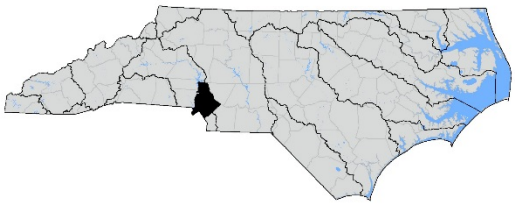
FLOOD INSURANCE STUDY

FEDERAL EMERGENCY MANAGEMENT AGENCY

A Report of Flood Hazards in

MECKLENBURG COUNTY, NORTH CAROLINA AND INCORPORATED AREAS



Community Name	Community Number
CITY OF CHARLOTTE	370159
MECKLENBURG COUNTY (Unincorporated Areas)	370158
TOWN OF CORNELIUS	370498
TOWN OF DAVIDSON	370503
TOWN OF HUNTERSVILLE	370478
TOWN OF MATTHEWS	370310
TOWN OF MINT HILL	370539
TOWN OF PINEVILLE	370160

NORTH CAROLINA Cooperating Technical State
FEMA'S COOPERATING TECHNICAL PARTNER

Charlotte-Mecklenburg STORM WATER Services

EFFECTIVE: 2/19/2014

PRELIMINARY: 8/30/2016

Federal Emergency Management Agency State of North Carolina

Flood Insurance Study Number

37119CV001E

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 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 Statewide FIRM:

Date	Reason
2/4/2004	Initial countywide FIS Report Effective Date
3/2/2009	Statewide FIRM Revision
2/19/2014	To update corporate limits; to change Base Flood Elevations; to add Base Flood Elevations; to add Special Flood Hazard Areas; to change Special Flood Hazard Areas; to delete Special Flood Hazard Areas; to change zone designations; to add roads and road names; to add floodway; to change floodway; and to advance suffix.
9/2/2015	To update corporate limits; to change Base Flood Elevations; to add Base Flood Elevations; to add Special Flood Hazard Areas; to change Special Flood Hazard Areas; to delete Special Flood Hazard Areas; to change zone designations; to add roads and road names; to add floodway; to change floodway; and to advance suffix.

This FIS has been produced as part of the Floodplain Mapping Program. Mecklenburg County falls under the administrative jurisdiction of Region IV of the Federal Emergency Management Agency (FEMA). Questions concerning this FIS may be directed to Mecklenburg County Storm Water at http://stormwater.charmeck.org, the North Carolina Floodplain Mapping Program (NCFMP) at www.ncfloodmaps.com, the FEMA Map Information eXchange 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 Mecklenburg County and the jurisdictions therein (hereinafter referred to collectively as Mecklenburg 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 Mecklenburg County, including the jurisdictions listed in Table 1.

Table 1 - Jurisdictions in Mecklenburg County

Community	Included in this FIS	If Not Included, Location of Flood Hazard/Flood Insurance Rate Data
CITY OF CHARLOTTE	Yes	*
MECKLENBURG COUNTY (Unincorporated Areas)	Yes	*
TOWN OF CORNELIUS	Yes	*
TOWN OF DAVIDSON	Yes	*
TOWN OF HUNTERSVILLE	Yes	*
TOWN OF MATTHEWS	Yes	*
TOWN OF MINT HILL	Yes	*
TOWN OF PINEVILLE	Yes	*
TOWN OF STALLINGS	No	Union County and Incorporated Areas

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 may include a set of flood profiles (for legacy studies). Descriptions of the FIRM and FIS are provided below. Printed flood profiles are not included with this FIS as this information is now being provided digitally via websites described below.

Flood Insurance Rate Map

The FIRM shows 1% annual chance (100-year) floodplains, future conditions floodplains, and/or the 0.2% annual chance (500-year) floodplains, using tints, screens, and symbols. Floodways, community encroachment areas, the locations of selected cross sections used in the hydraulic analyses and floodway computations, and Velocity Zones are shown where applicable. The FIRM for North Carolina has been produced digitally, and there are separate data layers that are available in the public domain via the Internet.

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.

Mecklenburg County and the State of North Carolina are transitioning FIRM and FIS products to a database driven environment. The North Carolina Mapping Program (NCFMP) stores all flood hazard data in an enterprise database which is used to dynamically produce the FIS and FIRM products. The database driven environment allows for more efficient maintenance and dissemination of flood hazard information. In addition to the standard products, Mecklenburg County and NCFMP provide access to the digital flood hazard information through interactive websites. These websites allow users to search, view, and download flood hazard related information. Current links to the Mecklenburg County and NCFMP websites are listed below.

Mecklenburg County 3D Floodzone Mapping: http://meckmap.mecklenburgcountync.gov/3dfz/

NCFMP Flood Risk Information System (FRIS) Website: http://fris.nc.gov/fris/

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; delineations of the 1% annual chance and 0.2% annual chance floodplains; and the 1% annual chance floodway. The 1% annual chance flood elevation is also referred to as the Base Flood Elevation (BFE). 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 elevation tables, and coastal transect parameter tables. Not all components may be provided for a specific FIS. FIRMs and the FIS report for Mecklenburg County include additional features such as 1% future conditions floodplain mapping and a second community encroachment area which are discussed later in this report.

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 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 Mecklenburg became Effective on 2/4/2004. Prior to the initial countywide FIS each community had a separate FIS and associated FIRMs. Refer to Table 15 (page 110) for a summary of map revisions for each community.

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)

The Community Rating System (CRS) is a voluntary incentive program that recognizes and encourages community floodplain management activities that exceed the minimum NFIP requirements. Residents that live in communities that participate in CRS may be eligible for discounts to flood insurance premiums. The City of Charlotte, Town of Pineville, and Mecklenburg County (unincorporated areas) currently participate in CRS. More information on CRS and how it is being implemented in Mecklenburg County can be found at http://charmeck.org/stormwater/StormWaterAgencies/pages/communityratingsystem.aspx.

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. 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. 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% annual chance event)) 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.

To assist in developing floodplain management measures, the FIS and associated FIRMs depict floodplain and floodway mapping, and flood elevation information as described below.

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.

FIRMs in Mecklenburg County include a future conditions floodplain which is based on the 1% annual flood event under potential future land use / development conditions. The future conditions floodplain is shown as a shaded Zone X on the FIRMs for all streams in the County, except for the Catawba River which uses the standard 0.2% flood event for the shaded Zone X. Communities in Mecklenburg County regulate to the future conditions floodplain as further described in Section 4.4.

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 illustrates this principle. Minimum Federal standards limit such increases to 1.0 foot, provided that hazardous velocities are not produced. However, in Mecklenburg County, the maximum increase used to develop the floodway boundary is 0.5 feet.

FIRMs in Mecklenburg County include a second floodway on the maps, referred to as the community encroachment area. The community encroachment area is based on a maximum 0.1-foot increase that accounts for potential allowable development within the floodplain fringe area. The community encroachment area is shown as a special hatched or stippled pattern on the FIRMs for all streams in the County, except for the Catawba River which just has the one standard floodway. Development is restricted in both the standard floodway and the community encroachment areas as further described in Section 4.4

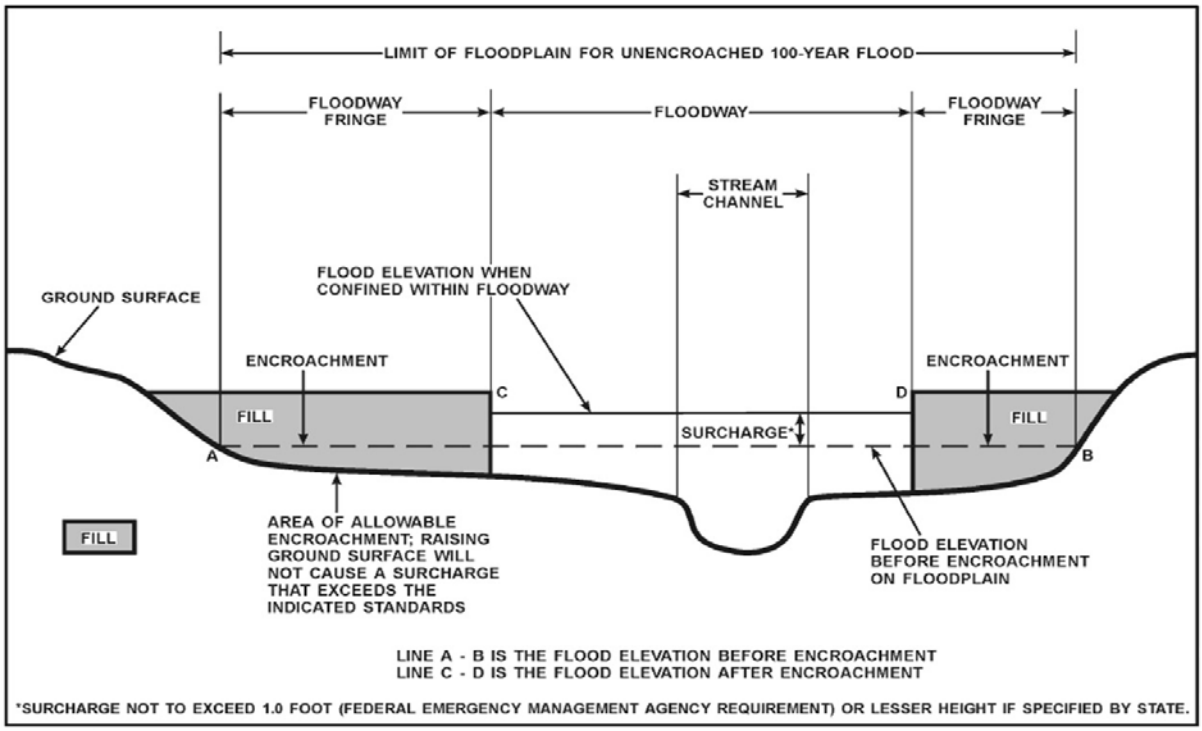

Figure 1 - Floodway Schematic

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 have traditionally been rounded to the whole foot, 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 (Table 14). BFEs are primarily intended for flood insurance rating purposes and local floodplain management purposes as described in Sections 3 and 4.

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.

This flood hazard study represents an analysis of certain watershed characteristics, some of which are summarized below. 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.

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 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.

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

Erosion, Deposition, and Debris Flow

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

Meandering and Lateral Migration

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

2.5. Coastal Flood Hazard Areas

This section is not applicable to this FIS project.

3.0 Insurance Applications

3.1. National Flood Insurance Program Insurance Zones

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

Table 2 – Flood Zone 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
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.
D	Zone D is the flood insurance rate zone that corresponds to unstudied areas where flood hazards are undetermined, but possible.

3.2. Coastal Barrier Resources System

This section is not applicable to this FIS project.

4.0 Area Studied

Mecklenburg County is located in the Piedmont region of North Carolina. It is surrounded by Iredell County to the north, Cabarrus County to the east, Union County to the southeast, South Carolina to the southwest, Gaston County to the west, and Lincoln County to the northwest. Mecklenburg County includes portions of the major river basins discussed below.

4.1. Basin Description

Catawba River Basin

The Catawba River Basin, along with the Broad River basin, forms the headwaters of the Santee-Cooper River system which flows through South Carolina to the Atlantic Ocean. It is bordered by the Yadkin River Basin to the east and north, the New River and Watauga River Basins to the north, the French Broad River Basin to the west, the Broad River Basin to the west and south, and South Carolina to the south. The Catawba River Basin covers approximately 3,285 square miles and is the eighth largest river basin in the State. It is located in the south central portion of western North Carolina within the Blue Ridge and Piedmont regions.

The Catawba River begins on the eastern slopes of the Blue Ridge Mountains in Avery, Burke, Caldwell, and McDowell counties and flows southeast to the North Carolina-South Carolina border near Charlotte. The basin contains the Linville River, one of only four rivers in the state designated as a Natural and Scenic River. The Linville flows through the Pisgah National Forest Wilderness area and into Lake James.

As the basin enters the Piedmont from the mountains, land use shifts from forest to agricultural and urban uses. Though urban areas are not numerous in the upper portions of the basin, the lower Catawba region contains many cities, including the growing metropolitan area surrounding Charlotte. In this region, urban growth has affected the water quality of the lakes, streams, and rivers.

According to land cover information developed by the Natural Resources Conservation Service, forestlands (both private and federal forests) cover approximately 45% of the basin. Agriculture (including cultivated and uncultivated cropland and pastureland) covers approximately 16% of the land area. The urban and built-up category comprises roughly 23% and exhibited the most dramatic change since 1982 (35% increase). Agriculture related land cover decreased by a total of 31% in the basin.

The population of the basin, based on 2010 census data, was estimated at 1,560,563. The overall population density of the basin is 475 persons per square mile versus a statewide average of 196 persons per square mile. The basin has experienced some of the fastest population growth in the State over the past 20 - 30 years.

The main stem of the Catawba River in North Carolina is regulated by a series of seven hydroelectric dams. The reservoirs formed by these dams are commonly referred to as the Catawba Chain Lakes. All seven of these dams are owned by Duke Energy and were created to generate electricity. The lakes begin with Lake James, located at the foot of the Blue Ridge Mountains, followed by Lake Rhodhiss, Lake Hickory, Lookout Shoals Lake, Lake Norman, Mountain Island Lake, and Lake Wylie. In addition to power generation, the lakes are popular recreational areas, and some are used for water supply purposes and for waterfront home development.

Yadkin River Basin

The Yadkin River Basin drains from the Virginia border to South Carolina, cutting a swath through west central North Carolina. With 7,400 square miles, or 15.6% of the land area, this is the second largest drainage basin in the state. It also has the second largest number of stream miles, with over 5,990 miles of freshwater streams and rivers. The basin originates on the eastern slopes of the Blue Ridge Mountains in Caldwell, Wilkes, and Surry Counties. A small portion of the Yadkin River headwaters originates in Virginia and flows northeasterly for about 100 miles. It then flows to the southeast until it joins the Uwharrie River to form the Pee Dee River. The Pee Dee River continues flowing southeasterly through South Carolina to the Atlantic Ocean.

Forest land covers approximately 50% of the basin and 95% of that forestry is privately owned. Agriculture (including cultivated and uncultivated cropland (15.6%) and pastureland (14.1%)) covers approximately 30% of the land area, while 13% of the land is developed. The urban and built-up category comprises roughly 11% and exhibited the most dramatic change between 1982 and 1992

(38% increase). Other categories that showed substantial changes during this period were pasturelands (19% increase) and the “Other” category, which includes rural transportation (26% increase).

Both cultivated and uncultivated cropland decreased by a total of 46% in the basin between 1982 and 1992. It is likely that some of this cropland was converted to pastureland and to urban and built-up areas. Major land use activities in the basin include agriculture (crops, swine, poultry, and cattle operations) and construction activities related to growth. Iredell County has the largest dairy cattle population in the state.

The population of the basin, based on 2010 census data, was estimated at 1,675,937, with an overall population density of approximately 230 persons per square mile. The Yadkin River Basin contains about 17% of North Carolina's population, encompassing all or portions of 21 counties and 93 municipalities. Three of North Carolina's 12 major metropolitan areas depend on this basin for water supply. The population for 13 counties in this basin grew by 10% from 1990 to 1997. The population for Union County grew by 26% over that same period. This region is characterized by rolling hills and geologic formations consisting of crystalline or sedimentary rocks. Because of the moderate topography, more streams drain a smaller amount of land, creating moderate drainage density.

The Yadkin Basin serves as a corridor for plants and animals migrating from the mountains to the Coastal Plain, and vice-versa. This basin contains a variety of habitat types, as well as many rare plants and animals. Sportfishes in the Yadkin River upstream of the Kerr Scott Reservoir include smallmouth bass, redbreast sunfish and bullhead catfishes. A considerable amount of white and striped bass fish exist below Idols Dam (west of Clemmons – in Forsyth County) in the spring when the fish migrate from downstream reservoirs to spawn. In addition to being important natural resources, these reservoir fisheries also help make the basin a popular place for recreation, significantly boosting the local economy.

Table 3 below lists the HUC-8 sub-basins in which Mecklenburg County falls. The table includes the main flooding sources within each basin, a brief description of the basin, and its area.

Table 3 - Basin Description

HUC-8 Sub-Basin Name	HUC-8 Sub-Basin Number	Primary Flooding Source	Description	HUC Area (square miles)
Lower Catawba	03050103	Catawba River	The Lower Catawba River Basin drains portions of Mecklenburg and Union Counties in North Carolina and ends near Lake Wateree in South Carolina.	1,334
Rocky	03040105	Rocky River	The Rocky River Basin begins in the southeast corner of Iredell County and follows Rocky River through Anson, Cabarrus, Stanly, and Union Counties before ending at the Pee Dee River.	1,417
Upper Catawba	03050101	Catawba River	The Upper Catawba River Basin headwaters are in the Appalachian Mountains (Avery, Caldwell, McDowell, and Watauga Counties) and drains through the Piedmont region (Gaston and Mecklenburg Counties) of North Carolina, ending in York County, South Carolina.	2,357

4.2. Principal Flood Problems

Table 4 below contains a list of principal flooding problems in Mecklenburg County.

Table 4 - Principal Flood Problems

Flooding Source	Problem
All Sources	Low-lying areas of Mecklenburg County are subject to periodic flooding caused by excess runoff from various streams and creeks and their tributaries. Flooding also occurs along the Catawba River, mainly along the area just below the Mountain Island Lake Dam. Approximately 10% of the land area in the County is within a mapped floodplain. The most severe flooding has been caused by tropical systems moving up from the Gulf or Atlantic coast. Flooding also occurs in spring or early summer because of heavy rains caused by stationary frontal systems. Thunderstorms occurring also account for some flooding. Damage to structures in the floodplains has occurred during floods in 1916, 1928, 1936, 1942, 1958, 1962, 1973, 1975, 1976, 1995, 1997, 2003, 2004, 2008, 2011, 2013, and 2014.

4.3. Historic Flood Elevations

There have been a number of flooding events within Mecklenburg County in location, magnitude, and impact. Below is a summary of some of the more significant events in recent history, followed by a table with some of the recorded high water elevations in the County.

2014 Storm Events

In June of 2014 a cluster of slow moving thunderstorms produced 3.5 to 5 inches of rain in less than two hours near the Mecklenburg/ Union County line. Severe urban flooding occurred in the Matthews area, with water up to the windows of some vehicles. Stream flooding included a tributary of McAlpine Creek which flooded a part of Sam Newell Road. Multiple roads were closed throughout the Town. In a separate event, 2 – 3 inches of rain fell in a couple hours near the airport, resulting in closure of multiple roads including Freedom Drive.

2013 Storm Events

Heavy rain in the mountains caused flooding May 7 and 8 along the Catawba River and its reservoirs, including Mountain Island Lake. Nearly 100 homes in the County were affected. On June 28, northern portions of the County got close to six inches of rain in four hours. With the ground already saturated, several houses flooded near McDowell Creek and Gilead Road. Intense rain on July 11 flooded parts of west Charlotte. About four inches of rain fell in less than three hours. Many streets were flooded along with six homes and several apartments.

2011 Storm Events

A thunderstorm stalled over central Mecklenburg County on August 5th dropping nearly seven inches of rain in less than four hours. More than 150 homes and businesses flooded - mostly northwest and west of uptown Charlotte. Emergency responders assisted nearly 90 people caught in flooded vehicles and flooded buildings. Damage was more than $2 million, mostly in the Irwin, Stewart and "big" Sugar Creek Watersheds. Two people drowned in Irvins Creek in southeast Charlotte.

Tropical Storm Fay (8/27- 8/28/2008) and 2008 Events

In the early morning hours of August 27, 2008, downpours from Tropical Storm Fay flooded more than 600 structures. Dozens of people were evacuated, including 20 swift-water rescues made by the Charlotte Fire Department. Approximately 90% of the flooding was in the Briar Creek Watershed. A federal Disaster Declaration was issued. Rainfall in a 24-hour period in northeastern Mecklenburg County exceeded 11 inches. Stream gages measuring water depths in local creeks set 19 new records, exceeding the 100-year flood level in some areas.

Two weeks later, thunderstorms sent Little Sugar Creek over its banks. During afternoon rush-hour on September 10th, fire crews used rafts to make 33 rescues from flooded buildings and from vehicles on flooded streets. More than five inches of rain fell in less than three hours in the headwaters of Little Sugar Creek. After the 2008 floods, Storm Water Services bought 37 flood-damaged homes before owners repaired them. The homes were demolished and the floodplain was returned to open space.

Hurricane Frances (9/5/2004)

On September 5, 2004, Hurricane Frances came ashore on the central east coast of Florida as a category 2 storm with 105 mph maximum sustained winds. According to the National Weather Service, Frances spawned more reported tornadoes – at least 101 – than any other tropical storm or hurricane to hit the Eastern Seaboard. Eleven of those tornadoes occurred in North Carolina. The remnants of Hurricane Frances washed out water lines or sanitation systems in several mountain towns leaving tens of thousands of people without drinking water for some time. In Western North Carolina many streams and rivers reached well above flood stage causing many roads to be closed. The total estimated damage from Frances is estimated to be about $9 billion (US 2004 dollars). Hurricane Frances had rainfall totals of 18 inches with 5 million dollars in damage in Mecklenburg County.

Hurricane Danny (7/23/1997)

In July 1997, the remnants of Hurricane Danny caused an estimated total of $8.5 million in property damage in Mecklenburg County and the loss of three lives in floodwaters, including a child in Charlotte who drowned when floodwater swept her into a creek. Rainfall amounts during the July 1997 storm were far greater than those of the August 1995 storm. The maximum total rainfall during the 1997 storm was 13.11 inches and the maximum rainfall amount measured in a continuous 24-hour period was 11.40 inches, which exceeds the 100-year storm total by 4.3 inches. The 24-hour rainfall recurrence interval exceeded 100 years for much of the central part of Mecklenburg County, including a large percentage of the Irwin Creek and Little Sugar Creek Basins. A railroad trestle collapsed, sending a CSX locomotive into Little Sugar Creek. More than 100 floodprone homes were bought and removed from the floodplain using Hazard Mitigation Grant Program (HMGP) and Flood Mitigation Assistance (FMA) program funds. Residents participating in these voluntary programs were relocated to higher ground out of harm's way.

Tropical Storm Jerry (8/27/1995)

In August 1995, the remnants of Tropical Storm Jerry caused rainfall ranging from 3.87 to 9.37 inches throughout the county. The highest rainfall amounts were concentrated in the southeastern part of the City of Charlotte between Providence Road and East Independence Boulevard, primarily in the Little Sugar Creek and McAlpine Creek drainage basins. The recurrence interval for a 24-hour storm exceeded 100 years in this part of the city. Due to the flooding, approximately $4 million in flood insurance claims were paid and $1 million in loans were issued for the repair of properties.

Table 5, "Historic Flood Elevations", lists selected flooding sources in Mecklenburg 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)
Briar Creek	Near Windsor Harbor Apartments	43,400	681.4	08/27/2008	*
Briar Creek	Near Chantilly Ln. and Bramlet Rd Crossing	26,300	647.4	08/27/2008	*
Briar Creek	Above Colony Rd	10,800	613.6	08/27/1995	*
Coffey Creek	S Tryon St Near Arrow Creek Dr.	6,100	577.8	08/27/2008	*
Four Mile Creek	Elm Ln. West	6,700	541.1	06/03/2013	*
Little Sugar Creek	Near Archdale Dr.	45,200	576.4	09/22/1975	*
Little Sugar Creek	Crossing at NC51	19,400	555.0	07/23/1997	*
Mallard Creek	Pavilion Blvd.	25,500	588.1	08/27/2008	*
McAlpine Creek	Sardis Rd.	75,500	566.4	01/06/1962	*
McAlpine Creek	Below McMullen Creek	23,100	534.9	08/27/1995	*
McMullen Creek	Sharon View Rd	36,000	599.8	01/06/1962	*
Paw Creek	Wilkinson Blvd	6,100	580.5	07/11/2013	*
Stewart Creek	West Morehead Street	1,400	637.4	08/05/2011	*
West branch Rocky River	Downstream River Ford Dr.	6,900	655.4	06/29/2013	*

* 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).

To provide safe flood protection and be mapped as such, FEMA specifies that all levees must: have a minimum of three feet of freeboard against the 1% annual chance flood event; be equipped with closure devices at every opening; be constructed with embankments and foundations that are certified not to fail due to erosion, seepage, or instability; and be certified against future loss of freeboard due to settling. For additional requirements, please refer to 44 CFR 65.10.

The water-carrying capacities of McDowell, Sugar, Little Sugar, McMullen, McAlpine, and Mallard Creeks were improved by dredging portions of the channels in 1916 and 1928.

Several flood control projects affect the study area. Some reduction of flood height is accomplished by removing brush and debris along certain reaches and around bridges and culverts. Other flood prevention measures, such as widening and deepening stream channels and increasing bridge and culvert openings, also help to reduce flood heights. However, such measures may not protect floodplain areas from major floods.

The Mecklenburg County subdivision ordinance includes requirements concerning development in the floodplain. The minimum first floor elevation for structures in any new development must be elevated at or above a flood protection elevation. Along the Catawba River, Mecklenburg County defines the flood protection elevation as two feet above the 1% annual chance (100-year) water-surface elevation, based on existing land use conditions. For all other areas in Mecklenburg County, the flood protection elevation is defined as one foot above the 1% annual chance (100-year) water-surface elevation, based on future land use conditions. Mecklenburg County has also decided to prohibit encroachments in regulatory floodways that are based on a 0.5-foot surcharge value using existing land use conditions discharges. In addition, a community encroachment line is being used to regulate development. More information on floodways, surcharges, and the community encroachment line is found in Section 6.3 of this FIS report.

Mecklenburg County manages a floodplain land acquisition (buyout) program to purchase floodprone properties and remove them from the floodplain. Since buying its first floodprone home in the fall of 2000, Mecklenburg County has acquired more than 325 residential structures (as of May 2016) at current fair market value. Most of the homes purchased, and later demolished, were hit by the floods of 1995, 1997, 2008, and 2011. The homes were demolished and the floodplain was returned to open space. Through the buyout program, Charlotte-Mecklenburg County Storm Water Services (CMSWS) is able to address both of its overriding objectives. First, CMSWS seeks to prevent or reduce the loss of life and damages caused by floods. Property acquisition is the most permanent, proactive step to avoiding tremendous costs and devastation later. The second objective of CMSWS is to preserve and restore the natural benefits of the floodplain. Removing structures from the floodplain has allowed areas to readapt to the natural phenomenon of flooding. Once the houses were razed and the parcels were cleared, the land became open space forever. CMSWS works with other agencies to find ways to use the open space to support other County values, such as the extension of the greenway system and improved water quality. This buyout program is funded generally from federal grants (67%) and local storm water fees (33%).

In addition to the acquisition program, the County implemented the retroFIT program in 2015. The purpose of the retroFIT program is to reduce flood damage to existing buildings in the regulated floodplain by offering financial and technical floodproofing assistance to owners. The program provides competitive grants that will aid floodplain property owners in making their dwellings more resilient to flood damage. Eligible projects are selected and ranked based upon risk reduction benefits.

4.5. Scope of Study

This FIS covers the geographic area of Mecklenburg County, North Carolina, and all jurisdictions therein. The initial countywide FIS for Mecklenburg County became Effective in February 2004. In March 2009, the FIS and FIRMs were updated to match the NCFMP statewide FIRM and FIS mapping standards. The March 2009 updates were administrative in nature, including format changes to the FIS and FIRMs and a new FIRM panel scheme (based on NCFMP's statewide scheme) - no new engineering analyses were performed.

In an effort to maintain accurate flood hazard areas in a growing and evolving community, Mecklenburg County initiated a maintenance program in 2007. As part of this overall maintenance program, the County commenced a multi-phase, multi-year effort to update the base data, engineering analyses, and floodplain mapping for the entire county. The countywide updates are being processed in four (4) phases as a series of Physical Map Revisions (PMRs), referred to as PMR1, PMR2, PMR3, and PMR4. The FIS and FIRMs are being updated with each PMR. PMR1 and PMR2 which cover the central, southeastern, and western portions of the County were previously completed. This FIS update is associated with PMR3 which covers the northern portion of the County. PMR4, which is only for the Catawba River (and associated Lakes), is underway and will be issued at a later date. As of this FIS, the Catawba River is the only flooding source in the County that has not been yet restudied and updated since the initial countywide FIS in February 2004. Table 6 below summarizes the phased PMR countywide update. Individual flooding sources (i.e. streams) are shown in Table 7. Additional map revision information for Mecklenburg County can be found in Table 15 and Table 16.

Table 6 – PMR Phase Overview

Phase	Area of County	County Watersheds	FIS Update Date
PMR1	Central / Southeastern	Back, Briar, Caldwell, Clear, Clem, Crooked, Four Mile, Goose, Little Sugar (Upper and Lower), McAlpine, McKee, McMullen, Reedy, Six Mile, Twelve Mile	February 2014
PMR2	Western	Beaverdam, Catawba, Gar, Irwin, Lake Wylie, Long, Mountain Island Lake (Upper and Lower), McDowell, Paw, Steele, Sugar	September 2015
PMR3	Northeastern	Clarke, Lower Clarke, Mallard, Rocky River	August 2016 (Preliminary)
PMR4	Western	Catawba River System Only	In-Progress

All riverine flooding sources in this FIS are based on "detailed study" methods. There are no flooding sources that are based on "approximate" or "limited detailed study" methods, or that were "redelineated" from studies performed prior to the initial countywide FIS in February 2004. Table 7 below lists all flooding sources within the county that were studied by detailed methods for this FIS and previous FISs. As indicated above, flooding sources within the PMR3 study area/watersheds, which include 23 streams, were newly restudied for this FIS.

Table 7 - Flooding Sources Studied by Detailed Methods

Source	Watershed	Riverine Sources		Length (mi)	Affected Communities
		From	To		
Back Creek	Back	Mecklenburg / Cabarrus County Line	Approximately 3,500 feet upstream of EWT Harris Boulevard	4.62	City of Charlotte Mecklenburg County
Back Creek Tributary	Back	Confluence with Back Creek	Approximately 250 feet upstream of Back Creek Church Road	2.27	City of Charlotte Mecklenburg County
Beaverdam Creek	Beaverdam	Confluence with Lake Wylie	Approximately 10,500 feet upstream of Dixie River Road	2.5	City of Charlotte Mecklenburg County
Beaverdam Creek Tributary	Beaverdam	Confluence with Beaverdam Creek	Approximately 400 feet downstream of I-485	1.29	Mecklenburg County
Blankmanship Branch	Steele	Mecklenburg County / York County, SC Line	Approximately 95 feet upstream of Steele Creek Road	0.74	City of Charlotte Mecklenburg County
Briar Creek	Briar	Confluence with Little Sugar Creek	Approximately 1,800 feet upstream of Ruth Drive	9.71	City of Charlotte
Briar Creek Tributary 1	Briar	Confluence with Briar Creek	Approximately 425 feet upstream of Colony Road	0.83	City of Charlotte
Briar Creek Tributary 2	Briar	Confluence with Briar Creek	Approximately 500 feet upstream of Galway Drive	0.66	City of Charlotte
Caldwell Creek	Caldwell	Mecklenburg / Cabarrus County Line	Approximately 4,986 feet upstream of Cabarrus County Line	0.94	Mecklenburg County
Caldwell Station	McDowell	Confluence with McDowell Creek	Approximately 2,360 feet upstream of Statesville Road	1.28	Mecklenburg County Town of Cornelius Town of Huntersville
Campbell Creek	McAlpine	Confluence with McAlpine Creek	Approximately 700 feet upstream of Footpath	5.25	City of Charlotte
Cane Creek	Clarke	Confluence with South Prong Clarke Creek	Approximately 2.3 miles upstream of confluence with South Prong Clarke Creek	2.30	Mecklenburg County
Catawba River	Catawba	Confluence with Lake Wylie	Mountain Island Dam	14.89	City of Charlotte Mecklenburg County
Catawba River Tributary 1		Confluence with Catawba River	Approximately 4,373 feet upstream of Moores Chapel Road	1.13	Mecklenburg County
Catawba River Tributary 2	Lower Mountain Island	Confluence with Catawba River	Approximately 10,593 feet upstream of confluence with Catawba River	2.00	City of Charlotte Mecklenburg County
Catawba River Tributary 3	Upper Mountain Island	Confluence with Catawba River	Approximately 85 feet upstream of Cashion Road	2.17	Mecklenburg County Town of Huntersville
Clarke Creek	Clarke	Mecklenburg / Cabarrus County Line	Approximately 2.11 miles upstream of Mecklenburg / Cabarrus County Line	2.11	Mecklenburg County Town of Huntersville
Clarke Creek Tributary	Lower Clarke	Mecklenburg / Cabarrus County Line	Approximately 1.07 miles upstream of Highland Creek Parkway	1.59	City of Charlotte Mecklenburg County

Source	Watershed	Riverine Sources		Length (mi)	Affected Communities
		From	To		
Clarks Creek	Mallard	Confluence with Mallard Creek	Approximately 520 feet upstream of Dearmon Road	3.77	City of Charlotte
Clarks Creek Tributary 1	Mallard	Confluence with Clarks Creek	Approximately 3,355 feet upstream of Hucks Road	1.44	City of Charlotte Mecklenburg County
Clarks Creek Tributary 1A	Mallard	Confluence with Clarks Creek Tributary 1	Approximately 1,900 feet upstream of Davis Lake Parkway	1.41	City of Charlotte Mecklenburg County
Clear Creek	Clear	Mecklenburg / Cabarrus County Line	Approximately 1,655 feet upstream of Interstate 485	6.26	Mecklenburg County Town of Mint Hill
Clear Creek Tributary	Clear	Confluence with Clear Creek	Approximately 1,643 feet upstream of Truelight Church Road	2.89	Mecklenburg County Town of Mint Hill
Clems Branch	Clems	Mecklenburg/ Union County Line	Approximately 150 feet upstream of Lancaster Highway	0.65	City of Charlotte
Coffey Creek	Sugar	Confluence with Sugar Creek	Approximately 3,530 feet upstream of West Blvd	6.31	City of Charlotte Mecklenburg County
Dairy Branch	Little Sugar	Confluence with Little Sugar Creek	Approximately 171 feet upstream of Kenilworth Avenue	0.57	City of Charlotte
Derita Branch	Little Sugar	Confluence with Little Sugar Creek	Approximately 3,104 feet upstream of West Craighead Road	1.72	City of Charlotte
Dixon Branch	Long	Confluence with Long Creek	Approximately 1,600 feet upstream of confluence with Dixon Branch Tributary	1.40	City of Charlotte Mecklenburg County
Dixon Branch Tributary	Long	Confluence with Dixon Branch	Approximately 1,550 feet upstream of Highway 21	1.25	City of Charlotte Mecklenburg County
Doby Creek	Mallard	Confluence with Mallard Creek	Approximately 2,900 feet upstream of University City Boulevard	3.12	City of Charlotte
Doby Creek Tributary	Mallard	Confluence with Doby Creek	Approximately 640 feet upstream of IBM Drive	1.50	City of Charlotte
Duck Creek	Goose	Mecklenburg / Union County Line	Approximately 6,435 feet upstream of County line.	1.21	Mecklenburg County Town of Mint Hill
Edwards Branch	Briar	Confluence with Briar Creek	Approximately 400 feet upstream of Sheffield Drive	2.26	City of Charlotte
Ferrelltown Creek	Clarke	Confluence with Clarke Creek	Approximately 1.37 miles upstream of confluence with Clarke Creek	1.37	Mecklenburg County
Flat Branch	Sixmile	Confluence with Sixmile Creek	Approximately 1,665 feet upstream of Truelight Church Road	3.09	City of Charlotte
Fourmile Creek	Fourmile	Confluence with McAlpine Creek	Approximately 150 feet upstream of E. John Street	9.64	City of Charlotte Town of Matthews
Gar Creek	Gar	Confluence with Mountain Island Lake (Catawba River)	Approximately 1,200 feet upstream of Kerns Road	3.50	Mecklenburg County Town of Huntersville
Goose Creek	Goose	Mecklenburg / Union County Line	Approximately 6,300 feet upstream of Lawyers Road	1.99	Mecklenburg County Town of Mint Hill Town of Stallings
Gum Branch	Long	Confluence with Long Creek	Approximately 460 feet upstream of Old Plank Road	3.19	City of Charlotte Mecklenburg County
Gutter Branch	Long	Confluence with Long Creek	Approximately 4,970 feet upstream of Oakdale Road	3.04	Mecklenburg County
Irvins Creek	McAlpine	Confluence with McAlpine Creek	Approximately 361 feet upstream of Lawyers Road	6.19	City of Charlotte Town of Matthews Town of Mint Hill
Irvins Creek Tributary 1	McAlpine	Confluence with Irvins Creek	Approximately 975 feet upstream of Footpath	2.66	City of Charlotte Town of Matthews
Irvins Creek Tributary 2	McAlpine	Confluence with Irvins Creek	Approximately 3,105 feet upstream of Lawyers Road	1.30	Town of Mint Hill
Irwin Creek	Irwin	Confluence with Sugar Creek	Approximately 4,700 feet upstream of Nevin Road	10.74	City of Charlotte
Irwin Creek Tributary 1	Irwin	Confluence with Irwin Creek	Approximately 3,000 feet upstream of Fieldcrest Road	0.78	City of Charlotte
Kennedy Branch	Irwin	Confluence with Irwin Creek	Approximately 200 feet upstream of Slater Road	2.05	City of Charlotte
Kings Branch	Sugar	Confluence with Sugar Creek	Approximately 370 feet upstream of I-77	4.40	City of Charlotte
Little Hope Creek	Little Sugar	Confluence with Little Sugar Creek	Approximately 182 feet upstream of East Woodlawn Road	1.32	City of Charlotte
Little Hope Creek Tributary	Little Sugar	Confluence with Little Hope Creek	Approximately 266 feet upstream of Bradbury Drive	0.39	City of Charlotte

Source	Watershed	Riverine Sources		Length (mi)	Affected Communities
		From	To		
Little Paw Creek	Paw	Confluence with Lake Wylie (Catawba River)	Approximately 4,320 feet upstream of Mt. Olive Church Road	1.57	Mecklenburg County
Little Sugar Creek	Little Sugar	Mecklenburg County/ Lancaster County, SC line	Approximately 750 feet upstream of Kent Brook Drive	19.20	City of Charlotte Town of Pineville
Long Creek	Long	Confluence with Catawba River	Approximately 2,410 feet upstream of Highway 21	15.08	City of Charlotte Mecklenburg County
Long Creek Tributary 1	Long	Confluence with Long Creek	Approximately 3,190 feet upstream of confluence with Long Creek	0.60	Mecklenburg County
Long Creek Tributary 2	Long	Confluence with Long Creek	Just downstream of Stoneyridge Drive	0.41	City of Charlotte
Long Creek Tributary 3	Long	Confluence with Long Creek	Approximately 800 feet upstream of Gum Branch Road	0.35	City of Charlotte
Mallard Creek	Mallard	Cabarrus County Line	Approximately 465 feet upstream of Old Potters Road	10.16	City of Charlotte Mecklenburg County
Mallard Creek Tributary	Mallard	Confluence with Mallard Creek	Approximately 1,450 feet upstream of Hubbard Road	0.48	City of Charlotte
McAlpine Creek	McAlpine	Mecklenburg County/ Lancaster County, SC line	Approximately 2,075 feet upstream of Albemarle Road	22.04	City of Charlotte Mecklenburg County Town of Mint Hill Town of Pineville
McAlpine Creek Tributary 1	McAlpine	Confluence with McAlpine Creek	Approximately 1,600 feet upstream of Golf Cart Path	1.26	City of Charlotte
McAlpine Creek Tributary 1A	McAlpine	Confluence with McAlpine Creek Tributary 1	Approximately 501 feet upstream of Ballantyne Com. Parkway	1.1	City of Charlotte
McAlpine Creek Tributary 3	McAlpine	Confluence with McAlpine Creek	Approximately 551 feet upstream of Providence Road	1.22	City of Charlotte
McAlpine Creek Tributary 6	McAlpine	Confluence with McAlpine Creek	Approximately 5,577 feet upstream of confluence with McAlpine Creek	1.05	City of Charlotte Mecklenburg County Town of Mint Hill
McCullough Branch	Sugar	Confluence with Sugar Creek	Approximately 415 feet upstream of Nations Ford Road	1.43	City of Charlotte Town of Pineville
McDowell Creek	McDowell	Confluence with Mountain Island Lake	Approximately 400 feet upstream of Statesville Road	9.40	Mecklenburg County Town of Cornelius Town of Huntersville
McDowell Creek Tributary 1	McDowell	Confluence with McDowell Creek	Approximately 1,025 feet upstream of Summer Serenade Road	0.80	Town of Huntersville
McDowell Creek Tributary 2	McDowell	Confluence with McDowell Creek	Approximately 1,150 feet upstream of Colonial Garden Drive	0.56	Town of Huntersville
McIntyre Creek	Long	Confluence with Long Creek	Approximately 640 feet upstream of Lawnmeadow Drive	4.34	City of Charlotte Mecklenburg County
McKee Creek	McKee	Mecklenburg / Cabarrus County Line	Approximately 600 feet upstream of Denbur Drive	3.12	City of Charlotte Mecklenburg County
McMullen Creek	McMullen	Confluence with McAlpine Creek	Approximately 3,962 feet upstream of Addison Drive	10.85	City of Charlotte Town of Pineville
McMullen Creek Tributary	McMullen	Confluence with McMullen Creek	Approximately 300 feet upstream of North Sharon Amity Road	0.70	City of Charlotte
North Fork Crooked Creek	North Fork Crooked	Mecklenburg / Union County Line	Approximately 2,324 feet upstream of County Line	0.44	Town of Matthews
North Fork Crooked Creek Tributary	North Fork Crooked	Mecklenburg / Union County Line	Approximately 630 feet upstream of Stallings Road	0.40	Town of Matthews
North Prong Clarke Creek	Clarke	Confluence with Clarke Creek	Approximately 1,570 feet upstream of Ramah Church Road	2.60	Mecklenburg County Town of Huntersville
Paw Creek	Paw	Confluence with Lake Wylie (Catawba River)	Approximately 3,050 feet upstream of Freedom Drive	7.07	City of Charlotte Mecklenburg County
Paw Creek Tributary	Paw	Confluence with Paw Creek	Approximately 4,450 feet upstream of confluence with Paw Creek	0.84	City of Charlotte
Paw Creek Tributary 1A	Paw	Confluence with Paw Creek	Approximately 160 feet upstream of Freedom Drive	0.98	City of Charlotte
Polk Ditch	Steele	Confluence with Walker Branch	Approximately 300 feet upstream of S Tryon St	1.42	City of Charlotte
Ramah Creek	Clarke	Confluence with Clarke Creek	Approximately 1,400 feet upstream of New Birth Drive	5.53	Mecklenburg County Town of Huntersville
Rea Branch	McAlpine	Confluence with McAlpine Creek	Approximately 214 feet upstream of Sequoia Red Lane	1.0	City of Charlotte

Source	Watershed	Riverine Sources		Length (mi)	Affected Communities
		From	To		
Reedy Creek	Reedy	Mecklenburg / Cabarrus County Line	Approximately 3,950 feet upstream of Plaza Road	3.83	City of Charlotte Mecklenburg County
Reedy Creek Tributary 1	Reedy	Mecklenburg / Cabarrus County Line	Approximately 2,208 feet upstream of Cabarrus County line	0.41	City of Charlotte Mecklenburg County
Reedy Creek Tributary 2	Reedy	Confluence with Reedy Creek	Approximately 6,300 feet upstream of Robinson Church Road	1.82	City of Charlotte
Reedy Creek Tributary 3	Reedy	Confluence with Reedy Creek	Approximately 150 feet upstream of Chapparal Lane	2.68	City of Charlotte Mecklenburg County
Rocky Branch	Fourmile	Confluence with Fourmile Creek	Approximately 1,200 feet upstream of Providence Road	2.09	City of Charlotte
Rocky River	Rocky	Mecklenburg / Cabarrus County Line	Approximately 2.29 miles upstream of East Rocky River Road	3.79	Town of Davidson Mecklenburg County
Rocky River Tributary	Lower Clarke	Mecklenburg / Cabarrus County Line	Approximately 3,520 feet upstream of I-85	0.82	Mecklenburg County
Sardis Branch	McAlpine	Confluence with McAlpine Creek	Approximately 817 feet upstream of Sardis Road	1.63	City of Charlotte
Sherman Branch	Clear	Confluence with Clear Creek	Approximately 2,850 feet upstream of Cabarrus Road	0.84	Mecklenburg County
Sixmile Creek	Sixmile	North Carolina/South Carolina State boundary	Approximately 0.5 mile upstream of Tilley Morris Road	8.84	City of Charlotte Mecklenburg County
South Prong Clarke Creek	Clarke	Confluence with Clarke Creek	Approximately 7,800 feet upstream of Asbury Chapel Road	2.41	Mecklenburg County Town of Huntersville
South Prong West Branch Rocky River	Rocky	Confluence with West Branch Rocky River	Approximately 1.21 miles upstream of confluence with West Branch Rocky River	3.48	Mecklenburg County Town of Davidson
South Prong West Branch Rocky River Tributary	Rocky	Confluence with South Prong West Branch Rocky River	Approximately 4,855 feet upstream of confluence with South Prong West Branch Rocky River	0.92	Mecklenburg County
Steele Creek	Steele	Mecklenburg / York County, SC Line	Approximately 170 feet upstream of Brown-Grier Road	4.49	City of Charlotte
Stevens Creek	Goose	Confluence with Goose Creek	Approximately 2,500 feet upstream of Thompson Road	1.76	Mecklenburg County Town of Mint Hill Town of Stallings
Stevens Creek Tributary	Goose	Confluence with Stevens Creek	Approximately 2,600 feet upstream of Thompson Road	0.71	Town of Mint Hill
Stewart Creek	Irwin	Confluence with Irwin Creek	Approximately 650 feet upstream of Capps Hill Mine Road	5.30	City of Charlotte Mecklenburg County
Stewart Creek Tributary 1	Irwin	Confluence with Stewart Creek	Approximately 1,550 feet upstream of Berryhill Road	0.76	City of Charlotte
Stewart Creek Tributary 2	Irwin	Confluence with Stewart Creek	Approximately 275 feet upstream of I -85	1.58	City of Charlotte
Stewart Creek Tributary 3	Irwin	Confluence with Stewart Creek	Approximately 2,065 feet upstream of Hoskins Road	1.05	City of Charlotte
Stony Creek	Mallard	Confluence with Mallard Creek	Approximately 2,695 feet upstream of Mallard Creek Road	4.09	City of Charlotte Mecklenburg County
Stony Creek Tributary	Mallard	Confluence with Stony Creek	Approximately 1.0 miles upstream of Mallard Creek Road	2.28	City of Charlotte Mecklenburg County
Stowe Branch	Wylie	Confluence with Lake Wylie (Catawba River)	Approximately 100 feet upstream of Shopton Road	0.80	City of Charlotte
Sugar Creek	Sugar	Mecklenburg / York County, SC Line	Confluence of Irwin Creek	12.12	City of Charlotte Town of Pineville
Swan Run	McAlpine	Confluence with McAlpine Creek	Approximately 5,255 feet upstream of Sharon View Road	1.35	City of Charlotte
Taggart Creek	Sugar	Confluence with Sugar Creek	Approximately 443 feet upstream of Denver Avenue	3.45	City of Charlotte
Ticer Branch	Pow	Confluence with Paw Creek	Approximately 2,330 feet upstream of Wilkinson Boulevard	1.54	City of Charlotte Mecklenburg County
Toby Creek	Mallard	Confluence with Mallard Creek	Approximately 1,195 feet upstream of Autumwood Lane	3.29	City of Charlotte
Torrence Creek	McDowell	Confluence with McDowell Creek	Approximately 2,450 feet upstream of Interstate 77	3.41	Town of Huntersville
Torrence Creek Tributary 1	McDowell	Confluence with Torrence Creek	Approximately 1,345 feet upstream of Statesville Road	2.62	Town of Huntersville
Torrence Creek Tributary 2	McDowell	Confluence with Torrence Creek	Approximately 250 feet upstream of Interstate 77	1.83	Town of Huntersville

Source	Watershed	Riverine Sources		Length (mi)	Affected Communities
		From	To		
Walker Branch	Steele	Mecklenburg / York County, SC Line	Approximately 1,625 feet upstream of S Tryon St	2.20	City of Charlotte
Walker Branch Tributary	Steele	Confluence with Walker Branch	Approximately 370 feet upstream of Steele Creek Road	0.82	City of Charlotte
West Branch Rocky River	Rocky	Confluence with Rocky River	Approximately 1,340 feet upstream of Grey Road	4.41	Mecklenburg County Town of Davidson
West Branch Rocky River Tributary	Rocky	Confluence West Branch Rocky River	Approximately 835 feet upstream of Davis Road	1.65	Mecklenburg County Town of Davidson

This FIS also incorporates the following determinations of letters issued by FEMA resulting in map revisions (Letters of Map Revision (LOMRs)), as shown in Table 8.

Table 8 - Letters of Map Revision

Case Number	Date Issued	Flooding Source(s) / Project Identifier	Community
14-04-4804P	10/13/2014	Little Hope Creek Little Hope Creek Tributary	City of Charlotte
14-04-8637P	10/7/2014	Little Sugar Creek	City of Charlotte

5.0 Engineering Methods

Flood events of a magnitude expected to occur with a 10%, 2%, 1%, and the 0.2% annual chance have been selected as having special significance for developing sound floodplain management programs. Standard hydrologic and hydraulic study methods were used to determine the flood hazard data required for this FIS. A summary of hydrologic and hydraulic methodologies is provided below. It is noted that the engineering methodologies used for the map maintenance (i.e. PMR) based revisions are described in the 'Floodplain Analysis and Mapping Standards Guidance Document' (Standards Document), originally developed in 2007 at the beginning of the PMR1 study. The Standards Document was updated in 2012 (during the PMR2 study). The majority of revisions were clarifications or administrative in nature, however, there were minor changes to parameter tables (e.g. Curve Numbers), which are also summarized in the subsections below.

Additional detail on engineering methodologies can be obtained by contacting the County, NCFMP, or FEMA referenced on the "Notice to Flood Insurance Study Users" at the beginning of this report.

5.1. Hydrologic Analyses

Hydrologic analyses were carried out to establish the peak discharge-frequency relationships for each identified flooding source (Table 7). Hydrologic analyses are typically performed at the watershed level. Depending on factors such as watershed size and shape, land use and urbanization, and natural or man-made storage, various models or methodologies may be applied. A summary of hydrology analyses organized by the source FIS of analysis for identified flooding sources is presented below.

Initial County-Wide Analysis (February 2004 / March 2009) – Catawba River ONLY

The Catawba River is a major river that flows along the western boundary of Mecklenburg County. The drainage area of the Catawba River adjacent to Mecklenburg County is over 2,000 square miles, with the contributing drainage area extending to the mountains of North Carolina. Flows along the Catawba River are heavily influenced by a series of reservoirs that are used for hydroelectric power generation. There are three (3) reservoirs along the Catawba River along the Mecklenburg County border (Lake Norman, Mountain Island Lake, and Lake Wylie), and an additional four (4) upstream of the County. Due to the size and complexity of the contributing drainage area, hydrologic analyses of the Catawba River adjacent to Mecklenburg County are based off statistical flood frequency analysis of stream gages along the Catawba River. The statistical analyses consider gages and other historic records and account for impacts to flows from the reservoirs using a combination of Log Pearson III analysis (per Bulletin 17B guidelines) with Maintenance of Variance Extension (MOVE) techniques.

PMR Revisions (February 2014, September 2015, and This Revision)

As mentioned above, the County developed a Standards Document at the beginning of PMR1 to help ensure consistency of analyses for all PMRs. An overview of the hydrologic analyses for map maintenance PMRs to date is described below. The reader is referred to the Standards Document for additional details.

Hydrologic analyses for the PMR FIS revisions were based on SCS rainfall-runoff methodology using the U.S. Army Corps of Engineers (USACE) Hydrologic Engineering Center's Hydrologic Modeling System (HEC-HMS) to determine peak flows. HEC-HMS simulates the surface runoff response of a watershed area to a given precipitation event. In the model, a watershed area is represented as an interconnected system of hydrologic components (e.g. subbasins, routing reaches, storage areas, etc.) which is used to simulate the precipitation-runoff process through time and space within the watershed. The primary output of HEC-HMS is streamflow hydrographs (estimates of flow versus time based on a given precipitation simulation) at strategic locations within the watershed. Peak flows are extracted from computed hydrographs along a stream system and subsequently used for subsequent hydraulic floodplain analysis. The primary input parameters used in SCS rainfall-runoff methodology are precipitation, subbasin drainage areas, curve numbers, time of concentration / lag time, and hydrologic routing, which are briefly described below.

Precipitation depths for modeled frequency storms were based on USGS precipitation study SIR 2006-5017. Precipitation depths used in the HEC-HMS models ranged from 3.06 inches for the 50% annual chance event to 9.23 inches for the 0.2% annual chance event. The rainfall used for the 1% annual chance event was 7.29 inches.

Subbasins for each study watershed were delineated from available County LiDAR-based digital elevation models (DEMs) using a combination of automated processing in Geographic Information Systems (GIS) and manual refinements. LiDAR from 2007 was used for PMR1 and PMR2, whereas, updated LiDAR from 2012 was used for PMR 3. Subbasins developed for the PMR studies generally ranged between 30 and 200 acres, with an overall average size of approximately 90 acres.

Curve numbers (CNs) were derived from land use and soil information. GIS layers representing existing and future conditions land use were developed for each study watershed. Existing land use was largely based on a layer that is maintained and regularly updated by CMSWS. The CMSWS layer was verified and updated per the Standards Document. Future land use was largely based on a layer maintained and regularly updated by Charlotte-Mecklenburg Planning Department. This layer was modified and translated into the same 12 classifications used for the existing land use layer per the Standards Document. For watershed areas that extended outside of Mecklenburg County (e.g. Rocky River, Sixmile, etc.), existing and future land use information was obtained from the appropriate jurisdiction/agency and integrated into the PMR land use layers.

Time of concentrations were developed using methodology described in TR-55 (SCS, 1986). Longest flow paths were developed for each subbasin using automated tools in GIS. Flowpaths were then inspected and adjusted as necessary for them to provide reasonable representation of the subbasin. The total flowpath for each subbasin was then divided into the flow segments/regimes (e.g. sheet flow, shallow concentrated flow, channel flow, etc.). Travel times for each flow path segment were calculated and then summed to estimate a total time of concentration for each subbasin. Lag time for each subbasin was then calculated by multiplying the time of concentration by 0.6 per standard TR-55 methodology.

Hydrologic routing was implemented to route each source subbasin hydrograph through the natural drainage system (i.e. stream channel and reservoirs). Hydrologic routing for channels in the PMR studies was accomplished using a combination of Modified Puls and Muskingum-Cunge methodologies for channel routing. For routing reaches that corresponded with study streams (i.e. streams in Table 7), the Modified Puls method was employed using storage-outflow information from the HEC-RAS models (discussed in Section 5.2). The Muskingum-Cunge method was used for the remaining routing reaches using simplified channel geometries and slopes that were estimated from LiDAR data and/or assumed based on engineering judgement. Hydrologic routing for reservoirs/ponds was only considered for limited cases where it was deemed that they would have an appreciable impact on peak flows in the study streams. For those cases where reservoir routing was deemed appropriate, level-pool methodology was used.

The HEC-HMS models were run and then calibrated to stream flow gages (where available) using historic storm rainfall and gage records. Model calibration, where necessary, generally involved adjustments to CN, lag time, or other model parameters to obtain reasonable correlation with observed flows. Details of calibration are provided in the watershed specific reports developed for the PMR studies and are available upon request from the County.

Differences in Methodologies between PMR Studies

As indicated above, the County developed the Standards Document at the initiation of the PMR1 study to help ensure consistency for all the map maintenance PMR studies. As the studies were performed by several different engineering contractors over a period of several years, there are some differences in source data, models, and specific application of engineering methodologies. The most significant difference in source data was the source of LiDAR (i.e. ground elevation) information. PMR1 and PMR2 used LiDAR that was flown in 2007, whereas PMR3 used an updated LiDAR source from 2012. For the HEC-HMS modeling, PMR1 used Version 3.4, whereas, PMR2 and PMR3 used Version 3.5. A portion of PMR2 and all of PMR3 included minor changes to CNs that were updated with the 2012 revision of the Standards Document (2012). Details of the application of engineering methodologies are described in watershed specific reports developed for the PMRs.

Little Hope Creek Subwatershed Letter of Map Revision (February 2015)

Following the Preliminary issuance of the PMR1 FIS revision, the County initiated an independent study to re-evaluate the engineering analysis for the Little Hope Creek subwatershed due to concerns with flood decreases shown by the PMR1 analysis. The Little Hope Creek subwatershed is in the Little Sugar Creek Watershed and contains the Little Hope Creek and Little Hope Creek Tributary mapped flooding sources. The study, which used HEC-HMS (Version 3.5), recommended increases in the peak flows and flood elevations. The updated study was submitted as a LOMR (Case# 14-04-4804P), which became Effective on February 24, 2014. The revised peak flows, flood elevations, and floodplain and floodway mapping associated with the LOMR are incorporated into this FIS.

A summary of the drainage area-peak discharge relationships for the flooding sources studied by detailed methods is shown in the table below. The table reflects peak discharges from all FIS revisions discussed above.

