to determine the height and extent of runup beyond the limit of stillwater inundation for the 1% annual chance flood. Wave runup elevations were modeled using the methods and models listed in Table 15.

Table 20, “Coastal Transect Parameters”

Table 20: Coastal Transect Parameters

Coastal Transect	Starting Wave Conditions for the 1% Annual Chance		Starting Stillwater Elevations (ft NAVD88) Range of Stillwater Elevations (ft NAVD88)				
	Significant Wave Height Hs (ft)	Peak Wave Period Tp (sec)	10% Annual Chance	4% Annual Chance	2% Annual Chance	1% Annual Chance	.2% Annual Chance
Atlantic Ocean		**From Atlantic Ocean coastline**			**To Pungo River Canal**		
41	3.7	3.6	*	*	*	4.2	5.5
			*	*	*	4.0 - 4.2	5.3 - 5.5
47	5.0	4.2	*	*	*	3.9	5.5

Table 20: Coastal Transect Parameters

Coastal Transect	Starting Wave Conditions for the 1% Annual Chance		Starting Stillwater Elevations (ft NAVD88) Range of Stillwater Elevations (ft NAVD88)				
	Significant Wave Height Hs (ft)	Peak Wave Period Tp (sec)	10% Annual Chance	4% Annual Chance	2% Annual Chance	1% Annual Chance	.2% Annual Chance
			*	*	*	3.8 - 4.0	5.0 - 5.5
49	5.0	4.2	*	*	*	3.9	5.5
			*	*	*	3.7 - 3.9	4.8 - 5.5
56	5.0	4.2	*	*	*	3.7	4.8
			*	*	*	3.7 - 4.0	4.7 - 5.1
Pamlico River		**From Pamlico / Hyde county boundary**			**To Pamlico River**		
1	3.8	3.6	*	*	*	4.2	5.4
			*	*	*	4.2 - 4.3	5.4 - 5.6
3	3.8	3.6	*	*	*	4.3	5.5
			*	*	*	4.3 - 4.3	5.5 - 5.6
5	3.8	3.6	*	*	*	4.3	5.5
			*	*	*	4.3 - 4.3	5.5 - 5.6
7	3.8	3.6	*	*	*	4.4	5.6
			*	*	*	4.3 - 4.5	5.6 - 5.7
9	3.8	3.6	*	*	*	4.5	5.7
			*	*	*	4.5 - 4.5	5.7 - 5.7
11	3.8	3.6	*	*	*	4.6	5.8
			*	*	*	4.6 - 4.6	5.8 - 5.9
13	3.8	3.6	*	*	*	4.6	5.9
			*	*	*	4.6 - 4.9	5.9 - 6.2
15	3.8	3.6	*	*	*	4.7	6.0
			*	*	*	4.7 - 5.2	6.0 - 6.5
17	3.8	3.6	*	*	*	4.8	6.1
			*	*	*	4.8 - 5.4	6.1 - 6.9
19	3.8	3.6	*	*	*	4.9	6.2
			*	*	*	4.9 - 5.5	6.2 - 6.9
21	3.8	3.6	*	*	*	4.9	6.3
			*	*	*	4.9 - 5.5	6.3 - 6.9
23	3.8	3.6	*	*	*	5.0	6.4
			*	*	*	5.0 - 5.3	6.4 - 6.8
25	3.8	3.6	*	*	*	5.0	6.4
			*	*	*	5.0 - 5.0	6.4 - 6.4
27	3.8	3.6	*	*	*	5.0	6.4
			*	*	*	5.0 - 5.0	6.4 - 6.4
29	3.8	3.6	*	*	*	5.0	6.5
			*	*	*	5.0 - 5.0	6.5 - 6.5
31	3.8	3.6	*	*	*	5.1	6.5
			*	*	*	5.1 - 5.1	6.5 - 6.5
33	3.8	3.6	*	*	*	5.1	6.6
			*	*	*	5.1 - 5.1	6.6 - 6.6
35	3.8	3.6	*	*	*	5.1	6.6
			*	*	*	5.1 - 5.1	6.6 - 6.6
37	3.7	3.6	*	*	*	5.2	6.6
			*	*	*	5.2 - 5.2	6.6 - 6.6
39	3.7	3.6	*	*	*	5.3	6.7
			*	*	*	5.3 - 5.3	6.7 - 6.7
41	3.7	3.6	*	*	*	5.2	6.7
			*	*	*	5.2 - 5.2	6.7 - 6.7
43	3.7	3.6	*	*	*	5.2	6.7
			*	*	*	5.2 - 5.2	6.7 - 6.7
45	3.7	3.6	*	*	*	5.3	6.8
			*	*	*	5.3 - 5.3	6.8 - 6.8
47	3.7	3.6	*	*	*	5.3	6.8
			*	*	*	5.3 - 5.3	6.8 - 6.8
49	3.7	3.6	*	*	*	5.3	6.9
			*	*	*	5.3 - 5.3	6.9 - 6.9
51	3.7	3.6	*	*	*	5.4	7.0
			*	*	*	5.4 - 5.4	7.0 - 7.0

Table 20: Coastal Transect Parameters

Coastal Transect	Starting Wave Conditions for the 1% Annual Chance		Starting Stillwater Elevations (ft NAVD88) Range of Stillwater Elevations (ft NAVD88)				
	Significant Wave Height Hs (ft)	Peak Wave Period Tp (sec)	10% Annual Chance	4% Annual Chance	2% Annual Chance	1% Annual Chance	.2% Annual Chance
53	3.7	3.6	*	*	*	5.4	7.0
			*	*	*	5.4 - 5.4	7.0 - 7.0
55	3.7	3.6	*	*	*	5.4	7.0
			*	*	*	5.4 - 5.4	7.0 - 7.0
57	3.7	3.6	*	*	*	5.5	7.1
			*	*	*	5.5 - 5.5	7.1 - 7.1
59	3.7	3.6	*	*	*	5.4	7.0
			*	*	*	5.4 - 5.4	7.0 - 7.1
61	3.7	3.6	*	*	*	5.4	7.0
			*	*	*	5.4 - 5.4	7.0 - 7.0
63	3.7	3.6	*	*	*	5.3	6.9
			*	*	*	5.2 - 5.3	6.7 - 6.9
65	3.7	3.6	*	*	*	5.3	6.8
			*	*	*	5.2 - 5.3	6.7 - 6.8
67	3.7	3.6	*	*	*	5.2	6.7
			*	*	*	5.2 - 5.2	6.7 - 6.7
69	3.7	3.6	*	*	*	5.2	6.7
			*	*	*	5.2 - 5.2	6.7 - 6.7
71	3.7	3.6	*	*	*	5.2	6.6
			*	*	*	5.2 - 5.2	6.6 - 6.6
73	3.7	3.6	*	*	*	5.1	6.6
			*	*	*	5.1 - 5.1	6.6 - 6.6
75	3.7	3.6	*	*	*	5.1	6.5
			*	*	*	5.1 - 5.1	6.5 - 6.5
77	3.7	3.6	*	*	*	5.0	6.4
			*	*	*	5.0 - 5.0	6.4 - 6.5
79	3.7	3.6	*	*	*	4.9	6.3
			*	*	*	4.9 - 4.9	6.3 - 6.3
81	3.7	3.6	*	*	*	4.9	6.3
			*	*	*	4.9 - 4.9	6.3 - 6.4
83	3.7	3.6	*	*	*	4.9	6.3
			*	*	*	4.9 - 4.9	6.3 - 6.3
85	3.7	3.6	*	*	*	4.9	6.2
			*	*	*	4.8 - 4.9	6.2 - 6.2
87	3.7	3.6	*	*	*	4.7	6.0
			*	*	*	4.7 - 4.7	6.0 - 6.0
89	3.7	3.6	*	*	*	4.6	5.9
			*	*	*	4.6 - 4.6	5.9 - 5.9
91	3.7	3.6	*	*	*	4.5	5.7
			*	*	*	4.4 - 4.5	5.6 - 5.7
93	3.7	3.6	*	*	*	4.4	5.5
			*	*	*	4.3 - 4.4	5.5 - 5.5
95	3.7	3.6	*	*	*	4.3	5.5
			*	*	*	4.3 - 4.3	5.4 - 5.5
97	3.7	3.6	*	*	*	4.2	5.4
			*	*	*	4.1 - 4.2	5.3 - 5.4
99	3.7	3.6	*	*	*	4.1	5.3
			*	*	*	4.1 - 4.1	5.3 - 5.3
122	2.2	2.7	*	*	*	5.5	7.0
			*	*	*	5.5 - 5.5	7.0 - 7.1
124	2.2	2.7	*	*	*	5.4	7.0
			*	*	*	5.4 - 5.4	7.0 - 7.0
126	2.2	2.7	*	*	*	5.4	7.0
			*	*	*	5.4 - 5.4	7.0 - 7.0
128	2.2	2.7	*	*	*	5.4	7.0
			*	*	*	5.4 - 5.4	7.0 - 7.0
130	2.2	2.7	*	*	*	5.5	7.1
			*	*	*	5.5 - 5.5	7.1 - 7.1
102	3.7	3.6	*	*	*	4.1	5.2

Table 20: Coastal Transect Parameters

Coastal Transect	Starting Wave Conditions for the 1% Annual Chance		Starting Stillwater Elevations (ft NAVD88) Range of Stillwater Elevations (ft NAVD88)				
	Significant Wave Height Hs (ft)	Peak Wave Period Tp (sec)	10% Annual Chance	4% Annual Chance	2% Annual Chance	1% Annual Chance	.2% Annual Chance
			*	*	*	4.1 - 4.1	5.2 - 5.3
104	3.7	3.6	*	*	*	4.1	5.3
			*	*	*	4.1 - 4.2	5.3 - 5.4
106	3.7	3.6	*	*	*	4.1	5.3
			*	*	*	4.1 - 4.3	5.3 - 5.5
108	3.7	3.6	*	*	*	4.1	5.3
			*	*	*	4.1 - 4.1	5.3 - 5.4
110	3.7	3.6	*	*	*	4.2	5.4
			*	*	*	4.1 - 4.2	5.3 - 5.4
112	3.7	3.6	*	*	*	4.3	5.6
			*	*	*	4.3 - 4.4	5.6 - 5.7
114	3.7	3.6	*	*	*	4.4	5.6
			*	*	*	4.4 - 4.4	5.6 - 5.7
116	3.7	3.6	*	*	*	4.3	5.6
			*	*	*	4.3 - 4.4	5.6 - 5.7
118	3.7	3.6	*	*	*	4.2	5.5
			*	*	*	4.2 - 4.2	5.5 - 5.5
120	3.7	3.6	*	*	*	4.2	5.4
			*	*	*	4.0 - 4.2	5.3 - 5.4
Pamlico Sound		**From The entire shoreline within the Tar Pamlico River Basin**			**To The entire shoreline within the Tar Pamlico River Basin**		

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 Beaufort 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 Beaufort County is # feet. The locations used to establish the conversion factor were USGS quadrangle corners that fell within the county, as well as those that were within 2.5 miles outside the county. The benchmarks are referenced to NAVD 88. Table 21, “Datum Conversion Locations and Values,” is shown below.

Table 21, “Datum Conversion Locations and Values.”

Table 21 - Datum Conversion Locations and Values

Latitude	Longitude	Conversion from NGVD29 to NAVD88 (feet)
35.62	-77.12	-1.12
35.63	-77.00	-1.09
35.63	-76.88	-1.09
35.63	-76.75	-1.07
35.62	-76.62	-1.07
35.50	-77.13	-1.09
35.50	-77.00	-1.07

Table 21 - Datum Conversion Locations and Values

Latitude	Longitude	Conversion from NGVD29 to NAVD88 (feet)
35.50	-76.87	-1.09
35.50	-76.75	-1.09
35.50	-76.63	-1.09
35.38	-77.00	-1.07
35.38	-76.88	-1.07
35.38	-76.75	-1.06
35.38	-76.63	-1.05
35.25	-76.88	-1.07
35.25	-76.75	-1.07
Average conversion in Beaufort County from NGVD 29 to NAVD 88 = -1.08 feet		

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

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

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

Vertical Control Monuments

Qualifying bench marks within Beaufort 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.

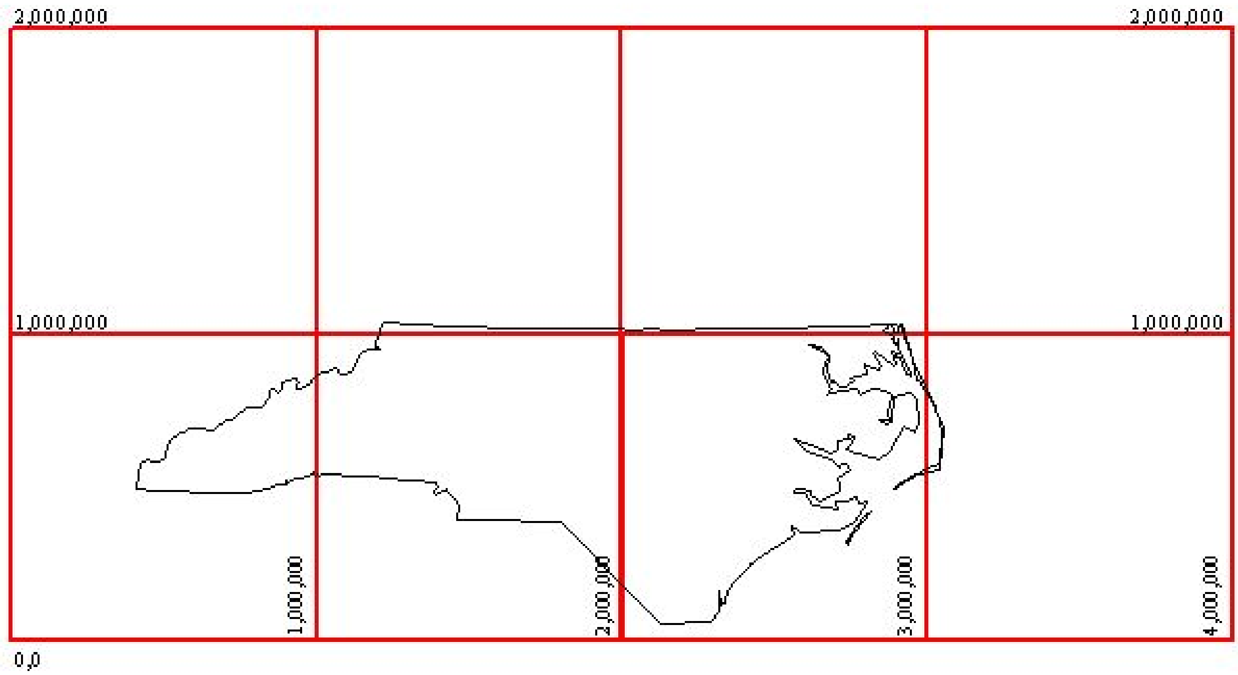

Figure 3 - North Carolina’s State Plane Coordinate System

6.3 Floodplain and Floodway Delineation

Floodplain Boundaries

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

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

For coastal floodplains, after analyzing wave heights along each transect, wave elevations were interpolated between transects. Various source data were used in the interpolation, including topographic data described above. Controlling features affecting the elevations were identified and considered in relation to their positions at particular transect and their variation between transects. •

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

Floodway Delineation

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

Table 22 - Floodway Data

Floodway Source		Floodway			Water Surface Elevation			
Cross Section	Distance (Feet Above Mouth)	Width (Feet)	Section Area (Square Feet)	Mean Velocity (Feet Per Second)	Regulatory	Without Floodway	With Floodway	Increase
Acre Swamp								
048	4,759	57	617	6.2	20.3	20.3	20.9	0.6
053	5,305	95	796	4.8	21.3	21.3	21.9	0.6
054	5,380	150	1,127	3.4	23.0	23.0	23.0	0.0
059	5,922	328	2,065	1.9	23.9	23.9	23.9	0.0
067	6,720	623	3,426	1.1	24.0	24.0	24.3	0.3
073	7,253	731	3,878	1.0	24.1	24.1	24.5	0.4
081	8,072	569	3,061	1.2	24.3	24.3	24.7	0.4
089	8,850	727	3,523	1.1	24.6	24.6	25.0	0.4
098	9,804	1,124	5,557	0.7	24.8	24.8	25.3	0.5
107	10,733	725	2,641	1.4	25.1	25.1	25.6	0.5
114	11,386	538	2,153	1.7	25.3	25.3	25.9	0.6
123	12,279	534	2,550	1.4	26.0	26.0	26.7	0.7
131	13,129	398	1,758	2.1	26.5	26.5	27.2	0.7
139	13,892	443	2,391	1.3	27.2	27.2	28.0	0.8
150	14,959	454	2,250	1.4	27.7	27.7	28.5	0.8
Aggie Run								
010	978	715	4,545	1.1	11.3[1]	8.5	9.4	0.9
014	1,424	775	5,834	0.8	11.3[1]	8.6	9.6	1.0
022	2,235	510	4,570	1.1	11.3[1]	8.7	9.7	1.0
029	2,928	263	2,491	2.0	11.3[1]	9.0	10.0	1.0
032	3,202	190	1,881	2.6	11.3[1]	9.2	10.1	0.9
034	3,448	358	3,601	1.4	11.3[1]	9.6	10.5	0.9
044	4,414	580	5,060	1.0	11.3[1]	9.9	10.9	1.0
052	5,173	609	4,856	1.0	11.3[1]	10.1	11.1	1.0
054	5,358	585	4,173	1.2	11.3[1]	10.8	11.7	0.9
062	6,245	455	4,774	1.0	11.3[1]	11.0	12.0	1.0
070	6,951	230	2,285	2.1	11.3[1]	11.2	12.2	1.0
079	7,897	145	1,083	4.5	12.4	12.4	13.2	0.8
087	8,663	275	2,780	1.8	13.5	13.5	14.3	0.8
092	9,232	520	4,793	1.0	13.7	13.7	14.6	0.9
097	9,691	758	4,034	1.2	13.8	13.8	14.7	0.9
102	10,209	1,045	8,683	0.6	14.0	14.0	14.9	0.9
109	10,858	815	4,873	1.0	14.1	14.1	15.0	0.9
115	11,482	683	5,778	0.9	14.2	14.2	15.2	1.0
120	12,008	390	3,067	1.6	14.3	14.3	15.3	1.0
126	12,582	646	5,464	0.9	14.6	14.6	15.6	1.0

Table 22 - Floodway Data

Floodway Source		Floodway			Water Surface Elevation			
Cross Section	Distance (Feet Above Mouth)	Width (Feet)	Section Area (Square Feet)	Mean Velocity (Feet Per Second)	Regulatory	Without Floodway	With Floodway	Increase
131	13,107	840	5,116	0.9	14.8	14.8	15.7	0.9
136	13,553	901	6,831	0.7	14.9	14.9	15.9	1.0
139	13,940	729	6,156	0.8	15.0	15.0	16.0	1.0
146	14,574	460	3,247	1.5	15.1	15.1	16.1	1.0
150	15,008	330	2,541	1.9	15.6	15.6	16.4	0.8
156	15,607	350	3,632	1.3	16.0	16.0	16.8	0.8
159	15,932	410	4,176	1.2	16.2	16.2	16.9	0.7
167	16,669	711	4,810	1.0	16.5	16.5	17.1	0.6
172	17,158	670	5,513	0.9	16.6	16.6	17.3	0.7
176	17,642	700	5,332	0.9	16.8	16.8	17.4	0.6
181	18,063	940	8,449	0.6	16.9	16.9	17.5	0.6
185	18,513	920	7,102	0.7	16.9	16.9	17.6	0.7
192	19,236	840	7,044	0.7	17.0	17.0	17.7	0.7
196	19,636	980	7,175	0.7	17.1	17.1	17.7	0.6
201	20,058	840	5,342	0.9	17.2	17.2	17.7	0.5
203	20,347	640	4,361	1.1	17.3	17.3	17.8	0.5
206	20,551	790	6,940	0.7	18.3	18.3	18.5	0.2
211	21,099	440	4,006	1.2	18.3	18.3	18.5	0.2
218	21,754	440	3,295	1.4	18.4	18.4	18.8	0.4
222	22,203	625	5,292	0.9	18.5	18.5	19.0	0.5
229	22,866	773	6,601	0.7	18.6	18.6	19.2	0.6
237	23,673	633	5,699	0.8	18.7	18.7	19.3	0.6
245	24,491	529	4,877	0.9	18.9	18.9	19.6	0.7
252	25,173	548	4,853	0.9	19.1	19.1	19.8	0.7
257	25,685	530	4,340	1.0	19.2	19.2	20.0	0.8
261	26,064	596	6,181	0.7	19.4	19.4	20.1	0.7
267	26,692	642	6,570	0.7	19.5	19.5	20.2	0.7
272	27,221	815	7,928	0.6	19.5	19.5	20.3	0.8
280	28,023	559	5,144	0.9	19.6	19.6	20.4	0.8
288	28,776	611	5,693	0.8	19.7	19.7	20.6	0.9
Bailey Creek								
053	5,267	190	851	1.7	5.5	5.5	4.6	-0.9
058	5,757	107	525	2.8	5.5	5.5	5.3	-0.2
059	5,914	107	572	2.6	5.8	5.8	5.7	-0.1
061	6,107	126	718	2.1	6.0	6.0	5.9	-0.1
066	6,598	200	1,215	1.2	6.2	6.2	6.5	0.3
070	6,990	279	1,698	0.9	6.2	6.2	6.7	0.5
075	7,468	330	2,169	0.7	6.3	6.3	6.8	0.5
080	8,000	302	1,916	0.7	6.4	6.4	7.0	0.6
085	8,500	268	1,566	0.9	6.5	6.5	7.1	0.6
090	9,017	304	1,752	0.8	6.6	6.6	7.4	0.8
094	9,442	293	1,751	0.8	6.8	6.8	7.5	0.7
100	10,000	272	1,576	0.9	6.9	6.9	7.7	0.8
105	10,451	103	496	2.7	7.0	7.0	7.8	0.8
110	11,025	209	1,316	1.0	7.6	7.6	8.5	0.9

