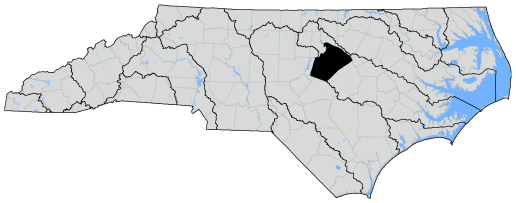
PRELIMINARY FLOOD INSURANCE STUDY

FEDERAL EMERGENCY MANAGEMENT AGENCY

A Report of Flood Hazards in

WAKE COUNTY, NORTH CAROLINA AND INCORPORATED AREAS



Community Name	Community Number
CITY OF RALEIGH	370243
TOWN OF APEX	370467
TOWN OF CARY	370238
TOWN OF FUQUAY-VARINA	370239
TOWN OF GARNER	370240
TOWN OF HOLLY SPRINGS	370403
TOWN OF KNIGHTDALE	370241
TOWN OF MORRISVILLE	370242
TOWN OF ROLESVILLE	370468
TOWN OF WAKE FOREST	370244
TOWN OF WENDELL	370245
TOWN OF ZEBULON	370246
WAKE COUNTY	370368

NORTH CAROLINA
Cooperating Technical State
FEMA'S COOPERATING TECHNICAL PARTNER

PRELIMINARY: 3/31/2015
REVISED: 3/31/2015
Federal Emergency Management Agency
State of North Carolina
Flood Insurance Study Number
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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
5/2/2006	Initial Countywide FIS Report Effective Date

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

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

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1.0 Introduction

1.1 The National Flood Insurance Program

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

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

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

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

1.2 Purpose of this Flood Insurance Study

Flood Insurance Studies (FISs) are one of the primary means by which the NFIP administers the National Flood Insurance Act of 1968, the Flood Disaster Protection Act of 1973, and the National Flood Insurance Reform Act of 1994. FISs develop flood risk data that are used to establish actuarial flood insurance rates. The information in this FIS Report will also be used by Wake County and the jurisdictions therein (hereinafter referred to collectively as Wake 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 Wake County, North Carolina, including the jurisdictions listed in Table 1.

Table 1 - Jurisdictions in Wake County

Community	Included in this FIS	If Not Included, Location of Flood Hazard/Flood Insurance Rate Data
CITY OF DURHAM	No	
CITY OF RALEIGH	Yes	*
TOWN OF APEX	Yes	*
TOWN OF CARY	Yes	*
TOWN OF CLAYTON	No	
TOWN OF FUQUAY-VARINA	Yes	*
TOWN OF GARNER	Yes	*
TOWN OF HOLLY SPRINGS	Yes	*
TOWN OF KNIGHTDALE	Yes	*
TOWN OF MORRISVILLE	Yes	*

TOWN OF ROLESVILLE	Yes	*
TOWN OF WAKE FOREST	Yes	*
TOWN OF WENDELL	Yes	*
TOWN OF ZEBULON	Yes	*
WAKE COUNTY	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 Wake became Effective on 5/2/2006. Refer to Table XX for information about subsequent revisions to FIRMs.

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

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

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

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

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

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

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

2.0 Floodplain Management Applications

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

2.1 Floodplains

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

2.2 Floodways

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

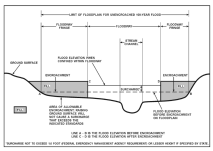

Figure 1- Floodway Schematic

2.3 Base Flood Elevations

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

2.4 Watershed Characteristics

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

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

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

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

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

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

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

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

It is important to note that the 1% annual chance flood is used as the national standard to allow a consistent approach to floodplain

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

Data Validity and Reliability

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

Developmental and Topographic Changes Over Time

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

Erosion, Deposition, and Debris Flow

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

Meandering and Lateral Migration

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

2.5 Coastal Flood Hazard Areas

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.

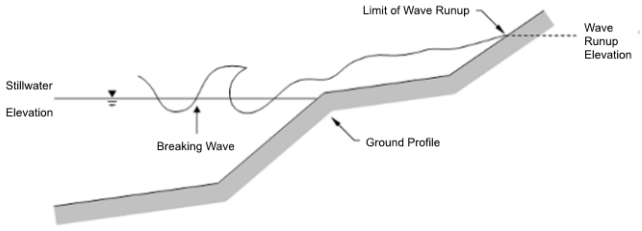

Figure 5: Wave Runup Transect Schematic

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.

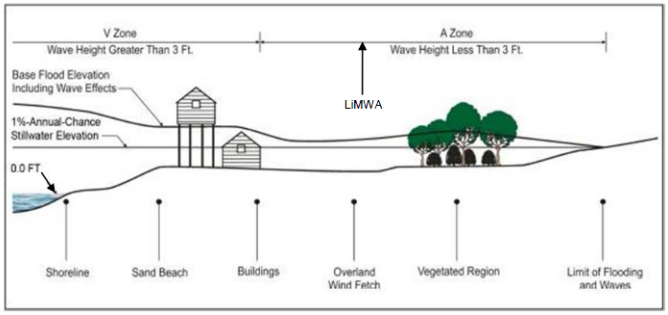

Figure 6: Coastal Transect Schematic

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

This section is not applicable to this FIS project.

4.0 Area Studied

Wake County is found in the Piedmont region of North Carolina. It is surrounded by Granville and Franklin Counties to the north, Nash and Johnston Counties to the east, Harnett County to the south, Durham and Chatham Counties to the west.

4.1 Basin Description

Table 3, “Basin Description” contains a description of the characteristics of the HUC-8 sub-basins within which each community falls. The table includes the main flooding sources within each basin, a brief description of the basin, and its area.

Table 3 - Basin Description

HUC-8 Sub-Basin Name	HUC-8 Sub-Basin Number	Primary Flooding Source	Description	HUC Area (square miles)
Black	03030006	Black River	The Black River Basin begins in the northeastern region of Harnett County, North Carolina. The basin then drains southeast through significant portions of Bladen, Cumberland, and Sampson Counties, ending at the Cape Fear River in Pender County.	1,574
Contentnea	03020203	Contentnea Creek	The Contentnea Creek Basin begins in southern Franklin County and drains southeast through significant portions of Greene, Nash, Pitt, Wayne, and Wilson Counties. The basin ends at the confluence with Neuse River in Craven County.	1,008
Haw	03030002	Haw River	The Haw River Basin begins in eastern Forsyth County, flowing across low, rolling hills. The basin drains large portions of Guilford, Alamance, and Chatham counties before entering B. Everett Jordan Lake at the headwaters of the Cape Fear River.	1,707
Upper Cape Fear	03030004	Cape Fear River	The Upper Cape Fear Basin begins just downstream of B. Everett Jordan Lake in Chatham County flowing through low, rolling hills until exiting in Cumberland County.	1,630
Upper Neuse	03020201	Neuse River	The Upper Neuse Basin is initially drained by the Eno and Flat Rivers in Orange County. Once they confluence near Falls Lake, the basin is then drained by the Neuse River which flows through Durham, Wake, and Johnston Counties.	2,406

4.2 Principal Flood Problems

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

Table 4 - Principal Flood Problems

Flooding Source	Problem
All Sources	Flooding problems in the unincorporated areas of Wake County have been mostly attributed to the inefficient removal of runoff from highly developed areas. The extent to which development in this area has affected flooding problems can be seen by compari
All Sources	Flooding problems in the unincorporated areas of Wake County have been mostly attributed to the inefficient removal of runoff from highly developed areas. The extent to which development in this area has affected flooding problems can be seen by comparing a flood in May 1957 with one in February 1973. The 1957 flood resulted from approximately 5.7 inches of rain and was considered to have an average frequency of once in 7 years. The 1973 flood reached higher levels in the floodplain but resulted from only 3.5 inches of rain, or a storm predicted to occur once in every 2 to 5 years. This increase in flood potential, caused partially by the intense development which has taken place in the area, has resulted in reduced crop yields and lowered land values and caused more frequent property damage.
All Sources	Flooding problems in the unincorporated areas of Wake County have been mostly attributed to the inefficient removal of runoff from highly developed areas. The extent to which development in this area has affected flooding problems can be seen by comparin
All Sources	Flooding problems in the unincorporated areas of Wake County have been mostly attributed to the inefficient removal of runoff from highly developed areas. The extent to which development in this area has affected flooding problems can be seen by comparing a flood in May 1957 with one in February 1973. The 1957 flood resulted from approximately 5.7 inches of rain and was considered to have an average frequency of once in 7 years. The 1973 flood reached higher levels in the floodplain but resulted from only 3.5 inches of rain, or a storm predicted to occur once in every 2 to 5 years. This increase in flood potential, caused partially by the intense development which has taken place in the area, has resulted in reduced crop yields and lowered land values and caused more frequent property damage.

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.

Table 5, “Historic Flood Elevations”, lists selected flooding sources in Wake 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)
Basin 28, Stream 8 / Hurricane Fran	At upstream face of Green Level West Road	1320	265.0	9/1/1996	50
Beaver Creek / Heavy Rain	At upstream face of Castleburg Drive	48370	355.0	8/8/8888	10
Beaver Creek / Hurricane Floyd	At upstream face of Kelly Road	30400	279.6	9/1/1999	10
Little River / Hurricane Floyd	Just upstream of Zebulon Road	416200	307.0	9/1/1996	100
Little River / Hurricane Floyd	4811 NC 231, Zebulon	334089	202.8	9/1/1999	100
Little River / Hurricane Floyd	Approximately 0.3 mile downstream of Wheeler Creek	366000	229.5	9/1/1999	100
Little River / Hurricane Floyd	Upstream of Highway 98	457531	342.4	9/1/1999	100
Little River / Hurricane Fran	Just upstream of State Highway 97	372000	236.1	9/1/1996	100
Marks Creek / Unknown Storm	500 Windless Trail, Clayton	11685	167.6	9/1/1996	100
Mill Creek (South) / Hurricane Floyd	1534 Olvens Grove Road, Four Oak	12558	151.5	9/1/1999	100
Moccasin Creek / Hurricane Floyd	Downstream of Pearces Road	111461	262.2	9/1/1999	100
Morris Branch / Hurricane Fran	At upstream face of Howard Road	16330	327.4	9/1/1996	50
Neuse River / Hurricane Floyd	Downstream face of Main Street	591830	54.9	9/1/1999	50
Neuse River / Hurricane Floyd	Downstream face of NC 111	636585	61.7	9/1/1999	50
Neuse River / Hurricane Floyd	Upstream face of SR 1915	694195	71.1	9/1/1999	50
Neuse River / Hurricane Floyd	160 feet Southeast of Bryan Boulevard	710650	72.8	9/1/1999	50
Richland Creek / Hurricane Floyd	Approximately 900 feet downstream of West Stadium Drive	24330	260.2	9/1/1999	100
Swift Creek / Hurricane Fran	Golf Course Green approximately 700 feet upstream of confluence from Lens Branch (Basin 20, Stream 22)	241000	309.8	9/1/1996	100
Swift Creek / Hurricane Fran	Golf course maintenance shed	238300	311.2	9/1/1996	100

* 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 Wake County.

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

4.5 Scope of Study

For this map maintenance revision, a scoping meeting was held in Wake 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 Wake 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 Wake 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	
Adams Branch (Basin 30, Stream 9)	At Corwin Road	At the confluence of Big Branch Tributary No. 1(Basin 30, Stream 6)	Town Of Garner
Angier Creek (Basin 24, Stream 4)	At Railroad	Approximately 0.4 mile upstream of Railroad	Town Of Fuquay-Varina
Armory Tributary (Basin 18, Stream 38)	At the confluence with Richland Creek (Basin 18, Stream 3)	Approximately 0.5 mile upstream of the confluence with Richland Creek (Basin 18, Stream 3)	City Of Raleigh
Austin Creek (Basin 6, Stream 10)	At the confluence with Smith Creek (Basin 6, Stream 1)	Approximately 1,275 feet upstream of Mill Dam Road	Rdu Town Of Wake Forest Wake County
Bachelor Branch (Basin 28, Stream 6)	At the confluence with White Oak Creek	Approximately 530 feet upstream of NC Highway 55	Rdu Town Of Cary Wake County
Bagwell Branch (Basin 20, Stream 10)	At the confluence with Swift Creek(Basin 20, Stream 1)	At NC Route 50	Rdu Town Of Garner Wake County
Basal Creek (Basin 22, Stream 16)	At the confluence with Middle Creek (Basin 22, Stream 1)	Approximately 0.8 mile upstream of NC-55	Rdu Town Of Fuquay-Varina Town Of Holly Springs Wake County
Basin 10, Stream 10	At Zebulon Road/NC Highway 96	Approximately 0.1 mile upstream of Zebulon Road/NC Highway 96	Rdu Wake County
Basin 10, Stream 2	At the confluence with Little River (Basin 10, Stream 1)	Approximately 1.1 miles upstream of the confluence with Little River (Basin 10, Stream 1)	Rdu Wake County
Basin 10, Stream 3	At the confluence with Little River (Basin 10, Stream 1)	At Moss Road	Rdu Wake County
Basin 10, Stream 5	At the confluence with Little River (Basin 10, Stream 1)	At Lizard Lick Road	Rdu Wake County
Basin 10, Stream 6	At the confluence with Little River (Basin 10, Stream 1)	At Lizard Lick Road	Rdu Wake County

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

Source	Riverine Sources		Affected Communties
	From	To	
Basin 10, Stream 9	At the confluence with Little River (Basin 10, Stream 1)	At Zebulon Road	Rdu Wake County
Basin 12, Stream 3	At the confluence with Beaverdam Creek (Basin 12, Stream 1)	At Old Crews Road	Rdu Town Of Knightdale Wake County
Basin 15, Stream 22	Approximately 0.2 mile upstream of Forestville Road	At the confluence with Neuse River (Basin 15, Stream 1)	City Of Raleigh
Basin 15, Stream 25	Approximately 730 feet upstream of Mitchell Mill Road	At the confluence with Neuse River (Basin 15, Stream 1)	City Of Raleigh
Basin 15, Stream 28	At the confluence with Perry Creek (Basin 15, Stream 26)	Approximately 1 mile upstream of the confluence with Perry Creek (Basin 15, Stream 26)	City Of Raleigh
Basin 15, Stream 32	Just upstream of Raven Ridge Road	Approximately 0.2 mile upstream of Raven Ridge Road	Rdu Wake County
Basin 15, Stream 33	At the confluence with Honeycutt Creek (Basin 15, Stream 31)	Approximately 0.3 mile upstream of Honeycutt Road	Rdu Wake County
Basin 15, Stream 7	At the confluence with Neuse River (Basin 15, Stream 7)	At Clifton Road	Rdu Wake County
Basin 15, Stream 8	At Grasshopper Road	Approximately 0.2 mile upstream of Grasshopper Road	Rdu Wake County
Basin 15, Stream 9	At the confluence with Neuse River (Basin 15, Stream 1)	At Battle Bridge Road	Rdu Wake County
Basin 16, Stream 2	At the confluence with Falls Lake	At State Route 50	Rdu Wake County
Basin 16, Stream 5	Approximately 0.2 mile upstream of NC-50	Approximately 0.4 mile upstream of NC-50	Rdu Wake County
Basin 17, Stream 4	At the confluence with Lower Barton Creek (Basin 17, Stream 1)	Approximately 900 feet upstream of NC-50	Rdu Wake County
Basin 18, Stream 13	At the confluence with Stirrup Iron Creek (Basin 18, Stream 12)	The Wake/Durham County boundary	Rdu Rdu Town Of Morrisville Town Of Morrisville Wake County Wake County
Basin 18, Stream 13 Tributary	At the confluence with Basin 18, Stream 13	Approximately 500 feet downstream of Paramount Parkway	Town Of Morrisville
Basin 18, Stream 4	At the confluence with Turkey Creek (Basin 18, Stream 5)	Appoximately 1,367 feet upstream of Country Trail	City Of Raleigh
Basin 18, Stream 7	At the confluence with Sycamore Creek (Basin 18, Stream 6)	Approximately 0.6 mile upstream of the confluence with Sycamore Creek (Basin 18, Stream 6)	City Of Raleigh
Basin 18, Stream 8	At the confluence with Sycamore Creek (Basin 18, Stream 6)	Approximately 0.6 mile upstream of West Gate Road	City Of Raleigh
Basin 19, Stream 3	At the confluence with Whiteoak Creek (Basin 19, Stream 1)	At Railroad	Rdu Town Of Garner Wake County
Basin 19, Stream 4	At Railroad	Approximately 0.3 mile upstream of Railroad	Rdu Town Of Garner Wake County
Basin 20, Stream 20	Approximately 0.8 mile upstream of the confluence with Swift Creek (Basin 20, Stream 1)	Approximately 0.9 mile upstream of the confluence with Swift Creek (Basin 20, Stream 1)	Rdu Wake County
Basin 20, Stream 7	At Bryan Road	Approximately 0.3 mile upstream of Bryan Road	Town Of Garner
Basin 20, Stream 8	At Bryan Road	Approximately 0.2 mile upstream of Bryan Road	Town Of Garner
Basin 22, Stream 20	At the confluence with Terrible Creek (Basin 22, Stream 9)	Approximately 1.1 miles upstream of the confluence with Terrible Creek (Basin 22, Stream 9)	Town Of Fuquay-Varina
Basin 22, Stream 6	At the confluence with Middle Creek (Basin 22, Stream 1)	Approximately 0.5 mile upstream of Optimist Farm Road	Rdu Wake County
Basin 22, Stream 9	At the confluence with Middle Creek (Basin 22, Stream 1)	At Holly Springs Road	Rdu Town Of Holly Springs Wake County
Basin 27, Stream 4	At the confluence with Beaver Creek (Basin 27, Stream 2)	Approximately 0.4 mile upstream of the confluence with Beaver Creek (Basin 27, Stream 2)	Town Of Apex
Basin 3, Stream 6	At the confluence with Newlight Creek (Basin 3, Stream 1)	Approximately 1.3 miles upstream of the confluence with Newlight Creek (Basin 3, Stream 1)	Rdu Wake County
Basin 3, Stream 8	At the confluence with Newlight Creek (Basin 3, Stream 1)	Approximately 1.2 miles upstream of Bold Run Hill Road	Rdu Wake County
Basin 30, Stream 3	At the confluence with Big Branch (Basin 30, Stream 2)	Approxiamtely 1.1 miles upstream of Auburn Church Road	City Of Raleigh Town Of Garner
Basin 4, Stream 13	At the confluence with Lowery Creek (Basin 4, Stream 10)	Approximately 1.1 miles upstream of the confluence with Lowery Creek (Basin 4, Stream 10)	Rdu Wake County

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

Source	Riverine Sources		Affected Communties
	From	To	
Basin 4, Stream 3	At the confluence with Horse Creek (Basin 4, Stream 1)	At Purnell Road	Rdu Town Of Wake Forest Wake County
Basin 6, Stream 9	At the confluence with Sanford Creek (Basin 6, Stream 7)	At Rodgers Road	Rdu Town Of Rolesville Town Of Wake Forest Wake County
Beaver Creek Tributary (Basin 27, Stream 3)	At the confluence with Beaver Creek (Basin 27, Stream 2)	Approximately 0.3 mile downstream of Holland Road	Rdu Town Of Apex Wake County
Beaverdam Creek	At the confluence with Moccasin Creek (Basin 11, Stream 1)	Approximately 0.7 mile upstream of Pearces Road	Rdu Town Of Zebulon Wake County
Beaverdam Creek (Basin 12, Stream 1)	At the confluence with Neuse River (Basin 15, Stream 1)	Approximately 1200 feet upstream of Lucas Road	City Of Raleigh Rdu Town Of Knightdale Wake County
Beaverdam Creek (Basin 15, Stream 21)	At the confluence with Neuse River (Basin 15, Stream 1)	At Kyle Drive	City Of Raleigh
Beaverdam Creek (Basin 18, Stream 28)	At the confluence with Crabtree Creek (Basin 18, Stream 9)	Approximately 150 feet upstream of Glenwood Avenue	City Of Raleigh
Big Branch (Basin 10, Stream 8)	At the confluence with Little River (Basin 10, Stream 1)	At Highway 96/Zebulon Road	Rdu Wake County
Big Branch (Basin 18, Stream 21)	At the confluence with Crabtree Creek (Basin 18, Stream 9)	Approximately 1,911 feet upstream of East Millbrook Road	City Of Raleigh
Big Branch (Basin 26, Stream 5)	At the confluence with White Oak Creek (Basin 26, Stream 1)	Approximately 0.7 mile upstream of U.S. Highway 1	Rdu Town Of Holly Springs Wake County
Big Branch (Basin 30, Stream 2)	At the confluence with Walnut Creek (Basin 30, Stream 1)	At Auburn Church Road	City Of Raleigh Town Of Garner
Big Branch Tributary No. 3	At the confluence with Big Branch Tributary No. 1 (Basin 30, Stream 6)	Approximately 1.0 mile upstream of Interstate 40	City Of Raleigh Town Of Garner
Big Branch Tributary No.1 (Basin 30, Stream 6)	Approximately 0.5 mile upstream of Interstate 40	At the confluence with Big Branch (Basin 30, Stream 2)	City Of Raleigh Town Of Garner
Big Branch Tributary No.1 (Basin 30, Stream 6)	At the confluence of Adams Branch (Basin 30, Stream 9)	Approximately 0.5 mile upstream of Interstate 40	Town Of Garner
Black Creek Tributary A (Basin 18, Stream 11)	At the confluece with Crabtree Creek (Basin 18, Stream 9)	At North Harrison Avenue	Town Of Cary
Bradley Creek (Basin 24, Stream 3)	At the confluence with Kenneth Creek (Basin 24, Stream 2)	At South Main Street (U.S. Route 401)	Town Of Fuquay-Varina
Bridges Branch	At the confluence with Crabtree Creek (Basin 18, Stream9)	Approximately 1,740 feet upstream of Barksdale Drive	City Of Raleigh
Brier Creek (Basin 18, Stream 14)	Approximately 0.3 miles upstream of confluence with Stirrup Iron Creek (Basin 18, Stream 12)	Approximately 0.7 miles upstream of confluence with Stirrup Iron Creek (Basin 18, Stream 12)	Rdu Town Of Cary Wake County
Buck Branch (Basin 20, Stream 12)	At the confluence with Reedy Branch (Basin 20, Stream 11)	Approximately 0.7 mile upstream of Vandora Springs Road	Rdu Town Of Garner Wake County
Buckhorn Branch (Basin 3, Stream 9)	At the confluence with Newlight Creek (Basin 3, Stream 1)	Approximately 1.4 miles upstream of the confluence with Newlight Creek (Basin 3, Stream 1)	Rdu Wake County
Buckhorn Creek	Approximately 430 feet downstream of Cass Holt Road	Approximately 0.5 mile upstream of Honeycutt Road	Rdu Wake County
Buffalo Branch (Basin 10, Stream 22)	At Morphus Bridge Road	At the confluence with Little River (Basin 10, Stream 1)	Rdu Town Of Wendell Wake County
Buffalo Creek (Basin 9, Stream 1)	At Robertsons Pond Dam	Approximately 0.8 mile upstream of Fowler Road	Rdu Town Of Rolesville Wake County
Buffalo Creek (Basin 9, Stream 1)	At the Wake/Johnston County boundary	At Robertsons Pond Dam	Rdu Town Of Wendell Wake County
Buffalo Creek West	The confluence with Middle Creek	The Johnston/Wake County boundary	Rdu Wake County
Camp Branch (Basin 22, Stream 7)	At the confluence with Middle Creek (Basin 22, Stream 1)	Approximately 2.0 miles upstream of Optimist Farm Road	Rdu Town Of Holly Springs Wake County
Cary Branch	Approximately 1.0 mile downstream of Rex Road	Approximately 3.2 miles upstream of Rex Road	Rdu Town Of Holly Springs Wake County
Cedar Creek (Basin 15, Stream 34)	At the confluence with Falls Lake	Approximately 0.4 mile upstream of Coachmans Way	Rdu Wake County
Coles Branch (Basin 18, Stream 24)	At the confluence with Crabtree Creek (Basin 18, Stream 9)	Approximately 0.8 mile downstream of NW Maynard Road	Town Of Cary Town Of Morrisville
Crabtree Creek (Basin 18, Stream 9)	At Bond Lake	Approximately 1.1 miles downstream of I-40	Rdu Town Of Cary Town Of Morrisville Wake County

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

Source	Riverine Sources		Affected Communties
	From	To	
Crabtree Creek (Basin 18, Stream 9)	At the confluence with Neuse River (Basin 15, Stream 1)	Approximately 1.0 mile upstream of Southwest Cary Parkway	City Of Raleigh Rdu Wake County
Crabtree Creek Tributary No. 6 (Basin 18, Stream 20)	Approximately 1,300 feet upstream of Weston Parkway	Approximately 1.9 miles upstream of confluence with Crabtree Creek (Basin 18, Stream 9)	Town Of Cary
Dunn Creek (Basin 6, Stream 5)	At the confluence with Smith Creek (Basin 6, Stream 1)	Approximately 1.0 mile upstream of Oak Grove Church Road	Rdu Town Of Wake Forest Wake County
Dutchmans Branch (Basin 20, Stream 17)	Approximately 200 feet upstream of Blaney Forks Road	Approxiamtely 0.7 mile upstream of Dutchman Drive	Rdu Town Of Cary Wake County
East Fork Mine Creek (Basin 18, Stream 34)	At the confluence with Mine Creek (Basin 18, Stream 34)	Approximately 0.7 mile upstream of Newton Road	City Of Raleigh
East Fork Mine Creek Tributary (Basin 18, Stream 35)	At the confluence with East Fork Mine Creek (Basin 18, Stream 34)	Approximately 0.5 mile upstream of Woodbend Drive	City Of Raleigh
Echo Creek (Basin 20, Stream 14)	At the confluence with Yates Branch (Basin 20, Stream 13)	At Vesta Drive	Rdu Town Of Garner Wake County
Falls Lake	The entire shoreline in Wake County	The entire shoreline in Wake County	Rdu Wake County
Falls Lake	The entire shoreline in Wake County, Durham County, Granville County	The entire shoreline in Wake County, Durham County, Granville County	Rdu Wake County
Gill Creek (Basin 10, Stream 24)	At the confluence with Little River (Basin 10, Stream 1)	At Mack Todd Road	Town Of Zebulon
Haleys Branch (Basin 18, Stream 10)	At the confluence with Crabtree Creek (Basin 18, Stream 9)	Approximately 0.7 mile upstream of Interstate 40	Rdu Town Of Cary Wake County
Hare Snipe Creek (Basin 18, Stream 1)	At the confluence with Crabtree Creek (Basin 18, Stream 9)	Approximately 100 upstream of Lynn Road	City Of Raleigh
Hatchet Grove Tributary (Basin 18, Stream 25)	At the confluence with Crabtree Creek (Basin 18, Stream 9)	Approximately 0.4 mile upstream of Davis Drive	Town Of Cary Town Of Morrisville
Hillard Creek (Basin 30, Stream 7)	Approximately 0.8 mile upstream of the confluence with Big Branch Tributary No. 1 (Basin 30, Stream 6)	At the confluence with Big Branch Tributary No. 1 (Basin 30, Stream 6)	Town Of Garner
Hodges Creek (Basin 8, Stream 1)	Approximately 1,700 feet upstream of Forestville Road	Approximately 0.8 mile downstream of Old Crews Road	City Of Raleigh Rdu Wake County
Hodges Creek (Basin 8, Stream 1)	At the confluence with Neuse River (Basin 15, Stream 1)	Approximately 1,700 feet upstream of Forestville Road	City Of Raleigh Rdu Wake County
Hominy Branch (Basin 10, Stream 4)	At the confluence with Little River (Basin 10, Stream 1)	At Marshburn Road	Rdu Town Of Wendell Wake County
Hominy Creek (Basin 10, Stream 7)	At the confluence with Little River (Basin 10, Stream 1)	At Lizard Lick Road	Rdu Wake County
Honeycutt Creek (Basin 15, Stream 31)	At the confluence with Falls Lake	At Honeycutt Road	Rdu Wake County
Horse Creek	At the confluence with Falls Lake	Approximately 0.5 mile upstream of Purnell Road	Rdu Town Of Wake Forest Wake County
House Creek (Basin 18, Stream 36)	At the confluence with Crabtree Creek (Basin 18, Stream 9)	Approximately 575 feet upstream of Interstate 440	City Of Raleigh
Kenneth Branch (Basin 24, Stream 6)	At the confluence with Kenneth Creek (Basin 24, Stream 2)	Approximately 390 feet upstream of Phelps West Road	Town Of Fuquay-Varina
Kenneth Creek	Approximately 0.5 mile upstream of the Wake/Harnett County boundary	At West Academy Street	Town Of Fuquay-Varina
Kit Creek	At the Wake/Chatham County boundary	Approximately 475 feet upstream of Railroad	Rdu Town Of Cary Town Of Morrisville Wake County
Kit Creek Tributary 1 (Basin 29, Stream 11)	At the confluence with Kit Creek (Basin 29, Stream 7)	Approx. 1,825 feet upstream of Davis Drive	Rdu Wake County
Kit Creek Tributary 2 (Basin 29, Stream 8)	At the confluence with Kit Creek (Basin 29, Stream 7)	Approximately 1.0 mile upstream of the confluence with Kit Creek (Basin 29, Stream 7)	Rdu Town Of Cary Wake County
Lake Johnson	At the confluence with Little River (Basin 10, Stream 1)	At Morphus Bridge Road	Town Of Wendell
Lake Johnson Bypass	Approximately 350 feet upstream of the confluence with Buffalo Branch (Basin 10, Stream 22)	At the confluence with Buffalo Branch (Basin 10, Stream 22)	Town Of Wendell
Lakemont Tributary (Basin 18, Stream 22)	At the confluence with Big Branch (Basin 18, Stream 21)	Approx. 200 feet downstream of Pinecroft Drive	City Of Raleigh
Lens Branch (Basin 20, Stream 22)	At the confluence with Swift Creek (Basin 20, Stream 1)	At Seabrook Avenue	Town Of Cary
Little Beaver Creek	At the Wake/Chatham County boundary	Approx. 1.2 miles upstream of New Hill Olive Chapel Road	Rdu Wake County

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

Source	Riverine Sources		Affected Communties
	From	To	
Little Beaverdam Creek (Basin 2, Stream 2)	The Wake/Granville County boundary	Approximately 2.2 miles upstream of the confluence with Beaverdam Lake	Rdu Wake County
Little Branch (Basin 26, Stream 3)	At the confluence with Big Branch (Basin 26, Stream 5)	Approximately 2.0 miles upstream of New Hill Road	Rdu Town Of Holly Springs Wake County
Little Brier Creek (Basin 18, Stream 15)	At the Wake/Durham County boundary	At Lumley Road	City Of Raleigh Rdu Town Of Cary Wake County
Little Brier Creek East (Basin 18, Stream 16)	At Glenwood Avenue	Approximately 1,300 feet upstream of the confluence with Little Brier Creek (Basin 18, Stream 15)	City Of Raleigh City Of Raleigh Rdu Rdu Wake County Wake County
Little Creek (Basin 11, Stream 2)	At the Wake/Johnston County boundary	At Cemetery Road	Rdu Town Of Zebulon Wake County
Lizard Lick Creek (Basin 10, Stream 23)	At the confluence with Little River (Basin 10, Stream 1)	Approximately 0.3 mile upstream of Old Zebulon Road	Town Of Wendell
Lower Barton Creek (Basin 17, Stream 1)	At the confluence with Falls Lake	At Ray Road	City Of Raleigh Rdu Wake County
Lowery Creek (Basin 4, Stream 10)	At the confluence with Falls Lake	At Purrell Road	Rdu Wake County
Lynn Road Tributary (Basin 18, Stream 32)	At the confluence with Mine Creek (Basin 18, Stream 31)	Approximately 0.3 mile upstream of Lead Mine Road	City Of Raleigh
Mahlers Creek (Basin 20, Stream 6)	At the confluence with Swift Creek (Basin 20, Stream 1)	Approximately 2.2 miles upstream of the confluence of Basin 20, Stream 7	Town Of Garner
Mango Creek (Basin 15, Stream 11)	At the confluence with Neuse River (Basin 15, Stream 1)	Approximately 2.4 miles upstream of Hodge Road	Town Of Knightdale
Marks Creek	At the Wake/Johnston County boundary	At Marks Creek Road	Rdu Town Of Knightdale Wake County
Marsh Creek (Basin 18, Stream 17)	At the confluence with Crabtree Creek (Basin 18, Stream 9)	Approximately 0.5 mile upstream of Quail Ridge Road	City Of Raleigh
Medfield Tributary (Basin 18, Stream 39)	At the confluence with Richland Creek (Basin 18, Stream 3)	Approximately 0.5 mile upstream of Old Trinity Road	City Of Raleigh
Middle Creek	At the Wake/Johnston County boundary	Appoximately 0.7 mile upstream of the confluence of Middle Creek Tributary	Rdu Town Of Apex Town Of Cary Town Of Fuquay-Varina Town Of Holly Springs Wake County
Millbrook Tributary to Marsh Creek (Basin 18, Stream 19)	At the confluence with Marsh Creek (Basin 18, Stream 17)	Approximately 0.5 mile upstream of East Millbrook Road	City Of Raleigh
Mills Branch (Basin 22, Stream 5)	At the confluence with Middle Creek (Basin 22, Stream 1)	Approximately 0.4 mile upstream of U.S. Route 401	Rdu Town Of Fuquay-Varina Wake County
Mine Creek	At the confluence with Crabtree Creek (Basin 18, Stream 9)	At the confluence of East Fork Mine Creek and West Fork Mine Creek	City Of Raleigh
Mingo Creek (Basin 12, Stream 2)	Approximately 100 feet upstream of confluence with Beaverdam Creek (Basin 12, Stream 1)	Approximately 250 feet upstream of confluence with Beaverdam Creek (Basin 12, Stream 1)	Rdu Town Of Knightdale Wake County
Morrisville Tributary (Basin 18, Stream 26)	At the confluence with Crabtree Creek (Basin 18, Stream 9)	Approximately 0.3 mile upstream of Railroad	Town Of Cary Town Of Morrisville
Mud Branch (Basin 4, Stream 15)	At the confluence with Horse Creek (Basin 4, Stream 1)	Approximately 3.0 miles upstream of the confluence with Horse Creek (Basin 4,Stream 1)	Rdu Wake County
Neil Branch (Basin 24, Stream 8)	At the confluence with Neil Creek (Basin 24, Stream 7)	At East Spring Avenue	Town Of Fuquay-Varina
Neil Creek (Basin 24, Stream 7)	At the confluence with Angier Creek (Basin 24, Stream 4)	At Holland Road	Town Of Fuquay-Varina
Neuse River	At Falls of the Neuse Road	At the Wake/Johnston County boundary	City Of Raleigh Rdu Town Of Knightdale Town Of Wake Forest Wake County
Neuse River	The Johnston/Wayne County boundary	Just downstream of Mial Plantation Road	Rdu Town Of Clayton Wake County
New Hope Tributary to Marsh Creek (Basin 18, Stream 18)	At the confluence with Marsh Creek (Basin 18, Stream 17)	Approximately 236 feet upstream of Calvary Drive	City Of Raleigh
New Light Creek	At the confluence of Basin 3, Stream 8	At the confluence with Neuse River (Basin 15, Stream 1)	Rdu Wake County
New Light Creek	At the Wake/Granville County boundary	At the confluence with Basin 3, Stream 8	Rdu Wake County

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

Source	Riverine Sources		Affected Communties
	From	To	
Norris Branch	At the confluence with Cary Branch	Approximately 1.2 miles upstream of Avent Ferry Road	Rdu Town Of Holly Springs Wake County
Panther Branch (Basin 22, Stream 2)	At the confluence with Middle Creek (Basin 22, Stream 1)	Approximately 0.5 mile upstream of Banks Road	Rdu Wake County
Panther Creek	At the Wake/Chatham County boundary	Approximately 1.0 mile upstream of Green Level to Durham Road	Town Of Cary
Perry Creek (Basin 15, Stream 26)	At the confluence with the Neuse River (Basin 15, Stream 1)	Approximately 0.9 mile upstream of Rainwater Drive	City Of Raleigh
Perry Creek East Branch (Basin 15, Stream 27)	At the confluence with Perry Creek (Basin 15, Stream 26)	Approximately 0.4 mile upstream of Bivens Drive	City Of Raleigh
Pigeon House Branch (Basin 18, Stream 27)	At the confluence with Crabtree Creek (Basin 18, Stream 9)	At West Peace Street	City Of Raleigh
Poplar Branch (Basin 13, Stream 2)	At the confluence with Poplar Creek (Basin 13, Stream 1)	At Farm Road	Rdu Town Of Knightdale Wake County
Poplar Creek (Basin 13, Stream 1)	At the confluence with Neuse River (Basin 15, Stream 1)	Approximately 600 feet upstream of Fayetteville Street	Rdu Town Of Knightdale Wake County
Powell Creek (Basin 8, Stream 7)	Approximately 1,500 feet upstream of Mitchell Mill Road	Approximately 1.3 miles upstream of Peebles Road	City Of Raleigh Rdu Town Of Rolesville Wake County
Powell Creek (Basin 8, Stream 7)	At the confluence with Hodges Creek (Basin 8, Stream 1)	Approximately 1,500 feet upstream of Mitchell Mill Road	City Of Raleigh Rdu Wake County
Reedy Creek (Basin 20, Stream 11)	At the confluence with Swift Creek (Basin 20, Stream 1)	Approximately 160 feet downstream of Aversboro Road	Rdu Town Of Garner Wake County
Reedy Creek (Basin 6, Stream 8)	At Rodgers Road	Approximately 475 feet upstream of Rodgers Road	Rdu Town Of Wake Forest Wake County
Reedy Creek Tributary (Basin 20, Stream 9)	At Claymore Drive	Approximately 0.2 mile upstream of Claymore Drive	Town Of Garner
Richland Creek	At the confluence with Neuse River (Basin 15, Stream 1)	At the Wake/Franklin County boundary	City Of Raleigh Rdu Town Of Wake Forest Wake County
Richland Creek (Basin 18, Stream 3)	At the confluence with Crabtree Creek (Basin 18, Stream 9)	At the confluence of Medfield Tributary	City Of Raleigh
Richland Creek Tributary	At the confluence with Richland Creek (Basin 5, Stream 1)	Approximately 2007 feet upstream of confluence with Richland Creek	City Of Raleigh Town Of Wake Forest
Rocky Branch (Basin 22, Stream 8)	At the confluence with Middle Creek (Basin 22, Stream 1)	At Holly Springs Road	Rdu Town Of Holly Springs Wake County
Rocky Branch (Basin 30, Stream 5)	At the confluence with Walnut Creek (Basin 30, Stream 1)	Approximately 200 feet upstream of Hillsborough Street	City Of Raleigh
Rocky Ford Branch (Basin 24, Stream 5)	At the confluence with Kenneth Creek (Basin 24, Stream 2)	Approximately 1.0 mile upstream of the confluence with Kenneth Creek (Basin 24, Stream 2)	Rdu Town Of Fuquay-Varina Wake County
Sanford Creek (Basin 6, Stream 7)	At the confluence with Smith Creek (Basin 6, Stream 1)	Approximately 300 feet upstream of the confluence of Basin 6, Stream 9	Rdu Town Of Wake Forest Wake County
Smith Creek	At the Wake/Franklin County boundary	At the confluence with Neuse River (Basin 15, Stream 1)	Rdu Town Of Wake Forest Wake County
Southeast Prong Beaverdam Creek (Basin 18, Stream 30)	At the confluences of Southwest Prong Beaverdam Creek (Basin 18, Stream 28) and Beaverdam Creek (Basin 18, Stream 28)	Approximately 215 feet upstream of Wade Avenue	City Of Raleigh
Southwest Prong Beaverdam Creek (Basin 18, Stream 29)	At the confluences of Southeast Prong Beaverdam Creek (Basin 18, Stream 30) and Beaverdam Creek (Basin 18, Stream 28)	Approximately 375 feet upstream of Wade Avenue	City Of Raleigh
Spring Branch (Basin 6, Stream 6)	Approximately 875 feet upstream of Franklin Street	At the confluence with Dunn Creek (Basin 6, Stream 6)	Town Of Wake Forest
Stirrup Iron Creek	At the confluence with Brier Creek (Basin 18, Stream 14)	At the Wake/Durham County boundary	Town Of Cary Town Of Morrisville
Stirrup Iron Creek	Just upstream of Highway I-40	The Wake/Durham County boundary	City Of Durham Rdu Town Of Cary Town Of Morrisville Wake County
Straight Branch (Basin 20, Stream 23)	At the confluence with Lens Branch (Basin 20, Stream 22)	Approximately 1,000 feet upstream of U.S. Highway 164	Town Of Cary
Swift Creek	Approximately 0.3 mile upstream of Holly Springs Road	Approximately 700 feet upstream of US 64	Rdu Town Of Cary Wake County

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

Source	Riverine Sources		Affected Communties
	From	To	
Swift Creek	At Lake Benson Dam	Approximately 1.5 miles upstream of NC-50 (Benson Road)	Rdu Town Of Cary Town Of Garner Wake County
Swift Creek	The confluence with Neuse River	The Johnston/Wake County boundary	Rdu Wake County
Swift Creek Tributary No. 7 (Basin 20, Stream 24)	At the confluence with Swift Creek (Basin 20, Stream 1)	At SW Maynard Road	Town Of Cary
Swift Creek Tributary No. 7A (Basin 20, Stream 25)	At the confluence with Swift Creek Tributary No. 7 (Basin 20, Stream 24)	Approx. 0.5 mile upstream of the confluence with Swift Creek Tributary No. 7 (Basin 20, Stream 24)	Town Of Cary
Sycamore Creek (Basin 18, Stream 6)	At the confluence with Crabtree Creek (Basin 18, Stream 9)	Approximately 1.0 mile upstream of Leesville Road	City Of Raleigh Rdu Wake County
Terrible Creek (Basin 22, Stream 19)	At the confluence with Middle Creek (Basin 22, Stream 1)	Approximately 1.0 mile upstream of Sunset Lake Road	Rdu Town Of Fuquay-Varina Wake County
Toms Creek (Basin 7, Stream 1)	At the confluence with Neuse River (Basin 15, Stream 1)	Approximately 0.9 mile upstream of Forestville Road	Rdu Town Of Rolesville Town Of Wake Forest Wake County
Tributary to Big Branch Tributary No. 1 (Basin 30, Stream 8)	Approximately 0.6 mile upstream of the confluence with Big Branch Tributary No. 1 (Basin 30, Stream 6)	At the confluence with Big Branch Tributary No. 1 (Basin 30, Stream 6)	Town Of Garner
Turkey Creek (Basin 18, Stream 23)	At the confluence with Crabtree Creek (Basin 18, Stream 9)	Approximately 1,200 upstream of High House Road	Town Of Cary
Turkey Creek (Basin 18, Stream 5)	Approximately 675 feet upstream of Glenwood Avenue	Approximately 1.3 miles upstream of Ebenezer Church Road	City Of Raleigh
Unnamed Stream	At the confluence with Kit Creek (Basin 29, Stream 7)	Approx. 1,825 feet upstream of Davis Drive	Rdu Wake County
Unnamed Tributary (#1) to Swift Creek	The confluence with Swift Creek	The Johnston/Wake County boundary	Rdu Wake County
Upper Barton Creek (Basin 16, Stream 1)	At the confluence with the Neuse River (Basin 15, Stream 1)	At Victory Church Road	Rdu Rdu Wake County Wake County
Utley Creek	At the confluence with White Oak Creek	Approximately 3.7 miles upstream of confluence with White Oak Creek (Basin 26, Stream 1)	Rdu Town Of Holly Springs Wake County
Walnut Creek (Basin 30, Stream 1)	At the confluence with Neuse River (Basin 15, Stream 1)	Approximately 1,580 feet upstream of Maynard Road	City Of Raleigh Town Of Cary
West Fork Mine Creek (Basin 18, Stream 33)	At the confluence with Mine Creek (Basin 18, Stream 31)	Approximately 0.6 mile upstream of the confluence with Mine Creek (Basin 18, Stream 31)	City Of Raleigh
Wheelers Creek (Basin 10, Stream 25)	At the confluence with Little River (Basin 10, Stream 1)	At Worth Hinton Road	Town Of Zebulon
White Oak Creek	At the Wake/Johnston County boundary	Approximately 0.4 mile upstream of Pergo Parkway	Rdu Town Of Garner Wake County
White Oak Creek (Basin 26, Stream 1)	At the confluence of Utley Creek	Apprxoimately 1.6 miles downstream of U.S. Route 1	Rdu Town Of Holly Springs Wake County
Wildcat Branch (Basin 30, Stream 4)	At the confluence with Walnut Creek (Basin 30, Stream 1)	Approximately 900 feet upstream of Tryon Road	City Of Raleigh
Yates Branch (Basin 20, Stream 13)	Approximately 3.6 miles upstream of Lake Wheeler Road	Approximately 100 feet downstream of Lake Wheeler Road	City Of Raleigh Rdu Town Of Garner Wake County
Yates Branch (Basin 20, Stream 13)	At the confluence with Swift Creek (Basin 20, Stream 1)	Approximately 100 feet downstream of Lake Wheeler Road	Rdu Town Of Garner Wake County

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	
Brier Lake	At the Wake/Durham County boundary	At Lumley Road	City Of Raleigh Rdu Town Of Cary Wake County

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

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

Source	Riverine Sources		Affected Communties
	From	To	
B. Everett Jordan Lake	Entire shoreline within Chatham County (Unincorporated Areas)	Entire shoreline within Chatham County (Unincorporated Areas)	Rdu Wake County
Bagwell Branch (Basin 20, Stream 10)	At NC Route 50	Approximately 0.1 mile upstream of NC Route 50	Town Of Garner
Basin 14, Stream 2	Approximately 900 feet upstream of confluence with Marks Creek (Basin 14, Stream 1)	Approximately 0.3 miles upstream of confluence with Marks Creek (Basin 14, Stream 1)	Rdu Wake County
Basin 14, Stream 3	Approximately 380 feet upstream of confluence with Marks Creek (Basin 14, Stream 1)	Approximately 870 feet upstream of confluence with Marks Creek (Basin 14, Stream 1)	Rdu Wake County
Basin 20, Stream 5	At the confluence with Swift Creek (Basin 20, Stream 1)	Approximately 1.4 miles upstream of the confluence with Swift Creek (Basin 20, Stream 1)	Rdu Wake County
Basin 23, Stream 2	Approximately 500 feet upstream of confluence of Black Creek (Basin 23, Stream 1)	Approximately 1000 feet upstream of confluence of Black Creek (Basin 23, Stream 1)	Rdu Wake County
Basin 23, Stream 3	At the confluence with Black Creek (Basin 23, Stream 1)	Approximately 0.7 mile upstream of dam along Basin 23, Stream 3	Rdu Town Of Fuquay-Varina Wake County
Basin 23, Stream 4	Approximately 200 feet upstream of confluence with Basin 23, Stream 3.	Approximately 0.3 miles downstream of Eddie Howard Road.	Rdu Wake County
Basin 23, Stream 5	At the confluence with Black Creek (Basin 23, Stream 1)	Approximately 0.9 mile upstream of the confluence with Black Creek (Basin 23, Stream 1)	Rdu Town Of Fuquay-Varina Wake County
Black Creek	At the Wake/Johnston County boundary	Approximately 1.0 mile upstream of dam along Black Creek (Basin 23, Stream 1)	Rdu Town Of Fuquay-Varina Wake County
Coles Branch (Basin 18, Stream 24)	Approximately 800 feet upstream of NW Maynard Road	Approximately 0.3 mile upstream of NW Maynard Road	Town Of Cary
Dutchmans Branch (Basin 20, Stream 17)	Approximately 0.7 mile upstream of Dutchman Drive	Approxiamtely 0.8 mile upstream of Dutchman Drive	Rdu Town Of Cary Wake County
Hatchet Grove Tributary (Basin 18, Stream 25)	Approximately 0.4 mile upstream of Davis Drive	Approximately 0.7 mile upstream of Hatchet Grove Tributary Dam	Town Of Cary
Lens Branch (Basin 20, Stream 22)	At Seabrook Avenue	Approximately 0.3 mile upstream of Seabrook Avenue	Town Of Cary
Little Beaverdam Creek (Basin 2, Stream 2)	Approxiamtely 1000 feet upstream of Old Weaver Trail	Approxiamtely 0.9 miles upstream of Old Weaver Trail	Rdu Wake County
Little Brier Creek (Basin 18, Stream 15)	The Wake/Durham County boundary	Approximately 0.8 mile upstream of the Wake/Durham County boundary	City Of Durham City Of Raleigh
Little Brier Creek East (Basin 18, Stream 16)	Glenwood Avenue	Approximately 0.2 mile upstream of Leesville Road	City Of Raleigh
Nancy Branch	Approximately 0.4 mile upstream of confluence with Panther Creek	Approximately 0.1 miles upstream of Del Webb Avenue	Town Of Cary
Nancy Branch	At the Durham/Wake County boundary	Approximately 0.3 mile upstream of Green Level to Durham Road	Town Of Cary
Neil Branch (Basin 24, Stream 8)	At East Spring Avenue	Approximately 0.2 mile upstream of East Spring Avenue	Town Of Fuquay-Varina
Neil Creek (Basin 24, Stream 7)	At Holland Road	Approximately 0.2 mile upstream of Holland Road	Town Of Fuquay-Varina
Reedy Creek (Basin 20, Stream 11)	Approximately 160 feet downstream of Aversboro Road	Approximately 690 feet upstream of Aversboro Road	Town Of Garner
Stirrup Iron Creek	The Wake/Durham County boundary	Approximately 150 feet downstream of Chin Page Road	City Of Durham
Straight Branch (Basin 20, Stream 23)	Approximately 1,000 feet upstream of U.S. Highway 164	Approximately 1,870 feet upstream of U.S. Highway 164	Town Of Cary
Turkey Creek Tributary	Approximately 160 feet upstream of confluence with Turkey Creek (Basin 18, Stream 23)	Approximately 290 feet upstream of confluence with Turkey Creek (Basin 18, Stream 23)	Town Of Cary
Wheelers Creek (Basin 10, Stream 25)	At the confluence with Little River (Basin 10, Stream 1)	At Worth Hinton Road	Town Of Zebulon

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	
Adams Branch (Basin 30, Stream 9)	At the confluence of Big Branch Tributary No. 1(Basin 30, Stream 6)	At Corwin Road	Town Of Garner
Angier Creek (Basin 24, Stream 4)	At Railroad	Approximately 0.4 mile upstream of Railroad	Town Of Fuquay-Varina
Armory Tributary (Basin 18, Stream 38)	At the confluence with Richland Creek (Basin 18, Stream 3)	Approximately 0.5 mile upstream of the confluence with Richland Creek (Basin 18, Stream 3)	City Of Raleigh
Austin Creek (Basin 6, Stream 10)	At the confluence with Smith Creek (Basin 6, Stream 1)	Approximately 1,275 feet upstream of Mill Dam Road	Rdu Town Of Wake Forest Wake County
Bachelor Branch (Basin 28, Stream 6)	At the confluence with White Oak Creek	Approximately 530 feet upstream of NC Highway 55	Rdu Town Of Cary Wake County
Bagwell Branch (Basin 20, Stream 10)	At the confluence with Swift Creek(Basin 20, Stream 1)	At NC Route 50	Rdu Town Of Garner Wake County
Basal Creek	The confluence with Richland Creek (Basin 5, Stream 1)	Approximately 215 feet upstream of St. Catherines Drive	Town Of Wake Forest
Basal Creek (Basin 22, Stream 16)	At the confluence with Middle Creek (Basin 22, Stream 1)	Approximately 0.8 mile upstream of NC-55	Rdu Town Of Fuquay-Varina Town Of Holly Springs Wake County
Basin 10, Stream 10	At Zebulon Road/NC Highway 96	Approximately 0.1 mile upstream of Zebulon Road/NC Highway 96	Rdu Wake County
Basin 10, Stream 2	At the confluence with Little River (Basin 10, Stream 1)	Approximately 1.1 miles upstream of the confluence with Little River (Basin 10, Stream 1)	Rdu Wake County
Basin 10, Stream 3	At the confluence with Little River (Basin 10, Stream 1)	At Moss Road	Rdu Wake County
Basin 10, Stream 5	At the confluence with Little River (Basin 10, Stream 1)	At Lizard Lick Road	Rdu Wake County
Basin 10, Stream 6	At the confluence with Little River (Basin 10, Stream 1)	At Lizard Lick Road	Rdu Wake County
Basin 10, Stream 9	At the confluence with Little River (Basin 10, Stream 1)	At Zebulon Road	Rdu Wake County
Basin 12, Stream 3	At the confluence with Beaverdam Creek (Basin 12, Stream 1)	At Old Crews Road	Rdu Town Of Knightdale Wake County
Basin 15, Stream 22	At the confluence with Neuse River (Basin 15, Stream 1)	Approximately 0.2 mile upstream of Forestville Road	City Of Raleigh
Basin 15, Stream 25	At the confluence with Neuse River (Basin 15, Stream 1)	Approximately 730 feet upstream of Mitchell Mill Road	City Of Raleigh
Basin 15, Stream 28	At the confluence with Perry Creek (Basin 15, Stream 26)	Approximately 1 mile upstream of the confluence with Perry Creek (Basin 15, Stream 26)	City Of Raleigh
Basin 15, Stream 32	Just upstream of Raven Ridge Road	Approximately 0.2 mile upstream of Raven Ridge Road	Rdu Wake County
Basin 15, Stream 33	At the confluence with Honeycutt Creek (Basin 15, Stream 31)	Approximately 0.3 mile upstream of Honeycutt Road	Rdu Wake County
Basin 15, Stream 7	At the confluence with Neuse River (Basin 15, Stream 7)	At Clifton Road	Rdu Wake County
Basin 15, Stream 8	At Grasshopper Road	Approximately 0.2 mile upstream of Grasshopper Road	Rdu Wake County
Basin 15, Stream 9	At the confluence with Neuse River (Basin 15, Stream 1)	At Battle Bridge Road	Rdu Wake County
Basin 16, Stream 2	At the confluence with Falls Lake	At State Route 50	Rdu Wake County
Basin 16, Stream 5	Approximately 0.2 mile upstream of NC-50	Approximately 0.4 mile upstream of NC-50	Rdu Wake County
Basin 17, Stream 4	At the confluence with Lower Barton Creek (Basin 17, Stream 1)	Approximately 900 feet upstream of NC-50	Rdu Wake County
Basin 18, Stream 13	At the confluence with Stirrup Iron Creek (Basin 18, Stream 12)	The Wake/Durham County boundary	Rdu Town Of Morrisville Wake County
Basin 18, Stream 13 Tributary	At the confluence with Basin 18, Stream 13	Approximately 500 feet downstream of Paramount Parkway	Town Of Morrisville
Basin 18, Stream 4	At the confluence with Turkey Creek (Basin 18, Stream 5)	Appoximately 1,367 feet upstream of Country Trail	City Of Raleigh
Basin 18, Stream 7	At the confluence with Sycamore Creek (Basin 18, Stream 6)	Approximately 0.6 mile upstream of the confluence with Sycamore Creek (Basin 18, Stream 6)	City Of Raleigh
Basin 18, Stream 8	At the confluence with Sycamore Creek (Basin 18, Stream 6)	Approximately 0.6 mile upstream of West Gate Road	City Of Raleigh
Basin 19, Stream 3	At the confluence with Whiteoak Creek (Basin 19, Stream 1)	At Railroad	Rdu Town Of Garner Wake County

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

Source	Riverine Sources		Affected Communties
	From	To	
Basin 19, Stream 4	At Railroad	Approximately 0.3 mile upstream of Railroad	Rdu Town Of Garner Wake County
Basin 20, Stream 20	Approximately 0.8 mile upstream of the confluence with Swift Creek (Basin 20, Stream 1)	Approximately 0.9 mile upstream of the confluence with Swift Creek (Basin 20, Stream 1)	Rdu Wake County
Basin 20, Stream 7	At Bryan Road	Approximately 0.3 mile upstream of Bryan Road	Town Of Garner
Basin 20, Stream 8	At Bryan Road	Approximately 0.2 mile upstream of Bryan Road	Town Of Garner
Basin 22, Stream 20	At the confluence with Terrible Creek (Basin 22, Stream 9)	Approximately 1.1 miles upstream of the confluence with Terrible Creek (Basin 22, Stream 9)	Town Of Fuquay-Varina
Basin 22, Stream 6	At the confluence with Middle Creek (Basin 22, Stream 1)	Approximately 0.5 mile upstream of Optimist Farm Road	Rdu Wake County
Basin 22, Stream 9	At the confluence with Middle Creek (Basin 22, Stream 1)	At Holly Springs Road	Rdu Town Of Holly Springs Wake County
Basin 27, Stream 4	At the confluence with Beaver Creek (Basin 27, Stream 2)	Approximately 0.4 mile upstream of the confluence with Beaver Creek (Basin 27, Stream 2)	Town Of Apex
Basin 28, Stream 8	The confluence with White Oak Creek (Basin 28, Stream 1)	Approximately 1,800 feet upstream of Hendricks Road	Town Of Apex Town Of Cary
Basin 3, Stream 6	At the confluence with Newlight Creek (Basin 3, Stream 1)	Approximately 1.3 miles upstream of the confluence with Newlight Creek (Basin 3, Stream 1)	Rdu Wake County
Basin 3, Stream 8	At the confluence with Newlight Creek (Basin 3, Stream 1)	Approximately 1.2 miles upstream of Bold Run Hill Road	Rdu Wake County
Basin 30, Stream 3	At the confluence with Big Branch (Basin 30, Stream 2)	Approxiamtely 1.1 miles upstream of Auburn Church Road	City Of Raleigh Town Of Garner
Basin 4, Stream 13	At the confluence with Lowery Creek (Basin 4, Stream 10)	Approximately 1.1 miles upstream of the confluence with Lowery Creek (Basin 4, Stream 10)	Rdu Wake County
Basin 4, Stream 3	At the confluence with Horse Creek (Basin 4, Stream 1)	At Purnell Road	Rdu Town Of Wake Forest Wake County
Basin 6, Stream 9	At the confluence with Sanford Creek (Basin 6, Stream 7)	At Rodgers Road	Rdu Town Of Rolesville Town Of Wake Forest Wake County
Beaver Creek Tributary (Basin 27, Stream 3)	At the confluence with Beaver Creek (Basin 27, Stream 2)	Approximately 0.3 mile downstream of Holland Road	Rdu Town Of Apex Wake County
Beaverdam Creek	At the confluence with Moccasin Creek (Basin 11, Stream 1)	Approximately 0.7 mile upstream of Pearces Road	Rdu Town Of Zebulon Wake County
Beaverdam Creek (Basin 12, Stream 1)	At the confluence with Neuse River (Basin 15, Stream 1)	Approximately 1200 feet upstream of Lucas Road	City Of Raleigh Rdu Town Of Knightdale Wake County
Beaverdam Creek (Basin 15, Stream 21)	At the confluence with Neuse River (Basin 15, Stream 1)	At Kyle Drive	City Of Raleigh
Beaverdam Creek (Basin 18, Stream 28)	At the confluence with Crabtree Creek (Basin 18, Stream 9)	Approximately 150 feet upstream of Glenwood Avenue	City Of Raleigh
Big Branch (Basin 10, Stream 8)	At the confluence with Little River (Basin 10, Stream 1)	At Highway 96/Zebulon Road	Rdu Wake County
Big Branch (Basin 18, Stream 21)	At the confluence with Crabtree Creek (Basin 18, Stream 9)	Approximately 1,911 feet upstream of East Millbrook Road	City Of Raleigh
Big Branch (Basin 26, Stream 5)	At the confluence with White Oak Creek (Basin 26, Stream 1)	Approximately 0.7 mile upstream of U.S. Highway 1	Rdu Town Of Holly Springs Wake County
Big Branch (Basin 30, Stream 2)	At the confluence with Walnut Creek (Basin 30, Stream 1)	At Auburn Church Road	City Of Raleigh Town Of Garner
Big Branch Tributary No. 3	At the confluence with Big Branch Tributary No. 1 (Basin 30, Stream 6)	Approximately 1.0 mile upstream of Interstate 40	City Of Raleigh Town Of Garner
Big Branch Tributary No.1 (Basin 30, Stream 6)	At the confluence of Adams Branch (Basin 30, Stream 9)	Approximately 0.5 mile upstream of Interstate 40	Town Of Garner
Big Branch Tributary No.1 (Basin 30, Stream 6)	At the confluence with Big Branch (Basin 30, Stream 2)	Approximately 0.5 mile upstream of Interstate 40	City Of Raleigh Town Of Garner
Black Creek Tributary A (Basin 18, Stream 11)	At the confluece with Crabtree Creek (Basin 18, Stream 9)	At North Harrison Avenue	Town Of Cary
Bradley Creek (Basin 24, Stream 3)	At the confluence with Kenneth Creek (Basin 24, Stream 2)	At South Main Street (U.S. Route 401)	Town Of Fuquay-Varina
Bridges Branch	At the confluence with Crabtree Creek (Basin 18, Stream9)	Approximately 1,740 feet upstream of Barksdale Drive	City Of Raleigh

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

Source	Riverine Sources		Affected Communties
	From	To	
Brier Creek (Basin 18, Stream 14)	The confluence with Stirrup Iron Creek (Basin 18, Stream 12)	Approximately 0.7 mile upstream of Nelson Road	Rdu Town Of Cary Wake County
Brier Creek (Basin 18, Stream 14)	The confluence with Stirrup Iron Creek (Basin 18, Stream 12)	Approximately 0.7 mile upstream of Nelson Road	Rdu Town Of Cary Wake County
Buck Branch (Basin 20, Stream 12)	At the confluence with Reedy Branch (Basin 20, Stream 11)	Approximately 0.7 mile upstream of Vandora Springs Road	Rdu Town Of Garner Wake County
Buckhorn Branch (Basin 3, Stream 9)	At the confluence with Newlight Creek (Basin 3, Stream 1)	Approximately 1.4 miles upstream of the confluence with Newlight Creek (Basin 3, Stream 1)	Rdu Wake County
Buckhorn Creek	Approximately 430 feet downstream of Cass Holt Road	Approximately 0.5 mile upstream of Honeycutt Road	Rdu Wake County
Buffalo Branch (Basin 10, Stream 22)	At the confluence with Little River (Basin 10, Stream 1)	At Morphus Bridge Road	Rdu Town Of Wendell Wake County
Buffalo Creek (Basin 9, Stream 1)	At Robertsons Pond Dam	Approximately 0.8 mile upstream of Fowler Road	Rdu Town Of Rolesville Wake County
Buffalo Creek (Basin 9, Stream 1)	At the Wake/Johnston County boundary	At Robertsons Pond Dam	Rdu Town Of Wendell Wake County
Buffalo Creek West	The confluence with Middle Creek	The Johnston/Wake County boundary	Rdu Wake County
Burdens Creek	The confluence with Northeast Creek	Approximately 640 feet upstream of East Cornwallis Road	City Of Durham Rdu Wake County
Camp Branch (Basin 22, Stream 7)	At the confluence with Middle Creek (Basin 22, Stream 1)	Approximately 2.0 miles upstream of Optimist Farm Road	Rdu Town Of Holly Springs Wake County
Cary Branch	Approximately 1.0 mile downstream of Rex Road	Approximately 3.2 miles upstream of Rex Road	Rdu Town Of Holly Springs Wake County
Cedar Creek (Basin 15, Stream 34)	At the confluence with Falls Lake	Approximately 0.4 mile upstream of Coachmans Way	Rdu Wake County
Coles Branch (Basin 18, Stream 24)	Approximately 0.5 mile downstream of Maynard Road	Approximately 1,800 feet upstream of Maynard Road	Town Of Cary
Coles Branch (Basin 18, Stream 24)	At the confluence with Crabtree Creek (Basin 18, Stream 9)	Approximately 0.8 mile downstream of NW Maynard Road	Town Of Cary Town Of Morrisville
Crabtree Creek (Basin 18, Stream 9)	At Bond Lake	Approximately 1.1 miles downstream of I-40	Rdu Town Of Cary Town Of Morrisville Wake County
Crabtree Creek (Basin 18, Stream 9)	At the confluence with Neuse River (Basin 15, Stream 1)	Approximately 1.0 mile upstream of Southwest Cary Parkway	City Of Raleigh Rdu Wake County
Crabtree Creek Tributary No. 6 (Basin 18, Stream 20)	Approximately 1,300 feet upstream of Weston Parkway	Approximately 1.9 miles upstream of confluence with Crabtree Creek (Basin 18, Stream 9)	Town Of Cary
Dunn Creek (Basin 6, Stream 5)	At the confluence with Smith Creek (Basin 6, Stream 1)	Approximately 1.0 mile upstream of Oak Grove Church Road	Rdu Town Of Wake Forest Wake County
Dutchmans Branch (Basin 20, Stream 17)	Approximately 200 feet upstream of Blaney Forks Road	Approxiamtely 0.7 mile upstream of Dutchman Drive	Rdu Town Of Cary Wake County
East Fork Mine Creek (Basin 18, Stream 34)	At the confluence with Mine Creek (Basin 18, Stream 34)	Approximately 0.7 mile upstream of Newton Road	City Of Raleigh
East Fork Mine Creek Tributary (Basin 18, Stream 35)	At the confluence with East Fork Mine Creek (Basin 18, Stream 34)	Approximately 0.5 mile upstream of Woodbend Drive	City Of Raleigh
Echo Creek (Basin 20, Stream 14)	At the confluence with Yates Branch (Basin 20, Stream 13)	At Vesta Drive	Rdu Town Of Garner Wake County
Falls Lake	The entire shoreline	The entire shoreline	Rdu Wake County
Gill Creek (Basin 10, Stream 24)	At the confluence with Little River (Basin 10, Stream 1)	At Mack Todd Road	Town Of Zebulon
Haleys Branch (Basin 18, Stream 10)	At the confluence with Crabtree Creek (Basin 18, Stream 9)	Approximately 0.7 mile upstream of Interstate 40	Rdu Town Of Cary Wake County
Hare Snipe Creek (Basin 18, Stream 1)	At the confluence with Crabtree Creek (Basin 18, Stream 9)	Approximately 100 upstream of Lynn Road	City Of Raleigh
Hatchet Grove Tributary (Basin 18, Stream 25)	At the confluence with Crabtree Creek (Basin 18, Stream 9)	Approximately 0.4 mile upstream of Davis Drive	Town Of Cary Town Of Morrisville
Hillard Creek (Basin 30, Stream 7)	At the confluence with Big Branch Tributary No. 1 (Basin 30, Stream 6)	Approximately 0.8 mile upstream of the confluence with Big Branch Tributary No. 1 (Basin 30, Stream 6)	Town Of Garner