Table 9 - 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	0.2% Annual Chance
Back Creek						
At Mecklenburg County Line	6.86	1690	2963	3607	4019	5364
Approximately 400 ft. upstream of Mecklenburg County Line	4.60	977	1658	1992	2199	2950
Approximately 3,100 ft. downstream of Katherine Kiker Road	2.83	673	1147	1383	1644	2071
Approximately 1,100 ft. downstream of McLean Road	2.05	559	1012	1208	1497	1707
Approximately 200 ft. upstream of McLean Road	1.45	507	855	1008	1261	1380
Approximately 800 ft. upstream of E. W.T. Harris Boulevard	1.07	393	705	841	1054	1153
Back Creek Tributary						
At Confluence with Back Creek	2.23	932	1525	1779	2219	2475
Approximately 100 ft. downstream of Back Creek Church Road	0.27	732	1118	1291	1440	1685
Beaverdam Creek						
Approx. 50' US of Windy Gap Rd.	4.47	1421	2718	3372	5144	5203
At Confluence with Beaverdam Creek Tributary	3.23	996	1900	2372	3811	3667
Approx. 1.1 miles US of confluence with Beaverdam Creek Tributary	1.1	396	809	1040	1862	1680
Approx. 2.0 miles US of confluence with Beaverdam Creek Tributary	0.73	332	778	984	1750	1629
Approx. 500' DS of American Legion Lake	0.5	223	493	638	1202	1111
Beaverdam Creek Tributary						
Approx. 300 ft. upstream of confluence with Beaverdam Creek	1.74	564	1217	1590	2480	2580
Approximately 1.1 miles upstream of Confluence with Beaverdam Creek	1.06	452	884	1114	1744	1730
Immediately DS of I-485 crossing	0.69	327	618	762	1159	1140
Blankmanship Branch						
At York County Line	1.50	467	863	1016	1231	1422
Approximately 560 ft. upstream of York County Line	1.34	428	809	944	1132	1294
Approximately 1070 ft. downstream of Steele Creek Road	1.16	397	761	880	1050	1188
Approximately 100 ft. downstream of Steele Creek Road	0.91	383	742	850	996	1119
Briar Creek						
Approximately 50 ft. upstream of Park Road	21.57	3260	4484	4871	5065	6150
Approximately 2,450 ft. downstream of Runnymede Lane	21.22	3246	4466	4852	5047	6040
Approximately 610 ft. downstream of Runnymede Lane	19.14	3150	4345	4726	4924	5682
Approximately 20 ft. upstream of Colony Road	18.92	3142	4334	4714	4912	5667
Approximately 960 ft. upstream of Colony Road	18.86	3140	4331	4711	4909	5663
Approximately 30 ft. upstream of Sharon Road	18.53	3127	4313	4692	4891	5640
At Providence Road	17.98	3131	4289	4668	4868	5612
Approximately 1,450 ft. upstream of Providence Road	17.21	3100	4254	4634	4839	5574
Approximately 1,620 ft. downstream of Randolph Road	16.08	3044	4205	4600	4813	5533
Approximately 40 ft. upstream of Randolph Road	15.20	2996	4164	4568	4782	5488
Approximately 20 ft. upstream of Monroe Road	14.68	2965	4121	4521	4734	5432
Approximately 460 ft. downstream of Bramlet Road	14.50	2953	4106	4505	4717	5412

Flooding Source		Discharges (cfs)				
Location	Drainage Area (square miles)	10% Annual Chance	2% Annual Chance	1% Annual Chance	1% Annual Future Annual	0.2% Annual Chance
Approximately 800 ft. upstream of Bramlet Road	14.17	3318	4996	5649	6035	7405
Approximately 190 ft. upstream of Commonwealth Avenue	11.20	2764	4188	4712	5031	6066
At Central Avenue	10.00	2984	4850	5910	6241	7359
Approximately 1,370 ft. upstream of Central Avenue	9.77	3010	4937	6053	6483	7963
Approximately 2,540 ft. downstream of Country Club Drive	9.02	2974	4906	6038	6733	8829
Approximately 1,530 ft. downstream of Country Club Drive	8.05	2825	4643	5691	6347	8261
Approximately 20 ft. upstream of Country Club Drive	7.45	2724	4475	5472	6090	7894
Approximately 30 ft. upstream of Eastway Drive	6.89	2679	4332	5300	5867	7514
Approximately 70 ft. upstream of Shamrock Drive	6.02	2479	4007	4790	5289	6716
Approximately 2,910 ft. downstream of Shannonhouse Drive	4.86	2320	3818	4506	4937	6242
Approximately 1,490 ft. downstream of Shannonhouse Drive	3.83	1949	3179	3751	4039	5209
Approximately 20 ft. upstream of Shannonhouse Drive	1.68	1024	1653	1945	2102	2749
Approximately 20 ft. upstream of The Plaza	1.49	1029	1656	1947	2108	2672
Approximately 390 ft. downstream of Barrington Drive	0.96	699	1125	1322	1440	1815
Approximately 1,510 ft. upstream of Barrington Drive	0.39	284	461	543	579	748
Briar Creek Tributary 1						
At Runnymede Lane	1.20	670	1011	1195	1274	1793
Approximately 390 ft. upstream of Colony Road	1.05	732	1213	1434	1508	1982
Approximately 50 ft. upstream of Sharon Park Road	0.65	452	745	883	937	1233
Briar Creek Tributary 2						
Approximately 570 ft. upstream of Galway Drive	1.71	906	1458	1714	1846	2369
Approximately 20 ft. upstream of Milton Road	0.89	550	884	1039	1108	1401
Approximately 40 ft. upstream of Barrington Drive	0.37	222	358	421	448	579
Caldwell Creek						
At Cabarrus County Line	1.52	340	746	1004	1603	1755
Approximately 900 ft. upstream of Cabarrus County Line	1.15	261	580	794	1246	1357
Caldwell Station						
Just upstream of Sam Furr Road	3.00	2738	3989	4534	4597	6002
Just upstream of Statesville Road	2.47	1143	1608	1833	1863	2344
Approximately 0.5 mi. upstream of Statesville Road	1.28	848	1399	1704	1735	2544
Campbell Creek						
At Confluence with McAlpine Creek	7.35	970	1886	2385	2673	3753
Approximately 2,700 ft. upstream of W.T. Harris Boulevard	6.78	939	1831	2316	2600	3645
Approximately 2,100 ft. downstream of Executive Center Drive	4.54	758	1499	1888	2150	2932
Approximately 1750 ft. upstream of Albemarle Road	2.88	568	1129	1411	1631	2170
Approximately 400 ft. downstream of Barcliff Park	1.22	370	734	924	1051	1463
Cane Creek						
Approximately 5,920 ft. upstream of confluence with South Prong Clarke	2.57	992	1823	2257	2284	3363
Approximately 6,850 ft. upstream of confluence with South Prong Clarke Creek	2.37	878	1650	2044	2070	3077
Approximately 7,230 ft. upstream of confluence with South Prong Clarke Creek	2.13	731	1406	1746	1778	2672
Approximately 10,390 ft. upstream of confluence with South Prong Clarke Creek	1.90	633	1246	1570	1609	2444

Flooding Source		Discharges (cfs)				
Location	Drainage Area (square miles)	10% Annual Chance	2% Annual Chance	1% Annual Chance	1% Annual Future Annual	0.2% Annual Chance
Approximately 11,820 ft. upstream of confluence with South Prong Clarke Creek	1.09	413	743	913	923	1404
Approximately 12,690 ft. upstream of confluence with South Prong Clarke Creek	0.33	230	410	496	498	718
Catawba River						
At Confluence of South Fork Catawba River	2100	36100	57900	69100	*	100000
Approximately 1,200 ft. downstream of Charlotte Ave (Highway 27)	2010	34700	55500	66300	*	96300
Approximately 1,000 ft. upstream of Charlotte Ave (Highway 27)	1856	32200	51500	61400	*	89300
Catawba River Tributary 1						
At Confluence with Catawba River	1.67	731	1343	1710	2467	2704
Approximately 500 ft. upstream of Moores Chapel Rd.	1.25	547	1105	1375	1980	2103
Approximately 2,200 ft. upstream of Moores Chapel Rd.	0.99	491	1005	1241	1758	1862
Catawba River Tributary 2						
Approximately 500 ft. downstream of Beagle Club Road	2.27	1038	1759	2078	2358	3080
Approximately 0.6 mi. upstream of Beagle Club Road	1.67	1022	1626	1927	2163	2880
Approximately 0.5 mi. upstream of Harwood Lane	1.20	870	1405	1698	1918	2439
Approximately 0.7 mi. upstream of Harwood Lane	1.04	761	1233	1488	1668	2127
Catawba River Tributary 3						
Approximately 1,885 ft. upstream of Gaston County line	2.30	752	1414	1746	1815	2756
Approximately 1.12 miles upstream of Gaston County line	1.88	727	1351	1664	1747	2654
Approximately 3,775 ft. downstream of Cashion Road	1.54	658	1236	1511	1602	2413
Approximately 1,910 ft. downstream of Cashion Road	1.19	532	977	1227	1297	1949
Clarke Creek						
At Cabarrus County Line	21.83	3780	6948	8598	8724	12811
Just downstream of confluence with Ramah Creek	21.49	4034	7326	8975	9101	13329
Approximately 3,660 ft. upstream of confluence with Ramah Creek	14.43	3521	6398	7741	7859	11346
At the Confluence of Ferreltown Creek	12.75	3532	6338	7683	7810	11168
At the confluence of North and South Prong Clarke Creek	10.60	3069	5549	6721	6827	9602
Clarke Creek Tributary						
At Cabarrus County line	2.25	1042	1491	1778	1877	3351
Approximately 1,720 ft. downstream of Highland Creek Parkway	2.17	1032	1466	1756	1855	3336
Approximately 1,400 ft. downstream of Highland Creek Parkway	2.04	1004	1387	1710	1809	3269
Just downstream of Highland Creek Parkway	1.92	966	1319	1646	1739	3165
Approximately 1,060 ft. upstream of Highland Creek Parkway	1.67	830	1161	1443	1526	2847
Approximately 0.75 mi. upstream of Highland Creek Parkway	1.42	1186	1976	2344	2440	3298
Approximately 0.90 mi. upstream of Highland Creek Parkway	1.26	1084	1788	2118	2195	2967
Approximately 1.35 mi. upstream of Highland Creek Parkway	0.72	600	963	1129	1168	1567
Clarks Creek						
At the confluence with Mallard Creek	6.37	2983	4977	5941	6745	8071
Approximately 2,100 ft. upstream of Saxonbury Way	4.83	2805	4860	5908	6842	8288
Approximately 2,600 ft. downstream of DeArmon Road	1.33	1231	1996	2369	2590	3323
Immediately downstream of DeArmon Road	1.00	1087	1777	2116	2305	2931
Clarks Creek Tributary 1						
At the confluence with Clarks Creek	3.10	1565	2840	3527	4362	5398

Flooding Source		Discharges (cfs)				
Location	Drainage Area (square miles)	10% Annual Chance	2% Annual Chance	1% Annual Chance	1% Annual Future Annual	0.2% Annual Chance
Immediately upstream of Browne Road	2.90	1585	2915	3642	4490	5533
Immediately downstream of Hucks Road	1.42	868	1576	1979	2567	3019
Approximately 1,800 ft. upstream of Hucks Road	1.15	798	1450	1783	2270	2639
Clarks Creek Tributary 1A						
At the confluence with Clarks Creek Tributary 1	1.36	870	1481	1791	2011	2593
Approximately 3,750 ft. downstream of Davis Lake Parkway	1.14	769	1287	1557	1763	2230
Approximately 2,100 ft. downstream of Davis Lake Parkway	0.98	677	1139	1371	1578	1963
Approximately 700 ft. downstream of Davis Lake Parkway	0.88	615	1038	1251	1477	1801
Approximately 1,875 ft. upstream of Davis Lake Parkway	0.46	219	375	438	475	535
Clear Creek						
At County Line	12.83	1364	2440	3028	3852	5005
Approximately 100 ft. upstream of Ferguson Road	11.25	1293	2331	2888	3682	4836
Approximately 1,400 ft. downstream of Arlington Church Road	8.59	1222	2245	2746	3502	4749
Approximately 50 ft. upstream of Bartlett Road	1.66	488	963	1161	1307	1538
Approximately 700 ft. upstream of Bartlett Road	1.18	387	793	937	1202	1426
Clear Creek Tributary						
At Confluence with Clear Creek	8.59	1222	2245	2746	3502	4749
Approximately 550 ft. upstream of Confluence	5.69	989	1915	2302	2858	3387
Approximately 4,500 ft. downstream of Blair Rd (Highway 51)	3.93	788	1603	1934	2427	2895
Approximately 60 ft. upstream of Blair Rd (Highway 51)	2.15	463	937	1164	1545	1851
Clems Branch						
Approximately 3,100 ft. downstream of Lancaster Highway	2.34	991	1642	1947	2186	2711
Approximately 2,700 ft. downstream of Lancaster Highway	1.56	642	1008	1173	1341	1588
Approximately 40 ft. downstream of Lancaster Highway	0.80	378	489	571	670	777
Coffey Creek						
At Confluence with Sugar Creek	10.56	1972	3445	4155	5282	5830
Approximately 515 ft. upstream of South Tryon Street	9.07	1871	3276	3969	5196	5747
Approximately 3,535 ft. upstream of Shopton Road	6.17	1864	3144	3786	4840	5381
Approximately 5,010 ft. downstream of Byrum Drive	4.74	1952	3158	3742	4573	5136
Approximately 4,310 ft. downstream of Byrum Drive	4.24	1905	3013	3524	4056	4737
Approximately 715 ft. downstream of Piney Top Drive	3.42	1643	2580	3025	3519	4122
Approximately 170 ft. downstream of West Boulevard	3.20	1577	2463	2888	3344	3939
Approximately 530 ft. upstream of West Boulevard	2.80	1534	2365	2740	2986	3637
Approximately 1,630 ft. upstream of West Boulevard	2.35	1469	2131	2458	2507	3224
Dairy Branch						
Approximately 40 ft. upstream of Cumberland Avenue	1.06	756	1209	1410	1514	1930
At Park Road	0.86	636	1014	1190	1286	1650
Approximately 610 ft. downstream of Ideal Way	0.71	531	853	1002	1085	1375
At Magnolia Avenue	0.23	216	347	407	452	557
Derita Branch						
Approximately 2,510 ft. downstream of West Craighead Road	1.85	936	1476	1725	1893	2359
Approximately 20 ft. upstream of West Craighead Road	1.40	702	1131	1330	1503	1821
Approximately 1,480 ft. upstream of West Craighead Road	1.08	558	908	1070	1245	1476

Flooding Source		Discharges (cfs)				
Location	Drainage Area (square miles)	10% Annual Chance	2% Annual Chance	1% Annual Chance	1% Annual Future Annual	0.2% Annual Chance
Approximately 2610 ft. upstream of West Craighead Road	0.87	456	736	864	1015	1187
At 350 ft. downstream of Cannon Avenue	0.45	215	353	417	508	579
At Princess Street	0.16	59	96	113	139	157
Dixon Branch						
Approximately 0.2 mi. upstream of WT Harris Blvd.	4.16	874	1460	1792	2240	2570
Just downstream of confluence with Dixon Branch Tributary	3.69	784	1355	1653	2098	2383
Approximately 0.3 mi. upstream of confluence with Dixon Branch Tributary	1.06	226	410	505	694	753
Dixon Branch Tributary						
Approximately 0.25 mi. upstream of confluence with Dixon Branch	2.52	589	940	1125	1337	1586
Approximately 400 ft. upstream of I- 77	2.24	501	793	949	1159	1332
Just downstream of Statesville Road	1.86	385	678	827	1085	1221
Approximately 0.2 mi. upstream of Statesville Road	1.37	259	481	593	820	883
Approximately 0.3 mi. upstream of Statesville Road (Highway 21)	0.27	87	156	189	237	273
Doby Creek						
At the confluence with Mallard Creek	5.84	2650	4175	4880	5681	6467
Approximately 3,900 ft. upstream of W WT Harris Blvd	2.71	1505	2462	2907	3523	3928
Immediately upstream of the confluence of Doby Creek Tributary	2.71	1395	2263	2654	3001	3273
Approximately 4,325 ft. downstream of University City Blvd	2.15	1165	1958	2318	2873	3245
Immediately downstream of University City Blvd	1.50	887	1562	1879	2333	2671
Doby Creek Tributary						
At the confluence with Doby Creek	2.38	959	1534	1745	1939	2196
Immediately downstream of IBM Drive 1	2.23	931	1511	1652	1874	2238
Approximately 1,375 ft. downstream of IBM Drive 2	1.88	951	1645	2027	2632	3069
Immediately upstream of IBM Drive 2	1.68	834	1456	1817	2336	2788
Duck Creek						
At County Line	2.87	498	1013	1258	1539	2056
Approximately 230 ft. upstream of County Line	2.53	452	930	1166	1431	1907
Approximately 1,450 ft. upstream of County Line	1.91	383	823	1050	1309	1732
Edwards Branch						
Briar Creek Road	2.56	1434	2086	2338	2499	3103
Approximately 980 ft. downstream of Eastway Drive	2.12	1308	1977	2252	2414	2930
Approximately 460 ft. upstream of Eastway Drive	1.89	1158	1774	2012	2153	2612
Approximately 380 ft. downstream of Woodland Drive	1.19	729	1183	1301	1392	1673
Approximately 20 ft. downstream of Sheffield Drive	0.99	648	1049	1236	1351	1706
Approximately 1,150 ft. upstream of Sheffield Drive	0.58	415	664	779	836	1067
Approximately 20 ft. upstream of Driftwood Drive	0.23	163	253	294	306	394
Ferrelltown Creek						
At confluence with Clarke Creek	1.98	593	1130	1385	1404	2070
Approximately 2,300 ft. upstream of confluence with Clarke Creek	1.83	568	1070	1301	1322	1971
Approximately 5,450 ft. upstream of confluence with Clarke Creek	1.60	493	904	1119	1139	1708
Approximately 7,300 ft. upstream of Confluence with Clarke Creek	1.43	452	819	1008	1030	1527
Flat Branch						
At Confluence with Sixmile Creek	3.94	866	1607	1964	2115	2927

Flooding Source		Discharges (cfs)				
Location	Drainage Area (square miles)	10% Annual Chance	2% Annual Chance	1% Annual Chance	1% Annual Future Annual	0.2% Annual Chance
Approximately 105 ft. upstream of Threat Vail Lane	2.75	808	1511	1846	2000	2776
Approximately 2,400 ft. downstream of Tom Short Road	1.84	702	1263	1536	1673	2263
Approximately 1,200 ft. downstream of Tom Short Road	1.24	521	948	1154	1274	1717
Approximately 3,800 ft. upstream of Tom Short Road	0.26	352	551	646	664	926
Fourmile Creek						
At Confluence with McAlpine Creek	18.17	2278	4104	5026	5525	7525
Approximately 2,200 ft. upstream of Providence Road	10.48	2166	3718	4564	4879	6749
Approximately 5,500 ft. upstream of Providence Road	8.07	1805	3132	3812	4295	5585
Approximately 6,100 ft. downstream of Trade Street	6.33	1694	2940	3544	3994	5140
Approximately 2,800 ft. downstream of Trade Street	5.05	1457	2549	3076	3497	4472
Approximately 800 ft. downstream of Trade Street	4.12	1175	2036	2451	2763	3566
Approximately 2,200 ft. upstream of Trade Street	3.14	815	1475	1801	2155	2662
Approximately 5,600 ft. upstream of Trade Street	1.12	247	470	575	741	876
Gar Creek						
Approximately 700 ft. downstream of Beatties Ford Road	3.76	750	1298	1559	1572	2229
Approximately 500 ft. downstream of Beatties Ford Road	3.45	876	1533	1846	1860	2646
Approximately 700 ft. upstream of Beatties Ford Road	2.52	1033	1811	2189	2207	3184
Approximately 1850 ft. upstream of McKoy Road	1.79	1288	2304	2790	2833	4151
Approximately 1,900 ft. downstream of Kerns Road	1.35	1298	2254	2773	2834	4294
Approximately 1,220 ft. upstream of Kerns Road	1.13	1244	1867	2206	2239	3787
Goose Creek						
At Union County Line	7.36	1532	3021	3898	4427	5716
Approximately 600 ft. upstream of Union County Line	3.28	722	1386	1867	2181	2737
Approximately 250 ft. downstream of Lawyers Road	1.86	518	982	1232	1403	1864
Gum Branch						
Just upstream of Gum Branch Road	5.37	1756	3032	3678	4278	5586
Just upstream of Birchwood Drive	4.90	1658	2909	3530	4134	5491
Approximately 0.2 mi. upstream of Valleyday Road	3.62	1259	2398	2983	3599	4587
Approximately 0.5 mi. upstream of Valleyday Road	3.35	1163	2238	2794	3405	4284
Approximately 900 ft. downstream of Brookshire Blvd.	2.45	832	1598	2006	2488	3103
Just upstream of Brookshire Blvd.	2.07	681	1288	1597	1932	2452
Approximately 800 ft. downstream of Caldwell Williams Road	1.88	627	1173	1453	1730	2216
Approximately 500 ft. upstream of Caldwell Williams Road	1.54	525	974	1203	1395	1817
Approximately 500 ft. upstream of Old Plank Road	0.75	355	652	802	915	1211
Gutter Branch						
Approximately 0.4 mi. upstream of confluence with Long Creek	2.95	689	1185	1462	1734	2305
Approximately 1.1 mi. upstream of confluence with Long Creek	2.63	598	1065	1349	1589	2106
Approximately 0.3 mi. upstream of Kelly Road	2.21	529	965	1199	1407	1855
Just upstream of Oakdale Road	1.66	404	754	936	1097	1453
Approximately 0.7 mi. upstream of Oakdale Road	1.38	360	639	784	905	1240
Approximately 0.9 mi. upstream of Oakdale Road	0.63	226	402	489	545	717
Irvins Creek						
At Confluence with McAlpine Creek	14.76	2293	4401	5671	6548	9038

Flooding Source		Discharges (cfs)				
Location	Drainage Area (square miles)	10% Annual Chance	2% Annual Chance	1% Annual Chance	1% Annual Future Annual	0.2% Annual Chance
Approximately 3,000 ft. upstream of E. Independence Boulevard	9.97	1772	3247	4054	4681	6299
Approximately 100 ft. upstream of Lebanon Road	5.53	1260	2382	2976	3319	4479
Upstream of Beaver Dam Lane	4.55	1095	2048	2528	2815	3700
Upstream of Beaver Dam Lane	1.98	590	1139	1425	1564	2115
Approximately 700 ft. upstream of Apple Creek Drive	1.19	347	616	738	806	1050
Approximately 400 ft. upstream of Lawyers Road	0.87	232	446	738	645	811
Irvins Creek Tributary 1						
At Confluence with Irvins Creek	4.28	812	1405	1852	2110	3003
Approximately 2,300 ft. downstream of Sam Newell Road	3.76	512	1352	1786	2031	3017
Approximately 1,650 ft. downstream of Independence Boulevard	2.69	816	1492	1766	2098	2818
Approximately 980 ft. upstream of Windsor Park	0.94	342	662	826	933	1249
Irvins Creek Tributary 2						
At Confluence with Irvins Creek	1.98	442	820	970	1078	1389
Approximately 300 ft. downstream of Lawyers Road	1.22	256	606	628	752	932
Approximately 2,300 ft. upstream of Lawyers Road	0.49	134	268	335	396	514
Irwin Creek						
At Confluence with Taggart Creek	30.98	8603	11334	12288	13344	16829
At Confluence with Irwin Creek Tributary 1	28.30	8241	10640	11679	13040	16250
At Confluence with Stewart Creek	12.85	4307	6206	6980	7579	9000
Approximately 320 ft. downstream of I-277 (b)	10.59	3965	5912	6784	7400	8786
Approximately 840 ft. upstream of Oaklawn Avenue	9.96	3686	5516	6403	6951	7993
At Confluence with Kennedy Branch	6.00	2303	3469	4081	4313	4919
Approximately 590 ft. upstream of Statesville Avenue	5.33	2067	3178	3663	3935	4657
Approximately 1,740 ft. downstream of I-85	4.90	1862	2833	3246	3447	4107
Approximately 790 ft. downstream of I-85	4.60	1668	2606	2989	3185	3847
Approximately 1,080 ft. upstream of Starita Road	3.92	1523	2368	2722	2882	3540
Approximately 2,180 ft. upstream of Starita Road	3.52	1398	2187	2570	2768	3500
Approximately 640 ft. upstream of Dalecrest Drive	2.44	820	1296	1594	1777	2791
Approximately 830 ft. downstream of Nevin Road	2.05	783	1252	1534	1793	2805
Approximately 1,130 ft. upstream of Nevin Road	1.62	730	1225	1541	1828	2532
Approximately 1,925 ft. upstream of Nevin Road	1.38	608	1118	1378	1543	2011
Irwin Creek Tributary 1						
At Confluence with Irwin Creek	1.17	1427	2109	2456	2589	3377
Approximately 2,780 ft. upstream of Fieldcrest Road	0.95	1296	1901	2196	2309	2982
Kennedy Branch						
Approximately 4,260 ft. downstream of I-85	3.13	1458	2380	2769	3026	3699
Approximately 2,765 ft. downstream of I-85	3.02	1382	2281	2664	2930	3624
Approximately 2,590 ft. downstream of I-85	2.39	964	1408	1677	1928	2306
Approximately 2,340 ft. upstream of I-85	1.77	833	1253	1554	1793	2189
Kings Branch						
At Confluence with Sugar Creek	4.38	1674	2508	2941	3200	3984
Approximately 2,350 ft. upstream of Westinghouse Boulevard	3.76	1620	2463	2889	3140	3953
Approximately 95 ft. upstream of Hebron Street	3.28	1566	2449	2874	3127	3961

Flooding Source		Discharges (cfs)				
Location	Drainage Area (square miles)	10% Annual Chance	2% Annual Chance	1% Annual Chance	1% Annual Future Annual	0.2% Annual Chance
Approximately 1,615 ft. downstream of East Arrowood Road	2.79	1563	2604	3166	3495	4574
Approximately 50 ft. downstream of Deanna Lane	2.42	1571	2610	3171	3504	4560
Approximately 1,425 ft. upstream of Deanna Lane	1.94	1429	2320	2788	3067	3894
Approximately 375 ft. downstream of Archdale Drive	1.67	1435	2329	2749	3002	3675
Approximately 125 ft. upstream of Archdale Drive	1.36	1235	1861	2150	2339	2820
Approximately 25 ft. downstream of I- 77	0.76	663	1023	1148	1240	1366
Little Hope Creek						
Just upstream of the Little Sugar Creek confluence	3.15	2336	3656	4226	4541	5492
At East Woodlawn Road	1.11	840	1310	1643	1878	2402
Little Hope Creek Tributary						
At Little Hope Creek confluence	1.36	1434	2284	2671	2833	3663
Little Paw Creek						
Approximately 0.26 mi. downstream of Mt. Olive Church Road	1.88	693	1486	1780	2386	3156
Approximately 880 ft. upstream of Mt. Olive Church Road	1.40	545	1213	1567	2087	2601
Approximately 0.46 mi. upstream of Mt. Olive Church Road	1.13	487	1157	1508	1941	2465
Approximately 0.82 mi. upstream of Mt. Olive Church Road	0.59	204	569	766	836	1309
Little Sugar Creek						
Approximately 990 ft. downstream of Belmont Avenue	9.19	2716	3748	4161	4329	5244
At Belmont Avenue	7.87	2383	3231	3584	3750	4403
At Parkwood Avenue	7.64	2375	3208	3555	3719	4377
Approximately 780 ft. downstream of Matheson Avenue	7.02	2276	3080	3391	3552	4109
Approximately 1,060 ft. downstream of East 36th Street	5.80	2411	3751	4187	4458	5262
Approximately 1,210 ft. upstream of East 36th Street	3.34	1494	2217	2476	2642	3071
Approximately 10 ft. downstream of East Craighead Road	2.89	1307	1889	2096	2240	2559
Approximately 680 ft. downstream of East Sugar Creek Road	2.68	1218	1713	1885	2003	2320
Approximately 660 ft. downstream of North Tryon Street	2.52	1146	1593	1750	1862	2160
Approximately 1,790 ft. upstream of North Tryon Street	1.93	1004	1598	1785	1925	2322
Approximately 1,660 ft. downstream of Snow White Lane	0.91	591	941	1104	1203	1511
Approximately 20 ft. upstream of Spring Garden Lane	0.27	219	334	386	399	515
Long Creek						
At confluence with Long Creek Tributary 1	35.73	3289	5616	6866	8164	10302
Approximately 0.2 mi. downstream of CSX RR crossing	33.77	3349	5811	6990	8235	10332
At confluence with Long Creek Tributary 2	31.76	3241	5516	6685	7814	9963
At confluence with Long Creek Tributary 3	29.78	3176	5414	6563	7557	9774
At confluence with Gum Branch	28.45	3123	5321	6453	7440	9605
At confluence with Gutter Branch	20.46	2884	4948	6009	7026	8873
At confluence with McIntyre Creek	16.18	2705	4609	5622	6428	7866
Approximately 0.4 mi. upstream of I- 485 #2	10.82	2135	3499	4180	4934	6038
Approximately 0.4 mi. upstream of I- 485 #3	8.85	1985	3208	3843	4626	5558
At confluence with Dixon Branch	7.49	1702	2749	3329	4038	4792
Just upstream of Reames Road	3.04	795	1267	1509	1767	2162
Just upstream of I-77	2.60	685	1145	1381	1649	2008
Approximately 800 ft. downstream of Lakeview Drive	2.28	599	1039	1260	1522	1843

Flooding Source		Discharges (cfs)				
Location	Drainage Area (square miles)	10% Annual Chance	2% Annual Chance	1% Annual Chance	1% Annual Future Annual	0.2% Annual Chance
Approximately 450 ft. downstream of Lakeview Drive	1.71	479	824	993	1200	1445
Just upstream of Statesville Road	1.41	420	733	887	1081	1286
Approximately 0.32 mi. upstream of Statesville Road	1.07	343	623	758	937	1107
Approximately 0.5 mi. upstream of Statesville Road	0.90	285	511	621	711	906
Long Creek Tributary 1						
Approximately 0.5 mi. upstream of confluence with Long Creek	1.26	310	580	733	998	1165
Approximately 0.6 mi. upstream of confluence with Long Creek	0.76	243	442	552	728	859
Long Creek Tributary 2						
Just upstream of Pine Island Country Club cart path	1.10	364	627	763	998	1165
Just downstream of Stoneyridge Drive	1.00	318	546	663	870	991
Long Creek Tributary 3						
At Confluence with Long Creek	1.28	440	798	981	1106	1465
Approximately 600 ft. downstream of Gum Branch Road	1.10	355	643	789	905	1183
Approximately 800 ft. downstream of Gum Branch Road	0.70	250	456	565	673	853
Mallard Creek						
Approximately 3 miles downstream of Pavilion Boulevard	38.71	8690	15211	18163	20785	25608
Approximately 2,150 ft. downstream of Pavilion Boulevard	35.02	8704	15592	18356	21020	25807
Just downstream of confluence with Toby Creek	25.81	7944	12689	15269	17755	22151
Just upstream of confluence with Doby Creek	19.54	6238	10235	12642	14907	18842
Just downstream of confluence with Clarks Creek	11.87	5149	8432	10020	11503	13810
Approximately 1,800 ft. upstream of Mallard Creek Road	5.47	2263	3726	4435	4961	6258
Approximately 400 ft. upstream of WT Harris Boulevard	5.12	2220	3658	4340	4864	6111
Just downstream of confluence with Mallard Creek Tributary	3.93	1712	2885	3454	4121	5128
Approximately 2,050 ft. upstream of Sugar Creek Road	1.96	996	1788	2187	2885	3367
Approximately 1,575 ft. downstream of Old Potters Road	1.42	726	1337	1654	2272	2556
Immediately downstream of Old Potters Road	1.24	689	1278	1584	2189	2416
Mallard Creek Tributary						
At confluence with Mallard Creek	1.24	583	1031	1247	1489	1954
Immediately downstream of Hubbard Road	1.11	559	993	1203	1435	1862
McAlpine Creek						
Approximately 5,600 ft. downstream of Lancaster Highway	93.47	5626	10529	12907	14375	20690
Upstream of Railroad Bridge (Upstream of Monroe Road)	32.35	4334	8293	10430	11896	16268
Upstream of Independence Boulevard	16.37	2045	4067	5172	5922	8466
Upstream of Idlewild Road	7.46	949	2031	2603	3090	4611
Approximately 200 ft. upstream of Lawyers Road	5.78	710	1618	2193	2652	4035
Approximately 500 ft. downstream of Marlwood Circle	2.88	292	739	1070	1250	1989
Approximately 50 ft. downstream of Albemarle Road	1.42	232	521	683	764	1169
McAlpine Creek Tributary 1						
At Confluence with McAlpine Creek	3.31	1220	2243	2679	2792	3520
Approximately 3,800 ft. upstream of US 521	1.46	525	986	1198	1250	1765
McAlpine Creek Tributary 1A						
At Confluence with McAlpine Creek Tributary 1	1.26	479	886	1049	1079	1400
Approximately 300 ft. upstream of Ballantyne Commons Parkway	0.98	378	699	837	868	1128

Flooding Source		Discharges (cfs)				
Location	Drainage Area (square miles)	10% Annual Chance	2% Annual Chance	1% Annual Chance	1% Annual Future Annual	0.2% Annual Chance
McAlpine Creek Tributary 3						
At Confluence with McAlpine Creek	1.79	728	1245	1466	1520	1909
Approximately 750 ft. downstream of Rea Road	1.29	498	888	1072	1122	1489
McAlpine Creek Tributary 6						
At Confluence with McAlpine Creek	2.06	463	1032	1306	1502	2074
Approximately 1,550 ft. upstream of Confluence with McAlpine Creek	1.65	386	860	1094	1094	1765
Approximately 5,300 ft. upstream of Confluence with McAlpine Creek	0.33	151	286	356	393	534
McCullough Branch						
At Confluence with Sugar Creek	2.22	784	1188	1379	1567	2019
Approximately 50 ft. upstream of Rock Hill Road	1.91	691	1141	1348	1543	1980
Approximately 530 ft. downstream of Nations Ford Road	1.48	617	1022	1220	1398	1753
McDowell Creek						
Just downstream of confluence with McDowell Creek Tributary 1	26.36	3688	6384	7765	8457	11256
Just downstream of confluence with McDowell Creek Tributary 2	24.21	3604	6250	7603	8283	11051
Just downstream of confluence with Torrence Creek	20.68	4289	6753	8223	8959	12915
Approximately 1.3 mi. upstream of Gilead Road	9.13	2843	4276	4892	4965	6640
Just upstream of Sam Furr Road	7.00	2738	3989	4534	4597	6002
Approximately 0.2 mi. upstream of Sam Furr Road	3.46	1588	2422	2783	2812	3697
Approximately 150 ft. downstream of Westmoreland Road	2.50	1481	2155	2453	2479	3192
Approximately 350 ft. downstream of I-77	2.13	1410	2051	2330	2355	3014
Approximately 400 ft. upstream of Statesville Road	1.07	662	956	1059	1075	1328
McDowell Creek Tributary 1						
Approximately 0.2 mi. upstream of Summer Serenade Road	1.78	576	903	1108	1331	1798
McDowell Creek Tributary 2						
Just upstream of Colonial Garden Drive	1.02	446	858	1098	1234	1695
Approximately 600 ft. upstream of Colonial Garden Drive	0.88	389	783	1000	1143	1567
McIntyre Creek						
Approximately 0.6 mi. upstream of Miranda Road	4.00	850	1615	2036	2413	3312
Approximately 0.7 mi. downstream of Beatties Ford Road	2.86	780	1498	1867	2181	2997
Approximately 0.2 mi. downstream of Beatties Ford Road	2.24	714	1303	1602	1857	2535
Approximately 0.26 mi. upstream of Beatties Ford Road	1.78	672	1238	1549	1758	2343
Approximately 700 ft. upstream of Lawnmeadow Drive	1.09	432	798	985	1116	1479
McKee Creek						
At County Line	5.98	1153	2170	2665	3460	4108
Approximately 2,100 ft. downstream of Camp Stewart Road	4.44	934	1718	2068	2752	3163
Approximately 200 ft. upstream of Camp Stewart Road	3.44	751	1348	1628	1975	2298
Approximately 75 ft. downstream of I-485	2.78	545	941	1191	1519	1877
Approximately 1,700 ft. downstream of East Lake Road	1.96	339	768	990	1303	1684
Approximately 1,400 feet Upstream of East Lake Road	1.01	212	485	644	896	1119
McMullen Creek						
At Confluence with McAlpine Creek	15.27	2968	4528	5340	5566	7428
Approximately 500 ft. upstream of Highway 51	13.1	2986	4376	5145	5379	7164
Approximately 6600 ft. downstream of Quail Hollow Road	10.65	2545	4074	4836	5122	6687

Flooding Source		Discharges (cfs)				
Location	Drainage Area (square miles)	10% Annual Chance	2% Annual Chance	1% Annual Chance	1% Annual Future Annual	0.2% Annual Chance
Upstream of Mountainbrook Road	7.52	2251	3774	4519	4805	6307
Approximately 1,000 ft. downstream of Arborway Road	5.38	2038	3489	4235	4514	5886
Approximately 1,300 ft. upstream of Arborway Road	4.75	1923	3281	3964	4215	5521
Approximately 300 ft. downstream of Lincrest Place	2.00	1047	1725	2015	2198	2846
Approximately 200 ft. downstream of Addison Road	1.69	993	1645	1958	2102	2724
McMullen Creek Tributary						
At Confluence with McMullen Creek	1.42	894	1561	1870	2003	2629
Approximately 1,200 ft. downstream of S. Sharon Amity Road	1.17	793	1375	1646	1764	2302
Upstream of S. Sharon Amity Road	0.84	703	1169	1412	1517	1995
North Fork Crooked Creek						
At Union County Line	1.25	451	800	1007	1182	1356
North Fork Crooked Creek Tributary						
At Union County Line	1.72	565	1084	1345	1503	1985
North Prong Clarke Creek						
Approximately 2,000 ft. upstream of Confluence with Clarke Creek	4.12	1041	1769	2056	2069	2703
Approximately 650 ft. upstream of Huntersville-Concord Road	3.54	961	1662	1960	1975	2512
Approximately 2,800 ft. upstream of Huntersville-Concord Road	2.82	875	1455	1737	1774	2459
Just upstream of Ramah Church Road	1.73	504	823	936	952	1251
Approximately 1,600 ft. upstream of Ramah Church Road	1.46	439	693	772	787	1103
Paw Creek						
Just downstream of Old Dowd Road	13.68	2945	4839	5766	6671	8166
Just downstream of Ticer Branch	13.11	3035	4961	5950	6880	8313
Approximately 0.38 mi. upstream of Wilkinson Blvd.	10.30	2862	4712	5692	6583	7972
Just downstream of confluence with Paw Creek Tributary	8.67	2813	5009	6140	7119	9177
Approximately 430 ft. upstream of Little Rock Road	5.61	2584	4773	5852	6787	8780
Approximately 0.24 mi. downstream of Toddville Road	3.28	1662	3021	3711	4262	5454
Approximately 810 ft. upstream of Toddville Road	2.91	1585	2870	3532	4051	5174
Approximately 0.36 mi. downstream of Freedom Drive	2.49	1503	2632	3211	3690	4626
Approximately 700 ft. downstream of Freedom Drive	2.18	1411	2388	2897	3283	4126
Approximately 150 ft. upstream of Freedom Drive	1.89	1324	2158	2562	2824	3592
Approximately 80 ft. downstream of Tar Heel Road	0.93	943	1564	1897	2273	2738
Paw Creek Tributary						
Approximately 0.45 mi. upstream of Golf Cart Path #2	0.95	276	507	646	948	1347
Approximately 60 ft. upstream of Golf Cart Path #3	0.15	122	226	277	315	409
Paw Creek Tributary 1A						
Approximately 530 ft. upstream of Paw Creek Road	1.69	991	1728	2109	2500	3129
Approximately 130 ft. downstream of Freedom Drive	1.19	976	1709	2070	2411	2997
Approximately 160 ft. upstream of Freedom Drive	1.01	874	1503	1810	2101	2600
Polk Ditch						
At Confluence with Walker Branch	1.63	820	1181	1383	1432	1789
Approximately 2,145 ft. upstream of Choate Circle	1.40	805	1160	1324	1370	1710
Approximately 3,375 ft. upstream of Choate Circle	1.29	796	1127	1287	1334	1656
Approximately 1670 ft. downstream of Lioness Street	0.92	491	663	748	774	1035

Flooding Source		Discharges (cfs)				
Location	Drainage Area (square miles)	10% Annual Chance	2% Annual Chance	1% Annual Chance	1% Annual Future Annual	0.2% Annual Chance
Approximately 1,670 ft. downstream of Lioness Street	0.70	367	515	556	590	919
Ramah Creek						
Just upstream of Huntersville - Concord Road (SR 2426)	6.17	1334	2274	2796	2822	4137
Approximately 3,320 ft. upstream of Huntersville - Concord Road (SR 2426)	5.33	1338	2308	2859	2888	4296
Approximately 750 ft. upstream of McAuley Road	4.70	1282	2218	2734	2765	4002
Approximately 3,900 ft. upstream of McAuley Road	4.10	1235	2144	2635	2667	3824
Approximately 1,000 ft. downstream of Ramah Church Road	3.24	1199	2083	2504	2540	3576
Approximately 1,200 ft. upstream of Ramah Church Road	2.78	1118	1937	2325	2361	3302
Approximately 150 ft. upstream of Black Farm Road	2.39	972	1657	1971	1989	2780
Approximately 2,775 ft. upstream of Black Farm Road	1.46	588	1016	1210	1218	1768
Approximately 2,700 ft. downstream of Sam Furr Road (NC-73)	1.32	516	886	1055	1062	1580
Approximately 1,200 ft. downstream of Sam Furr Road (NC-73)	1.08	434	739	900	911	1364
Just upstream of Sam Furr Road (NC-73)	0.55	268	486	575	577	777
Approximately 1,820 ft. upstream of Sam Furr Road (NC-73)	0.31	148	280	357	359	567
Rea Branch						
At Confluence with McAlpine Creek	1.81	399	859	1168	1214	1938
Upstream of Sequoia Red Lane	1.15	438	803	990	1029	1526
Reedy Creek						
At Cabarrus County Line	12.99	1892	3770	4715	5590	7168
Approximately 2,400 ft. downstream of Hood Road	7.87	1330	2561	3125	3655	4750
Approximately 1,600 ft. upstream of Hood Road	2.69	459	949	1190	1361	1830
Approximately 900 ft. upstream of Plaza Road Extension	1.64	261	532	672	725	1054
Reedy Creek Tributary 1						
At Cabarrus County Line	1.21	555	1045	1259	1480	1744
Reedy Creek Tributary 2						
At Confluence with Reedy Creek	2.74	377	876	1124	1377	1681
Approximately 200 ft. upstream of Robinson Church Road	2.01	267	635	818	1049	1392
Approximately 3,600 ft. upstream of Robinson Church Road	1.42	205	483	628	803	1023
Approximately 4,600 ft. upstream of Robinson Church Road	1.09	149	358	467	589	768
Approximately 6,300 ft. upstream of Robinson Church Road	0.50	53	119	164	277	343
Reedy Creek Tributary 3						
At Confluence with Reedy Creek	3.99	765	1450	1781	2107	2747
Approximately 4,400 ft. downstream of Plott Road	2.98	617	1174	1423	1605	2191
Approximately 30 ft. downstream of Plott Road	1.37	225	477	591	649	895
Approximately 1,560 ft. downstream of Chapparal Lane	1.08	171	383	476	535	726
Rocky Branch						
At Confluence with Fourmile Creek	2.12	573	1082	1337	1461	1972
Approximately 1,500 ft. upstream of Fourmile Creek Road	1.46	532	970	1164	1265	1637
Approximately 900 ft. upstream of Providence Road/SR 16	0.98	340	617	756	818	1045
Rocky River						
At the Cabarrus County border	36.88	4232	9035	11398	12204	18252
Approximately 1,375 ft. downstream of East Rocky River Road	13.52	1404	2919	3750	4111	6257
Approximately 0.7 miles upstream of East Rocky River Road	12.79	1392	2950	3811	4194	6372

Flooding Source		Discharges (cfs)				
Location	Drainage Area (square miles)	10% Annual Chance	2% Annual Chance	1% Annual Chance	1% Annual Future Annual	0.2% Annual Chance
Approximately 1.5 miles upstream of East Rocky River Road	11.63	1356	2902	3763	4155	6268
Rocky River Tributary						
Just downstream Cabarrus County boundary	1.71	777	1125	1288	1534	1690
Just upstream of Cabarrus County boundary	1.25	582	720	787	939	986
Approximately 460 ft. upstream of Interstate 85	1.18	604	780	848	962	1014
Approximately 1,700 ft. upstream of Interstate 85	0.98	642	1032	1233	1532	1560
Approximately 3,600 ft. upstream of Interstate 85	0.72	457	776	928	1217	1304
Sardis Branch						
At Confluence with McAlpine Creek	2.39	610	1296	1593	1724	2413
Approximately 50 ft. upstream of Sardis Road North	1.71	420	906	1136	1240	1747
Approximately 910 ft. downstream of Sardis Road	0.53	168	374	481	529	750
Sherman Branch						
At Confluence with Clear Creek	1.22	232	492	612	736	952
Sixmile Creek						
At County Line	22.44	2290	4173	5164	5538	7881
Approximately 4,790 ft. downstream of Rea Road	16.35	1861	3431	4233	4568	6490
Approximately 4,200 ft. downstream of Tom Short Road	9.43	1079	2094	2630	2978	4139
Approximately 4,300 ft. upstream of Tom Short Road	6.51	973	1886	2364	2687	3695
Approximately 200 ft. upstream of Providence Road	4.29	756	1426	1772	2025	2788
Approximately 3,100 ft. upstream of Providence Road	3.45	658	1250	1548	1789	2382
Approximately 3,000 ft. downstream of Tilley Morris Road	2.35	536	942	1145	1255	1689
South Prong Clarke Creek						
Just downstream of Confluence with Clarke Creek	10.60	3069	5549	6721	6827	9602
Approximately 500 ft. downstream of Asbury Chapel Road	6.06	2472	4134	5027	5128	7441
Approximately 330 ft. upstream of Asbury Chapel Road	5.58	2340	3962	4821	4921	7136
Approximately 1,800 ft. upstream of Asbury Chapel Road	1.98	1030	1662	2018	2087	2930
Approximately 3,600 ft. upstream of Asbury Chapel Road	1.75	1001	1629	1975	2044	2862
Approximately 4,750 ft. upstream of Asbury Chapel Road	1.61	958	1567	1901	1971	2744
Approximately 4,960 ft. upstream of Asbury Chapel Road	1.45	916	1516	1830	1899	2623
Approximately 7,930 ft. upstream of Asbury Chapel Road	1.01	596	1019	1242	1296	1822
South Prong West Branch Rocky River						
Approximately 4,200 ft. downstream of River Crossing Boulevard	6.86	1749	3014	3575	3839	5328
Approximately 3,300 ft. downstream of River Crossing Boulevard	6.57	1696	2935	3484	3746	5201
Approximately 225 ft. upstream of River Crossing Boulevard	5.45	1719	2868	3399	3657	5228
Approximately 375 ft. downstream of Davidson-Concord Road	5.14	1686	2805	3329	3587	5090
Approximately 725 ft. upstream of Davidson-Concord Road	4.86	1621	2718	3229	3483	4923
Approximately 500 ft. downstream of Robert Walker Drive	3.31	1375	2381	2899	3031	4356
Approximately 2,500 ft. upstream of Robert Walker Drive	2.51	1119	2006	2458	2571	3692
Approximately 5,200 ft. upstream of Robert Walker Drive	1.44	881	1589	1919	2015	2849
South Prong West Branch Rocky River Tributary						
Immediately upstream of the confluence with South Prong West Branch Rocky River	1.47	549	1112	1404	1613	2106
Immediately downstream of Bailey Road extension	1.18	423	878	1122	1364	1736

Flooding Source		Discharges (cfs)				
Location	Drainage Area (square miles)	10% Annual Chance	2% Annual Chance	1% Annual Chance	1% Annual Future Annual	0.2% Annual Chance
Approximately 1,900 ft. upstream of Bailey Road Extension	0.90	249	557	712	896	1136
Steele Creek						
At York County Line	14.63	4474	6848	7970	8956	10967
At Confluence with Walker Branch	7.54	2332	3286	3665	3122	4672
Approximately 100 ft. downstream of Carrowinds Boulevard	6.93	2169	3075	3435	3655	**
Approximately 2,430 ft. upstream of Carrowinds Boulevard	6.06	2145	3039	3393	3612	4093
Approximately 1,040 ft. downstream of South Tryon Street	5.30	1964	2828	3191	3433	3925
Approximately 660 ft. downstream of John Price Road	3.70	1373	2078	2376	2659	3213
Approximately 1,580 ft. downstream of Westinghouse Boulevard	3.62	1103	1746	2032	2368	2833
Approximately 150 ft. upstream of Westinghouse Boulevard	2.77	1098	1733	2019	2365	2840
Approximately 2,640 ft. upstream of Westinghouse Boulevard	2.03	820	1344	1622	2016	2341
Approximately 1400 ft. downstream of Red Hickory Lane	1.59	631	1037	1264	1638	1864
Approximately 850 ft. upstream of Red Hickory Lane	1.27	537	913	1124	1505	1694
Stevens Creek						
At Union County Line	7.36	1532	3021	3898	4427	5716
Approximately 250 ft. upstream of Union County Line	3.78	770	1636	2058	2333	3244
Approximately 3,000 ft. upstream of I-485	2.21	470	987	1247	1386	1943
Approximately 300 ft. upstream of Thompson Road	1.19	348	706	910	1021	1421
Stevens Creek Tributary						
At Confluence with Stevens Creek	1.44	326	684	844	1016	1351
Approximately 2,000 ft. upstream of Thompson Road	1.23	294	649	812	1015	1301
Stewart Creek						
At Confluence with Irwin Creek	11.19	4143	5648	6184	6396	7491
At Confluence with Stewart Creek Tributary 1	9.65	3875	5275	5802	6040	7407
At Confluence with Stewart Creek Tributary 2	6.64	3003	4385	5028	5565	6720
Approximately 245 ft. upstream of LaSalle Street	5.24	2957	4299	4929	5488	6628
At Confluence with Stewart Creek Tributary 3	3.72	1890	3070	3643	4155	5123
Approximately 1,575 ft. upstream of I-85	2.87	1789	3026	3615	4118	4955
Approximately 2,320 ft. upstream of Hoskins Road	1.45	983	1713	2038	2401	2798
Stewart Creek Tributary 1						
At Confluence with Stewart Creek	1.44	1676	2419	2774	2907	3551
Approximately 290 ft. upstream of Berryhill Road	1.09	1328	1994	2299	2412	3070
Stewart Creek Tributary 2						
At Confluence with Stewart Creek	2.24	2091	3056	3472	3605	4409
Approximately 100 ft. upstream of Coronet Way	2.12	2019	2936	3328	3450	4230
Approximately 1,485 ft. upstream of Parkway Avenue	1.68	1685	2383	2682	2754	3391
Approximately 100 ft. downstream of Lander Street	1.42	1573	2201	2446	2500	3034
Approximately 50 ft. downstream of I- 85	0.91	1000	1247	1336	1366	1595
Stewart Creek Tributary 3						
At Confluence with Stewart Creek	1.37	1153	1525	1626	1675	1856
Approximately 50 ft. downstream of Hoskins Road	0.98	1097	1404	1518	1562	1727
Approximately 1850 ft. upstream of Hoskins Road	0.79	1021	1288	1391	1635	2334
Stony Creek						

Flooding Source		Discharges (cfs)				
Location	Drainage Area (square miles)	10% Annual Chance	2% Annual Chance	1% Annual Chance	1% Annual Future Annual	0.2% Annual Chance
At confluence with Mallard Creek	6.71	2519	3190	3675	4161	5025
Immediately downstream of Interstate 485	6.53	2520	3165	3650	4145	5031
Approximately 1,625 ft. upstream of Interstate 485	6.18	2482	3096	3458	3919	4768
Immediately downstream of ramp from Interstate 85 to Interstate 485	4.98	2299	2818	3120	3302	3926
Immediately downstream of Interstate 85	4.75	2278	2802	3103	3285	3904
Immediately downstream of confluence of Stony Creek Tributary	4.50	2336	3185	3622	3866	4611
Approximately 2,600 ft. upstream of Interstate 85	2.49	1638	2286	2630	2741	3270
Approximately 3,900 ft. downstream of Mallard Creek Road	2.36	1676	2754	3284	3488	4752
Approximately 1,200 ft. downstream of Mallard Creek Road	2.03	1555	2616	3111	3310	4503
Immediately upstream of Mallard Creek Road	1.79	1416	2399	2836	3010	4113
Approximately 0.55 miles upstream of Mallard Creek Road	0.90	881	1444	1695	1812	2317
Stony Creek Tributary						
Immediately upstream of Homewood Drive	1.87	708	1221	1516	1753	2340
Immediately downstream of Mallard Creek Road	1.34	628	1130	1400	1626	2197
Approximately 2,900 ft. upstream of Mallard Creek Road	1.08	608	1062	1291	1506	1905
Approximately 0.9 mi. upstream of Mallard Creek Road	0.88	533	940	1142	1341	1665
Stowe Branch						
At Confluence with Lake Wylie (Catawba River)	1.05	758	1239	1478	1636	2118
Approximately 100 ft. downstream of Shopton Road	0.85	681	1117	1322	1460	1841
Sugar Creek						
At York County Line	68.54	10413	15106	16996	18889	22829
At Confluence with Kings Branch	58.46	10143	14803	16687	18467	22443
At Confluence with Coffey Creek	44.22	9090	13211	14493	15764	19622
Swan Run						
At Confluence with McAlpine Creek	2.12	515	1206	1559	1661	2373
Approximately 2,750 ft. upstream of Sharon View Road	1.46	336	895	1206	1300	1967
Approximately 5,300 ft. upstream of Sharon View Road	1.28	282	807	1121	1215	1916
Taggart Creek						
At Confluence with Sugar Creek	6.59	3338	4635	5120	5474	6518
Approximately 2,550 ft. downstream of West Boulevard	5.75	3156	4435	4933	5267	6316
Approximately 2,200 ft. downstream of West Boulevard	5.65	3047	4282	4753	5055	6088
Approximately 110 ft. downstream of West Boulevard	5.03	2855	4070	4532	4838	5823
Approximately 1,710 ft. upstream of Union County Line	4.02	2198	3085	3449	3670	4353
Approximately 375 ft. downstream of Billy Graham Parkway	3.18	1328	1739	1940	2014	2374
Approximately 910 ft. downstream of Norfolk Southern Railroad	2.89	1366	1584	1646	1725	1828
Approximately 180 ft. downstream of Mulberry Church Road	1.87	1104	1261	1304	1328	1401
Approximately 230 ft. upstream of Mulberry Church Road	1.17	644	1078	1260	1401	1731
Ticer Branch						
Approximately 700 ft. downstream of Freedom Drive	2.16	1094	1939	2360	3172	3249
Approximately 250 ft. downstream of Private Access Road	1.15	801	1452	1768	2224	2596
Approximately 250 ft. upstream of Private Access Road	0.44	376	645	774	961	1104
Toby Creek						
At confluence with Mallard Creek	5.09	1646	2333	2598	2908	3494

Flooding Source		Discharges (cfs)				
Location	Drainage Area (square miles)	10% Annual Chance	2% Annual Chance	1% Annual Chance	1% Annual Future Annual	0.2% Annual Chance
Immediately upstream of University City Boulevard	3.29	1524	2178	2537	3058	3699
Approximately 1,250 ft. downstream of Rocky River Road	2.23	1317	2152	2735	3374	4221
Immediately upstream of Rocky River Road	1.86	1147	1952	2521	2973	3729
Approximately 650 ft. downstream of Autumnwood Lane	1.42	881	1650	2014	2422	2974
Immediately downstream of Autumnwood Lane	1.19	770	1400	1714	2043	2484
Torrence Creek						
Just downstream of confluence with Torrence Creek Tributary 1	10.15	3521	5426	6272	6951	8482
Just downstream of confluence with Torrence Creek Tributary 2	7.23	2923	4469	5115	5758	6798
Approximately 150 ft. upstream of McKoy Road	4.62	2111	3263	3761	4350	4889
Approximately 750 ft. upstream of Reese Blvd. West	3.51	1834	2804	3260	3785	4283
Approximately 450 ft. upstream of Reese Blvd. East	3.18	1677	2564	2976	3552	3983
Approximately 0.3 mi. downstream of Mt. Holly- Huntersville Road	2.00	1148	1626	1807	2166	2262
Just upstream of I-77	1.32	914	1270	1391	1513	1669
Approximately 0.4 mi. upstream of I- 77	1.05	1050	1760	2096	2411	2938
Approximately 0.44 mi. upstream of I-77	0.39	376	621	737	846	1030
Torrence Creek Tributary 1						
Approximately 1000 ft. upstream of confluence with Torrence Creek	2.41	802	1172	1363	1451	1946
Approximately 0.3 mi. downstream of Stumptown Road	2.08	843	1223	1385	1472	2016
Just upstream of Stumptown Road	1.77	717	1046	1213	1326	1711
Approximately 600 ft. upstream of Statesville Road	1.43	648	950	1052	1085	1303
Approximately 0.25 mi. upstream of Statesville Road	0.73	570	1054	1284	1338	1872
Torrence Creek Tributary 2						
Approximately 150 ft. upstream of Gilead Road	1.82	811	1146	1292	1353	1803
Approximately 0.3 mi. upstream of Rosewood Meadow Lane	1.33	824	1295	1449	1520	1785
Approximately 200 ft. upstream of I- 77	0.97	624	980	1116	1180	1492
Walker Branch						
At Confluence with Steele Creek	7.07	2332	3803	4551	5131	6428
Approximately 2,490 ft. downstream of Smith Road	4.93	1607	2624	3181	3644	4453
Approximately 235 ft. downstream of Smith Road	4.34	1435	2374	2863	3301	4120
At Confluence with Walker Branch Tributary	2.37	926	1428	1721	1912	2431
Approximately 120 ft. upstream of South Tryon Street	2.14	496	812	962	1066	1367
Walker Branch Tributary						
At Confluence with Walker Branch	1.64	761	1239	1549	1868	2284
Approximately 980 ft. downstream of Steele Creek Road	1.26	564	991	1250	1551	1863
Approximately 50 ft. downstream of Steele Creek Road	0.90	439	853	1078	1318	1546
West Branch Rocky River						
Approximately 400 ft. downstream of River Ford Road	22.14	3307	6697	8344	8813	13424
Approximately 0.7 miles upstream of East Rocky River Road	13.06	1903	4055	5207	5440	9029
Approximately 0.8 miles downstream of Grey Road	10.12	1251	2953	3912	4138	7070
Approximately 225 ft. upstream of Grey Road	9.28	1121	2784	3780	4026	6883
West Branch Rocky River Tributary						
Immediately upstream of the confluence with West Branch Rocky River	2.08	577	1024	1262	1277	1994
Approximately 0.7 miles downstream of Davis Road	1.83	557	1022	1256	1270	1973

Flooding Source		Discharges (cfs)				
Location	Drainage Area (square miles)	10% Annual Chance	2% Annual Chance	1% Annual Chance	1% Annual Future Annual	0.2% Annual Chance
Approximately 0.4 miles downstream of Davis Road	1.43	523	952	1164	1177	1790
Approximately 500 ft. downstream of Davis Road	1.12	493	890	1082	1094	1596

Stillwater elevations have been determined for the 1% annual chance flood for the flooding sources studied by detailed methods and are summarized in the table below.