Table 22 - Floodway Data

Floodway Source		Floodway			Water Surface Elevation			
Cross Section	Distance (Feet Above Mouth)	Width (Feet)	Section Area (Square Feet)	Mean Velocity (Feet Per Second)	Regulatory	Without Floodway	With Floodway	Increase
115	11,516	223	1,196	1.1	7.8	7.8	8.7	0.9
117	11,747	189	1,024	1.3	7.9	7.9	8.8	0.9
122	12,177	91	489	2.6	8.1	8.1	9.1	1.0
123	12,299	83	559	2.2	9.2	9.2	9.9	0.7
128	12,776	137	993	1.3	9.4	9.4	10.2	0.8
Bear Creek								
149	14,914	318	1,372	1.1	6.3[1]	5.6	4.5	-1.1
156	15,608	240	1,207	1.2	6.3[1]	5.7	5.2	-0.5
160	16,000	195	970	1.5	6.3[1]	5.8	5.6	-0.2
165	16,500	198	1,013	1.4	6.3[1]	6.0	6.2	0.2
169	16,859	179	841	1.7	6.3	6.3	6.7	0.4
174	17,388	162	663	2.2	7.1	7.1	7.8	0.7
178	17,821	185	969	1.5	8.0	8.0	8.8	0.8
183	18,272	210	1,029	1.4	8.5	8.5	9.5	1.0
187	18,707	226	1,064	1.0	9.0	9.0	10.0	1.0
190	19,000	146	703	1.5	9.3	9.3	10.2	0.9
195	19,500	136	629	1.7	10.1	10.1	11.1	1.0
200	20,000	110	479	2.2	11.3	11.3	12.2	0.9
205	20,500	133	607	1.8	12.5	12.5	13.4	0.9
208	20,831	109	419	2.6	13.1	13.1	14.0	0.9
211	21,078	61	306	3.5	13.6	13.6	14.3	0.7
212	21,161	68	423	2.5	14.0	14.0	14.6	0.6
215	21,500	92	344	3.1	14.3	14.3	14.8	0.5
221	22,088	115	411	2.6	15.9	15.9	16.5	0.6
223	22,345	152	643	1.5	16.4	16.4	17.2	0.8
225	22,510	86	288	3.3	16.6	16.6	17.4	0.8
226	22,601	86	399	2.4	17.3	17.3	17.7	0.4
230	23,000	89	464	2.1	17.6	17.6	18.1	0.5
235	23,500	64	332	2.9	17.9	17.9	18.5	0.6
240	24,000	64	352	2.7	18.3	18.3	18.9	0.6
243	24,291	68	354	2.7	18.5	18.5	19.2	0.7
245	24,500	63	223	4.3	18.8	18.8	19.3	0.5
250	25,000	60	286	3.4	20.5	20.5	21.5	1.0
256	25,577	40	273	3.5	21.7	21.7	22.6	0.9
257	25,670	40	269	3.6	23.4	23.4	24.1	0.7
261	26,073	84	384	2.3	24.2	24.2	24.7	0.5
265	26,495	117	484	1.9	24.9	24.9	25.7	0.8
270	27,010	145	615	1.5	25.7	25.7	26.6	0.9
276	27,589	93	430	2.1	26.6	26.6	27.5	0.9
281	28,107	100	512	1.7	27.4	27.4	28.4	1.0
287	28,670	59	277	2.6	28.2	28.2	29.2	1.0
293	29,283	33	195	3.7	29.4	29.4	30.3	0.9
299	29,904	34	179	4.0	30.8	30.8	31.7	0.9
304	30,440	45	230	3.1	32.1	32.1	33.0	0.9
310	30,972	30	156	4.6	33.4	33.4	34.3	0.9

Table 22 - Floodway Data

Floodway Source		Floodway			Water Surface Elevation			
Cross Section	Distance (Feet Above Mouth)	Width (Feet)	Section Area (Square Feet)	Mean Velocity (Feet Per Second)	Regulatory	Without Floodway	With Floodway	Increase
Beaverdam Swamp								
336	33,568	83	1,036	2.9	12.9	12.9	13.9	1.0
345	34,548	454	2,645	1.0	13.4	13.4	14.3	0.9
354	35,378	360	2,365	1.1	13.8	13.8	14.7	0.9
363	36,282	395	2,142	1.2	14.3	14.3	15.2	0.9
373	37,287	500	2,503	1.1	15.0	15.0	15.9	0.9
385	38,498	437	2,053	1.3	15.9	15.9	16.7	0.8
394	39,406	365	2,048	0.9	16.7	16.7	17.3	0.6
402	40,194	360	1,610	1.2	17.0	17.0	17.7	0.7
411	41,060	275	1,323	1.5	17.6	17.6	18.3	0.7
420	42,008	231	1,298	1.5	18.3	18.3	19.2	0.9
428	42,831	127	788	2.5	19.1	19.1	20.0	0.9
430	42,985	110	656	2.9	19.3	19.3	20.3	1.0
439	43,862	232	1,387	1.3	20.8	20.8	21.6	0.8
445	44,513	342	1,949	1.0	21.2	21.2	22.0	0.8
453	45,290	294	1,688	1.1	21.4	21.4	22.4	1.0
462	46,152	264	1,317	1.4	21.9	21.9	22.9	1.0
470	46,992	262	1,332	1.4	22.6	22.6	23.6	1.0
476	47,605	190	1,101	1.6	23.1	23.1	24.1	1.0
484	48,364	176	872	2.1	23.8	23.8	24.8	1.0
491	49,138	231	1,216	1.4	24.7	24.7	25.5	0.8
498	49,779	175	935	1.9	25.2	25.2	26.1	0.9
503	50,273	143	832	2.0	25.8	25.8	26.6	0.8
508	50,771	149	761	2.2	26.2	26.2	27.1	0.9
512	51,227	78	571	3.0	26.8	26.8	27.7	0.9
516	51,573	150	857	2.0	27.4	27.4	28.1	0.7
517	51,664	153	1,000	1.7	27.5	27.5	28.4	0.9
520	52,012	154	942	1.8	27.6	27.6	28.6	1.0
526	52,610	180	1,027	1.6	28.1	28.1	29.1	1.0
532	53,242	180	937	1.8	29.0	29.0	29.9	0.9
537	53,660	250	1,378	1.0	29.4	29.4	30.4	1.0
538	53,788	225	1,203	1.1	29.9	29.9	30.6	0.7
542	54,220	270	1,600	0.9	30.1	30.1	30.8	0.7
548	54,755	290	1,523	0.9	30.2	30.2	31.1	0.9
554	55,366	324	1,886	0.7	30.4	30.4	31.3	0.9
560	56,043	278	1,493	0.9	30.6	30.6	31.6	1.0
567	56,709	131	676	2.0	31.0	31.0	31.9	0.9
573	57,317	134	640	2.0	31.9	31.9	32.6	0.7
580	57,965	174	864	1.5	32.6	32.6	33.2	0.6
586	58,591	145	753	1.7	33.1	33.1	33.7	0.6
587	58,742	130	676	1.9	33.5	33.5	34.0	0.5
594	59,379	208	1,033	1.1	34.0	34.0	34.5	0.5
602	60,165	281	1,278	0.9	34.2	34.2	34.9	0.7
608	60,750	261	941	1.2	34.4	34.4	35.1	0.7
613	61,313	290	1,036	1.1	34.7	34.7	35.5	0.8

Table 22 - Floodway Data

Floodway Source		Floodway			Water Surface Elevation			
Cross Section	Distance (Feet Above Mouth)	Width (Feet)	Section Area (Square Feet)	Mean Velocity (Feet Per Second)	Regulatory	Without Floodway	With Floodway	Increase
618	61,833	200	739	1.5	35.0	35.0	35.8	0.8
619	61,887	210	751	1.5	35.1	35.1	35.9	0.8
622	62,226	204	801	1.4	35.4	35.4	36.1	0.7
626	62,623	95	377	3.0	35.7	35.7	36.6	0.9
627	62,736	110	499	2.3	36.9	36.9	36.9	0.0
637	63,670	300	1,082	1.0	37.6	37.6	37.9	0.3
Big Swamp								
000	0	732	4,439	0.7	25.1	25.1	26.0	0.9
006	598	704	4,110	0.7	25.2	25.2	26.2	1.0
013	1,300	742	4,985	0.6	25.4	25.4	26.4	1.0
020	1,981	543	3,368	0.9	25.7	25.7	26.6	0.9
025	2,506	787	4,483	0.7	25.9	25.9	26.9	1.0
032	3,162	721	4,146	0.7	26.1	26.1	27.1	1.0
036	3,618	728	4,088	0.8	26.3	26.3	27.3	1.0
041	4,112	909	4,596	0.7	26.4	26.4	27.4	1.0
045	4,523	632	3,576	0.9	26.6	26.6	27.6	1.0
050	5,025	874	4,698	0.7	26.8	26.8	27.8	1.0
057	5,702	978	4,867	0.6	27.0	27.0	28.0	1.0
061	6,101	903	4,575	0.7	27.2	27.2	28.2	1.0
065	6,477	862	4,329	0.7	27.3	27.3	28.3	1.0
069	6,885	816	3,802	0.8	27.5	27.5	28.5	1.0
075	7,501	776	3,583	0.8	27.9	27.9	28.9	1.0
082	8,197	770	4,088	0.7	28.2	28.2	29.2	1.0
087	8,703	786	3,934	0.7	28.4	28.4	29.4	1.0
093	9,312	885	4,548	0.6	28.6	28.6	29.6	1.0
098	9,800	695	3,661	0.8	28.8	28.8	29.8	1.0
103	10,329	813	4,277	0.7	29.0	29.0	30.0	1.0
109	10,884	1,031	5,138	0.6	29.2	29.2	30.2	1.0
114	11,431	840	4,115	0.7	29.4	29.4	30.4	1.0
121	12,077	799	3,658	0.7	29.7	29.7	30.7	1.0
126	12,604	620	2,709	1.0	30.1	30.1	31.1	1.0
128	12,789	630	3,464	0.8	32.1	32.1	32.1	0.0
130	12,998	575	3,497	0.7	32.1	32.1	32.1	0.0
137	13,653	570	3,377	0.7	32.1	32.1	32.3	0.2
147	14,711	530	2,845	0.8	32.3	32.3	32.5	0.2
157	15,740	650	3,136	0.7	32.4	32.4	32.9	0.5
168	16,804	540	2,694	0.9	32.6	32.6	33.2	0.6
173	17,317	475	2,177	1.1	32.7	32.7	33.4	0.7
180	18,016	667	2,835	0.8	33.0	33.0	33.8	0.8
188	18,843	514	2,128	1.1	33.3	33.3	34.3	1.0
Blounts Creek								
254	25,445	831	8,129	0.6	5.2	5.2	1.5	-3.7
260	25,977	631	5,218	1.0	5.2	5.2	1.5	-3.7
264	26,369	436	4,671	1.1	5.2	5.2	1.5	-3.7
270	27,006	525	4,496	1.1	5.2	5.2	1.5	-3.7

Table 22 - Floodway Data

Floodway Source		Floodway			Water Surface Elevation			
Cross Section	Distance (Feet Above Mouth)	Width (Feet)	Section Area (Square Feet)	Mean Velocity (Feet Per Second)	Regulatory	Without Floodway	With Floodway	Increase
275	27,500	717	6,048	0.8	5.2	5.2	1.5	-3.7
280	28,009	759	6,180	0.8	5.2	5.2	1.6	-3.6
286	28,584	366	3,641	1.3	5.2	5.2	1.6	-3.6
296	29,551	283	2,878	1.7	5.2	5.2	1.6	-3.6
305	30,539	272	2,896	1.7	5.2	5.2	1.7	-3.5
307	30,736	266	2,506	2.0	5.2	5.2	1.7	-3.5
312	31,207	255	2,321	2.0	5.2	5.2	1.7	-3.5
328	32,791	257	2,489	1.8	5.2	5.2	1.9	-3.3
336	33,640	482	2,132	2.1	5.2	5.2	1.9	-3.3
345	34,534	384	3,691	1.2	5.2	5.2	2.1	-3.1
352	35,212	211	1,982	2.3	5.2	5.2	2.1	-3.1
355	35,542	272	2,969	1.5	5.2	5.2	2.2	-3.0
366	36,592	254	2,684	1.7	5.2	5.2	2.3	-2.9
375	37,534	181	1,941	2.4	5.2	5.2	2.3	-2.9
380	37,967	208	1,908	2.1	5.2	5.2	2.4	-2.8
385	38,476	163	1,650	2.4	5.2	5.2	2.5	-2.7
390	39,000	171	1,226	3.2	5.2	5.2	2.6	-2.6
394	39,436	155	1,397	2.8	5.3	5.3	2.8	-2.5
402	40,235	135	1,263	3.1	5.3	5.3	3.1	-2.2
406	40,630	113	871	4.5	5.3	5.3	3.1	-2.2
409	40,899	161	1,105	3.5	5.3	5.3	3.5	-1.8
414	41,442	142	1,098	3.6	5.3	5.3	3.9	-1.4
420	41,988	455	2,100	1.5	5.4	5.4	4.4	-1.0
426	42,589	116	1,260	2.5	5.4	5.4	4.7	-0.7
429	42,869	251	1,775	1.8	5.5	5.5	4.8	-0.7
434	43,369	304	1,946	1.6	5.5	5.5	5.0	-0.5
439	43,871	571	1,458	2.2	5.5	5.5	5.1	-0.4
444	44,437	483	2,679	1.2	5.7	5.7	5.5	-0.2
450	44,977	429	2,460	1.3	5.7	5.7	5.8	0.1
455	45,503	324	1,993	1.6	5.8	5.8	6.1	0.3
459	45,896	345	2,103	1.5	6.0	6.0	6.4	0.4
464	46,358	388	2,273	1.4	6.2	6.2	6.7	0.5
469	46,905	351	1,792	1.8	6.4	6.4	7.1	0.7
474	47,410	406	2,198	1.4	6.9	6.9	7.7	0.8
478	47,842	478	2,493	1.3	7.3	7.3	8.0	0.7
484	48,364	381	1,795	1.8	7.7	7.7	8.4	0.7
486	48,576	101	747	4.2	7.8	7.8	8.7	0.9
487	48,703	75	687	4.6	8.9	8.9	9.5	0.6
492	49,156	105	1,040	3.0	9.6	9.6	10.1	0.5
495	49,467	212	2,115	1.5	9.8	9.8	10.4	0.6
498	49,811	358	3,315	0.9	9.9	9.9	10.4	0.5
503	50,258	276	2,434	1.3	9.9	9.9	10.4	0.5
507	50,672	284	2,729	1.1	9.9	9.9	10.5	0.6
512	51,181	295	2,492	1.2	9.9	9.9	10.5	0.6

Table 22 - Floodway Data

Floodway Source		Floodway			Water Surface Elevation			
Cross Section	Distance (Feet Above Mouth)	Width (Feet)	Section Area (Square Feet)	Mean Velocity (Feet Per Second)	Regulatory	Without Floodway	With Floodway	Increase
516	51,583	185	1,320	2.3	10.0	10.0	10.6	0.6
521	52,126	449	3,154	1.0	10.2	10.2	10.7	0.5
526	52,573	325	2,531	1.2	10.2	10.2	10.8	0.6
530	52,970	328	2,287	1.3	10.3	10.3	10.8	0.5
536	53,597	440	2,923	1.0	10.4	10.4	10.9	0.5
542	54,173	198	1,098	2.7	10.5	10.5	11.0	0.5
545	54,529	163	1,049	2.9	10.8	10.8	11.5	0.7
548	54,754	176	1,119	2.7	11.0	11.0	11.9	0.9
552	55,196	233	1,244	2.4	11.5	11.5	12.5	1.0
553	55,310	250	1,503	2.0	12.4	12.4	13.1	0.7
557	55,679	184	1,451	2.1	12.6	12.6	13.3	0.7
561	56,104	269	1,955	1.5	12.8	12.8	13.6	0.8
565	56,500	365	2,224	1.3	12.9	12.9	13.8	0.9
569	56,894	174	906	3.3	13.3	13.3	14.0	0.7
572	57,246	383	2,347	1.3	14.0	14.0	14.9	0.9
575	57,480	344	2,214	1.3	14.3	14.3	15.0	0.7
578	57,841	170	1,125	2.6	14.7	14.7	15.4	0.7
580	57,985	175	1,423	2.1	17.7	17.7	17.7	0.0
583	58,325	254	2,310	0.9	17.9	17.9	18.0	0.1
589	58,887	244	2,079	1.0	18.0	18.0	18.1	0.1
593	59,304	278	2,061	1.0	18.0	18.0	18.3	0.3
597	59,695	240	1,901	1.1	18.1	18.1	18.4	0.3
601	60,110	334	2,208	1.0	18.2	18.2	18.5	0.3
608	60,824	179	1,436	1.5	18.3	18.3	18.8	0.5
612	61,161	176	1,367	1.5	18.4	18.4	18.9	0.5
615	61,502	197	1,434	1.5	18.5	18.5	19.2	0.7
620	62,047	227	1,631	1.3	18.7	18.7	19.5	0.8
624	62,441	197	1,363	1.5	18.8	18.8	19.7	0.9
628	62,838	203	1,286	1.6	19.0	19.0	19.9	0.9
632	63,243	292	1,725	1.3	19.2	19.2	20.2	1.0
Broad Creek								
184	18,418	170	1,153	2.9	5.2	5.2	2.7	-2.5
186	18,624	168	1,000	3.4	5.2	5.2	2.9	-2.3
195	19,506	91	755	4.4	5.3	5.3	3.6	-1.7
200	20,000	85	746	4.5	5.3	5.3	4.1	-1.2
207	20,660	322	1,782	1.9	5.4	5.4	5.0	-0.4
212	21,200	317	1,823	1.8	5.6	5.6	5.4	-0.2
219	21,920	307	1,592	2.0	5.8	5.8	6.0	0.2
224	22,435	236	1,769	1.8	6.0	6.0	6.6	0.6
230	22,987	356	2,473	1.3	6.2	6.2	6.9	0.7
235	23,501	445	3,119	1.0	6.4	6.4	7.1	0.7
240	24,000	499	3,356	0.9	6.6	6.6	7.3	0.7
245	24,453	545	3,732	0.8	6.7	6.7	7.4	0.7
251	25,078	442	2,669	1.2	6.8	6.8	7.6	0.8
259	25,873	348	2,194	1.4	7.2	7.2	8.0	0.8

Table 22 - Floodway Data

Floodway Source		Floodway			Water Surface Elevation			
Cross Section	Distance (Feet Above Mouth)	Width (Feet)	Section Area (Square Feet)	Mean Velocity (Feet Per Second)	Regulatory	Without Floodway	With Floodway	Increase
264	26,397	429	2,432	1.3	7.4	7.4	8.3	0.9
269	26,916	389	2,382	1.3	7.6	7.6	8.5	0.9
271	27,053	349	2,128	1.4	7.9	7.9	8.7	0.8
275	27,491	421	2,250	1.4	8.1	8.1	8.9	0.8
280	28,039	435	2,426	1.3	8.3	8.3	9.2	0.9
286	28,571	339	2,099	1.5	8.6	8.6	9.5	0.9
290	29,003	309	1,519	2.0	8.8	8.8	9.7	0.9
297	29,703	253	1,539	2.0	9.5	9.5	10.3	0.8
304	30,360	285	1,750	1.7	9.9	9.9	10.8	0.9
309	30,897	243	1,835	1.6	10.1	10.1	11.1	1.0
315	31,491	313	2,012	1.5	10.5	10.5	11.4	0.9
320	32,000	353	2,106	1.4	10.8	10.8	11.7	0.9
325	32,481	294	1,565	1.9	11.1	11.1	12.0	0.9
330	33,000	314	1,068	2.8	11.6	11.6	12.4	0.8
334	33,402	92	820	3.6	12.0	12.0	12.9	0.9
336	33,563	77	906	3.3	12.9	12.9	13.8	0.9
336	33,568	83	1,036	2.9	12.9	12.9	13.9	1.0
Broad Creek Tributary 1								
006	556	140	579	1.7	12.9[2]	12.2	12.4	0.3
010	986	75	190	5.1	15.2	15.2	15.3	0.1
015	1,458	93	393	1.5	16.3	16.3	17.3	1.0
019	1,875	92	449	1.6	16.8	16.8	17.8	1.0
026	2,628	142	463	1.5	18.0	18.0	18.6	0.6
031	3,138	102	434	1.5	18.9	18.9	19.8	0.8
037	3,666	128	561	1.2	19.7	19.7	20.6	0.9
040	3,993	195	792	0.8	20.0	20.0	20.9	0.9
044	4,400	102	415	1.6	20.4	20.4	21.4	1.0
050	5,011	104	463	1.4	21.7	21.7	22.7	1.0
055	5,471	75	202	2.8	23.0	23.0	23.9	0.9
060	6,034	70	300	1.9	26.0	26.0	26.6	0.6
066	6,568	206	659	0.9	26.9	26.9	27.6	0.7
069	6,902	216	820	0.6	27.1	27.1	27.8	0.7
073	7,327	172	600	0.8	27.3	27.3	28.1	0.8
079	7,860	85	341	1.5	27.9	27.9	28.8	0.9
083	8,309	75	207	2.4	29.2	29.2	30.0	0.9
089	8,915	144	489	0.6	30.7	30.7	31.3	0.6
093	9,324	185	735	0.4	30.8	30.8	31.4	0.6
098	9,813	133	554	0.6	30.9	30.9	31.6	0.7
Broad Creek Tributary 2								
003	324	50	146	3.6	15.5[3]	13.2	13.2	0.0
004	435	120	484	1.1	15.5[3]	13.6	13.6	0.0
005	517	105	387	1.4	15.5[3]	13.9	14.0	0.1
008	795	44	104	5.0	15.6[1]	14.2	14.5	0.3
010	996	72	260	2.0	16.1	16.1	16.4	0.3
012	1,206	77	299	1.8	16.5	16.5	17.0	0.5

Table 22 - Floodway Data

Floodway Source		Floodway			Water Surface Elevation			
Cross Section	Distance (Feet Above Mouth)	Width (Feet)	Section Area (Square Feet)	Mean Velocity (Feet Per Second)	Regulatory	Without Floodway	With Floodway	Increase
014	1,381	56	229	2.3	16.8	16.8	17.4	0.6
015	1,545	46	169	3.1	17.1	17.1	17.8	0.7
017	1,743	43	194	2.7	17.7	17.7	18.4	0.7
019	1,902	40	146	3.6	18.0	18.0	18.7	0.7
021	2,147	42	202	2.6	19.1	19.1	19.5	0.4
024	2,350	62	261	2.0	19.4	19.4	19.9	0.5
025	2,529	70	272	1.9	19.7	19.7	20.2	0.5
027	2,735	54	256	2.1	20.0	20.0	20.6	0.6
030	2,960	51	169	3.1	20.1	20.1	21.0	0.9
032	3,214	58	198	2.6	21.7	21.7	22.0	0.3
035	3,486	66	186	2.8	22.5	22.5	23.0	0.5
037	3,737	50	172	3.0	23.3	23.3	24.0	0.7
040	4,034	52	172	3.0	24.3	24.3	25.2	0.9
043	4,309	70	235	2.2	25.4	25.4	26.3	0.9
045	4,539	81	266	2.0	26.0	26.0	26.7	0.7
046	4,622	81	286	1.8	26.1	26.1	26.8	0.7
049	4,912	80	221	1.6	26.3	26.3	27.2	0.9
053	5,323	51	122	3.0	27.1	27.1	28.1	1.0
056	5,558	37	102	3.6	28.6	28.6	29.4	0.8
058	5,805	24	82	4.5	30.2	30.2	30.6	0.4
060	6,043	25	83	4.4	31.0	31.0	31.8	0.8
062	6,211	24	81	4.5	32.1	32.1	32.6	0.5
Broomfield Swamp Creek								
050	5,000	61	389	2.8	5.1	5.1	6.0	0.9
055	5,475	56	384	2.9	5.4	5.4	6.2	0.8
059	5,932	61	378	2.9	5.6	5.6	6.5	0.9
063	6,261	50	352	3.1	5.7	5.7	6.7	1.0
066	6,578	59	398	2.8	6.1	6.1	6.9	0.8
070	7,000	55	379	2.9	6.4	6.4	7.2	0.8
075	7,482	55	395	2.8	6.7	6.7	7.5	0.8
078	7,835	60	443	2.3	7.0	7.0	7.8	0.8
Chapel Branch								
003	294	189	775	1.0	8.9	8.9	9.9	1.0
004	400	90	346	2.2	9.0	9.0	9.9	0.9
009	910	93	310	2.5	10.8	10.8	11.8	1.0
013	1,320	84	422	1.8	12.0	12.0	13.0	1.0
016	1,610	73	386	2.0	12.5	12.5	13.5	1.0
020	1,976	61	324	2.4	13.2	13.2	14.1	0.9
022	2,209	69	328	2.4	13.7	13.7	14.6	0.9
027	2,689	81	261	3.0	15.4	15.4	16.2	0.8
028	2,764	81	454	1.7	16.8	16.8	17.0	0.2
030	3,023	81	447	1.7	16.9	16.9	17.3	0.4
032	3,200	57	304	2.5	17.0	17.0	17.4	0.4
035	3,492	61	295	2.4	17.3	17.3	17.9	0.6
039	3,915	49	267	2.6	17.8	17.8	18.6	0.8