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

Source	Riverine Sources		Affected Communties
	From	To	
Hodges Creek (Basin 8, Stream 1)	Approximately 1,700 feet upstream of Forestville Road	Approximately 0.8 mile downstream of Old Crews Road	City Of Raleigh Rdu Wake County
Hodges Creek (Basin 8, Stream 1)	At the confluence with Neuse River (Basin 15, Stream 1)	Approximately 1,700 feet upstream of Forestville Road	City Of Raleigh Rdu Wake County
Hominy Branch (Basin 10, Stream 4)	At the confluence with Little River (Basin 10, Stream 1)	At Marshburn Road	Rdu Town Of Wendell Wake County
Hominy Creek (Basin 10, Stream 7)	At the confluence with Little River (Basin 10, Stream 1)	At Lizard Lick Road	Rdu Wake County
Honeycutt Creek (Basin 15, Stream 31)	At the confluence with Falls Lake	At Honeycutt Road	Rdu Wake County
Horse Creek	At the confluence with Falls Lake	Approximately 0.5 mile upstream of Purnell Road	Rdu Town Of Wake Forest Wake County
House Creek (Basin 18, Stream 36)	At the confluence with Crabtree Creek (Basin 18, Stream 9)	Approximately 575 feet upstream of Interstate 440	City Of Raleigh
Kenneth Branch (Basin 24, Stream 6)	At the confluence with Kenneth Creek (Basin 24, Stream 2)	Approximately 390 feet upstream of Phelps West Road	Town Of Fuquay-Varina
Kenneth Creek	Approximately 0.5 mile upstream of the Wake/Harnett County boundary	At West Academy Street	Town Of Fuquay-Varina
Kit Creek	At the Wake/Chatham County boundary	Approximately 475 feet upstream of Railroad	Rdu Town Of Cary Town Of Morrisville Wake County
Kit Creek Tributary 1 (Basin 29, Stream 11)	At the confluence with Kit Creek (Basin 29, Stream 7)	Approx. 1,825 feet upstream of Davis Drive	Rdu Wake County
Kit Creek Tributary 1 (Basin 29, Stream 11)	The confluence with Kit Creek (Basin 29, Stream 7)	Approximately 1,825 feet upstream of Davis Drive	City Of Durham Rdu Wake County
Kit Creek Tributary 2 (Basin 29, Stream 8)	At the confluence with Kit Creek (Basin 29, Stream 7)	Approximately 1.0 mile upstream of the confluence with Kit Creek (Basin 29, Stream 7)	Rdu Town Of Cary Wake County
Lake Johnson	At the confluence with Little River (Basin 10, Stream 1)	At Morphus Bridge Road	Town Of Wendell
Lake Johnson Bypass	At the confluence with Buffalo Branch (Basin 10, Stream 22)	Approximately 350 feet upstream of the confluence with Buffalo Branch (Basin 10, Stream 22)	Town Of Wendell
Lakemont Tributary (Basin 18, Stream 22)	At the confluence with Big Branch (Basin 18, Stream 21)	Approx. 200 feet downstream of Pinecroft Drive	City Of Raleigh
Lens Branch (Basin 20, Stream 22)	At the confluence with Swift Creek (Basin 20, Stream 1)	At Seabrook Avenue	Town Of Cary
Little Beaver Creek	At the Wake/Chatham County boundary	Approx. 1.2 miles upstream of New Hill Olive Chapel Road	Rdu Wake County
Little Beaver Creek	The Chatham/Wake County boundary	Approximately 1.2 mile upstream of New Hill Olive Chapel Road	Rdu Wake County
Little Beaverdam Creek (Basin 2, Stream 2)	The Wake/Granville County boundary	Approximately 2.2 miles upstream of the confluence with Beaverdam Lake	Rdu Wake County
Little Branch (Basin 26, Stream 3)	At the confluence with Big Branch (Basin 26, Stream 5)	Approximately 2.0 miles upstream of New Hill Road	Rdu Town Of Holly Springs Wake County
Little Brier Creek (Basin 18, Stream 15)	At the Wake/Durham County boundary	At Lumley Road	City Of Raleigh Rdu Town Of Cary Wake County
Little Brier Creek East (Basin 18, Stream 16)	At Glenwood Avenue	Approximately 1,300 feet upstream of the confluence with Little Brier Creek (Basin 18, Stream 15)	City Of Raleigh Rdu Wake County
Little Creek (Basin 11, Stream 2)	At the Wake/Johnston County boundary	At Cemetery Road	Rdu Town Of Zebulon Wake County
Little River	The Wake/Johnston County Boundary	Approximately 300 feet upstream of confluence of Perry Creek (Basin 10, Stream 19)	Rdu Town Of Wendell Town Of Zebulon Wake County
Lizard Lick Creek (Basin 10, Stream 23)	At the confluence with Little River (Basin 10, Stream 1)	Approximately 0.3 mile upstream of Old Zebulon Road	Town Of Wendell
Lower Barton Creek (Basin 17, Stream 1)	At the confluence with Falls Lake	At Ray Road	City Of Raleigh Rdu Wake County
Lowery Creek (Basin 4, Stream 10)	At the confluence with Falls Lake	At Purrell Road	Rdu Wake County
Lynn Road Tributary (Basin 18, Stream 32)	At the confluence with Mine Creek (Basin 18, Stream 31)	Approximately 0.3 mile upstream of Lead Mine Road	City Of Raleigh
Mahlers Creek (Basin 20, Stream 6)	At the confluence with Swift Creek (Basin 20, Stream 1)	Approximately 2.2 miles upstream of the confluence of Basin 20, Stream 7	Town Of Garner

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

Source	Riverine Sources		Affected Communties
	From	To	
Mango Creek (Basin 15, Stream 11)	At the confluence with Neuse River (Basin 15, Stream 1)	Approximately 2.4 miles upstream of Hodge Road	Town Of Knightdale
Marks Creek	At the Wake/Johnston County boundary	At Marks Creek Road	Rdu Town Of Knightdale Wake County
Marsh Creek (Basin 18, Stream 17)	At the confluence with Crabtree Creek (Basin 18, Stream 9)	Approximately 0.5 mile upstream of Quail Ridge Road	City Of Raleigh
Medfield Tributary (Basin 18, Stream 39)	At the confluence with Richland Creek (Basin 18, Stream 3)	Approximately 0.5 mile upstream of Old Trinity Road	City Of Raleigh
Middle Creek	At the Wake/Johnston County boundary	Appoximately 0.7 mile upstream of the confluence of Middle Creek Tributary	Rdu Town Of Apex Town Of Cary Town Of Fuquay-Varina Town Of Holly Springs Wake County
Millbrook Tributary to Marsh Creek (Basin 18, Stream 19)	At the confluence with Marsh Creek (Basin 18, Stream 17)	Approximately 0.5 mile upstream of East Millbrook Road	City Of Raleigh
Mills Branch (Basin 22, Stream 5)	At the confluence with Middle Creek (Basin 22, Stream 1)	Approximately 0.4 mile upstream of U.S. Route 401	Rdu Town Of Fuquay-Varina Wake County
Mine Creek (Basin 18, Stream 31)	At the confluence with Crabtree Creek (Basin 18, Stream 9)	At the confluence of East Fork Mine Creek and West Fork Mine Creek	City Of Raleigh
Mingo Creek (Basin 12, Stream 2)	The confluence with Beaverdam Creek (Basin 12, Stream 1)	The downstream side of North Smithfield Road	Rdu Town Of Knightdale Wake County
Moccasin Creek	Approximately 400 feet downstream of U.S. Highway 264A	Approximately 0.7 mile upstream of Henry Baker Road	Rdu Town Of Zebulon Wake County
Morris Branch	Approximately 400 feet downstream of the Chatham/Wake County boundary	Approximately 500 feet downstream of Highway 55	Town Of Cary
Morrisville Tributary (Basin 18, Stream 26)	At the confluence with Crabtree Creek (Basin 18, Stream 9)	Approximately 0.3 mile upstream of Railroad	Town Of Cary Town Of Morrisville
Mud Branch (Basin 4, Stream 15)	At the confluence with Horse Creek (Basin 4, Stream 1)	Approximately 3.0 miles upstream of the confluence with Horse Creek (Basin 4,Stream 1)	Rdu Wake County
Neil Branch (Basin 24, Stream 8)	At the confluence with Neil Creek (Basin 24, Stream 7)	At East Spring Avenue	Town Of Fuquay-Varina
Neil Creek (Basin 24, Stream 7)	At the confluence with Angier Creek (Basin 24, Stream 4)	At Holland Road	Town Of Fuquay-Varina
Neuse River	At the Wake/Johnston County boundary	At Falls of the Neuse Road	City Of Raleigh Rdu Town Of Knightdale Town Of Wake Forest Wake County
Neuse River	The Johnston/Wayne County boundary	Just downstream of Mial Plantation Road	Rdu Town Of Clayton Wake County
New Hope Tributary to Marsh Creek (Basin 18, Stream 18)	At the confluence with Marsh Creek (Basin 18, Stream 17)	Approximately 236 feet upstream of Calvary Drive	City Of Raleigh
New Light Creek	At the confluence of Basin 3, Stream 8	At the confluence with Neuse River (Basin 15, Stream 1)	Rdu Wake County
Norris Branch	At the confluence with Cary Branch	Approximately 1.2 miles upstream of Avent Ferry Road	Rdu Town Of Holly Springs Wake County
Panther Branch (Basin 22, Stream 2)	At the confluence with Middle Creek (Basin 22, Stream 1)	Approximately 0.5 mile upstream of Banks Road	Rdu Wake County
Panther Creek	At the Wake/Chatham County boundary	Approximately 1.0 mile upstream of Green Level to Durham Road	Town Of Cary
Perry Creek (Basin 15, Stream 26)	At the confluence with the Neuse River (Basin 15, Stream 1)	Approximately 0.9 mile upstream of Rainwater Drive	City Of Raleigh
Perry Creek East Branch (Basin 15, Stream 27)	At the confluence with Perry Creek (Basin 15, Stream 26)	Approximately 0.4 mile upstream of Bivens Drive	City Of Raleigh
Pigeon House Branch (Basin 18, Stream 27)	At the confluence with Crabtree Creek (Basin 18, Stream 9)	At West Peace Street	City Of Raleigh
Poplar Branch (Basin 13, Stream 2)	At the confluence with Poplar Creek (Basin 13, Stream 1)	At Farm Road	Rdu Town Of Knightdale Wake County
Poplar Creek (Basin 13, Stream 1)	At the confluence with Neuse River (Basin 15, Stream 1)	Approximately 600 feet upstream of Fayetteville Street	Rdu Town Of Knightdale Wake County
Powell Creek (Basin 8, Stream 7)	Approximately 1,500 feet upstream of Mitchell Mill Road	Approximately 1.3 miles upstream of Peebles Road	City Of Raleigh Rdu Town Of Rolesville Wake County
Powell Creek (Basin 8, Stream 7)	At the confluence with Hodges Creek (Basin 8, Stream 1)	Approximately 1,500 feet upstream of Mitchell Mill Road	City Of Raleigh Rdu Wake County

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

Source	Riverine Sources		Affected Communties
	From	To	
Reedy Branch (Basin 27, Stream 5)	The confluence with Beaver Creek (Basin 27, Stream 2)	Approximately 0.4 mile upstream of confluence with Reedy Branch Tributary (Basin 27, Stream 6)	Rdu Town Of Apex Wake County
Reedy Branch Tributary (Basin 27, Stream 6)	The confluence with Reedy Branch (Basin 27, Stream 5)	Approximately 840 feet upstream of Kelly Road	Town Of Apex
Reedy Creek (Basin 20, Stream 11)	At the confluence with Swift Creek (Basin 20, Stream 1)	Approximately 160 feet downstream of Aversboro Road	Rdu Town Of Garner Wake County
Reedy Creek (Basin 6, Stream 8)	At Rodgers Road	Approximately 475 feet upstream of Rodgers Road	Rdu Town Of Wake Forest Wake County
Reedy Creek Tributary (Basin 20, Stream 9)	At Claymore Drive	Approximately 0.2 mile upstream of Claymore Drive	Town Of Garner
Richland Creek	At the confluence with Neuse River (Basin 15, Stream 1)	At the Wake/Franklin County boundary	City Of Raleigh Rdu Town Of Wake Forest Wake County
Richland Creek	The confluence with Neuse River (Basin 15, Stream 1)	The Wake/Franklin County boundary	City Of Raleigh Rdu Town Of Wake Forest Wake County
Richland Creek (Basin 18, Stream 3)	At the confluence with Crabtree Creek (Basin 18, Stream 9)	At the confluence of Medfield Tributary	City Of Raleigh
Richland Creek Tributary	At the confluence with Richland Creek (Basin 5, Stream 1)	Approximately 2007 feet upstream of confluence with Richland Creek	City Of Raleigh Town Of Wake Forest
Richland Creek Tributary	The confluence with Richland Creek (Basin 5, Stream 1)	Approximately 200 feet upstream of Retail Drive	City Of Raleigh Town Of Wake Forest
Rocky Branch (Basin 22, Stream 8)	At the confluence with Middle Creek (Basin 22, Stream 1)	At Holly Springs Road	Rdu Town Of Holly Springs Wake County
Rocky Branch (Basin 30, Stream 5)	At the confluence with Walnut Creek (Basin 30, Stream 1)	Approximately 200 feet upstream of Hillsborough Street	City Of Raleigh
Rocky Ford Branch (Basin 24, Stream 5)	At the confluence with Kenneth Creek (Basin 24, Stream 2)	Approximately 1.0 mile upstream of the confluence with Kenneth Creek (Basin 24, Stream 2)	Rdu Town Of Fuquay-Varina Wake County
Sanford Creek (Basin 6, Stream 7)	At the confluence with Smith Creek (Basin 6, Stream 1)	Approximately 300 feet upstream of the confluence of Basin 6, Stream 9	Rdu Town Of Wake Forest Wake County
Smith Creek	At the Wake/Franklin County boundary	At the confluence with Neuse River (Basin 15, Stream 1)	Rdu Town Of Wake Forest Wake County
Southeast Prong Beaverdam Creek (Basin 18, Stream 30)	At the confluences of Southwest Prong Beaverdam Creek (Basin 18, Stream 28) and Beaverdam Creek (Basin 18, Stream 28)	Approximately 215 feet upstream of Wade Avenue	City Of Raleigh
Southwest Prong Beaverdam Creek (Basin 18, Stream 29)	At the confluences of Southeast Prong Beaverdam Creek (Basin 18, Stream 30) and Beaverdam Creek (Basin 18, Stream 28)	Approximately 375 feet upstream of Wade Avenue	City Of Raleigh
Spring Branch (Basin 6, Stream 6)	At the confluence with Dunn Creek (Basin 6, Stream 6)	Approximately 875 feet upstream of Franklin Street	Town Of Wake Forest
Stirrup Iron Creek	At the confluence with Brier Creek (Basin 18, Stream 14)	At the Wake/Durham County boundary	Town Of Cary Town Of Morrisville
Stirrup Iron Creek	Just upstream of Highway I-40	The Wake/Durham County boundary	City Of Durham Rdu Town Of Cary Town Of Morrisville Wake County
Straight Branch (Basin 20, Stream 23)	At the confluence with Lens Branch (Basin 20, Stream 22)	Approximately 1,000 feet upstream of U.S. Highway 164	Town Of Cary
Swift Creek	Approximately 0.3 mile upstream of Holly Springs Road	Approximately 700 feet upstream of US 64	Rdu Town Of Cary Wake County
Swift Creek	At Lake Benson Dam	Approximately 1.5 miles upstream of NC-50 (Benson Road)	Rdu Town Of Cary Town Of Garner Wake County
Swift Creek	The confluence with Neuse River	The Johnston/Wake County boundary	Rdu Town Of Garner Wake County
Swift Creek Tributary No. 7 (Basin 20, Stream 24)	At the confluence with Swift Creek (Basin 20, Stream 1)	At SW Maynard Road	Town Of Cary
Swift Creek Tributary No. 7A (Basin 20, Stream 25)	At the confluence with Swift Creek Tributary No. 7 (Basin 20, Stream 24)	Approx. 0.5 mile upstream of the confluence with Swift Creek Tributary No. 7 (Basin 20, Stream 24)	Town Of Cary
Sycamore Creek (Basin 18, Stream 6)	At the confluence with Crabtree Creek (Basin 18, Stream 9)	Approximately 1.0 mile upstream of Leesville Road	City Of Raleigh Rdu Wake County

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

Source	Riverine Sources		Affected Communties
	From	To	
Terrible Creek (Basin 22, Stream 19)	At the confluence with Middle Creek (Basin 22, Stream 1)	Approximately 1.0 mile upstream of Sunset Lake Road	Rdu Town Of Fuquay-Varina Wake County
Toms Creek (Basin 7, Stream 1)	At the confluence with Neuse River (Basin 15, Stream 1)	Approximately 0.9 mile upstream of Forestville Road	Rdu Town Of Rolesville Town Of Wake Forest Wake County
Tributary to Big Branch Tributary No. 1 (Basin 30, Stream 8)	At the confluence with Big Branch Tributary No. 1 (Basin 30, Stream 6)	Approximately 0.6 mile upstream of the confluence with Big Branch Tributary No. 1 (Basin 30, Stream 6)	Town Of Garner
Turkey Creek (Basin 18, Stream 23)	At the confluence with Crabtree Creek (Basin 18, Stream 9)	Approximately 1,200 upstream of High House Road	Town Of Cary
Turkey Creek (Basin 18, Stream 5)	Approximately 675 feet upstream of Glenwood Avenue	Approximately 1.3 miles upstream of Ebenezer Church Road	City Of Raleigh
Unnamed Stream	At the confluence with Kit Creek (Basin 29, Stream 7)	Approx. 1,825 feet upstream of Davis Drive	Rdu Wake County
Unnamed Tributary (#1) to Swift Creek	The confluence with Swift Creek	The Johnston/Wake County boundary	Rdu Wake County
Upper Barton Creek (Basin 16, Stream 1)	At the confluence with the Neuse River (Basin 15, Stream 1)	At Victory Church Road	Rdu Wake County
Utley Creek	At the confluence with White Oak Creek	Approximately 3.7 miles upstream of confluence with White Oak Creek (Basin 26, Stream 1)	Rdu Town Of Holly Springs Wake County
Walnut Creek (Basin 30, Stream 1)	At the confluence with Neuse River (Basin 15, Stream 1)	Approximately 1,580 feet upstream of Maynard Road	City Of Raleigh Town Of Cary
West Fork Mine Creek (Basin 18, Stream 33)	At the confluence with Mine Creek (Basin 18, Stream 31)	Approximately 0.6 mile upstream of the confluence with Mine Creek (Basin 18, Stream 31)	City Of Raleigh
Wheelers Creek (Basin 10, Stream 25)	At the confluence with Little River (Basin 10, Stream 1)	At Worth Hinton Road	Town Of Zebulon
White Oak Creek	At the Wake/Johnston County boundary	Approximately 0.4 mile upstream of Pergo Parkway	Rdu Town Of Garner Wake County
White Oak Creek (Basin 26, Stream 1)	At the confluence of Utley Creek	Apprxoimately 1.6 miles downstream of U.S. Route 1	Rdu Town Of Holly Springs Wake County
Wildcat Branch (Basin 30, Stream 4)	At the confluence with Walnut Creek (Basin 30, Stream 1)	Approximately 900 feet upstream of Tryon Road	City Of Raleigh
Yates Branch (Basin 20, Stream 13)	Approximately 3.6 miles upstream of Lake Wheeler Road	Approximately 100 feet downstream of Lake Wheeler Road	City Of Raleigh Rdu Town Of Garner Wake County
Yates Branch (Basin 20, Stream 13)	At the confluence with Swift Creek (Basin 20, Stream 1)	Approximately 100 feet downstream of Lake Wheeler Road	Rdu Town Of Garner Wake County

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	
Brier Lake	The confluence with Brier Creek (Basin 18, Stream 14)	The Wake/Durham County boundary	City Of Raleigh Rdu Town Of Cary Wake County

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

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

Source	Riverine Sources		Affected Communties
	From	To	
Bagwell Branch (Basin 20, Stream 10)	At NC Route 50	Approximately 0.1 mile upstream of NC Route 50	Town Of Garner
Basin 10, Stream 13	The confluence with Basin 10, Stream 14	Approximately 1.7 miles upstream of confluence with Basin 10, Stream 14	Rdu Wake County

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

Source	Riverine Sources		Affected Communties
	From	To	
Basin 10, Stream 14	The confluence with Little River (Basin 10, Stream 1)	Approximately 1.4 miles upstream of the Franklin/Wake county boundary	Rdu Wake County
Basin 10, Stream 5	Lizard Lick Road	Approximately 0.6 mile upstream of Lizard Lick Road	Rdu Wake County
Basin 10, Stream 6	Lizard Lick Rd	Approximately 280 feet upstream of Edgemont Road	Rdu Wake County
Basin 11, Stream 4	The confluence of Moccasin Creek (Basin 11, Stream 1)	Approximately 700 feet upstream of Ferrell Road	Rdu Wake County
Basin 11, Stream 7	The Wake/Johnston County boundary	Approximately 0.4 mile upstream of Wake/Johnston County boundary	Rdu Wake County
Basin 12, Stream 3	Old Crews Road	Approximately 0.4 mile upstream of Horton Road	Town Of Knightdale
Basin 14, Stream 2	The confluence with Marks Creek (Basin 14, Stream 1)	Approximately 0.4 mile upstream of Lake Myra Road	Rdu Wake County
Basin 14, Stream 3	The confluence with Marks Creek (Basin 14, Stream 1) The confluence with Marks Creek (Basin 14, Stream 1)	Approximately 0.7 mile upstream of confluence with Marks Creek (Basin 14, Stream 1)	Rdu Wake County
Basin 18, Stream 13	Sorrell Grove Church Road	Approximately 0.2 mile upstream of Durham/Wake County boundary	City Of Durham Town Of Morrisville
Basin 20, Stream 5	At the confluence with Swift Creek (Basin 20, Stream 1)	Approximately 1.4 miles upstream of the confluence with Swift Creek (Basin 20, Stream 1)	Rdu Wake County
Basin 23, Stream 2	The confluence with Black Creek (Basin 23, Stream 1)	Approximately 1.7 miles upstream of confluence with Black Creek (Basin 23, Stream 1)	Rdu Wake County
Basin 23, Stream 2 Tributary	The confluence with Basin 23, Stream 2	Approximately 200 feet upstream of John Adams Road	Rdu Wake County
Basin 23, Stream 3	At the confluence with Black Creek (Basin 23, Stream 1)	Approximately 0.7 mile upstream of dam along Basin 23, Stream 3	Rdu Town Of Fuquay-Varina Wake County
Basin 23, Stream 4	The confluence with Basin 23, Stream 3	Approximately 1,800 feet upstream of Eddie Howard Road	Rdu Wake County
Basin 23, Stream 5	At the confluence with Black Creek (Basin 23, Stream 1)	Approximately 0.9 mile upstream of the confluence with Black Creek (Basin 23, Stream 1)	Rdu Town Of Fuquay-Varina Wake County
Basin 23, Stream 5	The confluence with Black Creek (Basin 23, Stream 1)	Approximately 1.0 mile upstream of confluence with Black Creek (Basin 23, Stream 1)	Rdu Town Of Fuquay-Varina Wake County
Basin 28, Stream 7	The confluence with Basin 28, Stream 8	Approximately 0.4 mile upstream of confluence with Basin 28, Stream 8	Town Of Cary
Beaver Creek	Entire shoreline within Chatham County (Unincorporated Areas)	Entire shoreline within Chatham County (Unincorporated Areas)	Rdu Wake County
Beaverdam Creek	Approximately 0.7 mile upstream of Pearces Road	Approximately 315 feet upstream of Pippin Road	Town Of Zebulon
Beddingfield Creek	Approximately 0.4 mile upstream of the confluence with Neuse River	Approximately 0.2 mile upstream of Shotwell Road	Rdu Town Of Clayton Wake County
Big Branch	The confluence with Harris Reservoir	Approximately 0.9 mile upstream of Highway 1	Rdu Town Of Apex Wake County
Black Creek	Approximately 260 feet upstream of State HWY 210	Approximately 1.0 mile upstream of dam along Black Creek (Basin 23, Stream 1)	Rdu Town Of Fuquay-Varina Wake County
Black Creek	At the Wake/Johnston County boundary	Approximately 1.0 mile upstream of dam along Black Creek (Basin 23, Stream 1)	Rdu Town Of Fuquay-Varina Wake County
Buffalo Creek (Basin 9, Stream 1)	State Highway 42	The Johnston/Wake County boundary	Rdu Wake County
Cedar Fork (Basin 10, Stream 15)	The confluence with Little River (Basin 10, Stream 1)	Approximately 3.4 miles upstream of confluence with Little River (Basin 10, Stream 1)	Rdu Town Of Rolesville Wake County
Clark Branch (Basin 28, Stream 3)	The confluence with White Oak Creek (Basin 28, Stream 1)	Approximately 0.5 mile upstream of Green Level Church Road	Town Of Apex
Coles Branch (Basin 18, Stream 24)	Approximately 800 feet upstream of NW Maynard Road	Approximately 0.3 mile upstream of NW Maynard Road	Town Of Cary
Dutchmans Branch (Basin 20, Stream 17)	Approxiamtely 0.7 mile upstream of Dutchman Drive	Approxiamtely 0.8 mile upstream of Dutchman Drive	Rdu Town Of Cary Wake County
Fowlers Mill Creek (Basin 10, Stream 12)	The confluence with Little River (Basin 10, Stream 1)	Approximately 1.4 miles upstream of Pulleytown Road	Rdu Wake County
Guffy Branch (Basin 21, Stream 4)	The confluence with Little Creek (Basin 21, Stream 1)	Approximately 4.3 miles upstream of confluence with Little Creek (Basin 21, Stream 1)	Rdu Wake County
Harris Reservoir	Entire shoreline within Chatham County	Entire shoreline within Chatham County	Rdu Wake County

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

Source	Riverine Sources		Affected Communties
	From	To	
Hatchet Grove Tributary (Basin 18, Stream 25)	Approximately 0.4 mile upstream of Davis Drive	Approximately 0.7 mile upstream of Hatchet Grove Tributary Dam	Town Of Cary
Hodges Creek (Basin 8, Stream 1)	Approximately 1,060 feet upstream of Old Crews Road	Approximately 1.4 miles upstream of R.C. Watson Road	City Of Raleigh Rdu Wake County
Hominy Creek (Basin 10, Stream 7)	Lizard Lick Rd	Approximately 1,740 feet upstream of Hodge Road	Rdu Wake County
Horse Creek	Approximately 0.5 mile upstream of Purnell Road	Approximately 225 feet upstream of Nottingham Court	Rdu Wake County
Horse Creek Tributary 1	The confluence with Horse Creek	Approximately 1.0 mile upstream of Holden Road (SR 1147)	Rdu Wake County
Jack Branch (Basin 28, Stream 4)	The confluence with White Oak Creek (Basin 28, Stream 1)	Approximately 1.5 miles upstream of confluence with White Oak Creek (Basin 28, Stream 1)	Rdu Town Of Cary Wake County
Jim Branch	The confluence with Harris Reservoir	Approximately 0.5 mile upstream of confluence with Harris Reservoir	Rdu Wake County
Juniper Branch (Basin 21, Stream 2)	The confluence with Little Creek (Basin 21, Stream 1)	Approximately 0.8 mile upstream of Pagen Road	Rdu Wake County
Kenneth Creek	The confluence with Neills Creek	Approximately 0.4 mile upstream of the Harnett/Wake County Boundary	Rdu Town Of Fuquay-Varina Wake County
Lens Branch (Basin 20, Stream 22)	At Seabrook Avenue	Approximately 0.3 mile upstream of Seabrook Avenue	Town Of Cary
Little Beaver Creek Tributary	Entire shoreline within Chatham County (Unincorporated Areas)	Entire shoreline within Chatham County (Unincorporated Areas)	Rdu Wake County
Little Beaverdam Creek (Basin 2, Stream 2)	The confluence with Beaverdam Lake	Approximately 2.2 miles above confluence with Beaverdam Lake	Rdu Wake County
Little Black Creek	The confluence with Black Creek	Approximately 0.6 mile upstream of Walter Myatt Road	Rdu Wake County
Little Branch Tributary (Basin 26, Stream 4)	The confluence with Little Branch (Basin 26, Stream 3)	Approximately 1.1 miles upstream of New Hill Road	Rdu Wake County
Little Brier Creek (Basin 18, Stream 15)	The Wake/Durham County boundary	Approximately 0.8 mile upstream of the Wake/Durham County boundary	City Of Durham City Of Raleigh
Little Brier Creek East (Basin 18, Stream 16)	Glenwood Avenue	Approximately 0.2 mile upstream of Leesville Road	City Of Raleigh
Little Creek (Basin 11, Stream 2)	Cemetery Road	Approximately 0.3 mile upstream of U.S. Highway 64	Town Of Zebulon
Little Creek (Into Middle Creek)	The confluence with Middle Creek	Approximately 2.3 miles upstream of the confluence of Juniper Branch	Rdu Wake County
Little River	Approximately 300 feet upstream of confluence of Perry Creek (Basin 10, Stream 19)	Approximately 900 feet upstream of Martindale Drive	Rdu Wake County
Little White Oak Creek (Basin 26, Stream 9)	The confluence with Harris Reservoir	Approximately 0.8 mile upstream of Highway 1	Rdu Wake County
Little White Oak Creek Tributary 2	The confluence with Little White Oak Creek (Basin 26, Stream 9)	Approximately 900 feet upstream of confluence with Little White Oak Creek (Basin 26, Stream 9)	Rdu Wake County
Marks Creek	The confluence with the Neuse River	Approximately 0.8 mile downstream of Knightdale Eagle Rock Road	Rdu Town Of Clayton Town Of Wendell Wake County
Nancy Branch	Approximately 0.4 mile upstream of confluence with Panther Creek	Approximately 0.1 miles upstream of Del Webb Avenue	Town Of Cary
Nancy Branch	At the Durham/Wake County boundary	Approximately 0.3 mile upstream of Green Level to Durham Road	Town Of Cary
Neil Branch (Basin 24, Stream 8)	At East Spring Avenue	Approximately 0.2 mile upstream of East Spring Avenue	Town Of Fuquay-Varina
Neil Creek (Basin 24, Stream 7)	At Holland Road	Approximately 0.2 mile upstream of Holland Road	Town Of Fuquay-Varina
Neills Creek	The confluence with Cape Fear River	Harnett/Wake County boundary	Rdu Town Of Angier Town Of Fuquay-Varina Wake County
Perry Creek (Basin 10, Stream 19)	The confluence with Little River (Basin 10, Stream 1)	Approximately 325 feet downstream of Old Pearce Road	Rdu Wake County
Reedy Creek (Basin 20, Stream 11)	Approximately 160 feet downstream of Aversboro Road	Approximately 690 feet upstream of Aversboro Road	Town Of Garner
Richland Creek	The Franklin/Wake County boundary	Approximately 0.3 mile upstream of Holden Road	Town Of Wake Forest
Richland Creek Tributary 2	The confluence with Richland Creek	Approximately 0.4 mile upstream of the confluence with Richland Creek	Town Of Wake Forest
Snipes Creek	The confluence with the Little River	Approximately 0.6 mile upstream of State Highway 96	Rdu Town Of Zebulon Wake County
Stirrup Iron Creek	The Wake/Durham County boundary	Approximately 150 feet downstream of Chin Page Road	City Of Durham

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

Source	Riverine Sources		Affected Communties
	From	To	
Straight Branch (Basin 20, Stream 23)	Approximately 1,000 feet upstream of U.S. Highway 164	Approximately 1,870 feet upstream of U.S. Highway 164	Town Of Cary
Thomas Creek	The confluence with Harris Reservoir	Approximately 100 feet downstream of Highway 1	Rdu Wake County
Turkey Creek Tributary	Confluence with Turkey Creek (Basin 18, Stream 23)	Approximately 250 feet upstream of Davis Drive	Town Of Cary
Wheelers Creek (Basin 10, Stream 25)	At the confluence with Little River (Basin 10, Stream 1)	At Worth Hinton Road	Town Of Zebulon

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

This FIS also incorporates the determinations of letters issued by FEMA resulting in map changes (Letters of Map Revision [LOMRs]), as shown in Table 12, “Letters of Map Revision”.

Table 12 - Letters of Map Revision

Case Number	Date Issued	Flooding Source/Description	Communities
NP	7/31/2012	Terrible Creek (Basin 22, Stream 19) / NP	City Of Raleigh
NP	7/31/2012	Terrible Creek (Basin 22, Stream 19) / NP	Town Of Apex
NP	7/31/2012	Terrible Creek (Basin 22, Stream 19) / NP	Town Of Fuquay-Varina
NP	7/31/2012	Terrible Creek (Basin 22, Stream 19) / NP	Town Of Holly Springs
NP	7/31/2012	Terrible Creek (Basin 22, Stream 19) / NP	Town Of Morrisville
NP	7/31/2012	Terrible Creek (Basin 22, Stream 19) / NP	Town Of Wake Forest
NP	7/31/2012	Terrible Creek (Basin 22, Stream 19) / NP	Town Of Zebulon

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	1% Annual Future Annual Chance	0.2% Annual Chance
Angier Creek (Basin 24, Stream 4)						
At mouth	5.10	530	1600	2300	*	4300
Bachelor Branch (Basin 28, Stream 6)						
At confluence with White Oak Creek	2.80	*	*	2583	2730	*
Basal Creek						
At confluence with Richland Creek (Basin 5, Stream 1)	0.21	*	*	149	220	*
Approximately 0.1 mile upstream of confluence with Richland Creek (Basin 5, Stream 1)	0.20	*	*	249	351	*
Approximately 1,060 feet upstream of confluence with Richland Creek (Basin 5, Stream 1)	0.11	*	*	161	227	*
Basin 10, Stream 10						
At mouth	1.10	*	*	1070	*	*
Basin 10, Stream 13						
At confluence with Basin 10, Stream 14	1.21	*	*	838	*	*
Approximately 0.5 mile upstream of confluence with Basin 10, Stream 14	1.00	*	*	747	*	*
Basin 10, Stream 14						
At confluence with Little River (Basin 10, Stream 1)	4.21	*	*	2674	*	*
Approximately 430 feet upstream of Zebulon Road	2.77	1002	1800	2273	*	3755
At confluence of Basin 10, Stream 13	2.77	*	*	2273	*	*
Approximately 0.92 mile downstream of the Franklin/Wake County Boundary	2.17	*	*	1210	*	*
Approximately 950 feet upstream of Halifax Road	2.17	976	1820	2432	*	3708
Basin 10, Stream 2						
At mouth	1.10	*	*	845	*	*
Just downstream of tributary draining pond near County boundary	0.50	*	*	701	*	*
Basin 10, Stream 3						
At mouth	1.10	*	*	950	*	*
Basin 10, Stream 5						
At State Route 2329	1.50	*	*	1320	*	*
Approximately 0.5 mile upstream of Lizard Lick Road	1.01	*	*	1289	*	*
Basin 10, Stream 6						
At mouth	2.70	*	*	1420	*	*
Approximately 0.9 mile upstream of Riley Hill Road	1.00	*	*	1594	2117	*
Basin 11, Stream 4						
At confluence with Moccasin Creek (Basin 11, Stream 1)	3.68	*	*	1680	2500	*
Approximately 0.9 mile upstream of Confluence with Moccasin Creek (Basin 11, Stream 1)	2.79	*	*	1420	2090	*
Approximately 530 feet downstream of Shepard School Road	2.47	*	*	1310	1940	*
Approximately 1,050 feet upstream of Rosinburg Road	2.13	*	*	1190	1760	*
Approximately 0.6 mile upstream of Rosinburg Road	1.74	*	*	1050	1580	*
Approximately 0.4 mile downstream of Pearces Road	1.59	*	*	995	1500	*
Approximately 1,600 feet downstream of Pearces Road	1.28	*	*	870	1300	*
Approximately 530 feet downstream of Pearces Road	0.88	*	*	687	1040	*
Approximately 1,600 feet upstream of Pearces Road	0.65	*	*	571	873	*

Table 13 - Summary of Discharges

Flooding Source		Discharges (cfs)				
Location	Drainage Area (square miles)	10% Annual Chance	2% Annual Chance	1% Annual Chance	1% Annual Future Annual Chance	0.2% Annual Chance
Basin 12, Stream 3						
At Old Crews Road	0.61	*	*	690	870	*
Basin 14, Stream 2						
At confluence with Marks Creek (Basin 14, Stream 1)	2.54	*	*	1340	2010	*
Approximately 0.4 mile upstream of confluence with Marks Creek (Basin 14, Stream 1)	2.45	*	*	1310	1990	*
Approximately 0.4 mile downstream of Lake Myra Road	1.47	*	*	947	1430	*
Basin 23, Stream 2						
At confluence of Basin 23, Stream 2 Tributary	0.48	*	*	309	*	*
Approximately 1,580 feet upstream of John Adams Road	0.23	*	*	206	*	*
Basin 23, Stream 2 Tributary						
At confluence with Basin 23, Stream 2	1.78	*	*	648	*	*
Basin 27, Stream 4						
At mouth	1.70	500	1050	1400	*	2700
Basin 28, Stream 7						
At confluence with Basin 28, Stream 8	0.50	*	*	806	989	*
Approximately 0.4 mile upstream of confluence with Basin 28, Stream 8	0.20	*	*	462	573	*
Basin 28, Stream 8						
At confluence with White Oak Creek	1.70	576	1330	1630	1740	2560
Approximately 1,060 feet downstream of Mills Road	1.00	481	860	1030	1080	1530
Approximately 1,060 feet upstream of Mills Road	0.70	440	785	932	985	1380
Just downstream of Hendricks Road	0.40	305	526	623	655	899
Beaver Creek						
Approximately 1,060 feet upstream of Chatham/Wake County boundary	17.50	*	*	5810	*	*
Just upstream of New Hill Olive Chapel Road	16.50	*	*	5730	*	*
Approximately 530 feet upstream of New Hill Olive Chapel Road	16.40	*	*	7040	*	*
Approximately 0.4 mile upstream of New Hill Olive Chapel Road	15.40	*	*	6960	*	*
At confluence of Reedy Branch	11.10	2790	4480	5310	6030	8460
Approximately 1,060 feet upstream of Richardson Road	10.00	2760	4410	5290	6130	8510
Approximately 0.4 mile downstream of confluence with Beaver Creek Tributary	9.10	2710	4330	5230	6220	8450
At confluence of Beaver Creek Tributary	6.40	2300	3340	4020	4670	5940
Approximately 1,580 feet downstream of Kelly Road	5.80	2270	3360	3980	4460	5930
At confluence of Basin 27, Stream 4	3.70	1590	2170	2470	2830	4080
Approximately 0.4 mile upstream of Olive Chapel Road	3.10	1550	2120	2410	2910	4070
Approximately 530 feet upstream of Highway 55	1.10	843	1340	1550	1600	2120
Approximately 350 feet downstream of Castleburg Drive	0.50	462	763	893	979	1260
Beaver Creek Tributary (Basin 27, Stream 3)						
At mouth	2.40	620	1295	1755	*	3330
Beddingfield Creek						
Approximately 0.4 mile downstream of Shotwell Road	5.43	*	*	2150	*	*
Big Branch						
Approximately 1,580 feet upstream of confluence with Little White Oak Creek	2.10	*	*	1170	2340	*

Table 13 - Summary of Discharges

Flooding Source		Discharges (cfs)				
Location	Drainage Area (square miles)	10% Annual Chance	2% Annual Chance	1% Annual Chance	1% Annual Future Annual Chance	0.2% Annual Chance
Approximately 1,060 feet downstream of Shearon Harris Road	1.60	*	*	1011	2060	*
Approximately 280 feet upstream of Shearon Harris Road	1.50	*	*	975	2000	*
Approximately 1,580 feet upstream of Shearon Harris Road	1.40	*	*	927	1910	*
Approximately 0.5 mile upstream of Shearon Harris Road	1.20	*	*	844	1750	*
Approximately 0.5 mile downstream of Highway 1	1.10	*	*	766	1600	*
Approximately 1,060 feet downstream of Highway 1	0.90	*	*	694	1460	*
Approximately 220 feet upstream of Highway 1	0.40	*	*	418	865	*
Approximately 530 feet upstream of Highway 1	0.40	*	*	394	803	*
Approximately 0.6 mile upstream of Highway 1	0.20	*	*	251	496	*
Approximately 1,580 feet upstream of Highway 1	0.20	*	*	286	567	*
Approximately 0.8 mile upstream of Highway 1	0.10	*	*	198	447	*
Big Branch (Basin 10, Stream 8)						
At mouth	1.70	*	*	1400	*	*
Black Creek						
Approximately 530 feet upstream of Wake/Johnston County boundary	14.04	*	*	2090	*	*
Approximately 0.6 mile upstream of Wake/Johnston County boundary	13.37	*	*	2030	*	*
Brier Creek (Basin 18, Stream 14)						
At Interstate 40	12.42	*	*	1360	1440	*
Approximately 1,000 feet upstream of Interstate 40	11.76	*	*	423	485	*
Approximately 0.5 mile upstream of Airport Boulevard	11.62	*	*	5190	6210	*
Approximately 0.4 mile upstream of confluence of Little Brier Creek (Basin 18, Stream 15)	1.26	*	*	1530	1670	*
Approximately 0.5 mile upstream of Nelson Road	1.00	*	*	1440	1620	*
Buffalo Branch (Basin 10, Stream 22)						
At Morphus Bridge Road	0.40	*	*	600	*	*
Cedar Fork (Basin 10, Stream 15)						
At confluence with Little River (Basin 10, Stream 1)	4.34	*	*	1860	2902	*
Approximately 0.6 mile upstream of confluence with Little River (Basin 10, Stream 1)	3.91	*	*	2316	2849	*
Approximately 1.4 miles upstream of confluence with Little River (Basin 10, Stream 1)	2.91	*	*	2219	2760	*
Approximately 2.0 miles upstream of confluence with Little River (Basin 10, Stream 1)	2.15	*	*	1995	2519	*
Approximately 3.0 miles upstream of confluence with Little River (Basin 10, Stream 1)	1.21	*	*	1307	1794	*
Clark Branch (Basin 28, Stream 3)						
Just upstream of confluence with White Oak Creek	1.10	*	*	1360	1530	*
Approximately 1,060 feet upstream of Green Level Church Road	0.40	*	*	785	958	*
Fowlers Mill Creek (Basin 10, Stream 12)						
Approximately 530 feet upstream of Little River (Basin 10, Stream 1)	3.51	*	*	1630	3874	*
Approximately 1,580 feet downstream of Pulleytown Road	3.42	*	*	1610	3335	*
Approximately 0.4 mile upstream of Pulleytown Road	2.44	*	*	1299	2133	*
Approximately 1.1 miles upstream of Pulleytown Road	1.13	*	*	806	1872	*
Gill Creek (Basin 10, Stream 24)						

Table 13 - Summary of Discharges

Flooding Source		Discharges (cfs)				
Location	Drainage Area (square miles)	10% Annual Chance	2% Annual Chance	1% Annual Chance	1% Annual Future Annual Chance	0.2% Annual Chance
At mouth	0.80	*	*	950	*	*
Guffy Branch (Basin 21, Stream 4)						
At confluence with Little Creek (Basin 21, Stream 1)	4.02	*	*	1029	*	*
At downstream side of Sauls Road	3.32	*	*	923	*	*
Approximately 0.7 mile upstream of Sauls Road	2.89	*	*	853	*	*
Approximately 1.3 miles upstream of Sauls Road	2.38	*	*	764	*	*
Approximately 2.1 miles upstream of Sauls Road	1.84	*	*	660	*	*
Hodges Creek (Basin 8, Stream 1)						
Approximately 1,060 feet downstream of Watkins Road	3.05	*	*	1500	1690	*
Approximately 1,060 feet upstream of Watkins Road	2.68	*	*	1780	2040	*
Approximately 1,060 feet upstream of R C Watson Road	1.90	*	*	1450	1690	*
Approximately 0.7 mile upstream of R C Watson Road	0.64	*	*	816	899	*
Approximately 1.0 mile upstream of R C Watson Road	0.52	*	*	756	786	*
Hominy Branch (Basin 10, Stream 4)						
At mouth	2.50	*	*	950	*	*
Hominy Creek (Basin 10, Stream 7)						
Approximately 1,580 feet upstream of confluence with Little River (Basin 10, Stream 1)	3.86	*	*	2445	3063	*
At mouth	3.80	*	*	2310	*	*
Approximately 0.5 mile upstream of Lizard Lick Road	3.48	*	*	1620	2873	*
Approximately 1.0 mile upstream of Lizard Lick Road	2.49	*	*	1912	2386	*
Approximately 530 feet downstream of Buck Road	2.09	*	*	1829	2297	*
Approximately 1,060 feet upstream of Edgemont Road	1.14	*	*	1262	1742	*
Jack Branch (Basin 28, Stream 4)						
Approximately 490 feet upstream of confluence with White Oak Creek	1.10	*	*	1610	1790	*
Approximately 0.8 mile upstream of confluence with White Oak Creek	0.70	*	*	1380	1540	*
Approximately 1,060 feet upstream of Wade Drive	0.20	*	*	490	633	*
Jim Branch						
Approximately 0.4 mile upstream of confluence with Buckhorn Creek	1.80	*	*	1082	2070	*
Approximately 0.8 mile upstream of confluence with Buckhorn Creek	1.60	*	*	1011	1980	*
Approximately 1.2 miles upstream of confluence with Buckhorn Creek	1.20	*	*	816	1680	*
Juniper Branch (Basin 21, Stream 2)						
At confluence with Little Creek (Basin 21, Stream 1)	2.03	*	*	700	*	*
Approximately 530 feet downstream of Pagan Road	1.59	*	*	607	*	*
Approximately 1,580 feet upstream of Pagan Road	1.36	*	*	557	*	*
Approximately 530 feet downstream of Lakefield Drive	1.08	*	*	489	*	*
Kenneth Creek						
At Wake/Harnett County boundary	11.30	*	*	3389	3990	*
Approximately 0.4 mile upstream of Wake/Harnett County boundary	5.60	*	*	2194	2480	*
Just upstream of Angier Creek9	5.40	540	1330	1650	*	2800
Ledge Creek						
Approximately 420 feet downstream of Old Weaver Trail	35.45	*	*	6929	*	*
Little Beaver Creek						

Table 13 - Summary of Discharges

Flooding Source		Discharges (cfs)				
Location	Drainage Area (square miles)	10% Annual Chance	2% Annual Chance	1% Annual Chance	1% Annual Future Annual Chance	0.2% Annual Chance
Just upstream of Chatham/Wake County boundary	3.80	*	*	2450	*	*
Little Black Creek						
Approximately 0.6 mile upstream of Wake/Johnston County boundary	6.40	*	*	1330	2370	*
Approximately 0.5 mile upstream of Old Stage Road	5.78	*	*	1260	*	*
Approximately 1,580 feet upstream of Wimberly Road	5.23	*	*	1190	*	*
Approximately 0.7 mile upstream of Wimberly Road	4.66	*	*	1120	*	*
Approximately 0.7 mile downstream of Kennebec Road	3.90	*	*	1010	*	*
Approximately 1,060 feet downstream of Kennebec Road	2.71	*	*	823	*	*
Approximately 1,060 feet upstream of Kennebec Road	2.35	*	*	760	*	*
Approximately 0.4 mile upstream of Kennebec Road	2.11	*	*	715	*	*
At downstream side of Walter Myatt Road	1.35	*	*	554	*	*
Approximately 1,580 feet upstream of Walter Myatt Road	1.23	*	*	527	*	*
Little Brier Creek (Basin 18, Stream 15)						
At mouth	8.60	*	*	3500	*	*
Little Creek (Into Middle Creek)						
Approximately 530 feet downstream of Wake/Johnston County boundary	9.90	*	*	1710	4010	*
At confluence of Guffy Branch (Basin 21, Stream 4)	5.19	*	*	1190	*	*
Approximately 1,580 feet upstream of confluence of Guffy Branch (Basin 21, Stream 4)	5.05	*	*	1171	*	*
Approximately 0.9 mile downstream of confluence of Juniper Branch (Basin 21, Stream 2)	4.86	*	*	1150	*	*
Approximately 0.5 mile downstream of confluence of Juniper Branch (Basin 21, Stream 2)	4.42	*	*	1080	*	*
At confluence of Juniper Branch (Basin 21, Stream 2)	2.27	*	*	744	*	*
Approximately 0.8 mile downstream of Pagan Road	2.04	*	*	701	*	*
Approximately 530 feet upstream of Pagan Road	1.52	*	*	594	*	*
Approximately 0.7 mile upstream of Pagan Road	1.18	*	*	513	*	*
Little River						
At confluence of Basin 10, Stream 2	67.90	*	*	11700	11700	*
At confluence of Basin 10, Stream 3	66.50	*	*	10400	*	*
At confluence of Buffalo Branch (Basin 10, Stream 22)	65.38	*	*	10400	*	*
At confluence of Lizard Lick Creek (Basin 10, Stream 23)	63.23	*	*	10400	*	*
At confluence of Hominy Branch (Basin 10, Stream 4)	59.73	*	*	10300	*	*
At confluence of Gill Creek (Basin 10, Stream 24)	58.85	*	*	10200	*	*
At confluence of Wheelers Creek (Basin 10, Stream 25)	56.68	*	*	10100	*	*
At confluence of Basin 10, Stream 5	53.45	*	*	10000	*	*
Approximately 0.3 mile upstream of US Highway 64	51.45	*	*	9930	*	*
At confluence of Basin 10, Stream 6	47.08	*	*	9750	*	*
At confluence of Hominy Creek (Basin 10, Stream 7)	43.12	*	*	9490	*	*
Approximately 1,580 feet upstream of confluence of Hominy Creek (Basin 10, Stream 7)	42.98	*	*	9490	*	*
At confluence of Big Branch (Basin 10, Stream 8)	40.29	*	*	9360	*	*
At confluence of Basin 10, Stream 10	36.86	*	*	9130	*	*
Approximately 1,150 feet downstream of Wake/Franklin County boundary	14.63	*	*	4620	*	*
Approximately 0.71 mile downstream of the Franklin/Wake County boundary	14.63	*	*	3990	*	*

Table 13 - Summary of Discharges

Flooding Source		Discharges (cfs)				
Location	Drainage Area (square miles)	10% Annual Chance	2% Annual Chance	1% Annual Chance	1% Annual Future Annual Chance	0.2% Annual Chance
Little White Oak Creek (Basin 26, Stream 9)						
Approximately 1,060 feet downstream of New Hill Holleman Road	4.30	*	*	1848	3380	*
Approximately 1,060 feet upstream of New Hill Holleman Road	4.10	*	*	1797	3300	*
Approximately 0.7 mile upstream of New Hill Holleman Road	3.70	*	*	1680	3150	*
Approximately 1.0 mile upstream of New Hill Holleman Road	3.50	*	*	1632	3080	*
Approximately 0.6 mile downstream of Friendship Road	3.40	*	*	1596	3030	*
Approximately 0.5 mile downstream of Friendship Road	3.00	*	*	1478	2850	*
Approximately 1,580 feet downstream of Friendship Road	2.90	*	*	1454	2810	*
Approximately 530 feet downstream of Friendship Road	2.80	*	*	1419	2740	*
At confluence with Little White Oak Creek Tributary 2	1.70	*	*	1039	2000	*
Just upstream of Deer Path	1.70	*	*	1023	1970	*
Approximately 0.4 mile downstream of Highway 1	1.30	*	*	885	1700	*
Just downstream of Highway 1	1.30	*	*	858	1640	*
Approximately 1,060 feet upstream of Highway 1	1.10	*	*	793	1500	*
Approximately 0.5 mile upstream of Highway 1	0.80	*	*	650	1210	*
Little White Oak Creek Tributary 2						
Approximately 1,580 feet upstream of confluence with Little White Oak Creek	0.50	*	*	464	1010	*
Approximately 530 feet upstream of confluence with Little White Oak Creek	0.50	*	*	478	1030	*
Mingo Creek (Basin 12, Stream 2)						
Approximately 0.4 mile upstream of Beaverdam Creek (Basin 12, Stream 1)	0.87	*	*	928	1120	*
Approximately 125 feet upstream of Forrestville Road	0.78	*	*	977	1130	*
Approximately 530 feet downstream of N Smithfield Road	0.45	*	*	848	1290	*
Moccasin Creek						
Approximately 0.4 mile upstream of Franklin/Nash County boundary	27.96	*	*	7470	*	*
Approximately 0.9 mile upstream of Franklin/Nash County boundary	26.57	*	*	7230	*	*
Approximately 0.92 mile upstream of the Franklin/Nash County boundary	26.57	*	*	7230	*	*
Approximately 1,060 feet upstream of NC 97	25.00	*	*	6960	*	*
Approximately 0.22 mile upstream of Highway 97	25.00	*	*	6960	*	*
Approximately 1,060 feet downstream of US Highway 64	15.49	*	*	5160	*	*
Approximately 0.24 mile downstream of U.S. Highway 64	15.49	*	*	5160	*	*
Approximately 0.4 mile upstream of Sheppard School Road	12.16	*	*	4440	*	*
Approximately 0.34 mile upstream of State Road 1770	12.16	*	*	4440	*	*
Approximately 1.04 miles upstream of State Road 1770	11.60	*	*	4310	*	*
Approximately 1.2 miles upstream of Sheppard School Road	11.60	*	*	4310	*	*
Approximately 0.13 mile upstream of Williams-White Road	9.47	*	*	3800	*	*
Approximately 530 feet upstream of Williams-White Road	9.47	*	*	3800	*	*
Confluence with Moccasin Creek Tributary 3	4.19	*	*	2369	*	*
At confluence of Moccasin Creek Tributary 3	4.18	*	*	2369	*	*
Approximately 1,580 feet upstream of Furney Pearce Road	2.94	*	*	1899	*	*
Approximately 0.28 mile upstream of Furney Pearce Road	2.94	*	*	1899	*	*
Approximately 0.72 mile upstream of Henry Baker Road	1.29	*	*	1130	*	*
Approximately 0.7 mile upstream of Henry Baker Road	1.29	*	*	1130	*	*
Morris Branch						

Table 13 - Summary of Discharges

Flooding Source		Discharges (cfs)				
Location	Drainage Area (square miles)	10% Annual Chance	2% Annual Chance	1% Annual Chance	1% Annual Future Annual Chance	0.2% Annual Chance
Approximately 0.4 mile upstream of Chatham/Wake County boundary	1.20	707	1300	1630	2210	2490
Just downstream of Green Level to Durham Road	0.80	765	1080	1230	1590	1840
Approximately 0.7 mile upstream of Green Level to Durham Road	0.50	490	772	893	1130	1230
Approximately 975 feet upstream of Howard Road	0.10	155	241	277	319	378
Neills Creek						
Approximately 1,060 feet upstream of Harnett/Wake County boundary	2.00	*	*	1137	1140	*
Approximately 0.6 mile upstream of Harnett/Wake County boundary	1.80	*	*	1057	1060	*
Approximately 0.9 mile upstream of Harnett/Wake County boundary	1.20	*	*	840	840	*
Perry Creek (Basin 10, Stream 19)						
At confluence with Little River (Basin 10, Stream 1)	6.44	*	*	2390	*	*
Approximately 0.4 mile upstream of Barham Siding Road	5.59	*	*	2180	*	*
Approximately 1,580 feet upstream of Zebulon Road/Highway 96	4.71	*	*	1960	*	*
Approximately 1,060 feet downstream of Louisburg Road/Highway 401	3.71	*	*	1690	*	*
Approximately 0.5 mile upstream of Louisburg Road/Highway 401	2.72	*	*	1390	*	*
Approximately 0.9 mile upstream of Louisburg Road/Highway 401	1.75	*	*	1060	1769	*
Approximately 1.6 miles upstream of Louisburg Road/Highway 401	1.01	*	*	751	1576	*
Reedy Branch (Basin 27, Stream 5)						
At confluence with Beaver Creek	4.10	1520	2550	3020	3340	4430
Approximately 1,580 feet upstream of Olive Chapel Road	3.00	1450	2430	2880	3170	4180
Just upstream of confluence with Reedy Branch Tributary (Basin 27, Stream 6)	1.00	656	1120	1350	1490	1970
Reedy Branch Tributary (Basin 27, Stream 6)						
At confluence with Reedy Branch (Basin 27, Stream 5)	1.50	864	1430	1690	1870	2380
Approximately 0.5 mile downstream of Kelly Road	1.10	819	1320	1540	1700	2140
Richland Creek						
Approximately 530 feet upstream of West South Avenue	8.15	*	*	4700	4700	*
Approximately 0.6 mile downstream of confluence of Basal Creek	7.28	*	*	4560	*	*
At confluence of Basal Creek	6.65	*	*	4560	*	*
Approximately 50 feet downstream of West Oak Avenue	6.07	*	*	4460	*	*
Approximately 1,580 feet upstream of West Oak Avenue	5.10	*	*	4170	4170	*
Approximately 0.24 mile downstream of the Franklin/Wake County boundary	4.16	*	*	1820	*	*
Approximately 1,060 feet downstream of Wake/Franklin County Line	4.11	*	*	3600	3600	*
Richland Creek Tributary						
Approximately 0.5 mile upstream of confluence with Richland Creek (Basin 5, Stream 1)	0.45	*	*	1370	1370	*
Approximately 0.5 mile upstream of confluence with Richland Creek (Basin 5, Stream 1)	0.45	*	*	1190	*	*
Approximately 0.8 mile upstream of confluence with Richland Creek (Basin 5, Stream 1)	0.40	*	*	1160	1310	*
Approximately 1.1 miles upstream of confluence with Richland Creek (Basin 5, Stream 1)	0.20	*	*	672	741	*
Syble Creek						
Approximately 260 feet downstream of Wake / Granville County Boundary	3.81	909	1474	1718	*	2337
Thomas Creek						

Table 13 - Summary of Discharges

Flooding Source		Discharges (cfs)				
Location	Drainage Area (square miles)	10% Annual Chance	2% Annual Chance	1% Annual Chance	1% Annual Future Annual Chance	0.2% Annual Chance
Approximately 1.0 mile downstream of Highway 1	1.60	*	*	992	2030	*
Approximately 0.7 mile downstream of Highway 1	0.80	*	*	649	1370	*
Approximately 0.4 mile downstream of Highway 1	0.70	*	*	606	1300	*

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

Table 14 - Summary of Non-Coastal Stillwater Elevations

Flooding Source	FIRM Panel Number(s)	Elevations (feet NAVD)			
		10% Annual Chance	2% Annual Chance	1% Annual Chance	0.2% Annual Chance
Basal Creek (Basin 22, Stream 16)	3720065800	329	331	331	332
Basin 18, Stream 13	3720075600	308	311	312	314
Coles Branch (Basin 18, Stream 24)	3720075400	319	322	324	326
Crabtree Creek (Basin 18, Stream 9)	3720075300	347	349	351	351
Crabtree Creek Tributary No. 6 (Basin 18, Stream 20)	3720075500	341	342	342	343
Hatchet Grove Tributary (Basin 18, Stream 25)	3720074500	329	330	331	332
Lake Crabtree	3720076500	280	282	283	286
Little Creek (Basin 11, Stream 2)	3720270500	267	269	269	271
Middle Creek	3720066900	308	310	310	312
Mills Branch (Basin 22, Stream 5)	3720068800	282	287	289	293
Neuse River	3720172900	260	264	266	270
Stirrup Iron Creek	3720075700	313	316	317	321
Terrible Creek (Basin 22, Stream 19)	3720067700	325	326	327	328
White Oak Creek (Basin 26, Stream 1)	3720073000	298	301	302	304

Table 15, “Gage Information”, lists the stream gages located in Wake 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
2087140	Basin 17, Stream 4	LOWER BARTON CREEK TRIB NR RALEIGH, NC	0.70	1954	1971
208706575	Beaverdam Lake	BEAVERDAM CREEK AT DAM NEAR CREEDMOOR, NC	52.50	2009	2011
208726005	Crabtree Creek (Basin 18, Stream 9)	CRABTREE CR AT EBENEZER CHURCH RD NR RALEIGH, NC	76.00	1989	2008
2087275	Crabtree Creek (Basin 18, Stream 9)	CRABTREE CREEK AT HWY 70 AT RALEIGH, NC	97.60	1973	2008
2087324	Crabtree Creek (Basin 18, Stream 9)	CRABTREE CREEK AT US 1 AT RALEIGH, NC	121.00	1973	2008
02087183	Falls Lake	NEUSE RIVER NEAR FALLS N C	772.00	1945	2008
02087190	Falls Lake	NEUSE RIVER NEAR NEUSE, N.C.	792.00	1908	1975
2087000	Falls Lake	NEUSE RIVER NEAR NORTHSIDE, NC	535.00	1928	1979
2087182	Falls Lake	FALLS LAKE ABOVE DAM NR FALLS, NC	771.00	2009	2011
208732885	Marsh Creek (Basin 18, Stream 17)	MARSH CREEK NEAR NEW HOPE, NC	6.84	1984	2009
02087580	Middle Creek	SWIFT CREEK NEAR APEX, N. C.	19.50	1954	2008
0208758850	Middle Creek	SWIFT CREEK NEAR MCCULLARS CROSSROADS, NC	35.80	1989	2009
208732534	Pigeon House Branch (Basin 18, Stream 27)	PIGEON HOUSE CR AT CAMERON VILLAGE AT RALEIGH, NC	0.29	1997	2011
208735012	Rocky Branch (Basin 30, Stream 5)	ROCKY BRANCH BELOW PULLEN DRIVE AT RALEIGH, NC	1.17	1997	2009

Table 15 - Gage Information

Gage Number	Flooding Source	Site Name	Drainage Area (square miles)	Period of Record	
				From	To
02087910	Swift Creek	MIDDLE CREEK NEAR HOLLY SPRINGS, NC	8.22	1954	1971
2087359	Walnut Creek (Basin 30, Stream 1)	WALNUT CREEK AT SUNNYBROOK DRIVE NR RALEIGH, NC	29.00	1997	2009
0209782609	White Oak Creek	WHITE OAK CR AT MOUTH NEAR GREEN LEVEL, NC	11.90	2000	2009

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"
Adams Branch (Basin 30, Stream 9)	0.030 to 0.070	0.055 to 0.110
Angier Creek (Basin 24, Stream 4)	0.030 to 0.070	0.055 to 0.150
Armory Tributary (Basin 18, Stream 38)	0.030 to 0.070	0.015 to 0.140
Austin Creek (Basin 6, Stream 10)	0.032 to 0.060	0.035 to 0.090
Bachelor Branch (Basin 28, Stream 6)	0.032 to 0.068	0.035 to 0.155
Bagwell Branch (Basin 20, Stream 10)	0.032 to 0.050	0.055 to 0.090
Basal Creek	0.030 to 0.070	0.070 to 0.200
Basal Creek (Basin 22, Stream 16)	0.032 to 0.050	0.032 to 0.090
Basin 10, Stream 10	0.050	0.055 to 0.090
Basin 10, Stream 13	0.045	0.130
Basin 10, Stream 14	0.035 to 0.050	0.080 to 0.150
Basin 10, Stream 2	0.050	0.032 to 0.090

Table 16 - Roughness Coefficients

Stream	Channel "n"	Overbank "n"
Basin 10, Stream 3	0.050	0.032 to 0.090
Basin 10, Stream 5	0.030 to 0.070	0.055 to 0.180
Basin 10, Stream 6	0.030 to 0.070	0.055 to 0.130
Basin 10, Stream 9	0.032 to 0.050	0.055 to 0.090
Basin 11, Stream 4	0.047	0.140
Basin 11, Stream 7	0.042	0.130
Basin 12, Stream 3	0.024 to 0.070	0.045 to 0.150
Basin 14, Stream 2	0.045	0.100
Basin 14, Stream 3	0.050	0.130
Basin 15, Stream 22	0.045	0.045 to 0.120
Basin 15, Stream 25	0.045 to 0.050	0.015 to 0.140
Basin 15, Stream 28	0.040 to 0.050	0.015 to 0.120
Basin 15, Stream 32	0.032 to 0.063	0.060 to 0.090
Basin 15, Stream 33	0.032 to 0.050	0.045 to 0.090
Basin 15, Stream 7	0.032 to 0.050	0.032 to 0.090
Basin 15, Stream 8	0.050	0.055 to 0.090
Basin 15, Stream 9	0.032 to 0.050	0.032 to 0.090
Basin 16, Stream 2	0.032 to 0.060	0.032 to 0.090
Basin 16, Stream 5	0.032 to 0.050	0.032 to 0.090
Basin 17, Stream 4	0.032 to 0.057	0.030 to 0.090
Basin 18, Stream 13	0.024 to 0.070	0.032 to 0.150
Basin 18, Stream 13 Tributary	0.032 to 0.050	0.032 to 0.150
Basin 18, Stream 4	0.030 to 0.070	0.012 to 0.130
Basin 18, Stream 7	0.055	0.080 to 0.150
Basin 18, Stream 8	0.044 to 0.053	0.035 to 0.150
Basin 19, Stream 3	0.050 to 0.060	0.045 to 0.090
Basin 19, Stream 4	0.050 to 0.055	0.055 to 0.090
Basin 20, Stream 20	0.032 to 0.050	0.055 to 0.090
Basin 20, Stream 5	0.047 to 0.050	0.050 to 0.130
Basin 20, Stream 7	0.030 to 0.070	0.055 to 0.130
Basin 20, Stream 8	0.050	0.055 to 0.090
Basin 22, Stream 20	0.050	0.035 to 0.090
Basin 22, Stream 6	0.050	0.055 to 0.090
Basin 22, Stream 9	0.032 to 0.050	0.055 to 0.090
Basin 23, Stream 2	0.050	0.140
Basin 23, Stream 2 Tributary	0.050	0.140
Basin 23, Stream 3	0.048	0.140
Basin 23, Stream 4	0.050	0.150
Basin 23, Stream 5	0.050	0.150
Basin 27, Stream 4	0.030 to 0.070	0.060 to 0.110
Basin 28, Stream 7	0.050 to 0.055	0.150 to 0.155
Basin 28, Stream 8	0.047 to 0.050	0.100 to 0.200
Basin 3, Stream 6	0.050 to 0.320	0.035 to 0.100
Basin 3, Stream 8	0.032 to 0.050	0.035 to 0.090
Basin 30, Stream 3	0.050	0.030 to 0.120
Basin 4, Stream 13	0.050	0.042 to 0.090
Basin 4, Stream 3	0.032 to 0.074	0.030 to 0.090
Basin 6, Stream 9	0.040 to 0.090	0.035 to 0.090
Beaver Creek	0.043 to 0.050	0.100 to 0.200
Beaver Creek Tributary (Basin 27, Stream 3)	0.030 to 0.070	0.032 to 0.110
Beaverdam Creek	0.030 to 0.070	0.032 to 0.150
Beaverdam Creek (Basin 12, Stream 1)	0.024 to 0.070	0.015 to 0.140
Beaverdam Creek (Basin 15, Stream 21)	0.018 to 0.070	0.015 to 0.130
Beaverdam Creek (Basin 18, Stream 28)	0.040 to 0.110	0.090 to 0.200
Beddingfield Creek	0.050	0.130
Big Branch	0.050	0.140
Big Branch (Basin 10, Stream 8)	0.030 to 0.070	0.055 to 0.130
Big Branch (Basin 18, Stream 21)	0.035 to 0.055	0.012 to 0.200
Big Branch (Basin 26, Stream 5)	0.050 to 0.056	0.035 to 0.140
Big Branch (Basin 30, Stream 2)	0.060	0.016 to 0.120
Big Branch Tributary No. 3	0.030 to 0.090	0.012 to 0.120