Table 10 - Summary of Stillwater Elevations

Flooding Source	FIRM Panel Number(s)	Elevations *(feet NAVD)*			
		10% Annual Chance	2% Annual Chance	1% Annual Chance	0.2% Annual Chance
Lake Norman	4611, 4612, 4613, 4621, 4622, 4623, 4624, 4631, 4632, 4633, 4634, 4643, 4644, 4654	*	*	760.2	*
Lake Wylie	3487, 3488, 3489, 3497, 3498, 3499, 3580, 3581, 3590, 3591, 3593, 4501, 4502, 4503, 4504	*	*	570.0	*
Mountain Island Lake	4508, 4509, 4518, 4519, 4528, 4529	*	*	654.6	*

Mecklenburg County, in collaboration with the USGS, maintains a network of stream gages that record stream stage and/or flow. Table 11, lists the stream gages located in Mecklenburg 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 11 - Gage Information

Gage Number	Flooding Source	Site Name	Drainage Area (square miles)	Period of Record	
				From	To
2124269	Back Creek	BACK CR AT SR1173 NEAR HARRISBURG, NC	7.45	2009	Current
214297160	Beaverdam Creek	BEAVERDAM CREEK AB WINDY GAP ROAD NR SHOPTON, NC	4.47	2003	Current
214645022	Briar Creek	BRIAR CR ABOVE COLONY RD AT CHARLOTTE NC	19.00	2007	Current
214642825	Briar Creek	BRIAR CREEK NEAR CHARLOTTE, NC	5.20	1998	Current
214643770	Briar Creek	BRIAR CR AT INDEPENDENCE BLVD AT	11.20	2005	Current
214643860	Briar Creek	BRIAR CR BL EDWARDS BRANCH NEAR CHARLOTTE, NC	14.20	2003	Current
2146449	Briar Creek	BRIAR CREEK AT PROVIDENCE ROAD AT CHARLOTTE, NC	17.60	2004	Current
2146562	Campbell Creek	CAMPBELL CREEK NR CHARLOTTE, NC	5.71	1999	Current
2124080	Clarke Creek	CLARKE CREEK NEAR HARRISBURG, NC	21.90	2003	Current
212466000	Clear Creek	CLEAR CREEK AT SR3181 NR MINT HILL, NC	12.60	2002	Current
2146348	Coffey Creek	COFFEY CREEK NR CHARLOTTE, NC	9.14	1998	Current
214643820	Edwards Branch	EDWARDS BRANCH AT SHEFFIELD DR AT CHARLOTTE, NC	1.03	2004	Current
2146670	Fourmile Creek	FOUR MILE CREEK NEAR PINEVILLE NC	17.80	1997	Current
214266080	Gar Creek	GAR CREEK AT SR2074 NR CROFT, NC	3.55	2002	Current
212467451	Goose Creek	GOOSE CR AT SR1524 NEAR INDIAN TRAIL, NC	8.50	2009	Current
212467595	Goose Creek	GOOSE CREEK AT SR1525 NR INDIAN TRAIL, NC	11.00	2002	Current
2142914	Gum Branch	GUM BRANCH NEAR THRIFT, NC	5.28	2004	Current
214657975	Irvins Creek	IRVINS CREEK AT SR3168 NR CHARLOTTE, NC	8.37	1999	Current

Gage Number	Flooding Source	Site Name	Drainage Area (square miles)	Period of Record	
				From	To
2146300	Irwin Creek	IRWIN CREEK NEAR CHARLOTTE NC	30.70	1962	Current
2146211	Irwin Creek	IRWIN CR AT STATESVILLE AVE AT CHARLOTTE, NC	5.97	1981	Current
2146470	Little Hope Creek	LITTLE HOPE CREEK AT SENECA PLACE	2.63	1982	Current
2146409	Little Sugar Creek	LITTLE SUGAR CREEK AT MEDICAL CENTER	11.80	1994	Current
2146507	Little Sugar Creek	LITTLE SUGAR C AT ARCHDALE DR AT CHARLOTTE NC	42.60	1977	Current[1]
214640410	Little Sugar Creek	LITTLE SUGAR CR BL 36TH STREET NEAR	3.42	2004	Current[1]
2146420	Little Sugar Creek	LITTLE SUGAR CR AT HILLSIDE AVE, CHARLOTTE,	15.00	2005	Current[1]
2146530	Little Sugar Creek	LITTLE SUGAR CREEK AT PINEVILLE, NC	49.20	1997	Current[1]
2142900	Long Creek	LONG CREEK NEAR PAW CREEK NC	16.40	1965	Current[1]
214291555	Long Creek	LONG CREEK NR RHYNE, NC	31.50	1998	Current[1]
212414900	Mallard Creek	MALLARD CR BL STONY CR NR HARRISBURG, NC	34.60	1994	Current[1]
2146600	McAlpine Creek	MCALPINE CR AT SARDIS ROAD NEAR CHARLOTTE NC	38.60	1962	Current[1]
2146750	McAlpine Creek	MCALPINE CR BELOW MCMULLEN CR NR PINEVILLE NC	92.40	1974	Current[1]
214655255	McAlpine Creek	MCALPINE CREEK AT SR3150 NR IDLEWILD, NC	7.33	1999	Current[1]
2146614	McAlpine Creek	MCALPINE CR AT COLONY RD NEAR OLDE PROVIDENCE, NC	47.10	2008	Current[1]
214676115	McAlpine Creek	MCALPINE CREEK AT SR2964 NR CAMP COX, SC	95.90	2005	Current[1]
214266000	McDowell Creek	MCDOWELL CREEK NR CHARLOTTE NC (CSW10)	26.30	1996	Current[1]
2142654	McDowell Creek	MCDOWELL CREEK NR HUNTERSVILLE, NC	10.20	2006	Current[1]
214265828	McDowell Creek Tributary	MCDOWELL CR TRIB AT SR2131 NR HICKS CROSSROADS, NC	0.90	2015	Current[1]
212430653	McKee Creek	MCKEE CREEK AT SR2804 NR WILGROVE, NC	5.760	2007	Current[1]
2146700	McMullen Creek	MCMULLEN CR AT SHARON VIEW RD NEAR CHARLOTTE NC	6.95	1962	Current[1]
214668150	McMullen Creek	MCMULLEN CR ABOVE LINCREST PLACE AT CHARLOTTE, NC	1.94	2006	Current[1]
214295600	Paw Creek	PAW CR AT WILKINSON BLVD NR CHARLOTTE NC	10.40	1994	Current[1]
212427947	Reedy Creek	REEDY CREEK AT SR 2803 NR CHARLOTTE, NC	2.50	2001	Current[1]
212430293	Reedy Creek	REEDY CREEK BELOW I-485 NR PINE RIDGE, NC	12.60	2007	Current[1]
214685800	Six Mile Creek	SIX MILE CREEK NEAR PINEVILLE, NC	20.3	2007	Current[1]
214678175	Steele Creek	STEELE CREEK AT SR1441 NR PINEVILLE, NC	6.91	1998	Current[1]
214627970	Stewart Creek	STEWART CREEK AT STATE ST AT CHARLOTTE, NC	9.07	2000	Current[1]
2146285	Stewart Creek	STEWART CREEK AT WEST MOREHEAD ST AT CHARLOTTE, NC	11.10	2000	Current[1]
2146381	Sugar Creek	SUGAR CREEK AT NC 51 NEAR PINEVILLE NC	65.30	1994	Current[1]
2146330	Sugar Creek	SUGAR CREEK AT ARROWOOD ROAD NEAR	43.70	2007	Current[1]
2146315	Taggart	TAGGART CREEK AT WEST BOULEVARD NR CHARLOTTE, NC	5.71	1998	Current[1]
214265808	Torrence Creek	TORRENCE CR AT BRADFORD HILL LN NR HUNTERSVLLE, NC	7.29	2007	Current[1]
214645075	Tributary to Briar Creek	TRIB TO BRIAR CREEK AT COLONY RD AT CHARLOTTE, NC	1.03	2005	Current[1]
214645080	Tributary to Briar Creek	TRIB TO BRIAR CR AT RUNNYMEDE LN AT CHARLOTTE, NC	1.19	2005	Current[1]
212393300	West Branch Rocky River	W. BR ROCKY R B MTH OF S PRONG R NR CORNELIUS, NC nr CORNELIUS, NC	20.80	2004	Current[1]

1. Current as of date of this FIS

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. A summary of hydraulic analyses organized by the source FIS of analysis for identified flooding sources is presented below. Locations of selected cross sections used in the hydraulic analyses are shown on the FIRMs. Additionally, flood elevation information for selected events is displayed on the FRIS website.

Initial County-Wide Analysis (February 2004 / March 2009) – Catawba River ONLY

Hydraulic analysis of the riverine portion of the Catawba River (excluding the Lakes/Reservoirs) is based on 1-dimensional (1-D) steady-state modeling using the USACE HEC-RAS Version 2.2b program. HEC-RAS computes water surface elevations, velocities, floodway encroachments, and a number of other hydraulic characteristics. In the model, a stream is represented as a series of hydraulic cross sections and hydraulic structures (e.g. culverts, bridges, dams, etc.). The hydraulic cross sections are spaced along the stream to depict the geometry of the channel and overbank areas. Hydraulic structures obstruct the natural flow of floodwaters and thus can have a significant impact on computed flood elevations. Both cross sections and structures have additional parameters associated with them. Ground elevation information for cross section geometries were obtained from topographic maps and field surveys. All bridges, dams, and culverts were field surveyed. The overbank cross section data for the backwater analyses were obtained from 2-foot contour interval data from 2002 provided by Mecklenburg County. Peak flows are based on the hydrologic analysis described in Section 5.1. Other input parameters (e.g. roughness coefficients, boundary conditions, etc.) were developed based on published standards, field observation, and/or GIS data. Hydraulic models were calibrated to historic high water information and/or gage information where available/applicable.

PMR Revisions (February 2014, September 2015, and This Revision)

As mentioned previously, the County developed a Standards Document at the beginning of PMR1 to help ensure consistency of analyses for all PMRs. An overview of the hydraulic analysis for map maintenance PMRs to date is described below. The reader is referred to the Standards Document for additional details.

Hydraulic analyses of the streams in the PMR FIS revisions were based on 1-dimensional (1-D) steady-state modeling using the USACE HEC-RAS program. Ground elevation information for cross section geometries was obtained from a combination of County LiDAR data and field surveys. All bridges, dams, and culverts in the initial countywide FIS analyses were field verified. Any structures that had been modified or that were not included in the initial countywide FIS were surveyed to obtain relevant information. Other input parameters (e.g. roughness coefficients, boundary conditions, etc.) were developed based on published standards, field observation, and/or GIS data similar as was done for the initial countywide FIS. Hydraulic models were calibrated to historic high water information and/or gage information where available/applicable. Calibration techniques generally included modifications to coefficients, flow changes, or similar parameters as described in the Standards Document.

Differences in Methodologies between PMR Studies

As indicated above, the County developed the Standards Document at the initiation of the PMR1 study to help ensure consistency for all the map maintenance PMR studies. As the studies were performed by several different engineering contractors over a period of several years, there are some differences is source data, models, and specific application of engineering methodologies. The most significant difference in source data was the source of LiDAR (i.e. ground elevation) information. PMR1 and PMR2 used LiDAR that was flown in 2007, whereas PMR3 used an updated LiDAR source from 2012. For the HEC-RAS modeling, PMR1 used Versions 4.0 and 4.1, whereas PMR2 and PMR 3 used Version 4.1. Details of the application of engineering methodologies are described in watershed specific reports developed for the PMRs.

Little Hope Creek Subwatershed Letter of Map Revision (February 2015)

As described in Section 5.1, the County initiated a LOMR for flooding sources in the Little Hope Creek subwatershed following the Preliminary issuance of the PMR1 FIS. The hydraulic analysis was performed using HEC-RAS (Version 4.1) using the updated peak flows developed as part of the LOMR. The revised peak flows, flood elevations, and floodplain and floodway mapping associated with the LOMR are incorporated into this FIS and associated FIRMs.

The channel and overbank “n” values for all of the streams studied by detailed methods are shown in Table 12. The table reflects coefficients from all FIS revisions discussed above.

Table 12 - Roughness Coefficients

Stream	Channel "n"	Overbank "n"
Back Creek	0.047-0.051	0.040-0.150
Back Creek Tributary	0.047-0.048	0.050-0.150
Beaverdam Creek	0.055	0.035-0.120
Beaverdam Creek Tributary	0.055	0.060-0.120

Stream	Channel "n"	Overbank "n"
Blankmanship Branch	0.048	0.060-0.150
Briar Creek	0.030-0.065	0.012-0.120
Briar Creek Tributary 1	0.055	0.025-0.120
Briar Creek Tributary 2	0.055	0.025-0.120
Caldwell Creek	0.050	0.075-0.150
Caldwell Station	0.055	0.035-0.150
Campbell Creek	0.048-0.056	0.060-0.150
Cane Creek	0.050-0.060	0.020-0.150
Catawba River	0.033	0.100
Catawba River Tributary 1	0.055	0.035-0.120
Catawba River Tributary 2	0.050	0.060-0.120
Catawba River Tributary 3	0.050	0.060-0.150
Clarke Creek	0.045-0.060	0.020-0.150
Clarke Creek Tributary	0.035-0.060	0.020-0.150
Clarks Creek	0.035-0.055	0.020-0.150
Clarks Creek Tributary 1	0.045-0.050	0.020-0.150
Clarks Creek Tributary 1A	0.045-0.055	0.020-0.150
Clear Creek	0.042-0.050	0.075-0.150
Clear Creek Tributary	0.042-0.050	0.060-0.150
Clems Branch	0.047-0.053	0.060-0.150
Coffey Creek	0.047-0.051	0.060-0.150
Dairy Branch	0.035-0.040	0.025-0.120
Derita Branch	0.050-0.055	0.025-0.120
Dixon Branch	0.040-0.055	0.100-0.200
Dixon Branch Tributary	0.055	0.060-0.120
Doby Creek	0.045-0.060	0.020-0.150
Doby Creek Tributary	0.045-0.060	0.020-0.150
Duck Creek	0.046-0.050	0.075-0.150
Edwards Branch	0.045-0.055	0.025-0.120
Ferrelltown Creek	0.050-0.060	0.035-0.150
Flat Branch	0.046-0.049	0.055-0.150
Fourmile Creek	0.045-0.050	0.055-0.150
Gar Creek	0.060	0.060-0.180
Goose Creek	0.046-0.050	0.060-0.150
Gum Branch	0.044-0.052	0.080-0.200
Gutter Branch	0.055	0.060-0.120
Irvins Creek	0.047-0.050	0.055-0.150
Irvins Creek Tributary 1	0.046	0.050-0.150
Irvins Creek Tributary 2	0.050	0.050-0.150
Irwin Creek	0.036-0.050	0.040-0.200
Irwin Creek Tributary 1	0.048-0.051	0.060-0.150
Kennedy Branch	0.044-0.048	0.075-0.150
Kings Branch	0.048-0.051	0.060-0.150
Little Hope Creek	0.035-0.055	0.025-0.120
Little Hope Creek Tributary	0.047-0.055	0.025-0.075
Little Paw Creek	0.055	0.060-0.150
Little Sugar Creek	0.03-0.055	0.025-0.120
Long Creek	0.055	0.035-0.120
Long Creek Tributary 1	0.040-0.050	0.060-0.120
Long Creek Tributary 2	0.040	0.035-0.060
Long Creek Tributary 3	0.045-0.060	0.035-0.120
Mallard Creek	0.040-0.060	0.020-0.150
Mallard Creek Tributary	0.045-0.055	0.020-0.150
McAlpine Creek	0.040-0.051	0.040-0.160
McAlpine Creek Tributary 1	0.043-0.048	0.055-0.150
McAlpine Creek Tributary 1A	0.043	0.055-0.150
McAlpine Creek Tributary 3	0.049	0.060-0.150
McAlpine Creek Tributary 6	0.050	0.060-0.150
McCullough Branch	0.040-0.048	0.060-0.150
McDowell Creek	0.040-0.055	0.035-0.120
McDowell Creek Tributary 1	0.040-0.060	0.035-0.120
McDowell Creek Tributary 2	0.055	0.060-0.120
McIntyre Creek	0.045-0.055	0.035-0.120
McKee Creek	0.045-0.048	0.055-0.145
McMullen Creek	0.045-0.055	0.055-0.150
McMullen Creek Tributary	0.045-0.050	0.060-0.150
North Fork Crooked Creek	0.050	0.085-0.150

Stream	Channel "n"	Overbank "n"
North Fork Crooked Creek Tributary	0.046-0.050	0.070-0.150
North Prong Clarke Creek	0.050-0.065	0.060-0.150
Paw Creek	0.035-0.055	0.060-0.150
Paw Creek Tributary	0.045-0.070	0.035-0.150
Paw Creek Tributary 1A	0.055	0.060-0.150
Polk Ditch	0.048	0.040-0.150
Ramah Creek	0.055-0.065	0.020-0.150
Rea Branch	0.040-0.052	0.055-0.150
Reedy Creek	0.043-0.052	0.060-0.150
Reedy Creek Tributary 1	0.046-0.047	0.060-0.150
Reedy Creek Tributary 2	0.049-0.050	0.060-0.160
Reedy Creek Tributary 3	0.0480	0.055-0.150
Rocky Branch	0.047-0.052	0.050-0.150
Rocky River	0.045-0.060	0.020-0.150
Rocky River Tributary	0.055-0.065	0.050-0.150
Sardis Branch	0.048-0.052	0.050-0.150
Sherman Branch	0.050	0.075-0.150
Sixmile Creek	0.035-0.051	0.055-0.150
South Prong Clarke Creek	0.050-0.060	0.020-0.150
South Prong West Branch Rocky River	0.045-0.060	0.020-0.150
South Prong West Branch Rocky River Tributary	0.040-0.060	0.020-0.150
Steele Creek	0.048	0.040-0.150
Stevens Creek	0.050	0.060-0.150
Stevens Creek Tributary	0.047-0.050	0.055-0.150
Stewart Creek	0.041-0.050	0.045-0.200
Stewart Creek Tributary 1	0.044-0.049	0.060-0.170
Stewart Creek Tributary 2	0.045-0.050	0.060-0.150
Stewart Creek Tributary 3	0.044-0.050	0.060-0.150
Stony Creek	0.055-0.060	0.020-0.150
Stony Creek Tributary	0.055-0.065	0.020-0.150
Stowe Branch	0.050	0.035-0.120
Sugar Creek	0.040-0.051	0.060-0.200
Swan Run	0.045-0.049	0.060-0.150
Taggart Creek	0.047-0.054	0.040-0.150
Ticer Branch	0.045-0.055	0.035-0.150
Toby Creek	0.045-0.060	0.020-0.150
Torrence Creek	0.040-0.055	0.060-0.120
Torrence Creek Tributary 1	0.055-0.065	0.060-0.120
Torrence Creek Tributary 2	0.055	0.060-0.120
Walker Branch	0.048-0.049	0.060-0.150
Walker Branch Tributary	0.044-0.049	0.040-0.150
West Branch Rocky River	0.045-0.060	0.020-0.150
West Branch Rocky River Tributary	0.045-0.050	0.040-0.150

5.3. Coastal Analyses

This section is not applicable to this FIS project.

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 Mecklenburg 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 Mecklenburg County is —0.74 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 and shown in the table below.

Table 13 - Datum Conversion Locations and Values

Latitude	Longitude	Conversion from NGVD29 to NAVD88 (feet)
35.37	-80.75	-0.76
35.37	-80.75	-0.76
35.25	-81.00	-0.73
35.25	-81.00	-0.73
35.12	-81.00	-0.76
35.12	-81.00	-0.76
35.50	-80.87	-0.70
35.50	-80.87	-0.70
35.37	-80.87	-0.71
35.37	-80.87	-0.71
35.25	-80.87	-0.74
35.25	-80.87	-0.74
35.25	-80.75	-0.74
35.25	-80.75	-0.74
35.13	-80.88	-0.76
35.13	-80.88	-0.76
35.12	-80.75	-0.75
35.12	-80.75	-0.75
Average conversion in Mecklenburg County from NGVD 29 to NAVD 88 = -0.74 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 legacy FIRMs 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 should take care and use BFEs from non-rounded BFEs before converting.

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 Mecklenburg 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) 733-4407.

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.

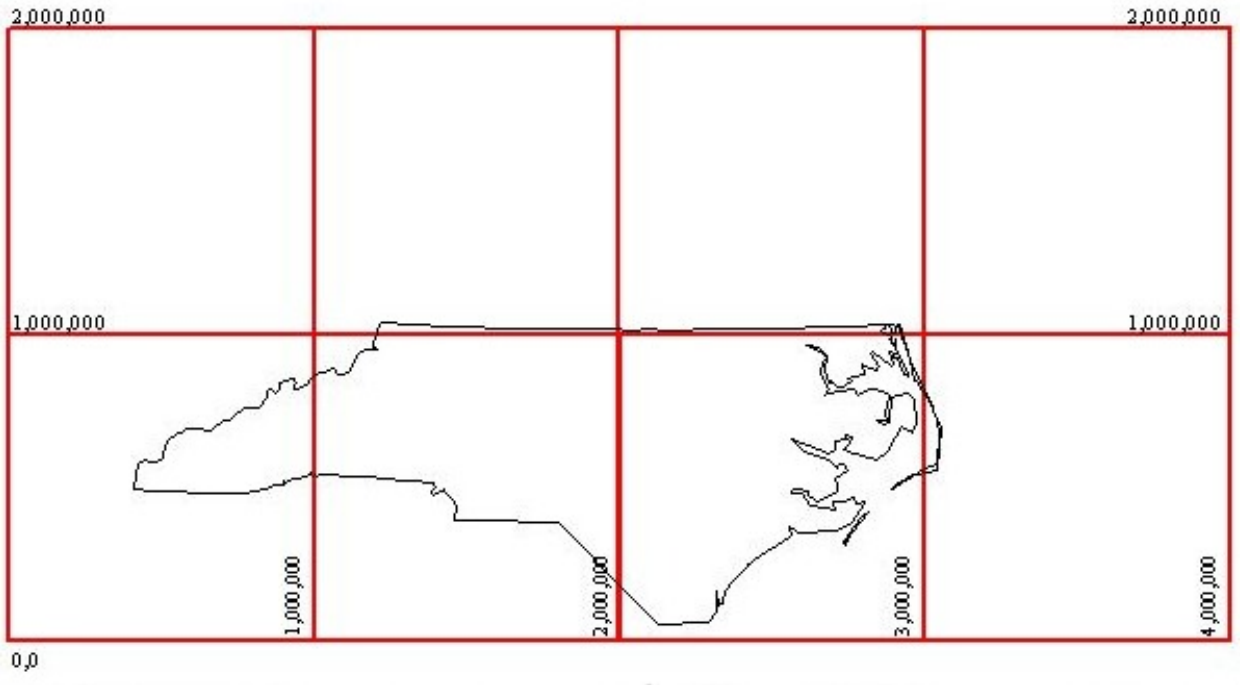

Figure 2 – North Carolina's State Plane Coordinate System

6.3. Floodplain and Floodway Delineation

Floodplain Boundaries

For streams restudied by detailed methods, the 1% existing conditions, and the 1% future conditions or the 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. For the initial countywide FIS (February 2004 / March 2009), topographic data is based on aerial 2-ft contour information collected in 1997. The PMR1 and PMR2 FIS revisions are based on 2007 LiDAR information. The PMR2 FIS revision includes redelineation of the riverine portion of the Catawba River (using the 2007 LiDAR). Topographic information for the PMR3 FIS revision is based on 2012 LiDAR information.

The 1% annual chance floodplain boundary corresponds to the boundary of the areas of special flood hazards (Zone AE), and the future conditions 1% and 0.2% annual chance floodplain boundary corresponds to the boundary of areas of moderate flood hazards. In cases where the 1% annual chance and 1% annual chance future and/or 0.2% annual chance floodplain boundaries are close together, only the 1% annual chance floodplain boundary (Zone AE) has been shown. Small areas within the floodplain boundaries may lie above the flood elevations but cannot be shown due to limitations of the map scale and/or lack of detailed topographic data.

Floodway Delineation

The floodways presented in this FIS (FEMA and Community Encroachment Area) 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 in Table 14. The computed floodways are 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 14 - Floodway Data

		1% Flood Discharges		Floodway			Non-Encroachment Offsets		Water Surface Elevation				
Cross Section	Distance (Feet Above Mouth)	Existing Land Use Conditions	Future Land Use Conditions	Width (Feet)	Section Area (Square Feet)	Mean Velocity (Feet Per Second)	Floodway	Community Encroachment Area	Regulatory	1% Annual Chance Future Water-Surface Elevation	Without Floodway	With Floodway	Increase
Back Creek													
0	12	3607	4019	105	719	5.0	35 / 70	45 / 95	613.7	614.1	613.7	614.1	0.4
5	483	3607	4019	215	1,366	2.6	165 / 50	225 / 75	616.2	616.7	616.2	616.7	0.5
15	1,489	1992	2199	105	408	4.9	75 / 30	140 / 35	619.2	619.5	619.2	619.6	0.4
25	2,489	1992	2199	115	624	3.2	90 / 25	130 / 60	624.3	624.6	624.3	624.8	0.5
34	3,368	1992	2199	190	660	3.0	155 / 35	180 / 85	627.1	627.4	627.1	627.6	0.5
44	4,446	1992	2199	175	617	3.2	25 / 150	25 / 240	631.7	631.9	631.7	632.1	0.4
58	5,801	1992	2199	85	418	4.8	60 / 25	115 / 40	636.1	636.3	636.1	636.5	0.4
75	7,474	1824	2002	44	268	6.8	28 / 16	115 / 20	642.1	642.4	642.1	642.4	0.3
83	8,280	1824	2002	82	390	4.7	17 / 65	20 / 90	646.9	647.2	646.9	647.4	0.5
93	9,297	1824	2002	145	560	3.3	15 / 130	40 / 160	650.5	650.7	650.5	651.0	0.5
100	10,033	1824	2002	225	955	1.9	75 / 150	100 / 195	652.8	653.0	652.8	653.3	0.5
112	11,177	1508	1682	250	999	1.5	200 / 50	325 / 50	656.5	656.8	656.5	657.0	0.5
122	12,150	1508	1682	100	468	3.2	75 / 25	115 / 50	658.5	658.8	658.5	659.0	0.5
129	12,897	1383	1644	265	650	2.1	245 / 20	300 / 20	661.4	661.7	661.4	661.8	0.4
134	13,397	1383	1644	270	718	1.9	150 / 120	270 / 120	662.9	663.2	662.9	663.4	0.5
144	14,397	1383	1644	145	561	2.5	25 / 120	60 / 145	667.8	668.1	667.8	668.3	0.5
154	15,397	1250	1538	97	401	3.1	25 / 72	35 / 125	672.3	672.8	672.3	672.7	0.4
161	16,148	1250	1538	110	518	2.4	35 / 75	60 / 115	675.1	675.6	675.1	675.6	0.5
170	17,036	1250	1538	120	482	2.6	45 / 75	85 / 125	679.4	680.2	679.4	679.8	0.4
179	17,915	1208	1497	160	590	2.0	15 / 145	15 / 210	682.1	682.6	682.1	682.6	0.5
188	18,819	1208	1497	140	610	2.0	50 / 90	90 / 110	686.1	686.6	686.1	686.6	0.5
203	20,317	1008	1261	95	383	2.6	20 / 75	40 / 135	691.4	691.9	691.4	691.8	0.4
213	21,302	1008	1261	110	301	3.3	20 / 90	25 / 195	696.1	696.6	696.1	696.6	0.5
224	22,449	841	1054	110	375	2.2	50 / 60	70 / 80	703.5	704.5	703.5	703.7	0.2
232	23,204	841	1054	90	258	3.3	20 / 70	35 / 115	707.1	707.9	707.1	707.4	0.3
236	23,586	841	1054	35	171	4.9	20 / 15	35 / 50	708.9	709.4	708.9	709.3	0.4
244	24,373	841	1054	32	243	3.5	22 / 10	25 / 10	711.8	712.3	711.8	712.3	0.5
Back Creek Tributary													
5	521	1641	1841	90	382	4.3	70 / 20	130 / 25	617.6	617.9	617.6	618.1	0.5
10	1,027	1641	1841	50	253	6.5	25 / 25	35 / 40	621.6	621.9	621.6	622.0	0.4
20	1,967	1641	1841	115	406	4.0	60 / 55	60 / 65	629.6	630.0	629.6	630.0	0.4
30	3,031	1641	1841	70	511	3.2	24 / 45	35 / 120	636.1	636.8	636.1	636.4	0.3
40	4,027	1624	1842	70	250	6.5	35 / 35	35 / 35	643.8	644.2	643.8	643.9	0.1
49	4,949	1624	1842	130	638	2.6	100 / 30	140 / 65	653.6	654.0	653.6	654.0	0.4
57	5,669	1511	1723	75	315	4.8	40 / 35	55 / 80	658.5	658.7	658.5	659.0	0.5
64	6,408	1511	1723	65	318	4.8	40 / 25	45 / 30	666.4	666.8	666.4	666.4	0.0
71	7,057	1511	1723	144	690	2.2	128 / 16	155 / 35	669.8	670.2	669.8	670.3	0.5
81	8,056	1511	1723	160	693	2.2	125 / 35	130 / 50	674.4	674.7	674.4	674.8	0.4
91	9,079	1303	1490	140	587	2.2	100 / 40	115 / 65	677.2	677.6	677.2	677.7	0.5
101	10,052	1303	1490	160	418	3.1	80 / 80	150 / 90	681.4	681.7	681.4	681.6	0.2
112	11,177	1303	1490	25	181	7.2	16-Sep	30 / 25	686.0	686.4	686.0	686.5	0.5
120	12,042	400	440	89	302	1.3	19 / 70	30 / 70	694.1	694.3	694.1	694.5	0.4
Beaverdam Creek													
6	558	3372	5144	225	1,148	2.9	187 / 38	216 / 58	572.8	574.2	572.8	573.3	0.5
14	1,447	2372	3811	316	1,764	1.3	185 / 131	200 / 154	574.9	575.9	574.9	575.4	0.5
22	2,195	2372	3811	211	1,054	2.2	164 / 48	187 / 69	575.9	577.1	575.9	576.4	0.5

		1% Flood Discharges		Floodway			Non-Encroachment Offsets		Water Surface Elevation				
Cross Section	Distance (Feet Above Mouth)	Existing Land Use Conditions	Future Land Use Conditions	Width (Feet)	Section Area (Square Feet)	Mean Velocity (Feet Per Second)	Floodway	Community Encroachment Area	Regulatory	1% Annual Chance Future Water-Surface Elevation	Without Floodway	With Floodway	Increase
27	2,660	2372	3811	266	1,167	2.0	201 / 65	230 / 101	576.9	578.2	576.9	577.4	0.5
33	3,333	1040	1862	241	1,247	0.8	228 / 13	273 / 13	578.9	579.8	578.9	579.1	0.2
38	3,800	1040	1862	239	740	1.4	213 / 26	271 / 69	579.1	580.1	579.1	579.3	0.3
44	4,424	1040	1862	265	635	1.6	17 / 248	19 / 313	580.4	581.4	580.4	580.9	0.5
53	5,270	1040	1862	75	256	4.1	11 / 64	11 / 101	585.5	586.3	585.5	585.9	0.4
57	5,717	1040	1862	178	561	1.8	48 / 130	91 / 172	587.9	589.0	587.9	588.3	0.4
65	6,522	1040	1862	124	227	4.6	12 / 112	12 / 179	591.9	592.7	591.9	592.3	0.4
70	7,026	1040	1862	141	403	2.6	12 / 129	14 / 138	596.7	597.9	596.7	597.0	0.4
77	7,691	1040	1862	150	476	2.2	93 / 57	112 / 79	599.7	601.0	599.7	599.9	0.3
85	8,526	984	1750	85	291	3.4	41 / 44	63 / 66	603.5	604.9	603.5	604.0	0.5
93	9,337	984	1750	56	251	3.9	43 / 13	55 / 14	608.5	609.8	608.5	608.8	0.3
109	10,904	984	1750	86	295	3.3	71 / 15	98 / 21	618.6	619.9	618.6	619.0	0.4
117	11,663	984	1750	109	380	2.6	88 / 21	105 / 36	625.2	626.7	625.2	625.7	0.5
125	12,502	984	1750	54	222	4.4	13 / 41	27 / 58	634.0	635.4	634.0	634.2	0.2
132	13,203	638	1202	34	110	5.8	17 / 17	17 / 17	637.3	638.6	637.3	637.6	0.3
Beaverdam Creek Tributary													
7	654	1590	2480	193	619	2.6	16 / 176	79 / 231	578.9[1]	579.5	576.6	577.1	0.5
13	1,251	1590	2480	109	282	5.6	30 / 79	52 / 100	578.9[1]	579.5	578.9	579.3	0.4
20	2,023	1590	2480	84	292	5.4	27 / 57	37 / 72	582.8	583.7	582.8	583.1	0.3
26	2,596	1590	2480	194	663	2.4	18 / 176	18 / 219	584.9	585.9	584.9	585.4	0.5
32	3,242	1590	2480	84	356	4.5	69 / 15	78 / 25	588.4	589.3	588.4	588.9	0.5
41	4,140	1114	1744	86	368	3.0	72 / 14	99 / 14	591.6	592.7	591.6	592.1	0.5
49	4,923	762	1159	69	196	3.9	19 / 50	34 / 64	595.3	595.8	595.3	595.8	0.5
56	5,642	762	1159	116	207	3.7	91 / 25	119 / 56	598.3	598.7	598.3	598.7	0.4
65	6,488	762	1159	89	201	3.8	30 / 60	64 / 129	601.9	602.4	601.9	602.3	0.4
Blankmanship Branch													
1	90	1016	1231	100	875	1.2	25 / 75	37 / 96	615.8	616.0	615.8	616.3	0.5
9	900	944	1132	110	608	1.6	60 / 50	110 / 62	616.0	616.2	616.0	616.5	0.5
17	1,698	944	1132	115	338	2.8	80 / 35	149 / 57	619.3	619.7	619.3	619.8	0.5
28	2,800	880	1050	29	146	6.0	14 / 15	20 / 18	623.5	623.8	623.5	624.0	0.5
39	3,919	850	996	68	453	1.9	40 / 28	275 / 497	635.5	635.5	635.5	635.9	0.4
Briar Creek													
10	964	4871	5065	94	805	6.1	57 / 37	57 / 66	590.2[1]	590.7	584.9	585.3	0.4
18	1,769	4871	5065	104	1,078	4.5	63 / 41	121 / 74	590.2[1]	590.7	587.7	588.0	0.3
26	2,606	4871	5065	108	758	6.4	33 / 75	33 / 75	590.2[1]	590.7	588.8	589.2	0.4
32	3,228	4871	5065	86	969	5.0	29 / 57	40 / 92	590.4	590.7	590.4	590.7	0.3
40	4,045	4871	5065	179	1,106	4.4	140 / 39	238 / 44	591.4	591.6	591.4	591.7	0.3
47	4,710	4852	5047	333	3,834	1.3	185 / 148	185 / 217	592.0	592.2	592.0	592.4	0.4
53	5,342	4852	5047	58	670	7.2	29 / 29	34 / 139	592.0	592.2	592.0	592.4	0.4
60	6,047	4852	5047	72	852	5.7	35 / 37	38 / 202	593.7	593.9	593.7	594.1	0.4
65	6,539	4726	4924	84	835	5.7	43 / 41	45 / 41	594.7	594.9	594.7	595.1	0.4
70	7,039	4726	4924	84	751	6.3	34 / 50	37 / 104	597.3	597.6	597.3	597.3	0.0
78	7,829	4726	4924	70	694	6.8	35 / 35	53 / 40	598.3	598.6	598.3	598.3	0.0
87	8,698	4726	4924	59	354	13.3	26 / 33	30 / 35	600.7	600.9	600.7	600.7	0.0
95	9,491	4726	4924	57	473	10.0	26 / 31	28 / 42	607.1	607.4	607.1	607.1	0.0
100	10,031	4714	4912	67	546	8.6	34 / 33	34 / 33	609.5	609.7	609.5	609.6	0.1
103	10,300	4714	4912	81	698	6.8	43 / 38	50 / 41	612.9	613.3	612.9	612.9	0.0
106	10,628	4714	4912	129	1,042	4.5	31 / 98	31 / 110	614.4	614.7	614.4	614.8	0.4
108	10,838	4714	4912	131	1,105	4.3	28 / 103	45 / 113	614.7	615.0	614.7	615.2	0.5

		1% Flood Discharges		Floodway			Non-Encroachment Offsets		Water Surface Elevation				
Cross Section	Distance (Feet Above Mouth)	Existing Land Use Conditions	Future Land Use Conditions	Width (Feet)	Section Area (Square Feet)	Mean Velocity (Feet Per Second)	Floodway	Community Encroachment Area	Regulatory	1% Annual Chance Future Water-Surface Elevation	Without Floodway	With Floodway	Increase
112	11,235	4711	4909	87	985	4.8	50 / 37	135 / 83	615.8	615.9	615.8	616.1	0.3
120	12,025	4711	4909	113	943	5.0	31 / 82	43 / 102	617.0	617.1	617.0	617.4	0.4
124	12,447	4711	4909	157	845	5.6	69 / 88	69 / 88	617.4	617.6	617.4	617.9	0.5
128	12,843	4711	4909	107	881	5.4	51 / 56	53 / 72	620.4	620.6	620.4	620.8	0.4
133	13,260	4692	4891	272	2,071	2.3	68 / 204	68 / 315	621.8	622.0	621.8	622.3	0.5
137	13,743	4692	4891	136	1,414	3.3	71 / 65	82 / 83	622.0	622.2	622.0	622.4	0.4
155	15,472	4692	4891	422	3,627	1.3	144 / 278	169 / 278	622.5	622.7	622.5	623.0	0.5
162	16,196	4668	4868	92	841	5.6	44 / 48	55 / 85	622.5	622.7	622.5	623.0	0.5
166	16,558	4668	4868	181	1,397	3.3	77 / 104	79 / 108	624.3	624.6	624.3	624.7	0.4
173	17,308	4634	4839	310	2,450	1.9	115 / 195	203 / 248	624.9	625.2	624.9	625.2	0.3
183	18,251	4634	4839	427	2,666	1.7	210 / 217	210 / 321	625.1	625.4	625.1	625.6	0.5
194	19,351	4634	4839	413	1,980	2.3	322 / 91	324 / 236	625.6	625.9	625.6	626.1	0.5
200	19,958	4634	4839	355	1,302	3.6	206 / 149	210 / 154	626.3	626.5	626.3	626.7	0.4
210	21,043	4634	4839	201	937	5.0	25 / 176	29 / 231	629.0	629.2	629.0	629.3	0.3
219	21,862	4600	4813	345	1,503	3.1	22 / 323	26 / 383	630.0	630.2	630.0	630.4	0.4
230	23,041	4568	4782	103	575	8.0	59 / 44	59 / 69	631.8	632.0	631.8	632.3	0.5
236	23,566	4568	4782	378	2,361	1.9	336 / 42	336 / 65	634.4	634.6	634.4	634.6	0.2
246	24,616	4568	4782	93	834	5.5	59 / 34	181 / 39	635.3	635.5	635.3	635.6	0.3
252	25,211	4521	4734	60	692	6.5	30 / 30	35 / 34	636.9	637.1	636.9	637.3	0.4
256	25,619	4505	4717	60	677	6.7	30 / 30	37 / 35	638.4	638.8	638.4	638.7	0.3
258	25,839	4505	4717	84	1,711	2.6	42 / 42	42 / 42	651.8	652.5	651.8	651.8	0.0
262	26,196	4505	4717	335	4,242	1.1	138 / 197	138 / 197	651.9	652.6	651.9	651.9	0.0
268	26,792	5649	6035	717	7,993	0.7	470 / 247	470 / 247	651.9	652.6	651.9	651.9	0.0
279	27,897	4712	5031	86	1,285	3.7	52 / 34	161 / 169	651.9	652.6	651.9	651.9	0.0
286	28,602	4712	5031	84	944	5.0	36 / 48	138 / 466	652.2	652.8	652.2	652.6	0.4
295	29,469	4712	5031	384	1,884	2.5	42 / 342	117 / 375	653.5	654.0	653.5	653.9	0.4
321	32,121	5910	6241	233	984	6.0	206 / 27	206 / 30	654.3	654.7	654.3	654.7	0.4
335	33,487	6053	6483	516	2,717	2.2	157 / 359	288 / 480	656.9	657.1	656.9	657.4	0.5
339	33,928	6053	6483	404	2,207	2.7	53 / 351	58 / 365	657.3	657.5	657.3	657.8	0.5
347	34,657	6053	6483	186	1,600	3.8	126 / 61	184 / 103	659.6	659.8	659.6	659.9	0.3
350	35,024	6053	6483	498	2,380	2.5	388 / 110	404 / 142	660.1	660.4	660.1	660.6	0.5
355	35,527	6053	6483	238	1,204	5.0	169 / 69	169 / 71	661.3	661.7	661.3	661.8	0.5
358	35,767	6053	6483	118	658	9.2	49 / 69	55 / 101	662.7	663.0	662.7	662.7	0.0
360	35,922	6053	6483	153	1,216	5.0	105 / 48	105 / 62	665.8	666.0	665.8	665.8	0.0
364	36,428	6038	6733	115	854	7.1	58 / 57	58 / 158	667.6	667.6	667.6	668.0	0.4
369	36,856	6038	6733	250	2,079	2.9	121 / 129	128 / 137	669.7	670.2	669.7	670.1	0.4
375	37,472	5691	6347	157	1,296	4.4	98 / 59	120 / 76	670.4	670.8	670.4	670.8	0.4
387	38,709	5472	6090	296	1,089	5.0	159 / 137	191 / 177	672.7	673.2	672.7	673.1	0.4
394	39,370	5472	6090	212	1,450	3.8	67 / 146	129 / 147	674.5	674.8	674.5	674.9	0.4
403	40,315	5472	6090	151	1,156	4.7	123 / 27	183 / 58	676.8	677.3	676.8	677.1	0.3
409	40,948	5472	6090	103	810	6.8	46 / 57	90 / 114	677.7	678.2	677.7	678.0	0.3
415	41,478	5300	5867	249	1,685	3.2	98 / 151	122 / 283	679.8	680.2	679.8	680.2	0.4
421	42,105	5300	5867	363	2,970	1.8	67 / 296	113 / 331	681.2	681.5	681.2	681.7	0.5
426	42,565	4790	5289	486	3,072	1.6	306 / 180	372 / 210	681.4	681.7	681.4	681.9	0.5
428	42,779	4790	5289	407	2,628	1.8	328 / 79	429 / 130	681.9	682.1	681.9	682.4	0.5
431	43,084	4790	5289	411	1,814	2.6	383 / 28	449 / 91	682.1	682.3	682.1	682.5	0.4
434	43,440	4790	5289	170	1,211	4.0	137 / 33	144 / 36	682.8	683.0	682.8	683.3	0.5
445	44,548	4790	5289	325	1,716	2.8	164 / 161	164 / 167	685.3	685.7	685.3	685.8	0.5
453	45,349	4506	4937	319	1,998	2.3	176 / 143	197 / 143	687.4	687.7	687.4	687.8	0.4

		1% Flood Discharges		Floodway			Non-Encroachment Offsets		Water Surface Elevation				
Cross Section	Distance (Feet Above Mouth)	Existing Land Use Conditions	Future Land Use Conditions	Width (Feet)	Section Area (Square Feet)	Mean Velocity (Feet Per Second)	Floodway	Community Encroachment Area	Regulatory	1% Annual Chance Future Water-Surface Elevation	Without Floodway	With Floodway	Increase
460	45,962	4506	4937	206	1,298	3.5	99 / 107	101 / 130	688.9	689.3	688.9	689.4	0.5
468	46,838	3751	4039	96	691	5.4	58 / 38	58 / 43	693.1	693.5	693.1	693.6	0.5
477	47,672	1945	2102	484	2,286	0.8	445 / 39	491 / 44	694.4	694.8	694.4	694.9	0.5
483	48,323	1945	2102	107	301	6.5	81 / 26	134 / 32	694.5	694.9	694.5	694.9	0.4
485	48,530	1945	2102	104	459	4.2	87 / 17	180 / 52	697.4	697.5	697.4	697.3	0.0
494	49,435	1945	2102	70	245	8.0	42 / 28	122 / 78	699.1	699.2	699.1	699.1	0.0
507	50,685	1947	2108	50	306	6.4	25 / 25	25 / 25	704.7	704.9	704.7	705.2	0.5
513	51,256	1947	2108	89	497	3.9	33 / 56	60 / 93	708.1	708.3	708.1	708.6	0.5
Briar Creek Tributary 1													
8	846	1195	1274	23	135	8.8	13 / 10	12 / 13	592.0[1]	592.3	590.8	590.8	0.0
15	1,500	1434	1508	80	393	3.7	31 / 49	71 / 160	598.7	599.5	598.7	598.7	0.0
22	2,198	1434	1508	46	279	5.1	23 / 23	44 / 36	601.0	601.2	601.0	601.5	0.5
27	2,719	1434	1508	39	241	6.0	18 / 21	18 / 34	603.8	604.0	603.8	604.2	0.4
33	3,338	1434	1508	51	256	5.6	27 / 24	27 / 23	606.2	606.4	606.2	606.4	0.2
39	3,913	1434	1508	38	212	6.8	18 / 20	18 / 20	610.3	610.5	610.3	610.3	0.0
43	4,264	1434	1508	80	452	3.2	43 / 37	66 / 36	615.5	615.7	615.5	616.0	0.5
Briar Creek Tributary 2													
7	660	1714	1846	59	389	4.4	27 / 32	28 / 31	693.4[1]	693.8	693.2	693.7	0.5
11	1,074	1714	1846	93	639	2.7	47 / 46	139 / 103	696.4	696.6	696.4	696.7	0.3
17	1,724	1714	1846	46	267	6.4	23 / 23	27 / 24	700.5	700.7	700.5	700.5	0.0
23	2,335	1714	1846	101	407	4.2	22 / 79	22 / 85	702.4	702.6	702.4	702.9	0.5
29	2,876	1714	1846	105	453	3.8	34 / 71	34 / 126	703.8	704.0	703.8	704.3	0.5
31	3,082	1714	1846	127	545	3.1	36 / 91	59 / 126	706.3	706.5	706.3	706.8	0.5
35	3,471	1714	1846	263	842	2.0	145 / 118	148 / 118	707.4	707.5	707.4	707.9	0.5
Caldwell Creek													
0	14	1004	1603	35	150	6.7	26 / 9	35 / 160	622.5	623.3	622.5	623.0	0.5
7	706	1004	1603	200	566	1.8	80 / 120	160 / 150	626.2	627.0	626.2	626.7	0.5
14	1,407	794	1246	60	154	5.2	25/ 35	25 / 130	629.2	629.8	629.2	629.6	0.4
25	2,513	794	1246	20	117	6.8	12 / 9	18 / 15	641.2	642.4	641.2	641.7	0.5
33	3,294	794	1246	42	106	7.5	12 / 30	20 / 85	650.4	651.3	650.4	650.4	0.1
40	4,025	648	1045	60	191	3.4	25 / 35	60 / 77	656.3	657.2	656.3	656.8	0.5
50	4,986	648	1045	28	114	5.7	10 / 18	30 / 50	662.7	663.6	662.7	663.1	0.4
Caldwell Station													
12	1,231	1833	1863	170	1117	1.6	37 / 133	72 / 146	703.3	703.4	703.3	703.7	0.4
16	1,609	1833	1863	150	1241	1.5	90 / 60	129 / 98	705.7	705.8	705.7	706.0	0.3
23	2,257	1833	1863	48	415	4.4	23 / 25	29 / 38	705.9	705.9	705.9	706.2	0.3
29	2,858	1833	1863	90	521	3.5	40 / 50	40 / 50	707.3	707.4	707.3	707.7	0.3
31	3,116	1833	1863	80	734	2.5	42 / 38	42 / 38	712.6	712.8	712.6	712.6	0.0
37	3,686	1833	1863	365	3740	0.5	54 / 311	72 / 320	716.2	716.5	716.2	716.3	0.0
44	4,440	2588	2640	391	4383	0.6	112 / 279	159 / 290	718.8	718.9	718.8	719.3	0.5
51	5,057	1704	1735	316	2711	0.6	69 / 247	94 / 268	718.9	719.0	718.9	719.4	0.5
59	5,902	1704	1735	328	1561	1.1	68 / 261	109 / 297	719.1	719.2	719.1	719.6	0.5
66	6,550	1704	1735	252	901	1.9	232 / 19	254 / 27	722.2	722.3	722.2	722.7	0.5
Campbell Creek													
7	678	2385	2673	80	531	4.5	25 / 55	215 / 65	588.9[1]	589.6[1]	586.2	586.6	0.4
17	1,678	2385	2673	78	487	4.9	43 / 34	43 / 34	590.3	590.5	590.3	590.8	0.5
26	2,578	2385	2673	205	757	3.2	150 / 55	235 / 135	594.9	595.2	594.9	595.2	0.3
36	3,578	2316	2600	51	275	8.4	26 / 25	100 / 100	601.8	602.3	601.8	602.1	0.3
47	4,678	2316	2600	80	522	4.4	50 / 30	140 / 80	614.1	614.3	614.1	614.3	0.2

		1% Flood Discharges		Floodway			Non-Encroachment Offsets		Water Surface Elevation				
Cross Section	Distance (Feet Above Mouth)	Existing Land Use Conditions	Future Land Use Conditions	Width (Feet)	Section Area (Square Feet)	Mean Velocity (Feet Per Second)	Floodway	Community Encroachment Area	Regulatory	1% Annual Chance Future Water-Surface Elevation	Without Floodway	With Floodway	Increase
56	5,559	2316	2600	165	802	2.9	145 / 20	200 / 30	617.5	618.0	617.5	617.9	0.4
66	6,568	2316	2600	70	414	5.6	20 / 50	45 / 190	622.0	622.4	622.0	622.5	0.5
76	7,628	2170	2448	70	353	6.2	40 / 30	125 / 45	633.4	633.9	633.4	633.8	0.4
89	8,878	2170	2448	43	270	8.0	25 / 18	43 / 30	645.6	645.9	645.6	645.9	0.3
99	9,855	2170	2448	90	438	5.0	40 / 50	48 / 89	653.1	653.4	653.1	653.6	0.5
111	11,078	2154	2433	120	512	4.2	95 / 25	155 / 65	658.5	658.9	658.5	658.9	0.4
123	12,278	2154	2433	350	1,177	1.8	180 / 170	230 / 240	663.6	664.0	663.6	664.1	0.5
135	13,478	2154	2433	98	516	4.2	70 / 28	85 / 40	671.8	672.2	671.8	672.1	0.3
146	14,578	1888	2150	145	585	3.2	125 / 20	170 / 68	678.5	678.9	678.5	678.9	0.4
159	15,878	1888	2150	45	301	6.3	30 / 15	80 / 27	683.4	683.8	683.4	683.7	0.3
168	16,778	1888	2150	220	964	2.0	5 / 215	5 / 325	685.4	685.8	685.4	685.9	0.5
179	17,912	1690	1917	320	1,238	1.4	20 / 300	20 / 400	689.2	689.5	689.2	689.6	0.4
191	19,078	1690	1917	295	924	1.8	140 / 155	197 / 340	691.6	691.9	691.6	692.1	0.5
201	20,078	1411	1631	77	259	5.4	65 / 12	130 / 12	693.7	694.2	693.7	693.9	0.2
209	20,878	1411	1631	115	384	3.7	100 / 15	155 / 17	696.0	696.5	696.0	696.5	0.5
218	21,837	1411	1631	44	317	4.5	17 / 27	32 / 39	699.3	700.0	699.3	699.7	0.4
230	23,042	1411	1631	122	373	3.8	100 / 22	120 / 340	701.2	701.9	701.2	701.6	0.4
241	24,078	993	1126	145	482	2.1	35 / 110	95 / 180	703.4	703.7	703.4	703.9	0.5
254	25,375	993	1126	130	414	2.4	45 / 85	55 / 150	705.8	706.1	705.8	706.2	0.4
266	26,578	924	1051	40	183	5.1	20 / 20	65 / 65	710.5	710.8	710.5	710.9	0.4
278	27,750	679	794	27	181	3.7	12 / 15	15 / 18	714.9	715.3	714.9	715.4	0.5
Cane Creek													
1	106	2870	2904	213	801	3.6	186 / 27	186 / 47	652.1[1]	652.2[1]	649.3	649.3	0.1
5	489	2870	2904	95	408	7.0	54 / 41	65 / 61	652.1[1]	652.2[1]	650.4	650.5	0.0
9	904	2870	2904	85	519	5.5	44 / 41	79 / 53	653.1	653.1	653.1	653.2	0.2
13	1,338	2870	2904	227	1,157	2.5	35 / 192	68 / 216	654.7	654.7	654.7	655.0	0.4
18	1,834	2870	2904	168	682	4.2	138 / 29	175 / 81	655.5	655.6	655.5	655.9	0.4
22	2,179	2870	2904	156	550	5.2	134 / 22	241 / 22	656.7	656.7	656.7	657.1	0.4
26	2,593	2870	2904	151	612	4.7	86 / 65	124 / 101	658.3	658.3	658.3	658.8	0.5
28	2,836	2870	2904	111	637	4.5	86 / 25	151 / 44	659.4	659.4	659.4	659.8	0.4
31	3,056	2870	2904	57	566	5.1	29 / 29	115 / 30	659.9	659.9	659.9	660.4	0.5
33	3,322	2870	2904	58	524	5.5	32 / 26	41 / 35	660.3	660.4	660.3	660.8	0.4
37	3,661	2870	2904	32	248	11.6	16 / 16	16 / 16	660.4	660.4	660.4	660.9	0.5
39	3,928	2870	2904	106	652	4.4	37 / 69	44 / 96	664.5	664.6	664.5	664.6	0.1
44	4,381	2870	2904	80	545	5.3	25 / 55	52 / 68	665.6	665.7	665.6	665.9	0.2
48	4,760	2870	2904	112	639	4.5	50 / 62	76 / 87	666.8	666.9	666.8	667.1	0.3
51	5,118	2870	2904	132	838	3.4	35 / 97	36 / 209	668.1	668.1	668.1	668.5	0.4
54	5,394	2257	2284	141	460	4.9	109 / 32	161 / 100	668.5	668.6	668.5	668.9	0.4
56	5,584	2257	2284	98	428	5.3	76 / 22	167 / 51	669.4	669.4	669.4	669.9	0.4
59	5,921	2044	2070	117	601	3.4	20 / 97	110 / 126	670.6	670.6	670.6	671.0	0.5
62	6,236	2044	2070	41	330	6.2	20 / 20	33 / 20	671.3	671.3	671.3	671.8	0.5
65	6,492	2044	2070	41	325	6.3	21 / 21	21 / 23	672.2	672.2	672.2	672.6	0.4
68	6,755	2044	2070	43	316	6.5	21 / 21	21 / 21	673.2	673.2	673.2	673.4	0.3
70	6,972	1746	1778	45	357	4.9	22 / 23	26 / 53	674.2	674.2	674.2	674.3	0.1
72	7,231	1746	1778	55	468	3.7	27 / 27	28 / 44	674.6	674.7	674.6	675.0	0.3
75	7,522	1570	1609	26	202	7.8	14 / 12	14 / 12	674.9	675.0	674.9	675.2	0.3
78	7,837	1570	1609	42	336	4.7	20 / 22	20 / 26	676.8	676.9	676.8	677.0	0.2
81	8,094	1570	1609	48	297	5.3	24 / 24	24 / 24	677.9	678.0	677.9	678.0	0.1
86	8,564	1570	1609	34	232	6.8	17 / 17	17 / 17	679.5	679.6	679.5	679.6	0.1