Table 22 - Floodway Data

Floodway Source		Floodway			Water Surface Elevation			
Cross Section	Distance (Feet Above Mouth)	Width (Feet)	Section Area (Square Feet)	Mean Velocity (Feet Per Second)	Regulatory	Without Floodway	With Floodway	Increase
042	4,171	31	145	4.8	18.2	18.2	19.0	0.8
046	4,649	51	270	2.6	19.7	19.7	20.5	0.8
051	5,142	37	197	3.5	20.6	20.6	21.5	0.9
055	5,484	31	154	4.5	21.7	21.7	22.6	0.9
058	5,845	38	190	3.7	23.1	23.1	23.9	0.8
061	6,138	29	126	5.5	24.5	24.5	25.0	0.5
067	6,683	42	158	4.4	27.4	27.4	27.5	0.1
071	7,080	66	348	2.0	28.2	28.2	28.3	0.1
072	7,177	66	436	1.6	30.4	30.4	30.5	0.1
075	7,501	90	402	1.4	30.6	30.6	30.7	0.1
079	7,879	43	163	3.5	31.0	31.0	31.3	0.3
084	8,400	84	333	1.7	31.6	31.6	32.3	0.7
088	8,800	55	212	2.7	32.1	32.1	32.8	0.7
093	9,265	51	251	2.3	34.0	34.0	34.7	0.7
097	9,732	70	303	1.9	35.3	35.3	36.1	0.8
101	10,072	60	308	1.4	35.9	35.9	36.8	0.9
103	10,334	38	149	2.9	36.4	36.4	37.2	0.8
107	10,710	68	275	1.6	37.7	37.7	38.5	0.8
112	11,216	36	130	3.3	39.4	39.4	40.2	0.8
115	11,509	62	300	1.4	40.8	40.8	41.7	0.9
117	11,713	87	293	1.5	41.2	41.2	42.1	0.9
118	11,793	87	422	1.0	42.9	42.9	43.5	0.6
120	11,974	107	427	1.0	43.0	43.0	43.7	0.7
Cherry Run								
092	9,156	177	1,042	1.7	6.1	6.1	6.2	0.1
096	9,578	271	1,512	1.2	6.2	6.2	6.6	0.4
100	10,026	279	1,608	1.1	6.4	6.4	6.9	0.5
105	10,529	265	1,521	1.1	6.5	6.5	7.1	0.6
107	10,705	345	2,111	0.8	6.6	6.6	7.1	0.5
110	10,962	227	1,294	1.4	6.6	6.6	7.1	0.5
114	11,410	145	842	2.1	6.8	6.8	7.3	0.5
118	11,803	232	1,235	1.4	6.9	6.9	7.5	0.6
122	12,188	261	1,476	1.1	7.0	7.0	7.6	0.6
127	12,680	152	607	2.7	7.3	7.3	7.7	0.4
131	13,090	167	803	2.1	8.1	8.1	8.9	0.8
133	13,256	140	738	2.3	8.3	8.3	9.2	0.9
135	13,520	140	704	2.4	10.4	10.4	10.7	0.3
140	13,955	110	737	2.3	10.9	10.9	11.3	0.4
146	14,622	109	725	2.3	11.1	11.1	11.7	0.6
150	15,047	131	847	2.0	11.2	11.2	12.0	0.8
156	15,557	142	853	2.0	11.5	11.5	12.2	0.7
159	15,856	140	835	2.0	11.6	11.6	12.4	0.8
165	16,457	155	959	1.7	11.8	11.8	12.7	0.9
170	16,989	168	883	1.5	12.1	12.1	13.0	0.9
175	17,487	147	674	1.9	12.4	12.4	13.3	0.9

Table 22 - Floodway Data

Floodway Source		Floodway			Water Surface Elevation			
Cross Section	Distance (Feet Above Mouth)	Width (Feet)	Section Area (Square Feet)	Mean Velocity (Feet Per Second)	Regulatory	Without Floodway	With Floodway	Increase
180	17,980	148	666	2.0	13.0	13.0	14.0	1.0
185	18,522	165	825	1.6	13.6	13.6	14.5	0.9
193	19,279	102	443	2.9	14.8	14.8	15.4	0.6
194	19,400	135	793	1.6	18.1	18.1	18.1	0.0
201	20,118	180	700	1.9	18.8	18.8	18.9	0.1
206	20,625	97	392	1.8	19.3	19.3	19.6	0.3
211	21,059	97	358	2.0	19.7	19.7	20.1	0.4
216	21,580	57	235	3.0	20.3	20.3	20.8	0.5
221	22,136	52	240	2.9	21.3	21.3	21.9	0.6
225	22,485	44	201	3.5	21.8	21.8	22.4	0.6
230	23,044	67	434	1.6	22.6	22.6	23.2	0.6
236	23,553	60	271	2.2	22.9	22.9	23.6	0.7
239	23,895	94	171	3.4	24.4	24.4	25.1	0.7
242	24,159	67	245	2.4	25.6	25.6	26.6	1.0
247	24,661	49	178	2.6	26.9	26.9	27.6	0.7
251	25,123	45	213	2.2	27.8	27.8	28.7	0.9
259	25,925	55	160	2.9	29.1	29.1	29.9	0.8
261	26,102	65	212	2.2	31.0	31.0	31.3	0.3
267	26,664	48	202	2.3	32.5	32.5	33.4	0.9
272	27,231	59	266	1.8	33.7	33.7	34.6	0.9
276	27,571	41	171	2.7	34.1	34.1	35.0	0.9
281	28,074	39	133	3.5	35.4	35.4	36.3	0.9
284	28,420	44	167	2.8	36.7	36.7	37.6	0.9
285	28,493	50	208	2.2	36.8	36.8	37.7	0.9
289	28,904	35	132	2.8	37.8	37.8	38.8	1.0
292	29,221	33	132	2.8	38.6	38.6	39.6	1.0
295	29,519	39	150	2.5	39.3	39.3	40.3	1.0
296	29,585	50	219	1.7	39.5	39.5	40.5	1.0
298	29,752	31	121	3.1	39.6	39.6	40.6	1.0
Cherry Run Tributary 1								
006	582	116	431	1.8	11.9[1]	10.4	11.3	0.9
011	1,054	102	420	1.8	11.9[1]	11.3	12.1	0.8
014	1,428	72	280	2.7	12.6	12.6	13.4	0.8
017	1,699	74	315	2.4	13.9	13.9	14.7	0.8
020	2,046	102	410	1.9	15.0	15.0	16.0	1.0
025	2,500	75	369	2.1	16.0	16.0	16.9	0.9
030	2,983	115	512	1.5	16.9	16.9	17.9	1.0
033	3,332	82	319	2.4	17.5	17.5	18.4	0.9
036	3,621	60	286	2.7	18.4	18.4	19.4	1.0
042	4,233	87	413	1.9	20.1	20.1	21.1	1.0
046	4,639	61	260	2.5	21.0	21.0	21.9	0.9
050	5,003	79	330	2.0	22.2	22.2	23.1	0.9
055	5,497	66	258	2.5	23.5	23.5	24.4	0.9
060	6,031	87	388	1.7	25.0	25.0	26.0	1.0
064	6,424	117	369	1.5	25.8	25.8	26.7	0.9

Table 22 - Floodway Data

Floodway Source		Floodway			Water Surface Elevation			
Cross Section	Distance (Feet Above Mouth)	Width (Feet)	Section Area (Square Feet)	Mean Velocity (Feet Per Second)	Regulatory	Without Floodway	With Floodway	Increase
067	6,748	72	251	2.1	26.5	26.5	27.5	1.0
Cherry Run Tributary 2								
002	242	42	231	4.1	18.9[1]	18.1	18.2	0.1
007	742	94	358	2.6	19.2	19.2	19.3	0.1
014	1,401	91	397	2.4	20.3	20.3	20.7	0.4
017	1,736	109	461	2.0	20.8	20.8	21.3	0.5
022	2,170	100	468	2.0	21.4	21.4	22.0	0.6
028	2,764	123	540	1.8	22.1	22.1	22.8	0.7
033	3,284	80	374	2.5	22.7	22.7	23.5	0.8
036	3,587	82	511	1.8	23.2	23.2	24.0	0.8
038	3,825	76	229	3.0	23.3	23.3	24.2	0.9
040	4,044	56	237	2.9	25.0	25.0	25.5	0.5
045	4,481	102	448	1.5	26.2	26.2	27.1	0.9
048	4,752	90	450	1.5	26.7	26.7	27.6	0.9
048	4,782	90	426	1.6	26.7	26.7	27.6	0.9
051	5,094	89	526	1.3	27.2	27.2	28.1	0.9
054	5,409	46	152	4.5	27.5	27.5	28.5	1.0
055	5,494	50	343	2.0	30.2	30.2	30.6	0.4
056	5,619	60	385	1.8	30.2	30.2	30.7	0.5
Cherry Run Tributary 3								
002	196	31	132	3.9	23.3[1]	23.0	23.6	0.6
004	381	31	143	3.6	23.7	23.7	24.4	0.7
008	755	25	97	5.3	25.0	25.0	25.7	0.7
011	1,082	49	250	2.1	26.4	26.4	27.2	0.8
015	1,475	36	99	5.2	27.1	27.1	28.0	0.9
017	1,714	50	165	3.1	29.3	29.3	29.9	0.6
018	1,805	60	305	1.7	30.6	30.6	31.3	0.7
020	2,023	89	389	1.3	30.7	30.7	31.6	0.9
024	2,417	146	546	0.9	31.1	31.1	32.0	0.9
028	2,808	98	360	1.4	31.5	31.5	32.4	0.9
031	3,145	81	281	1.8	32.2	32.2	33.1	0.9
034	3,391	44	179	2.9	32.9	32.9	33.8	0.9
037	3,656	28	115	4.5	34.1	34.1	35.0	0.9
040	3,975	37	201	2.6	35.9	35.9	36.4	0.5
043	4,266	47	186	2.8	36.5	36.5	37.0	0.5
044	4,358	55	265	1.9	38.1	38.1	39.0	0.9
047	4,713	37	218	2.4	38.5	38.5	39.4	0.9
051	5,122	40	181	2.8	39.0	39.0	39.8	0.8
054	5,404	40	167	2.2	39.4	39.4	40.2	0.8
056	5,623	36	133	2.7	39.8	39.8	40.4	0.6
057	5,704	40	261	1.4	41.0	41.0	41.7	0.7
058	5,755	40	235	1.5	41.0	41.0	41.7	0.7
Chocowinity Creek								
079	7,861	170	1,948	2.3	5.5	5.5	1.4	-4.1
096	9,609	160	1,493	2.9	5.5	5.5	1.6	-3.9

Table 22 - Floodway Data

Floodway Source		Floodway			Water Surface Elevation			
Cross Section	Distance (Feet Above Mouth)	Width (Feet)	Section Area (Square Feet)	Mean Velocity (Feet Per Second)	Regulatory	Without Floodway	With Floodway	Increase
099	9,886	160	1,495	2.9	5.5	5.5	2.1	-3.4
109	10,889	157	1,055	4.1	5.5	5.5	2.3	-3.2
116	11,645	334	1,111	3.9	5.5	5.5	3.3	-2.2
120	12,020	385	1,772	2.4	5.8	5.8	4.6	-1.2
131	13,144	680	3,289	1.3	6.0	6.0	5.7	-0.3
146	14,622	680	3,763	1.1	6.3	6.3	6.9	0.6
158	15,831	530	3,085	1.4	7.1	7.1	7.9	0.8
172	17,243	522	3,594	1.2	8.4	8.4	9.1	0.7
182	18,241	615	4,007	1.0	8.9	8.9	9.6	0.7
194	19,396	548	3,660	1.1	9.4	9.4	10.1	0.7
208	20,826	660	4,395	0.9	10.0	10.0	10.8	0.8
222	22,188	681	4,401	0.9	10.4	10.4	11.3	0.9
237	23,745	682	3,893	1.1	11.0	11.0	11.9	0.9
250	25,042	738	4,409	0.9	11.7	11.7	12.6	0.9
263	26,277	700	3,856	1.1	12.3	12.3	13.2	0.9
278	27,770	570	3,524	1.0	13.1	13.1	14.0	0.9
285	28,502	490	3,143	1.1	13.4	13.4	14.3	0.9
293	29,320	550	3,336	1.0	13.8	13.8	14.7	0.9
302	30,226	700	4,147	0.8	14.1	14.1	15.1	1.0
315	31,509	640	3,564	0.9	14.6	14.6	15.5	0.9
324	32,364	590	3,033	1.1	14.9	14.9	15.9	1.0
335	33,458	580	2,745	1.2	15.5	15.5	16.4	0.9
337	33,651	560	3,456	1.0	16.2	16.2	16.9	0.7
346	34,555	530	3,254	1.0	16.4	16.4	17.1	0.7
356	35,591	670	3,849	0.8	16.7	16.7	17.4	0.7
366	36,601	440	2,585	1.1	17.0	17.0	17.7	0.7
377	37,709	370	2,263	1.3	17.7	17.7	18.6	0.9
386	38,580	280	1,872	1.5	18.4	18.4	19.3	0.9
397	39,681	345	2,179	1.3	19.5	19.5	20.4	0.9
406	40,571	410	2,517	0.9	20.1	20.1	20.9	0.8
414	41,400	520	3,038	0.7	20.2	20.2	21.2	1.0
422	42,215	484	2,706	0.8	20.4	20.4	21.4	1.0
424	42,400	484	2,192	1.0	20.9	20.9	21.5	0.6
431	43,090	355	2,041	1.1	21.2	21.2	21.8	0.6
439	43,857	268	1,609	1.4	21.5	21.5	22.2	0.7
442	44,242	230	1,352	1.6	21.9	21.9	22.6	0.7
448	44,833	391	2,530	0.9	22.2	22.2	23.0	0.8
Chocowinity Creek Tributary 1								
009	948	44	113	4.6	11.1[4]	9.2	9.9	0.7
011	1,064	44	131	4.0	11.1[4]	9.8	10.5	0.7
012	1,185	43	97	5.4	11.1[4]	10.6	10.8	0.2
014	1,383	50	213	2.5	12.2	12.2	13.0	0.8
015	1,535	59	272	1.9	12.5	12.5	13.5	1.0
017	1,688	37	143	3.7	12.7	12.7	13.7	1.0
019	1,872	48	214	2.5	13.9	13.9	14.8	0.9

Table 22 - Floodway Data

Floodway Source		Floodway			Water Surface Elevation			
Cross Section	Distance (Feet Above Mouth)	Width (Feet)	Section Area (Square Feet)	Mean Velocity (Feet Per Second)	Regulatory	Without Floodway	With Floodway	Increase
020	2,005	53	204	2.6	14.6	14.6	15.3	0.7
022	2,168	39	157	3.3	15.2	15.2	16.0	0.8
023	2,290	67	220	2.4	16.0	16.0	16.9	0.9
024	2,426	58	224	2.3	16.6	16.6	17.5	0.9
025	2,526	46	194	2.7	17.0	17.0	17.9	0.9
026	2,630	50	246	2.1	17.5	17.5	18.4	0.9
027	2,715	33	154	3.4	17.7	17.7	18.6	0.9
028	2,843	33	136	3.9	18.3	18.3	19.3	1.0
029	2,937	50	259	2.0	19.5	19.5	20.0	0.5
030	2,998	46	241	2.2	19.5	19.5	20.2	0.7
031	3,085	52	269	1.5	19.7	19.7	20.4	0.7
032	3,217	53	233	1.8	19.9	19.9	20.6	0.7
034	3,381	58	278	1.5	20.1	20.1	20.9	0.8
035	3,454	43	184	2.2	20.2	20.2	21.0	0.8
036	3,555	46	194	2.1	20.5	20.5	21.3	0.8
037	3,665	53	252	1.6	20.7	20.7	21.6	0.9
038	3,774	39	196	2.1	20.9	20.9	21.7	0.8
039	3,873	33	161	2.5	21.1	21.1	21.9	0.8
040	3,965	27	121	3.4	21.3	21.3	22.1	0.8
041	4,054	34	157	2.6	21.9	21.9	22.6	0.7
042	4,158	32	141	2.9	22.1	22.1	22.9	0.8
043	4,285	42	216	1.9	22.5	22.5	23.3	0.8
044	4,401	49	225	1.8	22.6	22.6	23.5	0.9
045	4,505	43	213	1.9	22.8	22.8	23.7	0.9
047	4,654	50	236	1.7	23.0	23.0	24.0	1.0
048	4,788	50	301	1.4	24.5	24.5	25.1	0.6
049	4,915	34	186	2.2	24.5	24.5	25.2	0.7
051	5,123	30	176	2.3	24.8	24.8	25.5	0.7
Chocowinity Creek Tributary 2								
002	172	45	108	3.7	16.5[4]	13.3	13.9	0.6
007	654	77	256	1.6	16.5[4]	14.7	15.7	1.0
009	915	62	202	2.0	16.5[4]	15.5	16.5	1.0
010	1,029	29	98	4.0	16.5[4]	16.0	16.9	0.9
011	1,122	16	47	8.4	17.7	17.7	17.8	0.1
014	1,381	20	98	4.1	19.4	19.4	20.3	0.9
016	1,601	32	153	2.6	20.0	20.0	21.0	1.0
018	1,807	54	139	2.8	20.5	20.5	21.5	1.0
019	1,925	54	321	1.2	22.5	22.5	23.3	0.8
022	2,158	72	292	1.4	22.5	22.5	23.4	0.9
023	2,315	54	205	1.9	22.6	22.6	23.5	0.9
Cindy Edwards Branch								
004	428	361	1,260	0.8	16.6[4]	14.3	15.2	0.9
010	998	69	298	3.3	16.6[4]	15.1	16.0	0.9
014	1,375	57	273	3.6	16.5	16.5	17.1	0.6
015	1,498	114	703	1.4	19.2	19.2	19.2	0.0

Table 22 - Floodway Data

Floodway Source		Floodway			Water Surface Elevation			
Cross Section	Distance (Feet Above Mouth)	Width (Feet)	Section Area (Square Feet)	Mean Velocity (Feet Per Second)	Regulatory	Without Floodway	With Floodway	Increase
020	2,000	243	862	1.1	19.5	19.5	19.6	0.1
026	2,593	170	622	1.6	20.0	20.0	20.5	0.5
030	3,027	244	1,060	0.9	20.4	20.4	21.0	0.6
035	3,500	196	1,039	0.9	20.6	20.6	21.3	0.7
040	3,962	167	818	1.2	20.9	20.9	21.6	0.7
044	4,439	162	836	1.2	21.2	21.2	22.0	0.8
048	4,797	205	921	1.1	21.5	21.5	22.3	0.8
053	5,306	108	520	1.9	22.0	22.0	22.9	0.9
056	5,624	181	899	1.1	22.4	22.4	23.3	0.9
060	6,037	89	411	1.4	22.7	22.7	23.6	0.9
065	6,500	72	327	1.7	23.2	23.2	24.1	0.9
069	6,902	73	301	1.9	23.8	23.8	24.7	0.9
072	7,209	145	582	0.9	24.1	24.1	25.1	1.0
077	7,664	98	339	1.5	24.6	24.6	25.6	1.0
Cypress Run								
010	1,000	285	808	1.6	5.9[5]	4.0	4.9	0.9
015	1,500	192	536	2.3	5.9[5]	4.4	5.3	0.9
020	1,956	151	470	2.7	5.9[5]	4.9	5.8	0.9
025	2,500	208	595	2.1	5.9[5]	5.5	6.4	0.9
030	3,000	309	960	1.2	6.0	6.0	6.9	0.9
035	3,500	238	681	1.7	6.2	6.2	7.1	0.9
040	4,025	167	541	2.2	6.7	6.7	7.5	0.8
046	4,560	163	395	3.0	7.2	7.2	8.0	0.8
050	4,975	88	322	3.6	7.7	7.7	8.5	0.8
055	5,510	103	359	3.3	8.3	8.3	9.1	0.8
061	6,073	119	427	2.7	9.0	9.0	9.7	0.7
062	6,153	119	581	2.0	9.6	9.6	10.4	0.8
065	6,500	103	454	2.6	9.8	9.8	10.6	0.8
072	7,162	126	451	2.2	10.2	10.2	11.0	0.8
076	7,557	97	351	2.8	10.4	10.4	11.2	0.8
080	8,000	86	180	5.6	10.8	10.8	11.5	0.7
084	8,401	239	726	1.4	12.1	12.1	12.9	0.8
090	9,000	303	1,001	1.0	12.6	12.6	13.5	0.9
095	9,524	320	790	1.3	13.0	13.0	14.0	1.0
101	10,065	317	1,005	1.0	13.6	13.6	14.5	0.9
Duck Creek								
036	3,598	258	1,283	1.0	5.1	5.1	1.5	-3.6
039	3,900	237	1,181	1.1	5.1	5.1	1.5	-3.6
046	4,645	194	846	1.5	5.1	5.1	1.6	-3.5
054	5,352	110	447	2.8	5.1	5.1	1.7	-3.4
054	5,428	112	498	2.5	5.1	5.1	2.0	-3.1
060	5,971	118	582	2.2	5.1	5.1	2.3	-2.8
066	6,608	158	531	1.9	5.1	5.1	2.7	-2.4
070	6,972	238	731	1.4	5.1	5.1	2.9	-2.2
078	7,793	382	1,210	0.8	5.2	5.2	3.6	-1.6