Table 16 - Roughness Coefficients

Stream	Channel "n"	Overbank "n"
Big Branch Tributary No.1 (Basin 30, Stream 6)	0.030 to 0.093	0.070 to 0.130
Black Creek	0.025 to 0.060	0.030 to 0.150
Black Creek Tributary A (Basin 18, Stream 11)	0.032 to 0.050	0.032 to 0.090
Bradley Creek (Basin 24, Stream 3)	0.030 to 0.070	0.055 to 0.110
Bridges Branch	0.045 to 0.050	0.015 to 0.130
Brier Creek (Basin 18, Stream 14)	0.024 to 0.040	0.100 to 0.200
Buck Branch (Basin 20, Stream 12)	0.032 to 0.050	0.032 to 0.090
Buckhorn Branch (Basin 3, Stream 9)	0.050	0.045 to 0.100
Buckhorn Creek	0.040 to 0.050	0.032 to 0.320
Buffalo Branch (Basin 10, Stream 22)	0.032 to 0.090	0.035 to 0.150
Buffalo Creek (Basin 9, Stream 1)	0.030 to 0.070	0.032 to 0.140
Buffalo Creek West	0.045 to 0.052	0.030 to 0.140
Burdens Creek	0.042 to 0.050	0.100 to 0.200
Camp Branch (Basin 22, Stream 7)	0.050	0.035 to 0.090
Cary Branch	0.032 to 0.050	0.055 to 0.140
Cedar Creek (Basin 15, Stream 34)	0.032 to 0.060	0.070 to 0.140
Cedar Fork (Basin 10, Stream 15)	0.420 to 0.042	0.130
Clark Branch (Basin 28, Stream 3)	0.050	0.150
Coles Branch (Basin 18, Stream 24)	0.030 to 0.070	0.032 to 0.200
Cozart Creek Tributary 1	0.050	0.150
Cozart Creek Tributary 2	0.050	0.150
Crabtree Creek (Basin 18, Stream 9)	0.030 to 0.070	0.032 to 0.150
Crabtree Creek Tributary No. 6 (Basin 18, Stream 20)	0.030 to 0.070	0.060 to 0.130
Dunn Creek (Basin 6, Stream 5)	0.032 to 0.050	0.030 to 0.090
Dutchmans Branch (Basin 20, Stream 17)	0.032 to 0.050	0.032 to 0.090
East Fork Mine Creek (Basin 18, Stream 34)	0.050 to 0.105	0.015 to 0.150
East Fork Mine Creek Tributary (Basin 18, Stream 35)	0.035 to 0.055	0.070 to 0.120
Echo Creek (Basin 20, Stream 14)	0.050 to 0.065	0.035 to 0.090
Fowlers Mill Creek (Basin 10, Stream 12)	0.042	0.130
Gill Creek (Basin 10, Stream 24)	0.050	0.060 to 0.090
Guffy Branch (Basin 21, Stream 4)	0.047	0.130
Haleys Branch (Basin 18, Stream 10)	0.032 to 0.050	0.032 to 0.090
Hare Snipe Creek (Basin 18, Stream 1)	0.048 to 0.060	0.012 to 0.100
Hatchet Grove Tributary (Basin 18, Stream 25)	0.030 to 0.070	0.032 to 0.130
Hillard Creek (Basin 30, Stream 7)	0.050	0.055 to 0.090
Hodges Creek (Basin 8, Stream 1)	0.030 to 0.070	0.045 to 0.160
Hominy Branch (Basin 10, Stream 4)	0.050	0.032 to 0.090
Hominy Creek (Basin 10, Stream 7)	0.030 to 0.070	0.055 to 0.130
Honeycutt Creek (Basin 15, Stream 31)	0.032 to 0.055	0.080 to 0.150
Horse Creek	0.032 to 0.055	0.060 to 0.150
Horse Creek Tributary 1	0.048	0.120 to 0.150
House Creek (Basin 18, Stream 36)	0.048 to 0.050	0.015 to 0.150
Jack Branch (Basin 28, Stream 4)	0.055	0.155
Jim Branch	0.045	0.145
Juniper Branch (Basin 21, Stream 2)	0.045	0.110 to 0.130
Kenneth Branch (Basin 24, Stream 6)	0.030 to 0.070	0.055 to 0.150
Kenneth Creek	0.030 to 0.070	0.070 to 0.160
Kit Creek	0.030 to 0.070	0.070 to 0.130
Kit Creek Tributary 1 (Basin 29, Stream 11)	0.032 to 0.050	0.032 to 0.090
Kit Creek Tributary 2 (Basin 29, Stream 8)	0.030 to 0.070	0.055 to 0.110
Lakemont Tributary (Basin 18, Stream 22)	0.048 to 0.062	0.080 to 0.200
Ledge Creek	0.035 to 0.060	0.035 to 0.150
Lens Branch (Basin 20, Stream 22)	0.032 to 0.060	0.032 to 0.090
Little Beaver Creek	0.045 to 0.055	0.100 to 0.220
Little Beaverdam Creek (Basin 2, Stream 2)	0.030 to 0.070	0.070 to 0.150
Little Black Creek	0.030 to 0.070	0.070 to 0.130
Little Branch (Basin 26, Stream 3)	0.040 to 0.060	0.032 to 0.148
Little Branch Tributary (Basin 26, Stream 4)	0.048	0.148
Little Brier Creek (Basin 18, Stream 15)	0.030 to 0.086	0.012 to 0.150
Little Brier Creek East (Basin 18, Stream 16)	0.030 to 0.070	0.070 to 0.150
Little Creek (Basin 11, Stream 2)	0.030 to 0.080	0.055 to 0.150

Table 16 - Roughness Coefficients

Stream	Channel "n"	Overbank "n"
Little Creek (Into Middle Creek)	0.033 to 0.047	0.095 to 0.140
Little River	0.040 to 0.066	0.070 to 0.240
Little White Oak Creek (Basin 26, Stream 9)	0.035 to 0.050	0.148
Little White Oak Creek Tributary 2	0.040	0.140
Lizard Lick Creek (Basin 10, Stream 23)	0.032 to 0.050	0.032 to 0.090
Lower Barton Creek (Basin 17, Stream 1)	0.040 to 0.050	0.032 to 0.090
Lowery Creek (Basin 4, Stream 10)	0.032 to 0.050	0.032 to 0.090
Lynn Road Tributary (Basin 18, Stream 32)	0.035 to 0.050	0.015 to 0.150
Mahlers Creek (Basin 20, Stream 6)	0.050	0.032 to 0.090
Mango Creek (Basin 15, Stream 11)	0.050 to 0.054	0.032 to 0.090
Marks Creek	0.025 to 0.070	0.032 to 0.130
Marsh Creek (Basin 18, Stream 17)	0.038 to 0.060	0.048 to 0.200
Medfield Tributary (Basin 18, Stream 39)	0.045 to 0.050	0.015 to 0.120
Middle Creek	0.040 to 0.050	0.030 to 0.140
Mill Branch	0.050	0.030 to 0.150
Mill Creek (South)	0.035 to 0.060	0.040 to 0.160
Millbrook Tributary to Marsh Creek (Basin 18, Stream 19)	0.035 to 0.050	0.060 to 0.130
Mills Branch (Basin 22, Stream 5)	0.030 to 0.070	0.032 to 0.130
Mine Creek (Basin 18, Stream 31)	0.035 to 0.050	0.015 to 0.150
Mingo Creek (Basin 12, Stream 2)	0.041 to 0.044	0.100 to 0.200
Moccasin Creek	0.030 to 0.070	0.070 to 0.220
Morris Branch	0.030 to 0.050	0.100 to 0.200
Morrisville Tributary (Basin 18, Stream 26)	0.050	0.032 to 0.090
Mud Branch (Basin 4, Stream 15)	0.032 to 0.050	0.035 to 0.090
Nancy Branch	0.045 to 0.050	0.035 to 0.150
Neil Branch (Basin 24, Stream 8)	0.030 to 0.070	0.035 to 0.130
Neil Creek (Basin 24, Stream 7)	0.030 to 0.070	0.055 to 0.110
Neills Creek	0.035 to 0.048	0.100 to 0.150
Neuse River	0.035 to 0.060	0.055 to 0.250
New Hope Tributary to Marsh Creek (Basin 18, Stream 18)	0.035 to 0.065	0.035 to 0.200
New Light Creek	0.032 to 0.070	0.060 to 0.150
Norris Branch	0.048 to 0.050	0.055 to 0.145
Panther Branch (Basin 22, Stream 2)	0.050	0.035 to 0.090
Panther Creek	0.030 to 0.070	0.070 to 0.130
Perry Creek (Basin 10, Stream 19)	0.042	0.130
Perry Creek (Basin 15, Stream 26)	0.032 to 0.125	0.015 to 0.200
Perry Creek East Branch (Basin 15, Stream 27)	0.035 to 0.050	0.015 to 0.120
Pigeon House Branch (Basin 18, Stream 27)	0.045 to 0.048	0.015 to 0.120
Poplar Branch (Basin 13, Stream 2)	0.032 to 0.050	0.032 to 0.090
Poplar Creek (Basin 13, Stream 1)	0.050	0.055 to 0.090
Powell Creek (Basin 8, Stream 7)	0.032 to 0.050	0.015 to 0.120
Reedy Branch	0.050	0.150
Reedy Branch (Basin 27, Stream 5)	0.045 to 0.050	0.100 to 0.200
Reedy Branch Tributary (Basin 27, Stream 6)	0.045 to 0.050	0.100 to 0.200
Reedy Creek (Basin 6, Stream 8)	0.050	0.045 to 0.090
Reedy Creek Tributary (Basin 20, Stream 9)	0.050 to 0.059	0.035 to 0.090
Richland Creek	0.035 to 0.070	0.035 to 0.200
Richland Creek (Basin 18, Stream 3)	0.030 to 0.048	0.015 to 0.150
Richland Creek Tributary	0.040 to 0.055	0.070 to 0.200
Richland Creek Tributary 2	0.050	0.070 to 0.130
Robertson Creek	0.050	0.150
Robertson Creek Tributary 1	0.050	0.150
Rocky Branch (Basin 22, Stream 8)	0.050	0.032 to 0.090
Rocky Branch (Basin 30, Stream 5)	0.030 to 0.071	0.016 to 0.120
Rocky Ford Branch (Basin 24, Stream 5)	0.030 to 0.070	0.050 to 0.110
Sanford Creek (Basin 6, Stream 7)	0.050	0.045 to 0.090
Smith Creek	0.032 to 0.050	0.080 to 0.150
Snipes Creek	0.042 to 0.045	0.120 to 0.130
Southeast Prong Beaverdam Creek (Basin 18, Stream 30)	0.050 to 0.055	0.015 to 0.150
Southwest Prong Beaverdam Creek (Basin 18, Stream 29)	0.045 to 0.055	0.015 to 0.150
Spring Branch (Basin 6, Stream 6)	0.050 to 0.065	0.035 to 0.090

Table 16 - Roughness Coefficients

Stream	Channel "n"	Overbank "n"
Stirrup Iron Creek	0.015 to 0.150	0.032 to 0.170
Straight Branch (Basin 20, Stream 23)	0.032 to 0.050	0.032 to 0.090
Swift Creek	0.032 to 0.072	0.035 to 0.240
Swift Creek Tributary No. 7 (Basin 20, Stream 24)	0.032 to 0.060	0.035 to 0.090
Swift Creek Tributary No. 7A (Basin 20, Stream 25)	0.032 to 0.050	0.032 to 0.090
Syble Creek	0.045 to 0.052	0.035 to 0.160
Sycamore Creek (Basin 18, Stream 6)	0.030 to 0.070	0.035 to 0.150
Terrible Creek (Basin 22, Stream 19)	0.032 to 0.050	0.032 to 0.090
Thomas Creek	0.050	0.145
Toms Creek (Basin 7, Stream 1)	0.050	0.030 to 0.090
Tributary to Big Branch Tributary No. 1 (Basin 30, Stream 8)	0.050	0.055 to 0.090
Turkey Creek (Basin 18, Stream 23)	0.055	0.032 to 0.090
Turkey Creek (Basin 18, Stream 5)	0.030 to 0.070	0.012 to 0.150
Turkey Creek Tributary	0.046	0.100 to 0.150
Unnamed Tributary (#1) to Swift Creek	0.045 to 0.060	0.050 to 0.150
Upper Barton Creek (Basin 16, Stream 1)	0.032 to 0.055	0.035 to 0.090
Utley Creek	0.032 to 0.050	0.032 to 0.147
Walnut Creek (Basin 30, Stream 1)	0.038 to 0.060	0.025 to 0.200
West Fork Mine Creek (Basin 18, Stream 33)	0.045 to 0.050	0.070 to 0.120
Wheelers Creek (Basin 10, Stream 25)	0.050	0.032 to 0.090
White Oak Creek	0.035 to 0.050	0.035 to 0.150
White Oak Creek (Basin 26, Stream 1)	0.050	0.080 to 0.150
Wildcat Branch (Basin 30, Stream 4)	0.030 to 0.090	0.016 to 0.120
Yates Branch (Basin 20, Stream 13)	0.032 to 0.052	0.032 to 0.120

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
Bagwell Branch (Basin 20, Stream 10)				
138[1]	13,847[2]	920	298.5	51 / 59[4]
139[1]	13,889[2]	920	298.5	39 / 46[4]
140[1]	14,034[2]	920	300.8	40 / 45[4]
141[1]	14,136[2]	920	300.9	89 / 36[4]
142[1]	14,200[2]	920	300.9	105 / 62[4]
Basin 10, Stream 13				
010	1,000	1,101	275.9[5]	64 / 63
014	1,417	1,101	275.9[5]	25 / 133
020	2,044	1,101	279.6	68 / 19
025	2,517	1,101	282.8	25 / 102
028	2,827	1,007	284.1	60 / 25
039	3,911	1,007	293.8	50 / 25
047	4,706	1,007	301.9	50 / 30
054	5,427	1,007	307.7	25 / 45
060	6,048	1,007	312.7	25 / 15
066	6,632	1,007	319.2	35 / 10
072	7,225	1,007	326.3	10 / 20
078	7,767	1,007	331.5	15 / 20
084	8,412	1,007	338.0	15 / 10
090	9,000	1,007	344.4	10 / 10
Basin 10, Stream 14				
010	956	2,674	267.0[5]	11 / 709
018	1,753	2,674	267.0[5]	11 / 528
023	2,291	2,674	267.0[5]	11 / 282
027	2,698	2,674	267.8	11 / 241
032	3,241	2,674	270.2	125 / 14
034	3,412	2,674	275.6	125 / 14
040	4,041	2,273	275.9	150 / 175
049	4,939	2,273	276.5	57 / 92
053	5,329	2,273	277.0	185 / 14
061	6,072	2,273	278.0	126 / 101
065	6,500	2,273	278.6	242 / 26
070	7,000	2,273	280.3	20 / 112
075	7,500	2,273	282.4	90 / 28
078	7,803	2,273	283.1	109 / 22
080	8,015	2,273	287.4	109 / 22
083	8,343	2,273	287.7	100 / 46
088	8,826	2,273	288.7	80 / 50
094	9,392	2,432	290.2	100 / 60
101	10,083	2,432	292.2	110 / 70
103	10,315	2,432	293.4	90 / 25
106	10,642	2,432	300.5	350 / 190
110	11,000	2,432	300.5	160 / 146
115	11,500	2,432	300.6	102 / 84
120	12,000	2,432	300.6	108 / 95

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
125	12,500	2,432	300.7	119 / 181
133	13,267	2,432	304.2	71 / 91
Basin 10, Stream 5				
077	7,726	1,501	285.5	139 / 175
080	7,970	1,501	285.5	129 / 200
083	8,311	1,501	285.5	21 / 200
089	8,867	1,501	285.6	129 / 15
092	9,249	1,501	286.0	122 / 12
097	9,727	1,501	287.6	61 / 12
101	10,103	1,501	289.4	70 / 50
104	10,442	1,289	291.4	22 / 123
Basin 10, Stream 6				
045	4,500	2,058	272.5	75 / 125
050	5,000	2,058	273.4	175 / 175
055	5,500	2,058	274.1	171 / 200
060	6,000	2,058	275.5	91 / 100
065	6,500	2,058	277.6	107 / 140
070	7,000	2,058	280.6	121 / 45
075	7,500	2,058	284.5	98 / 45
080	8,000	2,058	286.8	33 / 84
085	8,506	1,594	287.7	53 / 188
090	9,000	1,594	288.4	77 / 27
100	10,000	1,594	294.0	75 / 15
105	10,500	1,594	298.6	76 / 50
110	11,000	1,594	303.8	22 / 67
116	11,623	1,594	309.6	50 / 50
121	12,119	1,594	317.6	25 / 74
124	12,433	1,594	321.6	50 / 73
130	13,000	1,594	329.7	120 / 60
134	13,440	1,594	339.4	100 / 70
Basin 11, Stream 4				
009	872	1,681	239.5[5]	217 / 45
029	2,942	1,681	240.3	256 / 85
043	4,267	1,681	247.0	254 / 71
052	5,206	1,416	247.1	190 / 378
065	6,476	1,416	250.0	78 / 9
071	7,067	1,416	254.6	10 / 135
078	7,753	1,416	256.2	49 / 204
083	8,280	1,310	257.2	133 / 110
097	9,655	1,310	267.2	73 / 5
106	10,636	1,310	273.4	99 / 152
113	11,309	1,194	274.9	146 / 108
121	12,113	1,194	276.9	27 / 97
127	12,719	1,053	278.8	59 / 15
133	13,253	1,053	280.9	56 / 89
137	13,722	1,053	281.9	146 / 22

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
142	14,207	995	283.0	72 / 61
148	14,811	870	284.7	123 / 44
155	15,453	870	287.0	98 / 5
168	16,757	870	302.2	85 / 100
174	17,408	687	303.3	14 / 84
179	17,870	571	305.9	4 / 97
189	18,916	571	322.9	55 / 53
194	19,377	571	324.8	4 / 33
200	19,986	571	332.2	22 / 24
210	21,008	571	341.3	11 / 16
Basin 11, Stream 7				
001	123	406	278.1	14 / 61
004	358	406	281.4	4 / 27
006	602	406	283.4	24 / 21
009	862	406	284.9	25 / 4
014	1,428	406	293.0	150 / 60
017	1,709	406	295.6	15 / 15
021	2,051	406	301.3	32 / 4
024	2,384	406	308.2	110 / 40
Basin 12, Stream 3				
073	7,332	690	269.1	28 / 41
078	7,838	690	272.2	22 / 21
083	8,318	690	279.2	12 / 25
088	8,750	690	283.9	12 / 31
093	9,274	690	293.1	34 / 8
Basin 14, Stream 2				
009	936	1,335	182.8[5]	14 / 128
016	1,632	1,335	184.0	13 / 114
024	2,434	1,306	187.6	72 / 83
031	3,074	1,306	190.9	83 / 13
037	3,741	1,306	193.8	83 / 30
043	4,330	1,306	195.3	78 / 69
049	4,945	1,306	196.8	132 / 25
057	5,724	947	200.1	12 / 107
065	6,522	947	205.0	41 / 17
071	7,124	947	207.7	12 / 80
078	7,817	947	214.9	18 / 18
083	8,255	947	215.2	75 / 68
088	8,765	947	216.2	54 / 25
093	9,280	947	219.9	44 / 12
098	9,824	947	224.9	13 / 24
Basin 14, Stream 3				
004	386	410	202.5[5]	14 / 79
009	864	410	205.9	14 / 19
018	1,775	410	213.2	5 / 5
023	2,311	410	220.2	5 / 5

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
029	2,918	410	227.6	5 / 5
035	3,466	410	235.5	5 / 5
039	3,867	410	243.8	5 / 4
Basin 20, Stream 5				
020[1]	2,024[2]	800	202.8[55]	36 / 92[4]
026[1]	2,566[2]	800	202.8[55]	36 / 89[4]
030[1]	2,976[2]	800	204.3	53 / 72[4]
032[1]	3,202[2]	800	206.3	37 / 91[4]
036[1]	3,568[2]	800	209.2	19 / 92[4]
039[1]	3,913[2]	800	210.7	71 / 15[4]
041[1]	4,136[2]	800	212.2	45 / 41[4]
044[1]	4,397[2]	800	214.3	87 / 19[4]
048[1]	4,807[2]	800	218.2	60 / 17[4]
049[1]	4,931[2]	800	219.4	64 / 16[4]
051[1]	5,138[2]	800	222.0	64 / 22[4]
054[1]	5,385[2]	800	224.0	45 / 45[4]
057[1]	5,672[2]	800	226.6	39 / 41[4]
059[1]	5,911[2]	800	228.6	48 / 32[4]
061[1]	6,107[2]	800	231.1	50 / 29[4]
064[1]	6,403[2]	800	233.3	30 / 50[4]
066[1]	6,575[2]	800	235.2	13 / 72[4]
066[1]	6,643[2]	800	236.1	11 / 69[4]
068[1]	6,763[2]	800	237.3	14 / 49[4]
068[1]	6,817[2]	800	238.4	13 / 37[4]
070[1]	6,965[2]	800	242.2	40 / 20[4]
072[1]	7,202[2]	800	245.1	61 / 15[4]
074[1]	7,418[2]	800	247.5	24 / 25[4]
077[1]	7,712[2]	800	251.4	26 / 16[4]
079[1]	7,879[2]	800	252.8	15 / 25[4]
080[1]	8,024[2]	800	253.9	16 / 24[4]
082[1]	8,221[2]	800	256.8	16 / 14[4]
Basin 23, Stream 2				
005	500	751	234.0[6]	248 / 3
010	1,000	751	235.0	3 / 120
015	1,500	751	237.7	163 / 5
021	2,127	309	239.8	4 / 50
025	2,485	309	243.8	20 / 14
028	2,839	309	248.7	41 / 6
031	3,077	309	259.8	93 / 104
034	3,355	309	259.8	30 / 20
038	3,764	309	263.2	18 / 20
042	4,219	309	266.5	13 / 31
048	4,835	309	278.2	5 / 7
053	5,310	206	284.0	11 / 6
058	5,810	206	289.4	5 / 6

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
063	6,310	206	295.2	14 / 10
068	6,798	206	302.7	13 / 23
073	7,344	206	307.9	12 / 25
077	7,713	206	309.7	40 / 30
082	8,206	206	314.3	6 / 6
087	8,717	206	318.8	29 / 4
092	9,234	206	320.0	38 / 4
Basin 23, Stream 3				
001[1]	61[2]	474	284.1[55]	27 / 133[4]
004[1]	423[2]	474	285.4	12 / 28[4]
006[1]	631[2]	474	286.2	110 / 110[4]
007[1]	671[2]	474	289.7	60 / 100[4]
008[1]	833[2]	474	289.7	89 / 89[4]
013[1]	1,340[2]	474	289.8	74 / 70[4]
018[1]	1,838[2]	474	294.4	4 / 40[4]
023[1]	2,314[2]	330	298.4	10 / 19[4]
028[1]	2,814[2]	330	305.3	9 / 8[4]
033[1]	3,316[2]	330	315.3	6 / 9[4]
034[1]	3,443[2]	330	318.2	10 / 9[4]
035[1]	3,501[2]	330	323.9	33 / 30[4]
039[1]	3,875[2]	330	324.0	17 / 44[4]
044[1]	4,404[2]	330	325.0	13 / 4[4]
050[1]	5,049[2]	330	328.9	90 / 123[4]
051[1]	5,089[2]	330	333.1	90 / 123[4]
057[1]	5,696[2]	248	333.0	10 / 4[4]
063[1]	6,325[2]	248	336.7	15 / 30[4]
068[1]	6,814[2]	248	339.3	4 / 25[4]
074[1]	7,366[2]	248	344.3	10 / 30[4]
079[1]	7,890[2]	248	348.4	9 / 14[4]
084[1]	8,370[2]	248	353.8	4 / 21[4]
089[1]	8,892[2]	248	360.1	14 / 19[4]
Basin 23, Stream 4				
002	178	285	295.8[5]	14 / 14
010	992	285	308.8	14 / 25
014	1,391	285	315.2	14 / 14
018	1,847	285	321.7	14 / 14
023	2,268	285	328.1	14 / 14
024	2,423	285	332.7	14 / 14
028	2,826	285	337.3	14 / 14
033	3,256	285	343.0	14 / 14
037	3,730	285	347.6	14 / 25
042	4,174	285	351.5	14 / 14
Basin 23, Stream 5				
002[1]	170[2]	416	303.0[55]	46 / 28[4]
006[1]	552[2]	416	303.2[5]	4 / 29[4]
011[1]	1,085[2]	416	306.2	86 / 12[4]

Table 17 - Limited Detailed Flood Hazard Data

Cross Section	Stream Station	Flood Discharge (cfs)	1% Annual Chance Water-Surface Elevation (feet NAVD 88)	Non-Encroachment Width (feet) Left/Right from Stream Centerline
015[1]	1,547[2]	348	308.5	29 / 9[4]
020[1]	2,044[2]	348	312.4	45 / 10[4]
026[1]	2,607[2]	348	317.0	4 / 59[4]
028[1]	2,764[2]	348	317.6	63 / 223[4]
028[1]	2,804[2]	348	322.3	63 / 223[4]
033[1]	3,344[2]	348	322.7	25 / 15[4]
040[1]	3,978[2]	348	328.4	40 / 25[4]
046[1]	4,609[2]	348	330.8	27 / 31[4]
Basin 28, Stream 7				
003	347	806	276.1	23 / 98
008	754	806	279.5	62 / 37
012	1,234	806	283.7	25 / 53
016	1,645	806	286.6	60 / 33
021	2,131	462	289.8	32 / 35
Beaverdam Creek				
227	22,654	523	329.6	40 / 80
Beaverdam Creek				
216	21,587	7,780	265.5[5]	697 / 37
Big Branch				
000	3	1,170	232.2[5]	270 / 93
000	5	1,170	232.2[5]	175 / 175
000	45	1,170	232.2[5]	175 / 175
002	187	1,170	232.2[5]	266 / 15
006	602	1,170	232.2[5]	167 / 15
010	967	1,170	232.2[5]	300 / 20
017	1,723	1,170	232.2[5]	295 / 15
022	2,175	1,170	232.2[5]	151 / 75
025	2,540	1,170	232.2[5]	125 / 58
030	3,009	1,011	232.2[5]	14 / 146
035	3,478	1,011	232.4	109 / 56
036	3,611	1,011	232.8	58 / 15
037	3,734	1,011	245.2	58 / 15
044	4,376	975	245.2	62 / 289
047	4,689	975	245.2	130 / 279
051	5,100	975	245.2	141 / 152
054	5,425	927	245.2	193 / 61
057	5,744	927	245.3	197 / 43
062	6,178	927	245.3	14 / 243
066	6,571	844	245.4	134 / 26
071	7,096	844	245.6	148 / 13
075	7,472	844	245.7	235 / 13
079	7,897	766	245.7	13 / 16
084	8,375	766	248.3	15 / 82
089	8,850	766	249.6	15 / 17
092	9,199	694	251.5	13 / 48
097	9,675	694	253.7	13 / 37

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
099	9,940	694	255.0	16 / 16
102	10,172	694	261.3	16 / 16
106	10,589	418	261.5	171 / 34
109	10,946	394	261.5	20 / 13
113	11,265	394	261.9	10 / 10
118	11,800	286	265.6	10 / 13
122	12,157	286	267.9	10 / 15
125	12,528	286	272.6	40 / 12
130	13,007	286	277.4	30 / 16
134	13,381	251	279.3	13 / 12
139	13,903	251	283.3	7 / 10
142	14,248	198	287.8	11 / 11
146	14,621	198	291.4	11 / 7
150	15,025	198	297.7	9 / 7
Black Creek				
1474[1]	147,375[2]	3,190	213.1	290 / 190[4]
1490[1]	149,043[2]	3,190	216.0	181 / 219[4]
1502[1]	150,164[2]	3,140	218.2	26 / 304[4]
1508[1]	150,843[2]	3,140	219.9	245 / 98[4]
1519[1]	151,857[2]	3,140	221.3	145 / 175[4]
1529[1]	152,884[2]	3,140	223.2	240 / 60[4]
1538[1]	153,788[2]	3,140	225.1	66 / 234[4]
1543[1]	154,255[2]	3,140	226.4	217 / 84[4]
1548[1]	154,762[2]	3,080	227.8	72 / 193[4]
1551[1]	155,139[2]	3,080	229.2	105 / 115[4]
1553[1]	155,277[2]	3,080	231.2	100 / 120[4]
1556[1]	155,569[2]	3,080	231.5	183 / 57[4]
1562[1]	156,161[2]	3,080	231.9	229 / 71[4]
1569[1]	156,852[2]	3,080	232.4	264 / 36[4]
1573[1]	157,325[2]	2,760	233.7	305 / 8[4]
1578[1]	157,752[2]	2,760	234.4	27 / 273[4]
1585[1]	158,526[2]	2,760	235.6	55 / 245[4]
1595[1]	159,472[2]	2,760	238.0	222 / 11[4]
1603[1]	160,265[2]	2,760	239.5	48 / 107[4]
1611[1]	161,111[2]	2,760	241.6	84 / 66[4]
1616[1]	161,574[2]	2,720	244.3	114 / 56[4]
1619[1]	161,861[2]	2,720	244.9	141 / 29[4]
1621[1]	162,060[2]	2,720	246.5	131 / 39[4]
1622[1]	162,235[2]	2,720	246.9	216 / 59[4]
1629[1]	162,918[2]	2,700	248.2	108 / 104[4]
1635[1]	163,472[2]	2,700	251.1	161 / 23[4]
1636[1]	163,603[2]	2,700	262.5	315 / 180[4]
1645[1]	164,498[2]	2,700	262.5	336 / 282[4]
1656[1]	165,580[2]	2,700	262.5	200 / 270[4]
1668[1]	166,794[2]	2,700	262.6	402 / 62[4]

Table 17 - Limited Detailed Flood Hazard Data

Cross Section	Stream Station	Flood Discharge (cfs)	1% Annual Chance Water-Surface Elevation (feet NAVD 88)	Non-Encroachment Width (feet) Left/Right from Stream Centerline
1679[1]	167,864[2]	2,560	262.9	310 / 138[4]
1690[1]	168,961[2]	2,560	263.7	178 / 138[4]
1696[1]	169,621[2]	2,560	265.2	69 / 166[4]
1702[1]	170,241[2]	2,560	267.2	98 / 149[4]
1711[1]	171,090[2]	2,420	268.6	119 / 127[4]
1718[1]	171,795[2]	2,420	270.9	116 / 84[4]
1725[1]	172,522[2]	2,420	274.5	36 / 164[4]
1732[1]	173,160[2]	2,350	276.7	80 / 52[4]
1734[1]	173,415[2]	2,350	277.7	13 / 69[4]
1736[1]	173,570[2]	2,350	278.7	35 / 57[4]
1737[1]	173,739[2]	2,350	279.2	77 / 88[4]
1742[1]	174,249[2]	2,350	279.8	45 / 155[4]
1748[1]	174,794[2]	2,350	280.4	158 / 42[4]
1753[1]	175,313[2]	2,350	281.5	88 / 82[4]
1758[1]	175,781[2]	2,120	283.9	70 / 103[4]
1763[1]	176,281[2]	2,120	284.7	30 / 137[4]
1766[1]	176,568[2]	2,120	295.1	145 / 432[4]
1769[1]	176,934[2]	2,120	295.1	349 / 326[4]
1774[1]	177,364[2]	2,120	295.1	309 / 158[4]
1780[1]	177,974[2]	2,120	295.1	222 / 192[4]
1783[1]	178,328[2]	2,120	295.1	34 / 509[4]
1785[1]	178,522[2]	2,120	295.2	11 / 570[4]
1786[1]	178,620[2]	2,120	296.0	15 / 585[4]
1787[1]	178,678[2]	2,120	296.1	10 / 572[4]
1791[1]	179,112[2]	2,120	302.9	255 / 510[4]
1796[1]	179,573[2]	2,120	302.9	253 / 346[4]
1802[1]	180,166[2]	2,120	302.9	254 / 207[4]
1806[1]	180,584[2]	2,120	303.0	197 / 160[4]
1809[1]	180,906[2]	1,810	303.0	258 / 102[4]
1813[1]	181,270[2]	1,810	303.1	21 / 464[4]
1815[1]	181,454[2]	1,810	308.6	73 / 463[4]
1820[1]	181,996[2]	1,810	308.6	159 / 372[4]
1826[1]	182,609[2]	1,810	308.6	278 / 250[4]
1832[1]	183,152[2]	1,810	308.6	319 / 66[4]
1835[1]	183,535[2]	1,360	308.6	163 / 37[4]
1837[1]	183,718[2]	1,360	309.0	155 / 25[4]
1840[1]	184,023[2]	1,360	310.6	57 / 68[4]
1843[1]	184,275[2]	1,360	312.1	61 / 59[4]
1846[1]	184,570[2]	1,360	314.0	21 / 99[4]
1850[1]	184,974[2]	1,360	316.0	96 / 24[4]
1853[1]	185,343[2]	1,360	318.0	31 / 69[4]
1855[1]	185,529[2]	1,360	319.2	40 / 50[4]
1857[1]	185,734[2]	1,360	320.1	64 / 26[4]
1860[1]	186,017[2]	1,360	320.4	20 / 70[4]
1862[1]	186,191[2]	1,360	321.4	71 / 27[4]

Table 17 - Limited Detailed Flood Hazard Data

Cross Section	Stream Station	Flood Discharge (cfs)	1% Annual Chance Water-Surface Elevation (feet NAVD 88)	Non-Encroachment Width (feet) Left/Right from Stream Centerline
1863[1]	186,269[2]	1,360	321.6	71 / 27[4]
1865[1]	186,511[2]	1,360	322.4	53 / 47[4]
1867[1]	186,658[2]	1,360	323.0	62 / 38[4]
1869[1]	186,879[2]	1,360	324.2	53 / 47[4]
Cedar Fork (Basin 10, Stream 15)				
002	158	2,368	287.0[5]	55 / 40
016	1,644	2,368	301.3	188 / 182
023	2,261	2,368	301.3	175 / 75
030	3,044	2,368	304.6	235 / 106
035	3,480	2,368	305.4	323 / 9
040	4,039	2,316	306.6	172 / 28
045	4,503	2,316	307.5	288 / 18
049	4,920	2,316	308.3	80 / 5
054	5,374	2,316	311.1	169 / 100
060	6,009	2,316	312.0	134 / 183
068	6,795	2,316	313.3	234 / 185
072	7,227	2,316	314.1	252 / 6
077	7,664	2,316	314.9	244 / 44
085	8,530	2,219	316.5	248 / 84
091	9,087	2,219	318.5	62 / 120
097	9,661	2,219	320.2	210 / 140
103	10,268	2,219	321.5	200 / 100
111	11,052	1,995	324.6	132 / 50
116	11,620	1,995	326.2	277 / 50
123	12,260	1,995	329.1	48 / 40
127	12,713	1,995	333.1	133 / 50
132	13,196	1,995	334.9	50 / 89
137	13,686	1,995	338.5	50 / 50
142	14,183	1,995	340.9	40 / 126
147	14,671	1,995	342.3	40 / 98
153	15,338	1,995	345.9	66 / 78
160	15,970	1,995	348.7	50 / 133
164	16,364	1,995	350.4	50 / 141
169	16,921	1,307	353.7	50 / 73
174	17,412	1,307	357.5	68 / 33
177	17,741	1,307	360.1	203 / 127
Clark Branch (Basin 28, Stream 3)				
007	738	1,360	257.1	243 / 13
011	1,087	1,360	258.9	14 / 59
015	1,544	1,360	261.8	109 / 13
020	1,951	1,360	264.2	34 / 13
024	2,422	1,360	267.0	57 / 34
029	2,910	1,360	269.0	53 / 75
034	3,424	1,360	272.9	20 / 15
038	3,780	1,360	277.4	50 / 40

Table 17 - Limited Detailed Flood Hazard Data

Cross Section	Stream Station	Flood Discharge (cfs)	1% Annual Chance Water-Surface Elevation (feet NAVD 88)	Non-Encroachment Width (feet) Left/Right from Stream Centerline
039	3,880	1,360	281.3	50 / 40
042	4,247	1,360	281.8	70 / 55
048	4,767	1,360	283.8	14 / 133
053	5,317	785	287.6	11 / 42
058	5,751	785	293.2	11 / 59
062	6,192	785	297.6	11 / 56
066	6,576	785	301.7	36 / 18
Coles Branch (Basin 18, Stream 24)				
110[1]	10,976[2]	1,772	368.9	50 / 100[4]
113[1]	11,292[2]	894	370.2	85 / 50[4]
116[1]	11,599[2]	894	372.0	16 / 96[4]
Dutchmans Branch (Basin 20, Stream 17)				
258[1]	25,770[2]	1,967	391.2	86 / 14[4]
258[1]	25,819[2]	1,511	392.2	77 / 39[4]
259[1]	25,893[2]	1,511	395.4	54 / 66[4]
262[1]	26,220[2]	1,511	395.6	132 / 101[4]
266[1]	26,554[2]	1,511	395.9	162 / 28[4]
Fowlers Mill Creek (Basin 10, Stream 12)				
006	648	3,101	266.3[5]	158 / 90
011	1,086	3,101	266.3[5]	191 / 90
015	1,472	3,101	266.3[5]	100 / 125
020	2,033	3,101	266.3	50 / 150
026	2,584	3,101	267.2	200 / 90
030	3,023	3,101	267.9	170 / 80
039	3,949	3,101	272.6	37 / 200
044	4,390	3,101	274.2	209 / 202
050	5,048	3,101	275.9	209 / 202
055	5,530	3,101	277.5	209 / 202
071	7,092	2,556	286.0	431 / 273
081	8,130	1,590	286.1	276 / 428
088	8,753	1,590	289.9	35 / 30
093	9,275	1,590	298.5	48 / 126
098	9,787	1,373	301.9	116 / 50
103	10,335	1,373	308.5	30 / 50
107	10,653	1,373	312.6	26 / 35
Guffy Branch (Basin 21, Stream 4)				
005	500	1,029	231.3[5]	121 / 97
010	1,028	1,029	233.3	16 / 109
015	1,500	1,029	235.6	23 / 32
027	2,749	923	241.8	22 / 44
033	3,290	923	246.1	53 / 33
039	3,855	923	247.6	37 / 158
044	4,374	923	249.1	5 / 175
049	4,860	923	250.9	31 / 53
053	5,340	923	252.5	94 / 16
058	5,775	923	253.9	12 / 22

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
063	6,275	853	256.4	28 / 8
068	6,775	853	258.5	60 / 15
073	7,275	853	260.2	41 / 74
078	7,775	853	262.2	4 / 159
083	8,275	853	264.0	40 / 103
088	8,775	853	266.4	38 / 80
092	9,228	853	268.9	77 / 34
098	9,793	764	271.0	70 / 110
103	10,342	764	272.6	3 / 116
108	10,801	764	275.4	45 / 99
113	11,314	764	278.1	35 / 76
118	11,821	764	280.5	111 / 6
123	12,321	764	282.3	66 / 34
128	12,801	764	284.2	81 / 7
133	13,331	660	286.7	7 / 128
138	13,812	660	288.8	49 / 51
143	14,269	660	291.3	93 / 11
148	14,769	517	293.7	40 / 31
153	15,269	517	296.7	2 / 108
158	15,793	517	300.3	2 / 99
162	16,224	517	304.6	2 / 61
167	16,728	517	309.3	46 / 26
172	17,234	452	311.9	22 / 4
177	17,734	452	315.0	50 / 10
183	18,276	410	318.9	4 / 27
187	18,745	410	323.1	8 / 14
192	19,212	410	328.5	17 / 13
197	19,743	287	331.8	27 / 9
202	20,196	287	336.3	4 / 7
206	20,648	287	341.5	20 / 60
211	21,068	287	344.7	14 / 13
216	21,565	287	347.7	15 / 90
221	22,065	287	350.5	6 / 4
226	22,633	287	354.7	25 / 45
Hatchet Grove Tributary (Basin 18, Stream 25)				
108[1]	10,814[2]	1,726	330.8	100 / 100
117[1]	11,719[2]	1,726	330.8	103 / 103
126[1]	12,582[2]	1,430	330.8	58 / 58
130[1]	13,011[2]	1,159	330.8	19 / 73
133[1]	13,344[2]	1,159	330.8	63 / 37
137[1]	13,681[2]	1,159	333.4	121 / 39[4]
139[1]	13,896[2]	1,159	335.2	94 / 106[4]
141[1]	14,112[2]	1,159	335.5	54 / 57[4]
143[1]	14,300[2]	1,159	336.1	52 / 22[4]
Hodges Creek (Basin 8, Stream 1)				

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
163	16,293	2,390	226.0	18 / 143
170	16,975	2,390	229.8	17 / 21
175	17,537	2,390	234.8	39 / 65
180	18,008	2,390	236.8	20 / 173
183	18,307	1,880	237.7	29 / 92
191	19,054	1,880	247.9	102 / 23
195	19,534	1,880	254.2	34 / 48
200	19,952	1,780	267.4	34 / 27
204	20,369	1,780	273.2	21 / 41
209	20,933	1,780	277.4	53 / 41
214	21,377	1,780	280.9	29 / 25
222	22,160	1,780	290.5	93 / 130
226	22,626	1,450	290.6	212 / 86
230	23,047	1,450	290.8	154 / 64
235	23,516	1,450	291.8	90 / 156
241	24,117	1,450	295.5	170 / 33
246	24,623	1,450	300.1	15 / 100
250	25,030	1,450	302.7	132 / 43
255	25,521	816	304.5	185 / 48
262	26,210	816	308.5	12 / 32
269	26,852	816	313.8	92 / 51
273	27,336	756	317.4	76 / 12
278	27,789	756	322.0	101 / 12
283	28,293	756	325.1	16 / 54
287	28,691	756	329.8	50 / 12
291	29,142	756	336.8	14 / 12
Hominy Creek (Basin 10, Stream 7)				
021	2,375	2,445	252.7[5]	180 / 120
026	2,812	2,445	252.7	200 / 180
030	3,226	2,445	252.3	190 / 190
033	3,534	2,445	253.6	100 / 125
039	4,192	2,445	256.7	175 / 45
045	4,803	2,375	259.4	140 / 75
052	5,471	2,375	264.4	90 / 50
057	5,984	2,375	267.9	183 / 137
063	6,530	2,375	268.6	74 / 163
069	7,106	1,912	270.5	14 / 200
080	8,208	1,912	274.5	349 / 269
086	8,824	1,912	274.5	173 / 83
095	9,733	1,912	277.0	120 / 120
100	10,248	1,829	278.4	80 / 40
105	10,707	1,829	282.2	80 / 140
112	11,432	1,829	287.4	130 / 100
116	11,892	1,829	287.6	169 / 100
123	12,554	1,829	288.2	104 / 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
130	13,228	1,829	290.7	105 / 167
134	13,699	1,829	294.4	50 / 75
146	14,891	1,829	313.0	23 / 256
151	15,339	1,262	313.2	233 / 155
158	16,059	1,262	316.7	12 / 61
166	16,820	1,262	328.1	126 / 48
173	17,592	1,262	330.4	36 / 35
177	17,990	1,262	336.6	46 / 35
Horse Creek Tributary 1				
004	412	900	340.5[5]	37 / 56
005	540	900	344.2	49 / 51
008	796	900	344.4	100 / 99
011	1,124	900	344.7	92 / 113
Jack Branch (Basin 28, Stream 4)				
006	572	1,610	274.1	40 / 243
016	1,563	1,610	279.9	10 / 234
020	1,975	1,610	282.6	10 / 208
024	2,420	1,610	285.4	114 / 107
031	3,056	1,610	289.6	134 / 65
036	3,598	1,610	293.7	86 / 70
039	3,883	1,610	295.3	78 / 77
044	4,440	1,380	298.6	95 / 70
051	5,123	1,380	303.7	77 / 66
054	5,432	1,380	305.8	80 / 6
058	5,810	1,380	308.6	51 / 58
062	6,185	1,380	311.0	20 / 80
063	6,262	1,380	311.6	20 / 80
067	6,671	1,380	315.2	28 / 77
070	6,988	1,380	319.0	66 / 65
073	7,304	490	322.3	6 / 35
077	7,675	490	330.7	10 / 19
Jim Branch				
002	227	1,082	232.2[5]	13 / 147
006	568	1,082	232.2[5]	13 / 80
009	871	1,082	232.2[5]	44 / 20
012	1,221	1,082	232.2[5]	21 / 45
015	1,530	1,082	232.2[5]	15 / 28
019	1,857	1,082	233.9	13 / 49
022	2,174	1,082	235.2	13 / 65
025	2,525	1,011	236.6	22 / 79
028	2,845	1,011	237.7	13 / 53
033	3,347	816	240.5	16 / 121
038	3,786	816	242.5	33 / 18
042	4,245	816	245.6	19 / 96
046	4,591	816	246.9	12 / 110
049	4,935	816	249.1	12 / 88

Table 17 - Limited Detailed Flood Hazard Data

Cross Section	Stream Station	Flood Discharge (cfs)	1% Annual Chance Water-Surface Elevation (feet NAVD 88)	Non-Encroachment Width (feet) Left/Right from Stream Centerline
053	5,258	816	251.9	19 / 28
Juniper Branch (Basin 21, Stream 2)				
005	500	700	262.1	41 / 52
009	926	700	264.5	133 / 5
014	1,422	700	267.3	75 / 3
019	1,922	700	270.6	36 / 6
024	2,422	700	273.6	34 / 15
029	2,922	700	277.7	18 / 44
034	3,422	700	281.5	11 / 54
039	3,916	700	285.2	105 / 3
044	4,359	700	288.6	15 / 20
049	4,856	607	293.7	155 / 45
053	5,283	607	298.3	65 / 65
058	5,772	607	302.6	83 / 4
063	6,272	607	303.8	2 / 71
068	6,825	557	306.2	25 / 50
080	8,013	557	315.2	2 / 37
085	8,474	557	320.8	50 / 65
090	9,012	489	323.6	25 / 15
095	9,512	489	326.7	25 / 17
Kenneth Creek				
247	24,685	3,389	256.5	18 / 113
251	25,063	3,389	257.7	12 / 229
254	25,350	3,389	258.3	78 / 87
261	26,064	2,194	260.7	40 / 52
Lake Benson				
139[1]	13,932[2]	970	316.1	32 / 13[4]
140[1]	13,991[2]	970	316.4	28 / 22[4]
141[1]	14,100[2]	970	321.7	37 / 28[4]
142[1]	14,177[2]	970	322.6	35 / 39[4]
144[1]	14,430[2]	970	322.9	19 / 46[4]
147[1]	14,672[2]	970	324.2	* 4
148[1]	14,847[2]	970	326.2	* 4
Ledge Creek				
190	19,013	6,929	265.5[5]	538 / 692
Lens Branch (Basin 20, Stream 22)				
158[1]	15,793[2]	1,779	387.4	88 / 22[4]
162[1]	16,155[2]	1,779	387.4	258 / 13[4]
164[1]	16,375[2]	1,779	387.4	219 / 16[4]
166[1]	16,567[2]	1,779	387.4	168 / 21[4]
168[1]	16,782[2]	1,779	387.4	184 / 12[4]
170[1]	16,983[2]	1,779	387.5	142 / 42[4]
170[1]	16,997[2]	1,779	387.5	143 / 41[4]
173[1]	17,276[2]	1,779	387.6	17 / 225[4]
175[1]	17,465[2]	1,779	387.6	15 / 251[4]

Table 17 - Limited Detailed Flood Hazard Data

Cross Section	Stream Station	Flood Discharge (cfs)	1% Annual Chance Water-Surface Elevation (feet NAVD 88)	Non-Encroachment Width (feet) Left/Right from Stream Centerline
Little Beaverdam Creek (Basin 2, Stream 2)				
029	2,885	1,690	265.5[5]	50 / 231
032	3,217	1,690	265.5[5]	93 / 163
036	3,593	1,690	265.5[5]	58 / 126
039	3,947	1,690	265.5[5]	135 / 78
044	4,380	1,690	265.5[5]	252 / 15
050	5,023	1,690	265.5[5]	28 / 101
056	5,563	1,690	265.5[5]	54 / 48
062	6,165	1,288	266.0	64 / 58
069	6,859	1,288	269.6	113 / 13
075	7,550	1,288	272.2	109 / 128
081	8,073	1,288	274.1	193 / 13
086	8,566	1,288	276.5	157 / 13
092	9,237	1,288	280.6	60 / 42
098	9,791	1,288	284.0	44 / 62
103	10,334	1,288	286.5	35 / 59
110	11,027	1,288	290.6	34 / 64
118	11,824	1,288	297.1	56 / 58
Little Black Creek				
217	21,726	1,334	228.7	195 / 8
223	22,321	1,263	229.7	185 / 7
227	22,724	1,263	231.2	7 / 37
237	23,676	1,263	233.9	50 / 43
242	24,224	1,263	235.5	156 / 22
247	24,724	1,263	237.2	114 / 83
252	25,224	1,194	238.4	62 / 100
257	25,724	1,194	239.2	121 / 113
262	26,224	1,194	240.4	148 / 35
268	26,770	1,194	242.6	7 / 149
272	27,218	1,118	243.6	14 / 264
278	27,784	1,011	245.2	32 / 57
282	28,224	1,011	247.2	136 / 6
287	28,724	1,011	248.7	31 / 89
292	29,158	1,011	249.7	12 / 194
296	29,588	1,011	250.6	6 / 105
300	30,009	1,011	251.8	43 / 138
305	30,515	1,011	252.8	79 / 12
310	31,015	1,011	254.9	112 / 76
315	31,515	1,011	256.2	117 / 36
320	32,015	823	257.5	96 / 105
330	33,015	823	262.0	56 / 119
335	33,515	760	262.6	32 / 94
340	34,015	760	264.0	18 / 110
345	34,477	715	265.5	3 / 123
350	34,982	715	268.1	30 / 35

Table 17 - Limited Detailed Flood Hazard Data

Cross Section	Stream Station	Flood Discharge (cfs)	1% Annual Chance Water-Surface Elevation (feet NAVD 88)	Non-Encroachment Width (feet) Left/Right from Stream Centerline
355	35,464	715	269.8	20 / 75
360	35,952	715	271.3	20 / 120
366	36,588	715	274.4	50 / 60
372	37,155	715	276.6	50 / 60
383	38,346	554	283.1	32 / 46
388	38,800	554	284.9	30 / 85
393	39,323	527	288.8	20 / 45
399	39,886	527	292.7	25 / 125
403	40,275	527	295.2	11 / 36
408	40,810	527	299.8	40 / 75
Little Brier Creek (Basin 18, Stream 15)				
207	20,668	2,437	347.7	55 / 45
Little Brier Creek East (Basin 18, Stream 16)				
126	12,600	622	383.7	30 / 7
Little Creek (Basin 11, Stream 2)				
024	2,385	2,136	215.6	142 / 17
223	22,302	756	284.6	15 / 50
226	22,639	756	286.7	10 / 25
230	23,000	756	291.5	10 / 25
236	23,570	756	299.2	20 / 100
246	24,625	756	309.9	14 / 182
249	24,869	756	312.1	28 / 13
Little Creek (Into Middle Creek)				
115	11,523	1,711	220.4	136 / 129
120	12,023	1,711	221.5	20 / 170
125	12,507	1,711	222.7	20 / 252
130	13,021	1,711	224.2	230 / 20
135	13,514	1,711	225.3	147 / 113
141	14,062	1,711	226.0	93 / 160
145	14,514	1,711	226.7	82 / 182
150	15,014	1,711	227.5	156 / 169
155	15,534	1,711	228.6	20 / 116
161	16,094	1,711	230.9	218 / 20
164	16,441	1,711	231.2	20 / 119
170	17,015	1,189	232.2	155 / 17
175	17,509	1,189	232.9	28 / 17
180	17,976	1,189	234.5	40 / 25
185	18,475	1,189	236.5	64 / 16
190	18,961	1,171	238.2	86 / 13
194	19,395	1,171	239.7	50 / 28
199	19,948	1,171	241.3	61 / 33
205	20,461	1,171	242.6	90 / 58
210	20,961	1,171	243.9	17 / 67
215	21,461	1,145	246.6	125 / 65
220	21,961	1,145	248.6	45 / 151
225	22,461	1,145	249.4	90 / 77

Table 17 - Limited Detailed Flood Hazard Data

Cross Section	Stream Station	Flood Discharge (cfs)	1% Annual Chance Water-Surface Elevation (feet NAVD 88)	Non-Encroachment Width (feet) Left/Right from Stream Centerline
230	23,014	1,145	250.9	17 / 79
234	23,441	1,145	253.4	54 / 77
239	23,941	1,085	255.9	16 / 250
244	24,369	1,085	257.3	32 / 94
249	24,869	1,085	259.0	68 / 45
254	25,411	1,085	260.0	59 / 132
258	25,843	1,085	260.8	32 / 82
264	26,436	744	263.0	58 / 50
269	26,895	744	265.6	27 / 20
274	27,383	744	269.1	52 / 13
279	27,877	744	272.7	13 / 44
284	28,377	744	275.7	102 / 49
289	28,886	744	278.5	13 / 102
294	29,374	744	281.8	13 / 49
299	29,874	701	284.1	30 / 84
304	30,374	701	286.3	62 / 28
309	30,874	701	289.4	18 / 76
314	31,420	701	293.9	40 / 20
318	31,824	701	295.9	13 / 86
322	32,162	701	296.9	16 / 92
327	32,701	701	299.5	37 / 58
332	33,186	701	302.0	17 / 88
336	33,555	701	303.3	79 / 13
343	34,292	701	307.6	45 / 58
348	34,753	594	308.5	28 / 32
352	35,177	594	311.1	27 / 12
357	35,701	594	315.8	28 / 103
362	36,168	594	318.4	12 / 81
366	36,606	594	321.7	65 / 34
371	37,128	594	325.4	28 / 64
375	37,537	513	328.8	51 / 13
383	38,298	513	333.0	22 / 73
387	38,673	513	335.0	66 / 19
Little River				
4214	421,449	4,620	320.4	67 / 94
4219	421,949	4,620	321.2	119 / 35
4233	423,256	3,985	323.3	180 / 13
4239	423,858	3,985	323.9	70 / 108
424	424,449	3,985	324.4	399 / 159
Little White Oak Creek (Basin 26, Stream 9)				
001	94	1,848	232.2[5]	157 / 327
006	603	1,848	232.2[5]	167 / 329
007	750	1,848	232.2[5]	34 / 432
008	817	1,848	232.2[5]	34 / 432
014	1,424	1,848	232.2[5]	92 / 245

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
020	2,037	1,797	232.2[5]	110 / 355
025	2,483	1,797	232.2[5]	133 / 446
031	3,073	1,797	232.2[5]	72 / 410
036	3,560	1,797	232.2[5]	206 / 158
041	4,145	1,797	232.2[5]	353 / 16
046	4,633	1,680	232.9	193 / 15
051	5,129	1,680	234.2	243 / 15
056	5,573	1,680	235.4	235 / 23
062	6,238	1,632	236.9	170 / 18
068	6,786	1,632	238.0	110 / 179
074	7,411	1,596	239.2	15 / 137
079	7,930	1,596	240.2	15 / 234
084	8,432	1,478	241.1	53 / 57
090	9,020	1,478	243.0	82 / 17
095	9,520	1,454	244.5	106 / 14
101	10,054	1,419	245.6	130 / 39
104	10,431	1,419	246.4	69 / 51
105	10,549	1,419	246.6	28 / 24
106	10,595	1,419	246.9	28 / 24
107	10,728	1,419	247.1	47 / 14
111	11,116	1,039	248.6	17 / 100
115	11,504	1,039	249.9	12 / 122
117	11,725	1,039	250.2	25 / 75
118	11,773	1,039	251.3	25 / 75
124	12,385	1,023	251.7	12 / 42
129	12,936	1,023	254.1	13 / 196
134	13,448	1,023	256.0	142 / 12
140	14,022	885	259.3	12 / 68
145	14,524	885	261.5	12 / 135
149	14,926	885	263.0	12 / 59
153	15,348	885	263.8	21 / 21
155	15,536	858	265.3	21 / 21
161	16,129	858	267.2	12 / 15
167	16,708	793	273.3	14 / 109
171	17,118	793	274.1	40 / 100
181	18,066	650	277.1	14 / 105
188	18,807	650	281.8	127 / 12
194	19,362	650	284.4	50 / 12
199	19,883	650	288.4	12 / 87
Little White Oak Creek Tributary 2				
006	620	478	248.5	12 / 12
010	991	478	251.6	12 / 12
014	1,425	464	255.1	12 / 12
017	1,748	464	257.9	12 / 12
020	1,956	464	261.4	41 / 39

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
Nancy Branch				
077[1]	7,744[2]	987	257.8	154 / 20[4]
080[1]	7,997[2]	730	259.4	17 / 29[4]
083[1]	8,265[2]	730	259.5	35 / 75[4]
086[1]	8,568[2]	730	259.7	40 / 70[4]
090[1]	8,958[2]	730	260.4	86 / 24[4]
093[1]	9,332[2]	730	262.0	94 / 16[4]
096[1]	9,612[2]	730	263.0	50 / 60[4]
099[1]	9,869[2]	730	264.2	15 / 27[4]
102[1]	10,242[2]	730	266.6	65 / 20[4]
106[1]	10,554[2]	730	267.4	63 / 10[4]
108[1]	10,840[2]	730	270.0	53 / 22[4]
112[1]	11,181[2]	730	271.4	13 / 37[4]
116[1]	11,560[2]	730	274.4	30 / 20[4]
117[1]	11,748[2]	730	275.6	9 / 11[4]
121[1]	12,092[2]	730	278.6	14 / 21[4]
122[1]	12,235[2]	730	286.2	27 / 26[4]
124[1]	12,379[2]	730	286.2	49 / 51[4]
126[1]	12,570[2]	730	286.2	85 / 65[4]
130[1]	13,033[2]	730	286.4	83 / 72[4]
133[1]	13,288[2]	730	286.5	63 / 27[4]
135[1]	13,483[2]	730	286.9	12 / 58[4]
138[1]	13,806[2]	730	288.7	24 / 16[4]
Neil Branch (Basin 24, Stream 8)				
035[1]	3,507[2]	1,180	343.8	46 / 73[4]
036[1]	3,581[2]	1,180	343.9	67 / 41[4]
036[1]	3,638[2]	1,180	343.9	67 / 55[4]
038[1]	3,771[2]	1,180	344.1	16 / 55[4]
039[1]	3,948[2]	1,180	344.6	11 / 80[4]
041[1]	4,101[2]	1,180	345.4	43 / 57[4]
042[1]	4,191[2]	1,180	345.9	18 / 42[4]
043[1]	4,280[2]	1,180	347.0	14 / 72[4]
Neil Creek (Basin 24, Stream 7)				
031[1]	3,143[2]	1,150	323.3	32 / 19[4]
032[1]	3,186[2]	850	323.4	50 / 15[4]
032[1]	3,224[2]	850	324.4	50 / 15[4]
034[1]	3,355[2]	850	324.5	15 / 39[4]
035[1]	3,503[2]	850	324.6	11 / 42[4]
036[1]	3,633[2]	850	324.9	16 / 42[4]
038[1]	3,771[2]	850	325.2	27 / 19[4]
039[1]	3,870[2]	850	327.2	55 / 15[4]
040[1]	4,033[2]	850	328.6	15 / 47[4]
Neills Creek				
614	61,362	1,187	262.9	23 / 54
620	61,992	1,187	266.7	17 / 222
624	62,407	1,187	268.0	6 / 164

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
629	62,909	1,137	270.3	114 / 82
634	63,409	1,137	272.5	5 / 177
638	63,838	1,137	274.8	94 / 38
645	64,497	1,137	277.9	125 / 38
650	65,010	1,057	280.4	59 / 70
656	65,562	1,057	282.9	78 / 44
659	65,909	1,057	284.2	5 / 82
664	66,409	1,057	287.0	38 / 72
669	66,860	840	289.0	93 / 22
673	67,341	840	290.8	26 / 89
680	67,962	840	294.1	83 / 20
684	68,409	840	296.1	110 / 23
688	68,796	840	297.4	81 / 52
692	69,172	840	300.5	3 / 92
Perry Creek (Basin 10, Stream 19)				
005	466	2,647	318.3[5]	87 / 272
011	1,118	2,647	318.3[5]	47 / 82
016	1,601	2,647	320.2	31 / 99
019	1,941	2,647	321.2	77 / 133
034	3,422	2,647	324.4	595 / 18
041	4,079	2,647	324.9	247 / 161
046	4,560	2,582	325.2	319 / 293
057	5,725	2,582	329.1	230 / 260
064	6,413	2,582	329.4	182 / 168
070	7,026	2,528	330.1	93 / 247
076	7,565	2,528	331.2	92 / 103
084	8,395	2,528	332.9	17 / 326
089	8,912	2,528	333.4	17 / 348
095	9,510	2,528	334.1	27 / 394
102	10,196	2,528	336.4	37 / 90
108	10,799	2,525	341.5	15 / 86
112	11,249	2,525	343.6	20 / 40
121	12,120	2,525	347.9	300 / 200
127	12,744	2,525	348.1	250 / 175
134	13,371	2,525	348.8	150 / 90
150	14,986	2,195	355.9	208 / 50
156	15,621	2,195	359.5	98 / 75
163	16,269	2,195	360.7	81 / 147
169	16,875	1,428	361.2	74 / 327
174	17,370	1,428	361.6	61 / 101
178	17,836	1,428	363.0	60 / 150
185	18,461	1,428	364.6	60 / 150
191	19,113	1,428	367.0	60 / 175
195	19,527	1,428	369.3	55 / 112
199	19,949	1,428	370.6	88 / 117

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
204	20,440	1,178	372.1	109 / 75
210	20,968	1,178	374.8	60 / 20
215	21,509	1,178	377.6	14 / 148
220	22,041	1,178	380.9	36 / 14
Snipes Creek				
281	28,051	723	279.1	65 / 15
283	28,349	723	280.6	30 / 70
291	29,136	723	285.2	17 / 43
296	29,634	723	288.1	23 / 82
302	30,223	723	292.9	35 / 30
306	30,595	723	296.3	19 / 46
311	31,124	723	301.8	20 / 15
316	31,578	723	309.6	56 / 37
320	32,002	723	310.1	7 / 27
325	32,465	723	315.8	21 / 34
332	33,152	723	321.0	19 / 19
337	33,670	723	325.5	44 / 48
344	34,417	723	330.2	41 / 18
Straight Branch (Basin 20, Stream 23)				
043[1]	4,275[2]	1,698	401.0	* 4
044[1]	4,388[2]	1,698	401.0	* 4
045[1]	4,505[2]	1,698	401.0	* 4
045[1]	4,541[2]	1,698	401.0	* 4
047[1]	4,736[2]	1,698	401.0	* 4
050[1]	4,952[2]	1,698	401.0	* 4
052[1]	5,158[2]	1,698	401.0	* 4
Thomas Creek				
001	73	992	232.2[5]	56 / 190
006	595	992	232.2[5]	206 / 13
009	879	992	232.2[5]	206 / 34
012	1,174	992	232.2[5]	208 / 13
016	1,598	992	232.2[5]	53 / 145
021	2,088	649	232.2[5]	20 / 97
024	2,444	649	232.2[5]	63 / 40
029	2,937	649	233.0	128 / 12
033	3,325	649	234.4	58 / 12
038	3,761	649	236.4	56 / 46
042	4,182	606	237.4	16 / 95
045	4,506	606	238.6	29 / 37
049	4,865	606	240.5	63 / 12
052	5,218	606	241.8	14 / 69
056	5,615	606	243.8	30 / 13
058	5,788	606	245.0	12 / 15
Turkey Creek Tributary				

Table 17 - Limited Detailed Flood Hazard Data

Cross Section	Stream Station	Flood Discharge (cfs)	1% Annual Chance Water-Surface Elevation (feet NAVD 88)	Non-Encroachment Width (feet) Left/Right from Stream Centerline
002	159	840	314.6[5]	30 / 76
004	375	840	319.2	60 / 25
006	578	840	319.2	45 / 40
007	713	840	319.9	50 / 40
011	1,075	840	320.9	45 / 50
014	1,391	840	323.2	26 / 48
017	1,658	840	324.4	32 / 10
019	1,883	840	326.0	23 / 15
024	2,352	840	329.4	17 / 15
029	2,908	840	332.6	25 / 15
032	3,157	840	339.7	32 / 16
033	3,343	840	340.9	11 / 23
034	3,440	840	341.0	6 / 22
Wheelers Creek (Basin 10, Stream 25)				
096[1]	9,625[2]	2,024	283.6	45 / 93[4]
097[1]	9,687[2]	2,024	283.8	15 / 121[4]
098[1]	9,805[2]	2,024	285.7	20 / 129[4]
100[1]	10,026[2]	2,024	286.1	43 / 57[4]
102[1]	10,195[2]	2,024	286.9	49 / 31[4]
104[1]	10,407[2]	2,024	289.2	45 / 25[4]
106[1]	10,601[2]	2,024	291.6	20 / 30[4]
White Oak Creek				
317	31,681	3,380	269.4	20 / 180
321	32,143	3,380	271.1	102 / 385
328	32,758	3,380	272.3	194 / 337
342	34,200	2,160	276.6	154 / 47
353	35,341	2,160	281.1	148 / 118
360	36,021	2,160	282.5	224 / 141
365	36,537	2,160	283.9	213 / 43
369	36,947	2,160	286.5	199 / 82
375	37,453	2,160	289.0	283 / 61
381	38,079	2,160	291.3	95 / 226
388	38,831	2,160	294.1	9 / 246
393	39,280	2,160	295.8	34 / 290
397	39,723	2,160	297.3	63 / 130
404	40,355	2,160	300.1	67 / 31
407	40,745	2,160	301.9	123 / 63
413	41,298	2,040	303.4	28 / 197
416	41,561	2,040	303.9	40 / 40
417	41,747	2,040	307.9	40 / 40
418	41,817	2,040	308.2	50 / 100
419	41,877	2,040	308.3	50 / 100
422	42,203	2,040	308.4	107 / 242
425	42,506	2,040	309.1	106 / 102
429	42,927	2,040	311.1	61 / 63

Table 17 - Limited Detailed Flood Hazard Data

Cross Section	Stream Station	Flood Discharge (cfs)	1% Annual Chance Water-Surface Elevation (feet NAVD 88)	Non-Encroachment Width (feet) Left/Right from Stream Centerline
431	43,093	2,040	311.6	59 / 80
433	43,318	2,040	314.4	59 / 80
436	43,563	2,040	314.7	76 / 107
440	43,952	2,040	316.2	11 / 192
443	44,285	2,040	318.2	51 / 103
447	44,651	2,040	320.4	134 / 33
451	45,067	2,040	322.8	45 / 161
454	45,429	2,040	325.0	148 / 73
457	45,678	2,040	326.1	102 / 30
458	45,807	2,040	329.9	102 / 30
462	46,159	1,130	330.1	81 / 218
465	46,510	1,130	330.3	65 / 80
469	46,879	1,130	333.2	65 / 79
473	47,257	1,130	335.6	57 / 90
478	47,757	1,130	337.9	17 / 13
479	47,943	1,130	342.8	17 / 12
484	48,368	1,130	344.3	37 / 75
489	48,862	1,130	349.1	124 / 4
493	49,267	1,130	351.4	134 / 10
498	49,759	620	355.4	10 / 54
502	50,151	620	359.6	31 / 38
507	50,651	620	363.9	97 / 22
511	51,130	620	368.7	35 / 32

[1]This table reflects all modeled cross sections. Some cross sections shown in this table may not appear on map

[2]Feet above mouth

[3]Discharges computed using future zoning coverages provided by Wake County

[4]Left/Right distance from the center of the stream to encroachment boundary based on a 1.0 foot or less discharge (looking downstream)

[5]Elevation includes backwater effects

[6]Black Creek

5.3 Coastal Analyses

This section is not applicable to this FIS project. Table 18 “Summary of Coastal Analyses” does not apply to Wake County.