		1% Flood Discharges		Floodway			Non-Encroachment Offsets		Water Surface Elevation				
Cross Section	Distance (Feet Above Mouth)	Existing Land Use Conditions	Future Land Use Conditions	Width (Feet)	Section Area (Square Feet)	Mean Velocity (Feet Per Second)	Floodway	Community Encroachment Area	Regulatory	1% Annual Chance Future Water-Surface Elevation	Without Floodway	With Floodway	Increase
88	8,832	1570	1609	43	310	5.1	21 / 21	21 / 22	680.8	680.9	680.8	680.8	0.0
92	9,220	1570	1609	35	236	6.6	18 / 17	18 / 17	681.8	681.9	681.8	681.8	0.0
95	9,493	1570	1609	32	208	7.6	16 / 16	22 / 19	683.1	683.2	683.1	683.1	0.0
98	9,827	1570	1609	45	301	5.2	22 / 22	22 / 22	684.8	684.9	684.8	685.1	0.3
101	10,065	1570	1609	43	241	6.5	13 / 71	13 / 71	685.6	685.7	685.6	685.8	0.2
104	10,388	1570	1609	44	277	5.7	17 / 27	20 / 35	688.1	688.2	688.1	688.2	0.1
105	10,536	913	923	34	207	4.4	16 / 18	16 / 22	688.9	689.0	688.9	689.2	0.3
109	10,864	913	923	24	110	8.3	14 / 10	45 / 10	690.0	690.1	690.0	690.1	0.1
111	11,147	913	923	32	172	5.3	17 / 15	18 / 15	692.7	692.7	692.7	693.0	0.2
114	11,355	913	923	40	232	3.9	20 / 20	20 / 20	693.7	693.7	693.7	693.8	0.1
117	11,749	913	923	23	93	9.8	11 / 12	11 / 12	695.0	695.0	695.0	695.0	0.0
121	12,119	496	498	20	94	5.3	10 / 10	10 / 10	701.5	701.5	701.5	701.5	0.0
Catawba River													
533	53,342	69100	*	1,016	35,584	1.9	508 / 508	*	571.0	*	571.0	572.0	1.0
537	53,744	69100	*	1,409	49,184	1.4	904 / 504	*	571.1	*	571.1	572.1	1.0
542	54,176	69100	*	1,140	39,498	1.8	570 / 570	*	571.1	*	571.1	572.1	1.0
546	54,569	69100	*	1,129	38,909	1.8	514 / 614	*	571.1	*	571.1	572.1	1.0
549	54,932	69100	*	1,196	41,041	1.7	418 / 778	*	571.1	*	571.1	572.1	1.0
555	55,530	69100	*	2,028	69,169	1.0	1383 / 645	*	571.1	*	571.1	572.1	1.0
567	56,685	69100	*	2,483	83,206	0.8	999 / 1483	*	571.1	*	571.1	572.1	1.0
575	57,519	69100	*	1,095	36,252	1.9	547 / 547	*	571.1	*	571.1	572.1	1.0
580	58,034	69100	*	1,138	37,497	1.8	660 / 478	*	571.1	*	571.1	572.1	1.0
588	58,808	69100	*	1,578	51,481	1.3	901 / 677	*	571.2	*	571.2	572.1	0.9
594	59,427	69100	*	1,693	54,723	1.3	846 / 846	*	571.2	*	571.2	572.2	1.0
601	60,093	69100	*	1,577	50,596	1.4	788 / 788	*	571.2	*	571.2	572.2	1.0
606	60,594	69100	*	1,262	40,182	1.7	631 / 631	*	571.2	*	571.2	572.1	0.9
612	61,180	69100	*	1,385	43,783	1.6	508 / 877	*	571.2	*	571.2	572.2	1.0
618	61,834	69100	*	1,757	55,060	1.3	878 / 878	*	571.2	*	571.2	572.2	1.0
624	62,433	69100	*	1,577	48,994	1.4	788 / 788	*	571.2	*	571.2	572.2	1.0
630	63,002	69100	*	1,532	47,213	1.5	675 / 857	*	571.2	*	571.2	572.2	1.0
635	63,460	69100	*	1,588	48,627	1.4	709 / 878	*	571.2	*	571.2	572.2	1.0
637	63,724	69100	*	1,799	54,999	1.3	900 / 900	*	571.2	*	571.2	572.2	1.0
643	64,300	69100	*	1,519	34,754	2.0	871 / 649	*	571.2	*	571.2	572.2	1.0
649	64,922	69100	*	1,982	42,456	1.6	991 / 991	*	571.2	*	571.2	572.2	1.0
653	65,312	69100	*	2,127	45,628	1.5	1064 / 1064	*	571.3	*	571.3	572.2	0.9
657	65,739	69100	*	2,373	50,050	1.4	1187 / 1187	*	571.3	*	571.3	572.3	1.0
662	66,172	69100	*	2,171	45,916	1.5	1085 / 1085	*	571.3	*	571.3	572.3	1.0
667	66,716	69100	*	1,823	38,074	1.8	685 / 1138	*	571.3	*	571.3	572.3	1.0
672	67,235	69100	*	1,881	39,043	1.8	941 / 941	*	571.3	*	571.3	572.3	1.0
677	67,741	69100	*	2,055	41,838	1.7	1141 / 914	*	571.3	*	571.3	572.3	1.0
683	68,324	69100	*	1,881	37,862	1.8	1071 / 811	*	571.3	*	571.3	572.3	1.0
689	68,855	69100	*	1,664	33,779	2.1	832 / 832	*	571.4	*	571.4	572.3	0.9
692	69,235	69100	*	1,461	28,926	2.4	670 / 791	*	571.4	*	571.4	572.3	0.9
697	69,732	69100	*	1,331	26,066	2.7	666 / 666	*	571.4	*	571.4	572.3	0.9
703	70,288	69100	*	1,085	21,016	3.3	543 / 543	*	571.4	*	571.4	572.3	0.9
708	70,810	69100	*	1,404	27,411	2.5	702 / 702	*	571.5	*	571.5	572.5	1.0
712	71,181	69100	*	1,519	30,631	2.3	760 / 760	*	571.6	*	571.6	572.5	0.9
717	71,722	69100	*	1,259	23,842	2.9	629 / 629	*	571.6	*	571.6	572.5	0.9
720	71,991	69100	*	1,187	22,527	3.1	593 / 593	*	571.6	*	571.6	572.5	0.9

		1% Flood Discharges		Floodway			Non-Encroachment Offsets		Water Surface Elevation				
Cross Section	Distance (Feet Above Mouth)	Existing Land Use Conditions	Future Land Use Conditions	Width (Feet)	Section Area (Square Feet)	Mean Velocity (Feet Per Second)	Floodway	Community Encroachment Area	Regulatory	1% Annual Chance Future Water-Surface Elevation	Without Floodway	With Floodway	Increase
724	72,360	69100	*	1,447	26,826	2.6	724 / 724	*	571.7	*	571.7	572.6	0.9
729	72,862	69100	*	1,375	25,876	2.7	687 / 687	*	571.7	*	571.7	572.6	0.9
733	73,328	69100	*	1,592	30,045	2.3	576 / 1016	*	571.8	*	571.8	572.7	0.9
739	73,853	69100	*	1,375	26,092	2.7	687 / 687	*	571.8	*	571.8	572.7	0.9
743	74,306	69100	*	1,881	36,192	1.9	1175 / 707	*	571.9	*	571.9	572.8	0.9
750	74,998	69100	*	1,722	33,295	2.1	1004 / 718	*	571.9	*	571.9	572.8	0.9
756	75,569	69100	*	1,635	31,493	2.2	693 / 942	*	571.9	*	571.9	572.8	0.9
761	76,060	69100	*	1,089	22,233	3.1	585 / 504	*	571.9	*	571.9	572.8	0.9
768	76,787	69100	*	1,100	21,360	3.2	481 / 618	*	571.9	*	571.9	572.8	0.9
778	77,829	69100	*	1,089	22,616	3.1	545 / 545	*	572.1	*	572.1	572.9	0.8
791	79,116	69100	*	1,259	26,380	2.6	630 / 630	*	572.2	*	572.2	573.1	0.9
801	80,111	69100	*	1,089	22,814	3.0	641 / 448	*	572.3	*	572.3	573.1	0.8
806	80,559	69100	*	1,293	27,558	2.5	647 / 647	*	572.4	*	572.4	573.2	0.8
813	81,292	69100	*	1,252	26,821	2.6	672 / 580	*	572.4	*	572.4	573.2	0.8
825	82,470	69100	*	1,293	27,944	2.5	751 / 542	*	572.5	*	572.5	573.3	0.8
829	82,857	69100	*	1,649	47,057	1.5	825 / 825	*	572.6	*	572.6	573.4	0.8
834	83,360	69100	*	1,867	52,007	1.3	933 / 933	*	572.6	*	572.6	573.4	0.8
838	83,843	69100	*	1,494	40,491	1.7	814 / 680	*	572.6	*	572.6	573.4	0.8
845	84,496	69100	*	1,105	28,826	2.4	503 / 602	*	572.6	*	572.6	573.4	0.8
849	84,885	69100	*	1,334	33,438	2.1	599 / 735	*	572.6	*	572.6	573.4	0.8
856	85,553	69100	*	1,556	38,177	1.8	778 / 778	*	572.6	*	572.6	573.4	0.8
863	86,284	69100	*	1,182	27,680	2.5	500 / 682	*	572.6	*	572.6	573.4	0.8
868	86,832	69100	*	1,042	23,531	2.9	434 / 608	*	572.6	*	572.6	573.4	0.8
873	87,281	69100	*	1,042	22,839	3.0	461 / 581	*	572.7	*	572.7	573.5	0.8
877	87,706	69100	*	1,307	27,887	2.5	653 / 653	*	572.7	*	572.7	573.5	0.8
880	87,982	69100	*	1,322	27,668	2.5	661 / 661	*	572.8	*	572.8	573.6	0.8
891	89,098	69100	*	1,836	38,404	1.8	788 / 1048	*	573.3	*	573.3	574.0	0.7
895	89,492	69100	*	1,618	34,631	2.0	861 / 757	*	573.3	*	573.3	574.0	0.7
900	89,970	69100	*	1,335	18,720	3.7	667 / 667	*	573.3	*	573.3	574.0	0.8
904	90,362	69100	*	1,306	19,042	3.6	653 / 653	*	573.3	*	573.3	574.1	0.8
907	90,729	69100	*	1,716	26,050	2.7	523 / 1193	*	573.5	*	573.5	574.2	0.7
913	91,326	69100	*	1,621	25,840	2.7	742 / 878	*	573.5	*	573.5	574.3	0.8
931	93,092	69100	*	1,716	29,369	2.4	539 / 539	*	574.3	*	574.3	574.9	0.6
936	93,552	69100	*	1,039	18,030	3.8	541 / 722	*	574.3	*	574.3	574.9	0.7
941	94,127	69100	*	963	16,577	4.2	553 / 553	*	574.3	*	574.3	575.0	0.7
948	94,795	69100	*	1,077	19,602	3.5	539 / 539	*	574.5	*	574.5	575.2	0.7
954	95,369	69100	*	1,173	20,112	3.4	451 / 722	*	574.6	*	574.6	575.2	0.6
960	95,973	69100	*	1,106	18,814	3.7	553 / 553	*	574.7	*	574.7	575.3	0.6
965	96,455	69100	*	1,012	21,174	3.3	611 / 401	*	574.8	*	574.8	575.4	0.6
967	96,717	69100	*	1,349	28,112	2.5	515 / 835	*	574.9	*	574.9	575.5	0.6
978	97,757	69100	*	913	18,958	3.6	457 / 457	*	575.4	*	575.4	576.0	0.6
985	98,467	69100	*	905	18,552	3.7	564 / 340	*	575.5	*	575.5	576.1	0.6
989	98,898	69100	*	913	18,402	3.8	457 / 457	*	575.6	*	575.6	576.2	0.6
992	99,213	69100	*	837	16,539	4.2	418 / 418	*	575.6	*	575.6	576.2	0.6
999	99,924	69100	*	648	12,409	5.6	324 / 324	*	575.6	*	575.6	576.2	0.6
1003	100,260	69100	*	945	17,871	3.9	692 / 252	*	575.9	*	575.9	576.5	0.6
1009	100,887	69100	*	1,496	19,409	3.6	1300 / 196	*	575.9	*	575.9	576.5	0.6
1013	101,269	69100	*	1,511	20,909	3.3	1275 / 236	*	576.2	*	576.2	576.8	0.6
1019	101,883	69100	*	1,354	21,007	3.3	1070 / 284	*	576.5	*	576.5	577.1	0.6

		1% Flood Discharges		Floodway			Non-Encroachment Offsets		Water Surface Elevation				
Cross Section	Distance (Feet Above Mouth)	Existing Land Use Conditions	Future Land Use Conditions	Width (Feet)	Section Area (Square Feet)	Mean Velocity (Feet Per Second)	Floodway	Community Encroachment Area	Regulatory	1% Annual Chance Future Water-Surface Elevation	Without Floodway	With Floodway	Increase
1025	102,464	69100	*	1,342	19,903	3.5	940 / 402	*	576.6	*	576.6	577.2	0.6
1028	102,843	69100	*	1,379	19,823	3.5	840 / 539	*	576.8	*	576.8	577.3	0.5
1033	103,282	69100	*	926	16,817	4.1	705 / 222	*	576.8	*	576.8	577.4	0.6
1038	103,842	69100	*	890	14,424	4.8	473 / 417	*	576.9	*	576.9	577.4	0.5
1059	105,870	69100	*	854	13,982	4.9	427 / 427	*	577.5	*	577.5	577.9	0.4
1066	106,647	69100	*	675	10,204	6.8	337 / 337	*	577.5	*	577.5	578.0	0.5
1075	107,533	69100	*	804	15,016	4.6	402 / 402	*	578.2	*	578.2	578.7	0.5
1079	107,871	69100	*	737	14,664	4.7	368 / 368	*	578.2	*	578.2	578.8	0.6
1082	108,180	69100	*	603	13,449	5.1	301 / 301	*	578.2	*	578.2	578.9	0.8
1087	108,712	69100	*	888	16,234	4.3	301 / 586	*	578.3	*	578.3	579.0	0.7
1092	109,197	69100	*	568	12,480	5.5	300 / 268	*	578.3	*	578.3	579.0	0.7
1098	109,761	69100	*	595	13,058	5.3	310 / 285	*	578.5	*	578.5	579.2	0.7
1103	110,336	69100	*	595	13,119	5.3	310 / 285	*	578.6	*	578.6	579.4	0.8
1108	110,838	69100	*	531	11,861	5.8	280 / 251	*	578.7	*	578.7	579.4	0.7
1113	111,287	69100	*	526	11,964	5.8	275 / 251	*	578.8	*	578.8	579.6	0.8
1117	111,700	66300	*	511	11,841	5.6	260 / 251	*	579.0	*	579.0	579.7	0.7
1120	112,004	66300	*	660	12,596	5.3	348 / 312	*	579.1	*	579.1	579.9	0.8
1135	113,507	66300	*	531	12,559	5.3	251 / 280	*	580.0	*	580.0	580.7	0.7
1146	114,571	61400	*	487	12,421	4.9	237 / 250	*	580.2	*	580.2	580.9	0.7
1154	115,381	61400	*	405	11,071	5.6	200 / 205	*	580.3	*	580.3	581.0	0.7
1166	116,639	61400	*	430	11,056	5.6	195 / 235	*	580.5	*	580.5	581.2	0.7
1175	117,519	61400	*	450	12,014	5.1	225 / 225	*	580.8	*	580.8	581.5	0.7
1186	118,555	61400	*	450	12,366	5.0	225 / 225	*	581.0	*	581.0	581.7	0.7
1194	119,405	61400	*	400	10,371	5.9	200 / 200	*	581.1	*	581.1	581.7	0.6
1203	120,288	61400	*	410	11,239	5.5	205 / 205	*	581.2	*	581.2	582.1	0.9
1213	121,277	61400	*	390	10,545	5.8	190 / 200	*	581.3	*	581.3	582.2	0.9
1225	122,483	61400	*	465	14,519	4.2	235 / 230	*	581.8	*	581.8	582.7	0.9
1237	123,691	61400	*	490	14,435	4.3	215 / 275	*	581.9	*	581.9	582.8	0.9
1245	124,518	61400	*	525	17,015	3.6	260 / 265	*	582.0	*	582.0	582.9	0.9
1252	125,185	61400	*	515	15,696	3.9	275 / 240	*	582.0	*	582.0	582.9	0.9
1266	126,601	61400	*	1,300	21,314	2.9	1075 / 225	*	582.2	*	582.2	583.1	0.9
1274	127,376	61400	*	1,625	18,579	3.3	1450 / 175	*	582.2	*	582.2	583.0	0.8
1279	127,850	61400	*	1,445	11,373	5.4	1350 / 95	*	582.2	*	582.2	582.7	0.5
Catawba River Tributary 1													
3	306	1710	2467	107	484	3.5	87 / 19	94 / 40	574.3[1]	574.3[1]	570.4	570.9	0.5
8	824	1710	2467	61	340	5.0	18 / 43	28 / 50	574.3[1]	574.3[1]	572.3	572.8	0.5
11	1092	1710	2467	79	447	3.8	53 / 26	58 / 35	574.3[1]	574.8	573.6	574.0	0.5
16	1,579	1710	2467	77	760	2.2	93 / 50	94 / 49	579.7	580.6	579.7	580.0	0.4
21	2,068	1710	2467	243	1,802	0.9	15 / 228	15 / 264	579.9	581.0	579.9	580.4	0.5
27	2,703	1375	1980	283	1,439	1.0	267 / 16	303 / 25	580.1	581.2	580.1	580.6	0.5
33	3,273	1375	1980	63	222	6.2	16 / 47	16 / 97	581.5	582.3	581.5	581.9	0.4
38	3,811	1375	1980	33	173	8.0	17 / 17	20 / 56	585.1	586.0	585.1	585.5	0.4
44	4,423	1241	1758	46	229	5.4	18 / 28	36 / 55	589.7	590.6	589.7	590.2	0.5
48	4,793	1241	1758	36	209	5.9	18 / 18	18 / 30	591.8	592.6	591.8	592.2	0.4
52	5,227	1241	1758	54	261	4.7	19 / 35	24 / 70	594.1	595.5	594.1	594.3	0.1
56	5,628	1241	1758	36	173	7.2	18 / 18	18 / 29	596.0	597.1	596.0	596.2	0.1
60	5,952	1241	1758	36	173	7.2	21 / 15	49 / 16	598.9	599.9	598.9	599.2	0.3
Catawba River Tributary 2													
7	727	2078	2358	371	1,858	1.1	298 / 73	344 / 151	581.1[1]	581.1[1]	575.3	575.8	0.5

		1% Flood Discharges		Floodway			Non-Encroachment Offsets		Water Surface Elevation				
Cross Section	Distance (Feet Above Mouth)	Existing Land Use Conditions	Future Land Use Conditions	Width (Feet)	Section Area (Square Feet)	Mean Velocity (Feet Per Second)	Floodway	Community Encroachment Area	Regulatory	1% Annual Chance Future Water-Surface Elevation	Without Floodway	With Floodway	Increase
13	1,258	2078	2358	231	1,277	1.6	22 / 208	34 / 259	581.1[1]	581.1[1]	575.4	575.9	0.5
20	2,031	1927	2163	318	1,411	1.4	14 / 304	43 / 347	581.1[1]	581.1[1]	575.8	576.3	0.5
28	2,785	1927	2163	270	1,181	1.6	121 / 149	207 / 260	581.1[1]	581.1[1]	577.1	577.6	0.4
34	3,351	1927	2163	152	686	2.8	19 / 133	40 / 153	581.1[1]	581.1[1]	578.6	579.1	0.5
41	4,115	1927	2163	175	605	3.2	39 / 136	71 / 179	581.6	581.9	581.6	582.0	0.4
48	4,775	1927	2163	82	431	4.5	43 / 39	51 / 47	586.3	586.6	586.3	586.7	0.4
56	5,555	1927	2163	100	584	3.3	46 / 54	55 / 73	591.7	592.1	591.7	592.1	0.4
64	6,362	1698	1918	64	272	6.2	44 / 20	99 / 36	598.8	599.0	598.8	599.2	0.4
70	6,952	1698	1918	91	973	1.7	23 / 68	30 / 88	612.8	613.3	612.8	613.3	0.5
75	7,522	1698	1918	127	807	2.1	88 / 39	105 / 55	613.1	613.7	613.1	613.6	0.5
83	8,269	1698	1918	112	349	4.9	98 / 14	144 / 21	614.7	615.1	614.7	615.1	0.4
89	8,884	1698	1918	51	219	7.7	23 / 29	43 / 43	621.7	622.0	621.7	621.9	0.2
96	9,648	1488	1668	127	630	2.4	52 / 75	74 / 102	629.1	629.7	629.1	629.5	0.4
103	10,261	1488	1668	55	253	5.9	37 / 18	53 / 24	631.9	632.2	631.9	632.4	0.5
107	10,723	1488	1668	70	397	3.7	56 / 15	66 / 22	634.7	635.1	634.7	635.2	0.5
Catawba River Tributary 3													
10	1,010	1746	1815	339	2,028	0.9	53 / 287	74 / 314	664.0[1]	664.0[1]	649.3	649.8	0.5
18	1,834	1746	1815	152	997	1.8	45 / 107	60 / 153	664.0[1]	664.0[1]	649.5	650.0	0.5
26	2,620	1746	1815	443	2,432	0.7	301 / 142	338 / 187	664.0[1]	664.0[1]	649.8	650.3	0.5
32	3,195	1746	1815	450	2,544	0.7	15 / 435	15 / 486	664.0[1]	664.0[1]	649.9	650.4	0.5
39	3,934	1664	1747	265	1,443	1.2	230 / 35	250 / 62	664.0[1]	664.0[1]	650.3	650.7	0.5
47	4,660	1664	1747	61	423	3.9	17 / 43	25 / 50	664.0[1]	664.0[1]	652.4	652.9	0.4
55	5,538	1664	1747	221	1,044	1.6	207 / 14	260 / 13	664.0[1]	664.0[1]	653.7	654.1	0.5
61	6,102	1664	1747	57	184	9.1	22 / 35	22 / 35	664.0[1]	664.0[1]	658.5	658.5	0.0
70	6,981	1664	1747	42	245	6.8	21 / 21	70 / 48	668.1	668.3	668.1	668.2	0.1
77	7,734	1511	1602	141	556	2.7	87 / 54	124 / 87	673.8	673.9	673.8	674.3	0.5
85	8,477	1511	1602	158	560	2.7	59 / 99	85 / 124	676.2	676.4	676.2	676.7	0.5
91	9,100	1511	1602	127	453	3.3	49 / 78	69 / 89	679.0	679.1	679.0	679.4	0.5
100	10,032	1227	1297	126	366	3.3	64 / 62	89 / 97	681.5	681.6	681.5	682.0	0.5
107	10,689	1227	1297	92	281	4.4	75 / 17	77 / 39	683.7	683.8	683.7	684.1	0.4
113	11,328	1227	1297	47	205	6.0	17 / 29	25 / 63	686.7	686.9	686.7	687.2	0.4
115	11,475	1227	1297	194	896	1.4	70 / 123	102 / 167	690.3	690.4	690.3	690.8	0.5
Clarke Creek													
191	19,131	8598	8724	530	5,986	1.4	432 / 98	455 / 119	626.3	626.5	626.3	626.8	0.5
195	19,518	8975	9101	788	11,330	0.8	739 / 49	769 / 90	626.4	626.6	626.4	626.9	0.5
202	20,193	8975	9101	1,358	17,345	0.5	1105 / 253	1180 / 337	626.5	626.7	626.5	627.0	0.5
210	20,953	8975	9101	1,404	14,374	0.6	892 / 512	953 / 518	626.5	626.7	626.5	627.0	0.5
217	21,670	7741	7859	1,220	12,849	0.6	824 / 396	831 / 399	626.6	626.7	626.6	627.0	0.5
220	22,041	7741	7859	1,321	13,804	0.6	809 / 512	816 / 514	626.6	626.7	626.6	627.1	0.5
227	22,724	7741	7859	1,054	9,168	0.8	732 / 322	815 / 362	626.6	626.8	626.6	627.1	0.5
232	23,226	7741	7859	540	4,864	1.6	379 / 162	450 / 191	626.9	627.0	626.9	627.3	0.5
238	23,794	7741	7859	661	5,360	1.4	412 / 249	459 / 290	627.3	627.5	627.3	627.8	0.5
242	24,213	7741	7859	858	6,852	1.1	348 / 510	379 / 606	627.6	627.7	627.6	628.1	0.5
245	24,523	7741	7859	688	4,822	1.6	276 / 412	313 / 483	627.8	627.9	627.8	628.3	0.5
248	24,770	7741	7859	495	3,684	2.1	187 / 308	212 / 346	628.0	628.2	628.0	628.5	0.5
252	25,231	7741	7859	567	4,028	1.9	165 / 403	225 / 441	628.8	628.9	628.8	629.3	0.4
257	25,745	7741	7859	626	4,351	1.8	220 / 406	292 / 490	629.6	629.7	629.6	630.1	0.5
262	26,248	7683	7810	788	4,946	1.6	308 / 480	578 / 501	630.3	630.4	630.3	630.8	0.4
269	26,898	7683	7810	725	4,230	1.8	395 / 329	466 / 370	631.1	631.2	631.1	631.5	0.5

		1% Flood Discharges		Floodway			Non-Encroachment Offsets		Water Surface Elevation				
Cross Section	Distance (Feet Above Mouth)	Existing Land Use Conditions	Future Land Use Conditions	Width (Feet)	Section Area (Square Feet)	Mean Velocity (Feet Per Second)	Floodway	Community Encroachment Area	Regulatory	1% Annual Chance Future Water-Surface Elevation	Without Floodway	With Floodway	Increase
273	27,330	7683	7810	717	4,139	1.9	394 / 323	438 / 369	631.7	631.8	631.7	632.2	0.4
277	27,708	7683	7810	505	3,336	2.3	282 / 223	328 / 254	632.4	632.5	632.4	632.9	0.4
283	28,323	7683	7810	747	4,529	1.7	489 / 261	490 / 438	633.2	633.3	633.2	633.7	0.5
288	28,808	7683	7810	728	3,196	2.4	588 / 140	624 / 189	633.8	633.8	633.8	634.3	0.5
300	29,971	6721	6827	605	2,667	2.5	410 / 195	413 / 212	634.9	635.0	634.9	635.5	0.5
303	30,298	6721	6827	698	3,634	1.8	413 / 285	413 / 333	635.6	635.7	635.6	636.0	0.4
Clarke Creek Tributary													
42	4,153	1778	1855	60	248	7.2	25 / 35	32 / 64	624.7	625.0	624.7	624.8	0.1
44	4,373	1756	1855	73	342	5.1	36 / 36	51 / 57	627.1	627.2	627.1	627.6	0.5
47	4,659	1756	1855	95	337	5.2	72 / 23	125 / 28	629.2	629.4	629.2	629.5	0.3
48	4,798	1756	1855	74	306	5.7	51 / 23	118 / 27	630.6	630.7	630.6	631.0	0.4
51	5,057	1756	1855	94	364	4.8	33 / 61	62 / 84	633.3	633.4	633.3	633.8	0.5
53	5,270	1710	1809	93	364	4.7	67 / 26	178 / 26	635.5	635.6	635.5	635.9	0.5
55	5,487	1710	1809	70	266	6.4	49 / 22	114 / 36	637.5	637.6	637.5	637.9	0.4
57	5,681	1710	1809	66	266	6.4	52 / 14	101 / 16	640.7	640.8	640.7	641.0	0.3
59	5,900	1710	1809	29	187	9.2	15 / 15	23 / 15	644.0	644.1	644.0	644.5	0.5
61	6,081	1646	1739	67	344	4.8	51 / 16	110 / 16	647.4	647.6	647.4	647.6	0.3
63	6,334	1646	1739	36	178	9.2	22 / 14	28 / 16	649.4	649.5	649.4	649.8	0.4
65	6,520	1646	1739	78	331	5.0	15 / 63	15 / 75	652.7	652.8	652.7	653.1	0.4
70	6,987	1646	1739	92	482	3.4	77 / 15	86 / 19	661.2	661.7	661.2	661.2	0.0
71	7,090	1443	1526	59	309	4.7	32 / 27	44 / 35	661.5	661.9	661.5	661.5	0.0
74	7,412	1443	1526	43	212	6.8	22 / 21	28 / 34	663.5	663.7	663.5	663.9	0.4
78	7,836	1443	1526	53	183	7.9	40 / 14	56 / 14	666.1	666.2	666.1	666.5	0.4
85	8,506	1443	1526	488	5,946	0.2	244 / 244	255 / 252	690.4	690.6	690.4	690.9	0.4
88	8,835	1443	1526	345	4,286	0.3	173 / 173	194 / 180	690.4	690.6	690.4	690.9	0.4
92	9,164	1443	1526	180	1,920	0.8	90 / 90	106 / 100	690.4	690.6	690.4	690.9	0.4
94	9,433	1443	1526	167	1,799	0.8	84 / 84	107 / 99	690.4	690.6	690.4	690.9	0.4
97	9,712	1443	1526	189	1,907	0.8	87 / 102	103 / 128	690.5	690.6	690.5	690.9	0.4
100	10,039	1443	1526	291	2,656	0.5	146 / 146	146 / 146	694.8	695.0	694.8	694.9	0.0
102	10,183	2344	2440	255	1,688	1.4	127 / 127	127 / 127	694.8	695.0	694.8	694.8	0.0
103	10,338	2344	2440	133	786	3.0	66 / 66	69 / 73	694.8	695.0	694.8	694.8	0.0
106	10,649	2344	2440	110	592	4.0	79 / 30	94 / 41	695.3	695.4	695.3	695.3	0.0
108	10,762	2118	2195	136	748	2.8	69 / 67	79 / 85	695.6	695.7	695.6	695.7	0.1
109	10,886	2118	2195	117	698	3.0	32 / 85	32 / 85	696.8	696.9	696.8	697.1	0.4
110	10,976	2118	2195	101	497	4.3	29 / 72	44 / 87	696.9	697.0	696.9	697.3	0.4
112	11,201	2118	2195	52	306	6.9	37 / 15	58 / 18	699.5	699.6	699.5	699.7	0.2
114	11,411	2118	2195	47	312	6.8	26 / 21	39 / 35	700.3	700.4	700.3	700.6	0.3
116	11,603	2118	2195	43	226	9.4	28 / 15	43 / 22	701.1	701.2	701.1	701.4	0.3
118	11,808	1129	1168	116	505	2.2	65 / 51	77 / 65	703.1	703.2	703.1	703.4	0.4
120	12,038	1129	1168	42	156	7.3	26 / 16	33 / 19	703.6	703.7	703.6	704.0	0.4
122	12,241	1129	1168	41	192	5.9	27 / 13	42 / 16	705.8	705.9	705.8	706.2	0.4
125	12,451	1129	1168	26	107	10.5	12 / 14	19 / 29	708.5	708.6	708.5	708.5	0.0
125	12,530	1129	1168	32	164	6.9	16 / 16	43 / 42	710.2	710.3	710.2	710.7	0.5
Clarks Creek													
1	94	5,941	6,745	92	781	7.6	47 / 45	62 / 253	637.0[1]	638.2[1]	635.6	635.6	0.1
3	267	5,941	6,745	96	795	7.5	31 / 64	38 / 165	637.0[1]	638.2[1]	636.4	636.8	0.5
5	516	5,941	6,745	115	756	7.9	52 / 64	79 / 90	637.3	638.3	637.3	637.7	0.4
8	775	5,941	6,745	106	664	9.0	24 / 82	32 / 101	638.9	639.6	638.9	639.2	0.3
10	1,008	5,941	6,745	60	486	12.2	33 / 27	63 / 27	641.0	641.4	641.0	641.1	0.1

		1% Flood Discharges		Floodway			Non-Encroachment Offsets		Water Surface Elevation				
Cross Section	Distance (Feet Above Mouth)	Existing Land Use Conditions	Future Land Use Conditions	Width (Feet)	Section Area (Square Feet)	Mean Velocity (Feet Per Second)	Floodway	Community Encroachment Area	Regulatory	1% Annual Chance Future Water-Surface Elevation	Without Floodway	With Floodway	Increase
12	1,208	5,941	6,745	55	494	12.0	33 / 22	39 / 25	642.8	643.3	642.8	643.0	0.2
13	1,317	5,941	6,745	80	705	8.4	32 / 48	67 / 58	646.7	648.1	646.7	647.0	0.4
14	1,355	5,941	6,745	152	1,033	5.8	44 / 108	67 / 133	649.4	650.1	649.4	649.9	0.5
14	1,437	5,941	6,745	85	730	8.1	29 / 56	30 / 81	649.5	650.2	649.5	649.9	0.4
16	1,582	5,941	6,745	72	665	8.9	35 / 36	35 / 49	650.3	650.9	650.3	650.7	0.4
17	1,731	5,941	6,745	55	399	14.9	25 / 29	50 / 48	651.0	651.6	651.0	651.0	0.0
19	1,874	5,941	6,745	68	543	11.0	22 / 46	34 / 98	653.0	653.3	653.0	653.4	0.4
21	2,095	5,941	6,745	133	1,040	5.7	22 / 111	22 / 153	657.4	658.4	657.4	657.8	0.4
23	2,329	5,941	6,745	104	575	10.3	25 / 80	25 / 85	658.2	658.8	658.2	658.1	0.0
25	2,509	5,941	6,745	114	763	7.8	59 / 55	60 / 55	661.2	661.8	661.2	661.1	0.0
28	2,849	5,941	6,745	188	1,130	5.3	121 / 67	129 / 73	664.1	664.9	664.1	664.1	0.0
32	3,180	5,941	6,745	136	836	7.1	76 / 60	98 / 92	665.9	666.4	665.9	665.9	0.0
34	3,374	5,941	6,745	90	673	8.8	30 / 60	38 / 83	667.0	667.5	667.0	667.3	0.3
36	3,570	5,941	6,745	123	785	7.6	37 / 86	39 / 99	668.7	669.4	668.7	669.1	0.4
38	3,756	5,941	6,745	148	840	7.1	44 / 104	51 / 128	669.9	670.5	669.9	670.1	0.2
38	3,791	5,941	6,745	197	1,057	5.6	71 / 126	71 / 203	670.5	671.2	670.5	671.0	0.5
39	3,895	3,493	3,971	158	1,104	3.2	29 / 130	42 / 172	672.2	672.8	672.2	672.3	0.1
41	4,146	3,493	3,971	63	533	6.7	30 / 33	37 / 46	672.4	673.0	672.4	672.5	0.1
44	4,442	3,493	3,971	122	733	4.9	21 / 101	21 / 110	674.1	674.7	674.1	674.3	0.3
46	4,622	3,493	3,971	143	751	4.8	98 / 45	112 / 53	675.3	676.1	675.3	675.7	0.4
47	4,658	3,493	3,971	200	893	4.0	137 / 63	147 / 77	675.5	676.2	675.5	675.9	0.4
48	4,763	3,493	3,971	133	816	4.4	109 / 25	193 / 32	676.1	676.6	676.1	676.2	0.2
49	4,950	3,493	3,971	117	742	4.8	84 / 32	150 / 34	676.7	677.2	676.7	677.0	0.3
53	5,276	3,493	3,971	77	327	10.9	75 / 26	76 / 29	677.7	678.2	677.7	677.8	0.0
54	5,429	3,493	3,971	130	619	5.8	89 / 41	100 / 41	680.6	681.2	680.6	680.7	0.1
56	5,601	3,493	3,971	127	775	4.6	77 / 51	110 / 66	681.4	682.0	681.4	681.5	0.1
59	5,874	5,941	6,745	261	1,233	4.8	229 / 31	255 / 55	682.4	683.0	682.4	682.5	0.1
61	6,076	5,941	6,745	183	955	6.2	100 / 83	154 / 106	683.4	683.9	683.4	683.5	0.1
64	6,421	5,941	6,745	111	781	7.6	86 / 25	182 / 43	685.5	686.0	685.5	685.7	0.3
67	6,732	5,941	6,745	191	1,504	4.0	125 / 66	163 / 102	687.7	688.3	687.7	688.2	0.5
71	7,121	5,941	6,745	102	591	10.0	77 / 25	111 / 26	688.5	689.0	688.5	688.5	0.0
73	7,301	5,908	6,842	60	526	11.2	32 / 28	52 / 28	690.8	691.2	690.8	691.3	0.5
76	7,565	5,908	6,842	70	636	9.3	46 / 24	71 / 24	693.0	693.8	693.0	693.5	0.5
78	7,761	5,908	6,842	104	907	6.5	27 / 77	63 / 91	695.0	695.9	695.0	695.4	0.3
81	8,062	5,908	6,842	403	2,924	2.0	263 / 140	285 / 167	697.5	698.5	697.5	697.8	0.3
83	8,292	5,908	6,842	326	2,220	2.7	192 / 134	222 / 166	697.8	698.7	697.8	698.0	0.3
86	8,550	5,908	6,842	121	932	6.3	95 / 26	150 / 61	698.1	699.0	698.1	698.5	0.4
89	8,906	5,908	6,842	232	1,648	3.6	152 / 80	179 / 130	699.6	700.2	699.6	700.1	0.5
92	9,249	5,908	6,842	157	1,212	4.9	52 / 106	82 / 134	700.2	700.8	700.2	700.7	0.5
95	9,532	5,908	6,842	142	950	6.2	100 / 42	124 / 62	700.8	701.5	700.8	701.3	0.5
99	9,896	5,908	6,842	116	849	7.0	79 / 38	104 / 67	702.7	703.4	702.7	703.1	0.4
102	10,169	5,908	6,842	91	851	6.9	51 / 40	95 / 72	704.1	704.9	704.1	704.6	0.5
104	10,412	5,908	6,842	131	1,122	5.3	106 / 26	150 / 45	704.7	705.4	704.7	705.2	0.5
107	10,707	5,908	6,842	67	724	8.2	33 / 34	43 / 55	705.5	706.2	705.5	706.0	0.5
111	11,124	5,908	6,842	96	860	6.9	37 / 59	60 / 74	706.8	707.6	706.8	707.3	0.4
116	11,621	5,908	6,842	176	1,803	3.3	148 / 28	206 / 38	712.1	714.6	712.1	712.6	0.4
118	11,849	5,908	6,842	135	1,461	4.0	93 / 42	115 / 61	712.3	714.7	712.3	712.7	0.4
122	12,198	5,908	6,842	196	2,036	2.9	26 / 170	51 / 198	712.8	715.1	712.8	713.3	0.5
126	12,592	5,908	6,842	250	2,252	2.6	189 / 61	219 / 91	713.3	715.5	713.3	713.8	0.5

		1% Flood Discharges		Floodway			Non-Encroachment Offsets		Water Surface Elevation				
Cross Section	Distance (Feet Above Mouth)	Existing Land Use Conditions	Future Land Use Conditions	Width (Feet)	Section Area (Square Feet)	Mean Velocity (Feet Per Second)	Floodway	Community Encroachment Area	Regulatory	1% Annual Chance Future Water-Surface Elevation	Without Floodway	With Floodway	Increase
130	13,009	5,908	6,842	187	1,613	3.7	49 / 138	96 / 169	713.8	715.8	713.8	714.2	0.5
134	13,388	5,908	6,842	246	1,986	3.0	83 / 163	123 / 207	714.5	716.3	714.5	715.0	0.5
136	13,601	2,369	2,590	194	1,497	1.6	93 / 101	164 / 131	715.1	716.7	715.1	715.6	0.5
140	13,957	2,369	2,590	82	625	3.8	55 / 26	91 / 39	715.2	716.8	715.2	715.7	0.5
143	14,333	2,369	2,590	63	401	5.9	24 / 39	31 / 87	715.8	717.1	715.8	716.2	0.4
146	14,574	2,369	2,590	127	689	3.4	105 / 23	171 / 30	716.9	717.8	716.9	717.4	0.5
148	14,781	2,369	2,590	135	693	3.4	108 / 28	195 / 42	717.6	718.3	717.6	718.1	0.5
151	15,121	2,369	2,590	66	374	6.3	43 / 23	74 / 51	718.5	718.9	718.5	718.9	0.5
155	15,479	2,369	2,590	49	304	7.8	24 / 25	29 / 39	720.2	720.5	720.2	720.7	0.5
158	15,840	2,369	2,590	63	343	6.9	24 / 39	24 / 93	722.5	722.8	722.5	722.6	0.2
163	16,275	2,369	2,590	169	770	3.1	81 / 87	124 / 109	724.7	725.0	724.7	725.2	0.5
165	16,538	2,369	2,590	126	575	4.1	35 / 91	64 / 105	725.6	725.8	725.6	726.0	0.5
169	16,872	2,369	2,590	147	651	3.6	18 / 129	43 / 160	727.4	727.7	727.4	727.8	0.4
173	17,268	2,369	2,590	58	325	7.3	15 / 44	17 / 56	729.8	730.1	729.8	730.2	0.3
176	17,604	2,369	2,590	66	446	5.3	23 / 44	27 / 59	732.3	732.6	732.3	732.7	0.4
180	18,043	2,369	2,590	143	783	3.0	69 / 74	100 / 84	733.6	733.9	733.6	734.0	0.4
182	18,232	2,369	2,590	165	740	3.2	139 / 26	177 / 54	734.0	734.3	734.0	734.4	0.4
185	18,486	2,369	2,590	139	610	3.9	118 / 21	213 / 21	734.7	735.0	734.7	735.1	0.4
189	18,893	2,369	2,590	88	402	5.9	65 / 23	77 / 34	736.4	736.5	736.4	736.7	0.4
192	19,197	2,116	2,305	93	498	4.2	64 / 29	74 / 34	739.3	739.6	739.3	739.6	0.3
197	19,693	2,116	2,305	73	391	5.4	19 / 53	41 / 66	740.6	740.9	740.6	741.0	0.4
198	19,846	2,116	2,305	81	408	5.2	28 / 53	52 / 66	741.3	741.5	741.3	741.7	0.4
199	19,922	2,116	2,305	97	466	4.5	22 / 75	24 / 105	741.5	741.8	741.5	742.0	0.5
Clarks Creek Tributary 1													
1	114	3,527	4,362	233	865	4.1	108 / 125	140 / 155	714.5[1]	716.3[1]	711.1	711.4	0.3
5	475	3,527	4,362	218	921	3.8	173 / 45	258 / 62	714.5[1]	716.3[1]	712.9	713.2	0.3
8	837	3,527	4,362	129	588	6.0	102 / 27	148 / 47	714.5[1]	716.3[1]	714.3	714.8	0.5
12	1,178	3,527	4,362	90	431	8.2	62 / 28	89 / 53	716.6	717.2	716.6	716.9	0.4
17	1,718	3,642	4,490	224	1,186	3.1	74 / 150	79 / 204	720.9	721.7	720.9	721.4	0.5
22	2,161	3,642	4,490	195	956	3.8	149 / 46	186 / 66	722.3	723.1	722.3	722.8	0.5
25	2,534	3,642	4,490	208	1,042	3.5	119 / 89	162 / 102	723.5	724.2	723.5	724.0	0.5
29	2,868	3,642	4,490	157	778	4.7	117 / 40	129 / 47	724.6	725.3	724.6	725.1	0.5
32	3,249	3,642	4,490	354	2,494	1.5	29 / 325	45 / 351	728.1	728.7	728.1	728.6	0.5
37	3,698	1,979	2,567	187	991	2.0	117 / 70	143 / 80	728.3	728.8	728.3	728.7	0.5
41	4,095	1,979	2,567	124	451	4.4	44 / 80	59 / 106	728.6	729.2	728.6	729.0	0.4
42	4,151	1,979	2,567	123	470	4.2	52 / 71	64 / 91	728.9	729.5	728.9	729.3	0.4
45	4,500	1,979	2,567	178	777	2.5	81 / 97	101 / 112	731.2	731.8	731.2	731.7	0.5
48	4,751	1,979	2,567	139	492	4.0	52 / 87	81 / 112	731.5	732.1	731.5	731.9	0.4
50	4,998	1,979	2,567	126	485	4.1	81 / 45	99 / 66	733.3	733.9	733.3	733.7	0.4
53	5,339	1,783	2,270	200	941	1.9	44 / 156	59 / 216	735.3	736.0	735.3	735.8	0.5
56	5,645	1,783	2,270	170	714	2.5	70 / 100	100 / 125	736.0	736.7	736.0	736.5	0.5
60	6,033	1,783	2,270	153	568	3.1	123 / 30	188 / 59	737.4	738.0	737.4	737.9	0.5
63	6,330	1,783	2,270	126	349	5.1	70 / 56	96 / 69	738.9	739.2	738.9	739.2	0.3
66	6,649	1,783	2,270	133	571	3.1	58 / 75	78 / 90	741.9	742.5	741.9	742.3	0.5
69	6,930	1,783	2,270	52	279	6.4	21 / 31	30 / 50	742.9	743.4	742.9	743.2	0.3
73	7,263	1,783	2,270	87	440	4.1	39 / 48	44 / 78	744.6	745.4	744.6	745.1	0.5
76	7,592	1,783	2,270	65	249	7.2	27 / 38	32 / 65	745.4	746.1	745.4	745.8	0.4
Clarks Creek Tributary 1A													
2	152	1,791	2,011	326	1,171	1.5	273 / 53	312 / 100	727.9[1]	728.4[1]	724.9	725.3	0.4

		1% Flood Discharges		Floodway			Non-Encroachment Offsets		Water Surface Elevation				
Cross Section	Distance (Feet Above Mouth)	Existing Land Use Conditions	Future Land Use Conditions	Width (Feet)	Section Area (Square Feet)	Mean Velocity (Feet Per Second)	Floodway	Community Encroachment Area	Regulatory	1% Annual Chance Future Water-Surface Elevation	Without Floodway	With Floodway	Increase
4	408	1,791	2,011	165	556	3.2	104 / 61	149 / 66	727.9[1]	728.4[1]	725.2	725.6	0.4
9	944	1,791	2,011	181	619	2.9	43 / 138	56 / 217	727.9[1]	728.4[1]	726.8	727.3	0.5
13	1,274	1,557	1,763	149	499	3.1	39 / 110	64 / 146	727.9[1]	728.4[1]	727.9	728.4	0.5
16	1,639	1557	1763	55	214	7.3	25 / 30	25 / 69	729.7	729.9	729.7	730.1	0.4
19	1,929	1371	1578	77	228	6.0	21 / 56	40 / 92	733.0	733.3	733.0	733.0	0.0
23	2,336	1371	1578	77	303	4.5	28 / 50	38 / 75	736.0	736.3	736.0	736.4	0.4
27	2,661	1371	1578	60	273	5.0	29 / 31	39 / 51	737.9	738.3	737.9	738.3	0.4
30	2,987	1371	1578	60	264	5.2	32 / 28	42 / 48	739.6	740.0	739.6	740.0	0.4
33	3,310	1371	1578	98	242	5.7	43 / 55	63 / 70	742.9	743.1	742.9	742.9	0.1
35	3,519	1251	1477	148	514	2.4	61 / 87	96 / 104	745.1	745.5	745.1	745.5	0.4
38	3,814	1251	1477	111	377	3.3	21 / 90	33 / 121	746.2	746.6	746.2	746.7	0.5
42	4,173	1251	1477	58	216	5.8	36 / 22	59 / 46	748.6	748.9	748.6	748.9	0.3
44	4,435	1251	1477	45	234	5.3	23 / 22	29 / 22	750.5	750.9	750.5	750.9	0.4
47	4,671	1251	1477	41	221	5.7	20 / 20	27 / 28	751.7	752.2	751.7	751.9	0.2
49	4,865	1251	1477	131	273	4.6	109 / 22	126 / 30	753.8	754.1	753.8	753.8	0.0
49	4,892	1251	1477	131	470	2.7	109 / 22	121 / 30	755.1	755.4	755.1	755.3	0.2
51	5,058	1251	1477	72	284	4.4	56 / 16	87 / 23	756.0	756.4	756.0	756.2	0.2
53	5,304	438	475	51	224	2.0	38 / 13	55 / 18	757.4	757.8	757.4	757.9	0.4
62	6,158	438	475	314	832	0.5	159 / 155	159 / 155	777.8	778.1	777.8	777.8	0.0
67	6,669	438	475	277	721	0.6	139 / 137	139 / 137	777.8	778.1	777.8	777.8	0.0
70	7,036	438	475	190	506	0.9	95 / 95	95 / 95	777.9	778.1	777.9	777.9	0.0
75	7,452	438	475	189	499	0.9	95 / 94	95 / 94	778.0	778.2	778.0	778.0	0.0
Clear Creek													
13	1,314	3028	3852	45	300	10.1	23 / 22	60 / 60	532.9	533.8	532.9	533.1	0.2
23	2,300	3028	3852	70	391	7.8	25 / 45	75 / 135	537.7	538.3	537.7	538.2	0.5
33	3,299	3028	3852	108	467	6.5	73 / 35	225 / 35	542.7	543.5	542.7	542.9	0.2
44	4,422	3028	3852	39	285	10.6	23 / 16	23 / 124	547.0	548.1	547.0	547.3	0.3
58	5,779	3028	3852	47	401	7.5	25 / 22	84 / 72	553.6	554.6	553.6	553.9	0.3
68	6,804	3028	3852	49	400	7.6	28 / 21	46 / 26	557.2	558.3	557.2	557.5	0.3
79	7,934	2888	3682	185	517	5.6	115 / 70	220 / 190	561.9	562.5	561.9	562.2	0.3
89	8,920	2888	3682	43	340	8.5	25 / 18	160 / 26	564.6	565.0	564.6	565.1	0.5
101	10,134	2888	3682	75	427	6.8	40 / 35	287 / 135	570.6	572.6	570.6	570.7	0.1
113	11,294	2888	3682	275	1,074	2.7	110 / 165	150 / 295	575.0	576.0	575.0	575.5	0.5
128	12,836	2888	3682	145	571	5.1	125 / 20	280 / 25	578.8	579.3	578.8	579.3	0.5
148	14,791	2850	3633	95	473	6.0	35 / 60	55 / 210	585.1	586.1	585.1	585.4	0.3
158	15,803	2850	3633	145	661	4.3	45 / 100	75 / 205	588.7	589.4	588.7	589.2	0.5
168	16,787	2850	3633	142	661	4.3	110 / 32	186 / 82	592.1	593.0	592.1	592.6	0.5
179	17,889	2850	3633	261	1,068	2.7	151 / 110	230 / 240	595.1	595.9	595.1	595.5	0.4
193	19,323	2746	3502	175	574	4.8	100 / 75	245 / 160	597.8	598.4	597.8	598.1	0.3
203	20,328	2746	3502	236	946	2.9	35 / 200	36 / 400	600.8	601.6	600.8	601.1	0.3
213	21,324	2746	3502	147	739	3.7	112 / 36	270 / 85	602.9	603.6	602.9	603.4	0.5
223	22,297	2746	3502	495	1,265	2.2	40 / 455	100 / 535	604.8	605.5	604.8	605.1	0.3
233	23,347	2,746	3,502	166	735	3.7	137 / 29	265 / 30	608.2	609.0	608.2	608.7	0.5
244	24,443	2,589	3,292	480	1,818	1.4	385 / 95	610 / 160	610.3	611.1	610.3	610.8	0.5
256	25,634	2,589	3,292	140	519	5.0	55 / 85	220 / 165	612.4	612.9	612.4	612.9	0.5
271	27,071	2,589	3,292	179	732	3.5	127 / 52	175 / 98	616.9	617.5	616.9	617.3	0.4
279	27,852	2,589	3,292	310	1,751	1.5	240 / 70	390 / 100	618.4	619.2	618.4	618.9	0.5
287	28,674	973	1,202	41	187	5.2	11 / 30	14 / 65	622.3	622.7	622.3	622.5	0.2
301	30,107	973	1,202	32	129	7.6	20 / 12	25 / 25	630.6	631.0	630.6	630.9	0.3

		1% Flood Discharges		Floodway			Non-Encroachment Offsets		Water Surface Elevation				
Cross Section	Distance (Feet Above Mouth)	Existing Land Use Conditions	Future Land Use Conditions	Width (Feet)	Section Area (Square Feet)	Mean Velocity (Feet Per Second)	Floodway	Community Encroachment Area	Regulatory	1% Annual Chance Future Water-Surface Elevation	Without Floodway	With Floodway	Increase
310	30,986	973	1,202	47	147	6.6	17 / 30	17 / 30	639.5	639.6	639.5	639.5	0.0
320	31,978	784	1,014	24	126	6.2	17 / 7	18 / 10	648.3	649.2	648.3	648.6	0.3
331	33,058	784	1,014	30	115	6.8	15 / 15	20 / 40	658.9	659.4	658.9	659.2	0.3
Clear Creek Tributary													
8	832	2,302	2,858	320	1,611	1.4	150 / 170	150 / 170	623.1	623.4	623.1	623.6	0.5
19	1,853	2,302	2,858	398	1,498	1.5	29 / 369	30 / 457	624.0	624.5	624.0	624.5	0.5
28	2,843	2,302	2,858	155	415	5.6	135 / 20	160 / 90	625.2	625.8	625.2	625.7	0.5
40	3,999	1,934	2,427	226	618	3.1	195 / 31	440 / 31	628.6	629.1	628.6	629.1	0.5
52	5,227	1,934	2,427	88	362	5.4	70 / 18	150 / 27	633.2	634.0	633.2	633.5	0.3
61	6,083	1,934	2,427	61	330	5.9	35 / 26	100 / 39	636.6	637.3	636.6	637.0	0.4
71	7,077	1,934	2,427	74	508	3.8	41 / 33	45 / 34	640.0	641.0	640.0	640.4	0.4
83	8,326	1,934	2,427	82	440	4.4	41 / 41	121 / 51	643.3	644.0	643.3	643.6	0.3
98	9,848	1,548	1,966	23	175	8.8	11 / 12	35 / 13	646.9	648.5	646.9	647.2	0.3
108	10,781	1164	1545	29	187	6.2	19 / 10	100 / 20	652.4	653.2	652.4	652.6	0.2
118	11,838	1164	1545	50	268	4.3	12 / 38	12 / 60	656.7	657.5	656.7	657.1	0.4
130	12,982	951	1236	80	244	3.9	30 / 50	55 / 150	662.1	662.6	662.1	662.6	0.5
140	13,989	951	1236	36	185	5.1	19 / 17	19 / 45	668.5	669.8	668.5	668.6	0.1
151	15,143	729	936	29	78	9.4	12 / 17	12 / 17	681.7	682.3	681.7	681.7	0.0
Clems Branch													
0	0	1,947	2,186	28	203	9.6	8 / 20	9 / 30	563.5	564.0	563.5	563.8	0.3
6	610	1,947	2,186	150	598	3.3	100 / 50	210 / 50	569.0	569.2	569.0	569.4	0.4
14	1,400	1,017	1,142	75	439	2.3	55 / 20	65 / 25	572.1	572.4	572.1	572.5	0.4
24	2,400	1,017	1,142	45	220	4.6	25 / 20	50 / 50	577.5	577.8	577.5	578.0	0.5
34	3,443	571	670	215	1,608	0.4	165 / 50	165 / 50	591.0	590.7	591.0	591.3	0.3
Coffey Creek													
9	900	4,155	5,282	239	1,501	2.8	162 / 77	191 / 113	578.0[1]	579.0[1]	568.4	568.9	0.5
18	1,750	4,155	5,282	242	2,022	2.1	61 / 181	78 / 198	578.0[1]	579.0[1]	571.2	571.6	0.5
27	2,740	4,155	5,282	321	2,489	1.7	163 / 158	195 / 181	578.0[1]	579.0[1]	572.9	573.4	0.5
37	3,650	4,155	5,282	326	2,424	1.7	204 / 122	219 / 176	578.0[1]	579.0[1]	573.8	574.3	0.5
45	4,525	4,155	5,282	293	1,709	2.4	128 / 165	163 / 200	578.0[1]	579.0[1]	575.1	575.6	0.5
53	5,300	4,155	5,282	303	1,863	2.2	104 / 199	127 / 235	578.0[1]	579.0[1]	576.5	577.0	0.5
63	6,300	4,155	5,282	156	1,365	3.0	46 / 110	62 / 223	580.2	582.4	580.2	580.5	0.3
72	7,200	3,969	5,196	268	1,968	2.0	160 / 108	192 / 150	582.2	585.5	582.2	582.7	0.5
80	8,000	3,969	5,196	325	2,436	1.6	195 / 130	253 / 170	583.1	586.0	583.1	583.6	0.5
89	8,850	3,969	5,196	365	2,218	1.8	290 / 75	340 / 107	584.2	586.5	584.2	584.7	0.5
99	9,900	3,969	5,196	139	1,174	3.4	80 / 59	102 / 70	587.3	588.8	587.3	587.7	0.4
108	10,845	3,969	5,196	269	1,991	2.0	101 / 168	132 / 196	588.9	590.3	588.9	589.4	0.5
118	11,800	3,969	5,196	389	2,173	1.8	271 / 118	307 / 142	589.6	591.0	589.6	590.2	0.5
127	12,675	3,969	5,196	190	1,066	3.7	114 / 76	140 / 91	591.4	592.5	591.4	591.9	0.5
138	13,800	3,969	5,196	487	3,750	1.1	194 / 293	199 / 289	596.6	598.4	596.6	597.0	0.4
147	14,700	3,969	5,196	364	2,042	1.9	317 / 47	325 / 71	596.9	598.6	596.9	597.3	0.4
156	15,600	3,969	5,196	502	2,634	1.5	346 / 156	388 / 193	598.6	599.8	598.6	599.1	0.5
168	16,800	3,969	5,196	325	1,828	2.2	160 / 165	191 / 183	602.0	602.9	602.0	602.5	0.5
177	17,700	3786	4840	258	1,697	2.2	95 / 163	106 / 206	604.9	605.8	604.9	605.4	0.5
186	18,635	3786	4840	491	2,422	1.6	410 / 81	494 / 119	606.4	607.3	606.4	606.9	0.5
195	19,500	3786	4840	177	1,122	3.4	137 / 40	151 / 48	609.0	609.8	609.0	609.5	0.5
204	20,400	3786	4840	295	2,053	1.8	130 / 165	144 / 194	610.9	611.9	610.9	611.5	0.5
214	21,425	3786	4840	364	1,896	2.0	150 / 214	212 / 262	612.0	613.1	612.0	612.6	0.6
226	22,550	3786	4840	104	755	5.0	50 / 54	59 / 82	615.1	616.1	615.1	615.6	0.5