Table 22 - Floodway Data

Floodway Source		Floodway			Water Surface Elevation			
Cross Section	Distance (Feet Above Mouth)	Width (Feet)	Section Area (Square Feet)	Mean Velocity (Feet Per Second)	Regulatory	Without Floodway	With Floodway	Increase
Durham Creek								
360	36,028	162	1,299	3.0	5.3	5.3	3.1	-2.2
365	36,514	253	2,333	1.7	5.3	5.3	3.3	-2.0
369	36,904	199	1,484	2.6	5.3	5.3	3.3	-2.0
375	37,486	195	1,748	2.2	5.3	5.3	3.5	-1.8
380	38,000	279	1,376	2.8	5.4	5.4	3.6	-1.8
385	38,505	91	732	5.3	5.4	5.4	3.8	-1.6
389	38,949	142	1,281	3.0	5.4	5.4	4.5	-0.9
395	39,491	278	2,101	1.8	5.5	5.5	4.7	-0.8
400	40,036	313	2,406	1.6	5.5	5.5	4.9	-0.6
406	40,612	368	2,428	1.6	5.5	5.5	5.0	-0.5
410	41,008	224	1,871	2.1	5.6	5.6	5.1	-0.5
415	41,499	297	2,065	1.9	5.6	5.6	5.2	-0.4
420	42,026	350	2,273	1.7	5.7	5.7	5.5	-0.2
425	42,544	353	2,287	1.7	5.8	5.8	5.7	-0.1
428	42,847	342	2,022	1.9	5.8	5.8	5.9	0.1
434	43,406	410	2,588	1.5	6.1	6.1	6.4	0.3
439	43,902	315	2,370	1.6	6.4	6.4	6.9	0.5
443	44,347	295	2,050	1.9	6.6	6.6	7.2	0.6
449	44,874	310	2,550	1.5	7.0	7.0	7.8	0.8
455	45,466	740	5,958	0.6	7.1	7.1	8.0	0.9
461	46,111	580	3,967	1.0	7.2	7.2	8.1	0.9
464	46,444	585	4,315	0.9	7.4	7.4	8.2	0.8
798	79,794	475	2,737	0.7	21.1	21.1	21.9	0.8
804	80,405	771	3,896	0.6	21.3	21.3	22.2	0.9
809	80,932	848	3,462	0.7	21.5	21.5	22.5	1.0
813	81,327	827	3,114	0.7	21.7	21.7	22.6	0.9
816	81,618	705	2,364	1.0	22.2	22.2	23.1	0.9
820	82,008	683	2,166	1.0	22.8	22.8	23.7	0.9
826	82,610	636	2,099	1.1	23.8	23.8	24.6	0.8
831	83,128	640	2,001	1.1	24.9	24.9	25.7	0.8
837	83,702	635	2,093	0.6	25.7	25.7	26.5	0.8
842	84,215	604	1,891	0.6	25.9	25.9	26.7	0.8
847	84,653	535	1,795	0.7	26.2	26.2	27.2	1.0
853	85,318	290	1,130	1.0	26.7	26.7	27.7	1.0
859	85,930	240	1,056	1.1	27.7	27.7	28.6	0.9
863	86,326	328	1,521	0.8	27.9	27.9	28.9	1.0
867	86,677	339	1,609	0.7	28.1	28.1	29.0	0.9
872	87,181	268	1,190	1.0	28.5	28.5	29.4	0.9
878	87,777	308	1,323	0.8	29.0	29.0	29.9	0.9
883	88,273	160	774	1.4	29.3	29.3	30.3	1.0
886	88,607	147	601	1.8	30.0	30.0	30.9	0.9
888	88,836	178	729	1.5	30.4	30.4	31.4	1.0
889	88,880	178	1,211	0.9	33.7	33.7	34.1	0.4
889	88,917	178	1,211	0.9	33.7	33.7	34.1	0.4

Table 22 - Floodway Data

Floodway Source		Floodway			Water Surface Elevation			
Cross Section	Distance (Feet Above Mouth)	Width (Feet)	Section Area (Square Feet)	Mean Velocity (Feet Per Second)	Regulatory	Without Floodway	With Floodway	Increase
892	89,242	242	1,502	0.5	33.7	33.7	34.2	0.5
Durham Creek Tributary								
008	777	154	662	1.6	12.3[6]	9.5	10.5	1.0
010	1,017	109	528	2.0	12.3[6]	10.0	11.0	1.0
015	1,522	159	823	1.3	12.3[1]	11.0	11.9	0.9
019	1,913	155	818	1.3	12.3[1]	11.4	12.3	0.9
023	2,269	128	676	1.6	12.3[1]	11.8	12.7	0.9
028	2,788	151	738	1.4	12.4	12.4	13.4	1.0
030	3,033	145	635	1.6	12.8	12.8	13.7	0.9
033	3,307	49	212	4.9	13.3	13.3	14.3	1.0
034	3,400	60	345	3.0	14.5	14.5	15.0	0.5
036	3,618	186	1,001	1.0	15.0	15.0	15.4	0.4
040	4,000	184	869	1.2	15.1	15.1	15.7	0.6
042	4,234	133	671	1.6	15.3	15.3	15.9	0.6
049	4,885	157	771	1.2	16.0	16.0	16.8	0.8
053	5,280	168	843	1.1	16.4	16.4	17.2	0.8
058	5,759	144	579	1.6	17.1	17.1	17.9	0.8
064	6,431	262	1,142	0.8	17.8	17.8	18.7	0.9
072	7,152	78	272	1.7	18.4	18.4	19.4	1.0
075	7,514	76	212	2.2	19.8	19.8	20.7	0.9
079	7,887	48	145	3.2	22.6	22.6	23.2	0.6
080	7,993	35	228	2.0	27.6	27.6	27.6	0.0
080	8,018	59	379	1.2	27.7	27.7	27.7	0.0
080	8,044	59	348	1.3	27.7	27.7	27.7	0.0
081	8,113	59	465	1.0	28.6	28.6	29.2	0.6
085	8,484	79	571	0.8	28.6	28.6	29.3	0.7
089	8,939	103	615	0.7	28.7	28.7	29.5	0.8
093	9,271	111	534	0.9	28.7	28.7	29.6	0.9
099	9,935	78	302	1.5	29.0	29.0	30.0	1.0
104	10,360	65	214	2.1	30.1	30.1	30.8	0.7
109	10,868	54	225	1.6	31.6	31.6	32.4	0.8
113	11,327	81	217	1.7	32.5	32.5	33.4	0.9
114	11,408	81	430	0.8	35.6	35.6	36.2	0.6
118	11,801	125	501	0.7	35.7	35.7	36.4	0.7
Fork Swamp								
005	527	367	1,947	0.8	27.0[7]	26.4	27.4	1.0
014	1,428	153	864	1.9	27.0[7]	26.7	27.6	0.9
021	2,072	70	446	3.7	27.1	27.1	28.0	0.9
026	2,570	64	392	4.1	27.9	27.9	28.5	0.6
031	3,091	59	385	4.2	28.5	28.5	29.2	0.7
033	3,296	61	429	3.7	29.1	29.1	29.8	0.7
039	3,896	110	429	3.7	29.6	29.6	30.6	1.0
045	4,466	52	476	3.4	30.3	30.3	31.3	1.0
049	4,868	60	425	3.8	30.5	30.5	31.5	1.0
050	5,006	60	423	3.8	31.5	31.5	31.8	0.3

Table 22 - Floodway Data

Floodway Source		Floodway			Water Surface Elevation			
Cross Section	Distance (Feet Above Mouth)	Width (Feet)	Section Area (Square Feet)	Mean Velocity (Feet Per Second)	Regulatory	Without Floodway	With Floodway	Increase
053	5,337	56	416	3.8	31.8	31.8	32.2	0.4
061	6,065	59	436	3.6	32.2	32.2	32.8	0.6
068	6,778	56	423	3.7	32.6	32.6	33.2	0.6
074	7,427	56	454	3.5	33.2	33.2	33.7	0.5
Gum Swamp								
130	12,984	330	1,530	1.2	29.8	29.8	30.8	1.0
134	13,449	324	1,779	1.0	30.3	30.3	31.2	0.9
139	13,929	310	1,690	1.0	30.6	30.6	31.6	1.0
147	14,665	410	2,187	0.8	31.0	31.0	32.0	1.0
152	15,153	294	1,512	1.1	31.3	31.3	32.3	1.0
157	15,665	326	1,700	1.0	31.8	31.8	32.8	1.0
160	16,049	335	1,831	0.9	32.0	32.0	33.0	1.0
166	16,618	393	2,046	0.8	32.4	32.4	33.3	0.9
172	17,157	232	1,263	1.4	32.7	32.7	33.7	1.0
176	17,647	290	1,503	1.1	33.3	33.3	34.3	1.0
182	18,165	301	1,443	1.1	33.7	33.7	34.7	1.0
186	18,626	364	1,736	0.9	34.1	34.1	35.0	0.9
189	18,947	320	1,351	1.2	34.4	34.4	35.3	0.9
197	19,698	395	1,913	0.9	35.0	35.0	36.0	1.0
202	20,168	375	1,814	0.9	35.3	35.3	36.3	1.0
210	21,025	336	1,581	0.9	35.9	35.9	36.8	0.9
215	21,461	377	1,727	0.9	36.2	36.2	37.1	0.9
219	21,864	476	1,544	0.9	36.5	36.5	37.4	0.9
220	21,982	476	2,284	0.6	37.6	37.6	38.3	0.7
Hall Swamp								
006	627	430	1,821	0.8	16.7	16.7	17.1	0.4
012	1,204	470	1,508	1.0	17.0	17.0	17.4	0.4
018	1,790	410	1,708	0.9	17.4	17.4	17.8	0.4
023	2,313	320	1,195	1.3	17.6	17.6	18.2	0.6
028	2,838	230	975	1.5	18.0	18.0	18.7	0.7
035	3,481	110	413	3.6	18.5	18.5	19.4	0.9
041	4,064	120	592	2.5	20.3	20.3	20.7	0.4
042	4,235	140	798	1.9	20.8	20.8	21.1	0.3
047	4,733	156	790	1.9	21.1	21.1	21.4	0.3
052	5,222	347	1,700	0.9	21.4	21.4	21.8	0.4
056	5,563	276	1,248	0.9	21.6	21.6	22.0	0.4
059	5,878	190	809	1.4	21.7	21.7	22.1	0.4
060	5,952	175	806	1.4	21.8	21.8	22.3	0.5
063	6,285	128	624	1.8	22.0	22.0	22.5	0.5
067	6,669	117	603	1.9	22.3	22.3	22.8	0.5
070	7,035	148	687	1.6	22.7	22.7	23.2	0.5
074	7,411	125	603	1.9	23.0	23.0	23.6	0.6
078	7,796	140	660	1.7	23.4	23.4	24.1	0.7
083	8,267	112	527	2.1	24.1	24.1	24.7	0.6
086	8,601	160	765	1.5	24.5	24.5	25.2	0.7

Table 22 - Floodway Data

Floodway Source		Floodway			Water Surface Elevation			
Cross Section	Distance (Feet Above Mouth)	Width (Feet)	Section Area (Square Feet)	Mean Velocity (Feet Per Second)	Regulatory	Without Floodway	With Floodway	Increase
090	9,013	148	627	1.8	24.9	24.9	25.7	0.8
094	9,399	86	473	2.4	25.5	25.5	26.3	0.8
095	9,488	88	599	1.9	25.9	25.9	26.7	0.8
098	9,801	155	690	1.6	26.3	26.3	27.0	0.7
103	10,255	220	1,049	1.1	26.7	26.7	27.5	0.8
108	10,761	230	915	0.9	27.0	27.0	27.9	0.9
111	11,147	228	914	0.9	27.2	27.2	28.1	0.9
115	11,497	210	876	1.0	27.3	27.3	28.2	0.9
119	11,926	195	855	1.0	27.5	27.5	28.4	0.9
124	12,436	236	797	1.1	27.9	27.9	28.7	0.8
128	12,753	139	490	1.1	28.1	28.1	29.1	1.0
131	13,071	78	293	1.8	28.5	28.5	29.5	1.0
134	13,373	61	231	2.3	29.1	29.1	30.1	1.0
138	13,768	90	331	1.6	29.9	29.9	30.9	1.0
142	14,166	60	247	2.2	30.5	30.5	31.5	1.0
145	14,529	68	256	2.1	31.5	31.5	32.2	0.7
148	14,779	56	221	2.4	32.1	32.1	32.7	0.6
150	15,033	83	353	1.5	32.7	32.7	33.4	0.7
154	15,400	68	296	1.8	33.3	33.3	34.0	0.7
157	15,730	65	316	1.7	34.1	34.1	34.7	0.6
160	15,964	90	310	1.7	34.6	34.6	35.1	0.5
161	16,100	100	467	1.2	36.4	36.4	36.7	0.3
164	16,423	95	428	1.1	36.5	36.5	36.9	0.4
168	16,765	68	223	2.1	36.6	36.6	37.1	0.5
172	17,228	75	228	2.1	37.6	37.6	38.3	0.7
175	17,533	78	218	2.2	38.6	38.6	39.6	1.0
Hall Swamp Tributary 1								
002	170	336	1,111	0.7	21.5[8]	19.4	20.2	0.8
004	422	180	770	1.0	21.5[8]	19.5	20.3	0.8
007	668	170	720	1.0	21.5[8]	19.7	20.4	0.7
008	803	320	1,978	0.4	25.3	25.3	25.4	0.1
013	1,297	206	1,301	0.6	25.4	25.4	25.5	0.1
017	1,698	215	1,338	0.5	25.4	25.4	25.5	0.1
022	2,188	222	1,378	0.5	25.5	25.5	25.6	0.1
026	2,595	230	904	0.8	25.5	25.5	25.7	0.2
031	3,064	180	713	1.0	25.7	25.7	26.0	0.3
035	3,514	160	418	1.7	26.0	26.0	26.5	0.5
040	3,999	85	332	2.1	26.6	26.6	27.3	0.7
044	4,377	80	287	2.4	27.0	27.0	27.7	0.7
047	4,709	110	392	1.8	27.5	27.5	28.1	0.6
048	4,812	110	362	1.9	27.5	27.5	28.1	0.6
051	5,102	110	335	2.1	28.3	28.3	29.1	0.8
053	5,337	105	355	1.9	29.0	29.0	29.8	0.8
057	5,722	90	298	0.3	29.5	29.5	30.4	0.9
061	6,089	88	286	0.3	29.5	29.5	30.4	0.9

Table 22 - Floodway Data

Floodway Source		Floodway			Water Surface Elevation			
Cross Section	Distance (Feet Above Mouth)	Width (Feet)	Section Area (Square Feet)	Mean Velocity (Feet Per Second)	Regulatory	Without Floodway	With Floodway	Increase
064	6,431	110	361	0.2	29.5	29.5	30.4	0.9
069	6,874	135	570	0.1	29.6	29.6	30.4	0.8
Hall Swamp Tributary 2								
001	108	84	244	2.2	28.0[8]	27.3	28.3	1.0
003	323	58	126	4.2	28.4	28.4	28.9	0.5
006	567	46	180	3.0	30.2	30.2	30.6	0.4
009	863	35	157	3.4	31.1	31.1	31.6	0.5
012	1,168	42	196	2.7	32.0	32.0	32.5	0.5
014	1,427	51	206	2.6	32.3	32.3	33.2	0.9
017	1,718	55	192	2.8	33.2	33.2	33.9	0.7
021	2,079	85	281	1.9	34.5	34.5	35.0	0.5
024	2,354	130	584	0.9	34.8	34.8	35.4	0.6
025	2,481	110	497	1.1	37.1	37.1	37.6	0.5
028	2,756	110	479	1.1	37.2	37.2	37.7	0.5
032	3,213	120	405	1.3	37.2	37.2	37.9	0.7
035	3,529	80	281	1.7	37.3	37.3	38.1	0.8
036	3,644	80	283	1.7	37.3	37.3	38.2	0.9
040	3,995	52	136	3.5	38.0	38.0	38.7	0.7
043	4,300	46	167	2.8	39.5	39.5	39.9	0.4
046	4,576	46	155	3.1	40.1	40.1	40.8	0.7
049	4,855	65	188	2.5	40.9	40.9	41.9	1.0
050	4,970	65	259	1.8	42.2	42.2	43.1	0.9
052	5,236	33	143	3.3	42.5	42.5	43.4	0.9
056	5,551	30	133	3.6	43.3	43.3	44.0	0.7
Hall Swamp Tributary A								
002	180	90	307	1.9	29.2[1]	28.6	29.5	0.9
006	602	62	191	3.0	29.2	29.2	30.0	0.8
009	928	62	232	2.5	29.9	29.9	30.7	0.8
011	1,099	80	411	1.4	32.6	32.6	33.2	0.6
014	1,390	92	376	1.5	32.7	32.7	33.4	0.7
017	1,700	95	317	1.8	32.8	32.8	33.8	1.0
019	1,922	105	340	1.7	33.3	33.3	34.1	0.8
020	2,026	109	303	1.6	33.3	33.3	34.2	0.9
024	2,396	68	182	2.7	33.9	33.9	34.8	0.9
028	2,847	62	214	2.3	35.3	35.3	35.8	0.5
032	3,181	70	212	2.3	36.0	36.0	36.6	0.6
035	3,515	52	170	2.9	36.6	36.6	37.5	0.9
039	3,889	53	191	2.6	37.4	37.4	38.3	0.9
043	4,263	55	196	2.5	38.3	38.3	38.9	0.6
047	4,740	52	137	3.6	39.1	39.1	39.6	0.5
051	5,074	66	202	2.0	40.1	40.1	40.6	0.5
056	5,557	130	228	1.8	40.8	40.8	41.2	0.4
056	5,619	150	250	1.6	40.9	40.9	41.2	0.3
057	5,666	125	242	1.7	41.3	41.3	41.6	0.3
058	5,792	130	267	1.5	42.2	42.2	42.5	0.3

Table 22 - Floodway Data

Floodway Source		Floodway			Water Surface Elevation			
Cross Section	Distance (Feet Above Mouth)	Width (Feet)	Section Area (Square Feet)	Mean Velocity (Feet Per Second)	Regulatory	Without Floodway	With Floodway	Increase
061	6,051	96	152	2.7	42.5	42.5	43.0	0.5
Harvey Creek								
059	5,855	200	732	1.8	5.1	5.1	3.9	-1.2
061	6,051	200	766	1.8	5.3	5.3	4.4	-0.9
069	6,868	300	1,337	1.0	5.5	5.5	5.1	-0.4
075	7,505	205	929	1.4	5.6	5.6	5.7	0.1
081	8,113	222	1,057	1.3	6.0	6.0	6.3	0.3
086	8,565	176	848	1.6	6.3	6.3	6.8	0.5
091	9,110	225	979	1.4	6.9	6.9	7.6	0.7
095	9,509	250	1,134	1.2	7.3	7.3	8.0	0.7
100	9,988	252	1,274	1.1	7.5	7.5	8.3	0.8
105	10,541	166	733	1.7	7.8	7.8	8.7	0.9
110	10,958	185	896	1.4	8.2	8.2	9.0	0.8
114	11,399	185	905	1.3	8.6	8.6	9.4	0.8
118	11,790	205	1,031	1.2	9.0	9.0	9.7	0.7
123	12,257	225	1,035	1.2	9.3	9.3	10.2	0.9
126	12,636	223	1,123	1.0	9.7	9.7	10.6	0.9
130	12,980	205	1,106	1.0	10.0	10.0	10.9	0.9
133	13,283	184	893	1.3	10.3	10.3	11.2	0.9
136	13,599	168	937	1.2	10.6	10.6	11.4	0.8
137	13,690	168	930	1.2	11.1	11.1	11.8	0.7
140	13,976	190	974	1.2	11.3	11.3	12.0	0.7
145	14,493	193	948	1.2	11.7	11.7	12.5	0.8
147	14,739	205	863	1.3	12.0	12.0	12.9	0.9
151	15,051	153	618	1.5	12.5	12.5	13.4	0.9
154	15,404	165	874	1.1	13.1	13.1	14.0	0.9
156	15,640	152	680	1.4	13.3	13.3	14.2	0.9
159	15,930	155	824	1.1	13.7	13.7	14.6	0.9
164	16,414	155	845	1.0	14.0	14.0	15.0	1.0
169	16,861	160	733	1.2	14.4	14.4	15.4	1.0
173	17,349	165	814	1.1	14.9	14.9	15.9	1.0
176	17,631	180	713	1.2	15.2	15.2	16.2	1.0
177	17,728	180	742	1.2	15.2	15.2	16.2	1.0
179	17,927	170	741	1.2	15.5	15.5	16.4	0.9
184	18,406	155	787	1.1	15.9	15.9	16.9	1.0
189	18,909	145	693	1.2	16.3	16.3	17.3	1.0
194	19,394	170	658	1.3	16.9	16.9	17.8	0.9
195	19,541	170	749	1.2	18.0	18.0	18.4	0.4
200	19,978	150	594	1.4	18.3	18.3	18.8	0.5
204	20,377	130	525	1.5	18.6	18.6	19.3	0.7
207	20,720	105	522	1.6	19.0	19.0	19.7	0.7
209	20,903	123	628	1.3	19.2	19.2	20.0	0.8
212	21,158	83	478	1.7	19.4	19.4	20.2	0.8
216	21,557	130	600	1.4	19.8	19.8	20.6	0.8
220	21,986	106	521	1.6	20.1	20.1	21.1	1.0

Table 22 - Floodway Data

Floodway Source		Floodway			Water Surface Elevation			
Cross Section	Distance (Feet Above Mouth)	Width (Feet)	Section Area (Square Feet)	Mean Velocity (Feet Per Second)	Regulatory	Without Floodway	With Floodway	Increase
224	22,351	90	406	2.0	20.5	20.5	21.5	1.0
226	22,557	110	496	1.6	22.0	22.0	22.5	0.5
229	22,939	105	442	1.8	22.4	22.4	23.0	0.6
235	23,534	92	385	2.1	23.0	23.0	23.9	0.9
242	24,183	96	426	1.9	23.7	23.7	24.6	0.9
254	25,385	96	524	1.4	24.3	24.3	25.3	1.0
Herring Run								
003	289	225	822	2.4	7.2[1]	5.7	5.7	0.0
009	880	157	639	3.1	7.2[1]	6.2	6.8	0.6
013	1,331	80	456	4.4	7.2[1]	6.9	7.7	0.8
017	1,657	72	402	5.0	7.9	7.9	8.4	0.5
018	1,776	118	781	2.6	9.1	9.1	9.1	0.0
020	1,972	165	992	2.0	9.4	9.4	9.4	0.0
025	2,470	107	606	3.3	9.8	9.8	9.9	0.1
028	2,819	95	662	3.0	10.3	10.3	10.5	0.2
031	3,118	90	712	2.8	10.4	10.4	10.9	0.5
033	3,346	100	602	3.3	10.6	10.6	11.2	0.6
037	3,697	54	429	4.0	10.7	10.7	11.7	1.0
040	4,049	54	415	4.2	11.3	11.3	12.1	0.8
044	4,409	54	446	3.9	11.7	11.7	12.5	0.8
048	4,783	66	520	3.3	12.2	12.2	13.0	0.8
051	5,104	52	435	4.0	12.3	12.3	13.2	0.9
054	5,407	76	578	3.0	12.8	12.8	13.5	0.7
058	5,803	107	661	2.6	13.2	13.2	14.0	0.8
062	6,215	84	685	2.5	13.5	13.5	14.5	1.0
066	6,586	51	439	3.9	13.7	13.7	14.7	1.0
070	6,959	70	550	3.1	14.5	14.5	15.3	0.8
072	7,210	100	705	1.6	14.9	14.9	15.7	0.8
074	7,387	86	472	2.4	14.9	14.9	15.8	0.9
075	7,495	104	734	1.5	15.7	15.7	16.4	0.7
077	7,750	150	916	1.2	15.7	15.7	16.5	0.8
082	8,208	160	840	1.3	15.9	15.9	16.7	0.8
085	8,534	105	390	2.9	15.9	15.9	16.9	1.0
088	8,829	71	307	3.7	16.6	16.6	17.3	0.7
092	9,162	82	401	2.8	17.1	17.1	17.9	0.8
096	9,600	70	383	2.9	17.5	17.5	18.4	0.9
101	10,079	44	302	3.7	17.9	17.9	18.8	0.9
104	10,424	46	303	3.7	18.2	18.2	19.2	1.0
107	10,672	82	314	3.6	18.7	18.7	19.5	0.8
109	10,861	46	314	3.6	18.8	18.8	19.8	1.0
110	11,003	60	360	3.1	19.1	19.1	20.0	0.9
111	11,104	54	358	3.2	19.4	19.4	20.2	0.8
113	11,339	46	363	3.1	19.7	19.7	20.4	0.7
115	11,538	45	299	3.7	19.8	19.8	20.5	0.7
118	11,771	44	282	4.0	20.1	20.1	20.8	0.7