6.0 Mapping Methods

6.1 Vertical and Horizontal Control

Vertical Datum

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

All flood elevations shown on the FIRM for Wake 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 Wake 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)
36.00	-78.63	-0.88
36.00	-78.50	-0.90
35.88	-78.75	-0.84
35.88	-78.38	-0.92
35.63	-78.63	-0.83
35.87	-78.63	-0.91
35.87	-78.50	-0.91
35.75	-78.88	-0.82
35.75	-78.75	-0.85
35.75	-78.62	-0.91
35.75	-78.50	-0.95
35.63	-78.88	-0.83
35.63	-78.75	-0.88
Average conversion in Wake County from NGVD 29 to NAVD 88 = -0.88 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 Wake 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.

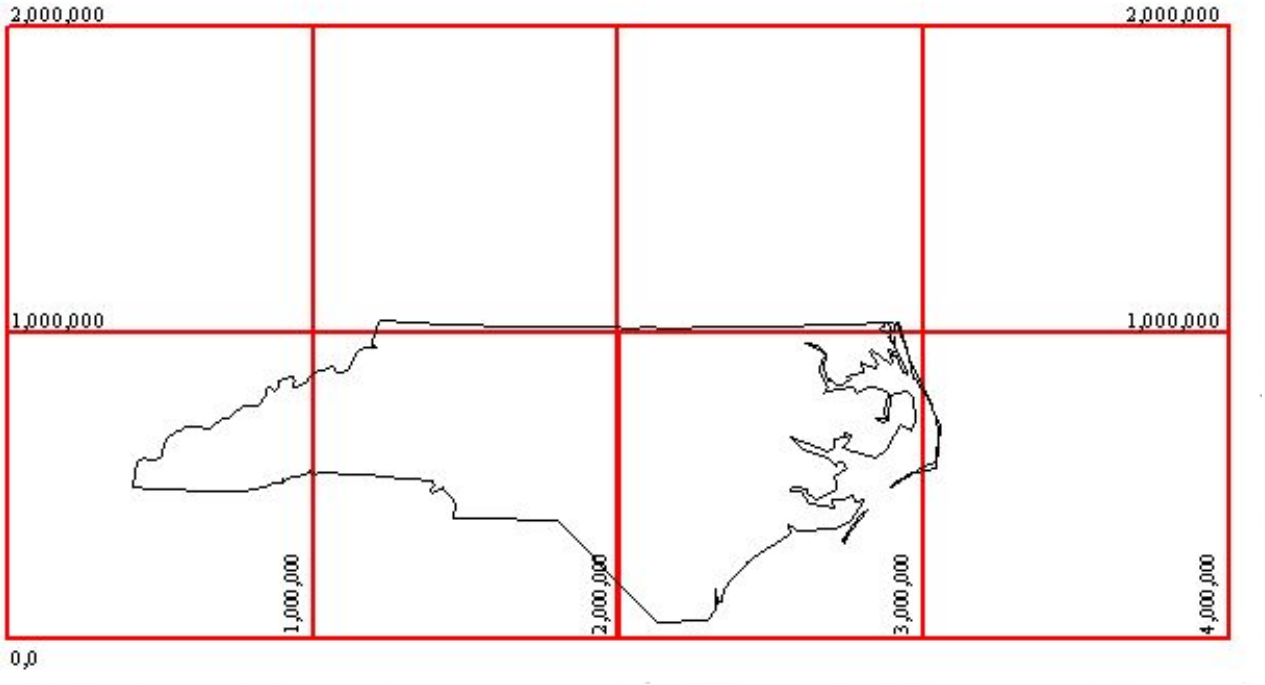

Figure 3 - North Carolina’s State Plane Coordinate System

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.

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	1% Annual Chance Future Water-Surface Elevation	Without Floodway	With Floodway	Increase
Adams Branch (Basin 30, Stream 9)									
174	17,358	100	531	5.7	260.7	*	260.7	260.9	0.2
187	18,672	70	322	11.0	268.6	*	268.6	268.6	0.0
195	19,524	90	497	4.9	275.3	*	275.3	275.7	0.4
198	19,752	100	586	3.8	276.2	*	276.2	276.9	0.7
205	20,470	60	230	8.4	279.3	*	279.3	279.9	0.6
Angier Creek (Basin 24, Stream 4)									
012	1,202	85	642	6.8	259.4[2]	*	258.1[1]	259.0	1.0
020	1,951	170	655	8.4	260.0	*	260.0	260.9	0.8
031	3,139	270	1,028	5.2	264.4	*	264.4	265.3	0.9
042	4,202	65	428	7.4	269.8	*	269.8	270.5	0.7
052	5,195	145	758	6.4	272.0	*	272.0	273.0	1.0
063	6,283	130	630	5.8	274.9	*	274.9	275.8	0.8
068	6,804	115	662	7.4	277.6	*	277.6	278.0	0.4
081	8,115	55	329	12.8	282.7	*	282.7	283.4	0.6
088	8,765	240	667	8.6	286.2	*	286.2	287.0	0.8
097	9,707	110	507	10.5	289.0	*	289.0	289.6	0.6
110	11,002	145	632	6.8	292.6	*	292.6	293.5	1.0
121	12,141	100	667	5.3	297.1	*	297.1	297.6	0.6
132	13,246	200	517	7.8	299.1	*	299.1	300.0	1.0
140	13,999	110	493	8.5	306.2	*	306.2	306.9	0.7
142	14,241	83	509	4.0	308.9	*	308.9	309.5	0.6
150	15,017	36	142	12.6	311.8	*	311.8	311.9	0.1
154	15,430	34	128	13.6	331.3	*	331.3	331.3	0.0
156	15,567	326	3,291	0.3	333.8	*	333.8	334.8	1.0
162	16,212	170	1,063	1.1	333.8	*	333.8	334.8	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	1% Annual Chance Future Water-Surface Elevation	Without Floodway	With Floodway	Increase
165	16,513	80	391	5.8	336.7	*	336.7	337.1	0.4
170	17,033	110	697	2.8	336.9	*	336.9	337.6	0.8
176	17,590	35	149	10.4	337.9	*	337.9	338.4	0.5
183	18,256	50	204	6.0	342.1	*	342.1	342.9	0.8
186	18,597	65	433	3.1	346.4	*	346.4	347.2	0.9
194	19,380	54	116	10.5	348.4	*	348.4	348.5	0.0
200	20,007	55	238	5.4	354.9	*	354.9	355.7	0.8
204	20,414	45	158	9.3	358.5	*	358.5	359.1	0.6
215	21,476	65	176	9.3	364.9	*	364.9	365.6	0.7
220	22,000	80	510	2.5	374.7	*	374.7	375.6	1.0
228	22,766	60	235	6.6	379.2	*	379.2	380.0	0.8
Armory Tributary (Basin 18, Stream 38)									
000	18	87	273	4.5	340.5	*	340.5	340.5	0.0
007	748	118	228	6.4	348.6	*	348.6	348.6	0.0
017	1,664	22	104	7.8	354.9	*	354.9	354.9	0.0
024	2,362	15	97	8.7	363.3	*	363.3	364.1	0.8
033	3,323	20	60	12.3	376.5	*	376.5	376.6	0.1
Austin Creek (Basin 6, Stream 10)									
004	402	70	265	9.1	250.5[2]	*	248.2[3]	248.4	0.1
007	719	85	384	6.1	250.5	*	250.5	250.7	0.2
010	1,012	95	477	4.6	252.3	*	252.3	252.5	0.2
021	2,145	70	409	7.5	255.5	*	255.5	256.3	0.8
027	2,695	58	243	11.0	259.6	*	259.6	259.6	0.0
031	3,113	90	513	5.1	262.5	*	262.5	262.5	0.0
040	4,040	70	441	6.4	265.1	*	265.1	265.2	0.1
051	5,065	155	778	4.1	267.6	*	267.6	268.1	0.5
060	6,010	75	344	5.7	269.6	*	269.6	269.9	0.2
069	6,893	115	395	4.8	272.9	*	272.9	273.2	0.2
078	7,797	150	372	6.5	276.8	*	276.8	277.6	0.8
082	8,176	59	332	4.7	281.1	*	281.1	281.1	0.0
089	8,939	110	396	4.0	282.0	*	282.0	282.9	0.8
092	9,214	107	538	3.7	286.0	*	286.0	286.6	0.6
097	9,726	90	374	4.8	286.4	*	286.4	287.3	0.8
099	9,926	85	443	3.5	290.5	*	290.5	291.2	0.7
109	10,926	120	252	6.4	291.7	*	291.7	292.4	0.7
120	11,979	100	248	5.7	300.4	*	300.4	300.8	0.4
129	12,921	26	90	11.8	313.0	*	313.0	313.1	0.1
132	13,229	80	691	1.6	331.0	*	331.0	331.6	0.6
136	13,558	129	929	0.8	348.1	*	348.1	348.3	0.2
147	14,670	140	495	2.7	348.2	*	348.2	348.3	0.1
151	15,137	227	1,442	0.5	363.3	*	363.3	363.4	0.1
158	15,797	125	618	1.3	363.3	*	363.3	363.4	0.1
161	16,117	221	2,012	0.4	377.2	*	377.2	377.3	0.1
168	16,772	75	344	2.4	377.2	*	377.2	377.3	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	1% Annual Chance Future Water-Surface Elevation	Without Floodway	With Floodway	Increase
170	17,030	38	375	2.4	385.9	*	385.9	386.8	0.9
171	17,121	300	1,926	0.4	389.8	*	389.8	389.8	0.1
177	17,728	79	147	10.2	390.8	*	390.8	390.8	0.0
182	18,245	28	97	12.2	399.8	*	399.8	399.8	0.0
Bachelor Branch (Basin 28, Stream 6)									
015	1,468	380	786	8.0	270.0	*	270.0	270.8	0.8
024	2,409	155	924	3.9	274.5	*	274.5	275.4	0.8
037	3,728	325	906	4.9	277.4	*	277.4	278.3	0.9
048	4,803	330	751	6.7	280.2	*	280.2	280.9	0.7
064	6,382	260	928	4.7	286.7	*	286.7	287.5	0.8
077	7,685	200	1,056	4.8	290.2	*	290.2	291.1	0.9
086	8,608	160	373	10.6	294.2	*	294.2	294.6	0.3
096	9,612	53	426	4.5	300.6	*	300.6	300.9	0.3
111	11,133	125	518	7.7	307.1	*	307.1	307.9	0.8
123	12,336	75	280	10.1	312.9	*	312.9	313.7	0.7
129	12,919	120	540	5.9	317.0	*	317.0	318.0	1.0
132	13,175	90	452	7.7	320.4	*	320.4	321.2	0.8
141	14,136	120	420	7.6	327.0	*	327.0	327.9	0.9
144	14,350	50	498	4.8	333.2	*	333.2	333.7	0.5
151	15,079	100	513	5.1	336.6	*	336.6	337.3	0.8
156	15,635	184	3,914	0.8	359.7	*	359.7	360.7	1.0
160	15,982	100	1,910	1.6	359.7	*	359.7	360.7	1.0
Bagwell Branch (Basin 20, Stream 10)									
001	147	422	683	2.6	238.6[2]	*	233.6[4]	233.6	0.0
004	382	660	6,564	0.3	243.0	*	243.0	243.0	0.0
015	1,519	200	1,785	1.4	243.0	*	243.0	243.0	0.0
027	2,687	100	581	4.8	243.5	*	243.5	243.9	0.5
037	3,707	180	913	3.6	245.0	*	245.0	245.7	0.7
050	4,999	197	671	4.7	247.9	*	247.9	248.5	0.6
063	6,323	150	566	4.8	253.6	*	253.6	254.3	0.7
073	7,262	135	396	6.7	257.3	*	257.3	258.2	0.9
080	8,003	75	336	6.2	262.3	*	262.3	262.3	0.0
085	8,478	56	338	5.4	265.7	*	265.7	265.8	0.1
100	9,983	90	527	4.1	273.3	*	273.3	273.8	0.5
106	10,650	100	407	5.5	273.8	*	273.8	274.7	0.9
110	11,045	147	404	6.9	276.2	*	276.2	277.1	1.0
116	11,560	125	392	6.6	279.8	*	279.8	280.1	0.3
118	11,843	100	292	8.4	282.0	*	282.0	282.5	0.5
129	12,913	135	340	8.9	288.3	*	288.3	288.3	0.1
137	13,702	90	658	2.6	298.5	*	298.5	299.4	0.9
Basal Creek									
002	158	11	38	4.0	272.8[2]	272.1	271.6	272.6	1.0
004	430	11	26	5.7	274.3	274.8	274.3	274.2	0.0
006	637	295	3,594	0.1	297.3	297.5	297.3	297.5	0.2

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	1% Annual Chance Future Water-Surface Elevation	Without Floodway	With Floodway	Increase
009	944	148	1,417	0.2	297.3	297.5	297.3	297.5	0.2
013	1,349	45	169	1.0	297.3	297.5	297.3	297.5	0.2
016	1,568	12	23	6.9	302.4	302.8	302.4	302.6	0.2
019	1,923	12	64	2.5	308.6	308.9	308.6	309.0	0.5
Basal Creek (Basin 22, Stream 16)									
009	941	670	1,265	1.8	310.3[2]	*	304.0[5]	304.0	0.0
020	1,988	657	1,309	1.8	310.3[2]	*	304.9[5]	304.9	0.0
033	3,283	420	1,594	3.7	311.1	*	311.1	311.6	0.5
042	4,166	125	620	7.7	313.2	*	313.2	313.7	0.6
046	4,633	128	773	6.2	316.1	*	316.1	316.2	0.0
053	5,341	708	7,745	0.6	331.2[2]	*	328.1[6]	328.1	0.0
068	6,810	720	7,283	0.6	331.2[2]	*	328.1[6]	328.1	0.0
082	8,247	535	4,712	0.9	331.2[2]	*	328.1[6]	328.1	0.0
088	8,823	290	1,129	7.4	331.2[2]	*	328.2[6]	328.3	0.1
105	10,502	265	1,302	5.5	333.2	*	333.2	333.8	0.6
119	11,930	220	1,095	5.8	337.5	*	337.5	338.2	0.7
132	13,182	200	1,029	7.5	342.0	*	342.0	342.7	0.8
146	14,552	170	979	7.3	348.1	*	348.1	348.8	0.8
157	15,656	215	999	6.7	352.7	*	352.7	353.6	0.9
165	16,494	195	3,012	2.8	368.3	*	368.3	368.3	0.0
177	17,704	110	1,106	2.8	368.4	*	368.4	368.4	0.1
188	18,785	130	443	7.5	369.0	*	369.0	369.8	0.8
201	20,115	140	448	7.4	376.4	*	376.4	377.2	0.9
212	21,159	105	348	6.5	383.4	*	383.4	384.3	0.9
Basin 10, Stream 10									
002	204	105	273	7.9	257.8[2]	*	255.3[7]	256.0	0.6
005	516	80	566	3.0	260.9	*	260.9	261.6	0.7
016	1,634	115	323	7.1	261.7	*	261.7	262.6	1.0
025	2,478	110	974	2.0	275.4	*	275.4	275.8	0.4
033	3,276	70	364	6.3	275.6	*	275.6	276.4	0.8
Basin 10, Stream 2									
007	661	78	286	7.1	218.9[2]	*	212.3[7]	213.0	0.6
011	1,147	185	811	3.6	219.1	*	219.1	219.3	0.2
024	2,389	110	402	5.0	222.8	*	222.8	223.8	0.9
037	3,679	93	227	10.2	231.6	*	231.6	231.6	0.0
047	4,721	100	330	7.4	239.5	*	239.5	240.1	0.6
055	5,523	40	278	8.6	247.5	*	247.5	247.9	0.4
061	6,057	55	326	7.0	256.0	*	256.0	256.2	0.2
Basin 10, Stream 3									
016	1,567	635	395	9.1	226.4	*	226.4	226.5	0.1
026	2,599	325	917	1.9	227.5	*	227.5	227.6	0.1
036	3,598	135	653	4.5	230.8	*	230.8	231.3	0.5
044	4,384	60	196	12.8	235.6	*	235.6	236.3	0.7
Basin 10, Stream 5									
022	2,198	115	789	3.9	248.6	*	248.6	249.4	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	1% Annual Chance Future Water-Surface Elevation	Without Floodway	With Floodway	Increase
035	3,480	125	479	6.2	254.6	*	254.6	255.6	1.0
047	4,736	80	467	5.9	258.9	*	258.9	259.7	0.8
061	6,127	135	343	6.6	266.3	*	266.3	267.3	1.0
074	7,417	75	368	10.6	273.2	*	273.2	273.6	0.4
Basin 10, Stream 6									
020	2,025	190	735	5.8	252.3[2]	*	249.4[7]	250.4	1.0
025	2,454	90	583	5.5	254.3	*	254.3	255.1	0.8
032	3,167	80	302	14.1	264.7	*	264.7	265.0	0.3
035	3,471	150	1,056	4.2	270.6	*	270.6	271.4	0.8
041	4,064	137	983	5.7	271.1	*	271.1	272.1	0.9
Basin 10, Stream 9									
012	1,233	310	1,307	12.7	258.8	*	258.8	259.2	0.5
021	2,121	150	1,034	17.2	267.5	*	267.5	268.3	0.8
032	3,227	170	919	13.2	275.4	*	275.4	275.6	0.2
042	4,185	305	1,731	10.2	284.4	*	284.4	284.8	0.4
044	4,439	383	2,695	7.8	289.7	*	289.7	290.7	1.0
050	4,985	115	970	18.5	293.8	*	293.8	294.2	0.3
Basin 12, Stream 3									
010	1,050	70	223	7.2	217.2	*	217.2	218.0	0.7
025	2,478	158	447	3.9	227.1	*	227.1	227.4	0.3
039	3,874	105	223	9.7	236.2	*	236.2	236.3	0.1
044	4,375	55	181	9.0	240.7	*	240.7	241.7	1.0
048	4,762	90	801	1.5	250.5	*	250.5	251.4	0.9
063	6,263	49	273	6.0	253.2	*	253.2	253.8	0.6
Basin 15, Stream 22									
009	942	155	523	3.4	187.5[2]	*	180.2[8]	180.4	0.2
019	1,910	98	495	8.0	187.5[2]	*	186.0[8]	187.0	1.0
027	2,743	80	278	13.2	193.8	*	193.8	193.8	0.0
036	3,619	79	435	6.1	199.5	*	199.5	199.6	0.1
047	4,727	115	510	6.9	205.5	*	205.5	205.8	0.3
056	5,648	80	392	8.1	214.8	*	214.8	215.5	0.7
063	6,319	100	506	5.9	220.5	*	220.5	221.4	1.0
072	7,175	40	201	9.4	227.5	*	227.5	228.5	1.0
Basin 15, Stream 25									
010	979	180	1,224	2.8	193.5[2]	*	186.0[8]	186.5	0.4
017	1,749	62	360	9.1	193.5[2]	*	189.5[8]	190.4	0.9
022	2,238	62	455	7.5	193.5[2]	*	192.6	193.6	1.0
027	2,682	80	319	9.6	195.2	*	195.2	196.2	1.0
037	3,706	44	330	9.1	207.1	*	207.1	208.1	1.0
047	4,675	90	406	6.8	214.6	*	214.6	215.6	1.0
055	5,519	60	253	12.1	221.9	*	221.9	222.5	0.6
066	6,571	85	352	5.0	243.9	*	243.9	244.1	0.2
078	7,830	45	219	7.4	253.2	*	253.2	254.2	1.0
Basin 15, Stream 28									
005	480	145	687	14.2	196.9[2]	*	192.7[9]	193.2	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	1% Annual Chance Future Water-Surface Elevation	Without Floodway	With Floodway	Increase
017	1,680	275	2,242	4.6	200.3	*	200.3	201.3	1.0
025	2,499	240	1,702	5.8	202.5	*	202.5	203.5	1.0
035	3,521	290	1,871	4.8	204.6	*	204.6	205.6	1.0
042	4,186	225	1,575	5.3	205.8	*	205.8	206.8	1.0
050	5,002	180	1,262	6.4	209.2	*	209.2	210.2	1.0
Basin 15, Stream 32									
004	438	304	547	3.1	265.5[2]	*	246.4[10]	246.4	0.0
014	1,381	47	160	10.8	265.5[2]	*	253.5[10]	253.5	0.0
019	1,915	45	233	11.2	265.8	*	265.8	266.6	0.8
026	2,637	186	938	4.0	272.1	*	272.1	273.1	1.0
033	3,301	110	412	7.4	274.8	*	274.8	275.6	0.7
038	3,812	100	1,289	2.2	288.1	*	288.1	288.7	0.6
047	4,703	80	591	4.8	288.2	*	288.2	288.9	0.7
Basin 15, Stream 33									
003	347	31	142	9.8	268.0[2]	*	267.4[11]	268.0	0.6
014	1,355	226	1,846	0.5	290.2	*	290.2	290.2	0.0
024	2,429	183	788	2.0	290.2	*	290.2	290.2	0.0
032	3,211	119	1,500	1.1	304.2	*	304.2	304.2	0.0
037	3,718	100	1,057	1.7	304.2	*	304.2	304.2	0.0
049	4,864	83	160	6.6	304.5	*	304.5	304.5	0.0
Basin 15, Stream 7									
030	2,964	240	1,638	5.0	169.5[2]	*	164.0[8]	164.8	0.9
055	5,455	165	977	8.5	170.8	*	170.8	171.8	1.0
065	6,485	290	1,523	4.1	172.6	*	172.6	173.6	1.0
076	7,623	270	1,390	4.4	176.4	*	176.4	177.0	0.6
084	8,350	310	1,451	2.2	177.0	*	177.0	177.6	0.6
103	10,259	170	818	5.3	183.7	*	183.7	184.7	1.0
120	11,956	135	650	5.9	190.9	*	190.9	191.2	0.3
127	12,741	170	1,151	3.7	197.7	*	197.7	197.7	0.0
140	13,985	170	799	6.4	200.1	*	200.1	200.8	0.7
153	15,277	185	742	4.7	204.1	*	204.1	205.0	0.9
164	16,445	180	497	6.3	209.1	*	209.1	210.0	0.9
176	17,606	240	395	7.2	216.3	*	216.3	217.0	0.6
192	19,158	90	289	7.1	227.7	*	227.7	228.7	1.0
Basin 15, Stream 8									
007	693	248	621	6.3	178.4	*	178.4	178.4	0.0
017	1,685	91	489	6.0	182.6	*	182.6	182.9	0.3
028	2,825	95	429	7.7	190.1	*	190.1	190.8	0.7
040	4,034	131	463	5.4	195.7	*	195.7	196.7	1.0
050	4,951	108	386	6.8	203.3	*	203.3	203.3	0.0
057	5,696	91	913	3.0	216.1	*	216.1	216.6	0.5
066	6,550	85	324	8.5	217.1	*	217.1	217.5	0.4
Basin 15, Stream 9									
005	457	46	216	5.6	170.1[2]	*	162.1[8]	162.1	0.0
006	648	195	980	0.9	172.0	*	172.0	172.0	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	1% Annual Chance Future Water-Surface Elevation	Without Floodway	With Floodway	Increase
014	1,363	95	474	3.3	175.2	*	175.2	175.2	0.0
021	2,144	100	275	6.4	177.3	*	177.3	177.6	0.3
027	2,727	47	252	4.0	180.5	*	180.5	180.9	0.4
028	2,774	62	293	4.2	181.9	*	181.9	182.7	0.8
037	3,652	75	281	5.2	187.0	*	187.0	187.8	0.8
043	4,333	60	162	10.9	192.1	*	192.1	192.3	0.2
051	5,081	58	542	2.6	204.2	*	204.2	204.3	0.1
058	5,807	40	205	6.2	204.5	*	204.5	204.7	0.2
Basin 16, Stream 2									
002	189	348	652	2.2	265.5[2]	*	248.9[10]	248.9	0.0
017	1,719	229	241	5.9	265.5[2]	*	251.4[10]	251.5	0.0
025	2,540	125	392	5.5	265.5[2]	*	257.2[10]	258.2	1.0
035	3,501	75	195	8.7	265.5[2]	*	262.7[10]	262.7	0.1
045	4,459	60	159	9.6	269.7	*	269.7	270.1	0.4
052	5,173	55	171	10.2	275.1	*	275.1	275.1	0.0
067	6,727	50	234	6.3	287.1	*	287.1	287.6	0.5
070	7,026	96	656	2.4	293.9	*	293.9	293.9	0.0
076	7,554	92	269	6.9	294.0	*	294.0	294.1	0.0
085	8,451	90	306	5.5	300.7	*	300.7	301.0	0.3
092	9,201	81	248	6.8	305.9	*	305.9	306.9	1.0
104	10,385	45	140	11.0	317.8	*	317.8	317.9	0.1
106	10,610	66	1,085	1.5	333.0	*	333.0	333.8	0.8
109	10,911	76	814	1.7	333.0	*	333.0	333.8	0.8
Basin 16, Stream 5									
006	596	498	6,423	0.2	282.6	*	282.6	282.6	0.0
018	1,772	327	2,215	0.5	282.6	*	282.6	282.6	0.0
025	2,496	110	369	5.3	284.4	*	284.4	284.8	0.5
032	3,192	50	203	8.2	288.2	*	288.2	288.9	0.8
034	3,425	29	502	3.1	301.3	*	301.3	301.9	0.6
041	4,118	110	1,314	1.6	301.3	*	301.3	302.1	0.8
049	4,942	140	1,213	1.6	301.3	*	301.3	302.1	0.8
055	5,507	100	481	4.0	301.3	*	301.3	302.3	1.0
061	6,128	36	131	11.7	303.7	*	303.7	303.8	0.1
Basin 17, Stream 4									
008	815	88	435	5.1	294.9	*	294.9	295.8	0.9
013	1,326	140	528	5.7	298.3	*	298.3	298.3	0.0
025	2,531	135	548	7.2	303.2	*	303.2	303.9	0.8
035	3,488	140	577	7.1	307.4	*	307.4	308.3	1.0
045	4,481	90	398	8.8	312.7	*	312.7	313.4	0.7
057	5,715	125	527	7.4	319.8	*	319.8	320.5	0.7
068	6,842	100	386	9.0	327.0	*	327.0	327.7	0.8
077	7,676	110	449	8.0	332.4	*	332.4	332.9	0.5
084	8,377	120	408	7.1	335.5	*	335.5	336.4	0.9
092	9,162	48	299	6.7	343.5	*	343.5	343.6	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	1% Annual Chance Future Water-Surface Elevation	Without Floodway	With Floodway	Increase
093	9,344	161	1,141	2.5	345.8	*	345.8	346.6	0.8
100	10,038	81	282	4.9	348.1	*	348.1	349.1	0.9
105	10,481	101	628	2.8	355.9	*	355.9	355.9	0.0
110	10,996	90	173	9.0	357.8	*	357.8	357.9	0.1
113	11,267	158	386	6.0	363.6	*	363.6	363.7	0.2
115	11,528	293	1,436	0.6	372.6	*	372.6	372.6	0.0
124	12,418	43	109	9.8	374.0	*	374.0	374.2	0.2
Basin 18, Stream 13									
015	1,464	70	255	4.2	287.9	*	287.9	288.2	0.3
020	1,969	74	296	3.7	290.7	*	290.7	290.8	0.1
025	2,543	54	273	3.4	292.6	*	292.6	292.6	0.0
042	4,214	193	400	5.0	312.4[2]	*	297.5[12]	297.5	0.0
052	5,212	151	256	9.5	312.4[2]	*	304.4[12]	304.4	0.0
064	6,436	95	403	6.8	312.4[2]	*	310.6[12]	311.4	0.7
072	7,224	93	413	7.5	316.0	*	316.0	316.9	1.0
079	7,869	46	449	4.0	321.2	*	321.2	322.1	0.9
080	8,029	61	539	5.1	323.2	*	323.2	324.2	1.0
Basin 18, Stream 13 Tributary									
006	571	401	614	1.9	312.4[2]	*	302.5[12]	302.5	0.0
015	1,503	157	253	4.7	312.4[2]	*	304.0[12]	304.0	0.0
023	2,283	85	337	6.8	312.4[2]	*	310.2[12]	311.2	0.9
027	2,659	82	326	5.7	312.5	*	312.5	313.1	0.6
033	3,257	50	147	11.3	320.8	*	320.8	321.2	0.4
Basin 18, Stream 4									
010	1,008	40	315	7.1	283.1	*	283.1	283.6	0.5
020	2,050	31	214	9.6	288.2	*	288.2	288.5	0.3
031	3,102	32	297	10.7	297.7	*	297.7	298.7	1.0
038	3,785	64	771	4.0	307.7	*	307.7	308.6	0.9
046	4,604	90	652	7.4	308.7	*	308.7	309.6	0.9
053	5,261	175	1,191	4.5	317.0	*	317.0	317.0	0.0
061	6,082	174	1,245	4.5	324.8	*	324.8	324.8	0.0
071	7,098	54	321	7.4	327.4	*	327.4	327.6	0.1
081	8,108	63	260	10.3	337.0	*	337.0	337.0	0.0
092	9,190	60	250	9.2	346.0	*	346.0	346.8	0.8
102	10,199	44	141	12.9	357.0	*	357.0	357.1	0.1
111	11,141	65	192	11.7	373.8	*	373.8	374.1	0.4
119	11,894	70	519	4.7	386.2	*	386.2	386.2	0.0
127	12,722	39	210	11.0	401.9	*	401.9	402.7	0.9
Basin 18, Stream 7									
002	200	27	234	9.5	324.0[2]	*	323.4[13]	324.3	0.9
011	1,065	32	259	8.5	330.0	*	330.0	330.8	0.8
020	2,002	37	262	10.0	338.9	*	338.9	339.8	0.9
030	3,000	30	186	11.4	346.3	*	346.3	347.2	1.0
Basin 18, Stream 8									
003	312	40	316	10.0	361.0[2]	*	358.8[13]	359.6	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	1% Annual Chance Future Water-Surface Elevation	Without Floodway	With Floodway	Increase
013	1,302	141	752	5.9	366.1	*	366.1	367.1	1.0
024	2,364	114	814	5.7	375.3	*	375.3	375.4	0.1
033	3,259	111	698	6.1	378.8	*	378.8	379.7	0.9
043	4,283	82	483	7.7	383.8	*	383.8	384.7	0.9
052	5,224	94	558	6.6	387.9	*	387.9	388.6	0.7
060	5,957	86	468	9.0	393.6	*	393.6	394.3	0.7
070	7,035	107	620	6.8	398.8	*	398.8	399.7	1.0
080	8,040	115	1,198	2.6	411.4	*	411.4	412.1	0.7
089	8,860	87	457	6.0	411.8	*	411.8	412.8	1.0
099	9,893	41	190	7.3	416.6	*	416.6	417.5	0.9
106	10,632	50	207	8.8	424.2	*	424.2	425.0	0.8
116	11,630	49	181	9.6	430.7	*	430.7	431.6	0.9
Basin 19, Stream 3									
018	1,809	250	496	6.1	247.6	*	247.6	248.6	1.0
029	2,901	220	550	5.5	253.5	*	253.5	254.3	0.7
041	4,068	175	512	5.3	258.3	*	258.3	259.3	1.0
049	4,922	100	354	4.0	267.1	*	267.1	267.8	0.7
058	5,779	115	228	6.4	271.2	*	271.2	271.9	0.6
066	6,619	205	3,670	0.2	297.6	*	297.6	298.4	0.9
078	7,829	80	837	1.3	297.6	*	297.6	298.4	0.9
086	8,642	165	2,806	0.4	319.0	*	319.0	320.0	0.9
088	8,779	220	2,903	0.4	319.0	*	319.0	320.0	0.9
Basin 19, Stream 4									
003	337	80	191	7.0	259.5	*	259.5	260.2	0.7
013	1,291	46	127	8.4	266.7	*	266.7	267.1	0.4
016	1,570	48	521	1.9	277.8	*	277.8	277.8	0.0
016	1,640	100	943	1.2	277.8	*	277.8	277.8	0.0
017	1,722	102	794	1.5	277.8	*	277.8	277.8	0.0
026	2,641	90	238	5.9	277.9	*	277.9	278.3	0.4
031	3,134	90	200	6.8	282.9	*	282.9	283.9	1.0
036	3,640	42	478	2.1	292.6	*	292.6	293.3	0.7
037	3,743	60	552	2.0	292.6	*	292.6	293.3	0.7
Basin 20, Stream 20									
007	672	151	457	5.5	295.4	*	295.4	295.8	0.3
020	1,981	180	676	4.7	301.8	*	301.8	302.2	0.4
033	3,326	219	573	6.2	307.8	*	307.8	308.0	0.1
045	4,453	75	251	11.3	313.5	*	313.5	313.5	0.0
049	4,884	161	538	5.5	315.1	*	315.1	316.1	1.0
054	5,421	465	2,817	0.5	332.8	*	332.8	332.8	0.0
060	6,017	155	465	4.6	332.7	*	332.7	332.7	0.0
Basin 20, Stream 7									
017	1,667	55	240	7.1	237.8	*	237.8	238.2	0.3
023	2,266	125	480	3.9	240.2	*	240.2	241.0	0.8
030	3,004	70	360	2.9	247.2	*	247.2	247.6	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	1% Annual Chance Future Water-Surface Elevation	Without Floodway	With Floodway	Increase
040	3,997	85	207	5.4	252.3	*	252.3	253.2	0.8
049	4,859	60	176	6.6	259.2	*	259.2	260.2	1.0
Basin 20, Stream 8									
002	245	120	415	2.8	247.8	*	247.8	247.9	0.1
005	527	60	129	6.3	247.8	*	247.8	248.0	0.2
010	1,003	46	127	5.7	253.4	*	253.4	253.4	0.0
011	1,053	67	147	6.0	253.7	*	253.7	253.7	0.0
Basin 22, Stream 20									
006	594	150	480	10.8	269.8	*	269.8	270.4	0.6
018	1,763	165	763	4.9	278.6	*	278.6	279.2	0.5
030	3,010	90	395	9.9	285.3	*	285.3	286.2	0.9
044	4,434	110	541	7.5	296.8	*	296.8	297.5	0.8
054	5,441	100	394	10.7	306.1	*	306.1	306.4	0.3
066	6,636	110	370	3.6	314.8	*	314.8	315.5	0.8
Basin 22, Stream 6									
011	1,121	210	571	8.4	269.3	*	269.3	270.3	1.0
020	1,994	190	1,290	3.5	277.8	*	277.8	278.5	0.7
030	2,992	110	481	8.5	281.1	*	281.1	281.7	0.6
040	3,984	100	445	10.0	288.3	*	288.3	288.6	0.4
053	5,314	175	580	8.2	295.7	*	295.7	295.8	0.1
063	6,252	275	985	4.8	300.4	*	300.4	300.7	0.2
081	8,056	100	393	3.2	311.4	*	311.4	312.2	0.8
086	8,568	60	366	3.4	319.5	*	319.5	319.8	0.3
099	9,939	55	157	6.9	332.9	*	332.9	333.1	0.2
115	11,525	40	106	10.1	351.8	*	351.8	352.2	0.4
Basin 22, Stream 9									
003	293	75	296	6.6	297.9[2]	*	297.0[5]	297.7	0.8
008	767	70	352	6.0	301.4	*	301.4	302.4	1.0
018	1,768	95	371	5.9	309.9	*	309.9	310.0	0.2
027	2,653	130	389	5.7	314.8	*	314.8	315.2	0.5
034	3,352	55	208	10.2	320.1	*	320.1	320.8	0.7
037	3,726	71	291	7.9	323.5	*	323.5	324.1	0.5
042	4,224	67	246	8.0	325.8	*	325.8	326.7	0.9
046	4,593	110	669	2.9	332.4	*	332.4	332.4	0.0
056	5,618	105	306	5.2	337.2	*	337.2	338.1	0.8
066	6,645	95	324	6.0	342.9	*	342.9	343.8	0.9
075	7,468	95	283	7.3	348.4	*	348.4	349.1	0.7
081	8,090	95	303	6.9	352.3	*	352.3	353.1	0.8
086	8,638	170	1,236	1.8	360.1	*	360.1	360.6	0.5
092	9,200	39	211	8.1	360.2	*	360.2	360.7	0.5
Basin 27, Stream 4									
005	457	130	465	8.8	283.8	*	283.8	284.7	0.9
018	1,836	150	420	10.4	290.6	*	290.6	291.5	0.9
030	2,950	180	559	8.0	298.6	*	298.6	299.6	1.0
Basin 28, Stream 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	1% Annual Chance Future Water-Surface Elevation	Without Floodway	With Floodway	Increase
008	835	241	932	1.8	261.9[2]	*	260.8	261.8	1.0
021	2,082	135	859	1.9	266.2	*	266.2	267.2	1.0
026	2,646	110	470	3.5	267.6	*	267.6	268.5	1.0
031	3,074	165	693	2.4	269.7	*	269.7	270.7	1.0
035	3,530	190	690	2.4	271.0	*	271.0	272.0	1.0
041	4,088	144	693	2.4	272.6	*	272.6	273.6	1.0
046	4,644	110	535	3.0	274.5	*	274.5	275.4	1.0
050	5,013	140	502	2.0	276.4	*	276.4	277.2	0.8
055	5,541	125	553	1.9	277.8	*	277.8	278.8	1.0
064	6,406	135	569	1.8	283.8	*	283.8	284.8	1.0
070	7,035	150	531	1.8	285.9	*	285.9	286.9	1.0
075	7,458	155	473	2.0	287.8	*	287.8	288.4	0.6
080	7,956	110	409	2.3	289.6	*	289.6	290.6	1.0
083	8,272	70	296	2.1	290.7	*	290.7	291.7	1.0
089	8,865	30	121	5.2	294.4	*	294.4	295.1	0.6
094	9,352	35	156	4.0	296.4	*	296.4	297.4	1.0
099	9,857	25	114	5.5	299.0	*	299.0	300.0	1.0
102	10,244	25	126	5.0	302.6	*	302.6	303.2	0.6
Basin 3, Stream 6									
008	781	70	197	6.4	265.5[2]	*	257.0[14]	257.1	0.1
018	1,777	100	228	8.5	265.5[2]	*	260.6[14]	260.8	0.3
026	2,558	59	254	6.0	265.5[2]	*	265.3[14]	265.9	0.6
030	3,040	55	197	7.0	270.5	*	270.5	270.5	0.1
034	3,371	76	412	4.3	274.8	*	274.8	274.9	0.0
041	4,119	70	222	7.7	277.9	*	277.9	278.0	0.2
049	4,932	70	234	7.5	285.0	*	285.0	285.6	0.5
059	5,929	43	178	7.4	294.4	*	294.4	294.5	0.0
073	7,253	50	137	8.6	305.6	*	305.6	305.6	0.0
Basin 3, Stream 8									
007	720	110	221	7.9	277.1	*	277.1	278.1	1.0
016	1,573	130	244	7.0	283.2	*	283.2	283.3	0.1
021	2,103	183	787	2.4	289.6	*	289.6	290.6	1.0
027	2,722	50	157	8.0	292.9	*	292.9	293.5	0.6
037	3,701	60	199	7.1	298.9	*	298.9	299.5	0.6
046	4,564	45	119	10.4	310.7	*	310.7	310.7	0.0
066	6,641	195	533	1.5	357.5	*	357.5	357.5	0.0
074	7,446	100	243	4.4	362.8	*	362.8	363.5	0.8
079	7,904	70	234	4.5	367.2	*	367.2	367.4	0.2
082	8,246	85	145	7.9	368.8	*	368.8	369.0	0.3
090	8,970	35	125	10.0	377.4	*	377.4	377.5	0.1
Basin 30, Stream 3									
005	521	115	471	7.4	200.5	*	200.5	201.5	1.0
015	1,469	82	432	6.5	207.0	*	207.0	208.0	1.0
020	2,020	105	550	5.4	214.6	*	214.6	215.2	0.6