		1% Flood Discharges		Floodway			Non-Encroachment Offsets		Water Surface Elevation				
Cross Section	Distance (Feet Above Mouth)	Existing Land Use Conditions	Future Land Use Conditions	Width (Feet)	Section Area (Square Feet)	Mean Velocity (Feet Per Second)	Floodway	Community Encroachment Area	Regulatory	1% Annual Chance Future Water-Surface Elevation	Without Floodway	With Floodway	Increase
235	23,500	3524	4056	210	1,223	2.9	117 / 92	163 / 133	617.4	618.5	617.4	617.9	0.5
246	24,600	3524	4056	120	852	4.1	95 / 25	187 / 36	620.3	621.0	620.3	620.8	0.5
257	25,680	3524	4056	61	461	7.6	31 / 31	31 / 31	622.8	623.4	622.8	623.3	0.5
268	26,800	3524	4056	75	542	6.5	42 / 33	44 / 33	628.0	628.7	628.0	628.1	0.1
278	27,770	3524	4056	80	659	5.4	50 / 30	56 / 37	641.1	642.6	641.1	641.2	0.1
285	28,455	3524	4056	68	438	8.0	25 / 43	29 / 67	646.5	647.3	646.5	646.7	0.2
295	29,500	3025	3519	291	1,744	1.7	90 / 200	118 / 220	651.1	652.1	651.1	651.5	0.4
304	30,400	2740	2986	189	874	3.1	40 / 149	69 / 196	652.8	653.8	652.8	653.1	0.3
313	31,250	2740	2986	44	411	6.7	19 / 25	22 / 31	654.6	655.0	654.6	655.0	0.4
324	32,400	2458	2507	208	855	2.9	71 / 137	112 / 167	659.7	659.8	659.7	660.2	0.5
333	33,300	2458	2507	81	581	4.2	29 / 52	32 / 59	664.4	664.5	664.4	664.7	0.3
Dairy Branch													
2	164	1410	1514	155	194	7.3	135 / 20	136 / 22	620.4	620.6	617.5	617.5	0.0
7	715	1410	1514	49	338	4.2	20 / 29	20 / 29	621.4	621.6	621.4	621.7	0.3
10	1,016	1410	1514	49	301	4.7	24 / 25	24 / 25	622.4	622.7	622.4	622.7	0.3
15	1,487	1410	1514	187	257	5.5	122 / 65	122 / 65	627.0	627.2	627.0	627.0	0.0
18	1,825	1410	1514	63	229	6.2	31 / 32	47 / 35	630.2	630.3	630.2	630.2	0.0
22	2,184	1410	1514	38	173	8.2	19 / 19	19 / 19	632.5	632.7	632.5	632.7	0.2
26	2,550	1410	1514	60	191	7.4	30 / 30	30 / 30	636.7	636.8	636.7	636.7	0.0
28	2,814	1410	1514	89	156	9.1	69 / 20	69 / 20	643.7	644.4	643.7	643.7	0.0
30	3,032	1410	1514	57	406	3.5	30 / 27	30 / 27	655.6	656.3	655.6	655.6	0.0
Derita Branch													
8	774	1930	2127	41	262	7.4	21 / 20	22 / 20	691.9	693.5	685.5	685.7	0.2
11	1,081	1930	2127	47	369	5.2	24 / 23	31 / 28	691.9	693.5	689.0	689.1	0.1
17	1,682	1930	2127	151	1,260	1.5	131 / 20	214 / 87	691.9	693.5	691.1	691.5	0.4
22	2,169	1725	1893	169	1,277	1.4	83 / 86	147 / 150	691.9	693.5	691.2	691.7	0.5
26	2,573	1725	1893	187	1,121	1.5	58 / 129	78 / 141	691.9	693.5	691.4	691.9	0.5
34	3,399	1725	1893	73	402	4.3	40 / 33	40 / 38	692.7	693.5	692.7	693.1	0.4
39	3,875	1725	1893	139	664	2.6	104 / 35	187 / 35	694.1	694.4	694.1	694.6	0.5
44	4,371	1725	1893	185	1,128	1.5	67 / 118	88 / 137	695.5	695.7	695.5	696.0	0.5
49	4,885	1330	1503	66	190	7.0	10 / 56	12 / 60	697.0	697.4	697.0	697.0	0.0
56	5,622	1330	1503	63	230	5.8	43 / 20	72 / 20	703.7	703.9	703.7	703.9	0.2
61	6,069	1330	1503	39	129	10.3	22 / 17	22 / 18	709.6	710.0	709.6	709.6	0.0
65	6,493	1330	1503	99	563	2.4	45 / 54	85 / 85	712.8	713.2	712.8	712.9	0.1
72	7,175	1330	1503	65	299	4.4	34 / 31	51 / 59	716.6	716.9	716.6	716.8	0.2
77	7,655	1070	1245	62	379	2.8	35 / 27	124 / 30	718.6	719.0	718.6	719.0	0.4
81	8,096	1070	1245	65	207	5.2	28 / 37	50 / 37	720.8	721.0	720.8	721.1	0.3
85	8,497	1070	1245	45	154	6.9	23 / 22	23 / 22	722.1	722.4	722.1	722.5	0.4
91	9,082	864	1015	46	175	4.9	23 / 23	66 / 23	728.2	728.6	728.2	728.5	0.3
Dixon Branch													
6	599	1,792	2,240	279	942	1.9	208 / 71	250 / 121	710.8[1]	711.2[1]	709.6	710.0	0.5
11	1,084	1,792	2,240	49	295	6.1	25 / 25	66 / 74	710.8[1]	711.2[1]	710.4	710.8	0.5
17	1,678	1,792	2,240	170	555	3.2	139 / 31	252 / 31	711.9	712.5	711.9	712.3	0.4
24	2,359	1,792	2,240	247	646	2.8	225 / 23	282 / 40	713.8	714.2	713.8	714.2	0.4
32	3,200	1,653	2,098	138	435	3.8	60 / 78	122 / 153	716.4	716.9	716.4	716.9	0.4
37	3,693	1,653	2,098	119	618	2.7	71 / 47	93 / 57	720.2	721.1	720.2	720.6	0.3
43	4,265	1,653	2,098	283	1,184	1.4	224 / 59	258 / 87	721.3	722.1	721.3	721.7	0.4
49	4,871	1,653	2,098	59	365	4.5	29 / 30	42 / 56	721.9	722.9	721.9	722.2	0.3
55	5,544	1,653	2,098	193	658	2.5	88 / 105	143 / 140	723.6	724.2	723.6	724.0	0.4

		1% Flood Discharges		Floodway			Non-Encroachment Offsets		Water Surface Elevation				
Cross Section	Distance (Feet Above Mouth)	Existing Land Use Conditions	Future Land Use Conditions	Width (Feet)	Section Area (Square Feet)	Mean Velocity (Feet Per Second)	Floodway	Community Encroachment Area	Regulatory	1% Annual Chance Future Water-Surface Elevation	Without Floodway	With Floodway	Increase
61	6,064	505	694	105	346	1.5	87 / 17	106 / 38	724.7	725.3	724.7	725.2	0.5
67	6,686	505	694	28	103	4.9	14 / 14	14 / 14	726.6	727.0	726.6	726.8	0.1
74	7,374	505	694	23	93	5.4	11 / 11	31 / 35	730.8	731.4	730.8	730.9	0.1
Dixon Branch Tributary													
3	346	1,125	1,337	137	396	2.8	61 / 75	129 / 125	724.7	725.0	724.7	725.2	0.5
10	979	1,125	1,337	106	290	3.9	91 / 15	151 / 29	726.8	727.2	726.8	727.2	0.4
17	1,687	949	1,159	50	210	4.5	16 / 33	16 / 38	729.7	730.1	729.7	730.1	0.4
24	2,397	949	1,159	60	232	4.1	24 / 36	24 / 36	732.1	732.6	732.1	732.3	0.2
29	2,935	949	1,159	65	375	2.5	29 / 36	39 / 38	735.4	736.6	735.4	735.4	0.0
36	3,609	827	1085	41	201	4.1	14 / 27	179 / 71	736.3	737.3	736.3	736.5	0.2
40	3,994	827	1085	115	266	3.1	46 / 70	142 / 136	737.4	738.1	737.4	737.7	0.3
47	4,686	827	1,085	95	378	2.2	21 / 74	52 / 97	741.6	741.9	741.6	742.1	0.5
53	5,326	593	820	84	277	2.1	25 / 58	63 / 91	742.9	743.7	742.9	743.4	0.4
60	6,000	593	820	150	306	1.9	57 / 93	110 / 153	745.5	745.9	745.5	746.0	0.5
66	6,592	189	237	21	79	2.4	10 / 10	53 / 32	748.0	748.4	748.0	748.5	0.5
Doby Creek													
2	216	4,880	5,681	236	1,056	4.6	215 / 21	282 / 22	610.2[1]	611.1[1]	602.6	603.0	0.5
9	882	4,880	5,681	158	954	5.1	28 / 130	54 / 153	610.2[1]	611.1[1]	605.5	606.0	0.5
13	1,268	4,880	5,681	136	1,122	4.4	109 / 27	134 / 38	610.2[1]	611.1[1]	607.3	607.8	0.5
18	1,773	4,880	5,681	166	1,286	3.8	106 / 60	119 / 85	610.2[1]	611.1[1]	608.3	608.8	0.5
25	2,509	4,880	5,681	108	846	5.8	80 / 28	123 / 50	610.3	611.1[1]	610.3	610.8	0.5
28	2,829	4,880	5,681	122	918	5.3	66 / 57	92 / 87	611.4	612.1	611.4	611.9	0.5
31	3,136	2,654	3,001	115	857	3.1	94 / 21	163 / 77	612.6	613.5	612.6	613.1	0.5
40	3,986	2,654	3,001	61	787	3.4	22 / 39	34 / 47	622.2	625.7	622.2	622.7	0.5
42	4,218	2,654	3,001	52	456	5.8	23 / 28	38 / 43	622.4	625.8	622.4	622.8	0.4
44	4,429	2,654	3,001	37	203	13.1	19 / 18	19 / 18	625.2	625.8	625.2	625.2	0.0
46	4,650	2654	3001	52	395	6.7	26 / 26	31 / 60	630.0	630.6	630.0	630.0	0.0
51	5,133	2654	3001	133	796	3.3	115 / 18	158 / 21	631.8	632.3	631.8	632.1	0.4
54	5,427	2,654	3,001	131	702	3.8	24 / 107	53 / 189	632.5	633.1	632.5	632.9	0.3
57	5,674	2,654	3,001	146	709	3.7	20 / 126	57 / 172	633.0	633.6	633.0	633.5	0.5
60	6,003	2,654	3,001	51	371	7.2	25 / 25	44 / 25	634.1	634.5	634.1	634.5	0.4
63	6,276	2,654	3,001	146	672	4.0	107 / 38	154 / 63	635.5	636.0	635.5	635.9	0.4
66	6,617	2,654	3,001	67	555	4.8	34 / 34	126 / 43	636.7	637.2	636.7	637.1	0.4
70	6,991	2,654	3,001	40	318	8.4	21 / 19	21 / 19	637.5	638.0	637.5	637.9	0.4
74	7,376	2,907	3,523	77	648	4.5	38 / 38	72 / 65	639.7	640.3	639.7	639.9	0.2
78	7,790	2,907	3,523	52	351	8.3	26 / 26	101 / 110	640.3	641.0	640.3	640.4	0.2
82	8,214	2,907	3,523	113	608	4.8	74 / 38	102 / 52	642.7	643.3	642.7	642.9	0.2
85	8,530	2,907	3,523	112	568	5.1	72 / 40	96 / 59	644.3	645.0	644.3	644.6	0.3
88	8,800	2,907	3,523	108	506	5.8	86 / 23	139 / 23	645.6	646.3	645.6	645.9	0.3
90	9,047	2318	2873	89	444	5.2	70 / 19	111 / 21	646.9	647.6	646.9	647.3	0.4
95	9,470	2318	2873	35	241	9.6	17 / 17	34 / 38	649.2	650.0	649.2	649.3	0.2
96	9,635	2318	2873	38	275	8.4	19 / 19	20 / 31	650.7	651.5	650.7	650.9	0.2
99	9,943	2,318	2,873	45	291	8.0	23 / 23	39 / 61	652.7	653.7	652.7	652.8	0.1
102	10,196	2,318	2,873	90	296	7.8	71 / 19	71 / 20	655.5	656.2	655.5	655.5	0.0
104	10,446	2,318	2,873	64	252	9.2	29 / 35	33 / 35	658.6	659.5	658.6	658.6	0.0
107	10,665	2,318	2,873	70	277	8.4	33 / 37	36 / 37	663.0	663.8	663.0	663.0	0.0
108	10,845	2318	2873	39	214	10.9	17 / 22	24 / 37	665.7	666.5	665.7	665.6	0.0
110	11,019	2318	2873	33	239	9.7	17 / 16	28 / 27	668.6	669.5	668.6	669.1	0.5
112	11,170	2318	2873	55	231	10.0	28 / 27	30 / 34	670.1	671.1	670.1	670.1	0.0

		1% Flood Discharges		Floodway			Non-Encroachment Offsets		Water Surface Elevation				
Cross Section	Distance (Feet Above Mouth)	Existing Land Use Conditions	Future Land Use Conditions	Width (Feet)	Section Area (Square Feet)	Mean Velocity (Feet Per Second)	Floodway	Community Encroachment Area	Regulatory	1% Annual Chance Future Water-Surface Elevation	Without Floodway	With Floodway	Increase
113	11,310	2318	2873	38	191	12.1	23 / 15	23 / 19	672.3	673.5	672.3	672.3	0.0
115	11,516	2318	2873	88	282	8.2	54 / 34	57 / 37	676.5	677.3	676.5	676.5	0.0
117	11,718	2318	2873	117	455	5.1	39 / 78	55 / 80	679.3	680.1	679.3	679.3	0.0
119	11,887	2318	2873	50	223	10.4	31 / 19	38 / 20	681.4	682.4	681.4	681.4	0.0
121	12,081	2318	2873	120	732	3.2	89 / 31	109 / 34	685.0	686.1	685.0	685.0	0.0
123	12,324	2318	2873	100	542	4.3	78 / 22	115 / 34	685.6	686.7	685.6	685.8	0.2
126	12,643	2318	2873	113	428	5.4	95 / 18	159 / 19	686.8	687.7	686.8	687.1	0.3
129	12,936	2318	2873	95	427	5.4	78 / 17	113 / 17	689.5	690.0	689.5	690.0	0.5
132	13,173	1879	2333	75	332	5.7	53 / 22	81 / 35	691.6	692.3	691.6	692.0	0.4
140	14,027	1879	2333	160	600	3.1	61 / 99	108 / 122	697.5	698.9	697.5	697.5	0.0
144	14,389	1879	2333	154	546	3.4	16 / 138	38 / 179	698.8	699.7	698.8	699.1	0.3
148	14,814	1879	2333	145	669	2.8	20 / 125	20 / 173	700.9	701.4	700.9	701.3	0.5
152	15,175	1879	2333	205	786	2.4	16 / 190	16 / 263	702.2	702.8	702.2	702.7	0.4
155	15,525	1879	2333	181	580	3.2	18 / 163	18 / 268	703.5	704.0	703.5	703.8	0.4
158	15,815	1879	2333	59	253	7.4	18 / 41	18 / 101	704.6	705.0	704.6	704.9	0.3
162	16,183	1879	2333	32	212	8.9	18 / 14	18 / 14	707.2	707.8	707.2	707.6	0.4
164	16,449	1879	2333	45	191	9.9	19 / 26	19 / 26	709.7	710.6	709.7	709.7	0.0
Doby Creek Tributary													
2	229	1745	1939	21	176	9.9	11 / 11	16 / 12	611.4[1]	612.1[1]	606.3	606.4	0.0
12	1,173	1,745	1,939	89	866	2.0	29 / 60	41 / 69	620.1	620.6	620.1	620.1	0.0
14	1,400	1,652	1,874	63	660	2.5	39 / 24	63 / 46	620.2	620.6	620.2	620.2	0.0
19	1,878	1,652	1,874	82	1,093	1.5	51 / 30	125 / 106	624.0	625.5	624.0	624.0	0.0
21	2,108	1,652	1,874	77	904	1.8	51 / 25	127 / 86	624.0	625.5	624.0	624.1	0.0
24	2,406	1,652	1,874	126	1,093	1.5	104 / 22	246 / 148	624.1	625.5	624.1	624.1	0.1
30	3,035	1,652	1,874	53	495	3.3	26 / 26	328 / 37	624.7	626.1	624.7	624.9	0.1
34	3,399	1,652	1,874	91	346	4.8	72 / 19	187 / 19	624.8	626.1	624.8	625.2	0.4
37	3,705	1,652	1,874	41	266	6.2	20 / 20	53 / 39	626.1	626.8	626.1	626.6	0.5
40	3,959	1,652	1,874	39	241	6.8	21 / 18	81 / 20	627.4	628.0	627.4	627.7	0.2
42	4,152	1,652	1,874	50	288	5.7	19 / 31	22 / 112	628.3	628.8	628.3	628.6	0.3
43	4,344	1,652	1,874	36	210	7.9	18 / 18	20 / 61	629.1	629.5	629.1	629.5	0.4
46	4,607	1,652	1,874	69	330	5.0	47 / 22	93 / 30	630.9	631.3	630.9	631.3	0.5
49	4,877	1,652	1,874	64	285	5.8	20 / 43	47 / 94	631.8	632.2	631.8	632.2	0.5
51	5,116	1,652	1,874	45	253	6.5	23 / 23	38 / 85	632.7	633.1	632.7	633.2	0.5
53	5,325	1,652	1,874	35	188	8.8	17 / 18	19 / 93	633.8	634.1	633.8	634.0	0.2
55	5,533	1,652	1,874	39	206	8.0	17 / 21	22 / 76	635.6	635.9	635.6	635.8	0.3
57	5,749	1,652	1,874	40	196	8.4	20 / 20	20 / 20	637.0	637.3	637.0	637.3	0.2
60	6,010	2,027	2,632	89	294	6.9	57 / 32	72 / 85	642.2	642.9	642.2	642.2	0.0
62	6,224	2,027	2,632	72	393	5.2	41 / 31	79 / 46	644.4	645.1	644.4	644.9	0.5
64	6,418	2,027	2,632	37	263	7.7	19 / 18	60 / 25	645.1	645.9	645.1	645.4	0.3
66	6,562	2,027	2,632	33	221	9.2	17 / 16	23 / 47	645.6	646.5	645.6	646.1	0.5
68	6,793	2,027	2,632	78	284	7.1	20 / 59	33 / 102	647.8	648.9	647.8	647.9	0.1
70	6,961	1,817	2,336	41	226	8.0	22 / 18	51 / 28	649.4	650.0	649.4	649.9	0.5
75	7,526	1,817	2,336	92	268	6.8	20 / 72	28 / 135	653.7	655.0	653.7	653.8	0.1
77	7,708	1,817	2,336	38	194	9.4	19 / 19	22 / 26	655.6	656.3	655.6	656.1	0.5
79	7,920	1,817	2,336	46	241	7.5	23 / 23	32 / 23	658.4	659.3	658.4	658.7	0.2
Duck Creek													
0	5	1,258	1,539	47	287	4.4	19 / 27	30 / 39	573.2	573.9	573.2	573.6	0.4
11	1,051	1,166	1,431	39	243	4.8	10 / 29	40 / 45	581.0	581.8	581.0	581.3	0.4
20	2,046	1,050	1,309	35	168	6.2	15 / 20	40 / 34	585.8	586.4	585.8	586.0	0.2

		1% Flood Discharges		Floodway			Non-Encroachment Offsets		Water Surface Elevation				
Cross Section	Distance (Feet Above Mouth)	Existing Land Use Conditions	Future Land Use Conditions	Width (Feet)	Section Area (Square Feet)	Mean Velocity (Feet Per Second)	Floodway	Community Encroachment Area	Regulatory	1% Annual Chance Future Water-Surface Elevation	Without Floodway	With Floodway	Increase
30	3,043	1,050	1,309	42	221	4.8	22 / 20	60 / 30	590.4	590.9	590.4	590.9	0.5
40	3,957	1,050	1,309	67	310	3.4	37 / 30	46 / 78	595.4	596.0	595.4	595.6	0.2
50	5,028	1,050	1,309	34	213	4.9	20 / 14	20 / 18	600.1	600.6	600.1	600.6	0.5
59	5,916	515	631	41	172	3.0	20 / 20	21 / 62	604.8	605.4	604.8	605.0	0.2
64	6,435	515	631	26	100	5.2	10 / 15	11 / 16	605.8	606.3	605.8	606.0	0.2
Edwards Branch													
11	1,125	2338	2499	73	236	9.9	18 / 55	18 / 55	652.01[1]	652.6[1]	642.6	643.0	0.4
15	1,499	2338	2499	48	289	8.1	25 / 23	25 / 23	652.01[1]	652.6[1]	647.8	647.8	0.0
20	2,028	2338	2499	46	353	6.6	22 / 24	23 / 24	652.01[1]	652.6[1]	651.8	651.8	0.0
26	2,551	2252	2414	66	543	4.2	30 / 36	30 / 36	655.2	655.6	655.2	655.2	0.0
34	3,406	2252	2414	127	901	2.5	31 / 96	55 / 120	662.0	662.6	662.0	662.4	0.4
39	3,867	2252	2414	88	678	3.3	39 / 49	54 / 75	662.5	663.0	662.5	662.8	0.3
45	4,479	2252	2414	133	678	3.3	52 / 81	52 / 137	664.7	665.1	664.7	665.2	0.5
50	4,992	2252	2414	156	1,116	2.0	88 / 68	177 / 68	665.2	665.5	665.2	665.7	0.5
58	5,763	2252	2414	96	390	5.8	70 / 26	70 / 26	666.1	666.4	666.1	666.6	0.5
64	6,392	2252	2414	63	362	6.2	32 / 31	32 / 32	670.1	670.4	670.1	670.2	0.1
78	7,838	2012	2153	40	183	11.0	12 / 28	12 / 85	676.2	676.3	676.2	676.2	0.0
102	10,247	1301	1392	240	1,237	1.0	76 / 164	76 / 164	692.7	692.8	692.7	693.2	0.5
107	10,740	1301	1392	153	863	1.5	31 / 122	31 / 138	692.8	692.9	692.8	693.3	0.5
117	11,678	1301	1392	36	241	5.4	20 / 16	21 / 16	693.5	693.6	693.5	693.8	0.3
120	11,963	1236	1351	44	316	3.9	22 / 22	22 / 22	694.9	695.2	694.9	695.2	0.3
Ferrelltown Creek													
1	62	1385	1404	176	363	3.8	38 / 138	123 / 156	634.6[1]	634.7[1]	630.7	630.9	0.3
5	514	1385	1404	322	764	1.8	126 / 196	186 / 266	634.6[1]	634.7[1]	631.9	632.2	0.3
7	748	1385	1404	236	448	3.1	158 / 78	194 / 127	634.6[1]	634.7[1]	632.3	632.7	0.4
10	1,018	1385	1404	87	243	5.7	77 / 15	103 / 15	634.6[1]	634.7[1]	633.6	634.1	0.5
14	1,439	1385	1404	131	372	3.7	115 / 16	151 / 20	636.2	636.2	636.2	636.7	0.4
18	1,809	1385	1404	84	234	5.9	81 / 16	160 / 16	637.6	637.7	637.6	638.0	0.4
23	2,279	1301	1322	41	277	4.7	21 / 21	115 / 93	639.6	639.6	639.6	640.1	0.5
26	2,614	1301	1322	28	183	7.1	14 / 16	14 / 168	640.7	640.7	640.7	640.9	0.3
29	2,885	1301	1322	36	276	4.7	18 / 18	18 / 18	641.9	642.0	641.9	642.3	0.4
32	3,206	1301	1322	47	305	4.3	23 / 23	23 / 23	642.8	642.8	642.8	643.1	0.3
35	3,463	1301	1322	37	249	5.2	19 / 19	19 / 19	643.3	643.3	643.3	643.5	0.2
37	3,660	1119	1139	32	183	6.1	16 / 16	16 / 16	643.9	643.9	643.9	644.1	0.2
39	3,942	1119	1139	35	172	6.5	18 / 18	18 / 18	645.4	645.4	645.4	645.4	0.1
42	4,222	1119	1139	34	177	6.3	17 / 17	17 / 56	647.0	647.0	647.0	647.0	0.0
45	4,539	1119	1139	32	171	6.5	17 / 17	17 / 19	648.6	648.6	648.6	648.7	0.1
49	4,863	1119	1139	55	300	3.7	27 / 27	27 / 102	649.9	650.0	649.9	650.1	0.1
52	5,234	1,119	1,139	32	146	7.7	16 / 16	17 / 33	650.5	650.6	650.5	650.6	0.1
57	5,655	1,119	1,139	35	189	5.9	18 / 18	32 / 18	653.6	653.7	653.6	653.9	0.3
60	5,959	1,119	1,139	64	149	7.5	17 / 47	19 / 61	655.7	655.8	655.7	655.8	0.1
63	6,276	1,008	1,030	40	208	4.9	20 / 20	21 / 20	658.6	658.6	658.6	658.7	0.1
68	6,847	1,008	1,030	36	159	6.3	17 / 19	17 / 73	661.5	661.6	661.5	661.7	0.2
70	7,019	1,008	1,030	37	191	5.3	19 / 19	30 / 55	662.6	662.7	662.6	662.9	0.3
72	7,235	1,008	1,030	32	132	7.6	16 / 16	31 / 17	663.9	663.9	663.9	664.1	0.2
Flat Branch													
3	300	1,964	2,115	484	1,638	1.2	432 / 52	517 / 145	587.3[1]	587.6[1]	586.0	586.5	0.5
18	1,800	1,964	2,115	356	1,189	1.7	125 / 231	228 / 282	589.2	589.3	589.2	589.6	0.4
30	3,000	1,964	2,115	297	1,452	1.4	108 / 189	138 / 247	593.0	593.2	593.0	593.5	0.5

		1% Flood Discharges		Floodway			Non-Encroachment Offsets		Water Surface Elevation				
Cross Section	Distance (Feet Above Mouth)	Existing Land Use Conditions	Future Land Use Conditions	Width (Feet)	Section Area (Square Feet)	Mean Velocity (Feet Per Second)	Floodway	Community Encroachment Area	Regulatory	1% Annual Chance Future Water-Surface Elevation	Without Floodway	With Floodway	Increase
42	4,200	1,964	2,115	352	1,758	1.1	84 / 269	115 / 300	595.5	595.7	595.5	596.0	0.5
50	5,004	1,964	2,115	265	1,048	1.9	87 / 178	142 / 223	596.8	597.0	596.8	597.3	0.5
60	6,030	1,846	2,000	269	837	2.2	27 / 241	66 / 308	599.4	599.6	599.4	599.9	0.5
70	7,048	1,846	2,000	238	932	2.0	177 / 62	216 / 111	602.3	602.5	602.3	602.8	0.5
80	8,000	1,846	2,000	239	780	2.4	176 / 63	242 / 119	604.6	604.8	604.6	605.1	0.5
92	9,200	1,536	1,673	248	1,039	1.5	18 / 231	33 / 317	608.3	608.5	608.3	608.9	0.6
100	9,989	1,536	1,673	252	780	2.0	92 / 160	152 / 254	610.2	610.4	610.2	610.7	0.5
112	11,150	1,154	1,274	138	400	2.9	98 / 40	115 / 70	615.2	615.4	615.2	615.7	0.5
121	12,122	1,154	1,274	150	627	1.8	46 / 104	64 / 134	620.3	620.4	620.3	620.8	0.5
130	13,022	1,154	1,274	131	508	2.3	16 / 116	32 / 145	623.9	624.1	623.9	624.3	0.4
140	14,022	1,154	1,274	151	536	2.2	107 / 44	127 / 80	628.1	628.2	628.1	628.6	0.5
150	15,022	1,154	1,274	108	364	3.2	91 / 17	116 / 43	632.9	633.0	632.9	633.4	0.5
163	16,322	646	664	95	277	2.3	46 / 48	68 / 63	641.4	641.4	641.4	641.8	0.4
Fourmile Creek													
4	400	5026	5525	409	2,631	1.9	182 / 227	225 / 269	539.4[1]	541.0[1]	533.4	533.9	0.5
19	1,900	5026	5525	456	3,339	1.5	211 / 244	276 / 274	539.4[1]	541.0[1]	535.7	536.2	0.5
33	3,300	5026	5525	660	3,949	1.3	270 / 390	307 / 499	539.4[1]	541.0[1]	538.0	538.5	0.5
46	4,600	5,026	5,525	457	3,182	1.6	408 / 49	439 / 80	540.2	541.0[1]	540.2	540.7	0.5
60	6,000	5,026	5,525	241	1,720	2.9	198 / 43	218 / 74	542.0	542.3	542.0	542.4	0.4
71	7,100	5,026	5,525	310	2,556	2.0	218 / 93	244 / 119	545.1	545.6	545.1	545.5	0.4
80	8,000	5,026	5,525	194	1,682	3.0	148 / 46	177 / 46	545.8	546.3	545.8	546.3	0.5
91	9,085	5,026	5,525	991	8,111	0.6	597 / 393	696 / 460	547.4	548.0	547.4	547.9	0.5
101	10,100	5,026	5,525	258	1,519	3.3	28 / 230	59 / 280	547.7	548.3	547.7	548.2	0.5
117	11,700	5026	5525	345	2,042	2.5	60 / 286	78 / 286	550.9	551.3	550.9	551.4	0.5
127	12,700	5,026	5,525	302	2,030	2.5	130 / 172	151 / 221	551.4	551.8	551.4	551.9	0.5
140	13,985	5,026	5,525	575	3,726	1.4	376 / 199	423 / 259	553.2	553.5	553.2	553.7	0.5
150	15,000	5,026	5,525	244	1,474	3.4	50 / 195	72 / 228	554.7	555.1	554.7	555.2	0.5
160	15,968	5,026	5,525	192	1,097	4.6	92 / 100	102 / 162	556.6	557.0	556.6	557.1	0.5
170	17,040	4,864	4,952	370	2,719	1.8	113 / 257	133 / 293	559.6	559.9	559.6	560.1	0.5
180	18,000	4,864	4,952	574	3,873	1.3	331 / 243	411 / 264	560.2	560.4	560.2	560.7	0.5
189	18,900	4,864	4,952	624	4,592	1.1	84 / 539	120 / 593	560.6	560.8	560.6	561.1	0.5
199	19,900	4,864	4,952	212	1,110	4.4	170 / 42	171 / 57	561.5	561.6	561.5	562.0	0.5
207	20,700	4,864	4,952	364	2,383	2.0	190 / 174	212 / 209	565.2	565.2	565.2	565.7	0.5
220	22,000	4,864	4,952	437	2,632	1.8	328 / 108	403 / 144	567.4	567.4	567.4	567.9	0.5
233	23,300	4,564	4,879	712	4,541	1.0	399 / 313	405 / 395	570.4	570.7	570.4	570.9	0.5
247	24,650	4,564	4,879	452	3,308	1.4	356 / 96	443 / 140	573.1	573.7	573.1	573.6	0.5
256	25,600	4,564	4,879	444	2,108	2.2	248 / 196	300 / 240	574.3	574.7	574.3	574.7	0.4
266	26,650	4,564	4,879	265	2,456	1.9	225 / 40	370 / 65	580.5	580.8	580.5	580.8	0.3
277	27,700	4,564	4,879	189	1,681	2.7	27 / 163	48 / 173	581.2	581.5	581.2	581.6	0.4
288	28,800	4564	4879	135	1,113	4.1	26 / 109	30 / 141	582.5	582.9	582.5	583.0	0.5
297	29,700	4564	4879	493	3,741	1.2	245 / 249	283 / 287	584.2	584.5	584.2	584.7	0.5
310	31,000	3812	4295	587	3,145	1.2	300 / 287	410 / 348	584.9	585.3	584.9	585.4	0.5
323	32,300	3812	4295	88	674	5.7	30 / 56	130 / 95	587.4	587.8	587.4	587.9	0.5
335	33,500	3,812	4,295	437	1,819	2.1	177 / 260	267 / 325	590.3	590.7	590.3	590.6	0.3
349	34,900	3,792	4,255	129	910	4.2	26 / 104	49 / 141	593.4	593.9	593.4	593.9	0.5
359	35,900	3,792	4,255	146	753	5.0	21 / 125	78 / 190	595.9	596.4	595.9	596.3	0.4
370	37,000	3,544	3,994	54	458	7.7	12 / 41	25 / 41	598.7	599.2	598.7	599.2	0.5
382	38,163	3,544	3,994	204	1,334	2.7	64 / 140	135 / 169	602.6	603.3	602.6	603.1	0.5
394	39,400	3,544	3,994	55	473	7.5	17 / 37	20 / 65	605.2	605.6	605.2	605.6	0.4

		1% Flood Discharges		Floodway			Non-Encroachment Offsets		Water Surface Elevation				
Cross Section	Distance (Feet Above Mouth)	Existing Land Use Conditions	Future Land Use Conditions	Width (Feet)	Section Area (Square Feet)	Mean Velocity (Feet Per Second)	Floodway	Community Encroachment Area	Regulatory	1% Annual Chance Future Water-Surface Elevation	Without Floodway	With Floodway	Increase
406	40,600	3,076	3,497	73	502	6.1	23 / 50	97 / 74	609.5	610.1	609.5	609.9	0.4
421	42,100	2,451	2,796	115	653	3.8	70 / 45	127 / 72	618.1	618.7	618.1	618.5	0.4
433	43,300	2,451	2,796	69	555	4.4	30 / 39	77 / 42	627.2	628.7	627.2	627.2	0.0
444	44,356	2,451	2,796	63	347	7.1	18 / 45	28 / 91	630.0	630.7	630.0	630.3	0.3
452	45,200	1,801	2,155	73	370	4.9	33 / 40	65 / 68	634.0	634.6	634.0	634.5	0.5
464	46,374	1,587	1,932	38	218	7.3	8 / 30	18 / 39	638.9	639.5	638.9	639.1	0.2
471	47,084	1,587	1,932	95	415	3.8	57 / 38	71 / 71	643.7	644.3	643.7	644.2	0.5
480	48,000	1,587	1,932	71	330	4.8	41 / 30	56 / 39	648.6	649.3	648.6	648.9	0.3
489	48,900	575	741	30	141	4.1	1 / 29	25 / 75	651.1	651.7	651.1	651.6	0.5
497	49,700	575	741	30	127	4.5	9 / 21	40 / 35	655.5	656.1	655.5	655.6	0.1
509	50,900	575	741	27	114	5.0	14 / 13	14 / 13	666.2	667.3	666.2	666.2	0.0
Gar Creek													
10	979	2206	2239	410	3,243	0.7	258 / 152	308 / 197	655.0[1]	655.0[1]	652.1	652.6	0.5
15	1,523	2206	2239	265	2,166	1.0	20 / 245	40 / 260	655.0[1]	655.0[1]	652.4	652.9	0.5
20	1,980	2206	2239	116	859	2.6	89 / 27	101 / 37	655.0[1]	655.0[1]	652.8	653.3	0.5
27	2,669	2206	2239	92	683	3.2	68 / 24	78 / 31	655.0[1]	655.0[1]	653.8	654.3	0.4
36	3,592	2,206	2,239	299	1,863	1.2	58 / 241	93 / 271	655.1	655.2	655.1	655.6	0.5
44	4,398	2,206	2,239	340	1,607	1.4	202 / 138	338 / 208	656.2	656.3	656.2	656.7	0.5
60	5,951	2206	2239	185	909	2.4	119 / 66	167 / 105	659.5	659.5	659.5	659.9	0.4
69	6,900	2206	2239	134	643	3.4	49 / 85	95 / 141	662.1	662.1	662.1	662.5	0.5
78	7,755	2,206	2,239	104	532	4.1	70 / 34	97 / 61	665.7	665.7	665.7	666.1	0.4
85	8,453	2,773	2,834	100	547	5.1	52 / 48	137 / 58	669.5	669.5	669.5	669.9	0.4
88	8,834	2,773	2,834	190	3,280	0.8	61 / 129	91 / 159	683.2	683.3	683.2	683.7	0.5
93	9,293	2,773	2,834	319	4,812	0.6	54 / 265	60 / 265	683.3	683.4	683.3	683.7	0.5
98	9,803	2,790	2,833	126	1,410	2.0	51 / 76	59 / 86	683.3	683.4	683.3	683.8	0.5
104	10,353	2,790	2,833	93	917	3.0	22 / 71	32 / 85	683.7	683.8	683.7	684.1	0.4
113	11,312	2,790	2,833	311	2,056	1.4	176 / 135	199 / 158	685.4	685.5	685.4	685.9	0.5
122	12,237	2,790	2,833	212	1,103	2.5	96 / 116	119 / 158	686.9	686.9	686.9	687.3	0.5
130	12,984	2,790	2,833	160	754	3.7	136 / 24	231 / 29	689.1	689.1	689.1	689.5	0.5
137	13,713	2,189	2,207	284	1,531	1.4	264 / 19	289 / 39	693.2	693.2	693.2	693.7	0.5
146	14,599	2,189	2,207	63	415	5.3	19 / 44	20 / 70	695.7	695.8	695.7	696.1	0.4
152	15,240	1,846	1,860	208	1,038	1.8	151 / 57	184 / 95	698.0	698.0	698.0	698.5	0.5
162	16,237	1,846	1,860	78	436	4.2	51 / 26	109 / 26	700.9	700.9	700.9	701.3	0.4
168	16,762	1,846	1,860	143	663	2.8	81 / 61	106 / 81	703.4	703.5	703.4	703.9	0.4
174	17,447	1,559	1,572	98	431	3.6	79 / 19	139 / 21	706.5	706.5	706.5	707.0	0.5
181	18,069	1559	1572	108	538	2.9	20 / 87	40 / 112	709.7	709.7	709.7	710.1	0.5
185	18,456	1559	1572	81	300	5.2	19 / 62	25 / 84	711.2	711.2	711.2	711.6	0.4
Goose Creek													
2	190	3898	4427	300	1,207	3.2	175 / 125	260 / 170	625.2	626.0	625.2	625.6	0.4
8	834	1867	2181	171	716	2.6	80 / 91	86 / 140	627.1	627.5	627.1	627.6	0.5
15	1,522	1867	2181	38	286	6.5	27 / 28	61 / 28	629.2	630.1	629.2	629.6	0.4
24	2,404	1867	2181	45	303	6.2	22 / 28	65 / 28	632.7	633.3	632.7	633.0	0.3
33	3,312	1867	2181	155	524	3.6	55 / 110	105 / 155	637.8	638.3	637.8	638.1	0.3
39	3,891	1232	1403	55	249	5.0	24 / 30	70 / 80	640.1	640.4	640.1	640.6	0.5
45	4,458	1232	1403	90	687	1.8	35 / 55	65 / 120	647.2	648.6	647.2	647.2	0.0
52	5,217	1232	1403	80	311	4.0	51 / 29	107 / 59	647.6	648.7	647.6	648.0	0.4
60	5,985	1088	1263	140	363	3.0	112 / 32	160 / 62	651.7	651.9	651.7	652.2	0.5
70	7,022	1088	1263	56	230	4.7	21 / 25	51 / 28	657.5	657.7	657.5	658.0	0.5
78	7,757	1088	1263	105	381	2.8	25 / 86	45 / 110	661.4	661.7	661.4	662.0	0.5

		1% Flood Discharges		Floodway			Non-Encroachment Offsets		Water Surface Elevation				
Cross Section	Distance (Feet Above Mouth)	Existing Land Use Conditions	Future Land Use Conditions	Width (Feet)	Section Area (Square Feet)	Mean Velocity (Feet Per Second)	Floodway	Community Encroachment Area	Regulatory	1% Annual Chance Future Water-Surface Elevation	Without Floodway	With Floodway	Increase
88	8,755	910	1021	30	177	5.1	28 / 20	32 / 18	667.3	667.6	667.3	667.6	0.3
97	9,651	910	1021	28	152	6.0	28 / 20	26 / 16	673.4	673.6	673.4	673.7	0.3
105	10,531	910	1021	28	147	6.2	28 / 20	19 / 20	679.1	679.4	679.1	679.4	0.3
Gum Branch													
6	634	3678	4278	233	1,519	2.4	28 / 204	54 / 225	640.3[1]	641.2[1]	638.1	638.6	0.5
13	1,303	3678	4278	313	1,967	1.9	115 / 198	142 / 238	640.3[1]	641.2[1]	638.5	639.0	0.5
21	2,114	3678	4278	292	1,325	2.8	221 / 71	255 / 104	640.3[1]	641.2[1]	638.8	639.3	0.5
29	2,926	3678	4278	187	823	4.5	29 / 157	93 / 244	640.3[1]	641.2[1]	640.2	640.7	0.5
35	3,485	3678	4278	104	486	7.6	50 / 54	50 / 54	641.5	641.9	641.5	642.0	0.5
43	4,256	3530	4134	232	1,090	3.2	133 / 100	195 / 162	644.1	644.7	644.1	644.5	0.4
49	4,930	3530	4134	270	1,323	2.7	135 / 135	213 / 195	645.5	645.9	645.5	646.0	0.5
58	5,812	3530	4134	144	627	5.6	31 / 142	92 / 268	647.4	647.8	647.4	647.8	0.4
63	6,347	2983	3599	313	1,194	2.5	66 / 247	166 / 319	649.7	650.1	649.7	650.1	0.4
68	6,767	2983	3599	219	877	3.4	36 / 182	138 / 301	650.3	650.7	650.3	650.7	0.4
73	7,276	2983	3599	81	626	4.8	42 / 42	42 / 214	651.3	651.8	651.3	651.7	0.4
80	8,048	2983	3599	402	2,629	1.1	154 / 248	188 / 273	658.9	659.6	658.9	659.4	0.5
88	8,809	2983	3599	222	1,122	2.7	44 / 178	79 / 203	659.6	660.3	659.6	660.0	0.5
95	9,456	2794	3405	103	546	5.1	26 / 76	59 / 104	660.9	661.5	660.9	661.4	0.5
102	10,227	2794	3405	74	443	6.3	24 / 51	43 / 106	663.6	664.0	663.6	664.0	0.4
110	11,046	2006	2488	75	499	4.0	53 / 22	55 / 22	666.8	667.6	666.8	667.3	0.4
119	11,896	2,006	2,488	38	270	7.4	19 / 19	44 / 19	669.6	670.4	669.6	670.0	0.4
125	12,451	2,006	2,488	123	476	4.2	105 / 18	163 / 18	673.7	674.4	673.7	674.0	0.3
137	13,728	1,453	1,730	88	387	3.8	28 / 59	41 / 82	684.5	685.5	684.5	684.5	0.0
145	14,549	1,453	1,730	33	202	7.2	17 / 17	18 / 23	689.7	690.2	689.7	689.8	0.0
153	15,308	1,203	1,395	91	199	6.0	24 / 67	25 / 69	697.4	697.7	697.4	697.4	0.0
158	15,775	1,203	1,395	64	371	3.2	15 / 49	19 / 65	705.5	705.9	705.5	705.8	0.2
164	16,396	802	915	106	634	1.3	27 / 79	101 / 94	711.8	711.9	711.8	712.3	0.5
168	16,847	802	915	55	214	3.7	44 / 10	63 / 15	712.1	712.3	712.1	712.5	0.4
Gutter Branch													
8	810	1,462	1,734	250	488	3.0	104 / 150	181 / 186	652.0[1]	652.8[1]	650.9	651.4	0.5
16	1,650	1,462	1,734	168	535	2.7	147 / 21	207 / 66	653.8	654.1	653.8	654.3	0.5
23	2,252	1,462	1,734	128	380	3.8	52 / 76	109 / 130	655.7	656.0	655.7	656.2	0.5
30	3,050	1,349	1,589	57	300	4.5	31 / 26	76 / 75	658.1	658.4	658.1	658.6	0.5
37	3,720	1,349	1,589	62	278	4.9	37 / 24	112 / 24	660.2	660.5	660.2	660.7	0.5
44	4,442	1,349	1,589	51	269	5.0	25 / 25	25 / 25	663.0	663.4	663.0	663.5	0.4
49	4,914	1,349	1,589	44	229	5.9	22 / 22	22 / 118	665.3	665.8	665.3	665.4	0.1
57	5,717	1,349	1,589	69	278	4.8	49 / 20	127 / 20	668.5	668.9	668.5	669.0	0.5
64	6,395	1,199	1,407	91	310	3.9	15 / 76	51 / 138	671.3	671.7	671.3	671.8	0.4
69	6,881	1,199	1,407	56	278	4.3	22 / 34	22 / 34	672.5	672.8	672.5	673.0	0.4
76	7,571	1199	1407	78	328	3.7	16 / 62	18 / 132	675.2	675.6	675.2	675.7	0.4
84	8,436	1199	1407	203	551	2.2	89 / 114	132 / 193	678.2	678.4	678.2	678.7	0.5
93	9,348	936	1097	61	207	4.5	14 / 47	56 / 84	681.7	682.0	681.7	682.2	0.4
98	9,770	936	1,097	58	219	4.3	44 / 14	80 / 21	684.2	684.5	684.2	684.7	0.4
103	10,262	936	1,097	95	279	3.4	68 / 27	117 / 55	686.3	686.6	686.3	686.8	0.5
110	10,952	936	1,097	45	203	4.6	22 / 22	22 / 22	689.3	689.6	689.3	689.7	0.4
118	11,849	784	905	37	135	5.8	18 / 18	52 / 18	694.4	694.7	694.4	694.6	0.2
124	12,434	784	905	65	162	4.8	48 / 16	72 / 16	697.9	698.1	697.9	698.3	0.4
131	13,090	784	905	36	92	8.6	13 / 23	13 / 23	702.9	703.2	702.9	702.9	0.0
139	13,881	784	905	36	107	7.3	11 / 24	11 / 46	709.9	710.1	709.9	709.9	0.0

		1% Flood Discharges		Floodway			Non-Encroachment Offsets		Water Surface Elevation				
Cross Section	Distance (Feet Above Mouth)	Existing Land Use Conditions	Future Land Use Conditions	Width (Feet)	Section Area (Square Feet)	Mean Velocity (Feet Per Second)	Floodway	Community Encroachment Area	Regulatory	1% Annual Chance Future Water-Surface Elevation	Without Floodway	With Floodway	Increase
147	14,715	784	905	175	488	1.6	64 / 111	86 / 138	714.0	714.3	714.0	714.5	0.5
156	15,586	489	545	26	75	6.5	13 / 13	13 / 13	717.7	717.7	717.7	718.1	0.4
161	16,055	489	545	70	196	2.5	14 / 56	14 / 128	720.6	720.8	720.6	721.0	0.4
Irvins Creek													
10	976	5,671	6,548	460	1,382	4.1	100 / 360	150 / 530	582.2[1]	584.4[1]	577.9	578.3	0.4
22	2,176	5,671	6,548	425	1,655	3.4	100 / 325	145 / 475	582.2[1]	584.4[1]	581.3	581.7	0.4
34	3,376	5,671	6,548	125	707	8.0	75 / 50	300 / 65	585.5	586.1	585.5	585.8	0.3
47	4,669	4,054	4,681	165	1,097	3.7	65 / 100	140 / 145	590.1	590.9	590.1	590.6	0.5
59	5,876	4,054	4,681	55	415	9.8	25 / 30	52 / 52	593.3	593.9	593.3	593.8	0.5
68	6,815	4,054	4,681	115	765	5.6	50 / 65	65 / 110	600.3	601.2	600.3	600.5	0.2
78	7,800	4,054	4,681	220	1,130	3.6	190 / 30	250 / 40	603.8	604.3	603.8	604.3	0.5
89	8,876	4,054	4,681	220	1,079	3.8	100 / 120	150 / 195	608.5	609.0	608.5	608.9	0.4
100	9,976	3835	4414	190	1,131	3.4	150 / 40	235 / 45	613.2	613.8	613.2	613.7	0.5
111	11,076	3835	4414	350	1,456	2.6	200 / 150	255 / 260	616.3	616.8	616.3	616.8	0.5
120	11,976	3835	4414	265	1,204	3.2	135 / 130	205 / 175	619.9	620.3	619.9	620.4	0.5
131	13,126	3835	4414	240	2,007	1.9	150 / 90	180 / 110	627.8	628.3	627.8	628.3	0.5
140	13,976	3835	4414	275	1,570	2.4	130 / 145	200 / 215	629.0	629.6	629.0	629.6	0.5
152	15,176	3788	4347	170	1,027	3.7	25 / 145	35 / 185	631.8	632.2	631.8	632.3	0.5
163	16,326	3788	4347	220	1,048	3.6	100 / 120	149 / 145	634.9	635.4	634.9	635.3	0.4
175	17,476	3788	4347	300	1,375	2.8	200 / 100	285 / 115	638.1	638.6	638.1	638.5	0.4
184	18,426	3654	4182	200	1,101	3.3	50 / 150	90 / 265	641.5	642.5	641.5	641.6	0.1
194	19,433	3261	3648	150	780	4.2	100 / 50	145 / 65	643.8	644.3	643.8	644.3	0.5
203	20,276	2976	3319	195	1,060	2.8	45 / 150	80 / 200	646.5	646.9	646.5	646.9	0.4
211	21,126	2976	3319	70	412	7.2	35 / 35	60 / 55	649.3	649.6	649.3	649.7	0.4
220	22,026	2976	3319	134	702	4.2	115 / 19	180 / 19	653.9	654.4	653.9	654.2	0.3
231	23,126	2528	2815	115	658	3.8	55 / 60	100 / 95	658.9	659.1	658.9	659.4	0.5
243	24,326	2528	2815	115	557	4.5	65 / 50	165 / 75	662.0	662.3	662.0	662.5	0.5
251	25,126	2528	2815	70	512	4.9	35 / 35	80 / 65	665.5	665.8	665.5	665.9	0.4
262	26,176	1105	1206	220	1,239	0.9	110 / 110	115 / 135	673.1	673.3	673.1	673.6	0.5
271	27,126	1105	1206	105	374	3.0	30 / 75	60 / 105	674.6	674.8	674.6	675.1	0.5
281	28,076	1,105	1,206	55	226	4.9	35 / 20	75 / 20	680.6	680.8	680.6	681.0	0.4
290	28,976	1,105	1,206	140	538	2.1	30 / 110	30 / 210	686.5	687.0	686.5	686.6	0.1
300	29,976	738	806	40	174	4.2	25 / 15	90 / 18	689.3	689.4	689.3	689.8	0.5
308	30,776	738	806	30	131	5.6	21 / 9	21 / 12	693.8	694.0	693.8	693.9	0.1
320	31,976	546	645	35	152	3.6	17 / 18	45 / 45	701.3	701.6	701.3	701.7	0.4
327	32,676	546	645	40	177	3.1	25 / 15	45 / 60	705.2	706.1	705.2	705.3	0.1
Irvins Creek Tributary 1													
1	85	1,852	2,110	31	225	8.2	13 / 17	21 / 33	589.6[1]	590.4[1]	586.2	586.5	0.3
12	1,185	1,852	2,110	83	520	3.6	60 / 23	100 / 26	598.3	599.6	598.3	598.3	0.0
24	2,385	1,821	2,075	29	231	7.9	14 / 15	25 / 22	603.7	604.1	603.7	603.9	0.2
36	3,585	1,821	2,075	33	279	6.5	18 / 15	210 / 28	611.3	611.9	611.3	611.8	0.5
45	4,517	1,786	2,031	34	211	8.5	20 / 14	25 / 14	616.8	617.3	616.8	617.2	0.4
56	5,550	1,786	2,031	28	208	8.6	14 / 13	16 / 14	640.1	640.8	640.1	640.1	0.0
65	6,468	1,786	2,031	122	1,340	1.3	45 / 77	62 / 192	643.7	644.4	643.6	644.0	0.4
75	7,535	1,766	2,098	155	1,135	1.6	45 / 110	52 / 118	643.9	644.6	643.9	644.4	0.5
89	8,885	1,766	2,098	250	934	1.9	150 / 100	265 / 125	645.1	645.7	645.1	645.6	0.5
100	10,035	1,766	2,098	135	525	3.4	50 / 85	80 / 120	649.0	649.5	649.0	649.5	0.5
113	11,285	1,361	1,500	48	242	5.6	25 / 23	35 / 27	655.1	655.4	655.0	655.3	0.3
124	12,385	1,245	1,390	35	164	7.6	20 / 15	35 / 45	661.0	661.1	661.0	661.0	0.0

		1% Flood Discharges		Floodway			Non-Encroachment Offsets		Water Surface Elevation				
Cross Section	Distance (Feet Above Mouth)	Existing Land Use Conditions	Future Land Use Conditions	Width (Feet)	Section Area (Square Feet)	Mean Velocity (Feet Per Second)	Floodway	Community Encroachment Area	Regulatory	1% Annual Chance Future Water-Surface Elevation	Without Floodway	With Floodway	Increase
135	13,463	1,245	1,390	65	279	4.5	25 / 40	30 / 60	666.7	667.0	666.7	667.2	0.5
141	14,085	826	933	33	154	5.4	18 / 15	18 / 15	668.4	668.7	668.4	668.9	0.5
Irvins Creek Tributary 2													
5	488	970	1078	26	171	5.7	13 / 14	20 / 150	670.2[1]	670.5[1]	667.0	667.2	0.2
13	1,288	970	1078	26	188	5.2	13 / 14	15 / 20	670.2[1]	670.5[1]	669.7	670.1	0.4
25	2,500	970	1078	22	143	6.8	9 / 13	11 / 15	674.3	674.7	674.3	674.7	0.4
35	3,488	915	1,051	60	244	3.8	35 / 25	145 / 40	680.5	680.9	680.5	680.9	0.4
45	4,488	628	752	30	122	5.1	15 / 15	15 / 15	682.9	683.3	682.9	683.3	0.4
53	5,288	628	752	17	77	8.1	8 / 9	10 / 9	687.8	688.1	687.8	688.1	0.3
61	6,088	628	752	80	221	2.8	55 / 25	95 / 74	694.9	695.2	694.9	695.2	0.3
69	6,888	335	396	13	51	6.6	7 / 6	12 / 30	700.9	701.2	700.9	701.4	0.5
Irwin Creek													
3	300	12,288	13,344	284	3,985	3.1	86 / 198	110 / 234	608.6	609.1	608.6	609.1	0.5
14	1,400	12,288	13,344	210	2,951	4.2	104 / 106	104 / 106	609.6	610.2	609.6	610.1	0.5
27	2,700	12,288	13,344	470	7,098	1.7	244 / 226	244 / 226	614.8	615.8	614.8	615.3	0.5
39	3,900	12,288	13,344	366	4,966	2.5	173 / 193	173 / 215	615.2	616.1	615.2	615.7	0.5
50	5,000	12,288	13,344	725	8,916	1.4	488 / 237	538 / 272	615.8	616.7	615.8	616.3	0.5
58	5,840	12,288	13,344	260	2,870	4.3	194 / 66	278 / 121	616.0	616.9	616.0	616.5	0.5
69	6,900	11,676	13,040	111	1,758	6.6	63 / 48	90 / 69	616.8	617.6	616.8	617.3	0.5
81	8,100	11676	13040	212	2,958	4.0	159 / 53	199 / 116	618.4	619.3	618.4	618.9	0.5
93	9,300	11676	13040	153	2,101	5.6	70 / 83	116 / 159	620.5	621.5	620.5	620.9	0.4
106	10,600	11,676	13,040	432	5,538	2.1	89 / 343	139 / 369	622.1	623.1	622.1	622.6	0.4
115	11,500	11,676	13,040	664	7,350	1.6	398 / 266	541 / 305	622.5	623.5	622.5	623.0	0.5
123	12,287	11,676	13,040	690	6,165	1.9	479 / 211	551 / 323	622.8	623.8	622.8	623.3	0.5
133	13,300	11,676	13,040	582	5,934	2.0	295 / 287	362 / 366	624.0	624.8	624.0	624.5	0.5
143	14,300	11,676	13,040	252	2,365	4.9	208 / 44	239 / 75	624.4	625.1	624.4	624.8	0.4
151	15,100	11,676	13,040	159	1,849	6.3	64 / 95	93 / 120	626.2	626.9	626.2	626.6	0.4
160	16,000	11,676	13,040	286	3,283	3.6	76 / 210	105 / 300	628.6	629.6	628.6	628.9	0.3
169	16,900	11,676	13,040	83	1,319	8.8	34 / 50	34 / 87	628.9	629.7	628.9	629.2	0.3
179	17,870	11,676	13,040	110	1,719	6.8	48 / 62	58 / 92	632.0	632.6	632.0	632.4	0.4
188	18,800	11,676	13,040	111	1,814	6.4	38 / 73	38 / 148	634.6	635.5	634.6	634.9	0.3
203	20,300	11,676	13,040	85	2,076	5.6	38 / 47	56 / 127	641.3	643.3	641.3	641.5	0.2
214	21,350	6,978	7,579	655	8,488	0.8	68 / 587	188 / 737	642.0	644.0	642.0	642.4	0.4
224	22,400	6,978	7,579	528	4,414	1.6	141 / 387	391 / 494	642.1	644.1	642.1	642.5	0.4
240	24,000	6978	7579	141	2,182	3.2	57 / 85	57 / 108	643.3	645.4	643.3	643.7	0.4
252	25,200	6978	7579	427	5,415	1.3	88 / 339	168 / 372	645.8	648.4	645.8	646.2	0.4
261	26,100	6,978	7,579	318	3,156	2.2	67 / 251	144 / 343	646.4	648.5	646.4	646.8	0.4
270	27,045	6,978	7,579	112	1,639	4.3	51 / 61	51 / 76	647.6	649.1	647.6	648.1	0.5
278	27,800	6,978	7,579	84	1,451	4.8	47 / 38	60 / 63	649.2	651.1	649.2	649.7	0.5
288	28,780	6,978	7,579	126	1,820	3.8	52 / 74	52 / 124	651.5	653.5	651.5	651.9	0.4
298	29,800	6,978	7,579	90	1,237	5.6	45 / 45	62 / 45	652.2	654.0	652.2	652.6	0.5
307	30,650	6,781	7,400	196	1,558	4.4	35 / 162	68 / 162	653.4	655.1	653.4	653.7	0.3
316	31,600	6,781	7,400	73	987	6.9	39 / 34	91 / 59	655.2	656.4	655.2	655.6	0.4
326	32,600	6781	7400	345	3,372	2.0	34 / 312	38 / 362	658.2	659.2	658.2	658.6	0.4
344	34,400	6401	6951	63	932	6.9	29 / 35	29 / 66	661.1	662.2	661.1	661.6	0.4
354	35,400	6,401	6,951	50	619	10.3	25 / 25	38 / 55	663.1	663.9	663.1	663.3	0.2
366	36,600	6,401	6,951	59	752	8.5	29 / 29	31 / 49	666.5	667.2	666.5	667.0	0.5
375	37,500	4,080	4,313	180	2,178	1.9	42 / 138	85 / 198	670.3	671.3	670.3	670.7	0.4
387	38,700	4,080	4,313	287	2,926	1.4	241 / 46	376 / 60	673.3	673.6	673.3	673.8	0.5