Table 22 - Floodway Data

Floodway Source		Floodway			Water Surface Elevation			
Cross Section	Distance (Feet Above Mouth)	Width (Feet)	Section Area (Square Feet)	Mean Velocity (Feet Per Second)	Regulatory	Without Floodway	With Floodway	Increase
121	12,086	42	275	4.1	20.6	20.6	21.2	0.6
124	12,383	42	320	3.5	21.1	21.1	21.6	0.5
126	12,596	40	299	3.7	21.3	21.3	21.7	0.4
128	12,836	39	305	3.7	21.5	21.5	22.0	0.5
130	13,033	38	297	3.8	21.7	21.7	22.1	0.4
132	13,208	46	295	3.8	21.9	21.9	22.3	0.4
134	13,391	41	277	4.0	22.1	22.1	22.4	0.3
137	13,671	36	264	4.2	22.6	22.6	22.9	0.3
138	13,821	43	291	3.8	22.8	22.8	23.1	0.3
141	14,069	32	204	5.4	23.1	23.1	23.4	0.3
142	14,180	34	209	5.3	23.5	23.5	23.7	0.2
144	14,449	38	218	5.1	24.3	24.3	24.4	0.1
146	14,590	31	198	5.6	24.7	24.7	24.8	0.1
148	14,791	39	248	4.4	25.6	25.6	25.6	0.0
151	15,084	30	207	5.2	26.3	26.3	26.4	0.1
152	15,217	31	201	5.4	26.7	26.7	26.8	0.1
154	15,412	30	203	5.3	27.4	27.4	27.5	0.1
156	15,580	47	303	3.6	28.0	28.0	28.1	0.1
156	15,642	47	361	3.0	28.3	28.3	28.4	0.1
157	15,739	46	339	3.2	28.4	28.4	28.4	0.0
160	15,968	41	323	3.4	28.6	28.6	28.6	0.0
161	16,136	47	341	3.2	28.7	28.7	28.8	0.1
165	16,472	46	320	3.4	29.0	29.0	29.1	0.1
168	16,827	33	278	3.9	29.4	29.4	29.4	0.0
170	17,008	27	213	5.1	29.6	29.6	29.7	0.1
173	17,295	38	250	4.3	30.4	30.4	30.4	0.0
176	17,608	32	216	5.0	31.0	31.0	31.1	0.1
179	17,906	32	216	4.9	32.0	32.0	32.0	0.0
180	18,028	16	151	7.0	32.3	32.3	32.3	0.0
182	18,190	32	204	5.2	33.2	33.2	33.2	0.0
184	18,357	40	310	3.4	34.1	34.1	34.1	0.0
185	18,492	28	237	4.5	34.3	34.3	34.3	0.0
185	18,548	28	260	4.1	34.5	34.5	34.5	0.0
Horse Branch								
003	312	251	1,005	1.1	13.2	13.2	14.2	1.0
010	984	192	748	1.5	14.1	14.1	15.0	0.9
019	1,891	194	828	1.4	15.4	15.4	16.4	1.0
025	2,498	107	414	2.7	16.7	16.7	17.6	0.9
026	2,588	101	645	1.8	18.2	18.2	18.6	0.4
030	3,000	110	679	1.7	18.6	18.6	19.2	0.6
035	3,475	171	991	1.1	18.8	18.8	19.7	0.9
041	4,050	173	828	1.4	19.3	19.3	20.2	0.9
044	4,364	153	907	1.3	19.6	19.6	20.6	1.0
048	4,754	112	576	2.0	20.0	20.0	20.9	0.9
053	5,293	109	547	2.1	20.6	20.6	21.6	1.0

Table 22 - Floodway Data

Floodway Source		Floodway			Water Surface Elevation			
Cross Section	Distance (Feet Above Mouth)	Width (Feet)	Section Area (Square Feet)	Mean Velocity (Feet Per Second)	Regulatory	Without Floodway	With Floodway	Increase
061	6,101	122	597	1.8	21.7	21.7	22.7	1.0
067	6,722	197	794	1.3	22.4	22.4	23.4	1.0
072	7,157	115	435	2.4	23.0	23.0	23.9	0.9
074	7,417	118	578	1.8	23.5	23.5	24.5	1.0
080	8,022	90	407	2.6	24.4	24.4	25.4	1.0
084	8,442	162	816	1.3	25.1	25.1	26.0	0.9
090	8,980	134	544	1.9	25.6	25.6	26.5	0.9
096	9,581	89	337	3.1	26.9	26.9	27.8	0.9
101	10,081	136	671	1.4	28.4	28.4	29.3	0.9
105	10,518	173	724	1.3	28.9	28.9	29.8	0.9
108	10,834	159	574	1.7	29.4	29.4	30.4	1.0
116	11,602	125	465	1.8	31.2	31.2	32.1	0.9
123	12,297	150	627	1.4	32.2	32.2	33.2	1.0
126	12,570	82	399	2.1	32.6	32.6	33.6	1.0
130	13,000	105	471	1.8	33.8	33.8	34.5	0.7
136	13,583	65	258	1.5	34.7	34.7	35.5	0.8
138	13,823	40	119	3.3	35.1	35.1	35.9	0.8
140	13,991	42	185	2.2	35.7	35.7	36.5	0.8
141	14,132	28	92	4.3	36.0	36.0	36.6	0.6
142	14,219	38	125	3.2	36.3	36.3	37.1	0.8
143	14,315	22	69	5.7	36.4	36.4	37.4	1.0
144	14,397	29	102	3.9	37.7	37.7	38.2	0.5
146	14,561	30	97	4.1	38.4	38.4	39.0	0.6
148	14,785	32	108	3.7	39.3	39.3	40.0	0.7
150	14,989	30	97	4.1	40.2	40.2	40.7	0.5
152	15,204	30	84	4.1	41.2	41.2	41.7	0.5
155	15,458	20	78	4.5	42.3	42.3	42.7	0.4
157	15,692	34	101	3.5	43.3	43.3	43.6	0.3
157	15,734	37	118	2.9	43.4	43.4	43.9	0.5
161	16,062	43	118	3.0	44.3	44.3	44.6	0.3
164	16,378	22	42	8.2	45.6	45.6	45.6	0.0
165	16,516	36	96	3.6	47.9	47.9	48.0	0.1
167	16,719	50	155	2.2	49.5	49.5	50.2	0.7
169	16,915	33	113	3.1	49.7	49.7	50.6	0.9
171	17,072	26	80	4.3	50.6	50.6	51.0	0.4
174	17,353	38	79	4.4	52.6	52.6	52.6	0.0
175	17,518	46	83	4.2	53.5	53.5	53.5	0.0
178	17,783	92	202	1.7	54.3	54.3	54.3	0.0
179	17,867	148	563	0.6	56.6	56.6	56.7	0.1
179	17,869	148	388	0.9	56.6	56.6	56.7	0.1
179	17,925	240	999	0.4	57.0	57.0	58.0	1.0
179	17,941	240	643	0.5	57.0	57.0	58.0	1.0
180	18,006	200	1,032	0.3	59.2	59.2	59.4	0.2
182	18,241	200	787	0.4	59.2	59.2	59.4	0.2
Horse Branch Tributary								

Table 22 - Floodway Data

Floodway Source		Floodway			Water Surface Elevation			
Cross Section	Distance (Feet Above Mouth)	Width (Feet)	Section Area (Square Feet)	Mean Velocity (Feet Per Second)	Regulatory	Without Floodway	With Floodway	Increase
002	185	61	199	3.1	34.1[9]	33.6	34.0	0.4
005	545	42	171	3.6	34.4	34.4	34.9	0.5
009	934	40	163	3.8	35.2	35.2	35.8	0.6
012	1,173	50	237	2.6	35.8	35.8	36.5	0.7
013	1,290	50	271	2.3	36.7	36.7	37.3	0.6
016	1,553	63	316	2.0	36.8	36.8	37.5	0.7
019	1,887	156	383	1.6	37.1	37.1	37.9	0.8
019	1,917	166	486	1.3	37.1	37.1	38.0	0.9
020	1,965	170	633	1.0	37.2	37.2	38.1	0.9
020	1,995	150	523	1.2	37.2	37.2	38.1	0.9
020	2,026	150	578	1.1	37.3	37.3	38.2	0.9
021	2,096	140	548	1.1	37.3	37.3	38.2	0.9
024	2,445	71	246	2.5	37.5	37.5	38.5	1.0
029	2,864	57	241	2.3	38.6	38.6	39.4	0.8
031	3,127	39	145	3.8	39.1	39.1	40.0	0.9
033	3,326	47	201	2.7	40.1	40.1	40.8	0.7
035	3,466	56	201	2.7	40.2	40.2	41.0	0.8
036	3,610	90	293	1.9	40.7	40.7	41.5	0.8
040	3,962	100	426	1.3	41.0	41.0	41.9	0.9
Jacks Creek								
002	176	360	898	1.1	8.1	8.1	9.0	0.9
006	649	105	462	2.2	8.1	8.1	9.1	1.0
007	746	425	3,595	0.6	6.3	6.3	6.6	0.3
009	941	188	460	2.2	8.3	8.3	9.2	0.9
011	1,125	210	1,934	1.0	6.3	6.3	6.6	0.3
012	1,206	200	2,013	1.0	6.3	6.3	6.6	0.3
013	1,272	235	2,474	0.8	6.3	6.3	6.7	0.4
013	1,313	235	2,474	0.8	6.3	6.3	6.7	0.4
014	1,392	125	352	2.9	8.8	8.8	9.5	0.7
016	1,554	200	2,178	0.9	6.3	6.3	6.7	0.4
017	1,657	193	380	2.7	9.0	9.0	9.8	0.8
017	1,743	140	1,401	1.2	6.3	6.3	6.7	0.4
019	1,852	180	1,730	1.0	6.3	6.3	6.9	0.6
020	1,976	175	397	2.6	9.2	9.2	10.0	0.8
022	2,208	175	1,934	0.9	6.3	6.3	6.9	0.6
024	2,359	235	354	2.9	9.4	9.4	10.3	0.9
026	2,559	200	2,137	0.8	6.3	6.3	6.9	0.6
030	2,995	200	1,776	0.9	6.4	6.4	6.9	0.5
034	3,390	325	1,586	0.8	6.4	6.4	7.0	0.6
036	3,580	160	732	1.8	6.4	6.4	6.9	0.5
037	3,680	130	819	1.6	6.4	6.4	7.0	0.6
037	3,736	130	751	1.7	6.4	6.4	7.0	0.6
038	3,781	130	826	1.6	6.5	6.5	7.1	0.6
039	3,858	130	732	1.8	6.5	6.5	7.1	0.6
040	3,976	130	770	1.7	6.5	6.5	7.2	0.7

Table 22 - Floodway Data

Floodway Source		Floodway			Water Surface Elevation			
Cross Section	Distance (Feet Above Mouth)	Width (Feet)	Section Area (Square Feet)	Mean Velocity (Feet Per Second)	Regulatory	Without Floodway	With Floodway	Increase
040	4,025	130	851	1.5	6.6	6.6	7.2	0.6
041	4,134	127	647	2.0	6.6	6.6	7.3	0.7
042	4,198	150	639	2.0	6.6	6.6	7.3	0.7
043	4,291	170	860	1.5	6.7	6.7	7.4	0.7
045	4,506	190	687	1.9	6.8	6.8	7.5	0.7
047	4,680	215	740	1.8	6.8	6.8	7.6	0.8
048	4,768	205	1,126	1.2	6.9	6.9	7.7	0.8
049	4,911	195	891	1.5	6.9	6.9	7.7	0.8
052	5,151	355	1,904	0.7	7.0	7.0	7.8	0.8
052	5,242	240	943	1.4	7.0	7.0	7.8	0.8
053	5,317	85	414	3.1	7.0	7.0	7.7	0.7
054	5,395	140	416	3.1	7.1	7.1	7.8	0.7
055	5,473	165	597	2.2	7.2	7.2	8.0	0.8
056	5,631	150	643	2.0	7.3	7.3	8.1	0.8
058	5,809	215	829	1.6	7.5	7.5	8.3	0.8
061	6,139	280	733	1.8	7.5	7.5	8.3	0.8
063	6,278	310	458	2.8	7.6	7.6	8.4	0.8
064	6,393	320	987	1.3	8.0	8.0	8.9	0.9
065	6,456	320	1,358	1.0	8.0	8.0	8.9	0.9
066	6,622	400	1,339	1.0	8.1	8.1	9.0	0.9
067	6,725	425	1,190	0.9	8.1	8.1	9.0	0.9
088	8,844	130	346	3.0	9.4	9.4	10.3	0.9
089	8,943	120	275	3.7	9.5	9.5	10.5	1.0
Jacks Creek Tributary 1								
002	214	91	480	1.9	6.3[10]	3.7	4.7	1.0
003	350	75	282	3.2	6.3[10]	3.9	4.9	1.0
004	420	48	232	3.9	6.3[10]	4.0	4.9	0.9
005	538	72	362	2.5	6.3[10]	4.4	5.4	1.0
007	651	70	345	2.6	6.3[10]	4.5	5.5	1.0
010	1,023	79	398	2.3	6.8	6.8	7.7	0.9
012	1,177	85	446	2.0	6.9	6.9	7.9	1.0
013	1,308	73	381	2.4	7.1	7.1	8.0	0.9
015	1,484	63	299	3.0	7.1	7.1	8.1	1.0
016	1,611	60	363	2.5	7.7	7.7	8.5	0.8
017	1,700	63	366	2.5	7.8	7.8	8.6	0.8
032	3,164	65	320	2.8	7.9	7.9	8.8	0.9
034	3,447	100	338	2.7	8.6	8.6	9.6	1.0
038	3,798	43	191	4.8	10.0	10.0	10.9	0.9
044	4,415	57	201	4.5	10.1	10.1	10.9	0.8
045	4,503	50	227	4.0	10.6	10.6	11.5	0.9
046	4,590	30	156	5.8	10.7	10.7	11.7	1.0
Jacks Creek Tributary 2								
001	68	73	307	2.9	6.4[10]	4.7	4.9	0.2
009	905	83	355	2.5	6.4[1]	5.6	6.6	1.0
011	1,081	73	344	2.6	6.4[1]	5.9	6.8	0.9

Table 22 - Floodway Data

Floodway Source		Floodway			Water Surface Elevation			
Cross Section	Distance (Feet Above Mouth)	Width (Feet)	Section Area (Square Feet)	Mean Velocity (Feet Per Second)	Regulatory	Without Floodway	With Floodway	Increase
012	1,241	73	360	2.5	6.4[1]	6.1	6.9	0.8
014	1,368	73	354	2.6	6.4[1]	6.1	7.1	1.0
015	1,513	35	185	4.9	6.4[1]	6.3	7.2	0.9
017	1,675	40	169	5.3	7.1	7.1	8.0	0.9
Joe Branch								
006	592	142	575	1.5	13.7[4]	12.7	13.6	0.9
011	1,076	68	217	4.0	13.6	13.6	14.6	1.0
015	1,508	135	674	1.3	15.4	15.4	16.2	0.8
019	1,924	137	509	1.7	15.8	15.8	16.7	0.9
024	2,418	124	577	1.5	16.6	16.6	17.6	1.0
029	2,860	80	369	2.4	17.4	17.4	18.3	0.9
034	3,413	90	376	2.3	18.8	18.8	19.7	0.9
036	3,575	90	678	1.3	21.0	21.0	21.6	0.6
039	3,897	77	487	1.8	21.0	21.0	21.8	0.8
041	4,115	59	348	2.5	21.2	21.2	22.1	0.9
046	4,615	66	402	2.2	22.2	22.2	23.1	0.9
051	5,135	50	326	2.7	23.1	23.1	24.1	1.0
055	5,506	76	367	2.4	23.9	23.9	24.9	1.0
059	5,923	55	258	3.4	25.1	25.1	26.0	0.9
067	6,659	86	503	1.5	26.9	26.9	27.8	0.9
074	7,396	102	483	1.5	27.6	27.6	28.6	1.0
078	7,827	89	339	2.2	28.4	28.4	29.4	1.0
082	8,210	54	263	2.8	29.5	29.5	30.4	0.9
087	8,729	87	366	2.0	31.3	31.3	32.1	0.8
094	9,430	70	355	2.1	32.8	32.8	33.7	0.9
098	9,839	87	458	1.6	33.7	33.7	34.6	0.9
102	10,243	59	325	2.3	34.6	34.6	35.5	0.9
104	10,444	79	425	1.7	35.1	35.1	36.1	1.0
108	10,774	90	484	1.3	35.7	35.7	36.6	0.9
114	11,402	50	209	2.9	36.8	36.8	37.7	0.9
118	11,794	78	365	1.7	38.4	38.4	39.3	0.9
119	11,907	78	523	1.2	39.0	39.0	39.7	0.7
121	12,140	76	467	1.3	39.0	39.0	39.9	0.9
125	12,541	81	464	1.3	39.4	39.4	40.4	1.0
129	12,945	50	307	2.0	39.7	39.7	40.7	1.0
133	13,281	77	398	1.5	40.0	40.0	41.0	1.0
136	13,586	50	215	2.8	40.3	40.3	41.3	1.0
137	13,673	51	347	1.8	42.3	42.3	42.9	0.6
139	13,914	75	503	1.2	42.4	42.4	43.1	0.7
146	14,571	68	346	1.8	42.6	42.6	43.4	0.8
148	14,803	52	221	2.8	42.7	42.7	43.6	0.9
153	15,274	100	394	1.6	43.8	43.8	44.3	0.5
155	15,526	150	262	2.3	44.2	44.2	44.7	0.5
162	16,226	166	760	0.6	44.7	44.7	45.5	0.8
166	16,621	266	783	0.6	44.7	44.7	45.5	0.8

Table 22 - Floodway Data

Floodway Source		Floodway			Water Surface Elevation			
Cross Section	Distance (Feet Above Mouth)	Width (Feet)	Section Area (Square Feet)	Mean Velocity (Feet Per Second)	Regulatory	Without Floodway	With Floodway	Increase
169	16,941	230	724	0.7	44.7	44.7	45.6	0.9
172	17,212	170	741	0.5	44.8	44.8	45.7	0.9
173	17,312	180	869	0.4	44.8	44.8	45.7	0.9
177	17,696	235	595	0.6	44.8	44.8	45.7	0.9
182	18,247	140	485	0.7	44.9	44.9	45.9	1.0
Latham Creek								
020	1,999	298	1,571	1.4	19.9[11]	17.0	18.0	1.0
023	2,308	196	1,064	2.1	19.9[11]	17.4	18.4	1.0
028	2,833	333	1,834	1.2	19.9[1]	18.2	19.1	0.9
033	3,267	396	1,994	1.1	19.9[1]	18.6	19.5	0.9
042	4,154	407	1,562	1.4	19.9[1]	19.6	20.4	0.8
047	4,691	310	1,531	1.4	20.3	20.3	21.2	0.9
055	5,455	356	1,827	1.2	21.2	21.2	22.1	0.9
060	5,999	303	1,441	1.3	21.7	21.7	22.6	0.9
065	6,502	319	1,473	1.3	22.4	22.4	23.2	0.8
069	6,880	325	1,404	1.4	22.8	22.8	23.7	0.9
076	7,610	367	1,708	1.1	23.6	23.6	24.6	1.0
080	7,979	288	1,425	1.3	24.0	24.0	25.0	1.0
086	8,580	147	659	2.8	24.9	24.9	25.8	0.9
087	8,743	147	1,191	1.6	25.7	25.7	26.4	0.7
092	9,170	284	1,523	1.2	26.0	26.0	26.7	0.7
096	9,598	364	1,836	1.0	26.3	26.3	27.0	0.7
101	10,122	316	1,539	1.2	26.7	26.7	27.5	0.8
106	10,574	300	1,326	1.4	27.2	27.2	28.1	0.9
109	10,929	264	1,334	1.3	27.8	27.8	28.7	0.9
115	11,500	392	1,734	1.0	28.4	28.4	29.4	1.0
119	11,888	306	1,397	1.3	28.8	28.8	29.7	0.9
126	12,552	359	1,685	1.1	29.5	29.5	30.5	1.0
128	12,819	330	1,530	1.2	29.8	29.8	30.8	1.0
Maple Branch								
010	1,000	289	1,811	0.6	8.4[1]	4.7	6.3	1.6
013	1,302	114	617	1.7	8.4[1]	4.8	6.4	1.6
014	1,377	109	888	1.2	8.4[1]	7.2	7.9	0.7
015	1,512	125	894	1.1	8.4[1]	7.3	7.9	0.6
016	1,625	117	834	1.2	8.4[1]	7.3	8.0	0.7
017	1,735	70	485	2.1	8.4[1]	7.3	8.0	0.7
020	2,000	95	691	1.5	8.4[1]	7.4	8.2	0.8
023	2,313	95	666	1.5	8.4[1]	7.5	8.4	0.9
025	2,500	90	594	1.7	8.4[1]	7.5	8.4	0.9
027	2,744	92	602	1.7	8.4[1]	7.6	8.5	0.9
030	3,000	90	602	1.7	8.4[1]	7.6	8.6	1.0
032	3,207	89	603	1.5	8.4[1]	7.7	8.7	1.0
035	3,500	85	587	1.6	8.4[1]	7.7	8.9	1.2
040	4,000	85	582	1.6	8.4[1]	7.8	9.1	1.3
045	4,500	87	580	1.6	8.4[1]	7.9	9.3	1.4