Table 22 - Floodway Data

Floodway Source		Floodway			Water Surface Elevation				
Cross Section	Distance (Feet Above Mouth)	Width (Feet)	Section Area (Square Feet)	Mean Velocity (Feet Per Second)	Regulatory	1% Annual Chance Future Water-Surface Elevation	Without Floodway	With Floodway	Increase
029	2,944	108	268	10.5	217.6	*	217.6	218.0	0.3
045	4,529	55	268	4.9	226.8	*	226.8	227.6	0.8
054	5,440	45	247	7.7	236.0	*	236.0	236.2	0.2
058	5,846	50	220	7.2	238.6	*	238.6	238.7	0.1
070	7,016	117	221	9.2	249.6	*	249.6	249.6	0.0
079	7,903	27	200	1.6	261.9	*	261.9	262.7	0.8
083	8,300	70	230	1.2	269.7	*	269.7	269.8	0.1
084	8,359	60	200	1.5	269.7	*	269.7	269.8	0.1
Basin 4, Stream 13									
007	703	70	142	9.3	284.1	*	284.1	284.1	0.0
014	1,428	55	150	8.2	289.9	*	289.9	290.4	0.6
023	2,303	70	185	7.1	296.0	*	296.0	296.3	0.3
030	2,988	40	114	9.6	301.8	*	301.8	301.9	0.1
040	4,003	45	161	7.4	312.1	*	312.1	313.0	0.9
050	5,049	45	117	10.2	322.0	*	322.0	322.0	0.0
056	5,585	55	113	9.0	336.2	*	336.2	336.2	0.0
060	5,988	30	101	11.8	345.5	*	345.5	345.6	0.1
Basin 4, Stream 3									
014	1,429	90	291	6.9	323.7	*	323.7	324.4	0.8
024	2,367	170	385	6.5	329.5	*	329.5	330.4	1.0
032	3,240	175	249	8.2	336.3	*	336.3	337.1	0.8
041	4,080	75	203	12.4	345.4	*	345.4	345.7	0.2
054	5,411	27	128	14.1	365.5	*	365.5	365.6	0.1
058	5,835	789	5,026	0.2	373.4	*	373.4	373.4	0.0
068	6,754	190	449	4.2	373.4	*	373.4	373.4	0.0
074	7,350	35	187	8.7	379.0	*	379.0	379.8	0.8
075	7,544	37	318	3.9	383.5	*	383.5	384.4	0.9
079	7,879	35	161	6.7	384.9	*	384.9	385.8	0.9
Basin 6, Stream 9									
002	160	185	278	7.1	240.0[2]	*	239.8[15]	240.3	0.5
006	581	189	506	5.5	243.9	*	243.9	244.4	0.5
016	1,650	95	407	5.4	255.5	*	255.5	255.6	0.0
027	2,741	65	177	11.7	265.2	*	265.2	265.2	0.0
035	3,475	33	127	12.7	278.4	*	278.4	278.5	0.1
037	3,723	92	741	2.6	305.2	*	305.2	306.1	0.9
044	4,394	60	222	8.8	306.5	*	306.5	307.5	1.0
Beaver Creek									
035	3,478	1,105	7,933	0.7	237.8[2]	*	228.3	229.2	0.9
044	4,422	960	5,437	1.1	237.8[2]	*	228.6	229.6	0.9
051	5,058	800	5,449	1.1	237.8[2]	*	228.9	229.9	1.0
054	5,445	660	3,248	1.8	237.8[2]	*	229.0	230.0	1.0
081	8,099	1,725	14,905	0.5	237.8[2]	*	237.7	237.7	0.0
093	9,318	1,630	14,676	0.5	237.8[2]	*	237.7	237.7	0.0
102	10,157	1,480	12,795	0.5	237.8[2]	*	237.7	237.7	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	1% Annual Chance Future Water-Surface Elevation	Without Floodway	With Floodway	Increase
111	11,107	1,250	5,096	1.4	237.8[2]	*	237.6	237.6	0.0
134	13,437	325	2,591	2.0	242.8	*	242.8	243.2	0.5
142	14,247	300	2,379	2.2	243.1	*	243.1	244.0	0.9
148	14,782	380	2,269	2.3	243.5	*	243.5	244.5	1.0
155	15,493	375	1,933	2.8	245.0	*	245.0	245.6	0.6
170	16,978	400	2,250	2.4	247.8	*	247.8	248.6	0.8
179	17,902	450	2,549	2.1	249.8	*	249.8	250.6	0.8
188	18,779	465	2,862	1.8	251.2	*	251.2	252.2	0.9
193	19,297	480	2,314	2.3	252.4	*	252.4	253.2	0.8
198	19,805	560	2,917	1.8	254.0	*	254.0	254.8	0.9
205	20,478	525	3,175	1.7	255.2	*	255.2	256.2	1.0
210	21,046	200	1,371	3.9	256.6	*	256.6	257.4	0.8
219	21,857	525	3,403	1.5	259.3	*	259.3	260.3	1.0
225	22,519	600	3,391	1.5	260.4	*	260.4	261.4	1.0
233	23,298	660	3,775	1.4	261.7	*	261.7	262.7	1.0
241	24,104	560	3,048	1.3	262.8	*	262.8	263.8	1.0
248	24,807	360	2,024	2.0	263.8	*	263.8	264.7	0.9
260	26,038	375	2,799	1.4	267.5	*	267.5	268.2	0.7
266	26,585	385	2,292	1.8	267.9	*	267.9	268.8	0.8
273	27,265	380	2,151	1.9	269.4	*	269.4	270.1	0.7
281	28,074	355	2,078	1.9	271.3	*	271.3	272.3	1.0
286	28,637	320	1,760	2.3	273.2	*	273.2	274.2	1.0
293	29,298	375	2,324	1.7	275.2	*	275.2	276.0	0.8
300	29,981	390	1,988	2.0	276.6	*	276.6	277.6	1.0
311	31,057	435	2,680	1.5	280.7	*	280.7	281.6	0.9
315	31,518	490	3,068	1.3	281.1	*	281.1	282.1	1.0
323	32,310	375	1,927	2.1	282.1	*	282.1	283.0	0.9
331	33,147	250	967	2.6	284.4	*	284.4	285.4	1.0
337	33,702	170	670	3.7	286.8	*	286.8	287.7	0.9
346	34,572	290	1,088	2.3	291.0	*	291.0	291.7	0.7
354	35,417	210	1,032	2.4	293.3	*	293.3	294.3	1.0
364	36,449	210	1,326	1.9	297.8	*	297.8	298.3	0.4
373	37,256	180	933	2.6	299.0	*	299.0	299.8	0.8
378	37,783	185	1,018	2.4	300.4	*	300.4	301.4	1.0
383	38,323	240	1,010	2.4	302.1	*	302.1	302.9	0.8
388	38,834	230	1,086	2.2	303.8	*	303.8	304.5	0.8
395	39,504	230	1,002	2.4	305.8	*	305.8	306.8	0.9
399	39,932	215	1,026	2.4	307.5	*	307.5	308.5	1.0
405	40,526	175	884	2.7	309.8	*	309.8	310.7	0.8
433	43,321	50	354	4.4	323.7	*	323.7	324.5	0.8
436	43,632	50	291	5.3	324.6	*	324.6	325.4	0.8
439	43,918	55	212	7.3	326.3	*	326.3	326.8	0.5
442	44,224	90	480	3.2	329.1	*	329.1	330.1	1.0
445	44,545	95	402	3.8	331.0	*	331.0	331.8	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	1% Annual Chance Future Water-Surface Elevation	Without Floodway	With Floodway	Increase
451	45,118	105	387	4.0	335.0	*	335.0	336.0	1.0
458	45,837	165	507	3.1	341.2	*	341.2	342.2	1.0
464	46,400	130	563	2.8	345.0	*	345.0	345.8	0.8
475	47,491	130	860	1.8	353.6	*	353.6	354.4	0.8
480	47,962	155	513	3.0	354.3	*	354.3	355.3	1.0
484	48,436	108	481	1.9	360.5	*	360.5	361.5	1.0
488	48,771	60	223	4.0	360.9	*	360.9	361.5	0.6
492	49,196	70	270	3.3	365.6	*	365.6	366.0	0.4
497	49,734	65	285	3.1	369.5	*	369.5	370.5	1.0
Beaver Creek Tributary (Basin 27, Stream 3)									
022	2,237	41	296	8.7	269.9	*	269.9	270.0	0.1
035	3,509	180	806	4.5	271.8	*	271.8	272.6	0.8
044	4,424	100	368	8.8	275.4	*	275.4	276.1	0.7
058	5,791	140	520	6.6	280.5	*	280.5	281.5	1.0
Beaverdam Creek									
012	1,176	135	861	2.9	227.7	*	227.7	227.7	0.0
023	2,262	350	1,017	2.3	228.4	*	228.4	228.6	0.2
035	3,489	391	614	3.1	229.3	*	229.3	229.4	0.1
044	4,351	160	497	7.3	232.7	*	232.7	233.0	0.4
055	5,485	170	478	6.8	235.8	*	235.8	236.6	0.9
068	6,829	240	758	3.2	238.2	*	238.2	239.1	0.9
080	7,981	540	1,477	1.0	240.0	*	240.0	240.1	0.2
088	8,835	121	802	2.9	246.9	*	246.9	247.2	0.2
095	9,510	99	847	3.2	251.0	*	251.0	251.3	0.3
109	10,879	240	1,404	1.4	251.4	*	251.4	251.8	0.4
123	12,316	240	532	4.6	252.6	*	252.6	252.9	0.3
135	13,503	160	580	3.5	256.9	*	256.9	257.8	0.8
146	14,558	175	498	6.1	260.9	*	260.9	261.5	0.6
155	15,456	150	505	4.8	263.5	*	263.5	264.5	0.9
166	16,619	65	252	5.0	267.2	*	267.2	268.1	0.9
170	16,950	60	284	4.0	282.0	*	282.0	282.4	0.3
172	17,192	80	317	4.6	285.4	*	285.4	285.4	0.0
185	18,537	150	446	3.4	286.1	*	286.1	286.5	0.4
193	19,294	84	289	4.5	291.5	*	291.5	291.6	0.2
194	19,404	64	220	6.4	295.6	*	295.6	295.6	0.0
195	19,477	101	416	4.1	297.0	*	297.0	297.0	0.0
204	20,418	60	151	10.7	299.4	*	299.4	299.4	0.0
216	21,574	80	313	5.3	306.8	*	306.8	307.5	0.8
222	22,175	120	293	6.5	309.8	*	309.8	310.4	0.6
226	22,580	120	339	5.0	313.3	*	313.3	314.0	0.7
233	23,312	1,250	6,947	0.1	326.1	*	326.1	326.4	0.2
245	24,470	22	68	11.4	327.0	*	327.0	327.8	0.9
Beaverdam Creek (Basin 12, Stream 1)									
013	1,341	490	3,100	2.1	184.3	*	184.3	184.3	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	1% Annual Chance Future Water-Surface Elevation	Without Floodway	With Floodway	Increase
021	2,098	459	2,744	2.7	184.5	*	184.5	184.5	0.0
031	3,058	892	5,469	1.2	184.7	*	184.7	184.7	0.0
043	4,335	770	3,264	2.1	185.0	*	185.0	185.0	0.0
053	5,321	401	2,195	6.5	187.2	*	187.2	187.2	0.0
061	6,115	726	5,507	1.4	194.3	*	194.3	194.3	0.0
070	7,022	512	3,962	1.9	194.4	*	194.4	194.4	0.0
088	8,820	200	1,763	5.7	198.5	*	198.5	198.8	0.3
097	9,709	160	1,303	7.6	199.7	*	199.7	200.6	0.9
097	9,709	160	1,303	7.6	199.7	*	199.7	200.6	0.9
113	11,261	250	986	4.5	203.1	*	203.1	203.8	0.7
124	12,357	165	904	4.2	207.8	*	207.8	207.9	0.1
130	12,981	165	748	4.0	208.6	*	208.6	209.0	0.4
133	13,287	174	1,149	2.6	211.9	*	211.9	212.5	0.6
142	14,234	282	787	1.7	212.6	*	212.6	213.2	0.6
155	15,538	261	242	5.6	214.9	*	214.9	214.9	0.0
165	16,489	110	344	5.0	218.0	*	218.0	218.2	0.2
169	16,877	110	689	2.5	222.0	*	222.0	222.9	1.0
183	18,273	378	879	1.5	224.5	*	224.5	224.7	0.2
195	19,544	364	752	1.4	229.0	*	229.0	229.4	0.3
201	20,089	300	2,072	0.6	236.9	*	236.9	236.9	0.0
213	21,348	155	347	4.2	237.0	*	237.0	237.0	0.0
225	22,523	60	196	6.6	248.1	*	248.1	248.9	0.8
234	23,409	70	188	7.9	251.4	*	251.4	252.4	1.0
246	24,590	50	202	5.2	262.2	*	262.2	263.2	0.9
257	25,680	55	140	5.6	271.7	*	271.7	272.3	0.6
262	26,210	70	205	3.0	277.2	*	277.2	278.2	1.0
265	26,476	60	264	3.1	281.5	*	281.5	282.1	0.5
272	27,174	40	127	6.2	287.3	*	287.3	287.4	0.2
277	27,732	41	82	9.2	297.8	*	297.8	297.8	0.0
Beaverdam Creek (Basin 15, Stream 21)									
014	1,369	565	1,619	2.6	186.3[2]	*	182.0[8]	182.0	0.0
018	1,759	389	1,312	5.7	186.3[2]	*	185.7	185.8	0.0
022	2,235	359	1,456	5.3	186.8	*	186.8	186.8	0.0
032	3,215	200	962	8.8	190.3	*	190.3	190.6	0.2
046	4,564	190	1,730	3.6	200.3	*	200.3	200.8	0.5
056	5,595	133	976	7.1	202.6	*	202.6	203.6	1.0
068	6,771	265	1,908	4.0	207.3	*	207.3	208.1	0.8
079	7,949	201	1,029	7.6	211.3	*	211.3	212.2	0.9
088	8,815	252	1,076	7.3	216.7	*	216.7	217.1	0.3
099	9,889	136	1,043	7.2	222.5	*	222.5	223.4	0.9
108	10,794	225	1,152	7.6	226.1	*	226.1	227.1	0.9
117	11,688	210	1,175	5.2	229.8	*	229.8	230.7	0.9
129	12,933	130	632	5.6	239.1	*	239.1	239.8	0.7
140	13,952	151	1,423	2.4	251.0	*	251.0	251.7	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	1% Annual Chance Future Water-Surface Elevation	Without Floodway	With Floodway	Increase
Beaverdam Creek (Basin 18, Stream 28)									
005	483	102	722	10.0	211.8[2]	*	208.6[16]	209.1	0.4
015	1,461	145	1,215	9.2	213.2	*	213.2	214.2	0.9
027	2,683	405	4,337	0.7	221.0	*	221.0	221.9	0.8
037	3,652	200	1,044	7.9	227.5	*	227.5	227.9	0.3
045	4,527	183	897	8.4	236.7	*	236.7	236.8	0.0
056	5,621	100	668	11.4	241.7	*	241.7	242.2	0.5
Big Branch (Basin 10, Stream 8)									
007	738	150	456	5.1	253.9[2]	*	249.5[7]	250.2	0.6
015	1,535	455	2,217	0.8	258.4	*	258.4	259.2	0.8
029	2,866	90	471	5.6	266.1	*	266.1	266.8	0.7
042	4,230	55	243	10.5	272.0	*	272.0	272.9	0.9
047	4,714	111	613	3.3	274.6	*	274.6	275.5	0.9
053	5,301	118	901	1.9	281.0	*	281.0	281.7	0.7
063	6,279	120	493	3.7	281.4	*	281.4	282.2	0.8
074	7,358	60	204	8.0	287.2	*	287.2	287.8	0.6
Big Branch (Basin 18, Stream 21)									
018	1,760	93	1,264	3.4	208.8	*	208.8	209.7	0.9
020	1,988	102	1,291	3.8	208.8	*	208.8	209.8	0.9
028	2,759	117	1,339	4.0	209.2	*	209.2	210.2	1.0
038	3,771	102	761	7.9	211.2	*	211.2	211.9	0.8
048	4,821	69	489	10.5	216.1	*	216.1	216.9	0.8
058	5,785	294	2,892	2.6	226.6	*	226.6	227.2	0.6
068	6,795	510	3,420	3.3	227.1	*	227.1	227.6	0.5
082	8,164	76	506	10.1	231.8	*	231.8	232.2	0.5
090	9,010	59	406	12.4	235.5	*	235.5	236.3	0.8
100	9,956	44	317	11.9	241.3	*	241.3	242.3	1.0
112	11,190	43	321	8.8	255.2	*	255.2	255.9	0.7
122	12,166	49	339	11.1	263.7	*	263.7	264.2	0.4
132	13,191	44	380	9.8	271.6	*	271.6	272.2	0.6
140	13,955	106	912	4.5	280.5	*	280.5	281.2	0.7
149	14,917	59	421	9.5	292.3	*	292.3	293.1	0.8
154	15,446	337	3,503	0.8	314.9	*	314.9	314.9	0.0
163	16,319	108	467	5.7	314.9	*	314.9	314.9	0.0
Big Branch (Basin 26, Stream 5)									
009	904	600	2,433	4.8	248.1	*	248.1	248.7	0.6
024	2,426	500	1,700	7.1	251.5	*	251.5	252.1	0.6
039	3,888	325	1,136	5.6	253.7	*	253.7	254.6	0.9
046	4,645	250	1,349	5.2	259.1	*	259.1	259.1	0.0
066	6,611	280	825	9.4	261.9	*	261.9	262.4	0.6
084	8,435	220	903	6.9	267.5	*	267.5	268.4	0.9
102	10,236	195	834	8.1	274.7	*	274.7	275.4	0.6
118	11,813	235	765	8.6	281.7	*	281.7	281.8	0.1
133	13,266	195	790	7.5	286.6	*	286.6	287.0	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	1% Annual Chance Future Water-Surface Elevation	Without Floodway	With Floodway	Increase
144	14,435	61	650	3.2	297.5	*	297.5	297.7	0.2
152	15,224	25	441	3.7	308.0	*	308.0	308.2	0.3
166	16,633	200	1,444	2.0	308.3	*	308.3	308.6	0.3
177	17,702	155	357	7.9	310.8	*	310.8	311.4	0.7
187	18,748	111	954	2.4	323.3	*	323.3	323.3	0.0
190	19,043	165	894	3.3	323.4	*	323.4	323.4	0.0
Big Branch (Basin 30, Stream 2)									
015	1,496	521	3,384	5.2	183.3	*	183.3	183.8	0.4
024	2,366	562	3,567	5.6	185.7	*	185.7	186.3	0.6
027	2,729	620	3,844	5.5	186.7	*	186.7	187.6	0.9
030	3,025	460	2,682	4.4	187.4	*	187.4	188.3	0.9
040	4,012	300	1,844	5.2	189.2	*	189.2	190.0	0.8
050	5,027	300	1,727	5.6	192.1	*	192.1	192.9	0.7
060	6,022	300	1,819	5.8	195.7	*	195.7	196.3	0.6
070	7,011	320	2,494	3.0	198.5	*	198.5	199.2	0.7
080	8,009	350	2,086	4.2	199.9	*	199.9	200.9	0.9
085	8,452	270	1,354	3.8	201.1	*	201.1	201.8	0.8
095	9,493	270	793	7.3	204.2	*	204.2	204.6	0.4
105	10,520	240	854	4.6	208.0	*	208.0	209.0	1.0
114	11,359	225	878	4.3	212.2	*	212.2	212.9	0.7
126	12,555	180	494	5.9	217.6	*	217.6	217.9	0.3
135	13,537	180	635	4.9	222.1	*	222.1	222.8	0.7
138	13,848	180	634	5.5	224.0	*	224.0	224.9	0.9
143	14,253	609	4,406	0.7	233.1	*	233.1	233.1	0.0
152	15,179	171	143	8.3	233.6	*	233.6	233.5	0.0
157	15,706	405	3,932	0.3	258.4	*	258.4	258.3	0.0
163	16,330	229	1,972	0.7	258.4	*	258.4	258.3	0.0
171	17,075	252	1,891	0.7	258.4	*	258.4	258.4	0.0
176	17,596	198	782	3.5	262.1	*	262.1	262.1	0.0
179	17,881	73	214	11.2	263.8	*	263.8	264.2	0.5
Big Branch Tributary No. 3									
005	473	361	2,543	0.7	198.8	*	198.8	199.2	0.4
015	1,456	225	649	7.8	200.0	*	200.0	201.0	1.0
020	2,004	110	335	4.5	203.9	*	203.9	204.1	0.3
027	2,670	274	301	6.8	209.1	*	209.1	209.9	0.8
039	3,904	127	515	7.8	218.0	*	218.0	219.0	1.0
051	5,082	51	275	7.4	228.7	*	228.7	229.5	0.8
059	5,902	409	1,541	0.7	243.2	*	243.2	243.2	0.0
066	6,645	27	88	10.9	244.5	*	244.5	244.7	0.2
077	7,697	15	60	10.4	257.6	*	257.6	257.7	0.1
Big Branch Tributary No.1 (Basin 30, Stream 6)									
010	1,013	382	2,279	4.6	187.1	*	187.1	187.9	0.8
020	1,991	410	2,075	6.1	188.7	*	188.7	189.6	0.9
030	2,991	351	1,662	8.3	190.9	*	190.9	191.7	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	1% Annual Chance Future Water-Surface Elevation	Without Floodway	With Floodway	Increase
040	3,991	305	1,168	9.6	193.8	*	193.8	194.6	0.8
050	5,011	208	856	7.4	199.4	*	199.4	200.1	0.7
060	5,993	364	1,442	5.4	201.1	*	201.1	202.0	0.9
070	7,008	223	601	10.9	205.2	*	205.2	206.2	1.0
077	7,671	766	970	3.4	215.0	*	215.0	215.0	0.0
088	8,813	435	3,235	2.6	215.4	*	215.4	215.4	0.0
101	10,125	152	849	9.2	217.8	*	217.8	218.0	0.2
111	11,118	257	1,409	6.1	221.2	*	221.2	221.8	0.6
119	11,924	100	587	8.9	223.5	*	223.5	223.8	0.3
127	12,708	94	746	5.8	228.6	*	228.6	229.1	0.6
132	13,232	85	730	6.1	230.2	*	230.2	230.5	0.3
139	13,868	85	539	6.7	231.2	*	231.2	231.6	0.4
145	14,477	110	539	6.5	232.2	*	232.2	232.9	0.7
155	15,511	150	434	10.1	242.2	*	242.2	242.4	0.2
163	16,267	105	481	6.8	250.9	*	250.9	250.9	0.0
Black Creek Tributary A (Basin 18, Stream 11)									
014	1,421	268	685	5.0	282.7[2]	*	275.0[17]	275.0	0.0
025	2,496	182	607	11.7	283.1	*	283.1	283.1	0.0
027	2,679	217	1,164	7.6	287.1	*	287.1	287.2	0.0
039	3,913	150	884	8.5	294.0	*	294.0	295.0	1.0
051	5,100	130	665	11.5	301.3	*	301.3	301.9	0.7
057	5,745	100	621	10.5	305.0	*	305.0	305.8	0.7
064	6,375	100	617	9.7	310.1	*	310.1	310.4	0.3
070	6,996	78	759	7.4	314.7	*	314.7	315.0	0.2
071	7,098	115	893	8.2	315.3	*	315.3	315.4	0.1
076	7,629	128	685	10.5	316.8	*	316.8	317.1	0.2
085	8,503	60	569	11.1	324.2	*	324.2	325.1	0.9
096	9,634	155	697	5.9	328.1	*	328.1	329.1	1.0
106	10,604	70	320	10.4	336.3	*	336.3	337.0	0.7
111	11,148	52	322	9.8	343.7	*	343.7	344.5	0.9
116	11,604	75	360	7.9	348.8	*	348.8	349.8	1.0
119	11,868	55	397	7.9	354.7	*	354.7	355.6	1.0
125	12,489	55	687	3.9	362.7	*	362.7	363.6	0.9
133	13,328	40	241	11.5	366.5	*	366.5	367.5	1.0
Bradley Creek (Basin 24, Stream 3)									
006	558	28	88	6.3	271.0	*	271.0	271.5	0.5
009	864	28	109	5.2	275.9	*	275.9	276.1	0.1
011	1,149	46	152	4.1	283.8	*	283.8	283.8	0.0
013	1,262	55	207	3.2	284.1	*	284.1	284.1	0.0
Bridges Branch									
007	708	75	633	0.6	198.9	*	198.9	199.6	0.7
011	1,057	31	241	3.5	198.9	*	198.9	199.6	0.7
016	1,620	35	168	4.8	201.8	*	201.8	202.6	0.7
024	2,433	21	114	8.2	209.4	*	209.4	209.5	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	1% Annual Chance Future Water-Surface Elevation	Without Floodway	With Floodway	Increase
Brier Creek (Basin 18, Stream 14)									
023	2,311	200	620	5.6	284.1[2]	*	280.7[18]	281.6	0.9
029	2,890	160	433	6.1	284.1[2]	*	282.0[18]	283.0	1.0
034	3,441	130	462	5.3	284.1[2]	*	283.5[18]	284.2	0.7
045	4,479	470	1,768	0.8	284.3	284.8	284.3	285.2	1.0
051	5,084	425	1,550	0.9	284.5	285.0	284.5	285.5	1.0
056	5,625	40	296	4.7	284.7	285.2	284.7	285.6	1.0
070	6,957	95	579	2.3	288.0	288.5	288.0	288.4	0.3
080	7,969	36	252	1.7	289.2	289.9	289.2	289.6	0.4
084	8,399	43	232	1.8	289.3	290.0	289.3	289.6	0.4
089	8,872	56	275	1.5	289.5	290.1	289.5	289.8	0.3
094	9,438	52	223	1.9	289.7	290.3	289.7	289.9	0.3
111	11,055	1,390	29,782	0.2	318.9	319.0	318.9	318.9	0.0
123	12,282	915	18,640	0.3	318.9	319.0	318.9	318.9	0.0
134	13,385	825	18,222	0.3	318.9	319.0	318.9	318.9	0.0
141	14,110	1,290	17,525	0.3	318.9	319.0	318.9	318.9	0.0
146	14,633	925	18,686	0.3	322.2	322.4	322.2	322.2	0.0
155	15,505	375	7,029	0.7	322.2	322.4	322.2	322.2	0.0
158	15,836	380	7,147	0.7	322.2	322.4	322.2	322.2	0.0
167	16,653	70	1,716	3.0	329.2	329.6	329.2	329.8	0.7
169	16,928	60	1,395	1.1	329.2	329.6	329.2	330.1	0.9
173	17,296	60	1,439	1.1	329.2	329.6	329.2	330.1	0.9
178	17,754	60	1,368	1.1	329.2	329.6	329.2	330.1	0.9
181	18,126	60	1,036	1.5	329.2	329.6	329.2	330.1	0.9
186	18,642	60	897	1.6	329.2	329.6	329.2	330.2	1.0
190	19,016	60	799	1.8	329.2	329.6	329.2	330.2	1.0
195	19,513	60	721	2.0	329.2	329.6	329.2	330.2	1.0
Buck Branch (Basin 20, Stream 12)									
009	877	898	2,680	1.2	238.8[2]	*	227.4[4]	227.4	0.0
015	1,501	611	1,475	2.1	238.8[2]	*	227.6[4]	227.6	0.0
019	1,892	100	466	6.9	238.8[2]	*	232.5[4]	232.5	0.0
032	3,249	158	456	4.9	238.8[2]	*	236.4[4]	236.5	0.1
049	4,945	160	409	8.6	240.8	*	240.8	241.8	1.0
060	5,998	139	881	3.5	247.7	*	247.7	248.7	0.9
078	7,770	174	244	12.6	252.5	*	252.5	253.3	0.8
087	8,732	115	442	7.0	257.6	*	257.6	258.4	0.8
091	9,069	165	406	8.0	259.0	*	259.0	259.8	0.8
100	10,002	170	540	6.2	264.3	*	264.3	264.7	0.4
109	10,859	100	388	7.1	267.9	*	267.9	268.5	0.6
112	11,154	48	335	6.3	270.6	*	270.6	271.0	0.5
122	12,219	100	447	5.1	275.0	*	275.0	275.4	0.5
127	12,711	67	366	4.5	276.9	*	276.9	277.3	0.4
141	14,094	100	519	5.0	283.5	*	283.5	284.1	0.7
150	14,964	40	181	10.5	286.9	*	286.9	287.2	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	1% Annual Chance Future Water-Surface Elevation	Without Floodway	With Floodway	Increase
Buckhorn Branch (Basin 3, Stream 9)									
009	887	124	380	8.0	265.5[2]	*	260.4[14]	261.3	0.9
020	1,996	99	374	6.4	265.5[2]	*	264.8[14]	265.7	0.8
030	2,981	125	463	5.7	269.8	*	269.8	270.6	0.8
041	4,077	80	354	6.0	274.7	*	274.7	275.5	0.8
051	5,107	38	266	7.6	280.6	*	280.6	281.4	0.9
060	5,997	22	126	14.6	284.6	*	284.6	284.7	0.1
072	7,159	60	317	8.8	294.1	*	294.1	294.8	0.7
081	8,101	55	251	6.7	301.2	*	301.2	301.2	0.0
Buckhorn Creek									
007	666	290	1,617	6.2	232.0[2]	*	224.8[19]	225.7	0.9
010	1,017	167	1,311	6.3	232.0[2]	*	227.8[19]	228.6	0.8
023	2,304	71	803	9.9	237.0	*	237.0	237.1	0.1
033	3,270	85	880	8.8	239.4	*	239.4	239.6	0.3
040	4,024	97	981	6.4	241.5	*	241.5	241.7	0.2
043	4,325	123	973	9.0	244.3	*	244.3	244.4	0.1
056	5,622	164	1,177	7.7	248.0	*	248.0	248.2	0.2
070	6,976	164	1,010	9.4	252.6	*	252.6	253.1	0.6
083	8,317	306	2,121	5.0	257.2	*	257.2	257.8	0.7
098	9,770	345	2,078	5.2	259.7	*	259.7	260.4	0.7
111	11,106	269	1,313	7.0	262.8	*	262.8	263.6	0.8
122	12,228	263	1,422	7.3	268.4	*	268.4	268.7	0.3
136	13,634	182	1,135	9.1	273.1	*	273.1	273.4	0.2
152	15,195	130	659	11.1	276.8	*	276.8	277.6	0.8
163	16,321	141	776	8.9	283.1	*	283.1	283.5	0.4
177	17,740	178	1,399	5.7	291.2	*	291.2	291.4	0.2
192	19,215	145	810	10.6	295.4	*	295.4	295.6	0.3
203	20,282	210	1,108	8.4	299.6	*	299.6	300.6	1.0
212	21,225	150	905	7.3	304.7	*	304.7	305.6	1.0
215	21,531	148	1,556	4.2	312.2	*	312.2	312.8	0.6
228	22,787	210	1,172	6.4	312.8	*	312.8	313.7	0.9
242	24,169	146	988	7.5	319.9	*	319.9	320.7	0.8
255	25,460	105	703	10.2	328.1	*	328.1	328.2	0.0
267	26,742	166	974	7.0	335.1	*	335.1	335.3	0.2
280	27,994	59	331	17.8	344.5	*	344.5	344.5	0.0
292	29,211	64	219	11.9	350.5	*	350.5	351.1	0.6
303	30,341	80	309	9.3	361.6	*	361.6	361.9	0.3
313	31,258	70	235	8.5	371.4	*	371.4	371.6	0.1
316	31,616	81	643	3.0	379.3	*	379.3	380.0	0.6
321	32,108	110	438	5.0	380.0	*	380.0	380.5	0.5
335	33,487	150	338	9.9	394.1	*	394.1	394.2	0.1
344	34,413	179	477	3.3	401.9	*	401.9	402.0	0.1
357	35,744	90	284	8.5	414.6	*	414.6	415.1	0.5
362	36,160	181	1,004	3.3	424.3	*	424.3	425.3	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	1% Annual Chance Future Water-Surface Elevation	Without Floodway	With Floodway	Increase
375	37,495	100	399	5.7	433.6	*	433.6	434.3	0.7
390	38,950	108	454	5.0	448.6	*	448.6	449.6	1.0
Buffalo Branch (Basin 10, Stream 22)									
002	194	22	33	8.8	233.4	*	233.4	233.4	0.0
002	244	55	201	9.6	228.8	*	228.8	229.1	0.3
004	395	40	156	1.9	239.3	*	239.3	239.4	0.0
006	563	80	295	7.2	238.3	*	238.3	238.4	0.1
008	849	572	4,316	0.3	239.4	*	239.4	239.4	0.0
013	1,314	115	354	6.7	221.4[2]	*	220.3	220.4	0.1
015	1,503	440	3,014	0.5	239.4	*	239.4	239.4	0.0
019	1,931	130	533	4.2	223.3	*	223.3	224.2	0.9
019	1,934	65	180	12.3	250.9	*	250.9	251.1	0.2
024	2,360	76	84	7.0	224.6	*	224.6	224.6	0.0
028	2,771	40	77	2.8	228.1	*	228.1	228.4	0.3
032	3,166	28	38	4.8	229.6	*	229.6	229.8	0.2
034	3,428	25	47	4.0	231.6	*	231.6	231.7	0.2
039	3,893	8	30	5.2	251.4	*	251.4	251.8	0.4
042	4,151	135	575	5.5	254.1	*	254.1	254.5	0.4
054	5,433	200	832	3.7	255.6	*	255.6	256.3	0.8
070	6,990	95	350	8.5	267.8	*	267.8	268.6	0.8
074	7,424	145	680	4.9	272.6	*	272.6	273.6	1.0
082	8,230	70	331	7.3	282.7	*	282.7	283.7	1.0
Buffalo Creek (Basin 9, Stream 1)									
1129	112,937	601	5,095	1.8	246.3	*	246.3	247.1	0.8
1141	114,129	400	3,240	1.7	246.5	*	246.5	247.3	0.8
1152	115,172	250	1,434	5.6	246.8	*	246.8	247.6	0.8
1164	116,392	210	1,472	5.3	249.8	*	249.8	250.3	0.5
1178	117,778	325	1,947	4.6	251.3	*	251.3	252.3	1.0
1190	119,004	145	1,061	7.2	254.6	*	254.6	255.1	0.5
1203	120,297	110	957	6.8	260.4	*	260.4	260.8	0.3
1207	120,726	192	1,719	3.8	261.4	*	261.4	262.3	0.8
1214	121,417	230	2,616	2.3	261.6	*	261.6	262.5	0.9
1232	123,184	160	1,318	5.4	262.8	*	262.8	263.6	0.8
1238	123,760	420	4,832	1.6	263.1	*	263.1	264.0	0.8
1250	125,010	208	2,279	3.0	263.6	*	263.6	264.7	1.0
1266	126,583	600	4,910	1.6	263.9	*	263.9	264.9	1.0
1281	128,083	205	1,488	4.7	264.1	*	264.1	265.1	1.0
1301	130,072	385	3,258	1.3	266.4	*	266.4	267.1	0.8
1315	131,542	395	2,403	2.3	266.7	*	266.7	267.5	0.8
1327	132,663	223	1,366	3.3	267.7	*	267.7	268.4	0.8
1343	134,301	220	1,141	5.2	269.7	*	269.7	270.5	0.8
1367	136,667	240	1,554	3.2	273.4	*	273.4	274.1	0.6
1374	137,350	265	1,678	2.7	273.6	*	273.6	274.4	0.8
1382	138,238	130	819	6.4	278.1	*	278.1	278.9	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	1% Annual Chance Future Water-Surface Elevation	Without Floodway	With Floodway	Increase
1392	139,211	370	2,729	2.2	279.1	*	279.1	280.0	1.0
1402	140,188	287	2,439	1.9	281.3	*	281.3	281.9	0.6
1412	141,181	480	3,404	1.8	281.5	*	281.5	282.1	0.6
1421	142,121	415	2,580	1.8	281.6	*	281.6	282.2	0.6
1433	143,346	380	2,042	2.8	281.8	*	281.8	282.4	0.6
1442	144,182	215	1,547	2.3	283.6	*	283.6	284.1	0.6
1457	145,737	310	1,691	3.7	284.0	*	284.0	284.6	0.6
1462	146,232	121	926	6.4	288.5	*	288.5	288.5	0.0
1482	148,206	121	926	7.3	288.5	*	288.5	288.5	0.0
1484	148,353	400	2,849	2.3	291.1	*	291.1	291.1	0.0
1492	149,172	535	1,797	6.6	291.1	*	291.1	291.1	0.0
1498	149,784	590	2,360	4.9	292.0	*	292.0	292.2	0.1
1506	150,582	388	1,908	5.0	292.8	*	292.8	293.2	0.4
1511	151,068	470	2,680	3.6	293.3	*	293.3	293.8	0.5
1515	151,453	621	3,741	2.6	293.5	*	293.5	294.0	0.5
1532	153,230	742	4,343	2.3	294.2	*	294.2	294.8	0.6
1540	154,009	526	3,279	2.8	294.4	*	294.4	295.0	0.6
1547	154,676	1,019	5,675	1.8	294.6	*	294.6	295.2	0.6
1555	155,525	576	3,026	3.2	294.9	*	294.9	295.5	0.6
1561	156,085	502	2,246	3.7	295.3	*	295.3	295.9	0.6
1568	156,809	420	1,713	4.9	296.1	*	296.1	296.8	0.7
1573	157,348	335	1,762	4.3	296.9	*	296.9	297.6	0.7
1580	157,981	559	3,003	2.8	297.4	*	297.4	298.1	0.7
1587	158,680	400	1,485	5.6	298.0	*	298.0	298.6	0.7
1591	159,108	380	1,729	4.5	298.9	*	298.9	299.6	0.7
1596	159,643	224	1,129	6.1	299.9	*	299.9	300.6	0.7
1602	160,157	147	771	8.1	301.5	*	301.5	302.2	0.7
1606	160,586	150	1,036	5.6	303.0	*	303.0	303.8	0.8
1613	161,276	396	2,256	3.2	303.9	*	303.9	304.6	0.8
1618	161,795	148	832	7.0	304.3	*	304.3	305.0	0.7
1623	162,255	120	647	8.2	305.6	*	305.6	306.2	0.7
1624	162,449	60	590	6.8	306.0	*	306.0	306.9	0.9
1625	162,488	60	591	6.8	307.6	*	307.6	307.3	-0.3
1630	162,981	280	1,134	6.2	308.8	*	308.8	308.8	0.0
1636	163,582	185	1,017	6.1	309.5	*	309.5	310.3	0.8
1641	164,085	104	634	8.2	311.3	*	311.3	311.6	0.4
1647	164,718	245	1,318	4.6	313.0	*	313.0	313.7	0.6
1653	165,307	354	1,977	3.2	313.6	*	313.6	314.3	0.7
1658	165,789	303	1,771	3.0	314.0	*	314.0	314.6	0.7
1664	166,435	188	1,182	4.2	314.5	*	314.5	315.2	0.7
1667	166,690	63	347	8.0	314.6	*	314.6	315.3	0.8
1667	166,734	63	419	6.8	316.7	*	316.7	316.7	0.0
1672	167,188	203	876	5.9	318.4	*	318.4	318.6	0.1
1676	167,591	286	1,174	4.7	319.3	*	319.3	319.7	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	1% Annual Chance Future Water-Surface Elevation	Without Floodway	With Floodway	Increase
1682	168,161	184	902	5.6	320.5	*	320.5	321.1	0.6
1687	168,719	233	1,109	4.7	321.8	*	321.8	322.5	0.7
1693	169,274	479	2,616	2.0	322.3	*	322.3	323.0	0.7
1700	169,969	436	2,234	2.5	322.6	*	322.6	323.3	0.7
1706	170,608	175	954	5.2	323.1	*	323.1	323.8	0.7
1715	171,550	200	1,121	3.0	324.6	*	324.6	325.3	0.7
1724	172,405	263	1,230	2.9	325.4	*	325.4	326.2	0.7
1730	173,020	259	1,150	2.9	326.1	*	326.1	326.8	0.7
1738	173,812	158	601	5.6	327.8	*	327.8	328.5	0.7
1749	174,932	339	1,341	2.1	330.0	*	330.0	330.7	0.7
1756	175,647	183	557	4.9	331.3	*	331.3	332.0	0.7
1764	176,393	87	428	6.2	335.7	*	335.7	336.4	0.7
1768	176,838	150	814	3.1	337.1	*	337.1	337.8	0.7
1773	177,312	211	859	2.9	337.9	*	337.9	338.6	0.7
1778	177,813	326	792	4.4	339.3	*	339.3	340.0	0.7
1782	178,210	160	223	8.5	341.2	*	341.2	341.7	0.5
1783	178,265	160	721	3.9	345.6	*	345.6	345.6	0.0
1788	178,845	267	582	6.2	346.5	*	346.5	346.7	0.2
1793	179,331	149	537	5.5	349.6	*	349.6	349.9	0.3
1799	179,893	132	531	3.8	350.9	*	350.9	351.5	0.6
1805	180,486	96	290	6.2	352.1	*	352.1	352.8	0.6
1811	181,065	82	264	6.5	355.0	*	355.0	355.7	0.7
1816	181,631	63	212	7.4	358.3	*	358.3	359.0	0.7
1821	182,114	37	139	7.0	361.5	*	361.5	362.1	0.5
1822	182,171	37	204	5.1	363.9	*	363.9	364.4	0.4
1826	182,556	60	152	9.7	365.8	*	365.8	365.9	0.1
1831	183,091	79	410	4.2	368.3	*	368.3	369.0	0.6
1838	183,799	75	162	9.9	372.6	*	372.6	373.1	0.5
1843	184,304	30	116	9.7	379.8	*	379.8	380.3	0.6
1845	184,523	70	219	5.6	382.4	*	382.4	382.8	0.3
1846	184,580	60	437	3.0	387.7	*	387.7	387.9	0.2
1850	184,994	60	150	9.4	387.9	*	387.9	388.0	0.1
1856	185,623	47	199	7.2	393.5	*	393.5	394.0	0.5
1863	186,301	94	176	9.4	399.4	*	399.4	399.8	0.4
Buffalo Creek West									
170	17,000	51	251	2.2	245.7	*	245.7	246.3	0.6
Camp Branch (Basin 22, Stream 7)									
015	1,465	290	884	6.4	292.4	*	292.4	293.1	0.6
029	2,884	230	722	7.2	297.4	*	297.4	298.2	0.9
042	4,202	235	796	7.0	303.6	*	303.6	304.4	0.8
048	4,824	235	863	6.4	306.6	*	306.6	307.4	0.8
054	5,390	255	1,245	4.3	312.5	*	312.5	312.5	0.0
066	6,590	180	527	7.5	317.2	*	317.2	317.8	0.6
080	7,978	110	532	6.4	324.0	*	324.0	324.7	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	1% Annual Chance Future Water-Surface Elevation	Without Floodway	With Floodway	Increase
089	8,851	130	665	5.6	327.4	*	327.4	327.8	0.3
095	9,545	146	797	4.8	331.0	*	331.0	332.0	0.9
107	10,742	180	549	7.3	334.3	*	334.3	335.0	0.6
120	12,042	120	414	8.4	339.5	*	339.5	340.3	0.8
127	12,719	100	451	7.3	342.4	*	342.4	343.4	0.9
136	13,559	95	364	10.3	347.0	*	347.0	347.8	0.8
147	14,661	140	378	11.2	354.2	*	354.2	354.2	0.0
156	15,621	140	500	6.6	359.1	*	359.1	359.5	0.4
164	16,448	50	249	11.8	364.7	*	364.7	365.4	0.7
Cary Branch									
007	710	315	1,019	4.0	232.3[2]	*	223.1[19]	223.1	0.0
018	1,759	300	1,392	4.9	232.3[2]	*	225.7[19]	226.0	0.4
028	2,802	186	1,139	6.2	232.3[2]	*	229.0[19]	229.4	0.4
041	4,082	195	1,131	6.0	232.3[2]	*	231.7[19]	232.5	0.8
051	5,068	216	1,057	6.9	234.1	*	234.1	234.9	0.8
061	6,097	338	1,984	3.6	238.9	*	238.9	239.8	0.9
071	7,085	158	694	5.9	240.2	*	240.2	241.2	1.0
083	8,289	170	598	6.9	245.6	*	245.6	245.9	0.4
094	9,372	90	328	10.0	250.6	*	250.6	251.1	0.5
106	10,605	88	354	8.9	258.8	*	258.8	259.5	0.7
118	11,789	94	378	8.8	266.6	*	266.6	267.1	0.4
128	12,758	120	526	5.7	272.4	*	272.4	273.3	0.9
140	13,967	100	415	7.0	278.9	*	278.9	279.4	0.5
151	15,144	104	379	8.2	286.3	*	286.3	286.7	0.4
161	16,110	115	397	8.5	291.4	*	291.4	292.2	0.9
164	16,401	117	379	5.8	293.8	*	293.8	294.6	0.8
175	17,490	69	292	9.2	300.2	*	300.2	301.0	0.9
179	17,913	47	197	12.2	303.8	*	303.8	304.1	0.3
181	18,060	115	454	6.6	308.1	*	308.1	309.0	0.9
188	18,785	100	376	7.4	313.3	*	313.3	313.6	0.3
201	20,102	100	383	6.8	328.3	*	328.3	329.1	0.8
Cedar Creek (Basin 15, Stream 34)									
045	4,478	212	563	4.0	265.5[2]	*	248.8[10]	248.8	0.0
057	5,719	238	618	3.6	265.5[2]	*	251.1[10]	251.1	0.0
068	6,829	145	583	6.6	265.5[2]	*	259.3[10]	259.8	0.4
081	8,069	130	504	7.1	265.5[2]	*	265.0[10]	265.5	0.4
098	9,760	104	348	9.1	275.3	*	275.3	275.8	0.5
102	10,197	71	527	3.6	282.6	*	282.6	282.7	0.0
112	11,151	55	321	6.5	292.3	*	292.3	292.8	0.5
120	12,025	55	260	6.5	298.2	*	298.2	298.4	0.2
125	12,515	60	504	3.9	307.2	*	307.2	307.4	0.1
133	13,310	224	2,788	0.5	332.2	*	332.2	332.2	0.0
142	14,242	372	2,830	0.5	332.2	*	332.2	332.2	0.0
152	15,150	80	345	5.2	334.6	*	334.6	335.5	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	1% Annual Chance Future Water-Surface Elevation	Without Floodway	With Floodway	Increase
159	15,944	50	206	9.0	339.3	*	339.3	339.9	0.6
Coles Branch (Basin 18, Stream 24)									
005	543	34	70	4.3	301.8[2]	*	297.7[16]	297.7	0.0
008	770	71	117	2.6	301.8[2]	*	298.7[16]	298.7	0.0
010	988	29	69	3.6	301.8[2]	*	299.1[16]	299.1	0.0
011	1,120	61	465	0.6	305.1	*	305.1	306.1	1.0
013	1,299	80	435	0.7	305.1	*	305.1	306.1	1.0
016	1,641	47	312	0.8	305.2	*	305.2	306.1	1.0
024	2,366	345	625	4.4	323.6[2]	*	309.3[20]	309.4	0.0
033	3,263	260	542	10.2	323.6[2]	*	315.7[20]	315.9	0.2
047	4,691	110	425	8.6	324.2	*	324.2	324.2	0.0
054	5,436	64	443	6.5	330.6	*	330.6	330.8	0.2
065	6,534	120	462	9.2	337.8	*	337.8	338.4	0.6
073	7,279	140	503	8.6	344.4	*	344.4	345.4	1.0
082	8,201	156	707	2.5	350.9	*	350.9	351.9	1.0
086	8,648	140	453	4.0	354.4	*	354.4	354.8	0.4
091	9,112	130	587	3.1	358.6	*	358.6	359.6	1.0
096	9,583	95	521	3.5	362.3	*	362.3	363.1	0.8
098	9,791	100	547	3.3	363.9	*	363.9	364.8	1.0
106	10,620	72	208	5.3	366.3	*	366.3	366.6	0.3
Crabtree Creek (Basin 18, Stream 9)									
011	1,112	112	1,984	7.8	175.3[2]	*	171.8[8]	172.5	0.6
026	2,617	110	1,920	8.0	175.3[2]	*	173.1[8]	173.8	0.7
035	3,478	250	2,661	6.3	175.3[2]	*	174.2[8]	174.8	0.6
051	5,101	175	2,340	7.7	176.5	*	176.5	177.3	0.7
062	6,153	132	2,495	6.5	178.1	*	178.1	178.8	0.6
071	7,145	170	2,528	6.8	178.6	*	178.6	179.3	0.7
082	8,242	120	2,045	8.4	179.0	*	179.0	179.8	0.8
097	9,706	150	2,573	6.6	180.4	*	180.4	181.3	0.9
115	11,491	224	4,491	4.2	183.0	*	183.0	183.6	0.5
130	13,001	302	3,930	6.2	183.5	*	183.5	183.9	0.4
141	14,111	100	1,817	8.0	184.6	*	184.6	184.7	0.0
151	15,131	700	7,146	4.6	185.7	*	185.7	186.0	0.3
164	16,369	786	5,501	8.2	185.8	*	185.8	186.2	0.4
172	17,176	320	4,579	5.9	186.3	*	186.3	186.9	0.6
184	18,437	155	2,633	7.2	187.0	*	187.0	187.6	0.6
199	19,886	217	2,948	7.5	188.1	*	188.1	188.7	0.6
211	21,144	295	3,657	6.5	189.0	*	189.0	189.7	0.7
222	22,224	290	3,478	5.6	190.6	*	190.6	191.1	0.5
240	23,977	860	9,840	4.4	191.2	*	191.2	191.8	0.6
261	26,135	1,390	15,300	3.2	191.4	*	191.4	192.1	0.7
275	27,495	1,275	13,855	3.3	191.5	*	191.5	192.2	0.7
297	29,701	900	8,904	4.3	191.8	*	191.8	192.6	0.8
317	31,704	1,095	8,430	4.7	192.8	*	192.8	193.6	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	1% Annual Chance Future Water-Surface Elevation	Without Floodway	With Floodway	Increase
352	35,238	600	4,974	5.5	197.8	*	197.8	198.0	0.2
364	36,424	770	5,674	5.9	197.8	*	197.8	198.4	0.7
383	38,273	370	1,905	7.9	200.6	*	200.6	201.3	0.6
398	39,806	462	4,722	5.4	201.6	*	201.6	202.6	0.9
414	41,412	410	2,275	7.5	202.8	*	202.8	203.6	0.8
427	42,725	590	3,672	5.3	205.1	*	205.1	205.5	0.4
443	44,283	550	4,693	4.2	206.0	*	206.0	206.9	0.9
458	45,787	630	6,649	4.5	206.7	*	206.7	207.6	0.9
463	46,296	300	3,202	6.3	206.8	*	206.8	207.6	0.7
472	47,206	293	3,107	6.3	209.2	*	209.2	209.2	0.1
485	48,471	445	5,647	4.4	210.0	*	210.0	210.1	0.1
498	49,799	350	4,378	5.3	210.4	*	210.4	210.8	0.4
509	50,942	215	2,512	6.9	210.6	*	210.6	211.4	0.8
518	51,762	450	5,321	4.9	211.4	*	211.4	212.2	0.8
527	52,734	480	4,667	5.1	211.8	*	211.8	212.7	0.9
536	53,562	350	3,094	5.7	212.0	*	212.0	212.9	1.0
548	54,827	132	1,734	6.8	213.8	*	213.8	214.6	0.8
560	55,989	87	1,113	10.8	215.6	*	215.6	216.2	0.6
568	56,807	135	1,949	6.6	218.0	*	218.0	218.8	0.8
579	57,870	230	2,417	7.0	218.9	*	218.9	219.8	0.9
594	59,365	150	2,149	6.9	220.9	*	220.9	221.5	0.6
608	60,797	300	2,826	6.1	222.6	*	222.6	223.4	0.7
618	61,824	290	2,976	6.0	223.2	*	223.2	224.1	0.9
628	62,848	79	1,103	10.3	223.5	*	223.5	224.4	0.9
639	63,891	80	1,609	8.2	226.0	*	226.0	226.5	0.6
652	65,209	165	2,304	6.0	228.4	*	228.4	228.7	0.3
667	66,744	195	2,426	5.6	229.9	*	229.9	230.6	0.6
678	67,755	142	1,799	6.2	231.0	*	231.0	231.5	0.5
685	68,462	147	2,119	6.3	232.1	*	232.1	232.7	0.6
696	69,592	350	4,300	5.1	233.4	*	233.4	234.3	0.9
711	71,112	180	2,269	5.1	233.8	*	233.8	234.7	1.0
724	72,397	90	1,469	6.2	234.3	*	234.3	235.2	0.9
738	73,840	89	1,579	6.2	235.3	*	235.3	236.2	0.8
748	74,754	115	1,992	5.1	235.9	*	235.9	236.8	0.9
759	75,859	110	1,822	4.9	236.3	*	236.3	237.2	0.9
773	77,272	81	1,468	6.1	236.8	*	236.8	237.7	0.9
785	78,456	97	1,386	6.4	237.6	*	237.6	238.5	0.9
797	79,662	83	1,284	6.9	240.2	*	240.2	241.1	0.9
809	80,907	86	1,306	6.8	241.8	*	241.8	242.4	0.6
817	81,724	170	2,366	5.5	242.7	*	242.7	243.3	0.6
829	82,898	120	1,723	5.2	243.2	*	243.2	244.0	0.8
838	83,849	144	1,921	2.6	244.8	*	244.8	245.6	0.8
848	84,846	190	2,775	2.0	244.9	*	244.9	245.7	0.8
868	86,842	220	1,983	3.0	245.1	*	245.1	246.1	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	1% Annual Chance Future Water-Surface Elevation	Without Floodway	With Floodway	Increase
879	87,851	100	1,471	3.0	245.4	*	245.4	246.3	1.0
889	88,854	165	1,496	3.8	245.5	*	245.5	246.5	1.0
899	89,870	174	1,965	2.9	245.8	*	245.8	246.8	1.0
909	90,863	93	1,675	2.4	246.0	*	246.0	247.0	1.0
919	91,922	71	1,041	3.8	246.1	*	246.1	247.0	1.0
929	92,868	142	1,691	3.3	246.4	*	246.4	247.3	0.9
939	93,856	87	930	4.4	247.3	*	247.3	248.2	0.8
949	94,856	82	1,004	2.2	247.7	*	247.7	248.6	0.9
958	95,843	93	1,121	1.9	247.9	*	247.9	248.7	0.8
968	96,834	68	796	3.0	248.0	*	248.0	248.8	0.8
973	97,310	82	845	2.5	248.1	*	248.1	249.0	0.8
983	98,311	63	638	3.4	248.6	*	248.6	249.3	0.7
992	99,152	62	573	3.8	248.9	*	248.9	249.6	0.7
998	99,802	62	524	4.0	249.6	*	249.6	250.2	0.5
1008	100,802	62	641	3.1	250.2	*	250.2	250.6	0.5
1019	101,906	59	458	4.4	250.8	*	250.8	251.3	0.5
1026	102,559	49	361	5.5	251.7	*	251.7	252.2	0.5
1043	104,262	49	349	5.7	255.1	*	255.1	255.5	0.4
1066	106,629	55	426	4.7	260.2	*	260.2	260.6	0.5
1066	106,629	55	426	4.7	260.2	*	260.2	260.6	0.5
1078	107,774	80	724	4.7	265.5	*	265.5	265.6	0.1
1088	108,847	60	724	4.3	267.1	*	267.1	267.5	0.4
1100	110,032	43	527	5.5	267.7	*	267.7	268.3	0.6
1111	111,085	60	730	2.4	269.2	*	269.2	269.2	0.0
1116	111,598	110	1,212	1.7	269.6	*	269.6	269.6	0.0
1117	111,722	115	1,109	1.8	269.8	*	269.8	269.8	0.0
1125	112,464	147	238	7.3	271.4	*	271.4	271.4	0.0
1130	113,006	138	436	4.0	287.2	*	287.2	287.2	0.0
1191	119,076	1,720	8,154	1.0	282.7[2]	*	274.3[17]	274.3	0.0
1209	120,872	780	3,344	5.0	282.7[2]	*	280.5[17]	280.6	0.1
1214	121,393	190	1,235	7.6	282.7[2]	*	281.3[17]	282.1	0.8
1215	121,512	250	1,737	6.5	282.7[2]	*	282.7[17]	283.1	0.4
1237	123,669	1,150	4,582	3.1	284.4	*	284.4	285.3	0.9
1260	125,982	500	2,208	5.0	286.8	*	286.8	287.5	0.7
1271	127,093	112	1,007	8.3	289.9	*	289.9	290.4	0.5
1272	127,248	250	2,215	5.3	293.2	*	293.2	293.4	0.1
1283	128,326	530	3,586	3.9	293.9	*	293.9	294.4	0.5
1300	129,953	545	2,221	2.7	294.2	*	294.2	295.1	0.9
1310	131,025	305	1,546	4.2	297.5	*	297.5	297.8	0.4
1311	131,106	315	1,229	6.3	297.5	*	297.5	297.9	0.4
1323	132,307	475	2,359	2.6	298.3	*	298.3	299.3	1.0
1330	133,048	449	1,421	5.5	299.3	*	299.3	299.9	0.7
1345	134,528	194	895	7.0	301.8	*	301.8	302.7	0.9
1356	135,607	100	544	4.6	303.3	*	303.3	304.3	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	1% Annual Chance Future Water-Surface Elevation	Without Floodway	With Floodway	Increase
1362	136,204	342	1,569	1.8	307.2	*	307.2	307.5	0.3
1374	137,412	298	2,257	1.0	312.0	*	312.0	312.0	0.0
1383	138,301	245	1,837	1.2	312.0	*	312.0	312.0	0.0
1387	138,729	400	1,335	1.6	312.0	*	312.0	312.0	0.0
1390	138,960	107	332	6.6	312.8	*	312.8	312.8	0.0
1392	139,213	98	367	7.0	313.4	*	313.4	313.4	0.0
1403	140,302	120	724	4.3	321.8	*	321.8	321.8	0.0
1411	141,140	120	501	0.6	322.5	*	322.5	322.9	0.4
1415	141,480	75	327	0.6	322.5	*	322.5	322.9	0.4
1423	142,349	33	64	2.6	323.9	*	323.9	323.9	0.0
1428	142,767	40	72	2.5	326.8	*	326.8	326.8	0.0
Crabtree Creek Tributary No. 6 (Basin 18, Stream 20)									
015	1,451	440	929	3.7	282.7[2]	*	281.2[17]	282.2	0.9
024	2,412	110	439	6.9	287.2	*	287.2	288.0	0.8
031	3,126	56	314	8.8	293.2	*	293.2	293.2	0.0
038	3,812	66	498	5.6	297.5	*	297.5	298.1	0.5
049	4,872	85	202	9.5	302.8	*	302.8	302.9	0.2
061	6,106	60	259	7.2	313.5	*	313.5	313.9	0.4
068	6,768	70	212	9.1	319.4	*	319.4	320.0	0.6
075	7,478	38	188	7.6	326.1	*	326.1	326.6	0.5
Dunn Creek (Basin 6, Stream 5)									
009	894	195	961	4.9	230.3[2]	*	228.5[3]	229.2	0.7
024	2,423	185	852	5.1	233.4	*	233.4	234.1	0.8
033	3,260	165	858	4.7	235.7	*	235.7	236.6	0.8
040	4,011	180	747	7.6	239.1	*	239.1	239.7	0.6
052	5,193	80	298	10.5	243.7	*	243.7	244.6	0.9
058	5,803	147	490	4.9	249.1	*	249.1	250.1	1.0
069	6,888	80	288	7.5	256.3	*	256.3	257.2	0.9
078	7,790	125	539	5.6	260.6	*	260.6	261.6	1.0
083	8,261	121	482	4.8	264.2	*	264.2	264.3	0.0
087	8,652	120	696	3.1	266.8	*	266.8	266.9	0.1
097	9,731	85	432	7.2	274.6	*	274.6	274.8	0.3
107	10,697	45	223	10.1	278.9	*	278.9	279.3	0.4
110	10,974	104	842	3.0	286.4	*	286.4	286.4	0.0
123	12,280	42	165	13.0	290.6	*	290.6	290.6	0.0
134	13,426	60	323	7.1	305.4	*	305.4	306.0	0.6
143	14,347	95	345	6.0	309.3	*	309.3	310.3	1.0
148	14,832	50	360	5.1	317.3	*	317.3	317.8	0.5
161	16,111	45	265	6.6	323.6	*	323.6	324.5	0.9
175	17,484	60	334	5.7	337.4	*	337.4	338.3	1.0
187	18,745	52	236	7.8	350.4	*	350.4	351.3	1.0
203	20,328	50	203	5.9	367.8	*	367.8	368.4	0.6
208	20,775	307	2,304	0.3	378.3	*	378.3	378.3	0.0
222	22,233	40	146	5.2	386.2	*	386.2	386.8	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	1% Annual Chance Future Water-Surface Elevation	Without Floodway	With Floodway	Increase
Dutchmans Branch (Basin 20, Stream 17)									
012	1,240	443	445	2.7	289.8[2]	*	271.5[4]	271.5	0.0
026	2,646	243	297	4.1	289.8[2]	*	277.2[4]	277.2	0.0
039	3,901	138	315	7.2	289.8[2]	*	286.5[4]	287.0	0.5
044	4,393	110	612	2.3	289.8[2]	*	289.3[4]	290.0	0.8
046	4,599	580	5,164	0.5	293.1	*	293.1	293.1	0.0
055	5,453	455	646	9.2	295.1	*	295.1	295.4	0.3
070	7,041	310	852	6.5	301.5	*	301.5	302.2	0.7
082	8,163	150	427	10.3	307.4	*	307.4	307.8	0.4
086	8,597	119	619	6.6	311.0	*	311.0	311.0	0.0
096	9,606	200	507	11.0	314.8	*	314.8	315.4	0.5
117	11,682	250	752	7.2	323.2	*	323.2	324.2	1.0
132	13,246	210	739	7.0	331.5	*	331.5	332.5	0.9
147	14,706	190	769	5.9	337.9	*	337.9	338.9	1.0
157	15,736	140	600	7.8	343.6	*	343.6	344.4	0.8
168	16,801	290	900	6.2	348.7	*	348.7	349.6	0.9
184	18,369	200	682	7.6	355.2	*	355.2	355.7	0.5
191	19,123	158	553	7.4	358.7	*	358.7	359.6	0.9
196	19,574	148	779	4.7	363.6	*	363.6	364.6	1.0
209	20,884	150	504	7.9	367.9	*	367.9	368.6	0.7
222	22,183	120	688	5.3	378.3	*	378.3	378.8	0.5
233	23,260	145	692	5.3	380.8	*	380.8	381.6	0.8
246	24,629	180	685	5.8	386.2	*	386.2	387.0	0.8
258	25,770	100	370	7.8	391.2	*	391.2	391.9	0.7
East Fork Mine Creek (Basin 18, Stream 34)									
006	615	41	294	8.1	279.5[2]	*	274.0[21]	274.8	0.8
015	1,494	31	276	11.3	282.3	*	282.3	282.8	0.5
026	2,582	206	1,783	2.2	305.5	*	305.5	305.6	0.1
040	4,034	82	778	1.7	318.4	*	318.4	318.7	0.2
051	5,135	150	945	2.5	327.2	*	327.2	327.3	0.1
061	6,109	46	192	7.9	329.4	*	329.4	329.5	0.0
071	7,060	72	350	3.8	335.2	*	335.2	336.2	1.0
077	7,700	25	168	17.3	342.0	*	342.0	343.0	1.0
East Fork Mine Creek Tributary (Basin 18, Stream 35)									
000	21	137	492	8.3	318.4[2]	*	312.4[22]	312.4	0.0
006	604	58	263	12.1	325.6	*	325.6	325.6	0.0
019	1,933	233	681	5.2	344.3	*	344.3	344.3	0.0
029	2,939	64	314	8.2	352.4	*	352.4	353.4	1.0
034	3,369	26	196	9.1	355.1	*	355.1	356.1	1.0
Echo Creek (Basin 20, Stream 14)									
010	1,035	340	855	5.0	259.5[2]	*	255.0[23]	255.8	0.8
019	1,897	103	666	4.6	262.8	*	262.8	263.5	0.7
026	2,605	90	519	5.2	264.6	*	264.6	265.4	0.8
030	3,028	84	496	6.7	266.2	*	266.2	266.4	0.2

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	1% Annual Chance Future Water-Surface Elevation	Without Floodway	With Floodway	Increase
045	4,455	150	818	4.8	270.0	*	270.0	271.0	1.0
053	5,329	90	418	6.8	274.2	*	274.2	275.0	0.8
058	5,807	70	307	7.2	278.8	*	278.8	278.8	0.0
069	6,891	165	521	5.2	281.6	*	281.6	282.6	1.0
076	7,636	105	304	5.8	284.7	*	284.7	285.5	0.8
079	7,933	107	419	4.2	290.0	*	290.0	290.0	0.0
090	9,011	45	192	9.1	293.9	*	293.9	294.4	0.5
096	9,579	50	201	8.4	298.2	*	298.2	298.5	0.3
099	9,873	73	279	7.9	306.2	*	306.2	307.1	1.0
101	10,146	65	246	7.0	307.5	*	307.5	308.2	0.7
103	10,324	67	347	4.7	312.6	*	312.6	313.6	1.0
107	10,674	26	109	13.4	317.2	*	317.2	317.2	0.0
Gill Creek (Basin 10, Stream 24)									
018	1,771	110	316	5.8	229.0[2]	*	228.5[7]	229.1	0.5
032	3,175	135	449	3.4	236.3	*	236.3	236.5	0.2
042	4,191	70	317	6.8	244.8	*	244.8	245.5	0.7
051	5,138	70	388	6.1	257.4	*	257.4	258.0	0.6
056	5,599	110	530	4.5	258.8	*	258.8	259.7	0.9
058	5,793	165	655	3.7	263.0	*	263.0	263.3	0.3
063	6,284	132	816	2.8	265.6	*	265.6	266.6	1.0
066	6,626	46	163	12.7	270.4	*	270.4	270.4	0.0
Haleys Branch (Basin 18, Stream 10)									
017	1,728	264	573	3.9	282.7[2]	*	277.5[17]	277.5	0.0
028	2,786	110	572	6.5	282.7[2]	*	282.4[17]	283.3	0.9
036	3,564	95	448	7.6	286.6	*	286.6	287.2	0.6
043	4,321	95	435	8.2	291.7	*	291.7	292.7	0.9
050	5,024	115	375	8.6	296.4	*	296.4	297.3	1.0
Hare Snipe Creek (Basin 18, Stream 1)									
010	1,017	50	580	7.0	233.8[2]	*	233.4[16]	234.0	0.6
020	2,028	107	824	6.7	238.4	*	238.4	239.3	0.9
030	3,038	48	372	11.2	245.9	*	245.9	246.8	0.9
038	3,755	71	381	13.3	255.4	*	255.4	255.8	0.4
047	4,656	102	819	9.4	270.8	*	270.8	270.9	0.1
056	5,592	65	437	9.8	276.3	*	276.3	277.2	0.9
066	6,579	195	816	8.6	283.6	*	283.6	284.3	0.6
072	7,183	280	1,735	5.1	286.8	*	286.8	287.8	1.0
082	8,176	95	734	7.6	292.3	*	292.3	293.0	0.7
090	9,037	280	1,530	4.3	294.7	*	294.7	295.6	0.9
096	9,559	115	597	4.6	295.9	*	295.9	296.6	0.8
101	10,086	65	401	7.3	298.4	*	298.4	299.2	0.7
107	10,691	67	405	6.5	299.9	*	299.9	300.7	0.8
115	11,462	76	466	7.3	303.5	*	303.5	304.2	0.7
123	12,336	22	200	3.4	310.7	*	310.7	311.1	0.4
130	12,966	35	246	3.0	311.0	*	311.0	311.8	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	1% Annual Chance Future Water-Surface Elevation	Without Floodway	With Floodway	Increase
136	13,558	22	131	5.4	312.3	*	312.3	313.0	0.7
138	13,847	36	304	0.5	314.5	*	314.5	315.4	1.0
Hatchet Grove Tributary (Basin 18, Stream 25)									
022	2,201	658	1,846	2.6	294.5	*	294.5	295.0	0.5
037	3,694	220	1,071	5.3	298.5	*	298.5	299.4	0.9
044	4,433	180	927	6.1	300.9	*	300.9	301.4	0.5
051	5,111	165	963	5.4	302.3	*	302.3	303.1	0.9
062	6,186	222	989	5.0	304.4	*	304.4	305.2	0.8
068	6,778	150	716	3.1	305.5	*	305.5	306.0	0.5
079	7,923	68	368	3.7	307.6	*	307.6	308.1	0.5
088	8,758	75	280	4.2	309.7	*	309.7	310.4	0.7
095	9,523	100	309	4.1	311.4	*	311.4	312.0	0.6
101	10,053	55	158	7.0	313.2	*	313.2	313.7	0.5
Hillard Creek (Basin 30, Stream 7)									
005	494	116	304	7.4	221.5[2]	*	221.4[24]	222.4	1.0
016	1,565	89	203	9.9	229.0	*	229.0	229.1	0.1
028	2,766	108	189	9.6	236.8	*	236.8	236.9	0.1
035	3,548	88	216	9.1	241.0	*	241.0	241.1	0.1
043	4,342	81	158	7.5	250.0	*	250.0	250.2	0.2
Hodges Creek (Basin 8, Stream 1)									
003	269	468	1,282	11.1	191.3[2]	*	182.3[8]	182.7	0.4
014	1,414	515	3,789	1.4	191.3[2]	*	183.8[8]	184.3	0.5
023	2,325	290	1,567	10.8	191.3[2]	*	184.6[8]	185.0	0.4
033	3,334	380	1,822	9.3	191.3[2]	*	186.8[8]	187.6	0.8
042	4,248	165	1,288	10.4	192.0	*	192.0	192.1	0.0
050	4,995	107	908	10.6	194.2	*	194.2	194.8	0.5
059	5,855	120	1,092	7.9	197.1	*	197.1	197.7	0.6
070	6,969	225	1,948	5.9	199.6	*	199.6	200.1	0.5
077	7,741	233	1,902	5.7	200.2	*	200.2	200.7	0.5
077	7,741	233	1,901	5.7	200.2	*	200.2	200.7	0.5
086	8,567	145	970	5.5	202.1	*	202.1	202.8	0.7
100	9,999	120	683	6.3	205.1	*	205.1	205.8	0.7
112	11,174	210	1,071	4.3	207.2	*	207.2	208.0	0.9
114	11,409	106	622	6.2	208.2	*	208.2	209.1	0.8
127	12,672	320	1,292	3.9	209.7	*	209.7	210.7	1.0
136	13,557	200	828	6.4	211.7	*	211.7	212.4	0.7
143	14,288	120	476	9.8	213.7	*	213.7	214.6	0.9
150	14,993	120	659	7.1	217.8	*	217.8	218.6	0.8
152	15,162	85	650	5.5	218.5	*	218.5	219.4	0.9
169	16,907	79	426	10.3	223.2	*	223.2	223.5	0.4
Hominy Branch (Basin 10, Stream 4)									
017	1,735	160	552	3.8	228.2[2]	*	223.4[7]	224.3	0.9
030	2,995	110	358	6.4	230.2	*	230.2	230.4	0.2
041	4,078	105	479	4.0	235.8	*	235.8	236.3	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	1% Annual Chance Future Water-Surface Elevation	Without Floodway	With Floodway	Increase
050	5,045	120	336	5.0	236.8	*	236.8	237.8	1.0
065	6,496	145	390	4.9	245.3	*	245.3	246.3	1.0
076	7,614	110	418	4.6	250.9	*	250.9	251.8	0.9
088	8,751	60	200	7.1	255.4	*	255.4	256.3	0.9
097	9,749	60	263	5.2	263.3	*	263.3	263.4	0.1
104	10,432	65	244	6.7	265.7	*	265.7	266.3	0.6
108	10,796	75	402	4.8	271.0	*	271.0	271.2	0.2
117	11,739	70	367	4.8	275.9	*	275.9	276.1	0.2
125	12,478	50	214	7.3	278.7	*	278.7	279.3	0.6
Hominy Creek (Basin 10, Stream 7)									
014	1,442	167	956	3.6	252.5[2]	*	248.3[7]	249.3	1.0
018	1,787	120	730	5.2	252.5[2]	*	250.2[7]	250.9	0.7
022	2,196	270	1,639	4.6	252.5[2]	*	250.5[7]	251.5	1.0
Honeycutt Creek (Basin 15, Stream 31)									
000	32	225	925	3.4	265.5[2]	*	254.8[10]	254.9	0.1
013	1,294	250	723	7.6	265.5[2]	*	258.0[10]	258.2	0.2
019	1,907	265	759	6.8	265.5[2]	*	260.1[10]	260.6	0.5
029	2,907	250	857	7.2	265.6	*	265.6	265.8	0.2
035	3,476	150	546	9.1	266.9	*	266.9	267.5	0.6
039	3,911	110	581	6.0	269.0	*	269.0	269.7	0.6
048	4,848	100	562	7.0	273.2	*	273.2	274.0	0.8
061	6,118	65	350	7.8	277.3	*	277.3	278.0	0.8
067	6,652	45	287	8.9	281.1	*	281.1	281.4	0.2
075	7,529	39	255	9.3	287.2	*	287.2	287.8	0.7
083	8,305	65	263	12.9	294.7	*	294.7	294.7	0.0
088	8,768	70	388	8.1	299.3	*	299.3	299.8	0.4
092	9,209	200	2,019	1.8	307.8	*	307.8	308.7	1.0
094	9,406	202	1,730	2.1	307.8	*	307.8	308.8	1.0
096	9,582	200	1,707	2.1	307.8	*	307.8	308.8	1.0
Horse Creek									
100	10,002	203	938	4.4	265.5[2]	*	247.6[10]	247.8	0.2
106	10,582	133	613	6.5	265.5[2]	*	248.3[10]	248.5	0.2
113	11,345	100	1,113	3.4	265.5[2]	*	260.6[10]	260.6	0.0
123	12,329	100	849	5.3	265.5[2]	*	261.0[10]	261.0	0.0
128	12,766	103	660	7.8	265.5[2]	*	261.7[10]	261.7	0.0
134	13,438	100	759	7.8	265.5[2]	*	264.0[10]	264.1	0.1
140	14,002	110	823	6.5	265.9	*	265.9	266.2	0.3
147	14,734	110	897	5.5	267.5	*	267.5	268.2	0.8
156	15,602	100	822	6.3	271.3	*	271.3	272.0	0.6
164	16,406	70	637	7.5	272.7	*	272.7	273.1	0.4
168	16,799	56	618	7.2	275.0	*	275.0	275.3	0.3
178	17,829	70	733	5.7	278.5	*	278.5	279.2	0.7
186	18,648	45	358	11.1	281.1	*	281.1	281.3	0.1
193	19,269	160	989	5.8	283.9	*	283.9	284.4	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	1% Annual Chance Future Water-Surface Elevation	Without Floodway	With Floodway	Increase
203	20,255	70	491	7.8	284.6	*	284.6	285.5	0.9
214	21,367	70	607	7.2	290.7	*	290.7	291.1	0.4
223	22,252	160	856	5.8	293.2	*	293.2	293.7	0.6
231	23,100	109	557	8.4	295.5	*	295.5	296.2	0.6
235	23,464	60	580	6.6	298.5	*	298.5	298.6	0.1
244	24,392	50	389	11.0	302.6	*	302.6	303.0	0.4
254	25,379	155	758	7.2	305.7	*	305.7	306.5	0.8
261	26,143	130	749	7.3	307.8	*	307.8	308.6	0.7
273	27,298	235	933	6.3	310.8	*	310.8	311.3	0.5
285	28,481	540	2,660	2.7	313.7	*	313.7	314.6	0.9
301	30,052	240	945	4.2	314.8	*	314.8	315.6	0.8
309	30,851	100	604	6.7	318.8	*	318.8	318.8	0.0
327	32,743	290	1,183	3.7	321.6	*	321.6	322.5	0.9
333	33,279	250	977	4.6	322.4	*	322.4	323.2	0.9
339	33,932	300	1,086	4.6	323.5	*	323.5	324.4	0.9
340	33,978	300	1,101	4.1	323.6	*	323.6	324.5	0.8
344	34,417	240	1,100	4.1	324.8	*	324.8	325.7	0.9
354	35,446	294	913	6.1	327.3	*	327.3	328.2	0.9
360	35,960	292	1,016	5.0	328.7	*	328.7	329.5	0.8
366	36,602	144	616	6.5	332.4	*	332.4	332.8	0.4
376	37,583	80	469	10.1	334.5	*	334.5	334.7	0.2
388	38,751	120	511	9.9	336.5	*	336.5	337.0	0.5
396	39,606	110	653	8.3	339.6	*	339.6	339.6	0.0
House Creek (Basin 18, Stream 36)									
006	586	98	974	2.9	228.4[2]	*	223.9[16]	224.5	0.7
016	1,563	106	831	4.9	231.0	*	231.0	231.1	0.1
026	2,562	87	472	9.2	233.8	*	233.8	234.6	0.8
034	3,375	44	260	11.4	238.6	*	238.6	238.9	0.3
044	4,382	159	887	5.0	250.6	*	250.6	250.6	0.0
054	5,409	230	2,211	2.8	263.2	*	263.2	263.2	0.0
063	6,333	255	1,014	6.9	263.5	*	263.5	263.5	0.0
074	7,447	44	259	11.4	271.0	*	271.0	271.8	0.8
085	8,506	50	377	7.7	277.5	*	277.5	278.5	1.0
095	9,546	80	399	8.7	285.4	*	285.4	286.1	0.7
106	10,579	129	1,316	3.7	303.0	*	303.0	303.1	0.0
114	11,414	115	1,484	1.3	313.3	*	313.3	313.3	0.0
126	12,612	97	303	5.9	313.2	*	313.2	313.4	0.2
135	13,543	26	154	8.7	320.0	*	320.0	320.3	0.3
146	14,571	392	1,762	1.4	341.2	*	341.2	341.2	0.0
154	15,358	67	275	6.9	344.3	*	344.3	344.3	0.0
Kenneth Branch (Basin 24, Stream 6)									
004	432	80	93	6.5	366.9	*	366.9	367.1	0.2
008	841	38	133	3.8	371.8	*	371.8	371.9	0.1
012	1,239	23	164	3.2	376.7	*	376.7	377.4	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	1% Annual Chance Future Water-Surface Elevation	Without Floodway	With Floodway	Increase
017	1,655	38	372	1.2	383.7	*	383.7	383.7	0.0
022	2,226	80	608	0.8	383.7	*	383.7	383.8	0.0
035	3,458	55	124	3.9	383.8	*	383.8	384.3	0.6
Kit Creek									
092	9,224	250	622	11.0	243.1	*	243.1	243.5	0.3
107	10,668	501	1,606	6.4	249.0	*	249.0	249.0	0.0
115	11,537	415	1,597	6.2	250.5	*	250.5	251.2	0.8
122	12,205	288	2,269	3.5	254.8	*	254.8	254.8	0.0
131	13,123	240	1,308	6.5	255.1	*	255.1	255.7	0.6
140	13,969	57	681	7.6	257.8	*	257.8	258.8	1.0
143	14,306	138	1,373	4.9	258.8	*	258.8	259.8	1.0
145	14,516	117	1,457	4.0	261.7	*	261.7	262.4	0.8
149	14,931	280	2,798	2.4	262.0	*	262.0	262.7	0.8
155	15,522	250	2,246	2.5	262.0	*	262.0	262.8	0.8
163	16,315	80	1,051	3.5	264.2	*	264.2	265.1	0.9
170	16,997	532	4,116	0.7	266.8	*	266.8	266.8	0.0
175	17,475	547	4,956	0.6	266.8	*	266.8	266.8	0.0
188	18,767	380	3,185	0.6	266.8	*	266.8	266.8	0.0
200	20,009	175	525	6.0	266.9	*	266.9	266.9	0.0
209	20,855	160	567	5.4	269.2	*	269.2	269.4	0.2
215	21,535	724	10,930	0.2	287.4	*	287.4	287.4	0.0
226	22,557	350	5,014	0.3	287.4	*	287.4	287.4	0.0
237	23,719	270	3,288	0.5	287.4	*	287.4	287.4	0.0
245	24,475	58	664	2.2	287.9	*	287.9	287.9	0.0
246	24,607	55	640	2.5	287.9	*	287.9	287.9	0.0
253	25,256	89	851	2.0	288.9	*	288.9	288.9	0.0
256	25,602	110	872	2.0	289.7	*	289.7	289.7	0.0
266	26,618	100	337	7.3	291.5	*	291.5	291.7	0.2
Kit Creek Tributary 1 (Basin 29, Stream 11)									
010	972	513	716	2.7	266.8[2]	*	258.9[25]	259.1	0.2
015	1,549	415	3,003	0.7	268.2	*	268.2	268.2	0.0
030	3,008	220	1,322	1.8	268.2	*	268.2	268.2	0.0
043	4,261	310	3,936	0.5	284.5	*	284.5	285.4	1.0
051	5,053	370	5,282	0.4	284.5	*	284.5	285.4	1.0
059	5,900	310	2,890	0.8	284.8	*	284.8	285.8	1.0
073	7,270	170	1,332	1.8	284.9	*	284.9	285.9	1.0
Kit Creek Tributary 2 (Basin 29, Stream 8)									
010	969	115	514	7.4	262.0[2]	*	258.6[25]	259.6	1.0
024	2,374	175	662	6.4	263.2	*	263.2	264.0	0.8
036	3,554	125	556	6.8	265.6	*	265.6	266.4	0.8
042	4,169	171	690	5.9	267.9	*	267.9	268.1	0.2
055	5,526	49	380	6.3	273.5	*	273.5	274.5	1.0
062	6,160	55	311	6.8	274.8	*	274.8	275.8	1.0
Lake Benson									