		1% Flood Discharges		Floodway			Non-Encroachment Offsets		Water Surface Elevation				
Cross Section	Distance (Feet Above Mouth)	Existing Land Use Conditions	Future Land Use Conditions	Width (Feet)	Section Area (Square Feet)	Mean Velocity (Feet Per Second)	Floodway	Community Encroachment Area	Regulatory	1% Annual Chance Future Water-Surface Elevation	Without Floodway	With Floodway	Increase
396	39,620	3,663	3,935	107	930	3.9	55 / 52	64 / 65	673.5	673.8	673.5	674.1	0.5
408	40,800	3663	3935	91	796	4.6	38 / 53	46 / 61	675.8	676.2	675.8	676.2	0.4
419	41,900	3663	3935	91	869	4.2	47 / 44	59 / 54	679.1	679.5	679.1	679.6	0.5
427	42,700	3246	3447	53	546	5.9	22 / 31	28 / 78	680.1	680.5	680.1	680.6	0.5
437	43,650	2989	3185	29	275	10.9	14 / 16	14 / 16	683.7	683.9	683.7	684.2	0.5
455	45,450	2989	3185	72	542	5.5	50 / 22	80 / 35	693.7	694.7	693.7	693.9	0.2
465	46,450	2,722	2,882	213	1,263	2.2	30 / 184	63 / 239	696.7	697.2	696.7	697.2	0.5
474	47,400	2,570	2,768	40	367	7.0	20 / 20	148 / 40	698.0	698.2	698.0	698.5	0.5
483	48,250	2,570	2,768	41	290	8.9	23 / 18	25 / 25	701.8	702.0	701.8	702.2	0.4
491	49,050	2,570	2,768	80	578	4.4	43 / 37	69 / 50	706.1	706.7	706.1	706.5	0.4
499	49,900	1,594	1,777	127	597	2.7	20 / 107	44 / 111	708.1	708.5	708.1	708.6	0.5
507	50,650	1,594	1,777	125	461	3.5	112 / 13	136 / 13	710.6	710.9	710.6	711.1	0.5
517	51,700	1,534	1,793	116	358	4.3	92 / 24	123 / 71	714.4	714.7	714.4	714.9	0.5
526	52,600	1,534	1,793	225	1,748	0.9	143 / 82	254 / 177	724.4	725.3	724.4	724.4	0.0
535	53,450	1,541	1,828	349	1,970	0.8	182 / 167	218 / 190	724.6	725.5	724.6	724.8	0.2
544	54,400	1,378	1,543	133	421	3.3	42 / 91	93 / 101	725.1	725.9	725.1	725.4	0.3
557	55,700	1,378	1,543	75	243	5.7	44 / 31	59 / 36	732.7	733.0	732.7	732.9	0.2
567	56,700	1,378	1,543	107	428	3.2	64 / 43	79 / 57	739.8	740.1	739.8	740.3	0.5
Irwin Creek Tributary 1													
5	500	2,456	2,590	37	195	12.6	18 / 18	18 / 18	616.2[1]	617.1[1]	612.1	612.2	0.1
17	1,700	2,456	2,590	35	325	7.6	18 / 18	26 / 30	627.3	627.5	627.3	627.7	0.4
29	2,900	2,456	2,590	54	288	8.5	21 / 32	41 / 55	636.6	636.7	636.6	637.1	0.5
41	4,100	2196	2310	30	181	12.1	14 / 16	14 / 41	645.6	645.8	645.6	645.9	0.3
Kennedy Branch													
9	875	3,000	3,286	145	945	3.2	109 / 36	152 / 53	669.8[1]	670.8[1]	668.1	668.6	0.5
19	1,945	2,769	3,026	55	454	6.1	28 / 28	28 / 30	671.5	671.9	671.5	671.9	0.4
28	2,755	2,664	2,930	45	361	7.4	28 / 18	51 / 21	673.7	674.1	673.7	674.1	0.4
56	5,550	1,677	1,928	198	737	2.3	8 / 190	8 / 260	706.2	707.2	706.2	706.2	0.0
66	6,575	1,677	1,928	90	359	4.7	36 / 54	52 / 72	713.2	713.6	713.2	713.5	0.2
76	7,600	1,677	1,928	186	726	2.3	55 / 131	94 / 185	718.5	718.8	718.5	718.8	0.3
86	8,600	1,554	1,793	55	239	6.5	23 / 32	23 / 47	721.9	722.3	721.9	722.3	0.4
98	9,820	1,554	1,793	150	824	1.9	126 / 24	151 / 69	728.5	729.4	728.5	728.6	0.2
108	10,800	1,016	1,191	104	490	2.1	66 / 38	90 / 79	731.5	731.9	731.5	731.9	0.4
Kings Branch													
5	535	2,941	3,200	60	337	8.7	34 / 26	39 / 26	554.1[1]	555.0[1]	542.2	542.2	0.0
15	1,500	2,941	3,200	330	1,693	1.7	245 / 85	280 / 121	554.1[1]	555.0[1]	552.2	552.7	0.5
27	2,665	2,941	3,200	185	1,397	2.1	75 / 110	100 / 126	554.9	555.5	554.9	555.4	0.5
32	3,150	2,941	3,200	120	847	3.5	76 / 44	95 / 69	555.4	556.0	555.4	555.9	0.5
41	4,100	2,941	3,200	105	697	4.2	36 / 69	43 / 93	557.7	558.1	557.7	558.2	0.5
51	5,100	2,889	3,140	240	1,003	2.9	120 / 121	158 / 158	560.5	560.8	560.5	561.0	0.5
61	6,100	2,889	3,140	212	919	3.1	190 / 23	248 / 23	563.3	563.5	563.3	563.6	0.3
71	7,100	2,889	3,140	78	455	6.4	19 / 59	19 / 105	566.8	567.1	566.8	567.1	0.3
80	8,000	2,889	3,140	145	707	4.1	59 / 86	110 / 132	571.2	571.5	571.2	571.4	0.2
90	8,990	2,889	3,140	64	522	5.5	32 / 32	70 / 80	574.5	574.9	574.5	574.9	0.4
99	9,900	2,874	3,127	130	777	3.7	32 / 98	62 / 173	580.6	581.8	580.6	581.1	0.5
111	11,100	2,874	3,127	165	789	3.6	22 / 143	40 / 224	583.5	584.1	583.5	583.9	0.5
122	12,200	3,166	3,495	95	608	5.2	45 / 50	50 / 61	589.4	589.7	589.4	589.8	0.5
131	13,100	3,166	3,495	155	1,111	2.8	25 / 130	35 / 160	593.2	593.7	593.2	593.7	0.5
143	14,300	3,166	3,495	155	1,141	2.8	87 / 68	167 / 103	598.5	598.9	598.5	599.0	0.5

		1% Flood Discharges		Floodway			Non-Encroachment Offsets		Water Surface Elevation				
Cross Section	Distance (Feet Above Mouth)	Existing Land Use Conditions	Future Land Use Conditions	Width (Feet)	Section Area (Square Feet)	Mean Velocity (Feet Per Second)	Floodway	Community Encroachment Area	Regulatory	1% Annual Chance Future Water-Surface Elevation	Without Floodway	With Floodway	Increase
152	15,220	3166	3495	270	1,672	1.9	52 / 218	94 / 257	599.8	600.2	599.8	600.3	0.5
161	16,050	3171	3504	175	1,050	3.0	50 / 125	85 / 149	603.2	603.4	603.2	603.7	0.5
172	17,150	3171	3504	205	1,065	3.0	178 / 27	242 / 54	606.0	606.3	606.0	606.4	0.4
182	18,200	2,788	3,067	69	511	5.5	48 / 21	72 / 29	610.0	610.4	610.0	610.3	0.4
192	19,200	2,788	3,067	90	655	4.3	60 / 30	79 / 50	615.5	615.9	615.5	616.0	0.5
202	20,220	2,749	3,002	90	840	3.3	45 / 45	90 / 45	621.2	621.4	621.2	621.7	0.5
213	21,300	2,150	2,339	45	363	5.9	23 / 22	63 / 22	622.6	622.9	622.6	623.1	0.5
222	22,200	2,150	2,339	32	278	7.7	16 / 16	16 / 16	626.8	627.1	626.8	627.2	0.4
233	23,250	1148	1240	50	414	2.8	30 / 20	30 / 20	636.5	637.9	636.5	636.8	0.3
Little Hope Creek													
3	259	4,226	4,541	62	645	6.6	33 / 29	55 / 35	589.3[1]	589.6[1]	588.8	589.3	0.5
9	900	4,226	4,541	95	850	5.0	58 / 37	73 / 62	593.9	595.3	593.9	594.4	0.5
15	1,521	4,226	4,541	55	468	9.0	28 / 28	36 / 51	596.3	596.9	596.3	596.6	0.3
21	2,106	4226	4541	80	493	8.6	26 / 54	34 / 71	599.7	599.9	599.7	600.1	0.4
26	2,550	4226	4541	90	624	6.8	42 / 48	54 / 106	603.5	603.8	603.5	603.9	0.4
29	2,931	4,226	4,541	81	510	8.3	20 / 61	20 / 77	605.2	605.5	605.2	605.7	0.5
33	3,287	4,226	4,541	69	593	7.1	38 / 31	55 / 38	607.3	607.5	607.3	607.7	0.4
36	3,638	4,226	4,541	74	396	10.7	50 / 24	50 / 44	608.1	608.4	608.1	608.4	0.3
42	4,200	4,226	4,541	138	870	4.9	80 / 58	85 / 50	613.0	613.5	613.0	613.2	0.2
46	4,601	4,226	4,541	208	1,039	4.1	128 / 81	137 / 81	614.0	614.5	614.0	614.2	0.2
52	5,184	1,643	1,878	170	630	2.6	23 / 147	33 / 244	615.0	615.4	615.0	615.3	0.3
59	5,915	1,643	1,878	88	214	7.7	19 / 69	19 / 130	617.1	617.2	617.1	617.6	0.5
63	6,301	1,643	1,878	180	361	4.6	14 / 166	17 / 341	620.0	620.2	620.0	620.2	0.2
68	6,784	1,643	1,878	77	255	6.4	23 / 54	37 / 81	620.9	621.2	620.9	621.3	0.4
70	6,971	1,643	1,878	120	764	2.2	63 / 58	102 / 118	626.9	627.1	626.9	627.3	0.4
Little Hope Creek Tributary													
11	1104	2671	2833	110	443	6.0	21 / 89	21 / 229	617.8	617.9	617.8	618.1	0.3
17	1,714	2671	2833	190	743	3.6	58 / 132	58 / 198	622.1	622.3	622.1	622.7	0.6
20	2,042	2671	2833	89	371	7.2	35 / 54	88 / 80	622.9	623.1	622.9	623.2	0.3
Little Paw Creek													
3	343	1780	2386	95	517	3.4	27 / 68	38 / 100	572.1[1]	572.1	570.3	570.8	0.5
8	800	1780	2386	121	700	2.5	24 / 97	25 / 121	572.1[1]	572.6	571.7	572.2	0.5
13	1,300	1780	2386	157	914	1.9	21 / 135	52 / 154	572.9	573.9	572.9	573.4	0.5
19	1,925	1,780	2,386	168	738	2.4	77 / 91	93 / 117	574.5	575.3	574.5	574.9	0.4
28	2,839	1,567	2,087	146	421	3.7	86 / 60	111 / 93	577.7	578.2	577.7	578.0	0.4
35	3,452	1,567	2,087	122	473	3.3	55 / 67	102 / 96	581.6	582.4	581.6	582.1	0.5
39	3,903	1,567	2,087	39	198	7.9	19 / 20	19 / 21	584.0	584.5	584.0	584.4	0.4
45	4,546	1,567	2,087	150	917	1.7	24 / 126	33 / 135	592.5	595.6	592.5	592.6	0.0
51	5,083	1,508	1,941	47	319	4.7	24 / 24	38 / 103	593.3	596.0	593.3	593.5	0.2
56	5,623	1,508	1,941	60	205	7.4	18 / 42	32 / 100	596.2	596.3	596.2	596.5	0.4
62	6,152	1,508	1,941	30	139	10.9	15 / 15	17 / 50	605.5	606.3	605.5	605.8	0.3
67	6,701	766	836	28	81	9.4	14 / 14	14 / 24	615.5	615.7	615.5	615.7	0.2
73	7,285	766	836	23	110	6.9	12 / 12	12 / 13	628.5	628.7	628.5	628.9	0.4
78	7,779	766	836	28	104	7.4	14 / 14	19 / 14	637.0	637.1	637.0	637.3	0.3
83	8,302	766	836	29	112	6.9	14 / 14	14 / 14	643.0	643.2	643.0	643.3	0.3
Little Sugar Creek													
0	0	13306	13865	204	2,888	4.6	134 / 70	157 / 88	537.5	537.9	537.5	538.0	0.5
8	771	13,306	13,865	489	5,047	2.6	57 / 432	65 / 506	538.5	538.9	538.5	539.0	0.5
16	1,643	13,306	13,865	341	4,381	3.0	280 / 61	370 / 61	539.0	539.4	539.0	539.5	0.5

		1% Flood Discharges		Floodway			Non-Encroachment Offsets		Water Surface Elevation				
Cross Section	Distance (Feet Above Mouth)	Existing Land Use Conditions	Future Land Use Conditions	Width (Feet)	Section Area (Square Feet)	Mean Velocity (Feet Per Second)	Floodway	Community Encroachment Area	Regulatory	1% Annual Chance Future Water-Surface Elevation	Without Floodway	With Floodway	Increase
22	2,191	13,306	13,865	161	2,907	4.6	87 / 74	124 / 83	539.3	539.7	539.3	539.8	0.5
31	3,111	13306	13865	271	3,383	3.9	204 / 67	221 / 100	540.0	540.4	540.0	540.5	0.5
37	3,677	13306	13865	184	2,781	4.8	92 / 92	113 / 107	540.7	541.1	540.7	541.2	0.5
46	4,555	13306	13865	324	4,613	2.9	248 / 76	339 / 78	541.5	541.9	541.5	542.0	0.5
61	6,106	13,306	13,865	748	6,605	2.0	49 / 699	49 / 797	542.7	543.1	542.7	543.2	0.5
71	7,107	13,306	13,865	468	4,290	3.1	108 / 360	170 / 451	543.3	543.7	543.3	543.8	0.5
76	7,555	13,306	13,865	197	2,481	5.4	132 / 65	159 / 101	543.6	543.9	543.6	544.1	0.5
81	8,061	13,306	13,865	156	2,245	5.9	61 / 95	66 / 138	544.3	544.7	544.3	544.8	0.5
89	8,941	13,306	13,865	170	2,803	4.8	74 / 96	93 / 116	545.6	546.0	545.6	546.1	0.5
96	9,634	13,306	13,865	236	2,848	4.7	158 / 78	212 / 92	546.1	546.5	546.1	546.6	0.5
103	10,275	1,785	1,925	333	3,808	3.5	64 / 269	89 / 304	546.9	547.2	546.9	547.4	0.5
110	11,023	1,785	1,925	216	2,529	5.3	112 / 104	147 / 125	547.5	547.8	547.5	547.9	0.5
116	11,552	13,306	13,865	218	2,626	5.1	153 / 65	183 / 72	548.3	548.7	548.3	548.8	0.5
120	12,039	13,306	13,865	228	2,652	5.0	175 / 53	221 / 92	548.9	549.3	548.9	549.4	0.5
127	12,699	13,306	13,865	140	2,068	6.4	52 / 88	54 / 117	549.8	550.2	549.8	550.3	0.5
137	13,682	13,306	13,865	299	4,398	3.0	114 / 185	123 / 322	551.3	551.6	551.3	551.8	0.5
143	14,323	13306	13865	285	3,324	4.0	182 / 103	219 / 141	551.4	551.8	551.4	551.9	0.5
152	15,174	13306	13865	230	3,147	4.2	143 / 87	211 / 124	552.0	552.4	552.0	552.5	0.5
158	15,788	13306	13865	224	2,905	4.8	102 / 122	106 / 124	552.4	552.7	552.4	552.9	0.5
163	16,307	13,306	13,865	350	5,020	2.8	210 / 140	255 / 204	555.0	555.2	555.0	555.0	0.0
176	17,570	13,909	14,510	250	3,720	3.7	118 / 132	328 / 274	555.5	555.7	555.5	555.6	0.1
184	18,431	13,909	14,510	499	7,086	2.0	123 / 376	146 / 503	555.8	556.0	555.8	556.3	0.5
192	19,234	13,909	14,510	692	7,171	2.0	435 / 257	435 / 287	556.0	556.2	556.0	556.5	0.5
198	19,752	13,909	14,510	861	9,702	1.5	619 / 242	820 / 259	557.2	557.3	557.2	557.4	0.3
205	20,480	14,099	14,714	1,338	15,671	0.9	630 / 708	735 / 749	557.2	557.4	557.2	557.5	0.3
213	21,266	14099	14714	677	8,668	1.6	577 / 100	597 / 125	557.3	557.4	557.3	557.6	0.3
223	22,300	14099	14714	655	5,359	2.6	169 / 486	196 / 569	557.5	557.7	557.5	557.8	0.3
227	22,715	14099	14714	351	4,361	3.2	131 / 220	153 / 387	557.8	558.0	557.8	558.1	0.3
234	23,431	14099	14714	341	4,204	3.4	90 / 251	122 / 288	558.4	558.6	558.4	558.6	0.3
241	24,055	14099	14714	370	4,347	3.4	185 / 185	213 / 214	558.8	559.0	558.8	559.0	0.3
246	24,645	14,099	14,714	144	1,919	7.6	96 / 48	99 / 63	559.0	559.2	559.0	559.3	0.3
254	25,413	14,642	15,306	128	2,310	6.3	61 / 67	216 / 82	562.0	562.4	562.0	562.2	0.1
258	25,845	14,642	15,306	260	4,311	3.4	129 / 131	178 / 227	562.5	562.9	562.5	562.9	0.4
265	26,521	14,642	15,306	588	8,566	1.7	397 / 191	412 / 202	562.8	563.2	562.8	563.2	0.5
271	27,055	14,642	15,306	565	7,400	2.0	237 / 328	269 / 362	562.9	563.3	562.9	563.4	0.5
278	27,784	14,642	15,306	579	7,035	2.1	66 / 513	89 / 536	563.2	563.6	563.2	563.6	0.5
286	28,555	14,642	15,306	1,000	9,008	1.6	605 / 394	819 / 394	563.6	563.9	563.6	564.0	0.4
297	29,698	14,642	15,306	829	9,865	1.5	682 / 147	777 / 179	563.9	564.2	563.9	564.3	0.5
302	30,226	14,770	15,413	664	7,524	2.0	575 / 89	613 / 148	564.0	564.3	564.0	564.4	0.5
311	31,051	14,770	15,413	777	8,652	1.7	516 / 261	605 / 400	564.4	564.7	564.4	564.8	0.5
320	32,034	14,770	15,413	696	6,997	2.1	619 / 77	715 / 77	564.6	565.0	564.6	565.1	0.5
330	33,016	14,770	15,413	682	4,211	3.7	220 / 462	507 / 509	565.1	565.4	565.1	565.6	0.5
335	33,542	14,770	15,413	633	5,267	3.0	165 / 468	392 / 608	567.5	567.9	567.5	568.0	0.5
341	34,056	15,530	16,369	607	6,303	2.5	216 / 391	397 / 503	567.7	568.1	567.7	568.2	0.5
346	34,555	15,530	16,369	351	4,105	3.8	170 / 181	310 / 259	567.8	568.1	567.8	568.2	0.5
351	35,098	15,530	16,369	266	3,519	4.4	179 / 87	441 / 87	568.0	568.4	568.0	568.5	0.5
360	36,027	15,530	16,369	393	4,570	3.4	282 / 111	317 / 178	568.5	568.8	568.5	569.0	0.5
369	36,899	15,530	16,369	120	1,944	8.0	60 / 60	60 / 180	568.6	569.0	568.6	569.1	0.5
372	37,219	15,552	16,400	211	2,443	6.4	152 / 59	332 / 128	569.3	569.7	569.3	569.7	0.4

		1% Flood Discharges		Floodway			Non-Encroachment Offsets		Water Surface Elevation				
Cross Section	Distance (Feet Above Mouth)	Existing Land Use Conditions	Future Land Use Conditions	Width (Feet)	Section Area (Square Feet)	Mean Velocity (Feet Per Second)	Floodway	Community Encroachment Area	Regulatory	1% Annual Chance Future Water-Surface Elevation	Without Floodway	With Floodway	Increase
376	37,580	15,552	16,400	185	2,336	6.7	100 / 85	175 / 140	569.6	570.0	569.6	570.1	0.4
381	38,054	15,552	16,400	197	2,274	6.8	139 / 58	249 / 68	570.9	571.2	570.9	571.2	0.3
386	38,636	15,552	16,400	218	2,893	5.4	143 / 75	223 / 97	571.8	572.1	571.8	572.2	0.4
395	39,505	15,552	16,400	509	3,841	4.1	127 / 382	261 / 472	572.6	572.9	572.6	573.0	0.4
401	40,055	15,552	16,400	398	4,096	3.8	246 / 152	372 / 195	573.0	573.3	573.0	573.4	0.4
407	40,733	15,552	16,400	142	2,169	7.0	86 / 56	257 / 77	573.3	573.6	573.3	573.7	0.4
412	41,167	15,552	16,400	386	3,340	4.6	88 / 298	258 / 370	573.8	574.2	573.8	574.3	0.4
421	42,065	15,238	16,035	344	3,222	4.7	231 / 113	291 / 209	574.7	575.1	574.7	575.2	0.5
431	43,055	15,238	16,035	128	2,149	7.1	64 / 64	151 / 75	575.7	576.0	575.7	576.2	0.5
441	44,055	15,238	16,035	168	2,528	6.0	84 / 84	114 / 113	577.3	577.7	577.3	577.8	0.6
452	45,236	15,238	16,035	110	1,145	12.7	49 / 61	52 / 73	578.2	578.5	578.2	578.6	0.4
457	45,662	15,238	16,035	146	1,435	10.1	91 / 55	167 / 66	581.8	582.3	581.8	581.8	0.0
464	46,386	14,541	15,252	176	3,147	4.6	126 / 50	197 / 72	584.8	585.2	584.8	584.8	0.0
470	46,973	14,541	15,252	98	1,473	9.4	49 / 49	95 / 124	584.8	584.8	584.9	584.7	-0.1
475	47,544	14,541	15,252	91	1,316	10.5	48 / 43	248 / 106	585.2	585.6	585.2	585.5	0.4
481	48,055	13,834	14,521	303	2,583	5.4	211 / 92	283 / 119	588.2	588.7	588.2	588.7	0.5
484	48,426	13,834	14,521	185	2,207	6.0	126 / 59	279 / 74	588.7	589.1	588.7	589.0	0.4
488	48,767	13,834	14,521	252	2,551	5.2	162 / 90	388 / 150	589.0	589.4	589.0	589.4	0.4
492	49,216	13,187	13,822	424	5,130	2.6	368 / 56	389 / 86	590.2	590.7	590.2	590.7	0.4
499	49,866	13,187	13,822	112	1,232	10.7	56 / 56	73 / 70	590.2	590.1	590.2	590.2	0.0
504	50,387	13,187	13,822	70	1,070	6.9	38 / 32	133 / 48	592.3	592.7	592.3	592.4	0.1
509	50,871	13,187	13,822	82	1,059	7.0	41 / 41	75 / 44	592.6	593.0	592.6	593.0	0.4
514	51,439	7,426	7,769	74	931	8.0	40 / 34	72 / 39	593.7	594.1	593.7	593.9	0.2
520	52,039	7,426	7,769	74	1,175	6.3	37 / 37	43 / 143	594.6	595.0	594.6	595.0	0.4
527	52,685	7,426	7,769	146	1,822	4.1	73 / 73	83 / 112	595.8	596.3	595.8	596.2	0.4
536	53,555	7426	7769	98	1,334	5.6	49 / 49	49 / 49	596.4	596.8	596.4	596.9	0.5
543	54,255	7426	7769	111	1,320	5.6	49 / 62	63 / 73	597.1	597.5	597.1	597.4	0.4
551	55,055	7426	7769	76	934	8.0	38 / 38	64 / 48	597.8	598.1	597.8	598.1	0.3
556	55,579	7426	7769	169	1,079	6.9	137 / 32	161 / 40	598.5	598.9	598.5	598.9	0.4
561	56,098	7,426	7,769	77	704	10.5	39 / 38	41 / 39	600.2	600.5	600.2	600.4	0.3
569	56,857	7,389	7,734	61	655	11.3	31 / 30	32 / 32	604.5	604.7	604.5	604.5	0.0
573	57,306	7,389	7,734	525	3,573	2.1	472 / 53	571 / 58	608.2	608.6	608.2	608.2	0.0
579	57,865	7,367	7,712	387	2,544	2.9	320 / 67	589 / 121	608.3	608.7	608.3	608.3	0.0
586	58,555	7,367	7,712	135	1,143	6.5	92 / 43	257 / 94	608.5	608.8	608.5	608.5	0.0
592	59,189	7,367	7,712	355	2,567	2.9	257 / 98	324 / 121	611.5	611.6	611.5	611.9	0.4
597	59,662	7,367	7,712	553	4,336	1.7	214 / 339	240 / 526	612.4	612.5	612.4	612.9	0.5
606	60,556	7,410	7,769	868	4,640	1.6	240 / 628	240 / 640	612.6	612.7	612.6	613.2	0.5
616	61,559	7,410	7,769	108	1,016	7.8	53 / 55	215 / 295	613.2	613.3	613.2	613.5	0.3
621	62,109	7,410	7,769	86	703	10.6	50 / 36	50 / 38	613.9	614.0	613.9	614.4	0.5
626	62,644	7,890	8,293	338	2,145	3.5	103 / 235	115 / 235	616.9	617.1	616.9	617.4	0.5
629	62,946	7,464	7,850	284	1,342	5.6	43 / 241	45 / 244	617.2	617.3	617.2	617.6	0.4
636	63,565	7,464	7,850	121	1,228	6.1	54 / 67	62 / 249	618.8	619.0	618.8	619.1	0.2
642	64,161	7,464	7,850	88	906	8.3	44 / 44	44 / 68	619.2	619.4	619.2	619.6	0.4
651	65,059	7,464	7,850	346	2,471	3.1	45 / 301	49 / 326	622.5	622.8	622.5	623.0	0.5
656	65,560	7,555	7,934	340	2,175	3.5	44 / 296	44 / 406	622.9	623.2	622.9	623.3	0.5
661	66,055	7,555	7,934	204	1,418	5.3	56 / 149	130 / 149	623.2	623.4	623.2	623.6	0.5
665	66,546	7,555	7,934	80	837	7.7	41 / 39	55 / 42	623.6	623.8	623.6	624.0	0.5
668	66,783	7,555	7,934	76	705	9.1	38 / 38	95 / 38	624.2	624.4	624.2	624.6	0.4
671	67,055	6,405	6,709	162	1,240	5.2	73 / 89	84 / 90	626.8	627.1	626.8	626.8	0.0

		1% Flood Discharges		Floodway			Non-Encroachment Offsets		Water Surface Elevation				
Cross Section	Distance (Feet Above Mouth)	Existing Land Use Conditions	Future Land Use Conditions	Width (Feet)	Section Area (Square Feet)	Mean Velocity (Feet Per Second)	Floodway	Community Encroachment Area	Regulatory	1% Annual Chance Future Water-Surface Elevation	Without Floodway	With Floodway	Increase
675	67,450	6,405	6,709	84	876	7.3	42 / 42	43 / 42	626.8	627.1	626.8	626.9	0.1
680	68,004	6,405	6,709	92	940	6.8	46 / 46	111 / 136	627.5	627.8	627.5	627.6	0.0
686	68,600	6,405	6,709	98	917	7.0	49 / 49	86 / 186	628.2	628.4	628.2	628.4	0.2
690	69,040	6,405	6,709	74	953	6.4	38 / 36	39 / 102	628.6	628.9	628.6	629.0	0.4
694	69,404	6,405	6,709	170	1,114	5.5	130 / 40	234 / 44	629.5	629.8	629.5	629.9	0.5
699	69,938	6,070	6,364	148	617	9.3	29 / 119	34 / 107	630.4	630.6	630.4	630.8	0.4
704	70,422	6,070	6,364	349	2,264	2.5	161 / 188	211 / 196	634.5	634.7	634.5	634.9	0.4
712	71,242	5,750	6,034	232	1,412	4.1	183 / 48	207 / 48	634.8	635.0	634.8	635.3	0.5
717	71,677	5,750	6,034	111	1,015	5.0	65 / 46	65 / 87	635.1	635.2	635.1	635.5	0.5
723	72,286	5,750	6,034	342	1,591	3.2	37 / 305	37 / 505	636.3	637.8	636.3	636.8	0.5
730	72,997	5,070	5,257	111	1,136	4.5	67 / 44	67 / 44	637.7	637.8	637.7	638.2	0.5
734	73,409	5,070	5,257	76	809	6.3	38 / 38	38 / 38	638.3	638.4	638.3	638.8	0.5
741	74,098	5,070	5,257	76	828	6.1	38 / 38	38 / 38	639.1	639.2	639.1	639.5	0.4
744	74,368	5,070	5,257	71	737	6.1	35 / 36	43 / 45	641.1	641.4	641.1	641.4	0.3
747	74,723	5,070	5,257	75	971	4.6	38 / 37	91 / 47	643.0	643.4	643.0	643.2	0.2
751	75,053	4,467	4,581	58	688	6.5	29 / 29	88 / 34	643.0	643.4	643.0	643.2	0.2
758	75,761	4,467	4,581	109	521	8.6	76 / 26	98 / 34	644.3	645.0	643.7	643.7	0.0
760	75,966	4,467	4,581	94	597	7.1	58 / 36	91 / 59	645.1	645.6	645.1	645.1	0.0
766	76,636	4,467	4,581	73	665	6.4	33 / 40	58 / 71	647.5	648.3	647.5	647.5	0.0
769	76,880	4,238	4,394	86	722	5.9	44 / 42	51 / 75	648.2	648.9	648.2	648.2	0.0
772	77,185	4,238	4,394	84	841	5.0	42 / 42	61 / 58	650.5	651.3	650.5	650.5	0.0
774	77,374	4,238	4,394	95	889	4.8	49 / 46	55 / 52	650.6	651.5	650.6	650.6	0.0
788	78,765	4,238	4,394	112	1,034	4.1	64 / 48	281 / 174	653.8	654.4	653.8	654.3	0.5
796	79,646	4,238	4,394	122	911	4.6	45 / 76	45 / 112	654.4	654.9	654.4	655.0	0.5
800	79,975	4238	4394	81	603	6.9	34 / 47	34 / 47	655.7	656.2	655.7	656.0	0.3
804	80,402	4161	4329	76	577	6.2	36 / 40	38 / 64	656.6	657.0	656.6	656.8	0.2
807	80,746	4161	4329	49	500	7.2	25 / 24	62 / 34	657.8	658.3	657.8	657.9	0.2
812	81,231	3584	3750	79	512	7.0	41 / 38	162 / 39	659.1	659.6	659.1	659.2	0.0
816	81,600	3,584	3,750	77	654	5.5	28 / 49	46 / 63	661.4	661.8	661.4	661.4	0.1
820	81,953	3,584	3,750	197	1,163	3.1	92 / 105	255 / 275	662.0	662.4	662.0	662.2	0.2
824	82,429	3,584	3,750	68	502	7.1	47 / 21	138 / 37	662.3	662.5	662.3	662.7	0.4
827	82,722	3,584	3,750	74	618	5.8	47 / 27	80 / 34	664.1	664.3	664.1	664.5	0.4
831	83,055	3,584	3,750	124	1,196	3.0	61 / 63	63 / 67	667.7	667.9	667.7	668.2	0.4
834	83,398	3,584	3,750	56	561	6.3	28 / 28	28 / 28	667.7	667.8	667.7	668.1	0.4
838	83,805	3,584	3,750	161	1,304	2.7	114 / 47	178 / 59	669.6	669.9	669.6	670.0	0.5
841	84,086	3,555	3,719	128	1,121	3.2	101 / 27	117 / 44	669.8	670.1	669.8	670.3	0.5
845	84,480	3,555	3,719	194	1,385	2.6	106 / 88	132 / 106	670.1	670.4	670.1	670.6	0.5
852	85,176	3,555	3,719	92	628	5.7	63 / 29	170 / 34	671.9	672.1	671.9	672.1	0.2
859	85,936	3,555	3,719	62	450	7.9	32 / 30	34 / 178	672.8	672.9	672.8	673.1	0.4
866	86,555	3,555	3,719	200	1,150	3.1	33 / 167	33 / 167	674.8	675.0	674.8	675.0	0.2
871	87,147	3,555	3,719	60	342	10.4	29 / 31	91 / 118	674.8	674.9	674.8	675.3	0.5
876	87,555	3,555	3,719	112	1,023	3.5	57 / 55	83 / 77	679.8	680.2	679.8	680.1	0.2
883	88,263	3,555	3,719	84	780	4.4	51 / 33	90 / 42	680.5	680.8	680.5	680.7	0.1
886	88,550	3,555	3,719	126	2,125	1.6	67 / 59	99 / 86	689.3	690.2	689.3	689.3	0.0
889	88,882	3,391	3,552	210	3,100	1.1	108 / 102	114 / 116	689.3	690.3	689.3	689.4	0.0
896	89,555	3,391	3,552	236	3,410	1.0	84 / 152	156 / 192	691.7	692.9	691.7	691.7	0.0
900	90,048	3,391	3,552	260	3,655	0.9	132 / 128	238 / 229	691.7	692.9	691.7	691.8	0.0
914	91,377	3,391	3,552	375	3,153	1.3	223 / 152	240 / 214	691.9	693.5	691.9	692.2	0.3
921	92,055	3,391	3,552	96	955	4.4	42 / 54	99 / 96	692.0	693.5	692.0	692.2	0.3

		1% Flood Discharges		Floodway			Non-Encroachment Offsets		Water Surface Elevation				
Cross Section	Distance (Feet Above Mouth)	Existing Land Use Conditions	Future Land Use Conditions	Width (Feet)	Section Area (Square Feet)	Mean Velocity (Feet Per Second)	Floodway	Community Encroachment Area	Regulatory	1% Annual Chance Future Water-Surface Elevation	Without Floodway	With Floodway	Increase
927	92,658	4,187	4,458	109	878	4.8	58 / 51	93 / 97	692.6	694.0	692.6	692.9	0.3
933	93,264	4,187	4,458	136	910	2.7	34 / 102	55 / 223	693.4	694.5	693.4	693.8	0.4
938	93,828	4,187	4,458	89	672	3.7	50 / 39	65 / 57	694.0	694.9	694.0	694.4	0.4
941	94,120	2,476	2,642	88	526	4.0	55 / 33	74 / 40	694.4	695.2	694.4	694.9	0.5
946	94,624	2,476	2,642	139	831	2.5	109 / 30	208 / 44	696.8	697.4	696.8	697.2	0.4
956	95,557	2,096	2,240	46	306	6.2	23 / 23	23 / 50	697.8	698.2	697.8	698.2	0.5
961	96,084	2,096	2,240	57	369	5.1	29 / 28	62 / 103	701.8	702.1	701.8	701.9	0.1
966	96,629	1,885	2,003	62	332	5.3	33 / 29	155 / 33	704.6	704.7	704.6	704.8	0.3
977	97,697	1,885	2,003	71	1,059	1.7	29 / 42	94 / 567	717.1	717.9	717.1	717.3	0.2
989	98,872	1,750	1,862	106	1,320	1.4	56 / 50	310 / 158	717.1	717.9	717.1	717.4	0.3
995	99,511	1,750	1,862	116	1,133	1.6	23 / 93	36 / 131	717.1	717.9	717.1	717.5	0.4
1004	100,367	1,785	1,925	156	854	2.1	97 / 59	154 / 65	717.3	718.0	717.3	717.8	0.5
1011	101,121	1,785	1,925	94	493	3.6	58 / 36	86 / 67	719.9	720.1	719.9	720.2	0.3
Long Creek													
6	581	6,866	8,164	220	2,641	2.6	137 / 84	156 / 107	577.5[1]	578.4	577.3	577.8	0.5
16	1,632	6,866	8,164	658	7,671	0.9	286 / 372	305 / 406	577.8	579.0	577.8	578.3	0.5
24	2,446	6,866	8,164	287	3,369	2.0	168 / 119	216 / 144	577.9	579.0	577.9	578.4	0.5
30	3,041	6,866	8,164	197	2,376	2.9	79 / 119	100 / 164	578.2	579.3	578.2	578.7	0.5
39	3,869	6,866	8,164	264	3,259	2.1	201 / 63	219 / 83	579.0	580.2	579.0	579.5	0.5
47	4,734	6,866	8,164	448	5,367	1.3	93 / 355	147 / 376	579.4	580.6	579.4	579.9	0.5
52	5,239	6,990	8,235	991	11,708	0.6	668 / 323	698 / 372	579.5	580.7	579.5	580.0	0.5
60	5,984	6,990	8,235	638	6,871	1.0	169 / 469	367 / 519	579.6	580.8	579.6	580.1	0.5
65	6,492	6,990	8,235	698	6,953	1.0	194 / 503	224 / 565	579.7	580.9	579.7	580.2	0.5
73	7,324	6990	8235	723	6,706	1.0	606 / 117	635 / 149	580.0	581.1	580.0	580.5	0.5
80	7,988	6990	8235	528	4,348	1.6	460 / 68	539 / 94	580.3	581.4	580.3	580.8	0.5
87	8,725	6990	8235	181	1,708	4.1	62 / 120	73 / 137	580.9	581.9	580.9	581.4	0.5
93	9,267	6990	8235	334	3,143	2.2	238 / 96	257 / 111	581.9	583.0	581.9	582.5	0.5
99	9,931	6,990	8,235	589	5,672	1.2	93 / 497	122 / 586	582.3	583.3	582.3	582.8	0.5
106	10,647	6,990	8,235	641	5,048	1.4	463 / 178	493 / 245	582.6	583.6	582.6	583.1	0.5
116	11,578	6,990	8,235	449	3,029	2.3	263 / 186	307 / 236	583.3	584.2	583.3	583.8	0.5
123	12,300	6,990	8,235	209	1,737	4.0	125 / 84	165 / 122	586.2	587.3	586.2	586.4	0.2
133	13,310	6,990	8,235	283	2,578	2.7	38 / 245	38 / 328	587.6	588.6	587.6	588.1	0.4
138	13,792	6,990	8,235	211	1,883	3.7	50 / 162	67 / 191	588.0	588.9	588.0	588.5	0.5
144	14,438	6,685	7,814	255	2,212	3.2	37 / 219	46 / 245	589.2	590.1	589.2	589.6	0.5
150	15,031	6,685	7,814	196	1,842	3.6	147 / 49	173 / 71	589.7	590.7	589.7	590.2	0.5
156	15,559	6,685	7,814	133	1,276	5.2	48 / 85	48 / 85	590.9	591.8	590.9	591.3	0.4
163	16,290	6,685	7,814	236	2,120	3.2	173 / 63	215 / 100	593.4	594.4	593.4	593.5	0.2
171	17,097	6,685	7,814	138	996	6.7	96 / 42	138 / 42	594.7	595.5	594.7	595.1	0.4
177	17,653	6,685	7,814	133	1,080	6.2	80 / 53	96 / 82	600.1	600.8	600.1	600.1	0.1
186	18,560	6,685	7,814	224	1,723	3.9	29 / 195	37 / 206	605.4	606.2	605.4	605.9	0.5
193	19,302	6,685	7,814	115	1,288	5.2	71 / 44	83 / 54	613.3	614.5	613.3	613.5	0.2
199	19,872	6,685	7,814	105	936	7.1	80 / 25	102 / 37	614.9	616.3	614.9	615.1	0.2
204	20,449	6,685	7,814	69	682	9.8	36 / 33	47 / 44	618.5	619.3	618.5	618.9	0.4
211	21,052	6,685	7,814	183	1,425	4.7	27 / 156	37 / 248	623.2	624.1	623.2	623.8	0.5
218	21,805	6,685	7,814	172	1,595	4.2	144 / 28	187 / 28	625.5	626.5	625.5	626.1	0.5
224	22,371	6,685	7,814	287	2,328	2.9	234 / 53	245 / 77	626.3	627.2	626.3	626.8	0.5
230	23,026	6,685	7,814	179	1,409	4.7	53 / 126	72 / 171	627.3	628.2	627.3	627.7	0.4
233	23,287	6,685	7,814	238	1,765	3.8	32 / 206	32 / 253	627.6	628.5	627.6	628.0	0.4
236	23,615	6,563	7,557	178	1,326	5.0	61 / 117	87 / 155	627.9	628.8	627.9	628.3	0.4

		1% Flood Discharges		Floodway			Non-Encroachment Offsets		Water Surface Elevation				
Cross Section	Distance (Feet Above Mouth)	Existing Land Use Conditions	Future Land Use Conditions	Width (Feet)	Section Area (Square Feet)	Mean Velocity (Feet Per Second)	Floodway	Community Encroachment Area	Regulatory	1% Annual Chance Future Water-Surface Elevation	Without Floodway	With Floodway	Increase
243	24,319	6,563	7,557	482	3,364	2.0	455 / 27	533 / 27	628.5	629.3	628.5	628.9	0.5
249	24,860	6563	7557	400	2,480	2.6	315 / 85	337 / 112	628.6	629.4	628.6	629.0	0.5
254	25,450	6563	7557	249	1,531	4.3	217 / 32	278 / 36	628.8	629.6	628.8	629.3	0.4
260	26,026	6563	7557	335	1,651	4.0	32 / 304	32 / 392	629.5	630.2	629.5	630.0	0.4
268	26,765	6563	7557	157	1,093	6.0	32 / 125	48 / 164	631.3	631.9	631.3	631.8	0.5
275	27,483	6,563	7,557	135	1,233	5.3	73 / 62	98 / 80	633.9	634.6	633.9	634.4	0.5
282	28,224	6,563	7,557	148	1,379	4.8	40 / 108	52 / 126	636.4	637.2	636.4	636.8	0.5
291	29,090	6,563	7,557	163	1,888	3.5	54 / 110	69 / 131	637.9	638.8	637.9	638.4	0.5
296	29,645	6,453	7,440	324	3,259	2.0	109 / 215	225 / 259	638.4	639.3	638.4	638.9	0.5
301	30,105	6,453	7,440	391	3,778	1.7	237 / 154	256 / 192	638.8	639.8	638.8	639.3	0.5
307	30,695	6,453	7,440	118	1,306	4.9	86 / 32	106 / 44	639.3	640.2	639.3	639.8	0.5
316	31,559	6,009	7,026	358	3,977	1.6	236 / 122	236 / 122	640.3	641.2	640.3	640.8	0.5
321	32,149	6,009	7,026	280	2,866	2.1	182 / 99	206 / 109	640.7	641.7	640.7	641.2	0.5
330	32,953	6,009	7,026	168	1,656	3.6	55 / 114	70 / 128	641.3	642.2	641.3	641.8	0.5
337	33,667	6,009	7,026	404	4,278	1.4	83 / 321	122 / 339	642.5	643.4	642.5	643.0	0.5
344	34,397	6,009	7,026	136	1,331	4.5	47 / 89	59 / 104	643.0	643.9	643.0	643.4	0.5
352	35,163	6,009	7,026	211	1,989	3.0	88 / 123	201 / 149	644.1	645.0	644.1	644.6	0.5
359	35,940	6,009	7,026	180	2,015	3.0	56 / 124	74 / 136	645.4	646.3	645.4	645.9	0.5
364	36,409	6,009	7,026	475	4,167	1.4	361 / 114	396 / 142	645.8	646.8	645.8	646.3	0.5
369	36,941	6,009	7,026	522	4,554	1.3	290 / 233	339 / 276	646.5	647.6	646.5	646.9	0.5
378	37,763	6,009	7,026	746	5,813	1.0	560 / 186	625 / 239	646.7	647.7	646.7	647.1	0.5
385	38,468	6,009	7,026	362	2,744	2.2	336 / 27	453 / 27	646.9	647.9	646.9	647.4	0.5
391	39,074	6,009	7,026	542	3,808	1.6	512 / 31	587 / 83	647.6	648.5	647.6	648.1	0.5
399	39,915	6,009	7,026	436	3,487	1.7	203 / 232	236 / 301	650.5	651.5	650.5	650.5	0.0
404	40,424	6,009	7,026	652	4,918	1.2	265 / 387	292 / 529	650.6	651.7	650.6	650.7	0.0
410	40,953	6,009	7,026	512	3,073	2.0	84 / 482	124 / 547	650.7	651.8	650.7	650.8	0.1
416	41,572	6,009	7,026	1,042	7,537	0.8	553 / 490	637 / 556	651.1	652.1	651.1	651.3	0.1
424	42,350	5,622	6,428	1,035	6,127	1.0	612 / 424	673 / 557	651.4	652.4	651.4	651.6	0.2
433	43,296	5,622	6,428	694	3,668	1.5	512 / 181	640 / 212	652.0	652.8	652.0	652.2	0.2
440	43,993	5,622	6,428	704	3,302	1.7	449 / 255	481 / 305	652.4	653.2	652.4	652.8	0.4
446	44,610	5,622	6,428	527	2,793	2.0	30 / 497	101 / 605	653.6	654.2	653.6	654.0	0.4
455	45,479	5,622	6,428	157	1,088	5.2	33 / 124	33 / 179	654.9	655.4	654.9	655.3	0.4
459	45,914	5,622	6,428	666	3,621	1.6	468 / 199	541 / 259	656.3	656.9	656.3	656.8	0.5
466	46,564	5,622	6,428	426	2,476	2.3	64 / 362	125 / 416	657.1	657.6	657.1	657.6	0.5
472	47,183	5,622	6,428	293	1,617	3.5	33 / 261	59 / 380	658.3	658.9	658.3	658.8	0.5
480	48,046	5,622	6,428	656	3,622	1.6	107 / 549	254 / 595	659.5	660.0	659.5	660.0	0.5
489	48,910	5,622	6,428	482	2,429	2.3	45 / 437	120 / 461	660.2	660.7	660.2	660.7	0.5
497	49,691	4,180	4,934	362	2,332	2.4	317 / 45	355 / 92	663.3	663.7	663.3	663.6	0.3
502	50,196	4,180	4,934	655	3,457	1.2	452 / 203	527 / 313	663.6	664.0	663.6	664.0	0.4
510	50,979	4,180	4,934	425	2,039	2.0	334 / 91	376 / 204	663.7	664.2	663.7	664.1	0.4
517	51,745	4,180	4,934	277	1,029	4.1	191 / 86	223 / 183	664.1	664.6	664.1	664.5	0.4
525	52,522	4,180	4,934	415	1,412	3.0	199 / 216	230 / 322	665.8	666.1	665.8	666.3	0.5
533	53,295	4,180	4,934	60	536	7.8	30 / 30	30 / 133	667.5	668.0	667.5	668.0	0.5
541	54,072	4,180	4,934	86	779	5.4	26 / 60	26 / 90	671.1	671.9	671.1	671.4	0.3
549	54,900	4,180	4,934	180	1,285	3.2	42 / 138	73 / 190	672.8	673.6	672.8	673.2	0.4
558	55,788	4,180	4,934	96	840	5.0	26 / 71	29 / 103	675.5	676.4	675.5	675.9	0.4
564	56,350	4,180	4,934	308	2,295	1.8	167 / 142	204 / 185	676.7	677.7	676.7	677.2	0.5
571	57,078	4,180	4,934	704	4,102	1.0	569 / 134	649 / 215	677.2	678.1	677.2	677.7	0.5
577	57,688	4,180	4,934	381	2,240	1.9	314 / 67	359 / 103	678.5	679.4	678.5	678.8	0.3

		1% Flood Discharges		Floodway			Non-Encroachment Offsets		Water Surface Elevation				
Cross Section	Distance (Feet Above Mouth)	Existing Land Use Conditions	Future Land Use Conditions	Width (Feet)	Section Area (Square Feet)	Mean Velocity (Feet Per Second)	Floodway	Community Encroachment Area	Regulatory	1% Annual Chance Future Water-Surface Elevation	Without Floodway	With Floodway	Increase
587	58,712	4180	4934	400	1,718	2.4	20 / 379	45 / 443	679.4	680.1	679.4	679.8	0.4
591	59,110	4180	4934	318	1,535	2.7	192 / 125	238 / 232	680.4	681.0	680.4	680.8	0.4
595	59,528	3843	4626	228	1,120	3.7	203 / 25	264 / 72	681.4	682.0	681.4	681.9	0.5
602	60,161	3843	4626	495	2,633	1.5	469 / 26	522 / 96	683.0	683.6	683.0	683.5	0.5
606	60,598	3,843	4,626	599	2,596	1.5	480 / 119	520 / 139	683.5	684.0	683.5	683.9	0.4
611	61,080	3,843	4,626	591	2,057	1.9	273 / 318	294 / 362	683.9	684.4	683.9	684.3	0.4
617	61,675	3,843	4,626	284	1,705	2.2	68 / 216	90 / 318	687.3	688.1	687.3	687.8	0.5
623	62,325	3,843	4,626	47	403	9.5	26 / 20	36 / 27	688.9	689.4	688.9	689.3	0.4
631	63,116	3,843	4,626	98	658	5.8	70 / 28	130 / 106	694.1	695.4	694.1	694.5	0.4
638	63,778	3,843	4,626	53	620	6.2	29 / 24	35 / 30	696.5	697.3	696.5	696.8	0.3
646	64,596	3,843	4,626	206	1,043	3.7	85 / 121	130 / 173	698.8	699.7	698.8	699.1	0.4
651	65,128	3,843	4,626	319	1,495	2.6	86 / 233	135 / 346	700.2	701.0	700.2	700.7	0.5
659	65,864	3,329	4,038	405	1,719	2.2	265 / 140	316 / 236	701.7	702.3	701.7	702.2	0.5
666	66,647	3,329	4,038	442	1,706	2.0	421 / 20	522 / 76	703.3	703.8	703.3	703.8	0.5
672	67,172	3,329	4,038	526	1,646	2.0	301 / 225	367 / 310	704.4	704.8	704.4	704.8	0.5
679	67,863	3,329	4,038	156	765	4.4	134 / 22	154 / 44	706.5	706.9	706.5	706.9	0.5
685	68,502	1,509	1,767	408	1,732	1.9	271 / 137	342 / 187	708.8	709.4	708.8	709.3	0.5
693	69,294	1,509	1,767	208	893	1.7	168 / 40	211 / 76	710.8	711.2	710.8	711.3	0.5
700	70,048	1,509	1,767	60	299	5.0	21 / 39	21 / 117	712.7	713.1	712.7	713.2	0.4
707	70,657	1,381	1,649	45	274	5.5	23 / 23	27 / 97	714.4	714.8	714.4	714.9	0.5
713	71,260	1,381	1,649	135	526	2.6	115 / 21	162 / 77	716.9	717.5	716.9	717.2	0.3
720	71,988	1,381	1,649	124	407	3.4	105 / 19	236 / 34	718.6	719.0	718.6	719.0	0.5
727	72,729	1,381	1,649	44	262	5.3	26 / 18	90 / 43	721.4	721.8	721.4	721.9	0.5
734	73,393	1,260	1,522	34	273	5.1	17 / 17	29 / 93	723.9	724.4	723.9	724.4	0.5
743	74,277	1,260	1,522	54	320	3.9	27 / 27	75 / 27	729.1	730.4	729.1	729.1	0.0
750	75,015	1,260	1,522	42	230	5.5	23 / 19	65 / 19	731.1	731.8	731.1	731.4	0.3
758	75,758	887	1,081	38	222	5.7	20 / 18	34 / 18	734.4	735.0	734.4	734.9	0.4
764	76,383	887	1,081	35	185	4.8	20 / 15	37 / 15	736.7	737.2	736.7	737.1	0.4
769	76,936	758	937	50	267	3.3	37 / 13	49 / 19	739.9	741.1	739.9	740.2	0.3
777	77,679	758	937	118	553	1.4	95 / 22	113 / 39	742.2	743.8	742.2	742.6	0.4
786	78,566	621	771	84	199	3.8	73 / 11	146 / 12	744.7	745.2	744.7	745.1	0.4
793	79,319	6,990	8,235	93	210	3.0	9 / 84	26 / 131	750.3	750.6	750.3	750.7	0.4
Long Creek Tributary 1													
7	699	733	998	380	843	0.9	80 / 300	178 / 370	579.5[1]	580.7[1]	570.0	570.5	0.5
12	1,247	733	998	171	455	1.6	47 / 124	81 / 150	579.5[1]	580.7[1]	572.3	572.8	0.5
18	1,801	733	998	82	248	3.0	17 / 64	33 / 71	579.5[1]	580.7[1]	575.8	576.2	0.4
24	2,395	733	998	88	298	2.5	10 / 78	32 / 90	579.5[1]	580.7[1]	578.0	578.4	0.4
32	3,187	552	728	57	214	2.6	42 / 15	71 / 33	580.2	580.7	580.2	580.7	0.5
Long Creek Tributary 2													
4	382	763	950	69	243	3.1	34 / 35	64 / 59	628.4[1]	629.1[1]	622.8	623.3	0.5
9	892	663	870	41	86	7.7	19 / 22	19 / 22	628.5	629.1	628.5	628.6	0.1
15	1,453	663	870	41	126	5.3	21 / 20	23 / 20	640.8	641.4	640.8	641.2	0.4
20	1,976	663	870	34	138	4.8	18 / 16	29 / 16	645.5	645.9	645.5	645.9	0.4
22	2,173	663	870	27	101	6.6	8 / 19	8 / 19	646.4	646.7	646.4	646.7	0.4
Long Creek Tributary 3													
3	298	789	905	81	351	2.2	41 / 41	41 / 41	638.8[1]	639.7[1]	629.8	630.0	0.2
9	926	789	905	41	131	6.0	22 / 19	22 / 19	638.8[1]	639.7[1]	630.9	631.1	0.2
14	1,421	789	905	30	129	6.1	15 / 15	16 / 61	638.8[1]	639.7[1]	634.2	634.2	0.0
18	1,824	565	673	30	188	3.0	15 / 15	19 / 17	638.8[1]	639.7[1]	635.3	635.7	0.4

		1% Flood Discharges		Floodway			Non-Encroachment Offsets		Water Surface Elevation				
Cross Section	Distance (Feet Above Mouth)	Existing Land Use Conditions	Future Land Use Conditions	Width (Feet)	Section Area (Square Feet)	Mean Velocity (Feet Per Second)	Floodway	Community Encroachment Area	Regulatory	1% Annual Chance Future Water-Surface Elevation	Without Floodway	With Floodway	Increase
Mallard Creek													
122	12,192	18163	20785	218	3,054	5.9	120 / 98	140 / 126	577.5	579.7	577.5	578.0	0.5
128	12,841	18,163	20,785	454	6,429	2.8	363 / 91	604 / 110	579.2	581.1	579.2	579.7	0.5
135	13,548	18,163	20,785	668	8,896	2.0	447 / 221	469 / 259	579.5	581.2	579.5	580.0	0.5
149	14,858	18,163	20,785	1,127	13,320	1.4	880 / 247	929 / 369	579.7	581.4	579.7	580.2	0.5
159	15,857	18,163	20,785	894	9,768	1.9	754 / 140	794 / 184	579.9	581.5	579.9	580.4	0.5
167	16,714	18,163	20,785	567	5,309	3.4	533 / 34	604 / 46	580.2	581.8	580.2	580.7	0.4
172	17,196	18,163	20,785	330	3,031	6.0	233 / 97	248 / 107	581.1	582.4	581.1	581.5	0.4
176	17,561	18,163	20,785	396	4,014	4.5	187 / 209	227 / 236	583.2	584.3	583.2	583.5	0.4
185	18,515	18,163	20,785	706	9,134	2.0	667 / 39	756 / 55	585.0	586.0	585.0	585.5	0.5
195	19,536	18163	20785	242	3,150	5.8	65 / 177	84 / 190	585.1	586.3	585.1	585.5	0.4
202	20,160	18163	20785	317	4,482	4.1	79 / 238	94 / 258	587.1	587.8	587.1	587.6	0.5
211	21,107	18,163	20,785	538	6,964	2.6	313 / 225	359 / 258	588.5	589.4	588.5	589.0	0.5
217	21,668	18,163	20,785	286	4,214	4.3	184 / 102	195 / 110	588.9	589.8	588.9	589.4	0.5
224	22,373	18,163	20,785	521	6,574	2.8	300 / 221	322 / 287	589.7	590.7	589.7	590.2	0.5
230	22,982	18,163	20,785	723	11,226	1.6	689 / 34	716 / 55	590.2	591.2	590.2	590.7	0.5
235	23,476	18356	21020	512	7,008	2.6	435 / 77	476 / 102	590.2	591.1	590.2	590.6	0.5
241	24,115	18356	21020	591	7,647	2.4	524 / 67	546 / 87	590.5	591.4	590.5	590.9	0.5
249	24,867	18356	21020	694	9,584	1.9	506 / 188	553 / 248	590.8	591.8	590.8	591.3	0.5
259	25,856	18,356	21,020	567	7,357	2.5	98 / 469	115 / 524	592.0	592.8	592.0	592.4	0.5
263	26,311	18,356	21,020	645	7,997	2.3	246 / 399	267 / 413	592.3	593.1	592.3	592.8	0.5
274	27,437	18,356	21,020	294	4,235	4.3	150 / 144	164 / 163	594.8	595.8	594.8	595.1	0.3
279	27,933	18356	21020	253	4,116	4.5	141 / 112	152 / 121	595.5	596.6	595.5	595.9	0.3
285	28,495	18356	21020	618	9,597	1.9	134 / 484	144 / 506	596.9	598.1	596.9	597.2	0.4
289	28,938	18356	21020	689	11,241	1.6	364 / 325	370 / 342	597.2	598.4	597.2	597.5	0.4
295	29,483	18,356	21,020	781	11,294	1.6	269 / 513	316 / 535	597.4	598.6	597.4	597.8	0.4
301	30,064	18,356	21,020	467	6,348	2.9	276 / 192	307 / 226	597.5	598.7	597.5	597.8	0.4
305	30,452	18356	21020	661	8,833	2.1	578 / 83	634 / 111	598.0	599.3	598.0	598.4	0.4
311	31,073	18,356	21,020	642	8,774	2.1	549 / 92	590 / 132	598.6	599.9	598.6	599.0	0.4
315	31,527	18,356	21,020	656	8,008	2.3	615 / 41	736 / 81	599.0	600.2	599.0	599.4	0.4
319	31,925	18,356	21,020	846	11,638	1.6	669 / 177	748 / 218	599.2	600.4	599.2	599.7	0.4
324	32,442	18,356	21,020	1,034	14,877	1.2	649 / 385	690 / 422	599.3	600.5	599.3	599.7	0.4
330	32,964	18,356	21,020	925	12,118	1.5	494 / 431	494 / 431	599.4	600.6	599.4	599.8	0.4
336	33,570	18,356	21,020	731	10,048	1.8	341 / 390	387 / 390	600.0	601.1	600.0	600.4	0.5
340	34,047	15,269	17,755	728	8,990	1.7	211 / 518	234 / 544	600.3	601.4	600.3	600.7	0.5
344	34,379	15,269	17,755	496	6,042	2.5	250 / 246	263 / 263	600.4	601.5	600.4	600.9	0.5
353	35,340	15,269	17,755	224	2,750	5.6	192 / 33	336 / 114	602.4	603.1	602.4	602.9	0.5
359	35,949	15,269	17,755	664	8,703	1.8	588 / 76	615 / 97	604.2	605.0	604.2	604.7	0.5
363	36,264	15,269	17,755	424	4,868	3.1	270 / 154	300 / 179	604.3	605.1	604.3	604.8	0.5
367	36,730	15,269	17,755	429	4,260	3.6	187 / 242	232 / 257	604.8	605.7	604.8	605.3	0.5
373	37,343	15,269	17,755	394	4,137	3.7	204 / 190	235 / 290	605.5	606.4	605.5	605.9	0.4
376	37,580	15,269	17,755	389	4,000	3.8	180 / 209	210 / 220	605.7	606.6	605.7	606.1	0.4
381	38,117	15,269	17,755	264	3,093	4.9	203 / 61	227 / 76	606.0	606.9	606.0	606.4	0.4
389	38,856	15,269	17,755	240	2,964	5.2	176 / 65	191 / 88	607.6	608.5	607.6	608.0	0.4
394	39,359	12,642	14,907	350	4,591	2.8	137 / 213	137 / 213	609.1	610.2	609.1	609.6	0.5
404	40,444	12,642	14,907	463	5,680	2.2	242 / 221	277 / 231	610.7	611.7	610.7	611.2	0.5
408	40,775	12642	14907	234	2,777	4.6	94 / 140	124 / 191	610.7	611.7	610.7	611.2	0.4
411	41,118	12642	14907	432	4,740	2.7	213 / 218	229 / 271	611.5	612.6	611.5	612.0	0.5
419	41,881	12642	14907	539	6,781	1.9	107 / 432	131 / 452	614.4	615.4	614.4	614.8	0.4