Table 22 - Floodway Data

Floodway Source		Floodway			Water Surface Elevation			
Cross Section	Distance (Feet Above Mouth)	Width (Feet)	Section Area (Square Feet)	Mean Velocity (Feet Per Second)	Regulatory	Without Floodway	With Floodway	Increase
047	4,709	85	541	1.7	8.4[1]	8.0	9.3	1.3
050	5,000	82	509	1.8	8.4[1]	8.1	9.5	1.4
052	5,219	60	397	2.3	8.4[1]	8.2	9.6	1.4
054	5,386	61	426	2.2	8.4[1]	8.3	9.7	1.4
056	5,615	61	478	1.9	9.4	9.4	11.6	2.2
060	6,000	51	343	2.7	9.7	9.7	11.7	2.0
065	6,500	50	228	4.1	10.4	10.4	12.1	1.7
070	7,000	83	376	2.5	12.0	12.0	13.4	1.4
075	7,500	59	288	2.9	12.8	12.8	14.3	1.5
080	8,000	88	362	2.3	13.9	13.9	15.3	1.4
083	8,263	53	249	3.3	14.3	14.3	15.8	1.5
085	8,525	26	134	6.2	15.1	15.1	16.5	1.4
086	8,563	26	158	5.3	15.6	15.6	16.9	1.3
090	9,000	134	785	1.1	16.5	16.5	18.0	1.5
095	9,500	52	317	2.6	16.8	16.8	18.3	1.5
097	9,734	131	690	1.2	17.2	17.2	18.8	1.6
100	10,000	106	562	1.3	17.4	17.4	19.0	1.6
105	10,500	85	412	1.8	17.8	17.8	19.4	1.6
108	10,760	75	401	1.8	18.2	18.2	19.7	1.5
110	11,000	87	428	1.7	18.5	18.5	20.0	1.5
113	11,291	63	275	2.6	18.8	18.8	20.3	1.5
115	11,500	63	302	2.4	19.4	19.4	20.9	1.5
120	12,000	81	405	1.8	20.4	20.4	21.9	1.5
122	12,247	53	293	2.5	20.8	20.8	22.3	1.5
126	12,595	89	443	1.5	21.4	21.4	23.0	1.6
Maple Branch (Near Chocowinity)								
005	500	137	604	1.2	6.1[1]	4.0	5.0	1.0
011	1,131	136	500	1.5	6.1[1]	4.5	5.5	1.0
014	1,438	117	392	1.9	6.1[1]	5.0	5.9	0.9
016	1,592	65	275	2.7	6.1[1]	5.3	6.1	0.8
017	1,726	52	205	3.6	6.1[1]	5.5	6.5	1.0
018	1,801	58	296	2.5	6.1	6.1	6.9	0.8
019	1,890	58	338	2.2	6.3	6.3	7.0	0.7
021	2,065	54	261	2.8	6.3	6.3	7.0	0.7
025	2,500	51	195	3.8	8.0	8.0	8.4	0.4
029	2,887	61	249	3.0	10.5	10.5	11.0	0.5
032	3,209	61	247	1.7	11.3	11.3	12.3	1.0
033	3,305	69	303	1.4	11.5	11.5	12.5	1.0
034	3,399	36	98	4.2	11.6	11.6	12.5	0.9
037	3,684	36	119	3.5	12.7	12.7	13.0	0.3
038	3,763	27	86	4.8	13.1	13.1	13.3	0.2
038	3,822	20	73	5.6	13.3	13.3	13.6	0.3
039	3,905	20	83	4.9	13.8	13.8	14.0	0.2
040	4,000	22	83	5.0	14.4	14.4	14.4	0.0
042	4,195	21	82	5.0	15.3	15.3	15.9	0.6

Table 22 - Floodway Data

Floodway Source		Floodway			Water Surface Elevation			
Cross Section	Distance (Feet Above Mouth)	Width (Feet)	Section Area (Square Feet)	Mean Velocity (Feet Per Second)	Regulatory	Without Floodway	With Floodway	Increase
045	4,500	21	80	4.7	17.5	17.5	18.2	0.7
048	4,843	21	78	4.8	20.5	20.5	20.7	0.2
050	5,000	19	68	5.5	21.7	21.7	22.0	0.3
053	5,314	20	84	4.4	24.2	24.2	24.7	0.5
055	5,500	20	76	4.9	25.4	25.4	25.8	0.4
057	5,727	20	80	4.7	27.1	27.1	27.4	0.3
060	6,000	28	98	3.8	28.5	28.5	29.0	0.5
061	6,124	31	101	3.7	29.0	29.0	29.4	0.4
062	6,196	35	192	2.0	30.9	30.9	31.7	0.8
064	6,369	28	127	3.0	30.9	30.9	31.9	1.0
065	6,500	28	112	3.4	31.2	31.2	32.1	0.9
067	6,674	28	111	3.4	31.8	31.8	32.5	0.7
069	6,878	28	118	3.2	32.4	32.4	32.9	0.5
Maple Branch Tributary (Near Chocowinity)								
002	171	70	284	2.8	10.8[1]	10.0	10.9	0.9
004	358	104	462	1.7	10.8[1]	10.6	11.6	1.0
006	635	118	538	1.5	11.2	11.2	12.2	1.0
009	924	126	509	1.5	11.7	11.7	12.7	1.0
012	1,200	109	466	1.7	12.3	12.3	13.2	0.9
017	1,745	95	415	1.9	13.6	13.6	14.5	0.9
022	2,180	123	520	1.5	14.5	14.5	15.4	0.9
026	2,609	104	338	2.0	15.3	15.3	16.2	0.9
032	3,219	126	466	1.4	17.2	17.2	17.9	0.7
038	3,838	88	318	2.1	18.5	18.5	19.3	0.8
045	4,481	101	203	3.3	21.9	21.9	22.3	0.4
046	4,582	101	831	0.8	25.5	25.5	25.6	0.1
051	5,086	187	1,092	0.6	25.6	25.6	25.8	0.2
055	5,536	103	478	1.3	25.7	25.7	25.9	0.2
060	6,018	81	278	2.2	26.1	26.1	26.5	0.4
065	6,492	120	375	1.6	27.2	27.2	27.9	0.7
069	6,886	72	289	2.1	27.9	27.9	28.8	0.9
072	7,211	43	195	2.8	28.6	28.6	29.4	0.8
074	7,357	43	225	2.4	29.4	29.4	30.0	0.6
077	7,667	36	164	3.4	29.9	29.9	30.3	0.4
Mitchell Branch								
003	298	225	1,689	0.7	7.0[1]	6.7	7.6	0.9
006	620	169	995	1.2	7.0[1]	6.7	7.7	1.0
010	1,030	203	1,599	0.8	7.0[1]	6.9	7.9	1.0
014	1,401	282	2,228	0.5	7.0	7.0	7.9	0.9
018	1,762	187	1,517	0.8	7.0	7.0	8.0	1.0
021	2,139	166	1,327	0.9	7.1	7.1	8.0	0.9
024	2,426	190	1,422	0.9	7.1	7.1	8.1	1.0
026	2,616	165	1,343	0.9	7.2	7.2	8.1	0.9
031	3,090	156	1,165	1.0	7.3	7.3	8.3	1.0
035	3,530	114	754	1.5	7.5	7.5	8.4	0.9

Table 22 - Floodway Data

Floodway Source		Floodway			Water Surface Elevation			
Cross Section	Distance (Feet Above Mouth)	Width (Feet)	Section Area (Square Feet)	Mean Velocity (Feet Per Second)	Regulatory	Without Floodway	With Floodway	Increase
038	3,825	104	712	1.6	7.6	7.6	8.6	1.0
040	3,977	90	691	1.7	7.7	7.7	8.7	1.0
040	4,025	90	690	1.2	7.8	7.8	8.8	1.0
045	4,463	104	665	1.7	7.9	7.9	8.9	1.0
051	5,108	59	432	2.7	8.2	8.2	9.1	0.9
057	5,747	99	544	1.7	8.4	8.4	9.4	1.0
059	5,930	99	907	1.0	12.5	12.5	13.0	0.5
063	6,280	172	1,344	0.7	12.5	12.5	13.0	0.5
067	6,707	190	1,289	0.7	12.5	12.5	13.0	0.5
072	7,173	215	1,397	0.6	12.6	12.6	13.1	0.5
076	7,580	185	1,088	0.7	12.6	12.6	13.2	0.6
080	8,029	195	994	0.8	12.6	12.6	13.3	0.7
085	8,530	194	735	1.1	12.6	12.6	13.5	0.9
092	9,217	147	387	1.5	12.9	12.9	13.8	0.9
097	9,665	40	172	3.4	13.2	13.2	14.1	0.9
101	10,065	50	172	3.4	13.9	13.9	14.6	0.7
104	10,368	41	158	3.7	14.5	14.5	15.1	0.6
108	10,822	43	156	3.7	15.6	15.6	15.8	0.2
110	10,992	40	150	3.9	16.0	16.0	16.1	0.1
113	11,259	42	152	3.8	16.5	16.5	16.6	0.1
116	11,597	26	97	4.4	17.2	17.2	17.3	0.1
117	11,673	32	161	2.6	19.1	19.1	19.1	0.0
120	12,030	36	88	4.8	19.4	19.4	19.5	0.1
122	12,199	44	97	4.4	20.2	20.2	20.3	0.1
124	12,423	33	89	4.8	21.1	21.1	21.2	0.1
127	12,738	33	76	5.6	22.9	22.9	23.2	0.3
Morris Run								
002	242	242	1,121	1.4	22.3[1]	21.4	21.5	0.1
008	781	356	1,559	1.0	22.3[1]	21.5	21.6	0.1
014	1,367	341	1,538	1.0	22.3[1]	21.6	21.7	0.1
018	1,799	479	2,201	0.7	22.3[1]	21.7	21.8	0.1
023	2,315	275	1,069	1.5	22.3[1]	21.8	21.9	0.1
027	2,693	404	1,259	1.2	22.3[1]	21.9	22.0	0.1
031	3,076	229	663	2.4	22.3[1]	22.2	22.2	0.0
032	3,195	259	1,636	1.0	24.7	24.7	24.8	0.1
035	3,515	196	1,047	1.5	24.7	24.7	24.9	0.2
039	3,938	186	1,024	1.5	24.9	24.9	25.1	0.2
047	4,708	177	933	1.2	25.1	25.1	25.6	0.5
049	4,888	177	953	1.2	25.8	25.8	26.3	0.5
053	5,345	135	821	1.4	25.9	25.9	26.5	0.6
058	5,796	122	682	1.6	26.1	26.1	26.7	0.6
062	6,185	180	774	1.4	26.3	26.3	27.0	0.7
065	6,501	166	886	1.2	26.6	26.6	27.4	0.8
069	6,879	200	758	1.4	26.9	26.9	27.9	1.0
072	7,197	135	563	1.9	27.6	27.6	28.5	0.9

Table 22 - Floodway Data

Floodway Source		Floodway			Water Surface Elevation			
Cross Section	Distance (Feet Above Mouth)	Width (Feet)	Section Area (Square Feet)	Mean Velocity (Feet Per Second)	Regulatory	Without Floodway	With Floodway	Increase
073	7,252	122	424	2.6	27.7	27.7	28.5	0.8
078	7,764	144	740	1.5	28.6	28.6	29.6	1.0
084	8,369	171	961	1.1	29.1	29.1	30.1	1.0
089	8,904	229	1,076	1.0	29.5	29.5	30.4	0.9
094	9,406	271	1,123	0.9	29.8	29.8	30.7	0.9
101	10,120	368	1,318	0.8	30.1	30.1	31.1	1.0
105	10,500	419	1,898	0.5	30.3	30.3	31.3	1.0
109	10,906	307	1,101	0.9	30.4	30.4	31.4	1.0
115	11,476	271	917	1.1	30.9	30.9	31.9	1.0
120	12,035	450	1,733	0.5	31.3	31.3	32.3	1.0
125	12,529	398	1,606	0.5	31.4	31.4	32.4	1.0
131	13,136	200	713	1.1	31.6	31.6	32.6	1.0
136	13,638	345	1,039	0.8	31.8	31.8	32.8	1.0
142	14,201	647	1,842	0.4	32.0	32.0	32.9	0.9
143	14,315	647	2,115	0.4	32.0	32.0	32.9	0.9
147	14,730	642	1,497	0.5	32.0	32.0	33.0	1.0
152	15,234	768	1,687	0.5	32.1	32.1	33.2	1.1
154	15,373	768	2,117	0.4	32.6	32.6	33.2	0.6
158	15,755	650	1,464	0.5	32.6	32.6	33.2	0.6
Old Ford Swamp								
000	0	611	5,717	0.8	19.7	19.7	20.6	0.9
006	554	685	6,339	0.7	19.9	19.9	20.7	0.8
010	1,029	644	5,443	0.7	20.0	20.0	20.8	0.8
015	1,520	789	6,846	0.5	20.0	20.0	20.9	0.9
020	1,986	750	6,047	0.6	20.1	20.1	20.9	0.8
027	2,664	643	5,113	0.7	20.2	20.2	21.0	0.8
032	3,177	541	4,101	0.9	20.3	20.3	21.1	0.8
035	3,500	584	3,694	1.0	20.4	20.4	21.2	0.8
040	3,966	549	3,867	0.9	20.5	20.5	21.4	0.9
046	4,591	765	4,148	0.9	20.7	20.7	21.7	1.0
054	5,389	726	5,249	0.7	20.9	20.9	21.9	1.0
064	6,357	505	3,599	1.0	21.2	21.2	22.1	0.9
068	6,834	494	3,629	0.9	21.4	21.4	22.3	0.9
074	7,427	593	4,053	0.9	21.7	21.7	22.6	0.9
079	7,876	588	3,462	1.0	21.9	21.9	22.8	0.9
083	8,337	697	3,304	1.0	22.1	22.1	23.1	1.0
088	8,816	517	3,415	1.0	22.4	22.4	23.4	1.0
093	9,340	501	3,600	0.9	22.6	22.6	23.6	1.0
096	9,643	396	2,944	1.1	22.8	22.8	23.7	0.9
101	10,146	649	4,390	0.8	23.0	23.0	24.0	1.0
108	10,823	550	3,404	1.0	23.2	23.2	24.2	1.0
113	11,343	150	1,089	3.0	23.5	23.5	24.5	1.0
116	11,578	165	1,254	2.6	24.2	24.2	25.2	1.0
121	12,057	807	5,488	0.6	24.6	24.6	25.6	1.0
125	12,473	825	5,256	0.6	24.7	24.7	25.7	1.0

Table 22 - Floodway Data

Floodway Source		Floodway			Water Surface Elevation			
Cross Section	Distance (Feet Above Mouth)	Width (Feet)	Section Area (Square Feet)	Mean Velocity (Feet Per Second)	Regulatory	Without Floodway	With Floodway	Increase
130	12,964	759	4,471	0.7	24.9	24.9	25.8	0.9
137	13,655	732	4,443	0.7	25.1	25.1	26.0	0.9
Pantego Creek								
046	4,550	125	1,242	2.6	4.6	4.6	3.3	-1.3
068	6,840	601	3,038	1.0	4.9	4.9	4.7	-0.2
088	8,800	198	1,146	2.7	5.7	5.7	6.1	0.4
106	10,600	389	2,850	1.1	6.3	6.3	7.1	0.8
127	12,705	430	3,125	1.0	6.9	6.9	7.7	0.8
156	15,555	445	2,900	1.0	7.9	7.9	8.7	0.8
188	18,845	510	2,858	1.0	9.1	9.1	10.0	0.9
227	22,654	102	1,115	2.4	9.9	9.9	10.8	0.9
232	23,173	*	*	*	10.3	10.3	*	*
233	23,328	151	1,094	2.4	10.5	10.5	11.5	1.0
Pineygrove Branch								
002	171	55	240	3.3	14.6[1]	10.4	10.9	0.5
005	542	66	335	2.4	14.6[1]	11.5	12.1	0.6
008	839	38	171	4.7	14.6[1]	11.8	12.7	0.9
011	1,086	34	172	4.6	14.6[1]	13.2	13.9	0.7
012	1,174	26	116	6.9	14.6[1]	13.5	14.2	0.7
013	1,295	31	158	5.1	14.9	14.9	15.2	0.3
014	1,412	43	269	3.0	15.8	15.8	15.9	0.1
015	1,532	32	189	4.2	15.9	15.9	16.1	0.2
017	1,705	41	181	4.4	16.2	16.2	16.7	0.5
019	1,853	65	294	2.7	17.2	17.2	17.5	0.3
020	2,006	68	379	2.1	17.3	17.3	17.9	0.6
024	2,409	83	474	1.7	17.7	17.7	18.4	0.7
030	3,002	80	390	2.0	18.3	18.3	19.2	0.9
035	3,506	61	317	2.5	19.2	19.2	20.1	0.9
038	3,782	99	448	1.8	19.9	19.9	20.8	0.9
040	4,042	85	387	2.1	20.2	20.2	21.2	1.0
044	4,384	83	388	2.1	20.6	20.6	21.6	1.0
048	4,752	42	194	4.1	21.2	21.2	22.1	0.9
052	5,160	60	269	3.0	22.2	22.2	22.9	0.7
057	5,726	55	252	3.2	22.8	22.8	23.7	0.9
059	5,942	42	188	4.3	23.0	23.0	23.9	0.9
063	6,252	49	198	4.0	24.1	24.1	24.7	0.6
067	6,696	90	324	2.5	25.3	25.3	25.9	0.6
068	6,778	90	558	1.4	28.0	28.0	28.4	0.4
071	7,148	148	700	0.9	28.0	28.0	28.6	0.6
Porter Creek								
101	10,091	81	575	2.8	5.0	5.0	3.0	-2.0
106	10,553	53	378	4.3	5.1	5.1	3.5	-1.6
109	10,861	209	784	2.0	5.4	5.4	4.4	-1.0
Poundpole Swamp Branch								
003	288	281	1,480	1.2	17.8[1]	13.6	14.6	1.0

Table 22 - Floodway Data

Floodway Source		Floodway			Water Surface Elevation			
Cross Section	Distance (Feet Above Mouth)	Width (Feet)	Section Area (Square Feet)	Mean Velocity (Feet Per Second)	Regulatory	Without Floodway	With Floodway	Increase
005	506	202	942	1.9	17.8[1]	13.8	14.7	0.9
010	983	265	1,283	1.4	17.8[1]	14.4	15.3	0.9
015	1,500	192	1,033	1.8	17.8[1]	14.8	15.8	1.0
018	1,827	182	1,037	1.7	17.8[1]	15.1	16.1	1.0
022	2,164	150	765	2.4	17.8[1]	15.5	16.4	0.9
028	2,832	146	694	2.6	17.8[1]	16.5	17.5	1.0
034	3,431	126	635	2.9	17.8[1]	17.5	18.4	0.9
039	3,897	212	1,055	1.7	18.1	18.1	19.1	1.0
040	4,030	212	1,319	1.3	19.6	19.6	20.2	0.6
043	4,339	176	1,050	1.7	19.7	19.7	20.4	0.7
050	5,000	277	1,357	1.3	20.2	20.2	21.0	0.8
055	5,480	284	1,381	1.3	20.5	20.5	21.3	0.8
061	6,074	198	1,024	1.7	21.1	21.1	21.9	0.8
067	6,716	192	1,072	1.6	21.9	21.9	22.8	0.9
071	7,060	313	1,667	1.0	22.2	22.2	23.1	0.9
075	7,500	231	1,281	1.2	22.4	22.4	23.4	1.0
080	8,000	219	1,072	1.5	22.9	22.9	23.9	1.0
085	8,500	209	1,252	1.3	23.4	23.4	24.4	1.0
092	9,175	253	1,168	1.4	23.9	23.9	24.9	1.0
093	9,270	253	1,333	1.2	26.1	26.1	26.5	0.4
096	9,588	241	1,446	1.1	26.2	26.2	26.7	0.5
100	10,000	238	1,467	1.1	26.4	26.4	26.9	0.5
104	10,412	216	1,083	1.5	26.5	26.5	27.2	0.7
109	10,898	172	927	0.9	26.9	26.9	27.7	0.8
113	11,325	186	1,049	0.8	27.1	27.1	27.9	0.8
119	11,871	188	852	1.0	27.3	27.3	28.2	0.9
122	12,240	159	546	1.5	27.6	27.6	28.5	0.9
126	12,568	181	864	0.9	28.1	28.1	28.9	0.8
130	13,000	147	636	1.3	28.4	28.4	29.3	0.9
135	13,492	77	431	1.9	28.8	28.8	29.7	0.9
140	14,000	79	446	1.8	29.2	29.2	30.1	0.9
144	14,387	112	508	1.6	29.4	29.4	30.4	1.0
146	14,579	138	553	1.5	29.5	29.5	30.5	1.0
147	14,699	128	509	1.6	29.6	29.6	30.6	1.0
150	15,035	55	355	1.0	29.8	29.8	30.8	1.0
153	15,253	75	396	0.9	29.9	29.9	30.8	0.9
157	15,720	55	354	1.0	30.0	30.0	30.9	0.9
162	16,236	53	313	1.2	30.1	30.1	31.0	0.9
169	16,866	46	233	0.7	30.2	30.2	31.1	0.9
174	17,374	46	207	0.8	30.3	30.3	31.2	0.9
179	17,887	46	169	1.0	30.4	30.4	31.3	0.9
Pungo Creek								
475	47,542	744	3,567	1.7	5.0	5.0	5.0	0.0
476	47,648	738	3,697	1.6	5.1	5.1	5.5	0.4
497	49,661	1,377	8,790	0.7	5.7	5.7	6.1	0.4

Table 22 - Floodway Data

Floodway Source		Floodway			Water Surface Elevation			
Cross Section	Distance (Feet Above Mouth)	Width (Feet)	Section Area (Square Feet)	Mean Velocity (Feet Per Second)	Regulatory	Without Floodway	With Floodway	Increase
510	51,009	1,183	7,539	0.8	5.9	5.9	6.4	0.5
522	52,227	747	4,659	1.2	6.2	6.2	6.7	0.5
532	53,217	1,398	9,513	0.6	6.4	6.4	7.0	0.6
543	54,314	1,867	12,682	0.5	6.5	6.5	7.1	0.6
554	55,381	1,934	13,188	0.4	6.5	6.5	7.1	0.6
566	56,552	2,344	13,389	0.4	6.6	6.6	7.2	0.6
574	57,380	2,001	8,400	0.7	6.6	6.6	7.3	0.7
585	58,500	1,699	9,653	0.6	6.8	6.8	7.5	0.7
594	59,393	1,660	7,550	0.8	7.0	7.0	7.7	0.7
607	60,728	700	2,998	1.8	7.5	7.5	8.2	0.7
608	60,797	700	3,431	1.6	7.8	7.8	8.4	0.6
623	62,265	1,338	6,964	0.8	8.4	8.4	9.1	0.7
633	63,268	1,170	4,567	1.2	8.6	8.6	9.4	0.8
Pungo River Canal								
063	6,299	5,159	26,303	0.9	4.9	4.9	5.5	0.6
123	12,308	3,575	16,214	1.5	5.2	5.2	5.9	0.7
183	18,313	6,463	24,701	1.0	5.5	5.5	6.2	0.7
243	24,332	6,829	29,197	0.9	5.6	5.6	6.5	0.9
303	30,259	3,749	21,505	0.7	5.8	5.8	6.6	0.8
368	36,809	7,105	23,751	1.0	6.4	6.4	7.1	0.7
410	40,971	9,123	30,852	0.6	6.5	6.5	7.2	0.7
455	45,529	5,581	14,134	1.0	6.6	6.6	7.3	0.7
496	49,632	1,712	2,102	8.0	8.0	8.0	8.3	0.3
518	51,772	1,337	2,426	4.8	10.3	10.3	11.2	0.9
Rowland Creek								
040	4,040	89	421	3.2	5.0	5.0	3.6	-1.4
041	4,127	89	463	2.9	5.1	5.1	3.8	-1.3
045	4,523	157	832	1.6	5.1	5.1	4.1	-1.0
050	4,995	198	1,054	1.3	5.2	5.2	4.4	-0.8
054	5,384	207	1,102	1.2	5.2	5.2	4.5	-0.7
060	5,983	185	959	1.4	5.3	5.3	4.8	-0.5
065	6,535	200	1,116	1.2	5.3	5.3	5.1	-0.2
070	7,005	241	1,306	1.0	5.4	5.4	5.2	-0.2
073	7,335	260	1,338	0.9	5.4	5.4	5.4	0.0
077	7,681	195	1,055	1.2	5.5	5.5	5.5	0.0
082	8,215	230	1,173	1.0	5.6	5.6	5.7	0.1
090	8,984	193	812	1.5	5.8	5.8	6.2	0.4
096	9,580	193	1,002	1.2	6.1	6.1	6.6	0.5
100	10,004	134	600	1.9	6.2	6.2	6.9	0.7
104	10,363	192	755	1.5	6.5	6.5	7.2	0.7
108	10,783	199	1,050	1.1	6.8	6.8	7.6	0.8
114	11,358	111	499	2.0	7.0	7.0	7.9	0.9
119	11,867	141	753	1.3	7.4	7.4	8.3	0.9
125	12,500	79	447	2.2	7.7	7.7	8.6	0.9
131	13,086	162	796	1.0	8.0	8.0	9.0	1.0