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	1% Annual Chance Future Water-Surface Elevation	Without Floodway	With Floodway	Increase
005	486	226	330	6.3	238.8[2]	*	235.8[26]	235.9	0.2
017	1,681	150	681	5.5	241.5	*	241.5	242.3	0.8
029	2,862	130	447	5.5	248.1	*	248.1	248.1	0.0
043	4,341	170	474	5.8	251.9	*	251.9	252.8	0.9
053	5,266	89	308	7.6	259.0	*	259.0	259.3	0.4
058	5,800	59	327	6.2	262.2	*	262.2	262.8	0.7
069	6,872	75	195	10.3	268.8	*	268.8	268.8	0.0
080	8,011	70	240	9.4	278.2	*	278.2	278.7	0.6
093	9,273	45	302	5.1	287.6	*	287.6	288.1	0.5
096	9,570	78	514	3.3	292.6	*	292.6	292.8	0.2
099	9,923	78	519	3.5	293.3	*	293.3	294.2	0.9
103	10,259	80	432	4.7	293.6	*	293.6	294.5	0.9
106	10,588	95	352	6.3	294.0	*	294.0	294.9	0.9
114	11,444	65	259	4.6	299.6	*	299.6	300.5	0.8
119	11,860	60	367	3.9	306.5	*	306.5	306.9	0.4
123	12,273	57	276	4.9	306.8	*	306.8	307.5	0.7
125	12,507	67	273	4.6	308.2	*	308.2	308.8	0.6
132	13,225	55	186	8.1	312.3	*	312.3	313.0	0.7
139	13,932	45	200	5.9	316.1	*	316.1	316.3	0.2
Lakemont Tributary (Basin 18, Stream 22)									
001	72	71	286	6.1	253.9[2]	*	252.2[27]	253.2	1.0
012	1,166	46	132	10.8	268.4	*	268.4	268.4	0.0
020	1,969	53	320	4.5	288.3	*	288.3	289.2	0.9
031	3,118	30	168	6.5	313.2	*	313.2	313.9	0.7
Lens Branch (Basin 20, Stream 22)									
019	1,924	258	871	6.4	311.7	*	311.7	312.7	1.0
029	2,862	164	1,118	7.1	318.2	*	318.2	318.9	0.7
034	3,396	885	15,768	0.2	343.5	*	343.5	343.5	0.0
061	6,137	620	8,847	0.4	343.5	*	343.5	343.5	0.0
080	7,974	210	2,232	1.7	343.5	*	343.5	343.5	0.0
086	8,644	245	2,340	1.6	343.5	*	343.5	343.5	0.0
097	9,707	90	1,208	4.2	354.9	*	354.9	355.2	0.3
106	10,606	152	1,839	3.2	362.7	*	362.7	363.5	0.8
119	11,921	190	1,857	2.0	362.8	*	362.8	363.8	1.0
130	12,983	180	841	4.8	363.2	*	363.2	364.2	1.0
139	13,862	245	6,006	0.6	387.4	*	387.4	388.2	0.8
150	14,958	130	2,485	1.3	387.4	*	387.4	388.2	0.9
155	15,540	120	1,924	1.8	387.4	*	387.4	388.3	0.9
158	15,793	110	1,575	2.2	387.4	*	387.4	388.3	0.9
Little Beaver Creek									
060	5,989	560	2,788	0.9	238.0[2]	*	231.1	232.1	1.0
067	6,667	350	1,511	1.6	238.0[2]	*	232.0	232.9	0.9
074	7,386	325	1,384	1.8	238.0[2]	*	234.0	235.0	0.9
081	8,098	400	1,960	1.2	238.0[2]	*	235.6	236.6	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	1% Annual Chance Future Water-Surface Elevation	Without Floodway	With Floodway	Increase
086	8,594	450	1,749	1.4	238.0[2]	*	236.5	237.5	1.0
092	9,189	240	940	2.6	238.5	*	238.5	239.3	0.8
Little Beaverdam Creek (Basin 2, Stream 2)									
118	11,824	113	477	5.9	297.1	*	297.1	297.8	0.7
126	12,566	130	401	5.0	297.5	*	297.5	298.5	0.9
133	13,263	100	272	6.4	301.9	*	301.9	302.6	0.8
138	13,828	38	126	11.0	307.4	*	307.4	307.4	0.0
146	14,607	45	180	8.6	317.8	*	317.8	318.3	0.5
154	15,376	75	395	4.3	323.3	*	323.3	324.2	1.0
Little Branch (Basin 26, Stream 3)									
013	1,320	703	1,654	4.9	253.2	*	253.2	253.8	0.6
025	2,452	578	1,243	6.6	255.2	*	255.2	255.6	0.4
034	3,426	578	1,365	6.2	257.3	*	257.3	257.9	0.6
039	3,895	606	1,417	6.9	258.3	*	258.3	258.9	0.6
041	4,138	479	1,482	4.8	259.7	*	259.7	260.5	0.8
045	4,509	459	1,461	4.0	260.3	*	260.3	261.2	0.9
064	6,423	404	1,611	7.5	264.9	*	264.9	265.4	0.6
072	7,185	414	2,292	5.0	267.6	*	267.6	268.0	0.4
085	8,537	308	1,039	3.2	268.3	*	268.3	269.0	0.6
101	10,077	139	533	4.5	274.4	*	274.4	275.3	0.9
114	11,356	104	390	7.1	279.6	*	279.6	280.5	0.8
127	12,657	32	247	8.3	285.4	*	285.4	286.0	0.7
141	14,092	92	391	6.7	291.8	*	291.8	292.4	0.6
154	15,391	105	387	7.0	298.6	*	298.6	299.6	1.0
162	16,236	50	287	7.9	305.3	*	305.3	305.9	0.6
174	17,434	32	127	8.5	311.2	*	311.2	312.1	0.9
251	25,140	75	447	3.3	301.5[2]	*	299.2[28]	299.6	0.4
260	26,031	66	205	6.8	302.4	*	302.4	302.9	0.5
269	26,929	40	134	10.0	310.9	*	310.9	311.8	0.9
Little Brier Creek (Basin 18, Stream 15)									
019	1,915	480	4,161	0.8	322.2[2]	*	313.1	314.1	1.0
031	3,100	670	2,155	1.5	322.2[2]	*	313.3	314.3	1.0
036	3,586	297	2,745	1.8	322.2[2]	*	313.3[29]	314.3	1.0
048	4,848	208	1,996	5.5	322.2[2]	*	319.0[29]	319.5	0.4
057	5,723	369	3,779	3.0	322.2[2]	*	319.4[29]	320.1	0.7
069	6,948	490	4,351	3.2	322.2[2]	*	319.6[29]	320.6	1.0
090	8,955	550	4,019	3.3	322.8	*	322.8	323.6	0.8
101	10,067	297	1,574	5.5	323.4	*	323.4	324.1	0.7
112	11,217	200	1,057	7.7	325.6	*	325.6	326.5	0.9
125	12,495	189	1,524	4.9	330.4	*	330.4	331.3	1.0
137	13,704	265	1,924	4.1	331.5	*	331.5	332.5	1.0
148	14,772	218	1,373	5.3	332.7	*	332.7	333.7	1.0
157	15,748	245	1,464	5.6	334.3	*	334.3	335.3	1.0
167	16,716	165	914	7.7	336.6	*	336.6	337.3	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	1% Annual Chance Future Water-Surface Elevation	Without Floodway	With Floodway	Increase
179	17,931	125	1,558	3.9	346.6	*	346.6	347.0	0.4
192	19,238	209	2,032	3.4	347.1	*	347.1	348.1	1.0
200	20,021	193	1,407	2.9	347.5	*	347.5	348.5	1.0
207	20,668	100	773	4.2	347.7	*	347.7	348.6	0.9
Little Brier Creek East (Basin 18, Stream 16)									
021	2,090	118	635	6.4	325.8	*	325.8	326.8	0.9
029	2,869	167	988	4.3	328.6	*	328.6	329.5	0.9
035	3,477	130	635	6.0	329.5	*	329.5	330.4	0.9
043	4,283	87	576	6.7	332.0	*	332.0	333.0	1.0
050	5,009	98	537	5.3	335.7	*	335.7	336.6	1.0
060	6,005	84	560	5.9	339.3	*	339.3	340.3	1.0
065	6,525	85	402	7.7	341.2	*	341.2	342.0	0.9
074	7,427	56	303	12.3	345.8	*	345.8	346.6	0.8
082	8,187	94	801	6.3	356.8	*	356.8	357.0	0.2
087	8,731	108	762	5.6	358.0	*	358.0	358.6	0.6
095	9,516	150	499	8.7	361.9	*	361.9	361.9	0.0
103	10,346	82	486	5.5	367.7	*	367.7	368.7	1.0
110	11,035	61	369	10.1	371.6	*	371.6	372.5	1.0
120	12,015	41	275	11.0	377.6	*	377.6	378.5	0.9
126	12,600	36	292	10.0	383.7	*	383.7	384.7	1.0
Little Creek (Basin 11, Stream 2)									
030	3,048	450	1,320	4.6	217.2	*	217.2	217.9	0.6
046	4,615	195	1,863	2.5	228.4	*	228.4	228.7	0.3
060	5,966	295	1,892	2.6	228.5	*	228.5	229.0	0.5
080	8,007	270	1,108	4.8	229.6	*	229.6	230.4	0.8
099	9,886	250	1,030	3.8	232.4	*	232.4	233.2	0.8
113	11,265	240	879	5.0	235.0	*	235.0	235.7	0.8
129	12,912	200	701	5.9	237.6	*	237.6	238.5	0.9
142	14,190	260	942	4.6	240.3	*	240.3	241.3	1.0
156	15,644	180	619	6.5	243.7	*	243.7	244.4	0.7
171	17,091	165	636	6.0	249.8	*	249.8	250.2	0.5
183	18,348	130	535	6.2	254.9	*	254.9	255.6	0.7
194	19,420	111	672	3.8	268.3	*	268.3	268.3	0.0
195	19,546	53	371	4.8	269.2[2]	*	266.3[30]	266.6	0.2
201	20,096	110	613	4.2	269.2[2]	*	266.8[30]	267.2	0.4
206	20,631	168	1,550	1.8	272.8	*	272.8	273.8	1.0
219	21,853	160	484	3.5	273.2	*	273.2	274.2	1.0
223	22,299	100	367	2.9	275.0	*	275.0	275.7	0.6
227	22,651	124	414	3.6	275.6	*	275.6	276.4	0.8
230	23,004	127	608	2.2	280.1	*	280.1	280.5	0.4
237	23,741	90	172	9.2	281.3	*	281.3	281.4	0.1
Little River									
3451	345,141	670	7,458	1.4	216.2	217.7	216.2	217.1	0.9
3461	346,136	630	6,234	1.7	216.6	218.0	216.6	217.5	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	1% Annual Chance Future Water-Surface Elevation	Without Floodway	With Floodway	Increase
3470	346,975	410	4,260	2.4	217.0	218.3	217.0	217.9	0.9
3480	347,953	330	3,856	2.7	217.7	218.9	217.7	218.4	0.8
3483	348,268	210	2,507	4.1	218.1	219.5	218.1	218.9	0.8
3489	348,904	450	6,223	1.7	219.4	220.6	219.4	220.2	0.8
3516	351,645	660	7,698	1.4	219.9	221.1	219.9	220.9	1.0
3522	352,180	420	4,235	2.5	220.0	221.2	220.0	221.0	1.0
3527	352,708	300	3,443	3.0	220.5	221.6	220.5	221.4	1.0
3534	353,443	545	7,197	1.4	221.3	222.4	221.3	222.3	1.0
3539	353,928	555	7,187	1.4	221.5	222.6	221.5	222.4	1.0
3544	354,443	880	11,540	0.9	221.7	222.8	221.7	222.6	1.0
3552	355,210	890	10,041	1.0	221.8	222.9	221.8	222.8	1.0
3562	356,218	350	4,688	2.2	222.9	224.0	222.9	223.6	0.7
3568	356,800	280	3,603	2.9	223.2	224.3	223.2	223.9	0.8
3573	357,317	245	3,169	3.3	223.5	224.6	223.5	224.3	0.8
3575	357,494	220	3,618	2.9	223.8	224.8	223.8	224.6	0.9
3579	357,854	250	4,129	2.5	224.0	225.0	224.0	224.8	0.8
3583	358,310	265	4,137	2.5	224.0	225.0	224.0	224.9	0.9
3588	358,803	200	2,315	4.5	226.0	227.0	226.0	226.2	0.2
3596	359,551	600	7,864	1.3	226.9	227.9	226.9	227.5	0.6
3604	360,403	700	7,979	1.3	227.2	228.1	227.2	227.8	0.6
3607	360,683	645	7,100	1.5	227.3	228.2	227.3	228.0	0.7
3616	361,554	490	6,269	1.7	227.8	228.7	227.8	228.4	0.6
3620	361,990	415	5,475	1.9	228.0	228.8	228.0	228.6	0.7
3622	362,215	380	4,902	2.1	228.0	228.9	228.0	228.8	0.8
3627	362,701	380	4,633	2.2	228.2	229.1	228.2	229.1	0.9
3632	363,195	360	4,425	2.3	228.5	229.3	228.5	229.4	0.9
3641	364,135	590	7,731	1.3	229.1	230.0	229.1	230.1	1.0
3646	364,567	830	10,457	1.0	229.3	230.2	229.3	230.3	1.0
3650	365,041	950	12,158	0.8	229.4	230.3	229.4	230.4	1.0
3659	365,854	990	11,018	0.9	229.6	230.5	229.6	230.6	1.0
3665	366,524	325	3,014	3.4	229.6	230.4	229.6	230.6	1.0
3668	366,844	320	3,978	2.6	230.7	231.5	230.7	231.4	0.7
3672	367,214	240	2,788	3.7	230.7	231.5	230.7	231.7	1.0
3677	367,746	235	2,663	3.8	232.0	232.8	232.0	232.8	0.9
3686	368,640	670	8,327	1.2	233.6	234.4	233.6	234.4	0.9
3692	369,242	680	8,659	1.2	233.8	234.6	233.8	234.7	0.9
3698	369,753	530	5,571	1.8	233.8	234.7	233.8	234.8	1.0
3703	370,260	465	5,137	2.0	234.3	235.2	234.3	235.2	0.9
3709	370,911	570	7,627	1.3	234.8	235.6	234.8	235.7	0.9
3714	371,356	470	5,941	1.7	234.9	235.8	234.9	235.8	1.0
3720	372,041	360	2,159	4.7	239.1	239.4	239.1	239.2	0.1
3726	372,586	390	2,784	3.6	240.2	240.6	240.2	240.7	0.5
3732	373,200	310	2,485	4.1	240.8	241.3	240.8	241.5	0.7
3742	374,178	370	3,532	2.8	243.6	244.1	243.6	244.3	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	1% Annual Chance Future Water-Surface Elevation	Without Floodway	With Floodway	Increase
3754	375,403	460	5,073	2.0	245.6	246.5	245.6	246.2	0.6
3762	376,220	730	7,671	1.3	245.9	246.7	245.9	246.7	0.9
3768	376,750	810	8,375	1.2	246.0	246.9	246.0	246.9	0.9
3772	377,157	780	7,503	1.3	246.1	247.0	246.1	247.1	1.0
3778	377,834	500	5,251	1.9	246.6	247.4	246.6	247.5	0.9
3782	378,226	465	4,785	2.1	246.9	247.7	246.9	247.8	0.9
3787	378,675	480	4,927	2.0	248.2	248.8	248.2	248.9	0.7
3790	379,021	500	5,730	1.7	248.6	249.2	248.6	249.2	0.6
3796	379,615	650	6,922	1.4	249.0	249.7	249.0	249.8	0.8
3800	379,968	680	7,916	1.3	249.1	249.8	249.1	250.0	0.9
3806	380,552	455	5,229	1.9	249.4	250.1	249.4	250.4	1.0
3809	380,859	400	4,324	2.3	249.8	250.5	249.8	250.8	1.0
3813	381,279	410	4,942	2.0	250.6	251.3	250.6	251.4	0.8
3820	382,035	450	5,456	1.8	251.3	252.0	251.3	252.2	0.9
3826	382,620	455	5,488	1.8	251.8	252.5	251.8	252.7	0.9
3832	383,158	420	5,000	2.0	252.2	252.9	252.2	253.2	1.0
3836	383,633	490	7,308	1.3	252.5	253.2	252.5	253.4	0.9
3840	383,954	550	6,940	1.4	252.5	253.3	252.5	253.4	0.9
3847	384,678	615	6,192	1.5	252.6	253.4	252.6	253.6	1.0
3854	385,374	750	10,317	0.9	252.8	253.6	252.8	253.8	0.9
3858	385,817	700	9,829	1.0	252.9	253.6	252.9	253.9	1.0
3864	386,350	540	7,563	1.3	252.9	253.7	252.9	253.9	1.0
3868	386,845	520	6,273	1.5	253.0	253.8	253.0	254.0	0.9
3873	387,340	940	11,178	0.8	253.6	254.4	253.6	254.6	1.0
3878	387,772	1,230	14,744	0.6	253.6	254.4	253.6	254.6	1.0
3882	388,243	1,490	17,474	0.5	253.7	254.5	253.7	254.7	1.0
3886	388,636	1,550	18,587	0.5	253.7	254.5	253.7	254.7	1.0
3891	389,106	1,425	17,917	0.5	253.7	254.5	253.7	254.7	1.0
3895	389,547	1,270	15,212	0.6	253.8	254.6	253.8	254.8	1.0
3902	390,210	900	7,930	1.2	253.8	254.6	253.8	254.8	1.0
3910	390,966	950	10,152	0.9	253.9	254.7	253.9	254.9	1.0
3918	391,796	500	6,107	1.5	254.0	254.8	254.0	255.0	1.0
3927	392,678	360	4,324	2.2	254.1	254.9	254.1	255.0	0.9
3932	393,237	500	4,406	2.1	254.3	255.1	254.3	255.3	1.0
3940	393,984	340	2,335	4.0	254.8	255.5	254.8	255.6	0.8
3947	394,729	385	3,445	2.7	255.8	256.4	255.8	256.5	0.7
3956	395,598	415	3,776	2.5	256.2	256.8	256.2	257.0	0.8
3965	396,549	415	3,290	2.8	256.6	257.2	256.6	257.6	0.9
3971	397,132	340	2,582	3.6	257.1	257.6	257.1	258.0	0.9
3980	397,971	205	1,868	4.9	259.0	259.9	259.0	259.6	0.6
3989	398,858	350	3,330	2.7	260.8	261.6	260.8	261.5	0.7
3994	399,408	465	4,901	1.9	261.4	262.1	261.4	262.1	0.7
4002	400,237	685	7,385	1.2	261.7	262.5	261.7	262.5	0.8
4009	400,905	660	6,934	1.3	261.8	262.6	261.8	262.8	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	1% Annual Chance Future Water-Surface Elevation	Without Floodway	With Floodway	Increase
4016	401,591	390	4,308	2.1	262.1	262.9	262.1	263.1	1.0
4022	402,174	260	2,783	3.3	262.6	263.4	262.6	263.5	0.9
4029	402,850	260	2,890	3.1	263.6	264.3	263.6	264.4	0.8
4038	403,813	290	3,154	2.9	264.7	265.4	264.7	265.5	0.9
4054	405,387	410	4,583	2.0	265.9	266.7	265.9	266.9	1.0
4060	405,975	330	3,883	2.3	266.2	267.0	266.2	267.2	1.0
4066	406,641	270	3,462	2.6	266.4	267.2	266.4	267.4	1.0
4072	407,196	170	2,079	4.2	266.4	267.2	266.4	267.4	1.0
4077	407,704	380	4,815	1.8	266.8	267.6	266.8	267.8	0.9
4082	408,239	490	5,985	1.3	266.9	267.7	266.9	267.8	0.9
4086	408,573	500	5,975	1.3	266.9	267.7	266.9	267.8	0.9
4089	408,865	550	5,842	1.4	266.9	267.7	266.9	267.8	0.9
4094	409,415	420	4,333	1.8	266.9	267.7	266.9	267.9	0.9
4097	409,674	370	4,807	1.6	267.0	267.8	267.0	268.0	0.9
4102	410,238	290	3,261	2.4	267.0	267.8	267.0	268.0	0.9
4106	410,613	190	1,501	5.3	267.0	267.5	267.0	267.7	0.7
4109	410,894	170	1,160	6.8	267.0	267.4	267.0	267.5	0.5
4113	411,298	185	1,419	5.6	269.6	270.0	269.6	269.6	0.0
4116	411,601	130	1,168	6.8	270.4	270.9	270.4	270.4	0.0
4120	412,021	130	1,307	6.1	271.9	272.4	271.9	272.2	0.3
4123	412,310	145	1,436	5.5	272.5	273.1	272.5	272.9	0.4
4125	412,531	110	1,402	5.7	273.4	273.9	273.4	273.6	0.3
4129	412,866	275	3,249	2.4	276.7	277.0	276.7	276.7	0.0
4134	413,358	295	1,021	7.8	282.7	283.0	282.7	282.7	0.0
4136	413,615	220	1,903	4.2	285.6	286.0	285.6	286.3	0.7
4140	414,007	200	2,037	3.9	286.5	286.9	286.5	287.5	1.0
4146	414,561	180	1,319	6.0	288.1	288.5	288.1	288.8	0.7
4151	415,077	130	786	9.0	294.4	294.8	294.4	295.1	0.6
4154	415,427	150	1,045	6.7	299.7	300.0	299.7	300.5	0.7
4158	415,752	160	1,943	3.6	307.2	308.3	307.2	307.2	0.0
4163	416,250	240	3,640	1.9	307.8	308.9	307.8	307.8	0.0
4166	416,629	320	3,779	1.9	307.8	308.9	307.8	307.8	0.0
4169	416,860	250	2,920	2.4	307.8	308.9	307.8	307.9	0.1
4173	417,261	170	1,966	3.6	308.0	309.0	308.0	308.1	0.1
4175	417,480	135	1,485	4.7	308.1	309.1	308.1	308.3	0.2
4178	417,836	140	1,433	4.9	308.7	309.7	308.7	309.1	0.3
4181	418,128	140	1,324	5.3	309.3	310.2	309.3	309.8	0.5
4186	418,587	135	1,094	6.4	310.9	311.6	310.9	311.5	0.5
4191	419,108	150	1,284	5.5	313.5	314.0	313.5	314.3	0.8
4196	419,603	140	1,273	5.5	315.4	315.8	315.4	316.3	0.9
4199	419,939	180	1,719	4.1	316.8	317.2	316.8	317.7	0.9
4204	420,419	180	1,592	4.4	318.0	318.4	318.0	318.9	1.0
4209	420,950	125	1,187	3.9	319.2	319.6	319.2	320.2	1.0
Lizard Lick Creek (Basin 10, Stream 23)									

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	1% Annual Chance Future Water-Surface Elevation	Without Floodway	With Floodway	Increase
013	1,273	140	340	5.9	222.6[2]	*	216.7[7]	217.4	0.7
023	2,267	220	646	3.5	222.6[2]	*	221.7[7]	222.4	0.8
031	3,122	135	389	6.1	226.4	*	226.4	226.4	0.0
035	3,475	58	531	4.2	232.8	*	232.8	233.0	0.2
047	4,669	125	403	6.6	233.4	*	233.4	234.3	1.0
058	5,775	120	579	3.7	240.6	*	240.6	240.9	0.3
071	7,071	70	184	9.4	245.5	*	245.5	246.5	1.0
075	7,485	110	1,038	1.8	253.7	*	253.7	254.6	0.8
079	7,854	190	1,324	1.7	253.7	*	253.7	254.6	0.9
085	8,513	85	216	11.2	254.0	*	254.0	254.8	0.8
089	8,918	385	1,769	0.8	271.6	*	271.6	271.6	0.0
101	10,139	338	1,315	1.0	271.7	*	271.7	271.7	0.0
110	11,037	85	285	6.5	275.5	*	275.5	275.5	0.0
Lower Barton Creek (Basin 17, Stream 1)									
067	6,669	641	2,483	1.9	265.5[2]	*	247.4[10]	247.4	0.0
079	7,903	660	2,796	1.7	265.5[2]	*	247.8[10]	247.8	0.0
096	9,604	142	519	8.7	265.5[2]	*	249.1[10]	249.1	0.0
104	10,354	89	399	13.9	265.5[2]	*	255.0[10]	255.1	0.1
111	11,134	195	1,243	6.4	265.5[2]	*	259.7[10]	260.2	0.5
120	12,039	230	1,288	7.4	265.5[2]	*	261.2[10]	262.0	0.8
137	13,684	188	927	10.1	265.5[2]	*	264.8[10]	265.5	0.7
148	14,818	135	1,004	9.1	269.0	*	269.0	269.8	0.7
161	16,116	150	1,097	7.4	271.8	*	271.8	272.6	0.8
167	16,676	187	1,147	7.4	273.5	*	273.5	273.8	0.2
175	17,491	155	1,176	8.0	275.0	*	275.0	275.2	0.2
184	18,382	193	1,440	7.1	277.3	*	277.3	278.0	0.7
191	19,065	202	1,495	6.6	278.5	*	278.5	279.5	1.0
197	19,745	110	936	9.4	280.1	*	280.1	280.8	0.7
209	20,902	370	2,695	3.0	282.5	*	282.5	283.3	0.8
230	22,982	325	1,494	6.1	285.3	*	285.3	286.1	0.8
236	23,558	172	1,155	6.7	289.3	*	289.3	289.3	0.0
244	24,361	300	1,531	5.9	290.4	*	290.4	291.0	0.5
255	25,503	295	1,314	7.0	292.4	*	292.4	293.1	0.7
259	25,859	280	1,185	6.1	293.2	*	293.2	294.2	1.0
266	26,606	135	557	11.0	295.3	*	295.3	296.2	0.8
272	27,178	120	668	7.5	299.2	*	299.2	300.2	1.0
277	27,690	245	1,433	4.7	300.8	*	300.8	301.5	0.7
286	28,641	236	986	7.0	302.0	*	302.0	302.7	0.7
294	29,361	200	854	7.4	304.2	*	304.2	304.8	0.6
300	30,027	151	866	5.2	306.7	*	306.7	307.5	0.8
304	30,445	100	954	4.5	314.2	*	314.2	314.3	0.1
318	31,769	290	1,769	3.2	314.7	*	314.7	315.1	0.3
324	32,414	194	1,836	2.6	320.5	*	320.5	320.5	0.0
335	33,484	260	1,280	4.8	320.6	*	320.6	321.0	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	1% Annual Chance Future Water-Surface Elevation	Without Floodway	With Floodway	Increase
340	33,959	158	773	6.6	321.5	*	321.5	322.0	0.6
348	34,789	160	611	8.3	324.6	*	324.6	325.1	0.5
356	35,575	165	620	8.2	328.1	*	328.1	328.9	0.8
363	36,333	155	637	8.3	332.6	*	332.6	333.5	0.9
372	37,236	128	580	8.2	337.2	*	337.2	337.3	0.1
384	38,378	170	659	8.3	340.8	*	340.8	341.6	0.8
393	39,327	150	710	6.4	345.5	*	345.5	346.1	0.6
397	39,745	155	482	10.6	347.0	*	347.0	347.4	0.4
401	40,139	97	406	9.3	349.3	*	349.3	349.7	0.4
404	40,403	85	526	6.8	353.4	*	353.4	354.4	1.0
412	41,231	60	311	10.4	357.2	*	357.2	357.2	0.0
423	42,268	85	534	6.3	367.3	*	367.3	368.3	1.0
432	43,163	60	287	11.1	374.0	*	374.0	374.2	0.2
437	43,734	49	183	8.6	376.7	*	376.7	377.3	0.6
444	44,358	89	881	2.2	389.3	*	389.3	389.3	0.0
449	44,926	145	937	2.6	389.4	*	389.4	389.4	0.0
Lowery Creek (Basin 4, Stream 10)									
037	3,651	593	8,086	0.2	265.5[2]	*	255.5[10]	255.5	0.0
046	4,646	420	2,743	0.7	265.5[2]	*	255.5[10]	255.5	0.0
056	5,554	430	733	1.9	265.5[2]	*	255.7[10]	255.7	0.0
066	6,595	150	490	6.3	265.5[2]	*	260.3[10]	261.1	0.8
076	7,630	105	439	8.1	266.4	*	266.4	267.2	0.9
084	8,450	110	533	7.1	270.7	*	270.7	271.3	0.6
096	9,616	100	365	10.2	276.5	*	276.5	277.1	0.7
110	10,955	90	239	8.5	282.3	*	282.3	283.3	1.0
116	11,610	70	180	10.3	286.5	*	286.5	286.8	0.3
125	12,546	55	160	10.6	294.0	*	294.0	294.2	0.2
136	13,598	65	188	9.8	302.3	*	302.3	302.5	0.3
147	14,672	60	164	11.4	309.4	*	309.4	309.8	0.4
156	15,557	40	149	7.7	315.4	*	315.4	315.8	0.4
166	16,620	35	124	10.6	324.0	*	324.0	324.2	0.3
176	17,587	41	171	8.0	333.9	*	333.9	334.8	0.9
181	18,123	29	141	5.8	341.0	*	341.0	341.1	0.1
187	18,728	20	91	8.2	346.7	*	346.7	346.8	0.2
189	18,895	356	3,226	0.2	365.2	*	365.2	365.2	0.0
197	19,676	113	336	1.9	365.2	*	365.2	365.2	0.0
200	20,039	60	115	8.6	369.3	*	369.3	369.4	0.1
204	20,368	43	118	8.3	378.3	*	378.3	378.6	0.2
205	20,546	29	95	10.1	380.4	*	380.4	380.8	0.4
Lynn Road Tributary (Basin 18, Stream 32)									
003	348	311	1,167	1.4	271.7[2]	*	252.8[31]	252.8	0.0
013	1,325	21	111	11.6	271.7[2]	*	271.6[31]	272.0	0.4
024	2,376	84	260	12.2	290.8	*	290.8	291.0	0.2
033	3,341	309	1,634	2.4	310.1	*	310.1	310.1	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	1% Annual Chance Future Water-Surface Elevation	Without Floodway	With Floodway	Increase
040	3,987	75	213	11.6	315.2	*	315.2	315.2	0.0
046	4,575	35	198	9.4	321.6	*	321.6	322.2	0.6
Mahlers Creek (Basin 20, Stream 6)									
018	1,840	90	383	8.3	223.1	*	223.1	223.5	0.4
031	3,073	165	691	5.5	227.2	*	227.2	228.2	1.0
035	3,468	101	699	3.5	229.7	*	229.7	229.8	0.0
040	4,045	180	807	4.4	230.3	*	230.3	230.4	0.1
051	5,119	175	668	4.3	232.7	*	232.7	233.7	0.9
065	6,515	165	676	4.2	239.2	*	239.2	240.0	0.8
074	7,396	120	376	6.6	241.4	*	241.4	242.3	0.8
085	8,504	125	454	5.6	246.5	*	246.5	247.1	0.6
098	9,794	130	444	5.8	252.1	*	252.1	252.9	0.8
110	11,022	110	296	6.7	258.1	*	258.1	258.9	0.8
122	12,230	140	393	5.2	263.8	*	263.8	263.9	0.2
136	13,611	120	445	4.8	273.0	*	273.0	273.5	0.5
146	14,619	70	210	8.4	276.8	*	276.8	277.5	0.7
157	15,691	70	209	8.4	283.0	*	283.0	283.5	0.6
163	16,335	30	166	9.4	298.8	*	298.8	299.8	1.0
Mango Creek (Basin 15, Stream 11)									
013	1,299	96	561	6.5	175.7[2]	*	166.6[8]	166.8	0.2
018	1,833	135	679	6.3	175.7[2]	*	168.8[8]	168.8	0.1
032	3,231	150	1,483	3.3	176.2	*	176.2	176.6	0.4
051	5,127	195	849	6.2	178.2	*	178.2	179.1	1.0
057	5,703	62	706	3.9	185.7	*	185.7	185.8	0.0
062	6,186	140	1,361	3.1	185.9	*	185.9	186.3	0.4
069	6,873	210	1,700	2.4	186.2	*	186.2	186.9	0.7
081	8,064	160	709	5.0	186.7	*	186.7	187.6	1.0
094	9,433	220	865	4.5	191.6	*	191.6	192.6	1.0
106	10,632	295	878	4.6	195.4	*	195.4	195.8	0.5
117	11,725	175	489	5.4	199.6	*	199.6	199.7	0.1
137	13,669	100	313	10.0	210.1	*	210.1	210.8	0.7
158	15,820	160	426	6.8	221.8	*	221.8	222.8	1.0
176	17,608	60	283	6.8	232.2	*	232.2	233.0	0.8
185	18,491	50	198	10.8	242.3	*	242.3	242.4	0.1
195	19,478	75	195	7.5	250.0	*	250.0	250.3	0.3
204	20,399	40	196	9.0	257.9	*	257.9	258.7	0.8
Marks Creek									
188	18,817	464	4,076	2.2	175.5	*	175.5	176.3	0.8
204	20,437	150	1,246	5.8	177.0	*	177.0	177.9	0.9
208	20,757	118	1,163	4.8	178.0	*	178.0	179.0	1.0
215	21,537	235	2,041	4.0	179.1	*	179.1	180.1	1.0
226	22,584	510	4,103	1.7	179.4	*	179.4	180.4	1.0
239	23,910	200	1,254	5.6	179.8	*	179.8	180.7	1.0
243	24,294	159	1,214	5.0	181.8	*	181.8	181.9	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	1% Annual Chance Future Water-Surface Elevation	Without Floodway	With Floodway	Increase
257	25,686	195	1,323	4.1	182.8	*	182.8	183.7	0.9
270	27,030	145	912	7.2	185.8	*	185.8	186.2	0.4
283	28,311	210	1,779	3.8	187.3	*	187.3	188.2	0.9
297	29,651	195	1,509	4.6	188.1	*	188.1	189.1	1.0
306	30,573	115	830	7.2	189.5	*	189.5	190.3	0.8
309	30,914	128	1,157	4.8	190.8	*	190.8	191.4	0.7
314	31,358	376	3,787	0.9	197.4	*	197.4	197.4	0.0
328	32,791	1,100	10,923	0.3	197.4	*	197.4	197.4	0.0
339	33,945	266	2,228	1.6	197.4	*	197.4	197.4	0.0
355	35,453	285	1,099	3.8	198.0	*	198.0	198.0	0.0
365	36,521	455	1,630	2.5	198.9	*	198.9	199.3	0.4
377	37,749	290	961	4.2	200.0	*	200.0	201.0	1.0
390	38,971	200	832	5.1	203.6	*	203.6	204.4	0.7
401	40,051	490	1,892	2.6	205.1	*	205.1	206.0	0.9
414	41,448	285	1,120	5.5	207.9	*	207.9	208.7	0.8
428	42,790	525	2,193	2.3	210.2	*	210.2	210.6	0.4
436	43,597	585	2,089	1.7	210.6	*	210.6	211.0	0.5
444	44,406	175	889	3.9	213.1	*	213.1	213.4	0.3
453	45,267	265	953	3.9	213.7	*	213.7	214.2	0.6
462	46,245	242	1,106	4.7	217.4	*	217.4	217.6	0.2
467	46,726	110	655	6.6	219.2	*	219.2	219.6	0.4
475	47,533	126	578	6.0	221.6	*	221.6	221.7	0.1
486	48,604	300	1,286	2.7	222.6	*	222.6	223.4	0.8
501	50,115	340	494	6.7	224.8	*	224.8	225.1	0.3
507	50,702	435	2,039	0.7	229.1	*	229.1	229.2	0.1
521	52,136	217	468	7.1	231.3	*	231.3	232.2	0.9
525	52,525	233	765	4.0	234.7	*	234.7	235.6	0.9
537	53,676	300	648	2.7	238.8	*	238.8	239.0	0.2
549	54,881	400	616	2.3	243.3	*	243.3	243.3	0.0
559	55,920	180	508	4.9	249.8	*	249.8	250.8	0.9
567	56,687	150	1,058	2.1	259.7	*	259.7	259.8	0.1
578	57,785	110	394	4.6	260.3	*	260.3	260.8	0.5
Marsh Creek (Basin 18, Stream 17)									
019	1,937	176	887	14.5	191.6[2]	*	187.4[16]	188.3	1.0
029	2,887	212	2,525	4.5	198.1	*	198.1	199.0	1.0
041	4,116	195	2,256	4.9	198.3	*	198.3	199.4	1.0
048	4,766	242	2,128	5.6	199.3	*	199.3	200.2	0.9
058	5,814	416	4,279	2.9	200.1	*	200.1	201.1	1.0
067	6,692	267	1,941	5.9	200.6	*	200.6	201.6	1.0
072	7,186	240	1,795	6.3	201.5	*	201.5	202.4	0.9
080	8,025	301	2,994	4.0	206.3	*	206.3	207.2	0.9
090	8,989	186	1,308	9.3	207.3	*	207.3	208.2	0.9
102	10,232	262	1,515	5.2	211.0	*	211.0	211.8	0.8
112	11,197	395	3,539	3.4	214.8	*	214.8	215.7	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	1% Annual Chance Future Water-Surface Elevation	Without Floodway	With Floodway	Increase
123	12,281	363	2,804	3.8	215.1	*	215.1	216.1	1.0
137	13,718	204	1,028	9.2	217.7	*	217.7	218.5	0.8
148	14,836	172	826	7.3	221.8	*	221.8	222.7	1.0
154	15,392	175	1,554	3.7	227.7	*	227.7	228.5	0.8
162	16,179	96	630	7.2	228.3	*	228.3	229.0	0.7
171	17,135	87	800	6.4	234.8	*	234.8	235.7	0.9
179	17,920	105	850	5.7	236.4	*	236.4	237.2	0.8
189	18,857	259	1,313	5.1	238.1	*	238.1	238.6	0.5
199	19,877	131	563	6.7	241.0	*	241.0	241.9	1.0
205	20,468	63	404	7.3	244.2	*	244.2	245.1	0.9
209	20,914	70	300	9.2	245.9	*	245.9	246.8	1.0
223	22,263	120	762	4.8	254.8	*	254.8	255.6	0.8
234	23,399	34	208	7.2	257.5	*	257.5	258.2	0.8
240	24,044	391	2,687	2.7	282.0	*	282.0	282.0	0.0
250	25,045	432	1,845	5.5	282.5	*	282.5	282.5	0.0
259	25,888	180	1,090	6.4	287.5	*	287.5	288.3	0.8
271	27,053	60	338	9.0	294.3	*	294.3	295.3	1.0
278	27,840	102	317	11.5	309.2	*	309.2	309.5	0.2
287	28,655	32	232	9.9	313.5	*	313.5	314.4	0.9
291	29,144	42	291	7.6	320.8	*	320.8	320.8	0.0
Medfield Tributary (Basin 18, Stream 39)									
010	1,018	35	457	3.9	337.7	*	337.7	338.4	0.7
019	1,902	25	199	7.5	338.9	*	338.9	339.8	1.0
028	2,832	35	181	10.1	345.9	*	345.9	346.0	0.1
037	3,708	62	265	9.5	355.8	*	355.8	356.6	0.8
048	4,772	75	640	4.3	368.1	*	368.1	369.0	0.9
058	5,774	60	301	7.8	373.4	*	373.4	374.1	0.7
067	6,690	31	185	9.8	381.2	*	381.2	381.7	0.5
Middle Creek									
1475	147,461	800	5,743	3.0	213.3	*	213.3	214.2	0.9
1504	150,416	730	3,927	5.6	214.8	*	214.8	215.6	0.8
1547	154,675	1,650	8,917	2.7	217.1	*	217.1	217.7	0.6
1577	157,732	470	2,544	8.5	220.7	*	220.7	221.0	0.4
1590	159,017	237	2,227	7.5	224.6	*	224.6	224.6	0.0
1606	160,575	570	4,963	4.2	226.1	*	226.1	226.4	0.2
1629	162,933	600	4,602	4.7	227.2	*	227.2	227.7	0.6
1645	164,474	460	3,757	5.8	229.3	*	229.3	230.0	0.7
1665	166,464	700	5,711	3.9	230.3	*	230.3	231.1	0.8
1712	171,196	1,725	12,247	1.7	231.2	*	231.2	232.0	0.8
1742	174,231	835	4,230	5.0	232.1	*	232.1	233.0	0.9
1759	175,906	680	4,107	5.3	233.7	*	233.7	234.7	1.0
1768	176,801	225	1,655	10.2	235.0	*	235.0	236.0	1.0
1790	179,038	395	3,095	6.5	238.5	*	238.5	239.0	0.5
1802	180,207	614	5,672	3.3	240.2	*	240.2	240.6	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	1% Annual Chance Future Water-Surface Elevation	Without Floodway	With Floodway	Increase
1814	181,355	265	3,003	5.8	241.2	*	241.2	241.7	0.5
1827	182,701	900	9,293	2.2	241.7	*	241.7	242.3	0.6
1840	184,040	725	6,983	2.9	241.8	*	241.8	242.5	0.7
1854	185,427	730	6,500	1.4	242.0	*	242.0	242.7	0.7
1881	188,137	850	4,928	2.6	242.4	*	242.4	243.2	0.8
1917	191,717	500	2,310	6.5	247.0	*	247.0	247.6	0.6
1943	194,344	380	2,325	5.2	250.0	*	250.0	251.0	0.9
1963	196,278	450	1,898	7.1	253.6	*	253.6	254.5	0.9
1971	197,055	136	1,023	7.2	255.7	*	255.7	255.8	0.2
1975	197,473	393	2,592	4.3	257.5	*	257.5	257.6	0.1
1986	198,557	325	1,983	5.4	258.5	*	258.5	258.6	0.2
2001	200,136	500	3,723	3.0	259.2	*	259.2	260.0	0.8
2013	201,266	485	2,965	4.0	259.4	*	259.4	260.4	1.0
2025	202,517	669	4,118	3.0	262.6	*	262.6	262.6	0.0
2063	206,322	680	2,934	4.4	263.7	*	263.7	264.6	0.9
2077	207,728	665	2,699	4.6	265.5	*	265.5	266.2	0.7
2105	210,534	581	2,974	3.8	272.1	*	272.1	272.1	0.0
2132	213,207	630	2,013	5.9	273.9	*	273.9	274.9	1.0
2165	216,460	750	2,414	5.4	279.2	*	279.2	279.6	0.3
2195	219,493	950	2,691	4.4	282.9	*	282.9	283.7	0.9
2219	221,917	440	1,765	6.2	287.2	*	287.2	287.9	0.7
2235	223,546	440	2,124	3.6	289.5	*	289.5	290.4	0.9
2267	226,732	365	1,737	5.6	293.4	*	293.4	294.0	0.6
2288	228,810	625	2,255	5.0	295.5	*	295.5	296.0	0.4
2308	230,800	490	1,752	6.5	297.0	*	297.0	297.6	0.6
2318	231,767	200	1,108	7.5	298.9	*	298.9	299.5	0.6
2332	233,175	135	1,167	5.2	302.0	*	302.0	302.2	0.2
2334	233,437	127	1,434	5.7	303.5	*	303.5	303.6	0.1
2336	233,575	620	3,648	1.6	310.3[2]	*	309.5[32]	309.6	0.0
2349	234,918	1,515	11,704	0.5	310.3[2]	*	309.6[32]	309.6	0.0
2359	235,862	1,005	7,324	0.5	310.3[2]	*	309.6[32]	309.6	0.0
2373	237,267	440	1,557	3.8	310.3	*	310.3	310.4	0.1
2384	238,401	610	1,464	5.8	312.6	*	312.6	313.0	0.4
2399	239,915	436	1,402	6.0	314.8	*	314.8	315.4	0.6
2408	240,841	370	1,479	5.1	317.0	*	317.0	317.5	0.5
2419	241,886	300	1,100	7.3	320.6	*	320.6	321.1	0.5
2426	242,574	280	1,415	5.6	322.5	*	322.5	323.1	0.5
2439	243,919	240	1,208	6.0	324.4	*	324.4	325.2	0.8
2458	245,795	340	1,425	5.0	328.0	*	328.0	328.8	0.8
2470	247,034	330	1,371	5.3	330.6	*	330.6	331.2	0.6
2483	248,313	350	1,388	4.9	333.0	*	333.0	333.9	1.0
2498	249,755	270	1,079	6.6	336.2	*	336.2	337.1	1.0
2512	251,242	255	1,052	4.6	338.9	*	338.9	339.8	0.9
2529	252,871	240	1,188	5.4	343.2	*	343.2	344.0	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	1% Annual Chance Future Water-Surface Elevation	Without Floodway	With Floodway	Increase
2542	254,214	270	1,192	5.9	346.5	*	346.5	347.5	1.0
2550	254,968	170	887	6.9	348.7	*	348.7	349.5	0.8
2556	255,563	160	1,485	4.0	354.5	*	354.5	355.3	0.8
2568	256,766	440	3,005	2.1	354.8	*	354.8	355.8	0.9
2583	258,293	280	1,270	4.5	355.7	*	355.7	356.6	0.8
2595	259,508	280	1,077	5.4	357.4	*	357.4	358.0	0.6
2607	260,727	230	1,121	4.4	359.4	*	359.4	360.0	0.6
2622	262,181	260	1,294	3.9	361.8	*	361.8	362.6	0.7
2636	263,617	215	903	5.8	364.5	*	364.5	365.0	0.5
2646	264,557	205	795	6.2	366.7	*	366.7	367.7	1.0
2662	266,240	200	930	4.7	370.0	*	370.0	370.9	0.9
2676	267,602	220	815	5.1	373.1	*	373.1	374.1	1.0
2690	268,971	200	753	5.2	376.4	*	376.4	377.3	0.9
Millbrook Tributary to Marsh Creek (Basin 18, Stream 19)									
011	1,064	53	233	11.0	238.8	*	238.8	239.6	0.8
021	2,082	174	840	2.0	251.4	*	251.4	251.4	0.0
032	3,192	21	118	14.6	259.8	*	259.8	259.8	0.0
043	4,311	361	2,635	0.5	274.9	*	274.9	274.9	0.0
051	5,064	259	1,107	3.3	274.9	*	274.9	274.9	0.0
061	6,068	28	185	9.2	280.3	*	280.3	281.3	1.0
Mills Branch (Basin 22, Stream 5)									
008	787	230	659	6.9	249.4	*	249.4	250.3	1.0
020	2,029	188	695	5.6	256.9	*	256.9	257.5	0.6
034	3,380	115	1,280	3.3	270.6	*	270.6	271.3	0.7
047	4,664	200	1,363	2.4	270.8	*	270.8	271.7	0.9
055	5,546	140	569	6.0	271.6	*	271.6	272.4	0.9
064	6,352	119	350	8.3	289.4[2]	*	276.5[33]	276.5	0.0
072	7,201	135	333	8.5	289.4[2]	*	283.3[33]	283.4	0.2
081	8,121	90	415	6.0	291.0	*	291.0	291.9	0.9
086	8,553	65	504	3.8	294.4	*	294.4	295.2	0.9
092	9,150	130	508	6.0	297.2	*	297.2	297.8	0.5
099	9,934	90	326	9.0	303.4	*	303.4	304.4	1.0
Mine Creek (Basin 18, Stream 31)									
003	265	35	305	7.9	222.7[2]	*	216.4[16]	217.3	0.8
012	1,185	31	299	8.0	222.7[2]	*	218.9[16]	219.6	0.7
024	2,394	58	405	2.9	222.7[2]	*	221.8[16]	222.6	0.8
033	3,294	92	544	2.5	222.7[2]	*	222.2[16]	223.2	0.9
044	4,416	67	373	4.1	223.1	*	223.1	224.0	0.9
054	5,353	35	231	8.8	226.7	*	226.7	227.4	0.8
062	6,226	54	384	4.6	229.8	*	229.8	230.8	1.0
079	7,904	44	352	2.8	234.6	*	234.6	235.3	0.6
089	8,861	30	84	2.9	237.3	*	237.3	237.5	0.2
099	9,879	1,305	31,220	0.1	271.7	*	271.7	271.7	0.0
111	11,099	749	12,803	0.2	271.7	*	271.7	271.7	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	1% Annual Chance Future Water-Surface Elevation	Without Floodway	With Floodway	Increase
121	12,080	747	12,801	0.4	271.7	*	271.7	271.7	0.0
136	13,604	915	12,613	0.5	271.7	*	271.7	271.7	0.0
145	14,463	129	1,464	11.2	272.2	*	272.2	272.2	0.0
153	15,253	200	3,448	4.9	277.8	*	277.8	277.8	0.0
163	16,319	210	2,848	4.6	277.9	*	277.9	278.2	0.3
171	17,140	210	2,468	6.9	279.2	*	279.2	279.3	0.1
175	17,488	250	2,991	6.7	279.4	*	279.4	279.7	0.3
Mingo Creek (Basin 12, Stream 2)									
002	249	56	124	9.2	208.7	*	208.7	208.7	0.0
006	553	23	88	10.6	218.7	219.2	218.7	218.8	0.1
009	859	17	79	11.8	231.3	231.9	231.3	231.3	0.0
012	1,229	27	98	9.6	246.1	246.5	246.1	246.1	0.0
015	1,474	20	94	9.9	249.6	250.3	249.6	249.7	0.1
017	1,710	20	146	6.4	252.2	253.0	252.2	252.3	0.0
020	2,006	18	144	6.5	253.0	253.8	253.0	253.2	0.2
023	2,267	20	163	5.7	253.8	254.7	253.8	254.1	0.3
025	2,501	20	188	4.9	254.2	255.1	254.2	254.7	0.5
027	2,725	20	182	5.1	254.5	255.4	254.5	255.1	0.6
030	3,013	20	181	5.1	255.0	255.9	255.0	255.5	0.5
033	3,337	20	182	5.1	255.7	256.6	255.7	256.1	0.4
036	3,649	23	226	4.1	256.1	257.0	256.1	256.6	0.5
040	3,984	20	202	4.6	256.4	257.4	256.4	257.0	0.6
043	4,318	20	186	5.0	256.8	257.7	256.8	257.4	0.6
046	4,616	20	183	5.1	257.3	258.2	257.3	257.9	0.6
049	4,907	31	247	3.8	258.6	259.5	258.6	259.4	0.8
053	5,275	371	2,009	0.5	258.9	259.8	258.9	259.6	0.7
058	5,773	156	841	1.2	258.9	259.8	258.9	259.6	0.8
062	6,229	110	277	3.5	258.9	259.8	258.9	259.7	0.8
064	6,425	90	232	4.2	260.6	260.7	260.6	260.8	0.2
067	6,675	105	271	3.0	261.9	262.2	261.9	262.6	0.7
070	6,979	100	243	3.4	263.8	264.2	263.8	263.9	0.1
072	7,193	140	269	3.1	264.9	265.3	264.9	265.0	0.1
075	7,515	137	826	1.0	272.3	272.4	272.3	272.4	0.1
078	7,814	42	201	4.2	272.3	272.3	272.3	272.4	0.1
Moccasin Creek									
910	91,019	765	10,344	0.7	219.4	*	219.4	220.3	1.0
916	91,628	825	10,848	0.7	219.4	*	219.4	220.4	1.0
922	92,195	825	10,006	0.8	219.5	*	219.5	220.5	1.0
929	92,927	895	10,659	0.7	219.6	*	219.6	220.6	1.0
935	93,527	920	10,307	0.7	219.7	*	219.7	220.7	1.0
943	94,329	723	7,579	1.0	219.9	*	219.9	220.9	1.0
948	94,837	642	6,402	1.1	220.0	*	220.0	221.0	1.0
955	95,464	646	6,465	1.1	220.3	*	220.3	221.3	1.0
960	95,987	673	6,081	1.2	220.6	*	220.6	221.6	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	1% Annual Chance Future Water-Surface Elevation	Without Floodway	With Floodway	Increase
966	96,591	565	5,022	1.4	221.0	*	221.0	221.9	1.0
972	97,239	850	7,590	1.0	221.4	*	221.4	222.4	1.0
994	99,443	500	5,228	1.4	224.4	*	224.4	225.1	0.6
1002	100,153	675	6,608	1.0	224.6	*	224.6	225.4	0.8
1006	100,646	650	6,481	1.1	224.8	*	224.8	225.6	0.9
1013	101,291	600	5,560	1.2	225.0	*	225.0	225.9	0.9
1018	101,807	700	6,357	1.1	225.3	*	225.3	226.2	1.0
1024	102,387	767	6,309	1.1	225.6	*	225.6	226.6	1.0
1029	102,913	675	5,232	1.2	225.9	*	225.9	226.9	1.0
1037	103,680	750	5,426	1.1	226.4	*	226.4	227.4	1.0
1043	104,282	490	3,810	1.6	227.0	*	227.0	227.9	1.0
1048	104,823	575	4,419	1.4	227.6	*	227.6	228.6	1.0
1055	105,519	415	3,110	2.0	228.3	*	228.3	229.3	1.0
1110	111,041	385	5,111	1.0	240.3	*	240.3	240.4	0.1
1122	112,174	690	7,714	0.6	240.4	*	240.4	240.4	0.1
1133	113,253	440	4,138	1.2	240.4	*	240.4	240.4	0.0
1137	113,726	260	2,508	1.9	240.4	*	240.4	240.5	0.0
1143	114,253	270	2,576	1.9	240.6	*	240.6	240.8	0.2
1148	114,798	350	3,140	1.5	240.8	*	240.8	241.3	0.5
1153	115,260	300	2,617	1.8	241.0	*	241.0	241.6	0.6
1157	115,658	250	2,082	2.3	241.1	*	241.1	241.9	0.8
1161	116,103	150	1,698	2.8	242.8	*	242.8	243.5	0.7
1168	116,771	325	2,800	1.7	243.3	*	243.3	244.2	0.8
1174	117,432	625	5,296	0.9	243.6	*	243.6	244.6	0.9
1181	118,089	500	4,219	1.0	243.8	*	243.8	244.8	1.0
1187	118,650	425	3,575	1.2	244.0	*	244.0	245.0	1.0
1193	119,291	550	4,468	1.0	244.4	*	244.4	245.4	1.0
1199	119,927	445	3,187	1.4	244.7	*	244.7	245.7	1.0
1205	120,527	225	1,741	2.6	245.3	*	245.3	246.2	1.0
1211	121,069	340	2,416	1.8	246.2	*	246.2	247.1	1.0
1217	121,737	535	3,905	1.1	246.8	*	246.8	247.8	1.0
1221	122,144	625	4,056	1.1	247.1	*	247.1	248.1	1.0
1226	122,598	325	2,151	2.0	247.5	*	247.5	248.4	1.0
1234	123,368	415	2,824	1.5	248.7	*	248.7	249.7	1.0
1240	124,014	556	3,785	1.1	249.2	*	249.2	250.2	1.0
1255	125,458	570	3,876	1.0	251.7	*	251.7	252.7	1.0
1260	126,046	490	2,890	1.3	252.2	*	252.2	253.2	1.0
1265	126,527	575	2,573	1.5	253.0	*	253.0	254.0	1.0
1271	127,143	375	1,779	2.1	254.7	*	254.7	255.7	1.0
1277	127,746	295	1,751	2.2	256.9	*	256.9	257.7	0.8
1285	128,450	300	1,997	1.7	258.3	*	258.3	259.3	1.0
1289	128,934	315	2,126	1.6	259.0	*	259.0	260.0	1.0
1295	129,461	125	851	4.1	260.1	*	260.1	260.9	0.8
1301	130,072	125	1,127	3.1	263.3	*	263.3	264.2	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	1% Annual Chance Future Water-Surface Elevation	Without Floodway	With Floodway	Increase
1308	130,822	88	835	4.2	265.5	*	265.5	266.5	1.0
1315	131,544	225	2,383	1.5	269.0	*	269.0	270.0	1.0
1321	132,106	320	3,004	0.8	269.3	*	269.3	270.3	1.0
1325	132,466	310	2,885	0.8	269.4	*	269.4	270.4	1.0
1329	132,897	215	1,909	1.2	269.6	*	269.6	270.6	1.0
1334	133,387	276	2,375	1.0	269.9	*	269.9	270.9	1.0
1339	133,904	100	799	3.0	270.3	*	270.3	271.2	1.0
1343	134,327	205	1,637	1.4	271.3	*	271.3	272.3	1.0
1348	134,820	290	2,319	1.0	273.9	*	273.9	274.8	0.9
1353	135,324	350	2,605	0.9	274.1	*	274.1	275.0	0.9
1359	135,928	210	1,410	1.7	274.5	*	274.5	275.4	1.0
1363	136,337	190	780	2.4	275.5	*	275.5	276.3	0.8
1369	136,883	385	1,913	1.0	276.6	*	276.6	277.6	1.0
1374	137,434	400	1,945	1.0	277.1	*	277.1	278.1	1.0
1380	137,953	175	849	2.2	277.9	*	277.9	278.9	1.0
1386	138,603	225	889	1.7	280.2	*	280.2	281.2	0.9
1392	139,229	45	212	7.2	284.3	*	284.3	284.6	0.3
1395	139,513	140	1,061	1.4	295.2	*	295.2	296.2	1.0
1401	140,119	520	3,574	0.4	295.6	*	295.6	296.4	0.9
1405	140,546	165	607	2.5	295.7	*	295.7	296.4	0.7
1410	141,032	170	787	1.9	298.5	*	298.5	299.4	0.8
1414	141,401	205	837	1.8	299.9	*	299.9	300.9	1.0
1417	141,695	95	406	3.7	302.2	*	302.2	303.0	0.7
1421	142,086	225	1,216	1.2	304.0	*	304.0	305.0	1.0
1425	142,507	140	716	2.1	305.1	*	305.1	306.1	1.0
1429	142,883	200	807	1.4	306.6	*	306.6	307.6	1.0
Morris Branch									
037	3,707	490	8,700	0.2	266.8	*	266.8	267.0	0.1
041	4,134	425	7,132	0.2	266.8	*	266.8	267.0	0.1
050	4,994	365	5,979	0.3	266.8	*	266.8	267.0	0.1
056	5,623	345	5,881	0.3	266.8	*	266.8	267.0	0.1
061	6,118	300	4,653	0.4	269.6	*	269.6	269.6	0.0
067	6,659	130	1,661	1.0	269.6	*	269.6	269.6	0.0
071	7,104	75	639	2.6	269.6	*	269.6	269.6	0.0
077	7,661	60	544	3.0	269.8	*	269.8	269.8	0.0
085	8,471	85	683	1.8	274.1	*	274.1	275.1	1.0
089	8,941	40	269	4.6	274.5	*	274.5	275.5	1.0
100	10,031	32	168	7.3	280.7	*	280.7	281.0	0.4
106	10,576	53	321	3.8	284.8	*	284.8	285.1	0.4
112	11,153	32	174	7.1	287.0	*	287.0	287.7	0.7
118	11,815	40	253	4.9	291.3	*	291.3	291.3	0.0
124	12,414	21	111	8.0	294.1	*	294.1	294.5	0.4
128	12,813	30	130	6.8	298.4	*	298.4	298.4	0.0
133	13,270	37	167	5.4	302.1	*	302.1	302.6	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	1% Annual Chance Future Water-Surface Elevation	Without Floodway	With Floodway	Increase
137	13,686	40	202	4.4	304.5	*	304.5	305.5	1.0
143	14,280	30	126	7.1	308.8	*	308.8	309.4	0.6
147	14,714	55	203	4.4	312.7	*	312.7	313.3	0.6
152	15,150	40	169	5.3	314.9	*	314.9	315.9	1.0
155	15,550	25	153	5.8	317.4	*	317.4	317.7	0.3
159	15,862	22	86	10.4	319.1	*	319.1	319.1	0.0
161	16,107	41	115	7.8	322.9	*	322.9	322.9	0.0
168	16,822	30	184	4.8	332.3	*	332.3	333.3	1.0
173	17,309	25	72	3.9	335.8	*	335.8	336.5	0.7
Morrisville Tributary (Basin 18, Stream 26)									
011	1,093	80	647	2.1	292.9	*	292.9	293.6	0.7
020	2,021	95	735	2.8	299.2	*	299.2	299.8	0.6
021	2,086	125	1,449	1.4	303.5	*	303.5	304.3	0.8
029	2,939	200	1,592	1.2	303.5	*	303.5	304.4	0.8
041	4,139	90	329	5.3	305.0	*	305.0	305.5	0.5
Mud Branch (Basin 4, Stream 15)									
003	332	50	276	6.8	265.5[2]	*	262.8[34]	263.8	0.9
010	1,029	45	222	8.7	268.4	*	268.4	269.4	0.9
020	2,006	40	176	10.2	277.1	*	277.1	277.8	0.7
029	2,942	45	201	10.6	286.0	*	286.0	286.1	0.1
038	3,785	46	247	8.8	292.9	*	292.9	293.8	0.9
049	4,866	70	292	8.4	303.0	*	303.0	303.7	0.7
057	5,746	100	293	9.2	308.9	*	308.9	309.6	0.7
066	6,639	80	270	7.2	315.1	*	315.1	315.6	0.6
070	6,983	345	3,370	0.4	339.7	*	339.7	339.9	0.2
078	7,829	342	3,076	0.4	339.7	*	339.7	339.9	0.2
083	8,289	597	5,929	0.2	352.3	*	352.3	352.3	0.0
093	9,334	160	1,081	1.1	352.3	*	352.3	352.3	0.0
100	10,035	95	206	11.0	356.0	*	356.0	356.4	0.4
112	11,183	50	161	11.8	368.3	*	368.3	368.3	0.0
118	11,752	75	261	7.5	374.3	*	374.3	375.0	0.6
122	12,199	265	1,848	0.6	392.5	*	392.5	392.5	0.0
130	13,037	50	154	12.6	394.5	*	394.5	394.6	0.0
137	13,701	50	157	5.6	404.1	*	404.1	404.3	0.2
141	14,083	183	1,357	0.4	420.9	*	420.9	420.9	0.0
149	14,856	40	82	9.8	423.3	*	423.3	423.6	0.4
154	15,371	29	103	7.0	431.0	*	431.0	431.5	0.5
156	15,604	40	187	3.7	437.6	*	437.6	438.6	1.0
157	15,747	440	4,061	0.1	447.6	*	447.6	447.6	0.0
164	16,442	87	558	0.9	447.6	*	447.6	447.6	0.0
169	16,926	34	101	7.1	452.0	*	452.0	452.1	0.0
Neil Branch (Basin 24, Stream 8)									
002	159	50	272	8.1	318.7	*	318.7	319.5	0.8
008	771	55	189	12.5	322.8	*	322.8	322.9	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	1% Annual Chance Future Water-Surface Elevation	Without Floodway	With Floodway	Increase
014	1,403	55	256	9.3	327.7	*	327.7	328.6	0.9
021	2,114	55	191	12.2	333.4	*	333.4	333.5	0.0
023	2,283	55	402	5.4	338.2	*	338.2	339.1	0.8
027	2,692	55	388	5.7	338.9	*	338.9	339.6	0.8
029	2,931	103	571	5.3	343.3	*	343.3	344.2	0.9
032	3,228	100	664	3.2	343.7	*	343.7	344.6	0.9
034	3,431	116	582	3.3	343.8	*	343.8	344.7	1.0
Neil Creek (Basin 24, Stream 7)									
004	437	75	406	7.9	309.1	*	309.1	309.5	0.4
009	859	62	379	8.3	311.2	*	311.2	312.0	0.8
012	1,176	68	534	6.0	312.7	*	312.7	313.7	1.0
016	1,618	105	709	5.4	314.5	*	314.5	315.4	0.9
025	2,469	50	386	7.9	317.1	*	317.1	318.1	1.0
028	2,831	40	222	7.4	318.4	*	318.4	319.2	0.9
031	3,078	50	336	4.9	323.3	*	323.3	323.9	0.7
031	3,143	50	340	4.4	323.3	*	323.3	324.1	0.8
Neuse River									
11016	1,101,589	686	9,463	2.1	160.8	*	160.8	161.6	0.7
11072	1,107,199	1,030	11,292	1.7	162.6	*	162.6	163.3	0.7
11080	1,107,813	340	6,046	4.1	162.6	*	162.6	163.4	0.7
11080	1,107,887	391	6,418	4.0	162.9	*	162.9	163.6	0.7
11090	1,108,786	500	7,333	4.1	163.2	*	163.2	163.9	0.6
11100	1,110,440	720	9,412	3.0	163.5	*	163.5	164.3	0.8
11130	1,112,566	680	8,013	4.0	163.9	*	163.9	164.7	0.8
11150	1,114,538	450	6,016	4.9	164.4	*	164.4	165.3	0.9
11170	1,117,095	800	9,041	3.4	165.5	*	165.5	166.4	0.9
11190	1,118,653	550	8,250	3.8	165.8	*	165.8	166.7	0.9
11200	1,120,365	590	7,836	4.1	166.2	*	166.2	167.1	1.0
11230	1,123,001	500	6,490	4.4	166.8	*	166.8	167.8	1.0
11250	1,125,052	600	7,838	4.0	167.5	*	167.5	168.4	1.0
11260	1,126,436	850	10,487	3.3	167.9	*	167.9	168.8	1.0
11280	1,127,590	620	8,538	3.6	168.0	*	168.0	169.0	1.0
11290	1,129,352	364	5,516	4.6	168.9	*	168.9	169.4	0.5
11300	1,130,103	500	7,113	4.0	169.3	*	169.3	169.8	0.4
11320	1,131,641	550	6,826	4.3	169.7	*	169.7	170.2	0.5
11330	1,132,756	400	6,188	4.3	169.9	*	169.9	170.5	0.7
11340	1,134,378	400	5,809	4.9	170.3	*	170.3	171.0	0.7
11360	1,136,275	600	7,754	4.0	171.0	*	171.0	171.8	0.8
11390	1,138,692	500	6,505	4.3	171.5	*	171.5	172.5	1.0
11400	1,140,006	440	7,009	4.0	171.9	*	171.9	172.9	1.0
11420	1,142,029	530	8,457	3.5	172.6	*	172.6	173.5	1.0
11440	1,144,138	411	6,449	3.9	174.0	*	174.0	174.1	0.1
11460	1,146,145	400	5,823	4.2	174.4	*	174.4	174.7	0.3
11480	1,148,266	400	6,075	4.1	175.0	*	175.0	175.4	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	1% Annual Chance Future Water-Surface Elevation	Without Floodway	With Floodway	Increase
11490	1,149,061	400	6,322	4.0	175.2	*	175.2	175.6	0.4
11500	1,150,004	400	5,871	3.2	175.4	*	175.4	175.9	0.5
11510	1,150,759	400	5,529	3.3	175.5	*	175.5	176.1	0.6
11520	1,151,982	344	6,155	2.7	175.7	*	175.7	176.4	0.6
11520	1,152,088	348	6,165	2.7	175.8	*	175.8	176.5	0.6
11530	1,153,164	420	5,305	3.6	176.0	*	176.0	176.6	0.6
11550	1,154,823	430	5,649	3.8	176.2	*	176.2	177.0	0.8
11570	1,156,542	540	6,716	3.2	176.6	*	176.6	177.6	0.9
11580	1,158,020	880	9,667	2.7	176.9	*	176.9	177.8	1.0
11600	1,160,252	410	6,549	2.6	177.9	*	177.9	178.2	0.4
11620	1,162,136	550	7,106	3.0	178.3	*	178.3	178.7	0.4
11630	1,163,120	490	6,400	2.5	179.2	*	179.2	180.2	1.0
11650	1,164,639	400	4,307	3.9	179.7	*	179.7	180.6	0.9
11670	1,166,737	450	4,736	3.9	180.6	*	180.6	181.5	0.9
11690	1,168,964	350	4,058	4.2	181.3	*	181.3	182.3	1.0
11700	1,169,691	370	3,518	5.3	181.7	*	181.7	182.7	1.0
11710	1,171,174	290	3,198	5.2	182.7	*	182.7	183.7	1.0
11720	1,172,061	350	3,736	4.8	183.6	*	183.6	184.4	0.8
11740	1,174,127	330	3,917	4.6	184.9	*	184.9	185.8	0.9
11760	1,176,041	360	3,819	4.6	185.9	*	185.9	186.9	1.0
11780	1,177,819	325	3,651	4.6	186.9	*	186.9	187.8	1.0
11790	1,178,721	295	3,612	4.4	187.3	*	187.3	188.3	1.0
11800	1,180,189	300	3,936	4.2	188.0	*	188.0	188.9	0.9
11820	1,181,898	370	4,608	3.9	188.6	*	188.6	189.6	1.0
11830	1,183,040	410	5,299	3.6	189.2	*	189.2	190.1	0.9
11840	1,184,343	410	4,838	3.7	189.8	*	189.8	190.7	0.9
11860	1,185,570	400	4,946	3.6	190.2	*	190.2	191.1	0.9
11870	1,186,726	420	4,901	3.8	191.0	*	191.0	191.6	0.6
11890	1,188,743	450	5,343	3.7	191.3	*	191.3	192.2	0.9
11910	1,191,225	760	8,405	2.8	192.0	*	192.0	192.9	0.9
11920	1,192,445	930	8,785	3.0	192.2	*	192.2	193.1	0.9
11950	1,194,836	720	8,028	2.8	192.9	*	192.9	193.8	0.9
11960	1,196,241	600	6,905	3.1	193.1	*	193.1	194.0	0.9
11980	1,197,574	520	5,996	3.6	193.4	*	193.4	194.3	0.9
11990	1,198,676	450	4,996	3.9	193.7	*	193.7	194.6	1.0
12000	1,200,342	358	4,542	3.9	195.2	*	195.2	195.3	0.1
12030	1,202,552	500	5,582	3.6	195.7	*	195.7	196.0	0.3
12060	1,205,512	550	5,781	4.0	196.5	*	196.5	197.0	0.5
12070	1,207,020	550	6,837	3.0	196.9	*	196.9	197.5	0.5
12090	1,208,857	600	6,417	3.4	197.2	*	197.2	197.9	0.6
12120	1,211,692	700	7,988	2.7	197.8	*	197.8	198.5	0.7
12130	1,213,152	650	7,346	3.0	198.0	*	198.0	198.7	0.8
12150	1,214,617	550	6,356	3.2	198.2	*	198.2	199.0	0.8
12160	1,216,355	650	7,524	2.9	198.6	*	198.6	199.4	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	1% Annual Chance Future Water-Surface Elevation	Without Floodway	With Floodway	Increase
12190	1,219,337	1,050	10,226	2.4	199.0	*	199.0	199.9	0.9
12210	1,221,470	1,000	9,361	2.5	199.2	*	199.2	200.2	1.0
12230	1,223,295	316	4,751	3.2	199.6	*	199.6	200.6	1.0
12240	1,223,981	260	2,745	5.9	199.7	*	199.7	200.7	0.9
12240	1,224,271	305	4,010	3.8	200.8	*	200.8	201.2	0.4
12260	1,226,217	450	4,270	4.1	201.4	*	201.4	201.8	0.4
12280	1,228,031	450	5,044	3.4	201.9	*	201.9	202.4	0.6
12300	1,230,493	350	4,541	3.4	202.3	*	202.3	203.0	0.7
12320	1,231,755	450	5,271	3.4	202.7	*	202.7	203.4	0.7
12340	1,233,697	450	5,233	3.2	203.2	*	203.2	203.8	0.7
12350	1,235,377	350	3,771	3.8	203.5	*	203.5	204.2	0.8
12380	1,237,511	300	3,800	3.7	204.4	*	204.4	205.2	0.8
12390	1,238,710	250	3,225	4.1	204.8	*	204.8	205.6	0.8
12410	1,240,617	300	3,614	4.1	205.7	*	205.7	206.5	0.8
12410	1,241,146	405	4,930	2.4	206.3	*	206.3	206.9	0.5
12420	1,241,738	135	1,625	8.6	211.0	*	211.0	211.0	0.0
New Hope Tributary to Marsh Creek (Basin 18, Stream 18)									
007	680	165	483	11.9	214.9[2]	*	211.1[35]	211.1	0.0
016	1,640	346	1,917	1.4	219.6	*	219.6	219.6	0.0
026	2,629	112	403	8.3	221.1	*	221.1	221.1	0.0
037	3,710	75	502	6.3	229.7	*	229.7	230.7	1.0
045	4,543	55	222	12.4	237.5	*	237.5	237.5	0.0
055	5,502	326	1,315	1.9	246.7	*	246.7	246.7	0.0
065	6,455	101	394	4.2	253.7	*	253.7	253.7	0.0
072	7,203	382	1,713	0.7	267.8	*	267.8	267.8	0.0
081	8,100	223	818	1.4	267.9	*	267.9	267.9	0.0
089	8,911	80	302	6.0	270.8	*	270.8	270.8	0.0
100	9,971	288	1,734	0.5	290.7	*	290.7	290.7	0.0
105	10,477	341	2,185	0.4	293.8	*	293.8	293.8	0.0
New Light Creek									
112	11,172	912	3,073	1.5	265.5[2]	*	251.8[10]	251.8	0.0
121	12,075	609	1,911	2.2	265.5[2]	*	252.2[10]	252.2	0.0
129	12,891	135	483	11.8	265.5[2]	*	254.3[10]	254.4	0.0
135	13,486	267	2,256	3.3	265.5[2]	*	261.1[10]	261.1	0.0
145	14,474	395	2,807	2.8	265.5[2]	*	261.4[10]	261.8	0.4
152	15,233	551	3,449	2.4	265.5[2]	*	261.6[10]	262.2	0.5
158	15,763	618	3,232	2.8	265.5[2]	*	261.8[10]	262.3	0.6
170	16,990	450	1,835	5.4	265.5[2]	*	263.7[10]	264.5	0.8
178	17,826	646	2,215	4.9	265.5[2]	*	265.0[10]	265.7	0.7
186	18,605	790	2,255	4.5	266.0	*	266.0	266.8	0.8
190	18,957	750	2,824	3.5	269.0	*	269.0	269.4	0.4
200	19,976	400	1,177	5.0	270.7	*	270.7	271.4	0.7
207	20,713	330	1,023	6.0	272.8	*	272.8	273.2	0.4
216	21,622	330	1,199	5.8	274.6	*	274.6	275.6	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	1% Annual Chance Future Water-Surface Elevation	Without Floodway	With Floodway	Increase
222	22,222	465	1,917	4.5	276.0	*	276.0	277.0	1.0
241	24,064	305	1,341	7.5	279.5	*	279.5	280.2	0.7
247	24,747	115	697	10.2	281.8	*	281.8	282.8	1.0
Norris Branch									
007	681	162	551	6.2	240.1	*	240.1	240.7	0.6
016	1,592	92	407	7.6	244.8	*	244.8	245.8	1.0
028	2,849	113	524	6.6	251.9	*	251.9	252.7	0.8
041	4,068	100	499	6.9	256.3	*	256.3	257.1	0.9
055	5,506	73	355	7.0	262.0	*	262.0	262.6	0.6
069	6,944	91	448	6.3	267.7	*	267.7	268.0	0.3
085	8,520	285	1,127	3.5	274.1	*	274.1	275.1	1.0
089	8,862	242	703	4.8	276.1	*	276.1	276.4	0.3
101	10,057	87	323	8.5	281.4	*	281.4	282.2	0.8
122	12,218	120	512	5.5	291.9	*	291.9	292.8	0.9
138	13,848	103	480	5.8	302.4	*	302.4	303.1	0.7
148	14,766	88	300	7.3	307.9	*	307.9	308.8	0.8
152	15,174	69	588	2.8	316.3	*	316.3	316.7	0.3
153	15,319	66	491	3.7	316.3	*	316.3	316.7	0.4
Panther Branch (Basin 22, Stream 2)									
001	72	75	483	8.5	234.7[2]	*	234.6[5]	235.2	0.5
009	869	100	741	6.0	236.9	*	236.9	237.6	0.8
020	2,016	200	966	5.2	238.0	*	238.0	238.9	0.9
030	3,010	175	596	9.0	241.2	*	241.2	241.7	0.5
038	3,821	175	905	5.6	244.4	*	244.4	245.3	0.9
045	4,513	145	661	7.4	246.5	*	246.5	247.4	0.9
056	5,553	172	766	5.4	250.5	*	250.5	251.3	0.8
063	6,264	100	656	5.1	256.1	*	256.1	256.5	0.4
070	7,032	230	461	8.4	256.7	*	256.7	257.3	0.6
081	8,144	120	516	7.1	259.8	*	259.8	260.6	0.9
092	9,197	165	566	7.2	264.8	*	264.8	265.5	0.7
102	10,236	120	408	9.0	269.1	*	269.1	269.7	0.6
115	11,451	145	476	8.3	274.7	*	274.7	275.6	0.9
126	12,635	135	403	9.6	280.8	*	280.8	281.6	0.8
135	13,521	125	978	3.7	292.1	*	292.1	292.7	0.6
146	14,641	135	353	9.6	293.8	*	293.8	294.0	0.2
156	15,566	135	405	5.0	298.9	*	298.9	299.8	0.9
165	16,480	165	388	5.8	303.6	*	303.6	304.5	0.9
174	17,396	134	331	6.6	308.2	*	308.2	308.9	0.7
183	18,296	65	187	11.6	314.2	*	314.2	315.0	0.8
Panther Creek									
126	12,614	142	806	5.5	245.5	*	245.5	246.3	0.8
132	13,200	53	482	6.4	249.7	*	249.7	250.4	0.7
145	14,458	240	923	5.2	251.5	*	251.5	252.3	0.8
153	15,251	373	5,352	0.4	265.1	*	265.1	265.2	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	1% Annual Chance Future Water-Surface Elevation	Without Floodway	With Floodway	Increase
163	16,264	452	5,960	0.3	265.1	*	265.1	265.2	0.1
170	16,975	356	4,268	0.4	265.1	*	265.1	265.2	0.1
173	17,258	403	4,484	0.4	266.0	*	266.0	266.0	0.1
178	17,825	283	3,263	0.4	266.0	*	266.0	266.1	0.1
182	18,211	125	1,262	1.4	267.2	*	267.2	267.3	0.1
194	19,413	165	779	3.4	267.8	*	267.8	268.3	0.5
207	20,699	150	459	4.5	271.2	*	271.2	271.4	0.2
218	21,783	100	320	4.1	272.7	*	272.7	273.4	0.7
225	22,510	100	311	5.0	277.4	*	277.4	277.7	0.3
229	22,865	170	713	2.6	279.2	*	279.2	279.7	0.6
238	23,844	35	111	9.8	281.8	*	281.8	282.1	0.3
Perry Creek (Basin 15, Stream 26)									
004	372	104	815	11.7	196.9[2]	*	187.2[8]	187.6	0.4
012	1,249	400	2,985	6.5	196.9[2]	*	189.7[8]	190.4	0.7
025	2,451	405	2,633	7.6	196.9[2]	*	190.8[8]	191.8	1.0
034	3,357	450	4,217	5.1	196.9[2]	*	196.5[8]	196.5	0.0
041	4,124	370	2,925	2.9	196.9	*	196.9	197.0	0.2
052	5,232	380	2,174	4.2	197.1	*	197.1	197.4	0.3
063	6,286	190	882	7.7	198.4	*	198.4	199.1	0.7
073	7,330	195	921	7.9	201.9	*	201.9	202.9	1.0
085	8,515	160	721	8.4	205.4	*	205.4	206.3	0.9
095	9,463	145	868	7.1	209.2	*	209.2	209.9	0.7
106	10,618	145	531	11.2	213.8	*	213.8	214.3	0.5
120	11,981	60	359	4.8	220.8	*	220.8	221.5	0.7
134	13,414	309	3,271	0.6	247.1	*	247.1	247.1	0.0
148	14,776	400	3,713	0.5	247.1	*	247.1	247.1	0.0
169	16,919	85	472	7.7	251.5	*	251.5	251.5	0.0
183	18,331	56	388	6.1	256.4	*	256.4	256.4	0.0
195	19,482	110	558	4.8	260.6	*	260.6	260.6	0.0
211	21,077	110	296	9.3	264.5	*	264.5	264.5	0.0
221	22,062	243	696	8.2	273.1	*	273.1	273.1	0.0
235	23,465	290	2,818	0.5	295.2	*	295.2	295.2	0.0
243	24,338	169	542	5.9	295.4	*	295.4	295.4	0.0
255	25,476	93	213	12.0	308.6	*	308.6	308.6	0.0
267	26,699	92	217	11.3	323.1	*	323.1	323.1	0.0
274	27,435	157	892	2.2	333.6	*	333.6	334.5	1.0
284	28,380	591	5,089	0.2	353.3	*	353.3	353.3	0.0
292	29,188	78	222	4.9	353.3	*	353.3	353.3	0.0
299	29,905	55	187	8.5	367.2	*	367.2	367.2	0.0
Perry Creek East Branch (Basin 15, Stream 27)									
007	674	84	409	7.5	197.1[2]	*	196.2[8]	197.1	0.9
015	1,479	99	367	7.6	201.8	*	201.8	202.8	0.9
024	2,426	290	1,184	3.2	210.8	*	210.8	210.9	0.1
035	3,500	181	484	6.1	218.4	*	218.4	218.4	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	1% Annual Chance Future Water-Surface Elevation	Without Floodway	With Floodway	Increase
045	4,496	67	173	11.0	224.8	*	224.8	224.8	0.0
053	5,318	20	112	14.8	236.2	*	236.2	236.7	0.5
062	6,195	62	244	3.8	247.9	*	247.9	248.9	1.0
070	7,013	25	115	4.6	254.8	*	254.8	255.6	0.8
080	8,037	91	147	6.9	273.1	*	273.1	273.1	0.0
Pigeon House Branch (Basin 18, Stream 27)									
014	1,419	115	811	8.1	198.1	*	198.1	198.1	0.0
028	2,753	190	964	5.1	204.5	*	204.5	204.5	0.0
039	3,910	280	1,495	3.1	208.0	*	208.0	208.0	0.0
047	4,679	255	1,393	3.9	208.4	*	208.4	209.3	1.0
057	5,680	54	514	7.9	211.1	*	211.1	212.1	1.0
069	6,883	80	713	9.1	219.7	*	219.7	220.0	0.3
076	7,606	147	1,630	3.9	226.5	*	226.5	227.4	0.9
085	8,507	182	1,728	2.8	230.3	*	230.3	231.3	1.0
093	9,315	123	1,058	5.8	230.7	*	230.7	231.6	1.0
101	10,148	50	722	7.6	235.3	*	235.3	235.5	0.3
115	11,522	33	461	10.5	239.8	*	239.8	240.4	0.6
126	12,586	115	1,298	4.0	253.7	*	253.7	254.5	0.8
135	13,465	28	417	6.9	257.8	*	257.8	258.2	0.4
144	14,429	64	517	6.2	261.2	*	261.2	261.9	0.8
157	15,719	155	543	8.3	270.1	*	270.1	271.0	1.0
Poplar Branch (Basin 13, Stream 2)									
004	415	60	231	8.8	214.9[2]	*	212.7[36]	213.4	0.7
009	888	36	159	8.5	216.0	*	216.0	216.3	0.3
010	1,050	98	632	2.8	222.5	*	222.5	223.2	0.7
017	1,704	65	211	7.5	223.9	*	223.9	224.7	0.8
025	2,474	135	437	5.2	230.2	*	230.2	231.0	0.8
028	2,790	110	307	7.8	233.9	*	233.9	234.8	0.8
034	3,368	95	233	3.9	241.4	*	241.4	241.8	0.4
035	3,536	95	486	2.9	242.5	*	242.5	242.9	0.4
038	3,798	166	761	1.1	248.2	*	248.2	248.6	0.4
043	4,273	80	275	4.8	248.2	*	248.2	248.5	0.4
Poplar Creek (Basin 13, Stream 1)									
003	267	400	702	9.3	165.6[2]	*	154.5[8]	155.2	0.7
016	1,625	150	1,002	6.1	165.6[2]	*	156.7[8]	157.7	1.0
026	2,638	230	1,562	4.3	165.6[2]	*	158.0[8]	158.9	1.0
045	4,487	188	1,036	7.6	165.6[2]	*	161.8[8]	162.5	0.7
049	4,926	179	1,326	5.7	165.7	*	165.7	165.7	0.0
056	5,615	85	687	8.9	167.0	*	167.0	167.3	0.3
064	6,352	115	1,001	7.5	171.2	*	171.2	171.3	0.2
065	6,505	135	1,340	5.9	171.9	*	171.9	172.1	0.2
067	6,730	180	1,760	4.4	172.0	*	172.0	172.6	0.5
077	7,691	305	2,348	3.2	172.2	*	172.2	173.1	0.9
085	8,470	220	1,496	4.7	173.0	*	173.0	173.9	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	1% Annual Chance Future Water-Surface Elevation	Without Floodway	With Floodway	Increase
091	9,093	330	2,042	4.3	174.8	*	174.8	175.5	0.7
102	10,169	285	1,505	5.0	176.4	*	176.4	177.0	0.6
111	11,077	330	1,651	4.9	177.8	*	177.8	178.7	0.9
121	12,112	355	1,908	3.2	180.6	*	180.6	181.4	0.8
131	13,115	340	2,166	3.1	185.2	*	185.2	185.7	0.5
144	14,368	275	1,244	4.1	186.5	*	186.5	187.4	0.9
160	16,049	295	1,146	6.0	191.5	*	191.5	192.3	0.8
180	18,021	150	728	7.1	199.3	*	199.3	200.0	0.8
189	18,881	220	823	5.9	201.6	*	201.6	202.4	0.8
200	20,019	290	1,283	4.8	207.6	*	207.6	207.7	0.1
218	21,830	240	891	6.6	213.5	*	213.5	214.3	0.9
224	22,366	180	378	8.4	216.3	*	216.3	217.2	0.9
229	22,942	100	824	2.4	224.2	*	224.2	224.9	0.8
238	23,778	115	485	6.0	225.1	*	225.1	226.0	0.9
252	25,213	145	480	6.4	231.0	*	231.0	231.9	1.0
264	26,389	85	819	2.8	251.0	*	251.0	251.3	0.4
271	27,134	120	672	3.5	251.1	*	251.1	251.7	0.6
277	27,727	90	330	6.9	256.0	*	256.0	257.0	0.9
Powell Creek (Basin 8, Stream 7)									
002	155	125	951	3.4	193.2[2]	*	189.7[37]	189.9	0.2
012	1,171	299	2,924	1.1	194.2	*	194.2	194.4	0.2
020	2,048	98	616	9.7	194.3	*	194.3	194.4	0.0
027	2,719	88	677	7.9	195.8	*	195.8	196.8	1.0
036	3,567	117	1,089	6.1	199.0	*	199.0	200.0	1.0
045	4,459	125	936	3.5	199.4	*	199.4	200.4	0.9
057	5,664	425	2,065	1.6	199.8	*	199.8	200.7	0.8
067	6,706	75	360	9.0	201.7	*	201.7	202.0	0.3
075	7,498	305	1,538	2.0	203.6	*	203.6	204.2	0.5
083	8,276	70	386	8.3	205.2	*	205.2	205.3	0.2
095	9,454	537	2,655	3.0	213.3	*	213.3	213.3	0.0
106	10,571	743	5,218	1.4	215.9	*	215.9	215.9	0.0
115	11,459	280	1,468	5.8	216.5	*	216.5	216.5	0.0
120	12,018	598	3,467	2.6	217.3	*	217.3	217.3	0.0
130	13,002	325	1,643	5.2	218.1	*	218.1	218.1	0.0
140	13,997	324	1,787	3.7	226.9	*	226.9	226.9	0.0
147	14,699	315	1,830	4.0	227.4	*	227.4	227.4	0.0
147	14,699	315	1,830	4.0	227.4	*	227.4	227.4	0.0
160	15,997	210	1,409	2.0	228.0	*	228.0	228.0	0.0
172	17,228	440	1,683	1.9	228.2	*	228.2	228.2	0.0
186	18,643	160	791	3.2	232.3	*	232.3	232.8	0.5
193	19,337	190	656	4.4	233.6	*	233.6	234.0	0.4
197	19,735	90	487	4.4	236.0	*	236.0	236.0	0.0
207	20,692	305	1,206	2.4	236.7	*	236.7	236.7	0.0
217	21,733	185	652	4.5	239.0	*	239.0	239.8	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	1% Annual Chance Future Water-Surface Elevation	Without Floodway	With Floodway	Increase
229	22,855	168	352	7.8	243.9	*	243.9	244.1	0.1
239	23,922	355	679	3.0	246.2	*	246.2	246.2	0.1
253	25,333	140	381	5.8	251.2	*	251.2	251.7	0.5
260	26,020	100	306	6.7	254.1	*	254.1	254.2	0.1
264	26,449	300	3,049	0.4	267.8	*	267.8	267.8	0.0
272	27,195	424	3,813	0.4	267.8	*	267.8	267.8	0.0
280	27,999	225	1,089	1.0	267.8	*	267.8	267.8	0.0
285	28,471	42	131	12.5	270.1	*	270.1	270.4	0.3
293	29,279	55	193	7.9	297.8	*	297.8	298.1	0.3
Reedy Branch (Basin 27, Stream 5)									
010	1,017	605	3,079	1.0	238.7	*	238.7	239.7	1.0
017	1,666	250	910	3.3	239.4	*	239.4	240.3	0.9
034	3,393	240	1,591	1.9	246.4	*	246.4	247.4	1.0
048	4,763	405	2,302	1.2	249.1	*	249.1	249.8	0.7
064	6,403	370	2,158	1.3	254.5	*	254.5	255.4	0.9
069	6,929	170	935	3.1	255.1	*	255.1	256.1	1.0
072	7,243	130	754	3.8	256.5	*	256.5	257.3	0.8
080	7,966	190	1,184	2.4	259.3	*	259.3	260.3	1.0
085	8,517	250	1,557	1.8	260.6	*	260.6	261.6	1.0
090	8,990	250	1,158	2.5	261.6	*	261.6	262.4	0.8
097	9,685	215	880	3.3	264.1	*	264.1	265.0	0.9
102	10,193	305	1,752	1.6	266.0	*	266.0	267.0	1.0
107	10,679	240	1,221	2.4	267.3	*	267.3	268.1	0.8
111	11,132	70	259	5.2	269.2	*	269.2	269.7	0.5
119	11,924	100	466	2.9	273.5	*	273.5	274.5	1.0
Reedy Branch Tributary (Basin 27, Stream 6)									
009	864	127	549	3.1	268.0	*	268.0	269.0	1.0
012	1,197	90	463	3.6	270.3	*	270.3	271.2	0.9
018	1,811	92	624	2.7	273.3	*	273.3	274.1	0.8
027	2,666	124	701	2.4	276.1	*	276.1	277.1	1.0
031	3,137	92	555	3.0	277.9	*	277.9	278.9	1.0
039	3,850	120	640	2.6	281.4	*	281.4	282.4	0.9
045	4,488	90	626	2.7	284.1	*	284.1	285.1	0.9
050	4,980	85	405	3.8	286.6	*	286.6	287.5	0.9
056	5,596	65	383	4.0	292.4	*	292.4	293.2	0.9
061	6,069	90	597	2.6	295.1	*	295.1	296.1	1.0
065	6,541	80	408	3.8	297.1	*	297.1	298.0	0.9
071	7,080	95	379	4.1	301.3	*	301.3	302.2	0.9
078	7,789	130	923	1.7	309.4	*	309.4	310.4	1.0
083	8,257	105	557	2.8	310.2	*	310.2	311.2	1.0
Reedy Creek (Basin 6, Stream 8)									
017	1,666	150	508	3.3	236.9[2]	*	236.1[15]	236.2	0.1
022	2,155	101	271	7.9	237.5	*	237.5	238.5	1.0
030	3,039	120	408	4.8	245.6	*	245.6	245.9	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	1% Annual Chance Future Water-Surface Elevation	Without Floodway	With Floodway	Increase
039	3,884	105	309	6.8	249.4	*	249.4	250.4	1.0
045	4,471	80	705	2.7	259.2	*	259.2	259.8	0.6
047	4,671	65	622	2.6	261.0	*	261.0	261.8	0.9
052	5,177	100	755	2.1	261.0	*	261.0	262.0	1.0
Reedy Creek Tributary (Basin 20, Stream 9)									
012	1,195	116	359	6.1	248.0	*	248.0	248.5	0.5
019	1,936	95	362	6.4	252.3	*	252.3	253.1	0.8
026	2,625	60	250	7.2	255.4	*	255.4	256.0	0.6
031	3,053	43	279	5.0	258.2	*	258.2	258.8	0.7
037	3,655	45	196	7.4	260.8	*	260.8	260.8	0.0
040	3,998	50	330	5.4	265.9	*	265.9	266.4	0.5
049	4,893	41	136	11.8	268.3	*	268.3	268.5	0.2
Richland Creek									
015	1,475	426	2,599	7.9	202.9[2]	*	197.6[8]	198.4	0.8
027	2,736	545	3,443	5.9	202.9[2]	*	199.6[8]	200.5	0.9
038	3,828	405	2,122	10.4	202.9[2]	*	202.8[8]	203.7	0.9
049	4,902	491	3,370	6.1	205.4	*	205.4	206.4	1.0
056	5,562	328	2,120	7.8	206.5	*	206.5	207.5	0.9
069	6,943	475	2,735	6.4	213.0	*	213.0	213.1	0.1
077	7,671	480	2,932	4.4	213.9	*	213.9	214.2	0.3
085	8,514	339	2,175	7.7	215.3	*	215.3	216.1	0.8
094	9,410	205	1,484	9.1	217.0	*	217.0	217.8	0.8
104	10,421	241	1,784	8.6	221.3	*	221.3	222.1	0.7
114	11,415	163	1,217	7.0	223.4	*	223.4	224.1	0.7
124	12,408	221	1,161	9.9	224.4	*	224.4	225.0	0.6
130	13,027	259	1,078	8.5	227.5	*	227.5	228.5	0.9
144	14,364	475	2,308	7.4	232.1	*	232.1	232.1	0.1
157	15,724	260	1,661	7.9	237.3	*	237.3	237.3	0.0
177	17,684	225	1,443	9.4	241.2	*	241.2	242.1	0.9
190	18,993	205	982	10.1	244.5	*	244.5	245.0	0.5
200	19,964	90	710	11.4	248.3	*	248.3	249.1	0.8
202	20,245	90	802	5.9	250.5	250.5	250.5	251.1	0.6
209	20,939	160	1,266	3.7	251.9	251.9	251.9	252.9	1.0
214	21,418	120	830	5.7	253.4	253.4	253.4	254.4	1.0
220	22,026	208	1,401	3.4	256.5	256.6	256.5	257.0	0.5
234	23,416	200	1,557	3.0	260.8	260.8	260.8	261.1	0.3
239	23,922	315	2,056	2.3	261.7	261.7	261.7	262.2	0.5
249	24,871	245	1,448	3.2	264.3	264.3	264.3	265.2	0.9
253	25,325	225	1,366	3.3	265.0	265.0	265.0	266.0	1.0
262	26,150	210	1,421	3.2	269.6	269.6	269.6	269.9	0.3
268	26,759	250	1,503	3.0	270.9	270.9	270.9	271.9	0.9
272	27,156	240	1,194	3.8	272.1	272.1	272.1	273.1	1.0
278	27,750	240	1,670	2.7	275.8	275.8	275.8	275.9	0.2
285	28,487	275	1,846	2.5	277.0	277.0	277.0	277.7	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	1% Annual Chance Future Water-Surface Elevation	Without Floodway	With Floodway	Increase
292	29,182	330	1,783	2.6	278.0	278.0	278.0	279.0	1.0
299	29,939	270	1,442	3.2	279.6	279.6	279.6	280.6	1.0
310	31,033	175	1,663	2.7	289.5	289.5	289.5	290.2	0.7
317	31,671	245	2,192	2.0	290.0	290.0	290.0	290.8	0.8
323	32,262	250	1,694	2.5	290.3	290.3	290.3	291.3	1.0
328	32,835	110	637	6.6	290.9	290.9	290.9	291.9	1.0
333	33,305	160	1,021	4.1	294.5	294.5	294.5	295.1	0.5
Richland Creek (Basin 18, Stream 3)									
013	1,262	43	205	7.0	242.7[2]	*	237.4[16]	237.7	0.4
021	2,069	34	183	8.2	242.9	*	242.9	242.9	0.1
031	3,120	34	181	8.2	249.6	*	249.6	250.0	0.4
041	4,087	36	250	6.1	257.3	*	257.3	257.7	0.4
050	4,985	48	204	7.3	261.2	*	261.2	261.4	0.2
060	6,024	32	202	6.8	267.4	*	267.4	267.5	0.0
071	7,116	29	261	5.3	271.2	*	271.2	271.3	0.1
081	8,085	23	161	8.3	276.0	*	276.0	276.1	0.1
091	9,124	31	157	3.2	277.9	*	277.9	278.0	0.1
113	11,251	1,017	12,333	0.1	311.6	*	311.6	311.6	0.0
130	13,019	610	7,743	0.2	314.2	*	314.2	314.2	0.0
141	14,128	582	5,378	0.7	314.2	*	314.2	314.2	0.0
150	14,987	430	2,671	1.2	314.2	*	314.2	314.2	0.0
161	16,077	452	856	4.2	314.5	*	314.5	314.5	0.0
169	16,908	55	336	13.4	318.4	*	318.4	318.4	0.0
177	17,748	70	476	11.9	324.9	*	324.9	325.9	1.0
186	18,649	43	347	8.3	329.2	*	329.2	329.7	0.6
195	19,467	34	243	10.8	333.6	*	333.6	334.0	0.4
207	20,681	108	550	7.3	338.9	*	338.9	339.8	0.9
217	21,720	85	631	4.2	348.3	*	348.3	348.3	0.0
226	22,620	94	331	7.9	349.6	*	349.6	350.0	0.4
234	23,412	85	593	3.9	357.6	*	357.6	357.6	0.0
246	24,581	70	480	6.4	368.4	*	368.4	368.4	0.0
253	25,311	71	474	8.9	373.0	*	373.0	373.5	0.4
260	26,008	40	189	2.8	375.3	*	375.3	376.2	1.0
Richland Creek Tributary									
002	188	119	523	6.6	226.5[2]	*	224.5[38]	224.6	0.1
006	610	143	472	6.7	231.6	*	231.6	231.8	0.1
010	1,045	81	301	10.0	235.2	*	235.2	235.3	0.1
015	1,479	109	495	7.2	239.4	*	239.4	239.5	0.1
020	2,026	25	131	13.8	244.4	*	244.4	244.4	0.0
025	2,455	40	209	6.6	251.2	251.7	251.2	251.4	0.2
029	2,872	40	215	5.5	254.1	254.5	254.1	255.1	1.0
033	3,341	22	104	11.5	258.8	259.1	258.8	259.4	0.5
038	3,804	30	143	8.3	265.0	265.4	265.0	266.0	1.0
043	4,285	30	163	7.1	269.5	269.8	269.5	270.2	0.6