		1% Flood Discharges		Floodway			Non-Encroachment Offsets		Water Surface Elevation				
Cross Section	Distance (Feet Above Mouth)	Existing Land Use Conditions	Future Land Use Conditions	Width (Feet)	Section Area (Square Feet)	Mean Velocity (Feet Per Second)	Floodway	Community Encroachment Area	Regulatory	1% Annual Chance Future Water-Surface Elevation	Without Floodway	With Floodway	Increase
423	42,252	12642	14907	515	5,639	2.2	202 / 314	304 / 331	614.6	615.6	614.6	615.0	0.4
427	42,735	12642	14907	434	4,726	2.7	398 / 35	432 / 41	615.0	616.0	615.0	615.4	0.4
437	43,693	12,642	14,907	1,225	11,907	1.1	579 / 646	634 / 796	616.1	617.2	616.1	616.5	0.5
442	44,156	12,642	14,907	631	5,093	2.5	191 / 441	242 / 504	616.1	617.2	616.1	616.7	0.5
447	44,652	12,642	14,907	262	1,964	6.4	179 / 84	202 / 129	616.5	617.4	616.5	616.9	0.5
452	45,160	12,642	14,907	184	1,644	7.7	148 / 35	223 / 71	619.1	620.1	619.1	619.5	0.4
455	45,486	12,642	14,907	107	1,297	9.7	76 / 31	104 / 37	620.2	621.1	620.2	620.7	0.4
459	45,890	12,642	14,907	108	1,458	8.7	43 / 65	57 / 80	622.5	623.7	622.5	623.0	0.5
462	46,196	12,642	14,907	161	2,110	6.0	42 / 119	59 / 137	624.1	625.5	624.1	624.6	0.5
465	46,526	12,642	14,907	136	1,724	7.3	87 / 50	114 / 64	624.5	625.9	624.5	625.0	0.5
470	46,979	12,642	14,907	176	2,463	5.1	74 / 102	88 / 123	626.3	627.8	626.3	626.9	0.5
474	47,410	12,642	14,907	499	5,930	2.1	104 / 395	130 / 513	627.6	629.2	627.6	628.1	0.5
480	48,035	12,642	14,907	162	2,013	6.3	69 / 92	95 / 110	627.8	629.2	627.8	628.3	0.5
486	48,601	12,642	14,907	255	2,535	5.0	60 / 196	79 / 213	629.3	630.6	629.3	629.7	0.5
492	49,241	12,642	14,907	140	2,026	6.2	77 / 63	93 / 92	634.9	636.7	634.9	635.0	0.1
495	49,476	10,020	11,503	93	1,085	9.2	64 / 29	88 / 40	635.1	636.9	635.1	635.3	0.2
501	50,128	10,020	11,503	189	1,694	5.9	117 / 72	180 / 88	640.3	640.9	640.3	640.7	0.4
504	50,364	10,020	11,503	138	1,531	6.5	60 / 77	85 / 99	640.8	641.3	640.8	641.1	0.4
506	50,604	10,020	11,503	134	1,241	8.1	106 / 28	145 / 29	641.1	641.7	641.1	641.4	0.3
508	50,814	4,435	4,961	180	1,957	2.3	63 / 117	79 / 129	643.6	644.5	643.6	644.1	0.5
512	51,218	4,435	4,961	184	1,576	2.8	126 / 58	150 / 82	643.8	644.7	643.8	644.3	0.5
516	51,614	4,435	4,961	92	762	5.8	43 / 49	61 / 69	643.9	644.8	643.9	644.4	0.5
520	51,952	4,435	4,961	141	1,119	4.0	101 / 40	130 / 67	645.2	646.0	645.2	645.7	0.5
525	52,453	4,435	4,961	62	348	12.7	31 / 31	36 / 33	647.3	647.9	647.3	647.3	0.0
526	52,605	4,435	4,961	96	436	10.2	41 / 55	42 / 73	650.7	651.5	650.7	650.7	0.0
528	52,762	4,435	4,961	127	884	5.0	80 / 47	82 / 48	654.0	654.6	654.0	653.9	0.0
531	53,051	4,435	4,961	82	641	6.9	44 / 37	63 / 48	655.4	656.0	655.4	655.6	0.2
531	53,112	4,435	4,961	84	602	7.4	54 / 29	83 / 38	655.5	656.1	655.5	655.7	0.2
536	53,634	4,435	4,961	245	1,619	2.7	217 / 28	287 / 72	658.7	659.8	658.7	659.1	0.4
538	53,812	4,340	4,864	282	1,713	2.5	244 / 38	279 / 81	658.9	660.0	658.9	659.4	0.5
540	54,033	4,340	4,864	98	818	5.3	64 / 33	114 / 47	659.2	660.2	659.2	659.7	0.4
543	54,304	4,340	4,864	81	555	7.8	26 / 55	40 / 72	659.5	660.4	659.5	659.9	0.4
546	54,608	4,340	4,864	122	998	4.4	87 / 35	117 / 59	661.9	662.6	661.9	662.3	0.4
549	54,900	4,340	4,864	193	1,218	3.6	70 / 123	78 / 162	662.6	663.3	662.6	663.0	0.4
556	55,563	4,340	4,864	298	1,783	2.4	34 / 264	74 / 306	664.9	665.4	664.9	665.4	0.5
561	56,051	4,340	4,864	164	944	4.6	29 / 135	79 / 161	666.1	666.6	666.1	666.6	0.5
565	56,535	4,340	4,864	71	579	7.5	21 / 50	64 / 69	668.0	668.5	668.0	668.5	0.5
568	56,761	4,340	4,864	41	349	12.4	21 / 21	23 / 36	668.8	669.1	668.8	669.2	0.4
570	56,989	4,340	4,864	55	396	11.0	35 / 21	49 / 29	671.2	672.1	671.2	671.5	0.3
574	57,354	4,340	4,864	97	770	5.6	55 / 43	60 / 49	675.7	676.1	675.7	676.1	0.4
576	57,599	3,454	4,121	236	1,870	1.8	66 / 171	95 / 203	677.8	678.5	677.8	678.3	0.4
580	58,045	3,454	4,121	211	1,527	2.3	45 / 167	95 / 215	678.2	678.9	678.2	678.7	0.5
584	58,381	3,454	4,121	109	508	6.8	88 / 21	144 / 26	678.2	679.0	678.2	678.6	0.4
586	58,565	3,454	4,121	48	271	12.7	24 / 24	46 / 50	680.5	681.1	680.5	680.9	0.4
587	58,721	3,454	4,121	41	261	13.2	22 / 19	37 / 22	684.2	684.8	684.2	684.4	0.2
589	58,903	3,454	4,121	39	255	13.5	22 / 17	30 / 18	689.3	690.1	689.3	689.5	0.2
590	59,045	3454	4121	53	296	11.7	29 / 24	31 / 25	700.1	700.8	700.1	700.1	0.0
592	59,231	3454	4121	74	384	9.0	38 / 35	42 / 38	703.8	705.0	703.8	703.8	0.0
594	59,438	3454	4121	117	579	6.0	34 / 83	49 / 96	706.3	707.1	706.3	706.2	0.0

		1% Flood Discharges		Floodway			Non-Encroachment Offsets		Water Surface Elevation				
Cross Section	Distance (Feet Above Mouth)	Existing Land Use Conditions	Future Land Use Conditions	Width (Feet)	Section Area (Square Feet)	Mean Velocity (Feet Per Second)	Floodway	Community Encroachment Area	Regulatory	1% Annual Chance Future Water-Surface Elevation	Without Floodway	With Floodway	Increase
597	59,717	3454	4121	111	602	5.7	23 / 88	36 / 126	708.0	708.7	708.0	708.1	0.2
600	59,972	3,454	4,121	188	1,057	3.3	25 / 163	36 / 209	709.7	710.4	709.7	710.1	0.4
603	60,279	3,454	4,121	61	395	8.7	19 / 42	29 / 65	710.4	711.0	710.4	710.9	0.5
604	60,443	3,454	4,121	87	662	5.2	17 / 70	28 / 80	712.6	713.4	712.6	713.0	0.5
609	60,910	3,454	4,121	255	2,210	1.6	204 / 51	279 / 66	715.9	716.7	715.9	716.3	0.4
613	61,342	3,454	4,121	248	1,586	2.2	164 / 84	201 / 109	716.0	716.8	716.0	716.5	0.4
618	61,761	3,454	4,121	205	1,361	2.5	121 / 83	182 / 118	716.8	717.5	716.8	717.3	0.5
622	62,183	3,454	4,121	127	787	4.4	48 / 79	71 / 90	718.1	718.8	718.1	718.5	0.5
624	62,439	3,454	4,121	71	451	7.7	29 / 43	35 / 50	718.7	719.5	718.7	719.2	0.5
629	62,864	2,187	2,885	301	1,694	1.3	157 / 144	193 / 296	721.8	722.3	721.8	722.2	0.4
631	63,059	2,187	2,885	255	1,461	1.5	74 / 181	111 / 258	721.9	722.5	721.9	722.3	0.4
635	63,522	2,187	2,885	290	1,374	1.6	193 / 98	225 / 123	722.4	723.1	722.4	722.9	0.4
639	63,876	1,654	2,272	167	731	2.3	58 / 109	95 / 134	723.0	723.7	723.0	723.4	0.4
642	64,245	1,654	2,272	130	445	3.7	36 / 94	66 / 174	723.7	724.5	723.7	724.1	0.4
646	64,626	1,654	2,272	94	347	4.8	76 / 19	100 / 44	725.3	726.0	725.3	725.7	0.4
650	64,994	1,654	2,272	101	390	4.2	75 / 26	93 / 43	728.2	729.0	728.2	728.6	0.4
652	65,169	1,584	2,189	66	362	4.4	44 / 22	57 / 42	729.3	730.1	729.3	729.8	0.5
656	65,620	1,584	2,189	112	612	2.6	87 / 25	121 / 45	733.5	734.2	733.5	734.0	0.4
659	65,852	1,584	2,189	120	446	3.6	68 / 52	85 / 90	733.8	734.6	733.8	734.2	0.4
Mallard Creek Tributary													
1	112	1,247	1,489	132	474	2.6	116 / 16	221 / 35	675.7[1]	676.1[1]	672.5	672.9	0.4
4	369	1,247	1,489	95	344	3.6	32 / 63	62 / 95	675.7[1]	676.1[1]	673.5	673.9	0.4
6	582	1,247	1,489	71	289	4.3	17 / 54	26 / 92	675.7[1]	676.1[1]	674.5	674.9	0.4
8	795	1,247	1,489	40	268	4.7	20 / 20	20 / 20	675.7[1]	676.1[1]	675.4	675.9	0.5
10	960	1,203	1,435	52	160	7.5	15 / 37	43 / 63	675.9	676.3	675.9	675.9	0.0
14	1,366	1,203	1,435	106	431	2.8	87 / 19	115 / 19	680.1	680.8	680.1	680.6	0.4
16	1,569	1,203	1,435	71	362	3.3	27 / 45	44 / 70	680.5	681.1	680.5	680.9	0.4
17	1,744	1,203	1,435	35	188	6.4	17 / 17	17 / 17	680.6	681.1	680.6	681.1	0.5
19	1,916	1,203	1,435	38	203	5.9	19 / 19	19 / 19	681.7	682.2	681.7	682.0	0.3
22	2,160	1,203	1,435	40	169	7.1	24 / 17	56 / 18	683.0	683.6	683.0	683.1	0.1
24	2,365	1,203	1,435	88	434	2.8	16 / 72	16 / 93	684.5	685.0	684.5	685.0	0.5
26	2,582	1,203	1,435	91	360	3.3	73 / 18	95 / 39	685.1	685.6	685.1	685.6	0.5
McAlpine Creek													
122	12,200	2,603	3,090	305	3,214	4.0	45 / 260	65 / 315	524.2	524.9	524.2	524.7	0.5
131	13,137	2,343	2,830	285	3,362	3.8	25 / 260	32 / 289	525.8	526.5	525.8	526.3	0.5
143	14,300	2,343	2,830	390	4,569	2.8	175 / 215	193 / 247	527.0	527.7	527.0	527.5	0.5
157	15,700	2,193	2,652	385	4,884	2.6	210 / 175	246 / 195	528.2	528.9	528.2	528.7	0.5
169	16,900	2,193	2,652	365	4,722	2.7	160 / 205	185 / 225	529.4	530.1	529.4	529.9	0.5
179	17,887	2,193	2,652	360	4,879	2.6	260 / 100	290 / 103	530.4	530.9	530.4	530.9	0.5
190	19,040	1,070	1,250	340	4,992	2.6	185 / 155	211 / 188	531.7	532.4	531.7	532.2	0.5
199	19,933	917	1,059	315	4,721	2.7	30 / 285	33 / 303	532.6	533.3	532.6	533.1	0.5
220	22,000	917	1,059	855	12,486	1.0	825 / 30	831 / 55	533.9	534.7	533.9	534.4	0.5
242	24,230	917	1,059	700	9,134	1.1	515 / 185	541 / 231	534.3	535.1	534.3	534.8	0.5
263	26,300	917	1,059	960	11,943	0.9	840 / 120	927 / 126	534.9	535.7	534.9	535.4	0.5
277	27,700	683	764	980	11,904	0.9	620 / 360	683 / 423	535.1	536.0	535.1	535.6	0.5
290	29,000	683	764	665	7,541	1.4	365 / 300	417 / 370	535.4	536.3	535.4	535.9	0.5
300	30,000	12909	14370	540	6,242	1.7	360 / 180	395 / 190	535.8	536.6	535.8	536.3	0.5
312	31,246	12909	14370	505	5,413	1.9	145 / 360	170 / 410	536.7	537.6	536.7	537.2	0.5
325	32,500	12,909	14,370	780	9,172	1.1	275 / 505	330 / 520	537.1	538.0	537.1	537.6	0.5

		1% Flood Discharges		Floodway			Non-Encroachment Offsets		Water Surface Elevation				
Cross Section	Distance (Feet Above Mouth)	Existing Land Use Conditions	Future Land Use Conditions	Width (Feet)	Section Area (Square Feet)	Mean Velocity (Feet Per Second)	Floodway	Community Encroachment Area	Regulatory	1% Annual Chance Future Water-Surface Elevation	Without Floodway	With Floodway	Increase
338	33,800	12,909	14,370	935	9,624	1.1	540 / 395	625 / 400	537.5	538.4	537.5	538.0	0.5
351	35,100	12,909	14,370	515	5,445	1.9	260 / 255	336 / 318	537.9	538.8	537.9	538.4	0.5
367	36,700	12,909	14,370	490	4,868	2.1	240 / 250	260 / 269	538.7	539.6	538.7	539.2	0.5
386	38,600	12,909	14,370	430	4,542	2.3	150 / 280	235 / 315	539.9	540.8	539.9	540.4	0.5
397	39,738	12,909	14,370	395	4,307	2.4	55 / 340	85 / 390	540.4	541.3	540.4	540.9	0.5
414	41,400	12,909	14,370	690	7,445	1.4	320 / 370	360 / 420	541.4	542.3	541.4	541.9	0.5
426	42,600	10,433	11,879	870	10,285	1.0	270 / 600	500 / 665	542.8	543.9	542.8	543.2	0.4
440	44,000	10,433	11,879	675	7,648	1.4	310 / 365	370 / 405	543.0	544.1	543.0	543.5	0.5
455	45,500	10,433	11,879	1,105	9,121	1.1	905 / 200	970 / 250	543.5	544.6	543.5	544.0	0.4
468	46,800	10433	11879	645	5,486	1.9	330 / 315	400 / 360	543.8	544.9	543.8	544.3	0.4
483	48,300	10433	11879	970	7,395	1.4	700 / 270	990 / 290	544.7	545.6	544.7	545.2	0.4
492	49,200	10433	11879	660	5,287	2.0	420 / 240	650 / 260	545.0	545.9	545.0	545.6	0.5
510	51,000	10433	11879	420	3,379	3.1	340 / 80	420 / 100	547.3	548.0	547.3	547.7	0.4
521	52,050	10433	11879	480	3,698	2.8	40 / 440	45 / 520	548.4	549.1	548.4	548.9	0.5
535	53,500	10433	11879	275	2,768	3.8	85 / 190	120 / 220	549.4	550.1	549.4	549.9	0.5
550	54,985	10,433	11,879	235	2,286	4.6	165 / 70	190 / 85	550.9	551.6	550.9	551.3	0.4
560	56,000	10,433	11,879	425	4,009	2.6	215 / 210	270 / 215	552.4	553.2	552.4	552.8	0.4
572	57,200	10,433	11,879	340	3,563	2.9	190 / 150	205 / 240	553.6	554.5	553.6	554.1	0.5
585	58,500	10,433	11,879	455	4,481	2.3	180 / 275	210 / 300	555.1	556.0	555.1	555.5	0.4
597	59,700	10,433	11,879	280	2,651	3.9	80 / 200	105 / 240	556.1	557.0	556.1	556.5	0.4
611	61,080	10,433	11,879	500	5,374	1.9	260 / 240	350 / 295	557.9	558.8	557.9	558.3	0.4
621	62,145	10,433	11,879	415	4,147	2.5	265 / 150	310 / 205	558.6	559.5	558.6	559.1	0.5
633	63,279	10433	11879	180	2,116	4.9	50 / 130	70 / 180	559.8	560.7	559.8	560.2	0.4
645	64,506	10,433	11,879	645	6,239	1.7	205 / 440	300 / 480	561.6	562.5	561.6	562.1	0.5
658	65,800	10,433	11,879	265	2,739	3.8	125 / 140	170 / 185	562.5	563.5	562.5	563.0	0.5
667	66,650	10,433	11,879	420	4,001	2.6	100 / 320	199 / 410	563.4	564.3	563.4	563.9	0.5
680	68,000	10,433	11,879	199	1,870	5.6	160 / 39	505 / 45	564.9	565.8	564.9	565.4	0.5
692	69,200	10,433	11,879	430	5,044	2.1	180 / 250	270 / 300	566.9	567.5	566.9	567.4	0.5
705	70,500	10,433	11,879	260	3,434	3.0	120 / 140	123 / 156	569.5	570.2	569.5	570.0	0.5
718	71,760	10,433	11,879	400	4,295	2.4	160 / 240	230 / 349	570.2	571.2	570.2	570.7	0.5
732	73,200	10,433	11,879	995	12,067	0.9	660 / 335	675 / 400	571.0	571.9	571.0	571.5	0.5
744	74,400	10,433	11,879	405	4,864	2.2	215 / 190	260 / 220	571.3	572.2	571.3	571.8	0.5
762	76,200	10,433	11,879	670	8,189	1.3	500 / 170	825 / 215	574.0	574.4	574.0	574.4	0.4
780	78,000	10,433	11,879	1,260	13,072	0.8	610 / 650	680 / 670	574.2	574.6	574.2	574.7	0.5
792	79,175	10,433	11,879	1,325	11,795	0.9	455 / 870	560 / 935	574.4	574.9	574.4	574.9	0.5
805	80,500	10,433	11,879	800	6,140	1.7	250 / 550	320 / 610	574.8	575.3	574.8	575.3	0.5
817	81,700	10,433	11,879	625	5,093	2.0	315 / 310	364 / 395	576.1	576.6	576.1	576.6	0.5
829	82,900	10,433	11,879	435	3,360	3.1	225 / 210	270 / 260	577.2	577.8	577.2	577.7	0.5
843	84,300	10,433	11,879	290	4,187	2.5	180 / 110	215 / 190	581.0	583.0	581.0	581.3	0.3
853	85,300	10,433	11,879	762	6,337	0.8	730 / 32	1190 / 37	582.4	584.3	582.4	582.8	0.4
865	86,500	10,433	11,879	580	4,606	1.1	340 / 240	500 / 275	582.5	584.4	582.5	582.9	0.4
878	87,828	10,433	11,879	395	2,193	2.4	225 / 170	275 / 300	582.7	584.5	582.7	583.2	0.5
886	88,600	10,433	11,879	150	855	6.0	100 / 50	200 / 100	583.3	584.8	583.3	583.6	0.3
902	90,150	10433	11879	220	1,516	3.4	30 / 190	30 / 260	588.6	589.5	588.6	588.7	0.1
913	91,300	10433	11879	55	423	6.7	20 / 35	75 / 115	594.2	595.0	594.2	594.4	0.2
925	92,460	10433	11879	50	359	7.9	25 / 25	30 / 260	598.4	598.9	598.4	598.9	0.5
937	93,700	10433	11879	310	1,233	2.3	200 / 110	275 / 235	601.9	602.4	601.9	602.4	0.5
949	94,900	10433	11879	250	937	3.0	210 / 40	295 / 120	604.9	605.4	604.9	605.3	0.5
963	96,300	10,433	11,879	160	783	3.6	130 / 30	285 / 95	609.1	609.5	609.1	609.5	0.4

		1% Flood Discharges		Floodway			Non-Encroachment Offsets		Water Surface Elevation				
Cross Section	Distance (Feet Above Mouth)	Existing Land Use Conditions	Future Land Use Conditions	Width (Feet)	Section Area (Square Feet)	Mean Velocity (Feet Per Second)	Floodway	Community Encroachment Area	Regulatory	1% Annual Chance Future Water-Surface Elevation	Without Floodway	With Floodway	Increase
975	97,500	10,433	11,879	65	385	7.3	30 / 35	35 / 100	614.8	615.2	614.8	615.3	0.5
988	98,800	10,433	11,879	50	341	7.6	24 / 26	25 / 29	620.8	621.3	620.8	621.1	0.4
998	99,800	10,433	11,879	48	291	8.9	18 / 30	20 / 35	628.1	628.8	628.1	628.2	0.0
1010	101,000	5,172	5,922	82	525	5.0	55 / 27	60 / 210	635.1	635.6	635.1	635.5	0.4
1027	102,744	5,172	5,922	125	481	4.9	15 / 110	15 / 185	643.8	644.4	643.8	644.3	0.5
1040	103,984	5,172	5,922	95	395	5.9	65 / 30	150 / 45	650.1	650.6	650.1	650.4	0.4
1056	105,575	5,172	5,922	145	612	3.6	30 / 115	60 / 160	655.6	656.2	655.6	656.0	0.4
1068	106,800	5,172	5,922	105	482	4.6	30 / 75	35 / 130	660.0	660.6	660.0	660.4	0.4
1077	107,700	2,820	3,303	50	392	5.6	27 / 23	55 / 25	663.3	664.3	663.3	663.7	0.4
1091	109,055	2,820	3,303	70	181	5.9	40 / 30	55 / 110	668.4	668.5	668.4	668.8	0.5
1100	110,000	2,820	3,303	49	228	4.0	23 / 26	23 / 65	673.8	674.3	673.8	674.2	0.3
1111	111,100	2,820	3,303	235	1,109	0.8	150 / 85	180 / 95	681.8	682.0	681.8	682.2	0.4
1122	112,200	2,820	3,303	135	400	2.3	120 / 15	190 / 15	683.1	683.3	683.1	683.5	0.4
1135	113,500	2,820	3,303	90	292	3.1	65 / 25	115 / 60	687.7	687.9	687.7	688.2	0.5
1147	114,700	2,603	3,090	413	1,871	0.4	198 / 215	198 / 215	701.0	701.1	701.0	701.0	0.0
1163	116,349	2,603	3,090	44	86	8.0	15 / 29	15 / 29	700.9	701.1	700.9	700.9	0.0
McAlpine Creek Tributary 1													
8	775	2,679	2,792	310	1,320	2.0	154 / 157	195 / 190	537.1[1]	538.4[1]	531.3	531.8	0.5
17	1,675	1,666	1,740	179	546	3.1	85 / 94	100 / 130	537.1[1]	538.4[1]	533.0	533.3	0.2
27	2,675	1,396	1,457	105	344	4.0	40 / 65	70 / 95	537.1[1]	538.4[1]	536.2	536.7	0.5
38	3,766	1,198	1,250	69	376	3.2	55 / 14	100 / 45	541.8	541.9	541.8	542.1	0.2
48	4,816	1,198	1,250	31	190	6.3	15 / 16	17 / 22	544.6	545.0	544.6	545.2	0.6
59	5,911	1,198	1,250	21	162	7.4	11 / 10	35 / 55	550.3	550.5	550.3	550.8	0.4
67	6,675	1,198	1,250	27	179	6.7	20 / 7	30 / 20	554.7	554.8	554.7	555.1	0.4
McAlpine Creek Tributary 1A													
7	688	1,049	1,079	25	141	7.4	11 / 13	14 / 17	537.1[1]	538.4[1]	531.8	532.2	0.4
20	1,988	1,067	1,101	66	314	3.4	55 / 11	65 / 11	539.6	539.8	539.6	539.6	0.0
30	2,988	1,067	1,101	29	146	7.3	10 / 19	27 / 45	545.1	545.2	545.1	545.2	0.2
38	3,788	1,067	1,101	36	183	5.8	16 / 20	16 / 23	553.1	553.1	553.1	553.1	0.0
49	4,888	1,067	1,101	34	193	5.5	21 / 14	21 / 20	559.9	560.0	559.9	560.5	0.5
58	5,804	837	868	19	95	8.8	7 / 12	20 / 15	567.3	567.4	567.3	567.5	0.2
McAlpine Creek Tributary 3													
1	85	1,466	1,520	38	165	8.9	28 / 10	28 / 11	561.7[1]	562.7[1]	551.6	551.7	0.1
10	1,047	1,466	1,520	85	457	3.2	30 / 55	50 / 100	561.7[1]	562.7[1]	559.4	559.5	0.2
20	2,035	1,466	1,520	26	213	6.9	11 / 14	14 / 17	561.7[1]	562.7[1]	561.0	561.4	0.5
30	2,985	1,433	1,490	24	177	8.7	9 / 15	22 / 22	566.5	566.6	566.5	566.9	0.4
40	3,985	1,072	1,122	50	379	2.8	15 / 35	22 / 45	574.4	574.5	574.4	574.9	0.5
48	4,785	1,072	1,122	24	151	7.1	12 / 12	17 / 18	579.5	579.7	579.5	580.1	0.5
57	5,685	1,072	1,122	49	367	2.9	40 / 9	45 / 13	591.1	591.2	591.1	591.6	0.5
65	6,485	782	826	80	296	2.6	35 / 45	85 / 80	593.7	594.0	593.7	594.2	0.5
McAlpine Creek Tributary 6													
2	190	1,276	1,502	43	236	5.4	23 / 20	90 / 50	664.4	664.8	664.4	664.8	0.4
11	1,139	1276	1502	30	167	7.7	23 / 7	23 / 30	670.2	670.7	670.2	670.5	0.3
24	2,436	1075	1260	28	168	6.4	17 / 11	25 / 90	679.9	680.2	679.9	680.3	0.4
33	3,315	1075	1260	104	312	3.4	67 / 37	100 / 45	684.6	686.0	684.6	684.9	0.3
44	4,417	1,075	1,260	27	183	5.9	13 / 14	20 / 30	690.2	690.7	690.2	690.6	0.4
56	5,577	309	344	19	55	5.6	10 / 11	10 / 11	696.5	696.8	696.5	696.9	0.4
McCullough Branch													
24	2,430	1,379	1,567	165	426	3.2	150 / 15	303 / 15	541.4[1]	542.3[1]	535.4	535.8	0.5

		1% Flood Discharges		Floodway			Non-Encroachment Offsets		Water Surface Elevation				
Cross Section	Distance (Feet Above Mouth)	Existing Land Use Conditions	Future Land Use Conditions	Width (Feet)	Section Area (Square Feet)	Mean Velocity (Feet Per Second)	Floodway	Community Encroachment Area	Regulatory	1% Annual Chance Future Water-Surface Elevation	Without Floodway	With Floodway	Increase
38	3,805	1,348	1,543	49	188	7.2	34 / 15	34 / 46	541.8	542.3[1]	541.8	542.3	0.5
49	4,855	1,348	1,543	100	355	3.8	60 / 40	105 / 76	549.3	549.7	549.3	549.7	0.4
57	5,700	1,348	1,543	40	203	6.6	15 / 25	35 / 55	552.6	553.0	552.6	553.0	0.5
65	6,500	1,348	1,543	28	153	8.8	13 / 14	22 / 14	555.6	555.9	555.6	555.9	0.3
75	7,545	1,220	1,398	175	257	4.8	146 / 28	214 / 62	571.5	571.6	571.5	572.0	0.5
McDowell Creek													
6	644	7,765	8,457	240	2,093	3.7	91 / 149	131 / 154	655.0[1]	656.5[1]	650.5	651.0	0.5
14	1,404	7,765	8,457	428	3,470	2.2	56 / 372	56 / 420	655.0[1]	656.5[1]	651.8	652.3	0.5
23	2,301	7,765	8,457	221	2,026	3.8	102 / 119	132 / 134	655.0[1]	656.5[1]	652.4	652.9	0.5
29	2,873	7,765	8,457	99	1,326	5.9	51 / 48	51 / 48	657.1	657.4	657.1	657.1	0.0
35	3,455	7,765	8,457	399	5,274	1.5	29 / 370	52 / 397	658.3	658.7	658.3	658.4	0.1
43	4,328	7,765	8,457	300	3,233	2.4	230 / 69	267 / 88	658.6	659.1	658.6	658.8	0.2
51	5,140	7765	8457	152	1,912	4.1	57 / 95	66 / 103	659.0	659.4	659.0	659.2	0.2
57	5,657	7765	8457	614	8,201	0.9	132 / 482	166 / 509	659.7	660.2	659.7	660.0	0.3
66	6,592	7,765	8,457	271	3,140	2.5	207 / 64	249 / 84	659.9	660.4	659.9	660.1	0.3
75	7,463	7,765	8,457	246	2,959	2.6	125 / 121	186 / 135	660.4	661.0	660.4	660.7	0.3
82	8,211	7,765	8,457	253	3,079	2.5	170 / 84	198 / 252	661.3	661.8	661.3	661.7	0.4
90	9,024	7,765	8,457	541	6,549	1.2	174 / 367	202 / 393	662.1	662.6	662.1	662.5	0.4
99	9,949	7,765	8,457	878	9,867	0.8	553 / 324	650 / 359	662.2	662.8	662.2	662.7	0.4
107	10,670	7,765	8,457	448	3,624	2.1	363 / 85	448 / 153	662.4	662.9	662.4	662.8	0.4
113	11,346	7765	8457	290	3,647	2.1	85 / 205	104 / 228	665.2	665.9	665.2	665.5	0.2
121	12,114	7603	8283	595	7,320	1.0	184 / 411	256 / 552	665.5	666.2	665.5	665.8	0.3
126	12,620	7,603	8,283	419	4,654	1.6	66 / 353	89 / 409	665.6	666.3	665.6	665.9	0.3
131	13,075	8,223	8,959	1,260	13,738	0.6	163 / 1097	274 / 1257	665.8	666.4	665.8	666.1	0.3
136	13,554	8,223	8,959	1,262	14,397	0.6	319 / 943	357 / 1026	665.8	666.4	665.8	666.1	0.3
141	14,099	8,223	8,959	1,296	14,435	0.6	548 / 748	607 / 848	665.8	666.5	665.8	666.1	0.3
146	14,566	8,223	8,959	1,245	13,891	0.6	593 / 651	659 / 719	665.8	666.5	665.8	666.2	0.3
151	15,097	8223	8959	1,379	14,086	0.6	928 / 451	1019 / 571	665.9	666.5	665.9	666.2	0.3
159	15,868	8223	8959	1,105	9,662	0.9	308 / 797	367 / 911	666.0	666.6	666.0	666.4	0.3
168	16,805	8,223	8,959	760	6,096	1.3	288 / 472	306 / 494	666.2	666.8	666.2	666.5	0.4
176	17,579	8,223	8,959	627	4,690	1.8	512 / 115	548 / 157	666.5	667.1	666.5	666.8	0.4
185	18,509	8,223	8,959	670	4,603	1.8	307 / 363	428 / 428	667.5	668.0	667.5	667.9	0.4
194	19,418	8,223	8,959	532	3,631	2.3	198 / 333	246 / 383	668.4	668.9	668.4	668.9	0.4
201	20,057	8,223	8,959	327	2,281	3.6	149 / 178	195 / 198	670.0	670.4	670.0	670.6	0.5
210	20,998	8,223	8,959	509	3,672	2.2	200 / 308	286 / 336	671.1	671.5	671.1	671.6	0.5
216	21,564	8,223	8,959	251	1,874	4.4	28 / 222	41 / 249	671.6	672.0	671.6	672.1	0.5
225	22,474	8223	8959	220	2,111	3.9	73 / 147	86 / 160	674.1	674.5	674.1	674.5	0.4
230	22,950	4892	4965	1,032	9,786	0.5	835 / 197	896 / 235	675.0	675.4	675.0	675.4	0.4
237	23,704	4892	4965	623	6,279	0.8	28 / 595	28 / 620	675.7	676.1	675.7	676.1	0.4
244	24,373	4892	4965	818	7,526	0.6	370 / 448	433 / 523	675.8	676.1	675.8	676.2	0.4
252	25,168	4892	4965	687	5,423	0.9	411 / 276	461 / 381	675.9	676.2	675.9	676.3	0.4
261	26,114	4892	4965	402	2,694	1.8	192 / 210	227 / 251	676.2	676.5	676.2	676.6	0.4
270	27,049	4892	4965	328	1,868	2.6	112 / 216	198 / 251	676.9	677.1	676.9	677.3	0.4
275	27,548	4892	4965	386	2,052	2.4	207 / 178	256 / 224	677.4	677.6	677.4	677.8	0.4
284	28,411	4892	4965	544	2,383	2.1	255 / 290	363 / 335	678.3	678.4	678.3	678.8	0.5
289	28,897	4892	4965	560	2,226	2.2	300 / 260	372 / 314	679.0	679.1	679.0	679.5	0.5
297	29,744	4892	4965	605	2,512	1.9	137 / 481	283 / 572	680.7	680.8	680.7	681.2	0.5
306	30,628	4534	4597	351	1,432	3.2	157 / 203	222 / 276	682.6	682.6	682.6	683.1	0.5
314	31,403	4534	4597	412	2,081	2.2	105 / 307	151 / 334	685.1	685.2	685.1	685.6	0.5

		1% Flood Discharges		Floodway			Non-Encroachment Offsets		Water Surface Elevation				
Cross Section	Distance (Feet Above Mouth)	Existing Land Use Conditions	Future Land Use Conditions	Width (Feet)	Section Area (Square Feet)	Mean Velocity (Feet Per Second)	Floodway	Community Encroachment Area	Regulatory	1% Annual Chance Future Water-Surface Elevation	Without Floodway	With Floodway	Increase
319	31,900	4534	4597	141	710	6.4	80 / 61	103 / 105	685.8	685.8	685.8	686.1	0.4
328	32,833	4534	4597	325	1,823	2.5	304 / 22	322 / 74	688.5	688.6	688.5	689.0	0.5
333	33,345	4534	4597	166	744	6.1	75 / 90	214 / 167	688.9	689.0	688.9	689.4	0.5
341	34,079	4534	4597	225	1,361	3.3	75 / 150	125 / 173	691.0	691.1	691.0	691.5	0.4
346	34,587	4534	4597	286	1,087	4.2	224 / 62	246 / 79	692.2	692.3	692.2	692.7	0.5
353	35,325	4534	4597	105	807	5.6	78 / 27	97 / 277	693.3	693.3	693.3	693.7	0.5
358	35,789	4534	4597	307	1,126	4.0	269 / 38	341 / 57	694.2	694.3	694.2	694.7	0.5
367	36,688	4534	4597	62	574	7.9	37 / 25	53 / 39	696.4	696.4	696.4	696.7	0.4
372	37,160	4534	4597	137	1,033	4.4	28 / 109	46 / 142	698.1	698.2	698.1	698.6	0.4
378	37,826	4534	4597	230	1,508	3.0	91 / 139	180 / 164	699.4	699.4	699.4	699.8	0.5
384	38,426	4534	4597	499	3,096	1.5	209 / 290	286 / 322	701.0	701.1	701.0	701.5	0.4
393	39,286	2783	2812	237	1,533	1.8	203 / 34	213 / 53	703.4	703.4	703.4	703.5	0.2
402	40,191	2453	2479	199	909	2.7	183 / 16	245 / 45	704.5	704.6	704.5	704.7	0.2
411	41,107	2453	2479	260	1,020	2.4	213 / 47	251 / 94	706.1	706.2	706.1	706.6	0.4
416	41,598	2453	2479	185	673	3.6	82 / 103	147 / 103	707.3	707.4	707.3	707.8	0.5
424	42,383	2453	2479	84	431	5.7	18 / 66	20 / 93	710.1	710.2	710.1	710.5	0.4
426	42,624	2453	2479	339	1,663	1.5	233 / 105	261 / 128	711.3	711.4	711.3	711.8	0.5
429	42,942	2453	2479	290	1,202	2.0	194 / 96	223 / 118	711.8	711.8	711.8	712.2	0.5
438	43,840	2453	2479	115	568	4.3	31 / 84	55 / 105	714.3	714.3	714.3	714.8	0.5
444	44,352	2453	2479	200	908	2.7	35 / 164	48 / 198	715.9	716.0	715.9	716.5	0.5
452	45,217	2453	2479	195	833	2.9	126 / 69	158 / 103	718.9	718.9	718.9	719.3	0.4
460	46,048	2453	2479	165	752	3.3	49 / 116	69 / 138	721.8	721.9	721.8	722.3	0.5
466	46,595	2330	2355	246	3,015	0.8	44 / 202	54 / 206	731.4	731.6	731.4	731.9	0.5
475	47,509	1059	1075	183	1,626	0.7	38 / 145	59 / 151	731.6	731.8	731.6	732.1	0.5
483	48,257	1,059	1,075	239	2,978	0.4	77 / 162	85 / 172	738.4	738.8	738.4	738.9	0.5
491	49,064	1,059	1,075	28	397	2.7	14 / 14	14 / 14	738.4	738.8	738.4	738.9	0.5
496	49,607	1,059	1,075	261	2,767	0.4	100 / 161	118 / 184	742.5	743.0	742.5	743.0	0.5
McDowell Creek Tributary 1													
5	459	1,108	1,331	110	317	3.5	86 / 24	123 / 69	665.2[1]	665.9[1]	656.6	657.1	0.5
11	1,075	1,108	1,331	169	755	1.5	38 / 132	55 / 152	665.2[1]	665.9[1]	659.5	659.9	0.4
19	1,933	1,108	1,331	137	362	3.1	15 / 122	42 / 157	665.2[1]	665.9[1]	661.6	662.0	0.4
28	2,823	1,108	1,331	79	278	4.0	59 / 20	86 / 32	665.9	666.3	665.9	666.4	0.5
34	3,449	1,108	1,331	82	279	4.0	13 / 69	18 / 97	668.6	669.2	668.6	669.0	0.3
42	4,219	1,108	1,331	101	314	3.5	17 / 84	30 / 168	671.5	671.9	671.5	672.0	0.5
McDowell Creek Tributary 2													
7	689	1,098	1,234	185	287	3.8	167 / 18	375 / 58	665.8[1]	666.4[1]	657.3	657.6	0.3
15	1,527	1,098	1,234	75	196	5.6	42 / 32	136 / 32	665.8[1]	666.4[1]	662.1	662.5	0.4
22	2,212	1,000	1,143	62	219	4.6	37 / 24	113 / 24	666.1	666.4	666.1	666.5	0.4
30	2,953	1,000	1,143	41	292	3.4	21 / 21	21 / 21	668.5	668.9	668.5	668.9	0.4
McIntyre Creek													
6	621	2,036	2,413	177	497	4.1	23 / 154	23 / 186	663.6[1]	664.1[1]	661.4	661.7	0.3
11	1,110	2,036	2,413	78	447	4.6	36 / 42	50 / 50	664.4	665.0	664.4	664.7	0.3
15	1,533	2,036	2,413	197	882	2.3	126 / 71	169 / 102	665.4	665.9	665.4	665.9	0.5
21	2,138	2,036	2,413	141	566	3.6	90 / 51	118 / 82	667.0	667.4	667.0	667.5	0.4
29	2,859	2,036	2,413	95	435	4.7	61 / 34	118 / 89	669.2	669.6	669.2	669.6	0.4
37	3,743	2,036	2,413	52	295	6.9	26 / 26	26 / 109	671.6	672.0	671.6	671.9	0.4
44	4,408	2,036	2,413	162	731	2.8	76 / 86	109 / 117	674.8	675.3	674.8	675.2	0.4
53	5,286	2,036	2,413	324	1,433	1.4	226 / 98	273 / 145	677.9	678.4	677.9	678.4	0.5
60	6,012	2,036	2,413	135	634	3.2	66 / 68	119 / 98	680.0	680.5	680.0	680.5	0.5

		1% Flood Discharges		Floodway			Non-Encroachment Offsets		Water Surface Elevation				
Cross Section	Distance (Feet Above Mouth)	Existing Land Use Conditions	Future Land Use Conditions	Width (Feet)	Section Area (Square Feet)	Mean Velocity (Feet Per Second)	Floodway	Community Encroachment Area	Regulatory	1% Annual Chance Future Water-Surface Elevation	Without Floodway	With Floodway	Increase
65	6,474	2,036	2,413	212	823	2.5	111 / 101	146 / 145	681.3	681.7	681.3	681.7	0.5
72	7,236	2,036	2,413	48	319	6.4	24 / 24	64 / 36	683.3	683.7	683.3	683.7	0.4
79	7,893	2,036	2,413	126	587	3.5	26 / 100	26 / 133	686.8	687.3	686.8	687.3	0.5
87	8,689	1867	2181	166	777	2.4	49 / 117	78 / 142	688.7	689.2	688.7	689.2	0.5
95	9,498	1867	2181	130	541	3.4	33 / 97	75 / 129	690.7	691.1	690.7	691.2	0.5
102	10,192	1867	2181	73	297	6.3	57 / 16	78 / 30	694.7	695.0	694.7	695.1	0.4
111	11,094	1867	2181	158	635	2.9	140 / 18	168 / 49	704.0	704.5	704.0	704.2	0.2
119	11,918	1,867	2,181	153	632	3.0	134 / 19	167 / 35	707.1	707.5	707.1	707.5	0.4
128	12,774	1,867	2,181	156	580	3.2	72 / 84	120 / 114	709.0	709.4	709.0	709.4	0.5
134	13,443	1,867	2,181	118	519	3.6	92 / 26	181 / 36	710.9	711.3	710.9	711.4	0.5
142	14,207	1,867	2,181	274	597	3.1	115 / 159	175 / 217	712.4	712.8	712.4	712.9	0.5
150	15,020	1,867	2,181	171	521	3.6	115 / 56	170 / 111	715.1	715.4	715.1	715.5	0.4
158	15,792	1,867	2,181	178	542	3.4	56 / 121	141 / 151	717.8	718.1	717.8	718.3	0.5
165	16,453	1,602	1,857	95	367	4.4	69 / 26	95 / 37	720.0	720.3	720.0	720.5	0.4
172	17,239	1,602	1,857	136	552	2.9	113 / 23	152 / 35	723.1	723.4	723.1	723.6	0.4
177	17,702	1,602	1,857	198	716	2.2	147 / 51	185 / 82	724.5	724.8	724.5	725.0	0.5
186	18,573	1,602	1,857	154	433	3.7	135 / 19	304 / 21	726.1	726.4	726.1	726.5	0.4
195	19,547	1,549	1,758	49	216	7.2	24 / 25	31 / 73	729.7	729.9	729.7	730.0	0.3
202	20,170	1,549	1,758	205	1,116	1.4	97 / 108	109 / 127	733.6	733.9	733.6	734.1	0.5
210	20,981	1,549	1,758	250	810	1.9	129 / 121	158 / 154	734.6	734.8	734.6	735.0	0.5
217	21,708	985	1,116	130	430	2.3	115 / 15	163 / 15	737.3	737.5	737.3	737.7	0.4
225	22,473	985	1,116	102	558	1.8	84 / 19	149 / 21	742.8	743.1	742.8	743.2	0.4
229	22,933	985	1,116	112	511	1.9	19 / 92	34 / 127	743.3	743.5	743.3	743.7	0.4
McKee Creek													
0	4	2,665	3,460	113	605	4.4	88 / 25	190 / 35	602.2	603.0	602.2	602.6	0.4
7	694	2,665	3,460	75	470	5.7	30 / 45	50 / 85	604.3	605.1	604.3	604.7	0.4
14	1,400	2,665	3,460	200	889	3.0	170 / 30	245 / 75	606.0	607.0	606.0	606.5	0.4
23	2,289	2,665	3,460	232	1,505	1.8	29 / 203	55 / 230	609.7	610.8	609.7	610.2	0.5
35	3,485	2,665	3,460	217	894	3.0	26 / 191	36 / 260	611.4	612.3	611.4	611.8	0.4
47	4,691	2,665	3,460	264	1,144	2.3	153 / 111	188 / 148	614.2	615.0	614.2	614.6	0.4
57	5,679	2,068	2,752	120	460	4.5	39 / 81	95 / 155	616.7	617.5	616.7	617.1	0.4
68	6,768	2,068	2,752	280	890	2.3	30 / 250	35 / 335	620.5	621.3	620.5	621.0	0.5
78	7,750	1,628	1,975	198	729	2.2	35 / 163	35 / 220	623.1	624.5	623.1	623.5	0.4
86	8,560	1,628	1,975	143	470	3.5	33 / 110	33 / 240	624.2	625.0	624.2	624.6	0.4
97	9,703	1,628	1,975	68	239	6.8	18 / 50	35 / 260	628.0	628.6	628.0	628.4	0.4
105	10,503	1,191	1,519	33	149	8.0	18 / 15	170 / 36	630.7	632.0	630.7	631.1	0.4
114	11,434	1,061	1,372	33	175	6.1	15 / 18	100 / 35	634.8	635.3	634.8	635.3	0.5
123	12,275	1,061	1,372	93	319	3.3	73 / 20	190 / 24	638.7	639.2	638.7	639.0	0.2
133	13,344	990	1,303	27	142	7.0	15 / 12	70 / 23	643.3	644.1	643.3	643.5	0.2
140	13,975	990	1,303	125	383	2.6	25 / 100	30 / 115	647.7	648.0	647.7	648.0	0.3
147	14,737	848	1,147	145	287	3.0	95 / 50	130 / 100	650.0	650.2	650.0	650.5	0.5
157	15,664	848	1,147	182	573	1.5	57 / 125	80 / 155	656.1	656.6	656.1	656.6	0.5
165	16,457	644	896	72	156	4.1	32 / 40	85 / 100	660.6	661.8	660.6	661.1	0.4
McMullen Creek													
4	368	5,340	5,566	290	1,574	3.4	195 / 95	216 / 122	534.1[1]	534.9[1]	525.7	526.1	0.4
21	2,100	5,340	5,566	606	5,023	1.1	195 / 411	220 / 411	534.1[1]	534.9[1]	531.5	532.0	0.4
34	3,400	5,340	5,566	450	3,422	1.6	216 / 234	277 / 261	534.1[1]	534.9[1]	532.1	532.6	0.4
47	4,700	5,340	5,566	402	2,861	1.9	230 / 173	262 / 210	534.1[1]	534.9[1]	532.8	533.2	0.4
58	5,768	5,340	5,566	532	3,594	1.5	279 / 253	332 / 290	534.1[1]	534.9[1]	533.4	533.9	0.5

		1% Flood Discharges		Floodway			Non-Encroachment Offsets		Water Surface Elevation				
Cross Section	Distance (Feet Above Mouth)	Existing Land Use Conditions	Future Land Use Conditions	Width (Feet)	Section Area (Square Feet)	Mean Velocity (Feet Per Second)	Floodway	Community Encroachment Area	Regulatory	1% Annual Chance Future Water-Surface Elevation	Without Floodway	With Floodway	Increase
69	6,900	5,340	5,566	253	1,679	3.2	98 / 155	125 / 175	534.4	534.9[1]	534.4	534.8	0.5
77	7,700	5,340	5,566	228	1,669	3.2	58 / 170	91 / 184	535.8	536.0	535.8	536.3	0.5
85	8,500	5,340	5,566	152	1,221	4.4	44 / 107	57 / 120	537.4	537.5	537.4	537.9	0.5
94	9,400	5,340	5,566	110	1,213	4.4	25 / 85	28 / 112	540.6	541.0	540.6	541.0	0.5
104	10,428	5,145	5,379	155	1,637	3.1	85 / 70	104 / 103	543.6	543.6	543.6	543.8	0.2
116	11,600	5,145	5,379	210	2,112	2.4	60 / 150	73 / 193	544.2	544.3	544.2	544.6	0.4
129	12,900	5,145	5,379	460	3,684	1.4	300 / 160	402 / 210	544.9	545.0	544.9	545.4	0.5
140	14,000	5,145	5,379	574	3,906	1.3	431 / 142	479 / 196	545.3	545.4	545.3	545.8	0.5
152	15,182	5,145	5,379	446	2,636	2.0	296 / 150	341 / 182	546.3	546.4	546.3	546.8	0.5
164	16,443	5,145	5,379	126	707	7.3	26 / 100	36 / 144	548.2	548.3	548.2	548.6	0.5
176	17,620	5,145	5,379	120	1,001	5.1	85 / 36	136 / 46	551.2	551.4	551.2	551.7	0.5
185	18,500	4,836	5,122	83	795	6.1	33 / 50	43 / 57	552.8	553.1	552.8	553.3	0.5
194	19,374	4,836	5,122	135	942	5.1	33 / 102	80 / 139	555.0	555.3	555.0	555.5	0.5
206	20,600	4,836	5,122	325	1,916	2.5	265 / 60	360 / 118	557.0	557.3	557.0	557.5	0.5
214	21,415	4,836	5,122	287	1,588	3.1	237 / 49	300 / 116	559.3	559.5	559.3	559.7	0.5
225	22,456	4,836	5,122	220	1,282	3.8	50 / 170	63 / 199	561.4	561.7	561.4	561.9	0.4
235	23,530	4,836	5,122	228	1,387	3.5	91 / 137	150 / 162	564.0	564.2	564.0	564.4	0.5
250	25,000	4,836	5,122	190	1,909	2.5	80 / 110	90 / 210	571.6	572.0	571.6	571.9	0.4
261	26,055	4,836	5,122	150	1,300	3.7	60 / 90	80 / 105	572.0	572.4	572.0	572.4	0.4
271	27,100	4,656	4,944	104	954	4.9	70 / 34	100 / 39	573.3	573.7	573.3	573.7	0.4
280	28,000	4,656	4,944	235	1,508	3.1	190 / 45	305 / 65	575.0	575.4	575.0	575.4	0.4
292	29,228	4,656	4,944	410	2,254	2.1	35 / 375	36 / 485	577.7	578.1	577.7	578.1	0.5
305	30,457	4,656	4,944	285	1,443	3.2	35 / 250	78 / 262	580.4	580.6	580.4	581.0	0.5
317	31,660	4,656	4,944	222	1,592	2.9	132 / 90	159 / 107	584.9	585.2	584.9	585.3	0.4
326	32,600	4,656	4,944	103	800	5.8	23 / 80	33 / 93	586.8	587.0	586.8	587.1	0.4
340	33,950	4,519	4,805	90	876	5.2	49 / 40	100 / 50	594.6	595.1	594.6	594.8	0.2
349	34,932	4,519	4,805	145	937	4.8	120 / 25	200 / 32	601.2	601.6	601.2	601.4	0.2
358	35,800	4,519	4,805	85	717	6.3	40 / 45	56 / 47	603.8	604.1	603.8	604.3	0.5
365	36,450	4,519	4,805	103	916	4.9	83 / 20	99 / 24	606.4	606.9	606.4	606.8	0.4
375	37,500	4,519	4,805	110	920	4.9	50 / 60	75 / 120	611.5	612.4	611.5	612.0	0.5
385	38,500	4,519	4,805	76	577	7.8	21 / 55	25 / 63	613.1	613.7	613.1	613.8	0.7
394	39,383	4,519	4,805	114	804	5.6	24 / 90	38 / 110	618.2	618.6	618.2	618.6	0.4
405	40,500	4,330	4,621	333	1,795	2.4	307 / 26	367 / 101	624.5	625.0	624.5	624.9	0.4
417	41,700	4,330	4,621	258	1,344	3.2	193 / 65	304 / 74	625.9	626.3	625.9	626.4	0.5
427	42,700	4,235	4,514	106	651	6.5	16 / 90	40 / 115	629.7	629.9	629.7	630.2	0.5
439	43,900	4,235	4,514	142	1,024	4.1	65 / 77	75 / 97	635.7	636.1	635.7	636.2	0.5
450	45,000	3,964	4,215	228	1,710	2.3	79 / 149	116 / 175	638.5	638.7	638.5	639.0	0.4
463	46,250	3,964	4,215	174	790	5.0	132 / 42	168 / 48	640.6	640.8	640.6	641.0	0.4
475	47,473	3,729	3,972	231	1,784	2.1	16 / 215	20 / 280	649.6	650.3	649.6	649.9	0.2
485	48,500	3,729	3,972	205	1,417	2.6	115 / 90	139 / 112	653.4	653.7	653.4	653.9	0.5
495	49,471	3,729	3,972	281	1,573	2.4	254 / 27	283 / 57	654.9	655.1	654.9	655.3	0.5
505	50,500	3,729	3,972	270	1,622	2.3	186 / 84	220 / 133	658.8	659.0	658.8	659.3	0.5
512	51,247	3,729	3,972	133	774	4.8	93 / 40	114 / 51	660.8	661.0	660.8	661.2	0.4
526	52,600	3,729	3,972	226	1,362	2.7	172 / 54	196 / 75	665.3	665.5	665.3	665.7	0.4
538	53,850	1,958	2,102	65	336	5.8	35 / 30	49 / 66	667.9	668.1	667.9	668.3	0.4
548	54,753	1,958	2,102	85	385	5.1	20 / 65	20 / 95	671.7	671.9	671.7	672.1	0.4
559	55,900	1,958	2,102	88	393	5.0	30 / 58	50 / 85	676.5	676.7	676.5	677.0	0.5
573	57,300	1,958	2,102	96	415	4.7	22 / 74	38 / 142	684.0	684.1	684.0	684.5	0.5
McMullen Creek Tributary													

		1% Flood Discharges		Floodway			Non-Encroachment Offsets		Water Surface Elevation				
Cross Section	Distance (Feet Above Mouth)	Existing Land Use Conditions	Future Land Use Conditions	Width (Feet)	Section Area (Square Feet)	Mean Velocity (Feet Per Second)	Floodway	Community Encroachment Area	Regulatory	1% Annual Chance Future Water-Surface Elevation	Without Floodway	With Floodway	Increase
2	237	1870	2003	202	625	3.0	132 / 71	210 / 93	665.7[1]	666.0[1]	664.3	664.8	0.5
13	1,250	1646	1764	160	947	1.7	96 / 64	120 / 80	670.3	670.4	670.3	670.7	0.4
23	2,250	1564	1672	79	359	4.4	49 / 30	80 / 40	673.7	673.9	673.7	674.2	0.5
31	3,050	1564	1672	55	267	5.9	20 / 35	20 / 65	677.8	678.0	677.8	678.1	0.3
37	3,700	1412	1517	155	1,225	1.2	80 / 75	95 / 90	686.8	686.8	686.8	687.3	0.5
North Fork Crooked Creek													
0	0	1,007	1,182	80	286	3.9	20 / 60	20 / 155	675.6	675.9	675.8	676.0	0.2
14	1,424	1,007	1,182	140	294	3.4	90 / 50	110 / 50	682.9	683.2	682.9	683.3	0.4
23	2,324	1,007	1,182	70	468	2.2	40 / 30	80 / 70	690.4	691.4	690.3	690.4	0.0
North Fork Crooked Creek Tributary													
11	1,071	1,136	1,269	86	307	3.7	36 / 50	80 / 145	663.4	663.9	663.4	663.4	0.0
21	2,133	869	961	98	259	3.4	75 / 23	110 / 25	669.0	669.2	669.0	669.3	0.3
North Prong Clarke Creek													
2	229	2,056	2,069	460	940	2.2	344 / 142	344 / 279	635.6[1]	635.7[1]	633.3	633.5	0.1
4	426	2,056	2,069	443	963	2.1	335 / 140	340 / 260	635.6[1]	635.7[1]	633.9	634.1	0.2
9	874	2,056	2,069	272	735	2.8	81 / 204	118 / 258	635.9	635.9	635.9	636.2	0.3
12	1,190	2,056	2,069	287	878	2.3	167 / 120	243 / 153	636.9	636.9	636.9	637.3	0.4
15	1,505	2,056	2,069	327	886	2.3	212 / 119	285 / 154	637.7	637.7	637.7	638.1	0.4
19	1,947	2,056	2,069	202	488	4.2	78 / 124	152 / 166	639.2	639.2	639.2	639.5	0.4
21	2,106	2,056	2,069	239	730	2.8	182 / 57	241 / 99	640.2	640.2	640.2	640.7	0.5
26	2,644	2,056	2,069	185	693	3.0	59 / 126	86 / 172	642.3	642.3	642.3	642.7	0.4
30	3,009	2,056	2,069	250	961	2.1	232 / 18	289 / 18	643.7	643.8	643.7	644.2	0.5
33	3,268	2,056	2,069	189	759	2.7	121 / 68	145 / 91	644.5	644.5	644.5	645.0	0.4
36	3,578	2,056	2,069	255	1,070	1.9	93 / 162	136 / 211	645.5	645.6	645.5	646.0	0.5
38	3,840	2,056	2,069	289	1,288	1.6	24 / 265	88 / 287	646.1	646.1	646.1	646.6	0.5
41	4,066	1,960	1,975	240	980	2.0	18 / 222	18 / 320	646.5	646.5	646.5	647.0	0.5
43	4,299	1,960	1,975	315	1,031	1.9	16 / 299	16 / 363	646.9	646.9	646.9	647.4	0.5
46	4,626	1,960	1,975	196	631	3.1	17 / 179	17 / 225	647.6	647.6	647.6	648.1	0.4
50	4,956	1,960	1,975	39	283	6.9	19 / 19	22 / 51	648.8	648.8	648.8	649.2	0.4
53	5,300	1,960	1,975	192	1,611	1.2	149 / 43	175 / 68	656.2	656.3	656.2	656.5	0.3
56	5,646	1,960	1,975	190	1,469	1.3	57 / 133	133 / 156	656.3	656.4	656.3	656.6	0.3
59	5,930	1,960	1,975	273	1,897	1.0	192 / 81	216 / 103	656.4	656.6	656.4	656.8	0.4
62	6,234	1,960	1,975	327	1,988	1.0	69 / 258	101 / 297	656.6	656.7	656.6	656.9	0.4
65	6,474	1,960	1,975	399	2,237	0.9	54 / 345	102 / 409	656.7	656.8	656.7	657.1	0.4
68	6,794	1,960	1,975	340	1,760	1.1	17 / 323	34 / 376	656.9	657.0	656.9	657.3	0.4
70	7,041	1,960	1,975	282	1,405	1.3	27 / 255	39 / 301	657.2	657.3	657.2	657.6	0.4
73	7,308	1,960	1,975	169	631	3.1	17 / 162	17 / 272	657.7	657.7	657.7	658.0	0.3
77	7,688	1,960	1,975	257	1,000	2.0	44 / 213	70 / 251	659.6	659.6	659.6	660.1	0.5
80	7,997	1,737	1,774	156	654	2.7	22 / 134	22 / 188	660.4	660.4	660.4	660.8	0.4
85	8,467	1,737	1,774	271	1,072	1.6	210 / 61	246 / 90	661.5	661.6	661.5	662.0	0.5
88	8,838	1,737	1,774	359	950	1.8	20 / 339	157 / 463	662.1	662.2	662.1	662.6	0.5
91	9,105	1,737	1,774	309	838	2.1	55 / 253	182 / 291	662.6	662.6	662.6	663.0	0.5
95	9,462	1,737	1,774	198	564	3.1	44 / 154	90 / 207	663.3	663.3	663.3	663.7	0.4
102	10,216	1,737	1,774	182	505	3.4	55 / 127	87 / 155	666.8	666.8	666.8	667.0	0.2
106	10,642	1,737	1,774	37	236	7.4	19 / 19	77 / 43	668.4	668.5	668.4	668.9	0.5
110	11,005	1,737	1,774	123	481	3.6	52 / 72	81 / 83	671.4	671.4	671.4	671.8	0.5
114	11,391	936	952	200	694	1.4	75 / 124	96 / 149	672.5	672.6	672.5	673.0	0.5
119	11,881	936	952	34	212	4.4	17 / 17	17 / 17	673.1	673.1	673.1	673.5	0.4
122	12,239	936	952	50	258	3.6	25 / 25	25 / 25	674.8	674.8	674.8	675.0	0.2