Table 22 - Floodway Data

Floodway Source		Floodway			Water Surface Elevation			
Cross Section	Distance (Feet Above Mouth)	Width (Feet)	Section Area (Square Feet)	Mean Velocity (Feet Per Second)	Regulatory	Without Floodway	With Floodway	Increase
136	13,595	82	519	1.6	8.2	8.2	9.1	0.9
141	14,082	46	344	2.4	8.3	8.3	9.3	1.0
146	14,559	80	434	1.9	8.6	8.6	9.5	0.9
152	15,212	94	402	2.0	8.9	8.9	9.9	1.0
157	15,659	150	441	1.9	9.4	9.4	10.2	0.8
157	15,749	150	596	1.4	11.1	11.1	11.7	0.6
163	16,258	300	931	0.9	11.2	11.2	11.9	0.7
166	16,633	600	2,208	0.4	11.2	11.2	12.0	0.8
172	17,155	800	2,349	0.3	11.2	11.2	12.0	0.8
177	17,728	800	2,139	0.3	11.2	11.2	12.0	0.8
183	18,303	800	1,813	0.4	11.2	11.2	12.1	0.9
190	19,000	800	1,483	0.4	11.3	11.3	12.1	0.8
195	19,500	800	1,836	0.3	11.3	11.3	12.2	0.9
200	20,000	800	1,371	0.4	11.3	11.3	12.3	1.0
Runyon Creek								
036	3,609	162	889	2.6	5.4	5.4	3.4	-2.0
041	4,127	162	981	2.4	5.5	5.5	3.6	-1.9
047	4,712	162	1,077	2.2	5.5	5.5	3.8	-1.7
052	5,221	64	430	5.4	5.5	5.5	3.8	-1.7
57	5,733	103	657	3.5	5.6	5.6	4.7	-0.9
063	6,279	105	718	3.2	5.7	5.7	5.2	-0.5
069	6,943	182	1,192	1.9	6.1	6.1	6.1	0.0
075	7,472	241	1,285	1.8	6.2	6.2	6.4	0.2
081	8,147	263	1,606	1.4	6.6	6.6	7.2	0.6
085	8,522	434	2,108	1.1	6.8	6.8	7.5	0.7
091	9,089	723	2,968	0.8	7.2	7.2	7.8	0.6
091	9,089	723	3,099	0.7	7.2	7.2	7.8	0.6
096	9,647	364	1,575	0.3	7.3	7.3	8.0	0.7
101	10,068	127	158	2.7	8.3	8.3	8.3	0.0
103	10,320	311	3,363	0.1	17.4	17.4	17.4	0.0
105	10,515	181	1,858	0.2	17.4	17.4	17.4	0.0
109	10,893	123	1,159	0.3	17.4	17.4	17.4	0.0
112	11,172	144	1,260	0.3	17.4	17.4	17.4	0.0
114	11,398	124	730	0.5	17.4	17.4	17.4	0.0
114	11,449	70	341	1.2	17.6	17.6	18.0	0.4
116	11,627	40	211	1.9	17.7	17.7	18.1	0.4
118	11,784	32	168	2.4	17.7	17.7	18.2	0.5
118	11,792	32	148	2.7	17.7	17.7	18.2	0.5
118	11,797	32	117	3.4	17.7	17.7	18.1	0.4
119	11,861	60	385	1.0	20.9	20.9	21.6	0.7
121	12,103	46	308	1.3	21.0	21.0	21.7	0.7
125	12,461	57	269	1.5	21.2	21.2	22.0	0.8
128	12,761	29	88	4.5	21.5	21.5	22.4	0.9
129	12,868	28	84	4.7	23.4	23.4	23.4	0.0
130	12,969	25	61	6.5	24.0	24.0	24.1	0.1

Table 22 - Floodway Data

Floodway Source		Floodway			Water Surface Elevation			
Cross Section	Distance (Feet Above Mouth)	Width (Feet)	Section Area (Square Feet)	Mean Velocity (Feet Per Second)	Regulatory	Without Floodway	With Floodway	Increase
131	13,061	39	112	3.5	25.4	25.4	25.4	0.0
132	13,178	40	154	2.6	26.1	26.1	26.2	0.1
135	13,520	55	180	2.2	26.8	26.8	27.5	0.7
139	13,911	38	162	1.3	27.4	27.4	28.4	1.0
142	14,240	28	108	1.9	27.8	27.8	28.8	1.0
144	14,449	25	86	2.4	28.3	28.3	29.2	0.9
148	14,840	53	138	1.5	29.3	29.3	30.1	0.8
152	15,199	66	177	1.2	29.7	29.7	30.7	1.0
Snode Creek								
015	1,467	115	160	4.0	6.0[12]	5.4	1.4	-4.0
020	2,000	62	232	2.8	5.4	5.4	3.6	-1.8
024	2,394	54	215	3.0	5.5	5.5	4.4	-1.1
031	3,093	103	416	1.5	5.7	5.7	5.3	-0.4
034	3,391	86	399	1.6	5.8	5.8	5.6	-0.2
037	3,682	69	316	2.0	5.9	5.9	6.0	0.1
041	4,125	49	248	2.4	6.1	6.1	6.6	0.5
044	4,361	40	172	3.5	6.3	6.3	6.9	0.6
046	4,559	30	174	3.5	7.0	7.0	7.4	0.4
047	4,651	30	272	2.2	9.9	9.9	10.6	0.7
050	4,959	45	316	1.9	9.9	9.9	10.7	0.8
South Creek								
825	82,527	1,310	5,639	0.3	5.9	5.9	6.3	0.4
Tankard Creek								
050	4,984	120	686	2.7	5.1	5.1	4.1	-1.0
051	5,129	99	867	2.1	6.2	6.2	6.1	-0.1
056	5,636	270	1,710	1.1	6.3	6.3	6.3	0.0
063	6,250	250	1,657	1.1	6.3	6.3	6.5	0.2
066	6,614	205	1,413	1.2	6.4	6.4	6.6	0.2
070	7,016	190	1,358	1.3	6.5	6.5	6.8	0.3
075	7,472	250	1,629	1.1	6.6	6.6	6.9	0.3
080	7,986	212	1,371	1.3	6.7	6.7	7.1	0.4
084	8,365	190	1,221	1.4	6.9	6.9	7.4	0.5
088	8,771	230	1,551	1.1	7.1	7.1	7.7	0.6
095	9,455	210	1,363	1.3	7.3	7.3	8.1	0.8
099	9,897	158	902	1.8	7.6	7.6	8.4	0.8
105	10,508	172	1,117	1.5	8.1	8.1	9.0	0.9
110	10,995	207	1,338	1.1	8.4	8.4	9.2	0.8
114	11,445	207	1,309	1.1	8.6	8.6	9.4	0.8
121	12,096	274	1,544	0.9	8.8	8.8	9.7	0.9
127	12,692	285	1,293	1.1	9.1	9.1	9.9	0.8
133	13,316	235	1,160	1.2	9.4	9.4	10.3	0.9
138	13,794	240	1,225	1.2	9.8	9.8	10.7	0.9
142	14,228	305	1,473	0.9	10.1	10.1	11.1	1.0
147	14,683	288	1,307	1.1	10.4	10.4	11.4	1.0
151	15,131	200	842	1.6	10.8	10.8	11.8	1.0

Table 22 - Floodway Data

Floodway Source		Floodway			Water Surface Elevation			
Cross Section	Distance (Feet Above Mouth)	Width (Feet)	Section Area (Square Feet)	Mean Velocity (Feet Per Second)	Regulatory	Without Floodway	With Floodway	Increase
155	15,479	204	860	1.6	11.3	11.3	12.2	0.9
156	15,592	204	1,425	1.0	13.4	13.4	14.1	0.7
162	16,227	350	1,712	0.8	13.5	13.5	14.2	0.7
Tranters Creek								
118	11,841	562	10,253	1.8	6.1	6.1	6.4	0.3
127	12,718	390	10,253	2.2	6.1	6.1	6.5	0.4
136	13,636	227	10,253	2.5	6.2	6.2	6.6	0.4
142	14,207	210	10,253	2.7	6.3	6.3	6.7	0.4
149	14,919	290	10,253	2.3	6.3	6.3	6.8	0.5
155	15,492	265	10,253	2.4	6.3	6.3	6.8	0.5
161	16,110	279	10,253	2.3	6.4	6.4	6.9	0.5
168	16,762	370	10,253	2.2	6.4	6.4	6.9	0.5
182	18,207	720	10,253	1.6	6.5	6.5	7.1	0.6
189	18,904	508	10,253	1.7	6.6	6.6	7.2	0.6
195	19,476	363	10,253	2.3	6.6	6.6	7.2	0.6
200	20,010	437	10,253	2.1	6.6	6.6	7.3	0.7
208	20,772	517	10,253	1.9	6.7	6.7	7.4	0.7
221	22,078	686	10,253	1.5	6.8	6.8	7.6	0.8
234	23,378	918	10,213	1.3	7.0	7.0	7.7	0.7
243	24,292	910	10,213	1.3	7.1	7.1	7.9	0.8
268	26,813	1,064	10,213	1.1	7.3	7.3	8.2	0.9
276	27,646	1,168	10,213	1.0	7.4	7.4	8.3	0.9
307	30,718	2,069	10,213	0.6	7.7	7.7	8.6	0.9
341	34,138	1,325	10,213	0.9	7.8	7.8	8.8	1.0
352	35,182	1,479	10,213	1.2	7.9	7.9	8.8	0.9
362	36,152	1,913	10,213	0.8	8.0	8.0	9.0	1.0
378	37,839	1,450	10,213	1.1	8.1	8.1	9.1	1.0
386	38,649	800	10,213	1.3	8.2	8.2	9.2	1.0
394	39,443	890	10,213	1.3	8.3	8.3	9.2	0.9
407	40,676	1,424	10,213	0.8	8.4	8.4	9.4	1.0
415	41,477	1,265	10,213	1.2	8.4	8.4	9.4	1.0
424	42,425	1,627	10,114	1.1	8.5	8.5	9.5	1.0
445	44,468	1,981	10,114	0.9	8.6	8.6	9.6	1.0
476	47,645	1,270	10,114	0.8	8.9	8.9	9.9	1.0
491	49,111	994	10,114	1.2	8.9	8.9	9.9	1.0
497	49,663	750	10,114	1.6	9.0	9.0	10.0	1.0
505	50,537	740	10,114	1.5	9.1	9.1	10.1	1.0
515	51,455	560	10,114	1.5	9.1	9.1	10.1	1.0
522	52,188	452	10,114	1.7	9.2	9.2	10.2	1.0
533	53,332	394	10,114	2.0	9.3	9.3	10.3	1.0
540	53,954	540	10,114	1.6	9.5	9.5	10.5	1.0
545	54,474	619	10,114	1.4	9.6	9.6	10.6	1.0
551	55,052	660	10,114	1.3	9.7	9.7	10.7	1.0
556	55,644	475	10,114	1.8	9.7	9.7	10.7	1.0
574	57,438	952	10,114	1.0	10.0	10.0	11.0	1.0

Table 22 - Floodway Data

Floodway Source		Floodway			Water Surface Elevation			
Cross Section	Distance (Feet Above Mouth)	Width (Feet)	Section Area (Square Feet)	Mean Velocity (Feet Per Second)	Regulatory	Without Floodway	With Floodway	Increase
585	58,454	1,110	10,114	0.9	10.1	10.1	11.1	1.0
594	59,375	640	10,114	1.4	10.1	10.1	11.1	1.0
616	61,608	992	10,114	1.0	10.5	10.5	11.5	1.0
638	63,802	690	10,041	1.2	10.6	10.6	11.6	1.0
660	65,960	1,239	10,041	0.7	10.8	10.8	11.8	1.0
663	66,311	1,279	10,041	0.7	11.1	11.1	12.0	0.9
680	67,982	950	10,041	0.8	11.2	11.2	12.1	0.9
694	69,357	1,077	10,041	0.8	11.3	11.3	12.2	0.9
709	70,889	1,383	8,613	0.5	11.4	11.4	12.4	1.0
717	71,681	1,283	8,613	0.6	11.4	11.4	12.4	1.0
729	72,896	1,430	8,613	0.6	11.5	11.5	12.5	1.0
741	74,084	1,507	8,613	0.5	11.6	11.6	12.5	0.9
748	74,764	1,402	8,613	0.7	11.6	11.6	12.6	1.0
757	75,732	1,623	8,561	0.5	11.7	11.7	12.7	1.0
766	76,565	1,836	8,561	0.5	11.8	11.8	12.7	0.9
774	77,413	1,857	8,561	0.6	11.8	11.8	12.8	1.0
781	78,071	1,212	8,561	0.8	11.9	11.9	12.8	0.9
788	78,790	1,028	8,561	0.6	12.0	12.0	12.9	0.9
797	79,651	919	8,561	0.7	12.1	12.1	13.0	0.9
White Branch								
007	667	300	1,300	1.1	12.5[1]	12.2	13.2	1.0
012	1,240	252	1,112	1.3	12.8	12.8	13.8	1.0
018	1,835	159	723	1.1	13.5	13.5	14.4	0.9
025	2,550	159	556	1.4	14.2	14.2	15.1	0.9
029	2,930	103	385	2.1	14.8	14.8	15.7	0.9
031	3,075	83	332	2.4	15.6	15.6	16.1	0.5
035	3,497	76	305	2.6	16.3	16.3	17.0	0.7
039	3,940	118	428	1.9	17.2	17.2	18.1	0.9
042	4,245	60	264	1.9	17.8	17.8	18.8	1.0
052	5,227	80	282	1.7	20.0	20.0	20.7	0.7
060	6,026	91	305	1.6	22.2	22.2	23.1	0.9
066	6,601	54	194	2.5	24.5	24.5	25.3	0.8
069	6,905	29	132	3.7	26.0	26.0	27.0	1.0
070	7,038	35	242	2.0	28.7	28.7	29.2	0.5
074	7,389	68	388	1.3	28.8	28.8	29.6	0.8
077	7,709	93	490	1.0	29.0	29.0	29.9	0.9
080	7,996	56	278	1.8	29.2	29.2	30.1	0.9
084	8,412	58	235	2.1	30.2	30.2	31.1	0.9
090	9,031	41	176	2.8	31.8	31.8	32.8	1.0
096	9,571	57	196	2.5	33.6	33.6	34.5	0.9
098	9,808	34	154	2.2	34.5	34.5	35.5	1.0
101	10,091	39	165	2.0	35.4	35.4	36.2	0.8
103	10,279	33	139	2.4	35.7	35.7	36.6	0.9
105	10,495	29	109	3.1	36.4	36.4	37.3	0.9
107	10,660	29	136	2.5	37.3	37.3	38.0	0.7

Table 22 - Floodway Data

Floodway Source		Floodway			Water Surface Elevation			
Cross Section	Distance (Feet Above Mouth)	Width (Feet)	Section Area (Square Feet)	Mean Velocity (Feet Per Second)	Regulatory	Without Floodway	With Floodway	Increase
110	11,042	29	152	2.2	37.9	37.9	38.8	0.9
Whitehurst Creek								
028	2,806	193	889	1.9	5.5	5.5	2.1	-3.4
030	2,993	229	1,057	1.5	5.5	5.5	2.1	-3.4
035	3,504	162	730	2.2	5.5	5.5	2.3	-3.2
039	3,886	128	719	2.3	5.5	5.5	2.5	-3.0
042	4,151	132	440	3.7	5.5	5.5	2.6	-2.9
044	4,399	132	579	2.8	5.5	5.5	3.3	-2.2
046	4,637	383	1,196	1.4	5.5	5.5	3.6	-1.9
055	5,522	722	2,692	0.6	5.6	5.6	4.1	-1.5
068	6,761	428	1,730	0.9	5.6	5.6	4.5	-1.1
073	7,282	556	2,624	0.6	5.6	5.6	4.9	-0.7
078	7,836	249	1,270	1.0	5.6	5.6	5.1	-0.5
082	8,162	235	1,213	1.0	5.7	5.7	5.4	-0.3
085	8,483	245	1,213	1.0	5.7	5.7	5.6	-0.1
086	8,595	245	1,220	1.0	5.8	5.8	5.9	0.1
089	8,889	368	1,785	0.7	5.9	5.9	6.1	0.2
093	9,341	300	1,486	0.8	6.0	6.0	6.3	0.3
099	9,933	275	997	1.2	6.1	6.1	6.7	0.6
105	10,472	175	850	1.4	6.8	6.8	7.3	0.5
111	11,074	200	1,006	1.2	7.2	7.2	7.8	0.6
116	11,596	250	1,200	1.0	7.5	7.5	8.3	0.8

[1] **Elevation includes backwater effects**

[2] **Broad Creek**

[3] **Broad Creek Tributary 1**

[4] **Chocowinity Creek**

[5] **South Creek**

[6] **Durham Creek**

[7] **Acre Swamp**

[8] **Hall Swamp**

[9] **Horse Branch**

[10] **Jacks Creek**

[11] **Old Ford Swamp**

[12] **Runyon Creek**

* Values not computed for this station

6.4 Coastal Flood Hazard Mapping

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

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

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

- *The primary frontal dune* zone is defined in 44 CFR Section 59.1 of the NFIP regulations. The primary frontal dune represents a continuous or nearly continuous mound or ridge of sand with relatively steep seaward and landward slopes that occur immediately landward and adjacent to the beach. The primary frontal dune zone is subject to erosion and overtopping from high tides and waves during major coastal storms. The inland limit of the primary frontal dune zone occurs at the point where there is a distinct change from a relatively steep slope to a relatively mild slope.
- *The wave runup zone* occurs where the (eroded) ground profile is 3.0 feet or more below the 2-percent wave runup elevation.
- *The wave overtopping splash zone* is the area landward of the crest of an overtopped barrier, in cases where the potential 2-percent wave runup exceeds the barrier crest elevation by 3.0 feet or more.
- *The breaking wave height zone* occurs where 3-foot or greater wave heights could occur (this is the area where the wave crest profile is 2.1 feet or more above the total stillwater elevation).
- *The high-velocity flow zone* is landward of the overtopping splash zone (or area on a sloping beach or other shore type), where the product of depth of flow times the flow velocity squared (hv2) is greater than or equal to 200 ft3/sec2. This zone may only be used on the Pacific Coast.

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

Table 23: Summary of Coastal Transect Mapping Considerations

Source	Coastal Transect	Primary Frontal Dune (PFD) Identified	Wave Runup Analysis	Wave Height Analysis	Zone VE Limit	SFHA Boundary
			Zone Designation and BFE (ft NAVD 88)	Zone Designation and BFE (ft NAVD 88)		
Pamlico River	1	*	*	AE 4	WHAFIS	WHAFIS
	2	*	*	AE 4	WHAFIS	WHAFIS
	3	*	*	AE 2 VE 3-4	WHAFIS	WHAFIS
	4	*	*	AE 3 VE 3-4	WHAFIS	WHAFIS
	5	*	*	AE 3 VE 3-4	WHAFIS	WHAFIS
	6	*	*	AE 3 VE 3-4	WHAFIS	WHAFIS
	7	*	*	AE 2 VE 3-4	WHAFIS	WHAFIS
	8	*	*	AE 2 AO 4 VE 3-4	WHAFIS	WHAFIS
	9	*	*	AE 3 VE 3	WHAFIS	WHAFIS

Table 23: Summary of Coastal Transect Mapping Considerations

Source	Coastal Transect	Primary Frontal Dune (PFD) Identified	Wave Runup Analysis	Wave Height Analysis	Zone VE Limit	SFHA Boundary
			Zone Designation and BFE (ft NAVD 88)	Zone Designation and BFE (ft NAVD 88)		
	10	*	*	AE 3 VE 3	WHAFIS	WHAFIS
	11	*	*	AE 4 VE 3-4	WHAFIS	WHAFIS
	12	*	*	AE 4 VE 3-4	WHAFIS	WHAFIS
	13	*	*	AE 4 AO 0-1 VE 0-4	WHAFIS	WHAFIS
	14	*	*	AE 4 VE 3-4	WHAFIS	WHAFIS
	15	*	*	AE 4 VE 2-4	WHAFIS	WHAFIS
	16	*	*	AE 4 AO 1 VE 3-4	WHAFIS	WHAFIS
	17	*	*	AE 4 AO 1 VE 0-4	WHAFIS	WHAFIS
	18	*	*	AE 2 AO 1 VE 0-4	WHAFIS	WHAFIS
	19	*	*	AE 1 VE 0-4	WHAFIS	WHAFIS
	20	*	*	AE 1 AO 0-2 VE 2-4	WHAFIS	WHAFIS
	21	*	*	AE 3 VE 3	WHAFIS	WHAFIS
	22	*	*	AE 4 VE 3-4	WHAFIS	WHAFIS
	23	*	*	AE 4 VE 3-4	WHAFIS	WHAFIS
	24	*	*	AE 3 VE 0-4	WHAFIS	WHAFIS
	25	*	*	AE 4 VE 3-4	WHAFIS	WHAFIS
	26	*	*	AE 4 VE 3	WHAFIS	WHAFIS
	27	*	*	AE 3 VE 3-4	WHAFIS	WHAFIS

Table 23: Summary of Coastal Transect Mapping Considerations

Source	Coastal Transect	Primary Frontal Dune (PFD) Identified	Wave Runup Analysis	Wave Height Analysis	Zone VE Limit	SFHA Boundary
			Zone Designation and BFE (ft NAVD 88)	Zone Designation and BFE (ft NAVD 88)		
	28	*	*	VE 0-4	WHAFIS	WHAFIS
	29	*	*	AE 4 VE 3-4	WHAFIS	WHAFIS
	30	*	*	AE 1-4 VE 3-4	WHAFIS	WHAFIS
	31	*	*	AE 4 VE 4	WHAFIS	WHAFIS
	32	*	*	VE 0-4	WHAFIS	WHAFIS
	33	*	*	AE 2 VE 0-4	WHAFIS	WHAFIS
	34	*	*	AE 0-3 VE 4	WHAFIS	WHAFIS
	35	*	*	AE 0-3 VE 4-4	WHAFIS	WHAFIS
	36	*	*	AE 4 VE 3-4	WHAFIS	WHAFIS
	37	*	*	AE 2-3 VE 3-4	WHAFIS	WHAFIS
	38	*	*	VE 4	WHAFIS	WHAFIS
	39	*	*	AE 3 VE 4	WHAFIS	WHAFIS
	40	*	*	AE 4 VE 3	WHAFIS	WHAFIS
	41	*	*	AE 4 VE 3	WHAFIS	WHAFIS
	42	*	*	AE 4 VE 3	WHAFIS	WHAFIS
	43	*	*	AE 4 VE 3	WHAFIS	WHAFIS
	44	*	*	AE 4 VE 3	WHAFIS	WHAFIS
	45	*	*	VE 3	WHAFIS	WHAFIS
	46	*	*	AE 3 VE 3	WHAFIS	WHAFIS
	47	*	*	VE 0-4	WHAFIS	WHAFIS
	48	*	*	AE 3 VE 3-4	WHAFIS	WHAFIS
	49	*	*	VE 0-4	WHAFIS	WHAFIS
	50	*	*	VE 4	WHAFIS	WHAFIS