Table 22 - Floodway Data

Floodway Source		Floodway			Water Surface Elevation				
Cross Section	Distance (Feet Above Mouth)	Width (Feet)	Section Area (Square Feet)	Mean Velocity (Feet Per Second)	Regulatory	1% Annual Chance Future Water-Surface Elevation	Without Floodway	With Floodway	Increase
048	4,819	43	129	9.0	277.0	277.4	277.0	277.0	0.0
052	5,240	20	99	11.7	282.3	282.6	282.3	282.3	0.0
057	5,689	20	120	5.6	287.0	287.6	287.0	287.3	0.2
060	6,038	18	64	10.5	289.3	289.5	289.3	289.3	0.0
064	6,430	66	791	0.8	310.8	310.9	310.8	311.8	1.0
Rocky Branch (Basin 22, Stream 8)									
016	1,551	110	390	6.5	299.9	*	299.9	300.7	0.8
028	2,809	65	299	7.8	305.3	*	305.3	306.3	1.0
042	4,166	100	349	7.5	312.4	*	312.4	312.9	0.6
047	4,730	120	892	2.5	319.6	*	319.6	320.3	0.7
060	6,010	100	467	5.6	321.2	*	321.2	322.1	0.9
072	7,249	60	285	8.5	330.0	*	330.0	330.7	0.6
085	8,506	170	527	6.1	337.4	*	337.4	337.4	0.0
096	9,624	185	443	7.6	342.3	*	342.3	342.4	0.1
105	10,507	110	443	5.9	345.4	*	345.4	345.6	0.2
114	11,391	95	436	5.3	351.3	*	351.3	351.7	0.5
118	11,825	105	263	10.8	354.2	*	354.2	354.6	0.4
125	12,547	100	218	10.0	356.8	*	356.8	357.2	0.4
131	13,080	95	214	10.2	361.3	*	361.3	361.3	0.0
134	13,389	75	256	8.0	363.1	*	363.1	363.4	0.4
137	13,653	75	478	4.9	369.4	*	369.4	370.1	0.7
143	14,307	125	243	10.0	370.5	*	370.5	371.5	1.0
Rocky Branch (Basin 30, Stream 5)									
009	876	94	722	6.5	236.5[2]	*	233.3[39]	233.3	0.0
018	1,788	258	1,687	4.1	236.5[2]	*	234.2[39]	234.6	0.4
029	2,881	216	873	7.2	236.5[2]	*	235.6[39]	235.8	0.2
036	3,594	174	506	11.0	237.9	*	237.9	237.9	0.0
039	3,851	140	508	8.3	241.4	*	241.4	241.8	0.3
045	4,472	220	1,382	4.7	243.7	*	243.7	244.1	0.4
050	5,008	179	618	6.4	246.8	*	246.8	246.8	0.0
053	5,346	171	1,167	5.4	251.3	*	251.3	251.3	0.0
059	5,869	144	1,116	4.9	251.7	*	251.7	251.8	0.0
064	6,377	58	479	7.5	255.0	*	255.0	255.0	0.0
074	7,407	65	378	11.4	260.3	*	260.3	261.0	0.7
081	8,052	72	712	4.7	269.7	*	269.7	270.0	0.3
090	8,986	80	494	9.0	273.0	*	273.0	273.7	0.8
096	9,612	105	794	5.3	286.2	*	286.2	286.7	0.5
100	9,962	99	978	3.0	289.5	*	289.5	290.0	0.4
110	11,033	29	300	9.3	291.7	*	291.7	291.7	0.0
120	12,018	47	390	6.7	298.5	*	298.5	298.6	0.1
123	12,326	103	772	5.4	306.9	*	306.9	307.4	0.6
126	12,623	80	530	5.5	311.9	*	311.9	312.1	0.2
127	12,678	80	675	4.3	314.8	*	314.8	315.7	0.9
136	13,634	256	516	9.1	317.4	*	317.4	317.4	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	1% Annual Chance Future Water-Surface Elevation	Without Floodway	With Floodway	Increase
138	13,776	210	781	6.2	320.8	*	320.8	320.9	0.1
141	14,053	77	490	7.8	325.6	*	325.6	325.6	0.0
145	14,520	149	695	4.0	326.8	*	326.8	326.8	0.0
151	15,053	63	298	14.3	329.3	*	329.3	329.3	0.0
155	15,461	77	300	8.3	333.1	*	333.1	333.1	0.0
161	16,096	53	485	5.1	351.1	*	351.1	351.1	0.0
162	16,169	65	583	5.3	351.2	*	351.2	351.3	0.1
172	17,157	38	198	9.8	351.3	*	351.3	351.5	0.2
174	17,366	72	537	3.3	361.2	*	361.2	361.2	0.0
180	18,043	40	150	10.6	362.7	*	362.7	362.7	0.1
182	18,223	49	254	8.1	367.5	*	367.5	367.5	0.0
188	18,821	34	200	6.4	369.7	*	369.7	369.7	0.1
190	18,984	65	331	4.7	381.0	*	381.0	381.5	0.5
201	20,101	47	137	9.8	392.5	*	392.5	392.6	0.0
202	20,243	61	259	7.0	395.6	*	395.6	396.4	0.9
209	20,859	52	259	6.2	403.6	*	403.6	403.6	0.0
217	21,746	77	108	7.7	415.1	*	415.1	415.2	0.0
220	22,015	70	265	3.8	421.2	*	421.2	421.5	0.3
223	22,285	31	116	5.3	424.5	*	424.5	424.7	0.2
224	22,422	23	103	6.0	425.7	*	425.7	426.1	0.4
226	22,608	42	151	4.0	429.7	*	429.7	430.3	0.6
229	22,944	70	435	2.8	442.5	*	442.5	443.2	0.8
233	23,338	113	758	0.7	442.6	*	442.6	443.4	0.8
Rocky Ford Branch (Basin 24, Stream 5)									
000	35	30	98	6.7	305.4[2]	*	302.0[1]	302.7	0.7
008	779	55	115	7.8	308.9	*	308.9	309.0	0.1
011	1,064	61	182	3.6	313.3	*	313.3	313.3	0.0
018	1,801	37	81	9.2	318.7	*	318.7	319.0	0.3
026	2,584	31	72	7.4	329.5	*	329.5	329.5	0.0
029	2,862	268	1,909	0.2	343.0	*	343.0	343.2	0.3
032	3,220	40	78	9.8	343.1	*	343.1	343.3	0.2
035	3,513	42	193	4.0	349.2	*	349.2	349.2	0.0
042	4,234	29	66	9.8	349.8	*	349.8	349.9	0.1
044	4,385	40	184	3.3	351.1	*	351.1	351.8	0.6
048	4,808	37	87	7.1	356.7	*	356.7	357.3	0.6
052	5,242	55	135	3.6	358.8	*	358.8	359.7	0.9
Sanford Creek (Basin 6, Stream 7)									
017	1,740	190	839	4.8	217.4	*	217.4	217.9	0.5
023	2,347	170	700	7.1	218.9	*	218.9	219.9	1.0
030	2,977	115	803	5.2	223.9	*	223.9	224.3	0.4
039	3,909	233	1,079	4.5	224.6	*	224.6	225.6	1.0
050	5,019	110	464	9.2	228.4	*	228.4	228.7	0.4
059	5,890	85	595	6.5	232.4	*	232.4	232.8	0.4
081	8,127	204	841	4.1	236.6	*	236.6	237.0	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	1% Annual Chance Future Water-Surface Elevation	Without Floodway	With Floodway	Increase
085	8,547	210	589	6.2	237.0	*	237.0	238.0	1.0
094	9,400	160	526	3.4	241.3	*	241.3	242.2	0.9
098	9,797	120	404	4.3	242.9	*	242.9	243.9	1.0
Smith Creek									
006	598	505	2,569	5.3	198.8[2]	*	192.9[8]	193.1	0.2
020	2,028	390	2,782	4.4	198.8[2]	*	194.1[8]	194.8	0.8
032	3,169	385	2,660	4.7	198.8[2]	*	195.1[8]	196.1	1.0
040	4,002	217	1,617	6.6	198.8[2]	*	197.6[8]	198.1	0.5
052	5,194	350	3,236	3.7	201.1	*	201.1	201.9	0.8
067	6,696	630	4,045	3.0	202.1	*	202.1	202.9	0.7
081	8,113	385	2,120	5.4	202.9	*	202.9	203.8	0.9
088	8,773	151	1,313	7.6	206.7	*	206.7	207.7	1.0
097	9,723	250	1,941	5.8	208.4	*	208.4	209.3	0.9
107	10,665	170	1,306	7.5	210.7	*	210.7	211.3	0.6
117	11,699	220	1,718	5.8	212.4	*	212.4	213.3	1.0
135	13,470	330	2,463	4.4	215.5	*	215.5	216.3	0.8
145	14,511	360	2,323	3.4	216.4	*	216.4	217.3	1.0
156	15,563	260	1,343	6.6	217.6	*	217.6	218.5	0.9
168	16,773	330	1,836	4.5	221.2	*	221.2	221.9	0.7
182	18,243	205	1,031	8.8	225.6	*	225.6	226.4	0.8
188	18,831	141	1,139	5.5	229.0	*	229.0	229.0	0.0
195	19,452	170	1,220	6.1	230.2	*	230.2	230.5	0.2
199	19,862	341	2,185	3.4	230.6	*	230.6	231.2	0.5
212	21,214	160	1,076	5.3	230.9	*	230.9	231.7	0.8
225	22,517	72	571	8.5	234.0	*	234.0	234.5	0.5
227	22,714	82	759	6.4	235.8	*	235.8	236.3	0.5
229	22,928	188	904	6.7	236.7	*	236.7	237.1	0.4
238	23,837	160	706	7.7	239.2	*	239.2	239.8	0.7
248	24,846	245	1,015	5.7	242.4	*	242.4	243.3	0.9
261	26,117	185	635	9.1	246.9	*	246.9	247.4	0.6
268	26,824	110	561	8.9	249.4	*	249.4	249.9	0.5
278	27,829	135	381	8.6	253.0	*	253.0	253.5	0.5
289	28,941	60	343	6.5	258.9	*	258.9	259.6	0.6
295	29,498	150	693	4.0	262.2	*	262.2	262.4	0.2
303	30,314	80	344	7.5	266.1	*	266.1	266.7	0.6
308	30,835	46	515	3.5	271.1	*	271.1	271.8	0.7
314	31,372	672	11,812	0.1	301.0	*	301.0	301.0	0.0
325	32,548	393	6,050	0.3	301.0	*	301.0	301.0	0.0
337	33,728	416	6,297	0.3	301.0	*	301.0	301.0	0.0
347	34,734	325	4,619	0.4	301.0	*	301.0	301.0	0.0
363	36,307	139	1,463	1.1	301.0	*	301.0	301.0	0.0
371	37,100	325	1,165	2.4	301.0	*	301.0	301.0	0.0
375	37,534	165	919	2.7	304.0	*	304.0	304.1	0.1
387	38,657	70	226	8.3	307.9	*	307.9	308.4	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	1% Annual Chance Future Water-Surface Elevation	Without Floodway	With Floodway	Increase
397	39,743	100	339	4.8	312.0	*	312.0	312.6	0.6
409	40,909	44	149	10.9	319.9	*	319.9	319.9	0.0
421	42,095	123	242	9.2	327.0	*	327.0	327.0	0.0
Southeast Prong Beaverdam Creek (Basin 18, Stream 30)									
005	457	59	249	3.9	247.6[2]	*	246.9[40]	247.8	0.9
015	1,498	85	350	9.6	256.4	*	256.4	256.9	0.4
023	2,260	62	241	12.3	262.9	*	262.9	263.0	0.0
032	3,150	65	257	7.2	271.6	*	271.6	272.3	0.7
041	4,091	34	213	10.1	281.7	*	281.7	282.1	0.4
052	5,194	73	476	3.3	299.3	*	299.3	299.3	0.0
064	6,400	85	606	3.6	314.9	*	314.9	315.6	0.7
074	7,385	54	143	8.8	324.2	*	324.2	325.1	1.0
Southwest Prong Beaverdam Creek (Basin 18, Stream 29)									
002	210	81	644	8.4	248.3	*	248.3	248.8	0.5
011	1,099	75	304	13.1	253.6	*	253.6	253.6	0.0
020	1,959	99	491	8.0	269.4	*	269.4	270.2	0.8
029	2,923	142	459	10.4	278.3	*	278.3	279.1	0.7
040	4,020	64	307	9.7	288.4	*	288.4	288.5	0.1
047	4,689	85	371	10.4	293.7	*	293.7	294.7	1.0
052	5,185	80	282	8.3	298.9	*	298.9	299.4	0.6
060	5,999	74	310	7.3	307.6	*	307.6	308.6	1.0
068	6,768	90	469	8.6	315.9	*	315.9	316.3	0.4
075	7,519	100	349	8.2	321.6	*	321.6	322.3	0.7
083	8,336	48	234	8.4	334.8	*	334.8	335.6	0.8
093	9,338	62	296	8.4	349.1	*	349.1	350.1	1.0
Spring Branch (Basin 6, Stream 6)									
008	782	112	398	5.1	244.8	*	244.8	244.8	0.0
019	1,873	120	312	7.0	253.8	*	253.8	254.7	0.9
026	2,597	120	372	6.4	261.0	*	261.0	261.9	0.9
029	2,899	70	205	9.4	263.2	*	263.2	263.8	0.6
034	3,435	90	327	5.2	284.3	*	284.3	284.3	0.0
042	4,165	40	134	11.1	290.6	*	290.6	290.7	0.0
046	4,585	30	126	13.1	302.0	*	302.0	302.9	0.9
050	4,979	81	512	4.2	312.6	*	312.6	313.4	0.8
063	6,338	50	241	9.3	320.6	*	320.6	321.1	0.5
073	7,315	42	299	4.5	332.3	*	332.3	333.3	0.9
077	7,731	53	542	1.8	341.0	*	341.0	341.8	0.8
079	7,900	100	667	1.9	341.0	*	341.0	341.9	0.9
080	7,970	100	570	2.1	341.1	*	341.1	341.9	0.9
084	8,391	60	139	9.7	344.9	*	344.9	344.9	0.0
Stirrup Iron Creek									
015	1,535	1,878	3,178	0.7	282.7[2]	*	267.9[17]	267.9	0.0
034	3,424	927	13,154	0.2	284.1	*	284.1	284.1	0.0
059	5,910	750	5,990	0.4	284.1	*	284.1	284.1	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	1% Annual Chance Future Water-Surface Elevation	Without Floodway	With Floodway	Increase
082	8,190	619	2,885	0.9	284.2	*	284.2	284.2	0.0
092	9,198	590	2,195	1.2	284.2	*	284.2	284.3	0.0
104	10,356	345	435	5.8	284.4	*	284.4	284.4	0.0
115	11,534	195	633	2.7	285.9	*	285.9	286.3	0.4
123	12,260	124	400	3.4	286.6	*	286.6	287.0	0.4
129	12,909	54	233	4.5	287.7	*	287.7	288.0	0.2
132	13,246	53	293	3.6	289.5	*	289.5	289.8	0.3
139	13,904	63	496	2.3	292.6	*	292.6	292.7	0.2
141	14,101	65	387	2.9	292.7	*	292.7	293.2	0.4
146	14,574	70	428	2.9	293.1	*	293.1	293.5	0.4
149	14,906	90	414	3.1	293.4	*	293.4	293.7	0.4
156	15,579	76	399	3.0	293.8	*	293.8	294.2	0.4
166	16,612	95	653	1.5	294.5	*	294.5	294.9	0.5
Straight Branch (Basin 20, Stream 23)									
005	471	145	465	9.1	362.8[2]	*	354.5[41]	354.5	0.0
006	595	465	5,158	0.4	362.8[2]	*	362.7[41]	363.0	0.3
017	1,678	130	1,296	3.0	369.1	*	369.1	369.2	0.1
026	2,571	115	986	3.4	374.1	*	374.1	374.9	0.9
033	3,306	147	4,060	0.8	401.0	*	401.0	402.0	1.0
043	4,275	120	2,443	1.4	401.0	*	401.0	402.0	1.0
Swift Creek									
1451	145,113	730	7,210	3.0	202.8	*	202.8	203.6	0.9
1494	149,425	1,120	7,440	3.3	203.6	*	203.6	204.5	0.9
1526	152,551	910	4,920	4.6	205.0	*	205.0	205.8	0.8
1555	155,540	520	3,755	5.8	208.1	*	208.1	208.9	0.8
1592	159,171	760	5,595	3.9	211.0	*	211.0	211.7	0.7
1621	162,114	480	3,484	6.1	213.2	*	213.2	214.0	0.8
1654	165,432	350	3,452	5.5	217.0	*	217.0	217.8	0.8
1691	169,072	945	3,119	6.6	219.4	*	219.4	220.1	0.7
1705	170,549	925	6,763	3.7	220.6	*	220.6	221.5	0.8
1721	172,111	203	2,565	4.8	222.1	*	222.1	222.9	0.8
1726	172,552	175	2,450	7.5	228.9	*	228.9	229.4	0.6
1728	172,840	202	3,787	2.5	238.6	*	238.6	238.6	0.0
1734	173,405	390	5,937	1.6	238.6	*	238.6	238.6	0.0
1756	175,554	345	5,712	1.6	238.7	*	238.7	238.7	0.0
1785	178,529	990	16,862	0.5	238.8	*	238.8	238.8	0.0
1806	180,575	1,857	32,382	0.3	238.8	*	238.8	238.8	0.0
1822	182,198	1,985	28,528	0.3	238.8	*	238.8	238.8	0.0
1836	183,600	1,270	15,571	0.6	238.8	*	238.8	238.8	0.0
1848	184,836	1,025	4,982	3.0	238.7	*	238.7	238.7	0.0
1863	186,291	820	3,769	5.3	239.3	*	239.3	239.5	0.2
1880	187,973	615	3,585	2.9	240.0	*	240.0	240.6	0.7
1897	189,743	184	1,463	3.8	240.6	*	240.6	241.3	0.7
1910	190,982	225	1,198	6.5	241.9	*	241.9	242.4	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	1% Annual Chance Future Water-Surface Elevation	Without Floodway	With Floodway	Increase
1924	192,411	860	3,803	2.8	243.1	*	243.1	243.9	0.8
1944	194,397	660	2,340	4.7	244.0	*	244.0	244.7	0.7
1954	195,442	169	1,159	6.2	246.1	*	246.1	246.7	0.6
1973	197,283	1,025	3,478	3.5	247.4	*	247.4	248.4	0.9
2002	200,249	665	2,359	4.8	249.1	*	249.1	250.0	0.9
2028	202,848	580	2,637	4.1	252.2	*	252.2	253.2	1.0
2041	204,108	340	1,482	6.3	253.6	*	253.6	254.3	0.8
2044	204,395	168	1,610	4.3	255.3	*	255.3	255.7	0.4
2068	206,834	625	2,833	3.3	256.4	*	256.4	257.3	0.9
2098	209,791	300	1,715	4.4	260.1	*	260.1	260.6	0.5
2120	211,987	200	1,227	5.7	262.8	*	262.8	263.5	0.7
2128	212,753	1,400	33,184	0.3	289.8	*	289.8	289.8	0.0
2144	214,359	1,608	38,232	0.2	289.8	*	289.8	289.8	0.0
2183	218,324	1,440	26,780	0.3	289.8	*	289.8	289.8	0.0
2212	221,233	1,430	25,645	0.3	289.8	*	289.8	289.8	0.0
2226	222,590	760	5,050	2.3	290.0	*	290.0	290.0	0.0
2250	224,952	1,570	14,320	0.4	290.0	*	290.0	290.0	0.0
2267	226,738	900	5,712	3.0	290.2	*	290.2	290.4	0.2
2290	228,954	850	4,085	5.0	291.7	*	291.7	292.5	0.7
2303	230,303	780	3,447	6.6	293.9	*	293.9	294.9	1.0
2331	233,079	620	3,438	5.9	299.1	*	299.1	299.8	0.7
2365	236,482	500	4,235	3.6	307.6	*	307.6	308.0	0.4
2381	238,086	960	6,291	5.9	308.1	*	308.1	309.0	0.9
2381	238,086	960	6,292	1.5	308.1	308.6	308.1	309.0	0.9
2384	238,415	860	5,473	1.7	308.4	308.8	308.4	309.3	0.9
2387	238,676	860	5,527	1.7	308.7	309.1	308.7	309.6	0.9
2390	238,999	875	1,818	5.1	309.1	309.4	309.1	309.7	0.6
2394	239,375	740	4,802	1.9	310.4	310.6	310.4	311.1	0.8
2397	239,720	755	5,349	1.7	311.0	311.3	311.0	311.7	0.7
2402	240,193	850	5,831	1.6	311.3	311.6	311.3	312.0	0.7
2409	240,860	750	4,552	2.0	311.7	312.0	311.7	312.5	0.8
2415	241,483	440	2,823	2.3	312.4	312.6	312.4	313.2	0.8
2426	242,634	725	4,564	1.4	313.6	313.8	313.6	314.4	0.8
2433	243,264	800	3,452	1.8	313.9	314.2	313.9	314.8	0.8
2438	243,770	710	3,593	1.8	314.3	314.6	314.3	315.1	0.8
2440	244,009	600	3,400	1.9	314.6	314.9	314.6	315.4	0.8
2442	244,172	580	2,201	2.9	315.1	315.4	315.1	315.6	0.6
2443	244,319	575	2,883	2.2	315.8	316.0	315.8	316.4	0.6
2449	244,851	675	3,041	2.1	316.7	316.9	316.7	317.4	0.7
2450	245,021	645	3,763	1.7	317.5	317.7	317.5	318.2	0.6
2453	245,343	640	3,532	1.8	317.6	317.8	317.6	318.2	0.6
2456	245,617	550	2,870	2.2	317.7	317.9	317.7	318.4	0.7
2461	246,104	340	1,335	4.8	318.0	318.2	318.0	318.7	0.7
2462	246,231	285	1,339	4.8	318.6	318.8	318.6	319.2	0.6