Table 23: Summary of Coastal Transect Mapping Considerations

Source	Coastal Transect	Primary Frontal Dune (PFD) Identified	Wave Runup Analysis	Wave Height Analysis	Zone VE Limit	SFHA Boundary
			Zone Designation and BFE (ft NAVD 88)	Zone Designation and BFE (ft NAVD 88)		
	51	*	*	AE 4 VE 3-4	WHAFIS	WHAFIS
	52	*	*	AE 4 VE 3-4	WHAFIS	WHAFIS
	53	*	*	VE 3-4	WHAFIS	WHAFIS
	54	*	*	AE 3 VE 2-4	WHAFIS	WHAFIS
	55	*	*	AE 0-3 VE 3-4	WHAFIS	WHAFIS
	56	*	*	VE 4	WHAFIS	WHAFIS
	57	*	*	AE 3 VE 3-4	WHAFIS	WHAFIS
	58	*	*	AE 2 VE 3-4	WHAFIS	WHAFIS
	59	*	*	AE 4 VE 3-4	WHAFIS	WHAFIS
	60	*	*	AE 3 VE 3-4	WHAFIS	WHAFIS
	61	*	*	AE 0-3 VE 2-4	WHAFIS	WHAFIS
	62	*	*	AE 4 VE 3-4	WHAFIS	WHAFIS
	63	*	*	AE 3 VE 2-4	WHAFIS	WHAFIS
	64	*	*	AE 2 VE 3-4	WHAFIS	WHAFIS
	65	*	*	AE 3 VE 3-4	WHAFIS	WHAFIS
	66	*	*	AE 3 VE 3	WHAFIS	WHAFIS
	67	*	*	AE 3 VE 4	WHAFIS	WHAFIS
	68	*	*	AE 3 AO 0-3 VE 3-4	WHAFIS	WHAFIS
	69	*	*	AE 2 VE 3-4	WHAFIS	WHAFIS
	70	*	*	AE 0-4 VE 3-4	WHAFIS	WHAFIS
	71	*	*	AE 3	WHAFIS	WHAFIS

Table 23: Summary of Coastal Transect Mapping Considerations

Source	Coastal Transect	Primary Frontal Dune (PFD) Identified	Wave Runup Analysis	Wave Height Analysis	Zone VE Limit	SFHA Boundary
			Zone Designation and BFE (ft NAVD 88)	Zone Designation and BFE (ft NAVD 88)		
	72	*	*	AE 3 VE 2-4	WHAFIS	WHAFIS
	73	*	*	AE 3 VE 4-4	WHAFIS	WHAFIS
	74	*	*	AE 3 VE 4-4	WHAFIS	WHAFIS
	75	*	*	AE 0-3 VE 3-4	WHAFIS	WHAFIS
	76	*	*	AE 3 VE 3-4	WHAFIS	WHAFIS
	77	*	*	AE 4 VE 3-4	WHAFIS	WHAFIS
	78	*	*	AE 0-3 VE 3-4	WHAFIS	WHAFIS
	79	*	*	AE 1 VE 0-4	WHAFIS	WHAFIS
	80	*	*	AE 2-4 VE 3-4	WHAFIS	WHAFIS
	81	*	*	AE 3 VE 3	WHAFIS	WHAFIS
	82	*	*	AE 3 VE 0-4	WHAFIS	WHAFIS
	83	*	*	AE 3 VE 3-4	WHAFIS	WHAFIS
	84	*	*	AE 3 VE 3-4	WHAFIS	WHAFIS
	85	*	*	AE 3 VE 3-4	WHAFIS	WHAFIS
	86	*	*	AE 4 VE 3-4	WHAFIS	WHAFIS
	87	*	*	AE 1-3 VE 3	WHAFIS	WHAFIS
	88	*	*	AE 3 VE 3	WHAFIS	WHAFIS
	89	*	*	AE 3 VE 3-4	WHAFIS	WHAFIS
	90	*	*	VE 3	WHAFIS	WHAFIS
	91	*	*	AE 2 VE 3-4	WHAFIS	WHAFIS
	92	*	*	AE 3 VE 3-4	WHAFIS	WHAFIS

Table 23: Summary of Coastal Transect Mapping Considerations

Source	Coastal Transect	Primary Frontal Dune (PFD) Identified	Wave Runup Analysis	Wave Height Analysis	Zone VE Limit	SFHA Boundary
			Zone Designation and BFE (ft NAVD 88)	Zone Designation and BFE (ft NAVD 88)		
	93	*	*	AE 3 VE 3-4	WHAFIS	WHAFIS
	94	*	*	AE 4 VE 1-4	WHAFIS	WHAFIS
	95	*	*	AE 3 VE 3-4	WHAFIS	WHAFIS
	96	*	*	AE 4	WHAFIS	WHAFIS
	97	*	*	AE 4	WHAFIS	WHAFIS
	98	*	*	AE 0-4	WHAFIS	WHAFIS
	99	*	*	AE 0-4	WHAFIS	WHAFIS
	100	*	*	AE 3	WHAFIS	WHAFIS
	122	*	*	AE 2 VE 3-4	WHAFIS	WHAFIS
	123	*	*	AE 0-4 VE 3-4	WHAFIS	WHAFIS
	124	*	*	AE 3 VE 3-4	WHAFIS	WHAFIS
	125	*	*	AE 3 VE 3-4	WHAFIS	WHAFIS
	126	*	*	AE 2 VE 3-4	WHAFIS	WHAFIS
	127	*	*	AE 0-3 VE 3-4	WHAFIS	WHAFIS
	128	*	*	AE 0-4 VE 3-4	WHAFIS	WHAFIS
	129	*	*	AE 3 VE 3-4	WHAFIS	WHAFIS
	130	*	*	AE 3 VE 3	WHAFIS	WHAFIS
Pamlico Sound	41	*	*	AE 4	WHAFIS	WHAFIS
	46	*	*	AE 4	WHAFIS	WHAFIS
	47	*	*	AE 4	WHAFIS	WHAFIS
	48	*	*	AE 5	WHAFIS	WHAFIS
	49	*	*	AE 4	WHAFIS	WHAFIS
	55	*	*	AE 4	WHAFIS	WHAFIS
	56	*	*	AE 4	WHAFIS	WHAFIS
Pungo River	101	*	*	AE 3	WHAFIS	WHAFIS
	102	*	*	AE 3	WHAFIS	WHAFIS
	103	*	*	AE 3	WHAFIS	WHAFIS

Table 23: Summary of Coastal Transect Mapping Considerations

Source	Coastal Transect	Primary Frontal Dune (PFD) Identified	Wave Runup Analysis	Wave Height Analysis	Zone VE Limit	SFHA Boundary
			Zone Designation and BFE (ft NAVD 88)	Zone Designation and BFE (ft NAVD 88)		
	104	*	*	AE 3	WHAFIS	WHAFIS
	105	*	*	AE 3	WHAFIS	WHAFIS
	106	*	*	AE 9	WHAFIS	WHAFIS
	107	*	*	AE 7	WHAFIS	WHAFIS
	108	*	*	AE 3	WHAFIS	WHAFIS
	109	*	*	AE 3	WHAFIS	WHAFIS
	110	*	*	AE 4	WHAFIS	WHAFIS
	111	*	*	AE 4	WHAFIS	WHAFIS
	112	*	*	AE 4	WHAFIS	WHAFIS
	113	*	*	AE 4	WHAFIS	WHAFIS
	114	*	*	AE 4	WHAFIS	WHAFIS
	115	*	*	AE 0-4	WHAFIS	WHAFIS
	116	*	*	AE 0-4	WHAFIS	WHAFIS
	117	*	*	AE 4	WHAFIS	WHAFIS
	118	*	*	AE 4	WHAFIS	WHAFIS
	119	*	*	AE 4	WHAFIS	WHAFIS
	120	*	*	AE 4	WHAFIS	WHAFIS
	121	*	*	AE 3	WHAFIS	WHAFIS

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

7.0 Revising the FIS

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

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

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

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

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

The issuance of a LOMA or LOMR-F ends the property owner's obligation to purchase flood insurance as a condition of Federal or federally backed financing. However, the property owner's mortgage company maintains the prerogative to require flood insurance as a condition of providing financing. Before attempting to obtain a LOMA or LOMR-F, property owners are advised to consult their mortgage companies regarding this policy. Even if the mortgage company indicates that it will require flood insurance if a LOMA or LOMR-F is issued, it may be advantageous for property owners to request a LOMA or LOMR-F because flood insurance premiums are lower for properties removed from the SFHA than for properties that remain within the SFHA.

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

7.2 Letters of Map Revision

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

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

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

7.3 Physical Map Revisions

Physical Map Revisions (PMRs) are processed to incorporate information concerning conditions present in the community that are not reflected in the FIS, and involve distributing republished FISs that supersede the most current NFIP data in the community repository. PMRs may be initiated by a request from a community resident or agency, or FEMA may initiate a PMR to incorporate one or more LOMRs, to reflect significant changes in corporate limits, to correct errors, or to update flood hazards to match new information from an adjacent community's FIS. Due to the costs associated with updating and distributing FISs, map revisions will be processed as LOMRs rather than PMRs whenever possible. For more information regarding PMRs, please contact the FEMA Map Information eXchange

(FMIX) toll-free information line at 1-877-FEMA MAP (1-877-336-2627), the FEMA Regional Office at the address listed on the Notice to Flood Insurance Study Users page at the front of this report, or the NCFMP at 919-715-5711.

7.4 Contracted Restudies

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

7.5 Map Revision History

The current FIRM is a subset of the Statewide FIRM, showing flood hazard information for the entire geographic area of Beaufort 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 5/15/2003 North Carolina Statewide FIRM, which includes Beaufort County, are presented in Table 24, “Map Revision History.”

Information pertaining to revised and unrevised flood hazards for each jurisdiction within Beaufort 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 Beaufort County.

Table 24 - Map Revision History

Community	Initial Identification Date	Initial FIRM Effective Date	FIS Revision Date
BEAUFORT COUNTY	7/22/1977	2/4/1987	07/07/2014
CITY OF WASHINGTON	2/20/1973	2/2/1977	07/07/2014
TOWN OF AURORA	5/3/1974	1/3/1986	01/02/2004
TOWN OF BATH	7/8/1977	2/4/1987	01/02/2004
TOWN OF BELHAVEN	4/13/1973	5/16/1977	01/02/2004
TOWN OF CHOCOWINITY	5/15/2003	5/15/2003	01/02/2004
TOWN OF PANTEGO	9/6/1974	8/5/1985	01/02/2004
TOWN OF WASHINGTON PARK	2/9/1973	11/22/1976	01/02/2004

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

Table 25 — Authority and Acknowledgments

Community	FIS Dated	Study Contracted By	Data Source	Contract or IAA Number	Work Completed In
BEAUFORT COUNTY	5/15/2003	NCFMP	NCFMP	19-000017	10/29/2012
BEAUFORT COUNTY	5/15/2003	NCFMP	NCFMP	286-000022	12/1/2012
BEAUFORT COUNTY	5/15/2003	NCFMP	NCFMP	286-000022	10/2/2014
CITY OF WASHINGTON	5/15/2003	NCFMP	NCFMP	19-000017	10/29/2012
CITY OF WASHINGTON	5/15/2003	NCFMP	NCFMP	286-000022	12/1/2012
CITY OF WASHINGTON	5/15/2003	NCFMP	NCFMP	286-000022	10/2/2014
TOWN OF AURORA	5/15/2003	NCFMP	NCFMP	19-000017	10/29/2012
TOWN OF AURORA	5/15/2003	NCFMP	NCFMP	286-000022	12/1/2012
TOWN OF AURORA	5/15/2003	NCFMP	NCFMP	286-000022	10/2/2014
TOWN OF BATH	5/15/2003	NCFMP	NCFMP	19-000017	10/29/2012
TOWN OF BATH	5/15/2003	NCFMP	NCFMP	286-000022	12/1/2012
TOWN OF BATH	5/15/2003	NCFMP	NCFMP	286-000022	10/2/2014
TOWN OF BELHAVEN	5/15/2003	NCFMP	NCFMP	19-000017	10/29/2012
TOWN OF BELHAVEN	5/15/2003	NCFMP	NCFMP	286-000022	12/1/2012
TOWN OF BELHAVEN	5/15/2003	NCFMP	NCFMP	286-000022	10/2/2014
TOWN OF CHOCOWINITY	5/15/2003	NCFMP	NCFMP	19-000017	10/29/2012
TOWN OF CHOCOWINITY	5/15/2003	NCFMP	NCFMP	286-000022	12/1/2012
TOWN OF CHOCOWINITY	5/15/2003	NCFMP	NCFMP	286-000022	10/2/2014
TOWN OF PANTEGO	5/15/2003	NCFMP	NCFMP	19-000017	10/29/2012
TOWN OF PANTEGO	5/15/2003	NCFMP	NCFMP	286-000022	12/1/2012
TOWN OF PANTEGO	5/15/2003	NCFMP	NCFMP	286-000022	10/2/2014
TOWN OF WASHINGTON PARK	5/15/2003	NCFMP	NCFMP	19-000017	10/29/2012
TOWN OF WASHINGTON PARK	5/15/2003	NCFMP	NCFMP	286-000022	12/1/2012
TOWN OF WASHINGTON PARK	5/15/2003	NCFMP	NCFMP	286-000022	10/2/2014

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 Beaufort County were produced by NCFMP under contract with the State of North Carolina and issued on effective 6/30/2016. 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 Beaufort County and Incorporated Areas were compiled from the previous countywide FIS Report and are shown in Table 26, "Consultation Coordination Officer's Meetings

Table 26 — Consultation Coordination Officer's Meetings

Community	For FIS Dated	Initial CCO Date	Attended By	Final CCO Date	Attended By
BEAUFORT COUNTY	2/4/1987	8/8/8888	NP	3/5/1986	Representatives of FEMA and Town of Creswell
BEAUFORT COUNTY	2/4/1987	8/8/8888	NP	3/5/1986	Representatives of Tetra Tech, Inc., FEMA, and community officials
BEAUFORT COUNTY	2/4/1987	8/8/8888	NP	3/5/1986	Representatives of the study contractor, FEMA, and community officials
CITY OF WASHINGTON	2/4/1987	8/8/8888	NP	3/5/1986	Representatives of FEMA and Town of Creswell

Table 26 — Consultation Coordination Officer's Meetings

Community	For FIS Dated	Initial CCO Date	Attended By	Final CCO Date	Attended By
CITY OF WASHINGTON	2/4/1987	8/8/8888	NP	3/5/1986	Representatives of Tetra Tech, Inc., FEMA, and community officials
CITY OF WASHINGTON	2/4/1987	8/8/8888	NP	3/5/1986	Representatives of the study contractor, FEMA, and community officials
CITY OF WASHINGTON ETJ	2/4/1987	8/8/8888	NP	3/5/1986	Representatives of FEMA and Town of Creswell
CITY OF WASHINGTON ETJ	2/4/1987	8/8/8888	NP	3/5/1986	Representatives of Tetra Tech, Inc., FEMA, and community officials
CITY OF WASHINGTON ETJ	2/4/1987	8/8/8888	NP	3/5/1986	Representatives of the study contractor, FEMA, and community officials
TOWN OF AURORA	1/3/1986	8/8/8888	NP	8/28/1984	Representatives of the study contractor, FEMA, and community officials
TOWN OF AURORA	1/3/1986	8/8/8888	NP	1/22/1985	Representatives of Moore, Gardner & Associates, Inc., Shallotte and FEMA
TOWN OF AURORA	1/3/1986	8/8/8888	NP	2/27/1985	Representatives of the City of Laurinburg and FEMA
TOWN OF AURORA ETJ	1/3/1986	8/8/8888	NP	8/28/1984	Representatives of the study contractor, FEMA, and community officials
TOWN OF AURORA ETJ	1/3/1986	8/8/8888	NP	1/22/1985	Representatives of Moore, Gardner & Associates, Inc., Shallotte and FEMA
TOWN OF AURORA ETJ	1/3/1986	8/8/8888	NP	2/27/1985	Representatives of the City of Laurinburg and FEMA
TOWN OF BATH	2/4/1987	8/8/8888	NP	3/5/1986	Representatives of FEMA and Town of Creswell
TOWN OF BATH	2/4/1987	8/8/8888	NP	3/5/1986	Representatives of Tetra Tech, Inc., FEMA, and community officials
TOWN OF BATH	2/4/1987	8/8/8888	NP	3/5/1986	Representatives of the study contractor, FEMA, and community officials
TOWN OF BATH ETJ	2/4/1987	8/8/8888	NP	3/5/1986	Representatives of FEMA and Town of Creswell
TOWN OF BATH ETJ	2/4/1987	8/8/8888	NP	3/5/1986	Representatives of Tetra Tech, Inc., FEMA, and community officials
TOWN OF BATH ETJ	2/4/1987	8/8/8888	NP	3/5/1986	Representatives of the study contractor, FEMA, and community officials
TOWN OF BELHAVEN	1/3/1986	8/8/8888	NP	8/28/1984	Representatives of the study contractor, FEMA, and community officials
TOWN OF BELHAVEN	1/3/1986	8/8/8888	NP	1/22/1985	Representatives of Moore, Gardner & Associates, Inc., Shallotte and FEMA
TOWN OF BELHAVEN	1/3/1986	8/8/8888	NP	2/27/1985	Representatives of the City of Laurinburg and FEMA
TOWN OF BELHAVEN ETJ	1/3/1986	8/8/8888	NP	8/28/1984	Representatives of the study contractor, FEMA, and community officials
TOWN OF BELHAVEN ETJ	1/3/1986	8/8/8888	NP	1/22/1985	Representatives of Moore, Gardner & Associates, Inc., Shallotte and FEMA
TOWN OF BELHAVEN ETJ	1/3/1986	8/8/8888	NP	2/27/1985	Representatives of the City of Laurinburg and FEMA
TOWN OF PANTEGO	2/5/1985	8/8/8888	NP	8/7/1984	Representatives of the SC, FEMA, and community officials
TOWN OF PANTEGO	2/5/1985	8/8/8888	NP	8/28/1984	Representatives of the study contractor, FEMA, and community officials
TOWN OF PANTEGO	2/5/1985	8/8/8888	NP	9/6/1984	Representatives of Tetra Tech, FEMA, and Town of Roper
TOWN OF WASHINGTON PARK	2/4/1987	8/8/8888	NP	3/5/1986	Representatives of FEMA and Town of Creswell
TOWN OF WASHINGTON PARK	2/4/1987	8/8/8888	NP	3/5/1986	Representatives of Tetra Tech, Inc., FEMA, and community officials
TOWN OF WASHINGTON PARK	2/4/1987	8/8/8888	NP	3/5/1986	Representatives of the study contractor, FEMA, and community officials

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 Beaufort County are shown in Table 28, "Scoping Meetings." Meetings held for the map maintenance revision are also included below for Beaufort County.

Table 28 — Scoping Meetings

Community	Riverbasin	Initial Scoping Date	Attended By	Final Scoping Date	Attended By
BEAUFORT COUNTY	TAR-PAMLICO	11/3/2000	Representatives of the State, FEMA, Dewberry & Davis, and Beaufort County	1/30/2001	Representatives of the State, FEMA, Dewberry & Davis, and Beaufort County
CITY OF WASHINGTON	TAR-PAMLICO	11/3/2000	Representatives of the State, FEMA, Dewberry & Davis, and Beaufort County	1/30/2001	Representatives of the State, FEMA, Dewberry & Davis, and Beaufort County
CITY OF WASHINGTON ETJ	TAR-PAMLICO	11/3/2000	Representatives of the State, FEMA, Dewberry & Davis, and Beaufort County	1/30/2001	Representatives of the State, FEMA, Dewberry & Davis, and Beaufort County
TOWN OF AURORA	TAR-PAMLICO	11/3/2000	Representatives of the State, FEMA, Dewberry & Davis, and Beaufort County	1/30/2001	Representatives of the State, FEMA, Dewberry & Davis, and Beaufort County
TOWN OF AURORA ETJ	TAR-PAMLICO	11/3/2000	Representatives of the State, FEMA, Dewberry & Davis, and Beaufort County	1/30/2001	Representatives of the State, FEMA, Dewberry & Davis, and Beaufort County
TOWN OF BATH	TAR-PAMLICO	11/3/2000	Representatives of the State, FEMA, Dewberry & Davis, and Beaufort County	1/30/2001	Representatives of the State, FEMA, Dewberry & Davis, and Beaufort County
TOWN OF BATH ETJ	TAR-PAMLICO	11/3/2000	Representatives of the State, FEMA, Dewberry & Davis, and Beaufort County	1/30/2001	Representatives of the State, FEMA, Dewberry & Davis, and Beaufort County
TOWN OF BELHAVEN	TAR-PAMLICO	11/3/2000	Representatives of the State, FEMA, Dewberry & Davis, and Beaufort County	1/30/2001	Representatives of the State, FEMA, Dewberry & Davis, and Beaufort County
TOWN OF BELHAVEN ETJ	TAR-PAMLICO	11/3/2000	Representatives of the State, FEMA, Dewberry & Davis, and Beaufort County	1/30/2001	Representatives of the State, FEMA, Dewberry & Davis, and Beaufort County
TOWN OF CHOCOWINITY	TAR-PAMLICO	11/3/2000	Representatives of the State, FEMA, Dewberry & Davis, and Beaufort County	1/30/2001	Representatives of the State, FEMA, Dewberry & Davis, and Beaufort County
TOWN OF PANTEGO	TAR-PAMLICO	11/3/2000	Representatives of the State, FEMA, Dewberry & Davis, and Beaufort County	1/30/2001	Representatives of the State, FEMA, Dewberry & Davis, and Beaufort County
TOWN OF WASHINGTON PARK	TAR-PAMLICO	11/3/2000	Representatives of the State, FEMA, Dewberry & Davis, and Beaufort County	1/30/2001	Representatives of the State, FEMA, Dewberry & Davis, and Beaufort County

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 30, "Preliminary and Public Participation Meetings."

Table 30 — Preliminary and Public Participation Meetings

Community	For FIS Dated	Meeting Location	Preliminary Meeting Date	Attended By	Public Meeting Date	Attended By
BEAUFORT COUNTY	1/2/2004	Washington	10/17/2002	Beaufort County and community officials, the State, Dewberry and Davis, and Watershed Concepts	9/3/2002	NP
BEAUFORT COUNTY	1/2/2004	Washington	10/17/2002	Beaufort County and community officials, the State, Dewberry and Davis, and Watershed Concepts	10/17/2002	NP

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 Beaufort 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 Washington	City of Washington Building and Inspecton Departme, 102 East Second Street	Washington	NC	27889
Beaufort County	Beaufort County Building Inspection, 220 North Market Street	Washington	NC	27889
Town of Aurora	Aurora Town Hall, 295 Main Street	Aurora	NC	27806
Town of Bath	Bath Town Hall, 207 South Main Street	Bath	NC	27808
Town of Belhaven	Town of Belhaven Building Inspection Department, 315 East Main Street	Belhaven	NC	27810
Town of Chocowinity	Town of Cocowinity Public Works Department, 3391 Highway 17 South	Chocowinity	NC	27817
Town of Pantego	Pantego Town Hall, 142 Swamp Road	Pantego	NC	27860
Town of Washington Park	Washington Park Town Office, 408 Fairview Avenue	Washington	NC	27889

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 29, “Additional Information” is not applicable in Beaufort 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