Table 22 - Floodway Data

Floodway Source		Floodway			Water Surface Elevation				
Cross Section	Distance (Feet Above Mouth)	Width (Feet)	Section Area (Square Feet)	Mean Velocity (Feet Per Second)	Regulatory	1% Annual Chance Future Water-Surface Elevation	Without Floodway	With Floodway	Increase
2463	246,330	235	1,220	5.3	318.9	319.1	318.9	319.6	0.7
2465	246,526	310	1,967	3.3	322.0	322.4	322.0	322.0	0.0
2466	246,626	385	2,787	2.3	322.4	322.8	322.4	322.4	0.0
2471	247,141	615	4,082	1.6	322.8	323.3	322.8	323.1	0.2
2476	247,586	580	3,126	2.1	323.1	323.6	323.1	323.5	0.3
2481	248,100	575	3,373	1.9	323.8	324.2	323.8	324.4	0.5
2486	248,634	470	2,992	2.2	324.5	325.0	324.5	325.0	0.4
2492	249,191	700	3,750	1.7	325.1	325.5	325.1	325.7	0.6
2496	249,624	590	3,323	1.9	325.4	325.8	325.4	326.1	0.7
2501	250,125	530	2,619	2.5	326.1	326.5	326.1	326.8	0.7
2507	250,681	700	4,000	1.5	327.2	327.5	327.2	328.0	0.8
2510	250,999	625	3,100	1.9	327.7	328.0	327.7	328.4	0.7
2516	251,626	90	987	6.1	331.4	331.7	331.4	332.0	0.6
2517	251,715	350	2,987	2.0	332.1	332.4	332.1	332.6	0.5
2519	251,908	375	3,243	1.0	332.4	332.7	332.4	332.9	0.5
2523	252,301	315	2,551	1.3	332.4	332.8	332.4	332.9	0.5
2532	253,240	220	1,447	2.2	332.7	333.1	332.7	333.3	0.5
2562	256,212	305	2,789	1.3	341.2	342.0	341.2	341.8	0.6
2565	256,548	325	2,468	1.5	341.4	342.1	341.4	342.0	0.6
2567	256,726	390	2,811	1.3	341.6	342.3	341.6	342.2	0.6
2569	256,943	285	1,990	1.8	342.0	342.6	342.0	342.6	0.6
2572	257,204	225	1,680	2.2	342.2	342.8	342.2	342.9	0.6
2579	257,936	355	2,624	1.4	342.9	343.4	342.9	343.5	0.6
2581	258,136	305	2,204	1.7	342.9	343.4	342.9	343.6	0.6
2585	258,524	130	684	5.4	343.0	343.5	343.0	343.2	0.2
2588	258,848	105	871	4.2	346.2	346.3	346.2	347.0	0.9
2591	259,130	155	1,301	2.8	347.0	347.3	347.0	347.7	0.6
2599	259,915	80	845	2.1	350.7	351.0	350.7	351.0	0.3
2602	260,228	75	800	2.2	350.8	351.1	350.8	351.1	0.3
2605	260,470	60	713	2.4	352.9	353.6	352.9	353.2	0.3
2608	260,769	65	697	2.5	353.0	353.7	353.0	353.3	0.3
2611	261,142	66	709	2.4	353.2	353.9	353.2	353.5	0.3
2614	261,417	64	510	3.4	353.2	353.9	353.2	353.5	0.3
2616	261,624	80	557	3.1	353.6	354.3	353.6	353.8	0.3
2620	261,950	130	1,288	1.4	357.3	358.7	357.3	357.5	0.2
2624	262,350	115	1,016	1.7	357.4	358.8	357.4	357.6	0.2
2626	262,612	78	661	2.6	357.4	358.8	357.4	357.7	0.3
Swift Creek Tributary No. 7 (Basin 20, Stream 24)									
007	719	224	1,759	4.5	333.1	*	333.1	334.1	1.0
016	1,554	280	1,953	4.3	333.9	*	333.9	334.7	0.8
026	2,555	173	666	13.9	336.8	*	336.8	336.9	0.1
031	3,109	173	815	8.4	341.5	*	341.5	341.7	0.2
033	3,273	173	2,561	2.8	346.6	*	346.6	347.4	0.8
042	4,155	225	2,540	2.4	346.6	*	346.6	347.5	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	1% Annual Chance Future Water-Surface Elevation	Without Floodway	With Floodway	Increase
048	4,795	945	14,750	0.3	356.4	*	356.4	356.5	0.1
055	5,461	865	12,600	0.3	356.4	*	356.4	356.5	0.1
062	6,188	605	7,625	0.4	356.4	*	356.4	356.5	0.1
070	6,953	510	2,761	1.7	356.4	*	356.4	356.5	0.1
076	7,568	230	1,458	2.7	356.5	*	356.5	356.6	0.1
083	8,287	310	1,464	3.3	356.7	*	356.7	356.9	0.1
088	8,835	125	739	7.6	360.8	*	360.8	361.4	0.6
097	9,670	165	922	6.5	362.2	*	362.2	363.0	0.8
104	10,358	305	1,143	4.8	369.8	*	369.8	370.1	0.3
111	11,137	250	1,694	3.6	370.2	*	370.2	370.6	0.4
122	12,207	478	6,495	0.5	383.7	*	383.7	384.0	0.4
131	13,052	630	8,240	0.3	383.7	*	383.7	384.0	0.3
147	14,745	215	1,791	1.4	383.7	*	383.7	384.0	0.3
152	15,179	130	492	9.0	388.1	*	388.1	388.1	0.0
155	15,539	125	840	5.2	392.4	*	392.4	392.7	0.2
159	15,867	120	751	5.8	396.5	*	396.5	397.3	0.8
166	16,575	65	418	7.8	398.1	*	398.1	399.0	0.9
171	17,071	79	974	3.3	406.2	*	406.2	406.8	0.7
183	18,286	150	392	8.6	406.8	*	406.8	407.3	0.5
191	19,089	100	391	9.5	410.6	*	410.6	411.4	0.8
195	19,480	125	495	9.1	414.0	*	414.0	414.9	0.9
197	19,661	110	383	8.4	414.8	*	414.8	415.6	0.8
Swift Creek Tributary No. 7A (Basin 20, Stream 25)									
018	1,820	134	243	5.7	356.4[2]	*	349.9[42]	349.9	0.0
023	2,311	88	309	5.0	356.4[2]	*	354.4[42]	354.9	0.5
029	2,874	146	1,328	1.9	361.7	*	361.7	362.5	0.8
031	3,117	100	800	3.1	361.7	*	361.7	362.5	0.8
Sycamore Creek (Basin 18, Stream 6)									
002	161	125	1,016	8.6	244.6[2]	*	238.3[16]	239.1	0.8
015	1,479	366	2,098	3.7	244.6[2]	*	240.6[16]	241.6	1.0
025	2,547	61	480	7.0	244.6[2]	*	241.1[16]	242.1	1.0
036	3,567	61	504	5.7	245.1	*	245.1	246.1	1.0
046	4,550	40	348	8.3	247.8	*	247.8	248.8	0.9
056	5,554	53	433	6.7	251.1	*	251.1	252.0	0.9
065	6,519	52	389	7.4	254.4	*	254.4	255.0	0.6
075	7,548	67	356	9.6	257.9	*	257.9	257.9	0.0
085	8,529	65	522	5.4	260.8	*	260.8	261.3	0.5
097	9,713	43	290	9.8	263.9	*	263.9	264.5	0.6
107	10,691	48	331	8.5	268.6	*	268.6	269.2	0.6
115	11,527	73	256	12.5	272.9	*	272.9	272.9	0.0
126	12,588	53	421	6.6	279.8	*	279.8	280.2	0.3
135	13,539	42	411	6.9	283.5	*	283.5	283.9	0.4
144	14,380	46	439	6.4	286.5	*	286.5	287.3	0.8
156	15,627	50	319	8.7	291.4	*	291.4	291.6	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	1% Annual Chance Future Water-Surface Elevation	Without Floodway	With Floodway	Increase
168	16,771	59	359	7.7	296.1	*	296.1	296.2	0.1
178	17,776	45	384	7.2	301.0	*	301.0	301.0	0.1
188	18,760	395	4,705	0.7	321.0	*	321.0	321.0	0.0
201	20,115	528	4,753	0.6	321.0	*	321.0	321.0	0.0
215	21,477	180	1,202	4.5	321.0	*	321.0	321.0	0.0
226	22,558	60	535	6.0	324.5	*	324.5	324.5	0.0
241	24,136	704	10,749	0.4	341.4	*	341.4	341.4	0.0
257	25,688	589	8,691	0.5	341.4	*	341.4	341.4	0.0
270	27,029	827	6,158	1.3	341.5	*	341.5	341.5	0.0
283	28,298	462	2,157	6.1	341.9	*	341.9	341.9	0.0
294	29,398	517	2,542	5.5	343.7	*	343.7	343.7	0.0
310	30,995	262	2,201	4.9	350.7	*	350.7	351.6	1.0
321	32,059	400	4,010	3.3	356.4	*	356.4	356.8	0.4
330	32,994	344	2,541	4.2	356.8	*	356.8	357.3	0.5
340	34,010	216	1,411	6.8	358.1	*	358.1	358.8	0.7
349	34,944	33	318	7.2	361.0	*	361.0	362.0	1.0
357	35,732	33	306	7.5	363.9	*	363.9	364.3	0.4
374	37,388	178	1,178	4.3	371.5	*	371.5	371.9	0.5
384	38,389	97	535	6.5	373.1	*	373.1	373.9	0.7
389	38,852	73	437	9.5	375.0	*	375.0	375.5	0.6
403	40,322	54	409	5.4	381.4	*	381.4	382.2	0.9
412	41,200	100	366	12.9	384.8	*	384.8	385.0	0.2
420	42,024	124	648	5.0	389.8	*	389.8	390.7	0.9
430	42,998	106	490	9.2	393.9	*	393.9	394.5	0.6
442	44,202	127	531	10.5	399.4	*	399.4	400.1	0.7
450	45,001	78	474	8.3	404.1	*	404.1	404.9	0.8
460	46,002	78	419	8.6	409.9	*	409.9	410.6	0.8
470	46,999	107	495	9.7	416.7	*	416.7	417.0	0.3
482	48,241	82	501	3.9	426.1	*	426.1	427.1	1.0
492	49,206	62	231	7.8	434.5	*	434.5	435.4	0.9
502	50,249	34	150	8.6	443.3	*	443.3	444.1	0.8
Terrible Creek (Basin 22, Stream 19)									
013	1,251	590	2,390	3.1	241.9[2]	*	237.4[5]	238.3	0.9
028	2,796	410	1,774	4.3	241.9[2]	*	241.7[5]	242.2	0.5
043	4,299	400	1,575	3.8	245.7	*	245.7	246.2	0.6
055	5,529	410	1,527	6.4	247.9	*	247.9	248.8	0.9
067	6,718	320	1,451	5.1	251.2	*	251.2	251.8	0.6
084	8,354	360	1,784	5.1	255.4	*	255.4	256.3	0.9
098	9,755	330	1,305	5.4	259.4	*	259.4	259.9	0.5
106	10,594	229	1,127	7.9	263.4	*	263.4	263.8	0.4
110	10,992	250	1,397	6.0	264.8	*	264.8	265.0	0.2
115	11,451	250	1,890	5.4	267.7	*	267.7	267.9	0.2
125	12,461	390	1,214	6.8	268.3	*	268.3	268.8	0.5
134	13,375	220	971	7.2	271.6	*	271.6	271.9	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	1% Annual Chance Future Water-Surface Elevation	Without Floodway	With Floodway	Increase
144	14,396	210	809	8.0	275.7	*	275.7	276.4	0.7
154	15,388	240	1,182	5.6	281.7	*	281.7	282.0	0.2
168	16,800	310	1,233	5.1	283.8	*	283.8	284.6	0.7
184	18,355	210	798	6.7	290.3	*	290.3	291.0	0.7
196	19,629	280	1,189	4.4	295.8	*	295.8	296.6	0.8
209	20,879	230	937	5.3	300.9	*	300.9	301.7	0.7
222	22,150	220	917	5.5	305.6	*	305.6	306.4	0.8
230	23,010	445	4,790	0.6	326.5[2]	*	323.9[43]	324.0	0.1
233	23,274	260	1,865	2.0	326.5[2]	*	324.0[43]	324.0	0.0
243	24,277	500	4,715	0.7	326.5[2]	*	324.0[43]	324.1	0.1
253	25,327	310	1,240	4.6	326.5[2]	*	324.0[43]	324.0	0.0
267	26,657	215	810	6.2	327.4	*	327.4	328.3	0.9
285	28,533	190	726	6.2	334.2	*	334.2	334.9	0.8
298	29,780	145	630	7.6	339.4	*	339.4	340.2	0.8
303	30,257	180	939	4.6	342.0	*	342.0	342.3	0.3
314	31,431	135	646	7.6	347.2	*	347.2	347.9	0.7
328	32,770	70	230	10.8	354.0	*	354.0	354.3	0.4
339	33,852	43	109	4.6	364.1	*	364.1	365.0	0.9
353	35,252	50	140	3.1	377.3	*	377.3	377.3	0.0
359	35,912	65	127	4.4	381.9	*	381.9	382.0	0.2
362	36,210	55	309	1.5	388.6	*	388.6	389.2	0.6
364	36,409	50	264	1.7	388.6	*	388.6	389.2	0.6
Toms Creek (Basin 7, Stream 1)									
026	2,596	195	672	3.0	198.4[2]	*	193.2[8]	193.5	0.3
039	3,923	82	333	6.2	202.0	*	202.0	202.0	0.0
051	5,094	120	882	2.9	207.7	*	207.7	208.0	0.4
063	6,315	100	434	7.1	213.8	*	213.8	214.0	0.2
079	7,907	160	727	4.3	219.5	*	219.5	219.9	0.4
086	8,566	100	411	6.1	222.3	*	222.3	222.6	0.3
088	8,817	50	280	7.6	223.8	*	223.8	224.0	0.2
092	9,247	435	3,972	0.4	233.2	*	233.2	233.2	0.0
102	10,201	140	832	1.9	233.2	*	233.2	233.2	0.0
109	10,900	180	1,436	1.1	244.8	*	244.8	245.0	0.2
115	11,515	355	1,628	1.2	244.9	*	244.9	245.1	0.2
122	12,201	75	506	2.2	249.1	*	249.1	249.3	0.2
131	13,142	250	475	3.2	249.4	*	249.4	250.1	0.8
145	14,541	126	177	8.1	257.6	*	257.6	258.2	0.6
158	15,775	220	344	2.5	263.5	*	263.5	263.6	0.0
166	16,624	107	194	4.7	270.5	*	270.5	270.6	0.0
174	17,414	50	161	9.0	281.2	*	281.2	281.8	0.6
Tributary to Big Branch Tributary No. 1 (Basin 30, Stream 8)									
006	563	49	286	5.0	232.2	*	232.2	232.3	0.1
012	1,162	26	114	11.9	237.4	*	237.4	237.8	0.4
021	2,137	53	227	7.1	249.7	*	249.7	249.7	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	1% Annual Chance Future Water-Surface Elevation	Without Floodway	With Floodway	Increase
032	3,156	39	178	7.3	258.5	*	258.5	258.8	0.3
039	3,927	29	100	11.3	265.0	*	265.0	265.0	0.0
Turkey Creek (Basin 18, Stream 23)									
009	884	280	856	4.5	303.3[2]	*	303.9[16]	303.9	0.0
010	1,030	290	770	4.4	303.7[2]	*	304.6[16]	304.8	0.2
018	1,846	170	756	4.8	309.4	*	309.4	310.0	0.5
023	2,279	116	572	6.6	311.5	*	311.5	312.3	0.8
027	2,733	210	833	4.4	313.8	*	313.8	314.3	0.5
036	3,638	240	888	2.7	316.3	*	316.3	316.7	0.3
038	3,832	170	901	2.2	319.2	*	319.2	320.1	0.9
042	4,160	110	691	3.8	322.1	*	322.1	322.5	0.5
047	4,652	115	574	4.6	322.5	*	322.5	323.4	1.0
054	5,375	140	562	4.9	324.3	*	324.3	325.3	0.9
Turkey Creek (Basin 18, Stream 5)									
005	452	64	412	11.4	244.6[2]	*	239.1[13]	239.6	0.6
014	1,441	49	289	11.9	246.4	*	246.4	246.4	0.0
025	2,519	85	586	6.7	253.4	*	253.4	254.2	0.8
035	3,474	68	590	6.3	255.4	*	255.4	256.3	1.0
047	4,659	93	397	10.0	260.3	*	260.3	261.2	0.9
056	5,594	67	493	8.1	264.1	*	264.1	265.1	1.0
066	6,581	94	697	6.7	268.6	*	268.6	269.1	0.5
076	7,577	52	468	7.7	274.4	*	274.4	275.4	1.0
085	8,534	62	458	3.5	277.2	*	277.2	278.1	0.9
096	9,596	63	319	4.9	283.1	*	283.1	284.0	1.0
106	10,610	33	181	6.2	290.0	*	290.0	291.0	1.0
116	11,623	31	170	6.0	297.1	*	297.1	297.9	0.9
122	12,226	24	89	7.7	303.3	*	303.3	304.2	0.9
134	13,352	312	3,037	0.6	333.2	*	333.2	333.2	0.0
141	14,074	299	3,096	0.6	333.2	*	333.2	333.2	0.0
154	15,353	44	286	10.0	337.5	*	337.5	338.3	0.8
167	16,726	18	89	12.3	347.7	*	347.7	348.1	0.3
Unnamed Stream									
062	6,222	265	1,113	9.2	243.0	*	243.0	243.7	0.8
066	6,604	160	1,322	6.0	246.5	*	246.5	246.6	0.1
079	7,935	400	1,546	7.3	247.4	*	247.4	248.3	0.9
090	8,962	360	1,621	6.2	250.5	*	250.5	251.3	0.8
104	10,356	395	1,440	3.5	253.5	*	253.5	254.0	0.5
117	11,698	250	1,140	5.5	258.5	*	258.5	259.4	0.9
120	12,016	250	1,559	4.1	260.4	*	260.4	261.1	0.6
134	13,378	200	860	8.1	263.0	*	263.0	263.6	0.6
148	14,759	205	869	8.6	267.3	*	267.3	268.3	1.0
162	16,152	160	568	8.3	272.1	*	272.1	272.7	0.5
174	17,446	105	610	6.0	277.5	*	277.5	278.4	0.9
176	17,630	100	698	3.9	279.3	*	279.3	280.2	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	1% Annual Chance Future Water-Surface Elevation	Without Floodway	With Floodway	Increase
187	18,736	110	418	9.2	283.7	*	283.7	284.4	0.7
266	26,614	157	1,382	4.2	262.0	*	262.0	262.8	0.7
275	27,489	100	651	3.4	262.5	*	262.5	263.2	0.7
283	28,335	110	588	3.7	262.8	*	262.8	263.6	0.8
293	29,267	95	317	6.2	265.1	*	265.1	266.1	1.0
297	29,737	325	2,993	0.3	277.9	*	277.9	278.6	0.7
306	30,579	123	562	2.1	277.9	*	277.9	278.6	0.7
320	31,981	80	347	3.8	281.4	*	281.4	281.9	0.5
335	33,505	65	217	7.5	285.4	*	285.4	286.3	0.9
337	33,703	33	190	5.9	286.3	*	286.3	287.3	1.0
344	34,398	95	375	3.6	287.7	*	287.7	288.4	0.6
346	34,568	65	215	6.8	289.1	*	289.1	289.7	0.6
350	34,965	85	330	5.2	290.0	*	290.0	290.9	1.0
351	35,117	70	230	5.5	291.6	*	291.6	291.8	0.1
358	35,850	110	249	7.5	292.7	*	292.7	293.6	0.9
362	36,230	70	291	4.9	295.1	*	295.1	296.1	1.0
364	36,391	70	204	6.8	296.0	*	296.0	296.8	0.8
366	36,643	60	168	9.0	297.0	*	297.0	297.6	0.6
369	36,880	58	276	4.3	300.5	*	300.5	300.5	0.0
376	37,552	109	606	2.0	305.2	*	305.2	305.3	0.1
380	37,955	70	353	2.8	305.4	*	305.4	305.6	0.2
382	38,179	60	251	3.8	305.5	*	305.5	305.7	0.2
396	39,583	65	149	7.1	314.3	*	314.3	314.8	0.4
409	40,927	65	117	9.0	326.1	*	326.1	326.3	0.2
416	41,612	50	112	7.3	335.3	*	335.3	335.5	0.2
419	41,944	60	328	2.6	346.5	*	346.5	346.5	0.0
425	42,536	27	76	8.0	352.6	*	352.6	352.6	0.0
428	42,840	53	274	2.6	360.8	*	360.8	360.8	0.0
440	44,003	85	229	4.7	364.5	*	364.5	365.5	1.0
444	44,350	60	148	3.7	365.8	*	365.8	366.7	0.9
452	45,213	55	100	4.5	371.7	*	371.7	372.2	0.4
454	45,421	29	179	1.8	377.2	*	377.2	377.2	0.0
458	45,849	40	70	7.5	377.4	*	377.4	377.6	0.2
Upper Barton Creek (Basin 16, Stream 1)									
122	12,212	462	1,122	3.3	265.5[2]	*	249.6[10]	249.6	0.0
137	13,691	269	1,231	5.8	265.5[2]	*	255.9[10]	256.2	0.4
146	14,601	276	1,573	4.4	265.5[2]	*	259.0[10]	259.3	0.4
161	16,147	220	900	7.1	265.5[2]	*	261.7[10]	262.1	0.4
169	16,863	123	711	8.2	265.5[2]	*	264.4[10]	264.9	0.5
174	17,364	310	1,520	5.1	266.2	*	266.2	266.5	0.3
183	18,347	310	883	7.4	267.9	*	267.9	268.6	0.7
196	19,606	160	770	7.7	272.5	*	272.5	273.2	0.8
203	20,296	130	614	9.8	276.0	*	276.0	276.5	0.5
218	21,753	130	672	8.0	282.5	*	282.5	283.0	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	1% Annual Chance Future Water-Surface Elevation	Without Floodway	With Floodway	Increase
221	22,119	66	711	7.5	287.8	*	287.8	288.8	0.9
228	22,774	202	1,545	4.1	288.9	*	288.9	289.8	0.9
235	23,472	140	778	7.5	289.4	*	289.4	290.1	0.8
241	24,090	120	677	8.1	291.4	*	291.4	292.0	0.6
251	25,118	300	1,287	5.0	293.4	*	293.4	294.4	1.0
264	26,415	239	738	8.7	297.4	*	297.4	298.2	0.9
274	27,408	175	676	7.9	302.0	*	302.0	302.3	0.3
279	27,886	110	725	4.6	304.9	*	304.9	305.6	0.7
281	28,102	250	1,195	3.3	305.3	*	305.3	306.0	0.6
283	28,314	210	933	4.3	305.4	*	305.4	306.1	0.7
289	28,931	150	536	6.9	307.2	*	307.2	307.6	0.4
298	29,789	150	580	7.4	311.1	*	311.1	311.4	0.3
305	30,479	120	542	7.3	314.1	*	314.1	314.8	0.8
312	31,210	144	614	6.9	316.8	*	316.8	317.7	0.9
318	31,772	71	301	10.1	320.3	*	320.3	320.4	0.1
327	32,721	110	508	7.9	326.1	*	326.1	327.0	0.9
335	33,544	50	347	9.2	331.4	*	331.4	331.8	0.3
343	34,258	34	262	10.8	335.0	*	335.0	335.9	0.9
351	35,102	62	350	7.6	339.4	*	339.4	340.4	1.0
355	35,518	45	221	10.8	342.6	*	342.6	342.8	0.2
360	35,966	65	216	11.8	346.3	*	346.3	346.5	0.3
364	36,366	60	264	9.8	349.7	*	349.7	350.4	0.8
369	36,917	81	312	8.7	353.1	*	353.1	353.8	0.7
374	37,421	62	459	5.5	359.8	*	359.8	360.4	0.6
382	38,213	40	167	13.7	363.3	*	363.3	364.0	0.7
Utley Creek									
014	1,352	280	856	7.2	232.3[2]	*	227.4[44]	227.8	0.4
028	2,789	335	1,443	3.6	232.3[2]	*	231.5[44]	231.7	0.2
039	3,948	160	756	7.4	235.2	*	235.2	235.9	0.7
051	5,100	160	824	6.8	239.2	*	239.2	240.0	0.8
056	5,551	404	3,374	1.5	246.1	*	246.1	247.1	1.0
068	6,802	170	978	5.4	246.6	*	246.6	247.6	1.0
083	8,306	190	771	6.5	251.6	*	251.6	252.6	0.9
094	9,394	140	570	6.8	258.2	*	258.2	258.5	0.3
102	10,225	100	543	8.9	262.2	*	262.2	262.6	0.4
106	10,570	60	523	5.5	275.8	*	275.8	275.9	0.1
119	11,926	245	1,543	2.7	275.9	*	275.9	276.5	0.6
130	13,032	109	430	8.7	278.3	*	278.3	278.9	0.5
142	14,152	145	637	6.2	283.8	*	283.8	284.5	0.8
154	15,420	100	429	8.2	291.0	*	291.0	291.5	0.6
166	16,593	200	494	9.2	296.0	*	296.0	296.6	0.6
179	17,909	100	441	10.2	309.6	*	309.6	309.8	0.2
190	18,999	112	470	10.8	320.9	*	320.9	321.0	0.1
203	20,266	125	795	4.8	330.9	*	330.9	331.9	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	1% Annual Chance Future Water-Surface Elevation	Without Floodway	With Floodway	Increase
Walnut Creek (Basin 30, Stream 1)									
004	382	170	1,979	7.9	172.7[2]	*	168.6[8]	169.2	0.6
013	1,294	161	2,214	8.4	172.7[2]	*	170.4[8]	170.6	0.2
026	2,618	550	7,991	4.4	172.7[2]	*	171.3[8]	172.0	0.7
035	3,509	675	8,863	4.0	172.7[2]	*	171.5[8]	172.2	0.7
056	5,586	750	8,241	4.0	172.7[2]	*	172.1[8]	172.8	0.7
065	6,523	840	8,636	4.2	172.7[2]	*	172.4[8]	173.2	0.8
074	7,369	885	7,854	4.7	172.8	*	172.8	173.5	0.8
088	8,822	700	5,298	6.9	174.1	*	174.1	174.8	0.7
102	10,212	650	4,823	7.7	176.0	*	176.0	176.6	0.7
113	11,316	1,020	7,658	5.5	177.5	*	177.5	178.2	0.7
125	12,524	455	3,505	3.2	178.9	*	178.9	179.6	0.7
135	13,517	570	3,137	7.4	179.5	*	179.5	180.1	0.6
145	14,463	680	4,304	5.5	180.6	*	180.6	181.5	1.0
161	16,081	475	2,710	6.8	182.7	*	182.7	183.7	1.0
179	17,873	450	3,094	8.1	187.5	*	187.5	188.3	0.8
185	18,529	300	2,483	8.5	189.5	*	189.5	190.5	1.0
202	20,157	310	2,535	7.9	192.5	*	192.5	193.5	1.0
204	20,419	69	921	9.7	194.2	*	194.2	194.3	0.0
218	21,820	420	4,117	5.2	196.6	*	196.6	197.5	1.0
226	22,613	550	5,430	3.7	198.0	*	198.0	198.6	0.7
240	23,968	500	4,404	6.1	199.0	*	199.0	199.7	0.7
253	25,322	700	6,552	4.2	200.9	*	200.9	201.4	0.5
267	26,655	730	6,685	4.2	201.5	*	201.5	202.1	0.6
281	28,068	900	4,957	6.9	202.4	*	202.4	203.1	0.6
297	29,660	500	2,879	8.3	205.1	*	205.1	205.5	0.4
306	30,626	490	3,980	4.7	208.5	*	208.5	208.5	0.0
321	32,076	1,050	7,494	3.9	209.2	*	209.2	209.7	0.5
332	33,200	800	7,704	3.8	213.8	*	213.8	214.5	0.8
346	34,554	775	6,248	4.2	214.7	*	214.7	215.3	0.6
358	35,811	375	2,153	11.0	215.5	*	215.5	216.2	0.7
367	36,681	189	2,055	6.6	220.8	*	220.8	221.2	0.4
378	37,840	590	5,510	5.2	221.8	*	221.8	222.5	0.6
393	39,255	1,000	9,618	3.6	223.1	*	223.1	224.0	0.9
405	40,532	1,000	9,482	3.2	223.7	*	223.7	224.6	0.8
417	41,683	1,050	7,699	4.6	224.4	*	224.4	225.3	0.8
428	42,807	805	6,013	3.4	226.8	*	226.8	227.8	0.9
432	43,240	695	4,698	6.5	227.2	*	227.2	228.1	0.9
438	43,800	115	1,317	10.6	231.1	*	231.1	231.1	0.0
445	44,484	150	2,670	3.5	236.4	*	236.4	236.4	0.0
450	45,004	460	6,223	3.2	236.5	*	236.5	236.6	0.1
460	46,020	155	1,208	5.2	236.3	*	236.3	236.8	0.5
472	47,215	275	2,619	3.9	237.8	*	237.8	238.2	0.4
483	48,333	225	1,848	5.4	238.6	*	238.6	239.3	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	1% Annual Chance Future Water-Surface Elevation	Without Floodway	With Floodway	Increase
493	49,266	66	727	9.0	241.3	*	241.3	242.1	0.8
496	49,578	52	864	5.3	243.6	*	243.6	244.5	0.9
508	50,828	180	1,344	8.2	245.0	*	245.0	245.9	0.9
521	52,135	425	2,396	6.6	246.3	*	246.3	247.2	0.9
533	53,255	153	1,580	6.4	253.6	*	253.6	253.7	0.0
545	54,483	625	3,845	5.4	254.4	*	254.4	254.6	0.2
552	55,194	550	3,615	3.3	255.6	*	255.6	256.6	1.0
561	56,138	670	3,882	5.4	256.4	*	256.4	257.3	0.9
575	57,464	370	1,580	10.6	261.1	*	261.1	261.4	0.3
582	58,217	375	2,189	7.3	263.1	*	263.1	263.6	0.5
587	58,735	246	1,867	3.9	266.6	*	266.6	267.1	0.5
591	59,090	135	1,127	7.1	267.2	*	267.2	267.7	0.4
600	60,004	590	11,361	0.4	286.2	*	286.2	286.2	0.0
614	61,410	1,595	26,445	0.3	286.2	*	286.2	286.2	0.0
635	63,477	562	5,954	1.4	286.2	*	286.2	286.2	0.0
654	65,396	370	1,806	16.3	286.7	*	286.7	287.2	0.6
663	66,333	325	2,201	3.2	290.2	*	290.2	290.8	0.6
677	67,676	230	1,285	7.3	291.1	*	291.1	291.7	0.6
684	68,370	275	1,156	5.5	293.6	*	293.6	293.6	0.0
698	69,811	385	1,601	6.0	296.6	*	296.6	297.1	0.4
712	71,155	310	1,083	8.2	301.0	*	301.0	301.5	0.5
726	72,558	75	385	10.1	305.4	*	305.4	305.6	0.2
730	73,039	34	305	10.9	309.6	*	309.6	309.8	0.2
736	73,594	935	16,120	0.2	349.6	*	349.6	349.7	0.1
751	75,107	998	16,604	0.4	349.6	*	349.6	349.7	0.1
759	75,907	1,267	27,698	0.2	349.6	*	349.6	349.8	0.1
770	76,980	790	15,526	0.4	349.8	*	349.8	349.9	0.1
772	77,185	1,005	21,689	0.3	351.6	*	351.6	351.7	0.1
780	77,976	1,027	16,684	0.4	351.6	*	351.6	351.7	0.1
789	78,870	923	10,828	0.7	351.6	*	351.6	351.7	0.1
800	79,982	418	4,460	2.1	351.6	*	351.6	351.7	0.1
809	80,932	425	3,128	5.4	352.0	*	352.0	352.5	0.6
819	81,911	120	1,365	4.1	357.6	*	357.6	358.2	0.6
829	82,918	185	1,036	8.6	358.7	*	358.7	359.5	0.8
840	83,960	185	914	8.6	363.2	*	363.2	363.9	0.8
853	85,273	150	785	8.5	369.4	*	369.4	369.6	0.2
864	86,395	180	768	8.9	374.0	*	374.0	374.6	0.7
870	87,049	85	831	6.2	381.8	*	381.8	381.9	0.1
877	87,709	260	1,471	5.7	382.7	*	382.7	383.2	0.5
884	88,406	133	1,406	4.3	391.2	*	391.2	391.2	0.0
897	89,713	233	1,534	6.4	391.7	*	391.7	391.9	0.2
910	91,034	240	828	12.9	395.0	*	395.0	395.0	0.0
920	91,980	290	1,582	6.1	399.9	*	399.9	400.5	0.6
936	93,565	210	931	9.2	404.3	*	404.3	405.1	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	1% Annual Chance Future Water-Surface Elevation	Without Floodway	With Floodway	Increase
940	93,965	185	918	5.2	405.8	*	405.8	406.8	1.0
945	94,459	79	896	4.1	415.0	*	415.0	415.0	0.0
957	95,692	436	1,084	6.4	415.7	*	415.7	415.7	0.0
966	96,615	160	552	11.5	421.1	*	421.1	421.8	0.7
976	97,577	170	969	6.3	429.4	*	429.4	430.2	0.9
987	98,678	119	583	6.2	435.8	*	435.8	436.7	0.9
994	99,365	45	606	2.9	445.1	*	445.1	445.9	0.9
1002	100,249	70	419	6.9	445.5	*	445.5	446.5	1.0
1012	101,180	30	174	10.2	451.6	*	451.6	452.2	0.6
West Fork Mine Creek (Basin 18, Stream 33)									
000	0	250	3,125	6.4	279.4	*	279.4	280.3	0.9
005	467	66	728	12.0	280.8	*	280.8	281.8	0.9
012	1,184	225	1,985	6.7	283.8	*	283.8	284.8	1.0
021	2,142	95	801	10.6	288.2	*	288.2	288.6	0.5
036	3,634	115	591	15.0	293.5	*	293.5	293.7	0.2
Wheelers Creek (Basin 10, Stream 25)									
024	2,426	165	616	7.4	236.6	*	236.6	237.4	0.8
032	3,202	185	684	6.1	239.6	*	239.6	240.5	0.9
035	3,490	160	1,491	3.0	247.9	*	247.9	248.2	0.3
047	4,652	125	643	6.6	248.5	*	248.5	249.1	0.6
051	5,066	60	328	10.4	249.1	*	249.1	250.0	1.0
052	5,191	78	407	10.1	251.9	*	251.9	252.6	0.7
066	6,568	160	679	6.2	256.5	*	256.5	257.4	0.8
080	8,005	120	326	10.1	264.3	*	264.3	264.9	0.6
089	8,916	100	478	6.8	274.3	*	274.3	274.6	0.3
092	9,246	105	331	11.2	276.6	*	276.6	277.3	0.7
095	9,538	160	913	4.0	283.5	*	283.5	284.2	0.7
White Oak Creek									
088	8,804	588	4,690	1.3	237.8[2]	*	233.7	234.7	1.0
096	9,645	790	6,444	1.0	237.8[2]	*	234.2	235.3	1.0
105	10,545	1,065	7,654	0.8	237.8[2]	*	234.6	235.6	1.0
119	11,886	950	5,187	1.2	237.8[2]	*	235.4	236.3	1.0
125	12,466	815	4,803	1.3	237.8[2]	*	236.0	236.9	1.0
130	12,997	630	3,846	1.6	237.8[2]	*	236.6	237.6	1.0
136	13,579	575	2,153	2.9	238.3	*	238.3	238.9	0.6
144	14,352	650	3,201	2.0	241.5	*	241.5	242.2	0.7
153	15,279	850	4,492	1.4	243.2	*	243.2	244.2	1.0
161	16,061	740	4,414	1.4	244.2	*	244.2	245.2	1.0
166	16,580	375	2,745	2.3	245.1	*	245.1	245.9	0.8
170	17,015	650	4,265	1.5	245.9	*	245.9	246.7	0.9
177	17,735	575	3,139	2.0	246.6	*	246.6	247.6	1.0
204	20,398	800	6,665	0.9	252.4	*	252.4	253.3	1.0
214	21,358	1,000	7,989	0.8	252.6	*	252.6	253.6	1.0
224	22,380	1,125	7,176	0.9	253.0	*	253.0	254.0	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	1% Annual Chance Future Water-Surface Elevation	Without Floodway	With Floodway	Increase
233	23,262	850	4,034	1.5	253.6	*	253.6	254.6	1.0
242	24,179	715	3,550	1.7	255.3	*	255.3	256.3	1.0
252	25,168	385	2,505	2.4	257.8	*	257.8	258.7	0.9
261	26,093	620	4,506	1.3	259.5	*	259.5	260.4	1.0
266	26,576	800	5,007	1.2	259.9	*	259.9	260.9	1.0
270	27,011	320	1,342	5.1	224.9	*	224.9	225.8	0.9
272	27,225	785	4,464	1.3	260.5	*	260.5	261.5	1.0
276	27,648	670	3,621	1.6	261.0	*	261.0	261.9	1.0
280	27,975	650	3,605	1.4	261.4	*	261.4	262.4	1.0
285	28,468	300	1,352	3.9	226.7	*	226.7	227.5	0.8
287	28,726	725	3,709	1.4	262.2	*	262.2	263.2	1.0
294	29,394	525	2,397	2.1	263.2	*	263.2	264.1	1.0
300	30,010	270	1,210	5.7	229.8	*	229.8	230.8	1.0
301	30,052	350	1,593	3.2	264.8	*	264.8	265.7	0.9
312	31,246	285	1,747	1.9	269.1	*	269.1	269.7	0.7
317	31,681	200	14	2.6	269.4	*	269.4	270.0	0.6
318	31,778	265	1,082	6.7	235.2	*	235.2	235.3	0.1
335	33,468	200	935	7.6	237.9	*	237.9	238.2	0.3
346	34,604	210	823	9.0	240.4	*	240.4	241.0	0.5
355	35,512	170	822	5.7	244.3	*	244.3	244.7	0.4
367	36,701	255	1,198	4.2	251.0	*	251.0	251.1	0.1
380	38,044	194	1,136	4.3	251.5	*	251.5	251.9	0.4
393	39,272	220	825	5.6	253.3	*	253.3	254.2	0.9
402	40,220	225	756	3.7	255.9	*	255.9	256.4	0.5
415	41,487	230	790	4.6	258.0	*	258.0	258.8	0.8
425	42,491	126	899	3.6	265.8	*	265.8	266.0	0.3
432	43,244	180	853	3.5	266.1	*	266.1	266.8	0.7
440	43,985	119	990	2.4	271.2	*	271.2	272.0	0.8
451	45,106	270	1,183	2.7	271.7	*	271.7	272.6	0.9
460	45,967	84	798	3.3	282.3	*	282.3	282.3	0.0
470	46,975	150	615	4.0	282.6	*	282.6	283.5	0.9
480	48,001	171	398	4.7	288.0	*	288.0	288.4	0.4
White Oak Creek (Basin 26, Stream 1)									
010	993	1,125	4,111	2.4	232.3[2]	*	223.1[19]	223.9	0.8
042	4,192	940	3,203	3.6	232.3[2]	*	227.4[19]	227.8	0.5
077	7,707	535	2,145	6.9	232.3[2]	*	232.2[19]	233.2	1.0
086	8,609	595	1,707	8.0	234.2	*	234.2	234.5	0.3
101	10,058	800	3,074	5.0	236.8	*	236.8	237.4	0.6
125	12,534	844	2,816	4.6	240.0	*	240.0	240.8	0.9
154	15,439	563	2,305	5.7	246.0	*	246.0	246.8	0.8
168	16,793	350	1,383	1.8	248.2	*	248.2	249.1	0.9
174	17,414	165	414	6.0	250.4	*	250.4	250.6	0.2
190	19,023	130	328	7.5	256.2	*	256.2	257.0	0.9
206	20,562	119	340	5.8	264.4	*	264.4	264.7	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	1% Annual Chance Future Water-Surface Elevation	Without Floodway	With Floodway	Increase
212	21,160	103	484	3.7	269.6	*	269.6	269.8	0.2
224	22,410	128	401	4.8	273.7	*	273.7	274.0	0.3
236	23,553	114	279	7.5	280.8	*	280.8	281.2	0.4
246	24,629	37	109	6.0	290.3	*	290.3	290.5	0.2
Wildcat Branch (Basin 30, Stream 4)									
017	1,743	663	3,834	0.9	240.0	*	240.0	240.0	0.0
027	2,708	490	4,546	1.3	245.5	*	245.5	245.5	0.0
040	4,029	166	1,777	3.7	249.9	*	249.9	250.4	0.5
051	5,100	200	827	8.6	252.5	*	252.5	253.3	0.8
058	5,805	70	1,002	5.9	260.2	*	260.2	260.2	0.0
067	6,728	120	1,196	6.6	260.8	*	260.8	261.3	0.5
077	7,666	140	868	5.1	261.1	*	261.1	261.9	0.8
085	8,524	100	430	5.8	263.2	*	263.2	264.2	1.0
090	9,046	80	271	5.6	268.1	*	268.1	268.2	0.1
093	9,336	60	286	7.0	269.8	*	269.8	269.8	0.0
103	10,294	20	135	9.6	275.2	*	275.2	275.9	0.7
110	10,988	47	361	2.0	293.7	*	293.7	293.7	0.0
113	11,312	70	1,376	0.3	311.1	*	311.1	311.1	0.0
118	11,761	100	1,596	0.3	311.1	*	311.1	311.1	0.0
Yates Branch (Basin 20, Stream 13)									
009	937	365	1,840	4.8	242.3	*	242.3	242.6	0.3
021	2,061	540	1,953	3.4	243.3	*	243.3	243.9	0.6
036	3,564	705	2,467	3.0	244.8	*	244.8	245.5	0.7
050	4,962	595	2,000	3.9	247.3	*	247.3	248.2	1.0
059	5,886	380	1,454	6.7	249.6	*	249.6	250.2	0.6
068	6,785	380	1,920	5.2	251.7	*	251.7	252.7	1.0
076	7,635	250	1,476	6.4	253.6	*	253.6	254.5	0.8
090	8,954	200	2,022	3.7	259.5	*	259.5	259.7	0.2
096	9,636	200	1,593	4.8	259.8	*	259.8	260.1	0.3
104	10,446	189	1,307	5.9	261.4	*	261.4	261.8	0.4
119	11,906	365	2,548	2.8	262.5	*	262.5	263.0	0.4
130	12,997	490	2,600	3.3	262.8	*	262.8	263.5	0.7
144	14,400	250	1,198	4.4	264.5	*	264.5	265.0	0.6
159	15,926	180	644	7.8	268.6	*	268.6	269.0	0.4
173	17,344	100	638	6.6	273.2	*	273.2	273.8	0.6
185	18,477	200	706	6.9	275.4	*	275.4	276.1	0.7
195	19,473	100	478	7.9	279.7	*	279.7	280.4	0.7
206	20,572	846	5,978	0.7	295.9	*	295.9	295.9	0.0
215	21,517	497	1,904	2.2	295.9	*	295.9	295.9	0.0
225	22,483	282	1,692	4.4	300.0	*	300.0	300.6	0.6
234	23,407	181	1,149	5.9	301.8	*	301.8	302.6	0.8
242	24,244	212	1,174	5.8	304.4	*	304.4	305.3	0.9
251	25,114	284	1,486	5.4	307.2	*	307.2	308.2	1.0
261	26,144	182	681	10.9	309.2	*	309.2	310.1	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	1% Annual Chance Future Water-Surface Elevation	Without Floodway	With Floodway	Increase
273	27,253	194	825	8.8	315.6	*	315.6	316.5	0.9
281	28,109	234	1,128	6.9	320.2	*	320.2	321.2	1.0
292	29,242	231	1,048	7.1	326.2	*	326.2	326.8	0.7
302	30,182	98	388	12.7	330.4	*	330.4	330.4	0.0
311	31,142	96	404	12.8	338.0	*	338.0	338.3	0.3
321	32,084	145	807	7.7	348.6	*	348.6	349.2	0.6
331	33,120	224	1,111	6.0	355.7	*	355.7	355.9	0.2
341	34,091	123	585	9.8	359.9	*	359.9	360.1	0.2
350	35,036	228	663	8.8	366.6	*	366.6	367.6	1.0
359	35,911	120	570	9.2	374.7	*	374.7	375.5	0.8
369	36,949	90	425	11.3	383.7	*	383.7	384.6	0.9
379	37,855	95	375	11.6	391.9	*	391.9	392.6	0.8
393	39,253	62	311	10.4	404.8	*	404.8	405.2	0.4

[1]Elevation computed without consideration of backwater effects from Kenneth Creek (Basin 24, Stream 2)

[2]Elevation includes backwater effects

[3]Elevation computed without consideration of backwater effects from Smith Creek

[4]Elevation computed without consideration of backwater effects from Swift Creek (Basin 20, Stream 1)

[5]Elevation computed without consideration of backwater effects from DTL_Middle Creek (Basin 22, Stream 1)

[6]Elevation computed without consideration of backwater effects from Bass Lake (Basal Creek)

[7]Elevation computed without consideration of backwater effects from Little River (Basin 10, Stream 1)

[8]Elevation computed without consideration of backwater effects from Neuse River (Basin 15, Stream 1)

[9]Elevation computed without consideration of backwater effects from Perry Creek (Basin 15, Stream 26)

[10]Elevation computed without consideration of backwater effects from Falls Lake

[11]Elevation computed without consideration of backwater effects from Honeycutt Creek (Basin 15, Stream 31)

[12]Elevation computed without consideration of backwater effects from Basin 18, Stream 13 Lake

[13]Elevation computed without consideration of backwater effects from Sycamore Creek (Basin 18, Stream 6)

[14]Elevation computed without consideration of backwater effects from New Light Creek

[15]Elevation computed without consideration of backwater effects from Sanford Creek (Basin 6, Stream 7)

[16]Elevation computed without consideration of backwater effects from Crabtree Creek (Basin 18, Stream 9)

[17]Elevation computed without consideration of backwater effects from Lake Crabtree

[18]Elevation computed without consideration of backwater effects from Stirrup Iron Creek

[19]Elevation computed without consideration of backwater effects from Shearon Harris Reservoir

[20]Elevation computed without consideration of backwater effects from Coles Lake

[21]Elevation computed without consideration of backwater effects from West Fork Mine Creek (Basin 18, Stream 33)

[22]Elevation computed without consideration of backwater effects from East Fork Mine Creek (Basin 18, Stream 34)

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	1% Annual Chance Future Water-Surface Elevation	Without Floodway	With Floodway	Increase

[23]Elevation computed without consideration of backwater effects from Yates Branch (Basin 20, Stream 13)

[24]Elevation computed without consideration of backwater effects from Big Branch Tributary No.1 (Basin 30, Stream 6)

[25]Elevation computed without consideration of backwater effects from Kit Creek (Basin 29, Stream 7)

[26]Elevation computed without consideration of backwater effects from Buck Branch (Basin 20, Stream 12)

[27]Elevation computed without consideration of backwater effects from Big Branch (Basin 18, Stream 21)

[28]Elevation computed without consideration of backwater effects from Big Branch (Basin 26, Stream 5)

[29]Elevation computed without consideration of backwater effects from Brier Creek (Basin 18, Stream 14)

[30]Elevation computed without consideration of backwater effects from Railroad

[31]Elevation computed without consideration of backwater effects from Mine Creek (Basin 18, Stream 31)

[32]Elevation computed without consideration of backwater effects from Sunset Lake (Middle Creek)

[33]Elevation computed without consideration of backwater effects from Railroad Culvert (Mills Branch)

[34]Elevation computed without consideration of backwater effects from Horse Creek

[35]Elevation computed without consideration of backwater effects from Marsh Creek (Basin 18, Stream 17)

[36]Elevation computed without consideration of backwater effects from Poplar Creek (Basin 13, Stream 1)

[37]Elevation computed without consideration of backwater effects from Hodges Creek (Basin 8, Stream 1)

[38]Elevation computed without consideration of backwater effects from Richland Creek (Basin 5, Stream 1)

[39]Elevation computed without consideration of backwater effects from Walnut Creek (Basin 30, Stream 1)

[40]Elevation computed without consideration of backwater effects from Southwest Prong Beaverdam Creek (Basin 18, Stream 29)

[41]Elevation computed without consideration of backwater effects from Lens Branch (Basin 20, Stream 22)

[42]Elevation computed without consideration of backwater effects from Swift Creek Tributary No. 7 (Basin 20, Stream 24)

[43]Elevation computed without consideration of backwater effects from Johnson Pond (Terrible Creek)

[44]Elevation computed without consideration of backwater effects from White Oak Creek (Basin 26, Stream 1)

* Future conditions not computed for this stream

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” is not applicable in Wake County.

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

7.0 Revising the FIS

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

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

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

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

charges a fee for the review of a LOMR-F request. As with the LOMA, the requester of a LOMR-F is responsible for providing all supporting information, including structure and/or property elevation data.

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

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

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

7.2 Letters of Map Revision

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

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

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

7.3 Physical Map Revisions

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

7.4 Contracted Restudies

The NFIP provides for a periodic review and restudy of flood hazards in a given community. FEMA accomplishes this through a national mapping needs assessment process that assigns priorities and allocates funds to sponsor or subsidize new flood hazard analyses used to update FIS Reports. For map maintenance restudies within the state of North Carolina, scoping will be performed by

county approximately 2.5-3.5 years after the previous effective date. Scoping will focus on streams with restudy needs within those previously effective counties rather than on full countywide restudies. A restudy refers specifically to updating or reevaluating engineering analyses that were performed for a flood mapping project that directly impact BFEs and/or flood hazard boundary extents or analysis of previously unstudied flood prone areas. Restudy project evaluation triggers and prioritization values are an essential component of the map maintenance program. For more information regarding NCFMP-contracted restudies, please contact the NCFMP at 919-715-5711 or at www.ncfloodmaps.com. For more information regarding FEMA-contracted restudies, please contact the FEMA Map Information eXchange (FMIX) toll-free information line at 1-877-FEMA MAP(1-877-336-2627) or the FEMA Regional Office at the address listed on the Notice to Flood Insurance Study Users page at the front of this report.

7.5 Map Revision History

The current FIRM is a subset of the Statewide FIRM, showing flood hazard information for the entire geographic area of Wake 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 5/2/2006 North Carolina Statewide FIRM, which includes Wake County, are presented in Table 22, “Community Map History.”

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

Table 24 - Map Revision History

Community	Initial Identification Date	Initial FIRM Effective Date	FIS Revision Date
CITY OF DURHAM	1/25/1974	1/17/1979	05/02/2006
CITY OF RALEIGH	6/28/1974	8/15/1978	04/16/2013
RDU	11/15/1978	11/15/1978	04/16/2013
TOWN OF ANGIER	8/18/1978	4/16/1990	10/03/2006
TOWN OF APEX	3/3/1992	3/3/1992	04/16/2013
TOWN OF CARY	6/28/1974	7/17/1978	04/16/2013
TOWN OF CLAYTON	12/28/1973	4/1/1982	12/02/2005
TOWN OF FUQUAY-VARINA	4/11/1975	11/1/1978	04/16/2013
TOWN OF GARNER	7/19/1974	7/3/1978	04/16/2013
TOWN OF HOLLY SPRINGS	3/3/1992	3/3/1992	04/16/2013
TOWN OF KNIGHTDALE	4/12/1974	8/1/1978	04/16/2013
TOWN OF MORRISVILLE	10/29/1978	11/1/1978	04/16/2013
TOWN OF ROLESVILLE	3/3/1992	3/3/1992	04/16/2013
TOWN OF WAKE FOREST	3/15/1974	7/3/1978	04/16/2013
TOWN OF WENDELL	3/8/1974	6/1/1978	04/16/2013
TOWN OF ZEBULON	3/8/1974	7/3/1978	04/16/2013
WAKE COUNTY	11/15/1978	11/15/1978	04/16/2013

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 Wake 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
CITY OF DURHAM	5/2/2006	NCFMP	NCFMP	286-000022	12/4/2013
CITY OF DURHAM	5/2/2006	NCFMP	NCFMP	286-000022	12/1/2012
CITY OF DURHAM	5/2/2006	NCFMP	NCFMP	286-000022	3/5/2013
CITY OF DURHAM	5/2/2006	NCFMP	NCFMP	286-000022	8/8/8888
CITY OF RALEIGH	5/2/2006	NCFMP	NCFMP	286-000022	12/4/2013
CITY OF RALEIGH	5/2/2006	NCFMP	NCFMP	286-000022	12/1/2012
CITY OF RALEIGH	5/2/2006	NCFMP	NCFMP	286-000022	3/5/2013
CITY OF RALEIGH	5/2/2006	NCFMP	NCFMP	286-000022	8/8/8888
RDU	5/2/2006	NCFMP	NCFMP	286-000022	12/4/2013
RDU	5/2/2006	NCFMP	NCFMP	286-000022	12/1/2012
RDU	5/2/2006	NCFMP	NCFMP	286-000022	3/5/2013
RDU	5/2/2006	NCFMP	NCFMP	286-000022	8/8/8888
TOWN OF ANGIER	5/2/2006	NCFMP	NCFMP	286-000022	12/4/2013
TOWN OF ANGIER	5/2/2006	NCFMP	NCFMP	286-000022	12/1/2012
TOWN OF ANGIER	5/2/2006	NCFMP	NCFMP	286-000022	3/5/2013
TOWN OF ANGIER	5/2/2006	NCFMP	NCFMP	286-000022	8/8/8888
TOWN OF APEX	5/2/2006	NCFMP	NCFMP	286-000022	12/4/2013
TOWN OF APEX	5/2/2006	NCFMP	NCFMP	286-000022	12/1/2012
TOWN OF APEX	5/2/2006	NCFMP	NCFMP	286-000022	3/5/2013
TOWN OF APEX	5/2/2006	NCFMP	NCFMP	286-000022	8/8/8888
TOWN OF CARY	5/2/2006	NCFMP	NCFMP	286-000022	12/4/2013
TOWN OF CARY	5/2/2006	NCFMP	NCFMP	286-000022	12/1/2012
TOWN OF CARY	5/2/2006	NCFMP	NCFMP	286-000022	3/5/2013
TOWN OF CARY	5/2/2006	NCFMP	NCFMP	286-000022	8/8/8888
TOWN OF CLAYTON	5/2/2006	NCFMP	NCFMP	286-000022	12/4/2013
TOWN OF CLAYTON	5/2/2006	NCFMP	NCFMP	286-000022	12/1/2012
TOWN OF CLAYTON	5/2/2006	NCFMP	NCFMP	286-000022	3/5/2013
TOWN OF CLAYTON	5/2/2006	NCFMP	NCFMP	286-000022	8/8/8888
TOWN OF FUQUAY-VARINA	5/2/2006	NCFMP	NCFMP	286-000022	12/4/2013
TOWN OF FUQUAY-VARINA	5/2/2006	NCFMP	NCFMP	286-000022	12/1/2012
TOWN OF FUQUAY-VARINA	5/2/2006	NCFMP	NCFMP	286-000022	3/5/2013
TOWN OF FUQUAY-VARINA	5/2/2006	NCFMP	NCFMP	286-000022	8/8/8888
TOWN OF GARNER	5/2/2006	NCFMP	NCFMP	286-000022	12/4/2013
TOWN OF GARNER	5/2/2006	NCFMP	NCFMP	286-000022	12/1/2012
TOWN OF GARNER	5/2/2006	NCFMP	NCFMP	286-000022	3/5/2013
TOWN OF GARNER	5/2/2006	NCFMP	NCFMP	286-000022	8/8/8888
TOWN OF HOLLY SPRINGS	5/2/2006	NCFMP	NCFMP	286-000022	12/4/2013
TOWN OF HOLLY SPRINGS	5/2/2006	NCFMP	NCFMP	286-000022	12/1/2012
TOWN OF HOLLY SPRINGS	5/2/2006	NCFMP	NCFMP	286-000022	3/5/2013
TOWN OF HOLLY SPRINGS	5/2/2006	NCFMP	NCFMP	286-000022	8/8/8888
TOWN OF KNIGHTDALE	5/2/2006	NCFMP	NCFMP	286-000022	12/4/2013
TOWN OF KNIGHTDALE	5/2/2006	NCFMP	NCFMP	286-000022	12/1/2012
TOWN OF KNIGHTDALE	5/2/2006	NCFMP	NCFMP	286-000022	3/5/2013
TOWN OF KNIGHTDALE	5/2/2006	NCFMP	NCFMP	286-000022	8/8/8888
TOWN OF MORRISVILLE	5/2/2006	NCFMP	NCFMP	286-000022	12/4/2013
TOWN OF MORRISVILLE	5/2/2006	NCFMP	NCFMP	286-000022	12/1/2012
TOWN OF MORRISVILLE	5/2/2006	NCFMP	NCFMP	286-000022	3/5/2013
TOWN OF MORRISVILLE	5/2/2006	NCFMP	NCFMP	286-000022	8/8/8888
TOWN OF ROLESVILLE	5/2/2006	NCFMP	NCFMP	286-000022	12/4/2013
TOWN OF ROLESVILLE	5/2/2006	NCFMP	NCFMP	286-000022	12/1/2012
TOWN OF ROLESVILLE	5/2/2006	NCFMP	NCFMP	286-000022	3/5/2013
TOWN OF ROLESVILLE	5/2/2006	NCFMP	NCFMP	286-000022	8/8/8888
TOWN OF WAKE FOREST	5/2/2006	NCFMP	NCFMP	286-000022	12/4/2013
TOWN OF WAKE FOREST	5/2/2006	NCFMP	NCFMP	286-000022	12/1/2012
TOWN OF WAKE FOREST	5/2/2006	NCFMP	NCFMP	286-000022	3/5/2013
TOWN OF WAKE FOREST	5/2/2006	NCFMP	NCFMP	286-000022	8/8/8888

Table 25 — Authority and Acknowledgments

Community	FIS Dated	Study Contracted By	Data Source	Contract or IAA Number	Work Completed In
TOWN OF WENDELL	5/2/2006	NCFMP	NCFMP	286-000022	12/4/2013
TOWN OF WENDELL	5/2/2006	NCFMP	NCFMP	286-000022	12/1/2012
TOWN OF WENDELL	5/2/2006	NCFMP	NCFMP	286-000022	3/5/2013
TOWN OF WENDELL	5/2/2006	NCFMP	NCFMP	286-000022	8/8/8888
TOWN OF ZEBULON	5/2/2006	NCFMP	NCFMP	286-000022	12/4/2013
TOWN OF ZEBULON	5/2/2006	NCFMP	NCFMP	286-000022	12/1/2012
TOWN OF ZEBULON	5/2/2006	NCFMP	NCFMP	286-000022	3/5/2013
TOWN OF ZEBULON	5/2/2006	NCFMP	NCFMP	286-000022	8/8/8888
WAKE COUNTY	5/2/2006	NCFMP	NCFMP	286-000022	12/4/2013
WAKE COUNTY	5/2/2006	NCFMP	NCFMP	286-000022	12/1/2012
WAKE COUNTY	5/2/2006	NCFMP	NCFMP	286-000022	3/5/2013
WAKE COUNTY	5/2/2006	NCFMP	NCFMP	286-000022	8/8/8888

This FIS Report was produced through a unique cooperative partnership between the State of North Carolina and FEMA. The State of North Carolina, through FEMA's Cooperating Technical Partner (CTP) Initiative, has become the first Cooperating Technical State (CTS) and will assume primary ownership of the NFIP FIRM panels for all North Carolina communities. This role has traditionally been fulfilled by FEMA. The North Carolina Floodplain Mapping Program is conducting flood hazard analyses and producing updated, digital FIRM panels. The hydrologic and hydraulic analyses and the FIRM panels for the initial statewide mapping for Wake County were produced by NCFMP under contract with the State of North Carolina and issued on effective 3/31/2015. 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 Wake 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
CITY OF DURHAM	1/17/1979	12/17/1974	Representatives of City of Durham, the county, the State, HSMM, and FEMA	5/17/1977	Representatives of City of Durham, the county, the State, HSMM, and FEMA
CITY OF DURHAM	1/17/1979	8/27/1975	Representatives of City of Durham, the county, the State, HSMM, and FEMA	5/17/1977	Representatives of City of Durham, the county, the State, HSMM, and FEMA
CITY OF DURHAM	1/17/1979	9/20/1976	Representatives of City of Durham, the county, the State, HSMM, and FEMA	5/17/1977	Representatives of City of Durham, the county, the State, HSMM, and FEMA
RDU	3/3/1992	11/1/1984	Representatives of the county, USACE, and FEMA	2/28/1991	Representatives of the county, USACE, and FEMA
RDU	11/20/1998	8/8/8888	Notified by letter	8/8/8888	Notified by letter
RDU	11/20/1998	8/8/8888	Notified by letter	8/8/8888	NP
RTP	3/3/1992	11/1/1984	Representatives of the county, USACE, and FEMA	2/28/1991	Representatives of the county, USACE, and FEMA
RTP	11/20/1998	8/8/8888	Notified by letter	8/8/8888	Notified by letter
RTP	11/20/1998	8/8/8888	Notified by letter	8/8/8888	NP
TOWN OF CLAYTON	10/1/1981	11/21/1978	Representatives of USACE, FEMA, the community, and local residents	2/25/1981	USACE, FEMA, and local officials
TOWN OF CLAYTON	10/1/1981	11/21/1978	Representatives of USACE, FEMA, the community, and local residents	5/22/1981	Representatives of FEMA and the community
TOWN OF CLAYTON	10/1/1981	11/21/1978	Representatives of USACE, FEMA, the community, and local residents	5/22/1981	Representatives of USACE, FEMA, and the community

Table 26 — Consultation Coordination Officer's Meetings

Community	For FIS Dated	Initial CCO Date	Attended By	Final CCO Date	Attended By
TOWN OF CLAYTON	10/1/1981	9/12/1979	Representatives of USACE and the community	2/25/1981	USACE, FEMA, and local officials
TOWN OF CLAYTON	10/1/1981	9/12/1979	Representatives of USACE and the community	5/22/1981	Representatives of FEMA and the community
TOWN OF CLAYTON	10/1/1981	9/12/1979	Representatives of USACE and the community	5/22/1981	Representatives of USACE, FEMA, and the community
WAKE COUNTY	3/3/1992	11/1/1984	Representatives of the county, USACE, and FEMA	2/28/1991	Representatives of the county, USACE, and FEMA
WAKE COUNTY	11/20/1998	8/8/8888	Notified by letter	8/8/8888	Notified by letter
WAKE COUNTY	11/20/1998	8/8/8888	Notified by letter	8/8/8888	NP

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 Wake County are shown in Table 27, "Scoping Meetings." Meetings held for the map maintenance revision are also included below for Wake County.

Table 27 — Scoping Meetings

Community	Riverbasin	Initial Scoping Date	Attended By	Final Scoping Date	Attended By
CITY OF DURHAM	CAPE FEAR	11/27/2000	Representatives of the county, FEMA, NCDEM, NC CGIA, and Dewberry	4/23/2001	Representatives of the county, FEMA, NCDEM, NC CGIA, and Dewberry
CITY OF DURHAM	CAPE FEAR	11/27/2000	Representatives of the county, FEMA, NCDEM, NC CGIA, and Dewberry	3/6/2011	Representatives of the county, NCDEM, NC CGIA, Dewberry, and Greenhorne & O'Mara
CITY OF DURHAM	NEUSE	11/27/2000	Representatives of the county, FEMA, NCDEM, NC CGIA, and Dewberry	4/23/2001	Representatives of the county, FEMA, NCDEM, NC CGIA, and Dewberry
CITY OF DURHAM	NEUSE	11/27/2000	Representatives of the county, FEMA, NCDEM, NC CGIA, and Dewberry	3/6/2011	Representatives of the county, NCDEM, NC CGIA, Dewberry, and Greenhorne & O'Mara
CITY OF RALEIGH	NEUSE	11/29/2000	Representatives of the State, FEMA, Dewberry, and the community	4/23/2001	State,FEMA,Dewberry,county,Raleigh,Apex,Cary,Garner,HollySprings,Knightdale,WakeForest,Wndell,Zebuln
CITY OF RALEIGH ETJ	NEUSE	11/29/2000	Representatives of the State, FEMA, Dewberry, and the community	4/23/2001	State,FEMA,Dewberry,county,Raleigh,Apex,Cary,Garner,HollySprings,Knightdale,WakeForest,Wndell,Zebuln
RDU	CAPE FEAR	11/28/2000	Representatives of the State, FEMA, Dewberry, and the county	4/23/2001	State,FEMA,Dewberry,county,Raleigh,Apex,Cary,Garner,HollySprings,Knightdale,WakeForest,Wndell,Zebuln
RDU	NEUSE	11/28/2000	Representatives of the State, FEMA, Dewberry, and the county	4/23/2001	State,FEMA,Dewberry,county,Raleigh,Apex,Cary,Garner,HollySprings,Knightdale,WakeForest,Wndell,Zebuln
RTP	CAPE FEAR	11/28/2000	Representatives of the State, FEMA, Dewberry, and the county	4/23/2001	State,FEMA,Dewberry,county,Raleigh,Apex,Cary,Garner,HollySprings,Knightdale,WakeForest,Wndell,Zebuln
RTP	NEUSE	11/28/2000	Representatives of the State, FEMA, Dewberry, and the county	4/23/2001	State,FEMA,Dewberry,county,Raleigh,Apex,Cary,Garner,HollySprings,Knightdale,WakeForest,Wndell,Zebuln
TOWN OF ANGIER	CAPE FEAR	12/5/2000	Community representatives, NCFMP, FEMA, NCEM	3/7/2001	Community representatives, NCFMP, FEMA, NCEM

Table 27 — Scoping Meetings

Community	Riverbasin	Initial Scoping Date	Attended By	Final Scoping Date	Attended By
TOWN OF APEX	NEUSE	10/29/2000	Representatives of the State, FEMA, Dewberry, and the community	4/23/2001	State,FEMA,Dewberry,county,Raleigh,Apex,Cary,Garner,HollySprings,Knightdale,WakeForest,Wndell,Zebuln
TOWN OF APEX ETJ	NEUSE	10/29/2000	Representatives of the State, FEMA, Dewberry, and the community	4/23/2001	State,FEMA,Dewberry,county,Raleigh,Apex,Cary,Garner,HollySprings,Knightdale,WakeForest,Wndell,Zebuln
TOWN OF CARY	NEUSE	11/30/2000	Representatives of the State, FEMA, Dewberry, and the community	4/23/2001	State,FEMA,Dewberry,county,Raleigh,Apex,Cary,Garner,HollySprings,Knightdale,WakeForest,Wndell,Zebuln
TOWN OF CARY ETJ	NEUSE	11/30/2000	Representatives of the State, FEMA, Dewberry, and the community	4/23/2001	State,FEMA,Dewberry,county,Raleigh,Apex,Cary,Garner,HollySprings,Knightdale,WakeForest,Wndell,Zebuln
TOWN OF CLAYTON	NEUSE	12/13/2000	Representatives of FEMA, the State, Dewberry, and the community	4/24/2001	Representatives of FEMA, the State, Dewberry, and the community
TOWN OF FUQUAY-VARINA	CAPE FEAR	11/30/2000	Representatives of the State, FEMA, Dewberry, and the Towns of Fuquay-Varina and Holly Springs	4/23/2001	State,FEMA,Dewberry,county,Raleigh,Apex,Cary,Garner,HollySprings,Knightdale,WakeForest,Wndell,Zebuln
TOWN OF FUQUAY-VARINA ETJ	CAPE FEAR	11/30/2000	Representatives of the State, FEMA, Dewberry, and the Towns of Fuquay-Varina and Holly Springs	4/23/2001	State,FEMA,Dewberry,county,Raleigh,Apex,Cary,Garner,HollySprings,Knightdale,WakeForest,Wndell,Zebuln
TOWN OF GARNER	NEUSE	11/30/2000	Representatives of the State, FEMA, Dewberry, and the community	4/23/2001	State,FEMA,Dewberry,county,Raleigh,Apex,Cary,Garner,HollySprings,Knightdale,WakeForest,Wndell,Zebuln
TOWN OF GARNER ETJ	NEUSE	11/30/2000	Representatives of the State, FEMA, Dewberry, and the community	4/23/2001	State,FEMA,Dewberry,county,Raleigh,Apex,Cary,Garner,HollySprings,Knightdale,WakeForest,Wndell,Zebuln
TOWN OF HOLLY SPRINGS	NEUSE	11/30/2000	Representatives of the State, FEMA, Dewberry, and the Towns of Fuquay-Varina and Holly Springs	4/23/2001	State,FEMA,Dewberry,county,Raleigh,Apex,Cary,Garner,HollySprings,Knightdale,WakeForest,Wndell,Zebuln
TOWN OF HOLLY SPRINGS ETJ	NEUSE	11/30/2000	Representatives of the State, FEMA, Dewberry, and the Towns of Fuquay-Varina and Holly Springs	4/23/2001	State,FEMA,Dewberry,county,Raleigh,Apex,Cary,Garner,HollySprings,Knightdale,WakeForest,Wndell,Zebuln
TOWN OF KNIGHTDALE	NEUSE	11/29/2000	Representatives of the State, FEMA, Dewberry, and the Towns of Knightdale, Wendell, and Zebulon	4/23/2001	State,FEMA,Dewberry,county,Raleigh,Apex,Cary,Garner,HollySprings,Knightdale,WakeForest,Wndell,Zebuln
TOWN OF KNIGHTDALE ETJ	NEUSE	11/29/2000	Representatives of the State, FEMA, Dewberry, and the Towns of Knightdale, Wendell, and Zebulon	4/23/2001	State,FEMA,Dewberry,county,Raleigh,Apex,Cary,Garner,HollySprings,Knightdale,WakeForest,Wndell,Zebuln
TOWN OF MORRISVILLE	NEUSE	11/30/2000	Representatives of the State, FEMA, Dewberry, and the community	4/23/2001	State,FEMA,Dewberry,county,Raleigh,Apex,Cary,Garner,HollySprings,Knightdale,WakeForest,Wndell,Zebuln
TOWN OF MORRISVILLE ETJ	NEUSE	11/30/2000	Representatives of the State, FEMA, Dewberry, and the community	4/23/2001	State,FEMA,Dewberry,county,Raleigh,Apex,Cary,Garner,HollySprings,Knightdale,WakeForest,Wndell,Zebuln
TOWN OF ROLESVILLE	NEUSE	11/29/2000	Representatives of the State, FEMA, Dewberry, and the Towns of Rolesville and Wake Forest	4/23/2001	State,FEMA,Dewberry,county,Raleigh,Apex,Cary,Garner,HollySprings,Knightdale,WakeForest,Wndell,Zebuln
TOWN OF ROLESVILLE ETJ	NEUSE	11/29/2000	Representatives of the State, FEMA, Dewberry, and the Towns of Rolesville and Wake Forest	4/23/2001	State,FEMA,Dewberry,county,Raleigh,Apex,Cary,Garner,HollySprings,Knightdale,WakeForest,Wndell,Zebuln

Table 27 — Scoping Meetings

Community	Riverbasin	Initial Scoping Date	Attended By	Final Scoping Date	Attended By
TOWN OF WAKE FOREST	NEUSE	11/29/2000	Representatives of the State, FEMA, Dewberry, and the Towns of Rolesville and Wake Forest	4/23/2001	State,FEMA,Dewberry,county,Raleigh,Apex,Cary,Garner,HollySprings,Knightdale,WakeForest,Wndell,Zebuln
TOWN OF WAKE FOREST ETJ	NEUSE	11/29/2000	Representatives of the State, FEMA, Dewberry, and the Towns of Rolesville and Wake Forest	4/23/2001	State,FEMA,Dewberry,county,Raleigh,Apex,Cary,Garner,HollySprings,Knightdale,WakeForest,Wndell,Zebuln
TOWN OF WENDELL	NEUSE	11/29/2000	Representatives of the State, FEMA, Dewberry, and the Towns of Knightdale, Wendell, and Zebulon	4/23/2001	State,FEMA,Dewberry,county,Raleigh,Apex,Cary,Garner,HollySprings,Knightdale,WakeForest,Wndell,Zebuln
TOWN OF WENDELL ETJ	NEUSE	11/29/2000	Representatives of the State, FEMA, Dewberry, and the Towns of Knightdale, Wendell, and Zebulon	4/23/2001	State,FEMA,Dewberry,county,Raleigh,Apex,Cary,Garner,HollySprings,Knightdale,WakeForest,Wndell,Zebuln
TOWN OF ZEBULON	NEUSE	11/29/2000	Representatives of the State, FEMA, Dewberry, and the Towns of Knightdale, Wendell, and Zebulon	4/23/2001	State,FEMA,Dewberry,county,Raleigh,Apex,Cary,Garner,HollySprings,Knightdale,WakeForest,Wndell,Zebuln
TOWN OF ZEBULON ETJ	NEUSE	11/29/2000	Representatives of the State, FEMA, Dewberry, and the Towns of Knightdale, Wendell, and Zebulon	4/23/2001	State,FEMA,Dewberry,county,Raleigh,Apex,Cary,Garner,HollySprings,Knightdale,WakeForest,Wndell,Zebuln
WAKE COUNTY	CAPE FEAR	11/28/2000	Representatives of the State, FEMA, Dewberry, and the county	4/23/2001	State,FEMA,Dewberry,county,Raleigh,Apex,Cary,Garner,HollySprings,Knightdale,WakeForest,Wndell,Zebuln
WAKE COUNTY	NEUSE	11/28/2000	Representatives of the State, FEMA, Dewberry, and the county	4/23/2001	State,FEMA,Dewberry,county,Raleigh,Apex,Cary,Garner,HollySprings,Knightdale,WakeForest,Wndell,Zebuln

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

Table 28 — Preliminary and Public Participation Meetings

Community	For FIS Dated	Meeting Location	Preliminary Meeting Date	Attended By	Public Meeting Date	Attended By
RDU	5/2/2006	Raleigh	7/14/2004	Representatives of the county, the State, FEMA, Dewberry, and Watershed Concepts	5/11/2004	NP
RDU	5/2/2006	Raleigh	7/14/2004	Representatives of the county, the State, FEMA, Dewberry, and Watershed Concepts	9/2/2004	NP
RDU	5/2/2006	Raleigh	7/14/2004	Representatives of the county, the State, FEMA, Dewberry, and Watershed Concepts	9/9/2004	NP
RDU	5/2/2006	Raleigh	7/14/2004	Representatives of the county, the State, FEMA, Dewberry, and Watershed Concepts	9/20/2004	NP
RDU	4/16/2013	Louisburg	7/15/2010	Representatives of the State, Wake County and Incorporated Communities, and Dewberry	8/10/2010	Representatives of the State, Franklin County and Incorporated Communities
RDU	4/16/2013	Louisburg	7/15/2010	Representatives of the State, Wake County and Incorporated Communities, and Dewberry	8/10/2010	Representatives of the State, Granville County, and Dewberry

Table 28 — Preliminary and Public Participation Meetings

Community	For FIS Dated	Meeting Location	Preliminary Meeting Date	Attended By	Public Meeting Date	Attended By
RDU	4/16/2013	Louisburg	7/15/2010	Representatives of the State, Wake County and Incorporated Communities, and Dewberry	8/10/2010	Representatives of the State, Vance County and Incorporated Communities, and Dewberry
RDU	4/16/2013	Louisburg	7/15/2010	Representatives of the State, Wake County and Incorporated Communities, and Dewberry	8/10/2010	Representatives of the State, Wake County and Incorporated Communities, and Dewberry
RDU	4/16/2013	Louisburg	7/15/2010	Representatives of the State, Wake County and Incorporated Communities, and Dewberry	11/15/2010	Representatives of the State, Nash County and Incorporated Communities, and Dewberry
RDU	4/16/2013	Louisburg	7/15/2010	Representatives of the State, Wake County and Incorporated Communities, and Dewberry	1/16/2011	Representatives of the State, Nash County and Incorporated Communities, and Dewberry
RDU	4/16/2013	Louisburg	7/15/2010	Representatives of the State, Wake County and Incorporated Communities, and Dewberry	4/18/2011	Representatives of the State, FEMA, Dewberry, and Wilson County and Incorporated Areas
RDU	4/16/2013	Louisburg	7/15/2010	Representatives of the State, Wake County and Incorporated Communities, and Dewberry	10/19/2011	Representatives of the State, FEMA, Dewberry, and Pitt County and Incorporated Areas
RDU	4/16/2013	Louisburg	7/15/2010	Representatives of the State, Wake County and Incorporated Communities, and Dewberry	10/20/2011	Representatives of the State, FEMA, Dewberry, and Lenoir County and Incorporated Areas
RDU	4/16/2013	Louisburg	7/15/2010	Representatives of the State, Wake County and Incorporated Communities, and Dewberry	12/2/2011	Representatives of the State, FEMA, Dewberry, and Greene County and Incorporated Areas
RDU	4/16/2013	Louisburg	7/15/2010	Representatives of the State, Wake County and Incorporated Communities, and Dewberry	12/2/2012	Representatives of the State, FEMA, Dewberry, and Greene County and Incorporated Areas
RTP	5/2/2006	Raleigh	7/14/2004	Representatives of the county, the State, FEMA, Dewberry, and Watershed Concepts	5/11/2004	NP
RTP	5/2/2006	Raleigh	7/14/2004	Representatives of the county, the State, FEMA, Dewberry, and Watershed Concepts	9/2/2004	NP
RTP	5/2/2006	Raleigh	7/14/2004	Representatives of the county, the State, FEMA, Dewberry, and Watershed Concepts	9/9/2004	NP
RTP	5/2/2006	Raleigh	7/14/2004	Representatives of the county, the State, FEMA, Dewberry, and Watershed Concepts	9/20/2004	NP
RTP	4/16/2013	Louisburg	7/15/2010	Representatives of the State, Wake County and Incorporated Communities, and Dewberry	8/10/2010	Representatives of the State, Franklin County and Incorporated Communities
RTP	4/16/2013	Louisburg	7/15/2010	Representatives of the State, Wake County and Incorporated Communities, and Dewberry	8/10/2010	Representatives of the State, Granville County, and Dewberry
RTP	4/16/2013	Louisburg	7/15/2010	Representatives of the State, Wake County and Incorporated Communities, and Dewberry	8/10/2010	Representatives of the State, Vance County and Incorporated Communities, and Dewberry
RTP	4/16/2013	Louisburg	7/15/2010	Representatives of the State, Wake County and Incorporated Communities, and Dewberry	8/10/2010	Representatives of the State, Wake County and Incorporated Communities, and Dewberry

Table 28 — Preliminary and Public Participation Meetings

Community	For FIS Dated	Meeting Location	Preliminary Meeting Date	Attended By	Public Meeting Date	Attended By
RTP	4/16/2013	Louisburg	7/15/2010	Representatives of the State, Wake County and Incorporated Communities, and Dewberry	11/15/2010	Representatives of the State, Nash County and Incorporated Communities, and Dewberry
RTP	4/16/2013	Louisburg	7/15/2010	Representatives of the State, Wake County and Incorporated Communities, and Dewberry	1/16/2011	Representatives of the State, Nash County and Incorporated Communities, and Dewberry
RTP	4/16/2013	Louisburg	7/15/2010	Representatives of the State, Wake County and Incorporated Communities, and Dewberry	4/18/2011	Representatives of the State, FEMA, Dewberry, and Wilson County and Incorporated Areas
RTP	4/16/2013	Louisburg	7/15/2010	Representatives of the State, Wake County and Incorporated Communities, and Dewberry	10/19/2011	Representatives of the State, FEMA, Dewberry, and Pitt County and Incorporated Areas
RTP	4/16/2013	Louisburg	7/15/2010	Representatives of the State, Wake County and Incorporated Communities, and Dewberry	10/20/2011	Representatives of the State, FEMA, Dewberry, and Lenoir County and Incorporated Areas
RTP	4/16/2013	Louisburg	7/15/2010	Representatives of the State, Wake County and Incorporated Communities, and Dewberry	12/2/2011	Representatives of the State, FEMA, Dewberry, and Greene County and Incorporated Areas
RTP	4/16/2013	Louisburg	7/15/2010	Representatives of the State, Wake County and Incorporated Communities, and Dewberry	12/2/2012	Representatives of the State, FEMA, Dewberry, and Greene County and Incorporated Areas
WAKE COUNTY	5/2/2006	Raleigh	7/14/2004	Representatives of the county, the State, FEMA, Dewberry, and Watershed Concepts	5/11/2004	NP
WAKE COUNTY	5/2/2006	Raleigh	7/14/2004	Representatives of the county, the State, FEMA, Dewberry, and Watershed Concepts	9/2/2004	NP
WAKE COUNTY	5/2/2006	Raleigh	7/14/2004	Representatives of the county, the State, FEMA, Dewberry, and Watershed Concepts	9/9/2004	NP
WAKE COUNTY	5/2/2006	Raleigh	7/14/2004	Representatives of the county, the State, FEMA, Dewberry, and Watershed Concepts	9/20/2004	NP
WAKE COUNTY	4/16/2013	Louisburg	7/15/2010	Representatives of the State, Wake County and Incorporated Communities, and Dewberry	8/10/2010	Representatives of the State, Franklin County and Incorporated Communities
WAKE COUNTY	4/16/2013	Louisburg	7/15/2010	Representatives of the State, Wake County and Incorporated Communities, and Dewberry	8/10/2010	Representatives of the State, Granville County, and Dewberry
WAKE COUNTY	4/16/2013	Louisburg	7/15/2010	Representatives of the State, Wake County and Incorporated Communities, and Dewberry	8/10/2010	Representatives of the State, Vance County and Incorporated Communities, and Dewberry
WAKE COUNTY	4/16/2013	Louisburg	7/15/2010	Representatives of the State, Wake County and Incorporated Communities, and Dewberry	8/10/2010	Representatives of the State, Wake County and Incorporated Communities, and Dewberry
WAKE COUNTY	4/16/2013	Louisburg	7/15/2010	Representatives of the State, Wake County and Incorporated Communities, and Dewberry	11/15/2010	Representatives of the State, Nash County and Incorporated Communities, and Dewberry
WAKE COUNTY	4/16/2013	Louisburg	7/15/2010	Representatives of the State, Wake County and Incorporated Communities, and Dewberry	1/16/2011	Representatives of the State, Nash County and Incorporated Communities, and Dewberry

Table 28 — Preliminary and Public Participation Meetings

Community	For FIS Dated	Meeting Location	Preliminary Meeting Date	Attended By	Public Meeting Date	Attended By
WAKE COUNTY	4/16/2013	Louisburg	7/15/2010	Representatives of the State, Wake County and Incorporated Communities, and Dewberry	4/18/2011	Representatives of the State, FEMA, Dewberry, and Wilson County and Incorporated Areas
WAKE COUNTY	4/16/2013	Louisburg	7/15/2010	Representatives of the State, Wake County and Incorporated Communities, and Dewberry	10/19/2011	Representatives of the State, FEMA, Dewberry, and Pitt County and Incorporated Areas
WAKE COUNTY	4/16/2013	Louisburg	7/15/2010	Representatives of the State, Wake County and Incorporated Communities, and Dewberry	10/20/2011	Representatives of the State, FEMA, Dewberry, and Lenoir County and Incorporated Areas
WAKE COUNTY	4/16/2013	Louisburg	7/15/2010	Representatives of the State, Wake County and Incorporated Communities, and Dewberry	12/2/2011	Representatives of the State, FEMA, Dewberry, and Greene County and Incorporated Areas
WAKE COUNTY	4/16/2013	Louisburg	7/15/2010	Representatives of the State, Wake County and Incorporated Communities, and Dewberry	12/2/2012	Representatives of the State, FEMA, Dewberry, and Greene County and Incorporated Areas

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

Table 27 — Map Repositories

Community	Address	City	State	Zip Code
Town of Rolesville	Rolesville Planning Department, Town Hall, 200 East Young Street	Rolesville	NC	27571
Town of Apex	Apex Engineering Department, 73 Hunter Street	Apex	NC	27502
City of Durham	City Hall, Public Works Department, 101 City Hall Plaza	Durham	NC	27701
Town of Angier	Angier Town Hall, 55 North Broad Street	Angier	NC	27501
Town of Cary	Cary Stormwater Services Division, Town Hall, 316 North Academy Street	Cary	NC	27513
Town of Holly Springs	Holly Springs Engineering Department, 128 South Main Street	Holly Springs	NC	27540
Town of Clayton	Clayton Town Hall, Planning Department, NC	Clayton	NC	27520
Town of Zebulon	Zebulon Planning Department, Town Hall, 1003 North Arendell Avenue	Zebulon	NC	27597
Town of Wendell	Wendell Planning Department, 15 East Fourth Street	Wendell	NC	27591
Town of Wake Forest	Wake Forest Planning Department, 301 South Brooks Street, 3rd Floor	Wake Forest	NC	27587
Wake County	Wake County Environmental Services Department, Waverly F. Akins Office Building, 337 South Salisbury Street	Raleigh	NC	27602
City of Raleigh	Raleigh Engineering Department, Municipal Building, 222 West Hargett Street	Raleigh	NC	27601
Town of Morrisville	Morrisville Planning Department, Town Hall, 100 Town Hall Drive	Morrisville	NC	27560

Table 27 — Map Repositories

Town of Knightdale	Knightdale Town Hall, 950 Steeple Square Court	Knightdale	NC	27545
Town of Garner	Garner Engineering Department, 900 Seventh Avenue, Building B	Garner	NC	27529
Town of Fuquay-varina	Fuquay-Varina Planning Department, Town Hall, 401 Old Honeycutt Road	Fuquay-Varina	NC	27526

9.1 Additional Information

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

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

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

Table 28, “Additional Information” is not applicable in Wake 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