		1% Flood Discharges		Floodway			Non-Encroachment Offsets		Water Surface Elevation				
Cross Section	Distance (Feet Above Mouth)	Existing Land Use Conditions	Future Land Use Conditions	Width (Feet)	Section Area (Square Feet)	Mean Velocity (Feet Per Second)	Floodway	Community Encroachment Area	Regulatory	1% Annual Chance Future Water-Surface Elevation	Without Floodway	With Floodway	Increase
124	12,402	936	952	46	236	4.0	23 / 23	23 / 23	675.3	675.3	675.3	675.5	0.2
128	12,773	772	787	38	209	3.7	20 / 18	20 / 18	676.4	676.5	676.4	676.6	0.1
132	13,165	772	787	34	148	5.2	16 / 18	16 / 18	677.7	677.8	677.7	677.8	0.1
134	13,408	772	787	34	165	4.7	18 / 16	18 / 16	680.5	680.5	680.5	680.5	0.1
134	13,439	772	787	45	137	5.6	22 / 23	22 / 23	680.5	680.6	680.5	680.6	0.1
135	13,455	772	787	52	118	6.6	18 / 34	21 / 34	680.6	680.7	680.6	680.6	0.0
135	13,490	772	787	64	280	2.8	25 / 39	25 / 69	681.8	681.9	681.8	682.3	0.5
137	13,717	772	787	34	124	6.2	17 / 17	17 / 17	682.0	682.1	682.0	682.5	0.4
Paw Creek													
6	606	5,766	6,671	602	1,823	3.2	94 / 508	194 / 629	572.1[1]	572.1[1]	569.6	569.7	0.0
11	1,129	5,766	6,671	81	607	9.5	41 / 41	61 / 52	572.1[1]	572.1[1]	570.2	570.6	0.4
17	1,674	5,766	6,671	197	1,900	3.0	95 / 102	210 / 195	575.7	577.5	575.7	575.7	0.0
23	2,282	5950	6880	657	6,927	0.9	54 / 603	88 / 632	577.9	579.5	577.9	577.9	0.0
31	3,131	5950	6880	527	5,461	1.1	67 / 461	97 / 512	578.5	580.0	578.5	578.7	0.2
40	4,028	5950	6880	488	3,614	1.6	164 / 324	195 / 367	578.8	580.2	578.8	579.0	0.2
50	4,988	5692	6583	539	3,901	1.5	510 / 29	566 / 71	579.3	580.6	579.3	579.6	0.3
58	5,789	5,692	6,583	171	1,099	5.2	25 / 146	34 / 425	580.7	581.6	580.7	581.1	0.4
64	6,403	5,692	6,583	105	890	6.4	50 / 55	368 / 69	585.0	585.9	585.0	585.4	0.4
71	7,091	5,692	6,583	343	3,064	1.9	140 / 203	168 / 228	586.7	587.2	586.7	587.2	0.5
77	7,651	5,692	6,583	472	4,426	1.3	66 / 406	85 / 464	587.0	587.6	587.0	587.6	0.5
83	8,270	5,692	6,583	610	5,060	1.1	376 / 234	430 / 274	587.3	587.9	587.3	587.8	0.5
88	8,829	6,140	7,119	434	3,615	1.7	284 / 150	317 / 179	587.6	588.2	587.6	588.1	0.5
94	9,418	6,140	7,119	100	969	6.3	58 / 41	61 / 55	588.0	588.6	588.0	588.5	0.5
99	9,886	6,140	7,119	75	1,003	6.1	37 / 37	37 / 37	590.4	591.8	590.4	590.9	0.5
104	10,435	6,140	7,119	70	1,042	5.9	35 / 35	35 / 35	595.8	599.4	595.8	596.3	0.5
115	11,494	6,140	7,119	73	1,459	4.2	37 / 36	44 / 40	599.6	604.3	599.6	600.0	0.4
120	12,008	6,140	7,119	222	3,197	1.9	136 / 85	158 / 147	603.8	606.4	603.8	604.3	0.5
127	12,743	6,140	7,119	275	3,066	2.0	180 / 95	238 / 125	603.9	606.4	603.9	604.4	0.5
135	13,475	6,140	7,119	205	2,166	2.8	77 / 127	105 / 159	604.0	606.5	604.0	604.5	0.5
143	14,262	6,140	7,119	95	888	6.9	47 / 48	61 / 59	605.2	607.2	605.2	605.6	0.4
148	14,771	6,140	7,119	68	616	10.0	39 / 29	75 / 158	608.1	609.4	608.1	608.2	0.2
154	15,412	5,852	6,787	246	2,000	2.9	34 / 212	95 / 250	611.8	612.4	611.8	612.2	0.4
162	16,185	5,852	6,787	101	894	6.6	56 / 45	71 / 58	613.0	613.5	613.0	613.4	0.4
170	17,044	5,852	6,787	173	1,764	3.3	45 / 127	60 / 136	616.3	617.2	616.3	616.8	0.5
177	17,660	5,852	6,787	260	2,516	2.3	119 / 141	147 / 161	617.2	618.0	617.2	617.7	0.5
182	18,154	5,852	6,787	379	2,786	2.1	288 / 91	313 / 121	617.8	618.5	617.8	618.2	0.5
190	18,998	5,852	6,787	92	975	6.0	30 / 62	30 / 80	620.6	621.4	620.6	621.0	0.4
197	19,729	5,852	6,787	109	914	6.4	59 / 50	69 / 63	622.7	623.5	622.7	623.2	0.5
202	20,167	5,852	6,787	200	1,809	3.2	36 / 164	37 / 167	626.3	627.2	626.3	626.6	0.3
207	20,677	5,852	6,787	95	1,090	5.4	62 / 33	78 / 52	627.3	628.2	627.3	627.6	0.4
213	21,256	5,852	6,787	282	2,300	2.5	192 / 90	237 / 115	629.6	630.6	629.6	630.1	0.4
219	21,894	5852	6787	99	532	11.0	60 / 39	63 / 45	633.3	634.1	633.3	633.3	0.0
224	22,363	5852	6787	251	1,994	2.9	141 / 109	241 / 175	638.5	639.4	638.5	638.8	0.2
231	23,093	5852	6787	237	1,583	3.7	116 / 121	146 / 161	639.4	640.2	639.4	639.9	0.5
238	23,768	5852	6787	81	717	8.2	49 / 32	82 / 73	641.3	641.9	641.3	641.7	0.4
243	24,277	5,852	6,787	79	812	7.2	46 / 33	77 / 57	644.4	645.3	644.4	644.9	0.5
248	24,752	5,852	6,787	207	1,992	2.9	26 / 181	38 / 228	646.5	647.5	646.5	647.0	0.5
251	25,114	5,852	6,787	130	1,167	5.0	65 / 65	72 / 90	647.0	648.0	647.0	647.5	0.4
253	25,255	5,852	6,787	222	2,016	2.9	150 / 73	180 / 116	648.6	649.6	648.6	648.7	0.1

		1% Flood Discharges		Floodway			Non-Encroachment Offsets		Water Surface Elevation				
Cross Section	Distance (Feet Above Mouth)	Existing Land Use Conditions	Future Land Use Conditions	Width (Feet)	Section Area (Square Feet)	Mean Velocity (Feet Per Second)	Floodway	Community Encroachment Area	Regulatory	1% Annual Chance Future Water-Surface Elevation	Without Floodway	With Floodway	Increase
260	25,985	3,711	4,262	303	2,777	1.3	198 / 105	238 / 143	649.7	650.7	649.7	649.9	0.2
266	26,552	3,711	4,262	115	771	4.8	34 / 81	53 / 100	650.0	650.9	650.0	650.2	0.2
271	27,103	3,711	4,262	113	761	4.9	47 / 67	68 / 86	652.6	653.2	652.6	653.0	0.4
278	27,820	3,711	4,262	63	447	8.3	37 / 26	53 / 42	657.2	657.7	657.2	657.4	0.2
283	28,316	3,711	4,262	248	1,739	2.1	105 / 143	129 / 162	659.8	660.5	659.8	660.3	0.4
289	28,862	3,532	4,051	186	1,059	3.3	142 / 44	168 / 67	660.9	661.5	660.9	661.3	0.4
295	29,526	3,532	4,051	223	1,099	3.2	34 / 189	34 / 228	663.5	664.0	663.5	663.9	0.4
301	30,135	3,532	4,051	45	398	8.9	23 / 22	30 / 37	669.0	669.6	669.0	669.3	0.3
307	30,703	3,211	3,690	239	1,084	3.0	20 / 218	43 / 271	672.3	672.9	672.3	672.8	0.5
314	31,380	3,211	3,690	103	616	5.2	43 / 60	58 / 72	677.0	677.5	677.0	677.4	0.4
321	32,143	3,211	3,690	185	1,087	3.0	140 / 45	156 / 62	680.0	680.5	680.0	680.4	0.4
330	32,984	2,897	3,283	236	1,161	2.5	19 / 217	86 / 250	682.6	683.0	682.6	683.1	0.5
338	33,818	2,562	2,824	185	719	3.6	97 / 88	167 / 124	685.8	686.2	685.8	686.2	0.4
343	34,313	2,562	2,824	147	1,492	1.7	36 / 111	54 / 136	695.6	696.2	695.6	695.6	0.0
348	34,845	1,897	2,273	144	1,158	1.6	107 / 37	120 / 85	695.8	696.3	695.8	695.8	0.0
358	35,842	1,897	2,273	121	504	3.8	51 / 70	96 / 104	696.9	697.5	696.9	697.1	0.2
363	36,296	1,897	2,273	51	268	7.1	19 / 32	21 / 32	698.9	699.4	698.9	699.4	0.5
369	36,862	1,897	2,273	41	197	9.6	17 / 24	17 / 24	703.4	703.9	703.4	703.6	0.2
370	37,047	1,897	2,273	41	852	2.2	20 / 21	20 / 21	722.9	727.2	722.9	722.9	0.0
Paw Creek Tributary													
3	253	646	948	72	223	2.9	9 / 63	11 / 81	611.8[1]	612.4[1]	606.7	607.1	0.4
10	1,002	646	948	90	145	4.4	38 / 52	103 / 107	611.8[1]	612.4[1]	609.4	609.8	0.3
16	1,579	646	948	84	255	2.5	46 / 38	74 / 49	613.5	614.0	613.5	613.9	0.4
23	2,252	646	948	43	129	5.0	20 / 23	21 / 23	617.2	617.8	617.2	617.6	0.3
28	2,821	646	948	76	174	3.7	17 / 59	17 / 116	625.5	626.1	625.5	626.0	0.5
34	3,387	277	315	30	67	4.1	15 / 15	15 / 15	637.7	637.9	637.7	637.7	0.0
39	3,937	277	315	35	87	3.2	8 / 27	13 / 44	645.4	645.6	645.4	645.8	0.4
45	4,454	277	315	31	152	1.8	19 / 12	24 / 14	655.0	655.2	655.0	655.5	0.4
Paw Creek Tributary 1A													
5	481	2,109	2,500	103	481	4.4	38 / 65	41 / 89	649.4[1]	650.7[1]	645.5	646.0	0.5
11	1,095	2,109	2,500	54	294	7.2	39 / 15	52 / 29	649.4[1]	650.7[1]	648.2	648.6	0.4
17	1,712	2,109	2,500	165	939	2.2	27 / 138	46 / 234	652.7	653.4	652.7	652.8	0.1
23	2,348	2,070	2,411	182	887	2.3	89 / 93	103 / 113	654.5	655.1	654.5	654.9	0.4
29	2,900	2,070	2,411	90	420	4.9	16 / 74	27 / 87	656.4	656.9	656.4	656.8	0.4
38	3,780	2,070	2,411	162	738	2.8	147 / 14	194 / 58	659.7	660.2	659.7	660.1	0.4
44	4,392	2,070	2,411	184	792	2.6	93 / 91	119 / 118	662.4	662.8	662.4	662.9	0.5
49	4,913	1810	2101	65	400	4.5	44 / 21	79 / 46	666.8	667.5	666.8	667.2	0.4
52[2]	5,153	1810	2101	104	1,134	1.6	61 / 43	68 / 52	673.3	673.9	673.3	673.8	0.5
Polk Ditch													
6	600	1383	1432	115	410	3.4	55 / 60	70 / 82	570.4	571.2	566.1	566.6	0.5
17	1,650	1,383	1,432	55	265	5.2	20 / 35	26 / 43	570.4	571.2	569.5	569.9	0.4
28	2,800	1,383	1,432	155	666	2.1	137 / 18	197 / 43	574.5	574.6	574.5	575.0	0.4
41	4,090	1,324	1,370	115	369	3.6	43 / 72	81 / 103	578.9	579.0	578.9	579.4	0.4
53	5,300	748	774	50	272	2.8	21 / 29	30 / 96	583.8	583.9	583.8	584.2	0.4
64	6,400	556	590	30	123	4.5	15 / 15	24 / 15	587.4	587.5	587.4	587.8	0.4
75	7,500	556	590	80	675	0.8	42 / 38	140 / 155	601.9	602.1	601.9	602.2	0.2
Ramah Creek													
6	632	2,796	2,822	625	2,609	1.1	111 / 514	256 / 579	626.6[1]	626.7[1]	620.2	620.7	0.5
12	1,168	2,796	2,822	460	1,569	1.8	143 / 317	191 / 352	626.6[1]	626.7[1]	621.0	621.4	0.5

		1% Flood Discharges		Floodway			Non-Encroachment Offsets		Water Surface Elevation				
Cross Section	Distance (Feet Above Mouth)	Existing Land Use Conditions	Future Land Use Conditions	Width (Feet)	Section Area (Square Feet)	Mean Velocity (Feet Per Second)	Floodway	Community Encroachment Area	Regulatory	1% Annual Chance Future Water-Surface Elevation	Without Floodway	With Floodway	Increase
21	2,082	2,796	2,822	476	1,830	1.5	134 / 341	197 / 403	626.6[1]	626.7[1]	623.1	623.5	0.4
25	2,504	2,796	2,822	454	1,532	1.8	89 / 366	189 / 422	626.6[1]	626.7[1]	624.0	624.5	0.4
31	3,053	2,796	2,822	162	786	3.6	22 / 140	26 / 231	626.6[1]	626.7[1]	625.7	626.1	0.4
40	3,995	2,796	2,822	475	2,797	1.0	352 / 122	391 / 176	629.7	629.7	629.7	630.0	0.3
45	4,518	2,859	2,888	508	2,432	1.2	458 / 50	520 / 146	630.0	630.1	630.0	630.4	0.3
50	5,001	2,859	2,888	503	2,046	1.4	432 / 71	491 / 136	630.6	630.7	630.6	631.0	0.4
53	5,336	2,859	2,888	315	1,282	2.2	302 / 17	362 / 64	631.2	631.2	631.2	631.5	0.4
57	5,738	2,859	2,888	436	1,580	1.8	259 / 186	338 / 265	632.1	632.1	632.1	632.5	0.4
63	6,294	2,859	2,888	359	1,393	2.1	258 / 101	303 / 138	633.6	633.7	633.6	634.1	0.4
70	6,951	2,859	2,888	324	1,306	2.2	123 / 202	168 / 246	635.3	635.4	635.3	635.8	0.4
74	7,390	2,859	2,888	401	1,660	1.7	234 / 167	296 / 224	636.3	636.3	636.3	636.8	0.5
79	7,921	2,859	2,888	270	1,101	2.6	250 / 20	357 / 74	637.6	637.6	637.6	638.0	0.4
83	8,263	2,734	2,765	357	1,362	2.0	337 / 20	397 / 86	638.6	638.6	638.6	639.1	0.5
87	8,667	2,734	2,765	179	680	4.0	140 / 63	187 / 95	639.1	639.1	639.1	639.6	0.4
91	9,089	2,734	2,765	100	476	5.7	22 / 79	39 / 98	640.7	640.7	640.7	641.1	0.4
95	9,526	2,734	2,765	368	2,143	1.3	93 / 275	120 / 314	644.4	644.4	644.4	644.9	0.5
99	9,894	2,734	2,765	227	1,240	2.2	97 / 130	123 / 157	644.8	644.8	644.8	645.3	0.5
103	10,346	2,734	2,765	314	1,508	1.8	86 / 228	133 / 261	645.7	645.7	645.7	646.2	0.5
107	10,740	2,734	2,765	277	1,143	2.4	155 / 122	209 / 152	646.3	646.3	646.3	646.7	0.4
112	11,193	2,734	2,765	197	828	3.3	93 / 104	204 / 168	647.3	647.3	647.3	647.7	0.4
116	11,591	2,734	2,765	478	1,860	1.5	253 / 224	297 / 278	648.7	648.7	648.7	649.1	0.5
120	12,046	2,734	2,765	387	1,325	2.1	292 / 95	338 / 163	649.9	649.9	649.9	650.4	0.4
123	12,265	2,635	2,667	328	1,088	2.4	252 / 76	329 / 154	650.4	650.5	650.4	650.9	0.4
125	12,500	2,635	2,667	102	518	5.1	83 / 19	188 / 25	651.1	651.1	651.1	651.5	0.4
130	13,009	2,635	2,667	166	772	3.4	148 / 19	191 / 19	653.5	653.5	653.5	654.0	0.5
133	13,333	2,635	2,667	242	1,115	2.4	154 / 88	184 / 129	654.7	654.7	654.7	655.2	0.5
138	13,767	2,635	2,667	94	612	4.3	69 / 25	112 / 50	655.6	655.6	655.6	656.1	0.5
140	14,023	2,635	2,667	356	1,428	1.8	341 / 15	480 / 35	656.3	656.3	656.3	656.8	0.5
142	14,249	2,635	2,667	284	1,055	2.5	264 / 20	432 / 55	656.6	656.6	656.6	657.0	0.5
146	14,568	2,635	2,667	139	530	5.0	121 / 18	178 / 19	657.1	657.2	657.1	657.5	0.4
147	14,713	2,504	2,540	173	747	3.4	144 / 29	243 / 29	658.0	658.0	658.0	658.4	0.5
150	14,996	2,504	2,540	225	802	3.1	70 / 154	112 / 205	658.7	658.7	658.7	659.1	0.4
154	15,438	2,504	2,540	341	1,177	2.1	16 / 325	61 / 402	660.2	660.2	660.2	660.7	0.5
159	15,889	2,504	2,540	263	978	2.6	16 / 247	20 / 314	661.8	661.9	661.8	662.3	0.4
164	16,358	2,504	2,540	320	1,210	2.1	17 / 303	36 / 392	663.7	663.7	663.7	664.1	0.5
168	16,793	2,504	2,540	175	620	4.0	16 / 159	16 / 249	665.2	665.2	665.2	665.6	0.4
171	17,098	2,504	2,540	61	526	4.8	30 / 30	33 / 218	666.5	666.6	666.5	667.0	0.5
174	17,439	2,504	2,540	102	302	8.3	27 / 81	29 / 141	667.4	667.4	667.4	667.3	0.0
178	17,771	2,504	2,540	123	656	3.8	102 / 21	119 / 50	670.5	670.5	670.5	670.8	0.3
182	18,211	2,504	2,540	192	1,257	2.0	134 / 58	194 / 118	672.9	672.9	672.9	673.2	0.4
185	18,525	2,325	2,361	114	673	3.5	88 / 26	134 / 28	673.3	673.4	673.3	673.6	0.4
189	18,865	2,325	2,361	265	1,257	1.9	95 / 170	131 / 220	674.3	674.4	674.3	674.8	0.4
193	19,293	2,325	2,361	230	997	2.3	51 / 179	101 / 206	675.4	675.5	675.4	675.9	0.4
196	19,627	1,971	1,989	177	874	2.3	20 / 157	50 / 198	676.4	676.4	676.4	676.8	0.4
200	20,050	1,971	1,989	123	709	2.8	30 / 93	41 / 131	677.1	677.2	677.1	677.6	0.4
203	20,313	1,971	1,989	40	300	6.6	20 / 20	46 / 84	677.4	677.5	677.4	677.8	0.4
205	20,521	1,971	1,989	106	514	3.8	83 / 22	125 / 33	678.8	678.8	678.8	679.2	0.4
208	20,767	1,971	1,989	81	434	4.5	61 / 20	77 / 48	679.6	679.6	679.6	680.0	0.4
210	21,050	1,971	1,989	87	633	3.1	31 / 57	55 / 60	681.2	681.2	681.2	681.7	0.5

		1% Flood Discharges		Floodway			Non-Encroachment Offsets		Water Surface Elevation				
Cross Section	Distance (Feet Above Mouth)	Existing Land Use Conditions	Future Land Use Conditions	Width (Feet)	Section Area (Square Feet)	Mean Velocity (Feet Per Second)	Floodway	Community Encroachment Area	Regulatory	1% Annual Chance Future Water-Surface Elevation	Without Floodway	With Floodway	Increase
212	21,197	1,210	1,218	204	840	1.4	177 / 27	182 / 68	681.5	681.6	681.5	682.0	0.5
214	21,391	1,210	1,218	141	491	2.5	61 / 81	171 / 97	681.6	681.7	681.6	682.1	0.5
217	21,740	1,210	1,218	135	396	3.1	15 / 120	70 / 261	682.6	682.6	682.6	683.0	0.4
221	22,138	1,210	1,218	166	404	3.0	48 / 118	86 / 201	684.2	684.3	684.2	684.7	0.4
225	22,457	1,210	1,218	41	263	4.6	20 / 20	154 / 77	685.5	685.5	685.5	685.9	0.4
228	22,816	1,210	1,218	36	223	5.4	18 / 18	18 / 148	687.0	687.0	687.0	687.3	0.3
231	23,149	1,210	1,218	27	170	7.1	14 / 14	14 / 146	689.3	689.3	689.3	689.4	0.1
235	23,522	1,210	1,218	36	234	5.2	18 / 18	18 / 75	692.1	692.1	692.1	692.3	0.2
239	23,866	1,210	1,218	26	155	7.8	13 / 13	13 / 141	693.9	693.9	693.9	694.2	0.3
241	24,072	1,210	1,218	110	348	3.5	22 / 92	25 / 189	695.8	695.9	695.8	696.2	0.3
245	24,515	1,055	1,062	70	232	4.5	15 / 54	54 / 100	697.3	697.3	697.3	697.7	0.4
248	24,765	1,055	1,062	61	335	3.2	16 / 44	59 / 55	698.3	698.4	698.3	698.8	0.5
250	25,035	900	911	33	189	4.8	17 / 17	49 / 172	699.1	699.2	699.1	699.6	0.4
253	25,306	900	911	35	201	4.5	18 / 18	18 / 18	700.4	700.4	700.4	700.8	0.4
256	25,578	900	911	41	208	4.3	20 / 20	20 / 113	701.7	701.7	701.7	701.9	0.2
259	25,874	900	911	29	179	5.0	15 / 14	15 / 14	703.1	703.1	703.1	703.2	0.1
261	26,109	900	911	30	193	4.7	15 / 15	15 / 15	704.3	704.3	704.3	704.4	0.1
264	26,392	575	577	36	201	2.9	20 / 16	20 / 16	705.4	705.4	705.4	705.4	0.1
267	26,744	575	577	25	96	6.0	13 / 12	13 / 12	706.4	706.4	706.4	706.5	0.0
271	27,115	575	577	28	139	4.1	14 / 14	14 / 14	709.6	709.6	709.6	709.6	0.0
276	27,586	575	577	185	2,121	0.3	112 / 73	112 / 73	725.4	725.5	725.4	725.4	0.0
276	27,627	575	577	170	1,844	0.3	94 / 76	94 / 76	725.4	725.5	725.4	725.4	0.0
282	28,165	575	577	190	1,585	0.4	38 / 152	46 / 161	726.0	726.1	726.0	726.0	0.0
287	28,656	357	359	128	783	0.5	27 / 101	62 / 115	726.1	726.1	726.1	726.1	0.0
292	29,198	357	359	27	124	2.9	14 / 14	15 / 20	726.1	726.1	726.1	726.1	0.0
Rea Branch													
10	978	1,168	1,214	265	1,531	0.8	75 / 190	75 / 190	547.4	547.4	547.4	547.4	0.0
20	1,978	1168	1214	95	398	2.9	56 / 40	56 / 40	547.6	547.6	547.6	547.6	0.0
28	2,828	959	985	70	226	4.2	40 / 30	120 / 30	552.6	552.7	552.6	553.0	0.4
40	3,978	959	985	90	278	3.4	25 / 65	60 / 90	558.8	558.8	558.8	559.2	0.4
53	5,278	990	1,029	35	159	6.2	25 / 10	35 / 15	564.8	564.9	564.8	564.9	0.1
Reedy Creek													
0	3	4,715	5,590	500	2,773	1.7	150 / 350	180 / 380	607.9	608.5	607.9	608.2	0.3
10	1,000	4,715	5,590	280	2,147	2.2	110 / 170	135 / 195	609.0	609.7	609.0	609.4	0.4
18	1,821	4,620	5,520	440	2,704	1.7	220 / 220	260 / 320	610.0	610.8	610.0	610.4	0.3
29	2,944	4,620	5,520	300	2,043	2.3	140 / 160	165 / 250	612.1	613.0	612.1	612.4	0.3
40	4,009	4,620	5,520	350	1,737	2.7	130 / 220	250 / 295	614.3	615.1	614.3	614.6	0.3
50	5,011	4,376	5,242	465	2,274	1.9	50 / 514	50 / 575	615.9	616.6	615.9	616.4	0.4
58	5,769	4,376	5,242	290	1,520	2.9	225 / 65	315 / 115	617.8	618.4	617.8	618.1	0.3
70	7,009	4,376	5,242	315	1,437	3.0	150 / 165	180 / 210	619.8	620.6	619.8	620.3	0.5
79	7,882	4,376	5,242	490	1,813	2.4	30 / 165	70 / 610	621.8	622.6	621.8	622.2	0.4
87	8,749	4,376	5,242	305	1,274	3.4	25 / 280	27 / 370	623.4	624.3	623.4	623.9	0.5
99	9,889	4,376	5,242	360	2,259	1.9	60 / 300	115 / 415	626.3	626.9	626.3	626.7	0.4
107	10,712	3,125	3,655	93	560	5.6	33 / 60	140 / 185	627.3	628.0	627.3	627.6	0.3
114	11,367	3,125	3,655	40	389	8.0	20 / 20	30 / 40	628.8	629.5	628.8	629.1	0.3
119	11,901	3,125	3,655	50	435	7.2	25 / 25	65 / 27	630.8	631.2	630.8	631.1	0.3
127	12,744	3,125	3,655	103	614	5.1	80 / 23	145 / 24	633.6	634.2	633.6	634.1	0.5
134	13,427	3,125	3,655	39	374	8.4	15 / 24	19 / 29	635.7	636.4	635.7	636.1	0.4
144	14,362	1,190	1,361	65	287	4.2	20 / 45	80 / 50	639.5	640.4	639.5	639.7	0.2

		1% Flood Discharges		Floodway			Non-Encroachment Offsets		Water Surface Elevation				
Cross Section	Distance (Feet Above Mouth)	Existing Land Use Conditions	Future Land Use Conditions	Width (Feet)	Section Area (Square Feet)	Mean Velocity (Feet Per Second)	Floodway	Community Encroachment Area	Regulatory	1% Annual Chance Future Water-Surface Elevation	Without Floodway	With Floodway	Increase
154	15,362	1,190	1,361	97	317	3.8	80 / 17	115 / 20	642.4	643.1	642.4	642.6	0.2
160	15,978	1,190	1,361	38	282	4.2	25 / 13	30 / 14	643.0	643.6	643.0	643.3	0.3
168	16,771	1,190	1,361	46	254	4.7	18 / 28	20 / 30	646.7	647.0	646.7	646.9	0.2
175	17,507	672	725	150	331	2.0	65 / 85	80 / 145	650.1	650.1	650.1	650.6	0.5
185	18,507	672	725	24	144	4.7	13 / 11	15 / 12	655.1	655.1	655.1	655.2	0.1
194	19,429	672	725	21	138	4.9	10 / 11	11 / 12	658.9	658.4	658.9	659.0	0.1
202	20,237	672	725	20	132	5.1	10 / 11	10 / 11	661.8	661.9	661.8	662.0	0.2
Reedy Creek Tributary 1													
3	349	1,259	1,480	230	1,361	0.9	115 / 115	170 / 170	624.6	625.9	624.6	625.1	0.5
13	1,336	1,259	1,480	36	147	8.6	12 / 24	14 / 70	625.9	626.4	625.9	626.3	0.4
22	2,208	550	696	29	74	7.4	19 / 10	20 / 10	639.6	640.5	639.6	639.7	0.1
Reedy Creek Tributary 2													
15	1,533	1,124	1,377	32	204	5.5	15 / 17	16 / 17	626.1[1]	626.3[1]	623.3	623.6	0.2
25	2,522	1,124	1,377	27	173	6.5	13 / 14	14 / 14	628.6	629.4	628.6	628.9	0.2
37	3,741	818	1,049	38	210	3.9	20 / 18	21 / 18	634.9	635.7	634.9	635.4	0.4
48	4,762	818	1,049	18	131	6.3	12 / 6	20 / 18	640.0	640.8	640.0	640.3	0.3
58	5,848	818	1,049	21	157	5.2	8 / 13	8 / 13	643.1	644.0	643.1	643.4	0.3
70	7,025	628	803	23	135	4.7	17 / 6	17 / 6	648.3	649.2	648.3	648.6	0.2
82	8,183	467	589	19	79	5.9	13 / 6	13 / 6	652.6	653.2	652.6	652.7	0.2
90	9,021	467	589	16	82	5.7	10 / 6	10 / 7	659.1	659.8	659.1	659.5	0.4
96	9,606	164	277	13	55	3.0	7 / 6	7 / 6	662.0	663.0	662.0	662.2	0.2
Reedy Creek Tributary 3													
5	483	1,781	2,107	23	191	9.3	13 / 10	30 / 12	637.5[1]	638.2[1]	636.7	637.1	0.4
13	1,275	1,781	2,107	20	163	10.9	10 / 10	17 / 20	642.0	642.9	642.0	642.3	0.3
21	2,076	1,781	2,107	30	281	6.3	15 / 15	25 / 15	647.4	648.3	647.4	647.9	0.4
27	2,683	1,781	2,107	27	220	8.1	13 / 14	18 / 17	649.2	650.1	649.2	649.5	0.3
35	3,488	1,781	2,107	30	184	9.7	15 / 15	25 / 15	655.0	655.6	655.0	655.5	0.5
45	4,451	1,562	1,814	120	388	4.0	15 / 105	25 / 250	661.2	661.6	661.2	661.7	0.5
55	5,492	1,423	1,605	30	209	6.8	15 / 15	50 / 17	665.2	665.6	665.2	665.7	0.5
64	6,409	1,291	1,456	30	220	5.9	15 / 15	80 / 50	668.2	668.9	668.2	668.9	0.5
73	7,330	1,291	1,456	57	227	5.7	22 / 35	130 / 40	671.9	671.9	671.9	672.2	0.3
81	8,141	1,291	1,456	230	464	2.8	15 / 215	19 / 320	675.0	675.2	675.0	675.3	0.3
87	8,661	1,291	1,456	155	406	3.2	15 / 140	16 / 250	676.8	677.0	676.8	677.3	0.5
97	9,655	591	649	128	236	2.5	23 / 105	23 / 210	679.3	679.7	679.3	679.7	0.4
103	10,315	591	649	17	79	7.5	7 / 10	8 / 25	681.9	682.1	681.9	682.0	0.1
110	10,979	591	649	18	109	5.4	10 / 8	15 / 10	685.5	685.7	685.5	685.9	0.5
116	11,625	591	649	23	128	4.6	13 / 10	16 / 42	689.6	689.8	689.6	689.8	0.2
122	12,177	591	649	23	101	5.8	14 / 9	32 / 10	691.9	692.1	691.8	691.9	0.1
129	12,907	476	535	17	74	6.4	8 / 9	25 / 15	697.2	697.5	697.2	697.3	0.1
137	13,668	433	493	26	122	3.5	14 / 12	20 / 12	700.8	700.9	700.8	701.3	0.5
142	14,175	433	493	24	65	6.6	12 / 11	13 / 50	704.6	705.0	704.6	704.6	0.0
Rocky Branch													
2	200	1,337	1,461	37	212	6.3	27 / 9	31 / 20	557.9[1]	558.3[1]	553.7	554.0	0.3
13	1,300	1,337	1,461	150	458	2.9	135 / 15	190 / 64	560.9	561.2	560.9	561.2	0.3
25	2,500	1,337	1,461	36	246	5.4	14 / 22	20 / 25	564.8	565.0	564.8	565.2	0.4
35	3,500	1,164	1,265	27	215	5.4	2 / 25	13 / 35	570.5	570.7	570.5	570.7	0.2
45	4,513	1,164	1,265	21	164	7.1	11 / 10	15 / 14	575.0	575.3	575.0	575.4	0.4
55	5,500	1,164	1,265	25	123	9.5	7 / 18	7 / 18	585.7	586.0	585.7	585.8	0.1
67	6,700	1,164	1,265	29	182	6.4	10 / 19	20 / 60	606.9	607.2	606.9	607.0	0.1

		1% Flood Discharges		Floodway			Non-Encroachment Offsets		Water Surface Elevation				
Cross Section	Distance (Feet Above Mouth)	Existing Land Use Conditions	Future Land Use Conditions	Width (Feet)	Section Area (Square Feet)	Mean Velocity (Feet Per Second)	Floodway	Community Encroachment Area	Regulatory	1% Annual Chance Future Water-Surface Elevation	Without Floodway	With Floodway	Increase
76	7,550	756	818	43	194	3.9	20 / 23	26 / 23	612.6	612.8	612.6	613.1	0.4
84	8,400	756	818	100	482	1.6	50 / 50	70 / 50	625.7	626.3	625.7	625.7	0.0
93	9,300	756	818	54	259	2.9	23 / 31	28 / 58	630.5	630.6	630.5	631.0	0.5
Rocky River													
4522	452,201	11,398	12,204	455	4,578	2.5	193 / 262	241 / 268	645.4	645.9	645.4	645.9	0.5
4529	452,936	11,398	12,204	510	4,488	2.5	336 / 174	392 / 190	646.1	646.5	646.1	646.5	0.4
4538	453,789	3,750	4,111	403	3,102	1.2	298 / 105	333 / 108	647.0	647.5	647.0	647.5	0.5
4547	454,728	3,750	4,111	368	2,300	1.6	275 / 92	301 / 103	647.3	647.7	647.3	647.7	0.4
4553	455,349	3,750	4,111	135	888	4.2	100 / 35	107 / 39	647.5	648.0	647.5	647.9	0.4
4557	455,688	3,750	4,111	163	856	4.4	114 / 49	226 / 64	648.1	648.7	648.1	648.4	0.2
4559	455,946	3,750	4,111	204	1,159	3.2	45 / 159	107 / 185	648.8	649.3	648.8	649.3	0.5
4564	456,398	3,750	4,111	86	746	5.0	48 / 38	52 / 128	651.5	652.0	651.5	651.8	0.3
4566	456,644	3,750	4,111	230	1,123	3.3	183 / 47	238 / 52	652.0	652.6	652.0	652.4	0.4
4571	457,138	3,750	4,111	300	1,340	2.8	90 / 210	138 / 224	652.7	653.1	652.7	653.2	0.5
4577	457,664	3,750	4,111	129	598	6.3	40 / 88	56 / 96	653.4	653.8	653.4	653.8	0.3
4583	458,307	3,750	4,111	251	1,220	3.1	71 / 181	87 / 201	655.8	656.1	655.8	656.1	0.3
4588	458,812	3,750	4,111	301	1,103	3.4	162 / 138	225 / 161	656.6	656.9	656.6	656.9	0.3
4593	459,299	3,750	4,111	348	1,346	2.8	210 / 144	235 / 175	657.5	657.7	657.5	657.7	0.3
4597	459,713	3,750	4,111	280	1,157	3.2	196 / 84	291 / 94	658.2	658.4	658.2	658.4	0.3
4608	460,796	3,750	4,111	217	1,059	3.5	70 / 148	174 / 221	661.5	662.1	661.5	661.8	0.3
4612	461,217	3,750	4,111	81	761	4.9	47 / 33	75 / 64	662.1	662.6	662.1	662.6	0.5
4614	461,421	3,750	4,111	75	521	7.2	43 / 32	68 / 32	662.2	662.6	662.2	662.6	0.4
4617	461,692	3,750	4,111	140	901	4.2	83 / 57	95 / 68	663.6	664.1	663.6	664.0	0.4
4622	462,207	3,750	4,111	217	972	3.9	52 / 165	73 / 177	664.9	665.4	664.9	665.4	0.5
4625	462,547	3,750	4,111	167	1,290	2.9	32 / 135	35 / 158	665.5	666.0	665.5	666.0	0.4
4629	462,947	3,750	4,111	492	2,425	1.5	174 / 318	225 / 363	665.9	666.4	665.9	666.3	0.4
4635	463,456	3,750	4,111	222	894	4.2	127 / 95	155 / 133	666.2	666.6	666.2	666.6	0.4
4639	463,946	3,811	4,194	226	1,022	3.7	149 / 77	193 / 99	668.1	668.4	668.1	668.4	0.3
4645	464,462	3,811	4,194	465	2,190	1.7	75 / 390	75 / 448	669.5	669.7	669.5	669.8	0.4
4650	464,954	3,811	4,194	228	870	4.4	102 / 126	160 / 140	669.4	669.8	669.4	669.8	0.4
4658	465,780	3,811	4,194	205	1,030	3.7	169 / 37	205 / 86	670.9	671.2	670.9	671.3	0.4
4663	466,271	3,811	4,194	117	492	7.7	95 / 22	118 / 22	671.4	671.6	671.4	671.7	0.3
4668	466,820	3,811	4,194	159	825	4.6	82 / 77	95 / 112	673.8	674.1	673.8	674.3	0.4
4674	467,437	3,811	4,194	377	1,341	2.8	124 / 253	154 / 363	675.2	675.5	675.2	675.6	0.4
4680	467,967	3,763	4,155	284	1,129	3.3	168 / 116	223 / 122	676.1	676.3	676.1	676.5	0.4
4685	468,480	3,763	4,155	284	886	4.2	164 / 131	190 / 195	677.0	677.2	677.0	677.3	0.4
4692	469,158	3,763	4,155	255	788	4.8	162 / 92	175 / 146	678.5	678.7	678.5	678.8	0.4
4698	469,795	3,763	4,155	310	951	4.0	110 / 205	125 / 269	680.3	680.5	680.3	680.6	0.3
4703	470,332	3,763	4,155	290	1,115	3.4	166 / 124	186 / 155	681.7	682.0	681.7	682.0	0.3
4710	471,048	3,763	4,155	305	1,089	3.5	133 / 172	158 / 221	683.3	683.6	683.3	683.5	0.3
4718	471,778	3,763	4,155	306	932	4.0	115 / 204	174 / 274	685.0	685.4	685.0	685.3	0.3
4720	471,960	3,763	4,155	298	922	4.1	102 / 208	198 / 439	685.4	685.7	685.4	685.7	0.3
4722	472,237	3,763	4,155	160	742	5.1	33 / 127	77 / 287	685.8	686.1	685.8	686.3	0.5
Rocky River Tributary													
47	4,732	1,288	1,534	145	492	2.6	61 / 84	87 / 84	601.6	601.9	601.6	601.9	0.3
49	4,937	787	939	32	169	4.7	16 / 16	43 / 100	601.9	602.4	601.9	602.2	0.2
52	5,199	787	939	75	265	3.0	55 / 20	76 / 74	604.7	604.9	604.7	605.0	0.4
52	5,241	848	962	40	225	3.8	20 / 20	67 / 38	604.7	604.9	604.7	605.1	0.4
59	5,894	848	962	59	686	1.2	35 / 24	50 / 29	616.8	619.6	616.8	616.8	0.0

		1% Flood Discharges		Floodway			Non-Encroachment Offsets		Water Surface Elevation				
Cross Section	Distance (Feet Above Mouth)	Existing Land Use Conditions	Future Land Use Conditions	Width (Feet)	Section Area (Square Feet)	Mean Velocity (Feet Per Second)	Floodway	Community Encroachment Area	Regulatory	1% Annual Chance Future Water-Surface Elevation	Without Floodway	With Floodway	Increase
61	6,065	848	962	243	2,307	0.4	129 / 113	148 / 119	616.9	619.6	616.9	616.9	0.0
64	6,450	1,233	1,532	247	2,052	0.6	176 / 71	203 / 89	616.9	619.6	616.9	616.9	0.0
68	6,802	1,233	1,532	175	1,169	1.1	123 / 53	150 / 65	617.0	619.7	617.0	617.0	0.0
71	7,130	1,233	1,532	104	537	2.3	84 / 20	130 / 23	617.2	619.8	617.2	617.2	0.0
73	7,272	1,233	1,532	77	424	2.9	50 / 27	123 / 28	617.4	619.8	617.4	617.5	0.1
74	7,438	1,233	1,532	38	202	6.1	19 / 19	69 / 26	617.5	619.9	617.5	617.6	0.1
77	7,737	928	1,217	37	191	4.9	19 / 19	19 / 23	619.7	620.7	619.7	619.9	0.3
81	8,052	928	1,217	43	107	8.7	26 / 19	69 / 47	622.5	623.2	622.5	622.7	0.2
84	8,450	928	1,217	61	229	4.1	40 / 21	78 / 61	626.9	627.4	626.9	627.3	0.4
88	8,774	928	1,217	40	158	5.9	20 / 20	47 / 35	628.8	629.4	628.8	629.2	0.4
91	9,061	928	1,217	37	119	7.8	18 / 18	18 / 18	632.5	632.9	632.5	632.5	0.1
Sardis Branch													
10	990	1,593	1,724	36	234	6.8	17 / 19	70 / 25	573.2[1]	573.3[1]	567.2	567.5	0.3
20	1,990	1,593	1,724	53	247	6.4	31 / 23	31 / 25	573.2[1]	573.3[1]	571.3	571.5	0.2
30	2,990	1,136	1,240	40	187	6.1	23 / 18	23 / 18	577.7	578.1	577.7	577.9	0.1
40	4,040	1,136	1,240	28	114	10.0	15 / 13	19 / 16	593.4	593.6	593.4	593.4	0.0
50	4,990	1,136	1,240	28	118	9.7	11 / 17	60 / 20	605.0	605.2	605.0	605.2	0.3
61	6,100	1,136	1,240	41	186	6.1	18 / 23	18 / 45	613.8	614.0	613.8	614.3	0.5
73	7,290	481	529	15	54	9.0	7 / 8	9 / 8	620.5	620.7	620.5	620.6	0.1
80	7,990	422	466	23	99	4.2	10 / 13	11 / 15	625.9	626.2	625.9	626.2	0.3
86	8,600	422	466	17	53	8.0	7 / 10	7 / 11	631.2	631.3	631.2	631.4	0.2
Sherman Branch													
3	302	612	736	34	107	5.7	17 / 17	17 / 17	569.0[1]	569.9[1]	567.5	567.5	0.0
13	1,280	612	736	27	110	5.6	13 / 14	14 / 14	577.3	577.7	577.3	577.3	0.0
25	2,549	568	687	23	85	6.7	12 / 11	25 / 25	591.1	591.3	591.1	591.2	0.2
36	3,558	568	687	22	86	6.6	12 / 10	17 / 128	600.6	600.9	600.6	601.0	0.4
44	4,411	568	687	19	74	7.7	15 / 4	20 / 7	611.7	612.4	611.7	612.1	0.4
Sixmile Creek													
0	0	5,164	5,538	254	2,602	2.0	100 / 154	147 / 177	570.5	570.9	570.5	571.0	0.5
11	1,100	5,164	5,538	338	3,448	1.5	168 / 170	195 / 206	571.6	572.0	571.6	572.1	0.5
22	2,238	5,164	5,538	557	5,171	1.0	397 / 160	430 / 175	572.0	572.4	572.0	572.5	0.5
31	3,100	5,164	5,538	882	7,095	0.7	336 / 546	546 / 695	572.4	572.8	572.4	572.9	0.5
40	4,037	5,164	5,538	504	4,038	1.3	170 / 334	203 / 421	572.9	573.3	572.9	573.3	0.4
53	5,283	5,043	5,400	722	5,068	1.0	342 / 380	441 / 465	573.2	573.6	573.2	573.7	0.5
63	6,309	5,043	5,400	652	3,799	1.3	40 / 612	40 / 737	573.9	574.2	573.9	574.4	0.5
72	7,200	4,809	5,158	653	3,368	1.4	28 / 625	92 / 936	574.5	574.8	574.5	575.0	0.5
86	8,600	4,809	5,158	433	2,406	2.0	160 / 273	211 / 370	575.4	575.7	575.4	575.9	0.5
102	10,200	4,809	5,158	347	2,045	2.4	146 / 201	176 / 230	577.3	577.5	577.3	577.8	0.5
115	11,500	4,233	4,568	511	2,549	1.7	491 / 20	567 / 91	578.6	578.8	578.6	579.1	0.5
129	12,928	4,233	4,568	298	1,679	2.5	32 / 266	59 / 473	580.4	580.6	580.4	580.9	0.5
142	14,200	4,233	4,568	672	2,733	1.6	303 / 369	380 / 459	581.7	581.9	581.7	582.2	0.5
157	15,700	4,233	4,568	427	2,254	1.9	21 / 406	25 / 635	584.3	584.6	584.3	584.5	0.2
170	17,000	4,233	4,568	455	2,933	1.4	60 / 395	100 / 503	586.5	586.7	586.5	587.0	0.5
191	19,100	2,630	2,978	465	2,098	1.2	237 / 228	368 / 363	588.0	588.3	588.0	588.5	0.5
201	20,100	2,630	2,978	407	1,647	1.6	107 / 300	146 / 373	589.5	589.8	589.5	590.0	0.5
216	21,600	2,630	2,978	411	1,731	1.5	164 / 247	245 / 299	592.1	592.4	592.1	592.6	0.5
232	23,200	2,630	2,978	267	1,273	2.1	85 / 182	183 / 352	595.6	595.9	595.6	596.1	0.5
247	24,700	2,630	2,978	308	1,280	2.0	19 / 289	19 / 320	597.6	597.9	597.6	598.1	0.5
261	26,100	2,630	2,978	268	1,257	2.1	70 / 198	98 / 255	601.7	602.0	601.7	602.1	0.4

		1% Flood Discharges		Floodway			Non-Encroachment Offsets		Water Surface Elevation				
Cross Section	Distance (Feet Above Mouth)	Existing Land Use Conditions	Future Land Use Conditions	Width (Feet)	Section Area (Square Feet)	Mean Velocity (Feet Per Second)	Floodway	Community Encroachment Area	Regulatory	1% Annual Chance Future Water-Surface Elevation	Without Floodway	With Floodway	Increase
276	27,576	2,364	2,687	174	819	2.9	125 / 49	135 / 82	604.8	605.1	604.8	605.3	0.5
292	29,200	2,364	2,687	379	1,779	1.3	300 / 79	351 / 121	607.8	608.2	607.8	608.4	0.5
304	30,400	2,364	2,687	285	1,188	2.0	41 / 244	79 / 380	610.0	610.3	610.0	610.5	0.5
316	31,600	2,149	2,454	349	1,527	1.4	225 / 124	275 / 212	612.7	612.9	612.7	613.2	0.5
329	32,900	2,149	2,454	289	1,426	1.5	251 / 38	334 / 50	616.1	616.4	616.1	616.6	0.5
342	34,200	1,772	2,025	530	2,565	0.7	283 / 247	380 / 318	619.8	620.4	619.8	620.0	0.2
356	35,600	1,772	2,025	255	917	1.9	212 / 43	267 / 84	622.0	622.3	622.0	622.4	0.4
371	37,100	1,548	1,789	330	1,178	1.3	267 / 62	328 / 123	626.4	626.7	626.4	627.0	0.5
386	38,600	1,548	1,789	232	854	1.8	67 / 164	118 / 205	631.5	631.8	631.5	632.0	0.5
400	40,000	1,548	1,789	122	488	3.2	94 / 28	148 / 28	636.5	636.9	636.5	637.0	0.5
416	41,600	1,135	1,255	225	869	1.3	202 / 23	252 / 72	641.7	642.0	641.7	642.1	0.4
425	42,500	1,135	1,255	251	737	1.5	125 / 126	167 / 171	643.7	643.9	643.7	644.2	0.5
435	43,500	676	721	28	201	3.4	13 / 15	23 / 25	647.0	647.3	647.0	647.4	0.4
444	44,400	676	721	24	122	5.6	14 / 10	24 / 20	649.4	649.6	649.4	649.7	0.3
455	45,500	676	721	198	313	2.2	134 / 64	202 / 125	654.3	654.4	654.3	654.8	0.5
465	46,456	410	421	121	376	1.1	50 / 71	78 / 92	656.6	656.6	656.6	657.0	0.4
South Prong Clarke Creek													
0	0	6,721	6,827	698	3,637	1.8	413 / 285	413 / 333	635.6	635.7	635.6	636	0.4
2	223	5,027	5,128	873	3,436	1.5	626 / 247	736 / 306	635.9	636	635.9	636.3	0.4
8	821	5,027	5,128	340	1,211	4.2	257 / 83	298 / 85	636.6	636.6	636.6	637	0.4
11	1,091	5,027	5,128	454	1,919	2.6	239 / 215	267 / 245	638	638	638	638.3	0.4
16	1,594	5,027	5,128	404	1,615	3.1	198 / 207	225 / 265	639.5	639.6	639.5	639.9	0.4
21	2,106	5,027	5,128	426	1,967	2.6	264 / 162	308 / 230	641.4	641.5	641.4	641.9	0.5
26	2,595	5,027	5,128	360	1,630	3.1	328 / 32	382 / 114	642.6	642.7	642.6	643.1	0.4
31	3,064	5,027	5,128	403	1,832	2.7	374 / 29	442 / 29	643.9	643.9	643.9	644.3	0.5
34	3,431	5,027	5,128	367	1,589	3.2	342 / 26	385 / 69	644.7	644.8	644.7	645.2	0.5
39	3,921	5,027	5,128	142	769	6.5	116 / 26	144 / 30	646.4	646.5	646.4	646.8	0.3
44	4,375	5,027	5,128	171	1,078	4.7	70 / 101	86 / 115	649	649.1	649	649.5	0.5
47	4,728	4,821	4,921	332	1,822	2.6	308 / 24	353 / 24	650.2	650.3	650.2	650.7	0.5
50	5,048	4,821	4,921	212	1,441	3.3	140 / 72	140 / 175	651.8	651.9	651.8	652.3	0.5
53	5,252	4,821	4,921	285	2,096	2.3	235 / 50	257 / 110	652.1	652.2	652.1	652.6	0.5
55	5,542	2,018	2,087	230	1,315	1.5	181 / 49	206 / 72	652.3	652.4	652.3	652.8	0.5
58	5,814	2,018	2,087	120	755	2.7	62 / 58	77 / 83	652.5	652.6	652.5	653	0.5
63	6,271	2,018	2,087	141	694	2.9	120 / 22	148 / 62	653.4	653.5	653.4	653.9	0.5
67	6,686	2,018	2,087	201	731	2.8	98 / 102	139 / 135	654.5	654.6	654.5	655	0.5
69	6,946	1,975	2,044	143	514	3.8	39 / 105	106 / 153	655.3	655.3	655.3	655.7	0.4
73	7,275	1,975	2,044	112	583	3.4	53 / 60	73 / 83	657.5	657.5	657.5	657.9	0.5
76	7,648	1,975	2,044	122	485	4.1	25 / 97	25 / 157	658.6	658.7	658.6	659	0.4
80	8,020	1,975	2,044	79	394	5.0	23 / 57	44 / 106	660.4	660.5	660.4	660.8	0.5
86	8,568	1,975	2,044	161	652	3.0	142 / 19	162 / 71	662.8	662.9	662.8	663.3	0.5
90	9,012	1,901	1,971	73	341	5.6	35 / 38	59 / 59	664.6	664.7	664.6	665	0.4
93	9,342	1,901	1,971	158	733	2.6	21 / 138	61 / 154	666.3	666.4	666.3	666.8	0.5
98	9,825	1,901	1,971	115	397	4.8	30 / 85	66 / 117	668.1	668.2	668.1	668.5	0.4
103	10,257	1,830	1,899	166	721	2.5	146 / 20	175 / 65	670.4	670.5	670.4	670.9	0.5
106	10,580	1,830	1,899	141	554	3.3	121 / 20	161 / 46	671.4	671.5	671.4	671.9	0.5
110	10,952	1,830	1,899	177	607	3.0	156 / 21	184 / 55	673	673.1	673	673.4	0.5
115	11,466	1,242	1,296	63	291	4.3	23 / 40	38 / 63	675	675.1	675	675.5	0.4
118	11,785	1,242	1,296	54	351	3.5	27 / 27	27 / 102	676.3	676.4	676.3	676.7	0.5
122	12,224	1,242	1,296	27	172	7.2	15 / 12	15 / 12	677.3	677.5	677.3	677.7	0.3

		1% Flood Discharges		Floodway			Non-Encroachment Offsets		Water Surface Elevation				
Cross Section	Distance (Feet Above Mouth)	Existing Land Use Conditions	Future Land Use Conditions	Width (Feet)	Section Area (Square Feet)	Mean Velocity (Feet Per Second)	Floodway	Community Encroachment Area	Regulatory	1% Annual Chance Future Water-Surface Elevation	Without Floodway	With Floodway	Increase
127	12,706	1,242	1,296	32	206	6.0	16 / 16	16 / 16	681.3	681.5	681.3	681.3	0
South Prong West Branch Rocky River													
2	181	3,575	3,839	214	1,241	2.9	101 / 113	101 / 123	655.4[1]	655.7[1]	653.6	653.6	0.0
7	700	3,575	3,839	350	1,908	1.9	160 / 190	295 / 405	655.4[1]	655.7[1]	654.4	654.5	0.1
12	1,166	3,575	3,839	295	1,317	2.7	75 / 220	75 / 275	655.4[1]	655.7[1]	654.6	655.0	0.4
13	1,331	3,575	3,839	225	1,076	3.3	109 / 116	111 / 185	655.4[1]	655.7[1]	654.8	655.3	0.5
16	1,559	3,575	3,839	385	2,257	1.6	319 / 66	383 / 86	655.6	655.9	655.6	656.1	0.5
17	1,695	3,575	3,839	320	1,662	2.2	293 / 27	397 / 27	655.7	656.0	655.7	656.2	0.4
21	2,059	3,575	3,839	240	1,295	2.8	192 / 48	232 / 48	656.3	656.6	656.3	656.7	0.5
25	2,497	3,575	3,839	362	1,980	1.8	296 / 66	346 / 92	657.4	657.7	657.4	657.7	0.3
29	2,921	3,575	3,839	285	1,562	2.3	246 / 39	290 / 70	657.8	658.1	657.8	658.1	0.3
35	3,452	3,484	3,746	360	1,588	2.2	208 / 152	228 / 457	658.0	658.3	658.0	658.3	0.3
41	4,088	3,484	3,746	510	2,249	1.5	386 / 129	408 / 173	659.0	659.2	659.0	659.5	0.5
46	4,639	3,484	3,746	592	2,216	1.6	356 / 236	474 / 292	659.9	660.2	659.9	660.3	0.4
47	4,730	3,484	3,746	629	1,440	2.4	342 / 287	501 / 358	660.0	660.2	660.0	660.3	0.4
48	4,804	3,484	3,746	637	1,716	2.0	308 / 329	514 / 410	660.1	660.3	660.1	660.5	0.4
53	5,285	3,484	3,746	530	1,162	3.0	372 / 158	536 / 285	660.3	660.5	660.3	660.6	0.3
57	5,712	3,484	3,746	418	1,253	2.8	354 / 64	354 / 66	662.5	662.6	662.5	663.0	0.5
61	6,051	3,484	3,746	361	1,292	2.7	226 / 135	274 / 190	663.6	663.8	663.6	663.8	0.3
64	6,373	3,484	3,746	175	1,150	3.0	106 / 69	166 / 94	666.0	666.2	666.0	666.2	0.2
65	6,474	3,484	3,746	239	1,463	2.4	166 / 74	197 / 92	666.1	666.3	666.1	666.3	0.3
68	6,795	3,484	3,746	245	841	4.1	204 / 41	298 / 44	666.8	667.0	666.8	667.1	0.3
69	6,867	3,399	3,657	238	1,212	2.8	168 / 70	260 / 89	667.1	667.3	667.1	667.5	0.4
72	7,202	3,399	3,657	185	685	5.0	38 / 147	54 / 227	667.4	667.6	667.4	667.9	0.5
77	7,661	3,399	3,657	300	1,368	2.5	125 / 175	145 / 275	668.7	668.9	668.7	669.2	0.5
80	8,021	3,399	3,657	326	1,139	3.0	190 / 136	221 / 229	669.1	669.3	669.1	669.5	0.4
84	8,412	3,399	3,657	281	548	6.2	122 / 183	122 / 343	670.2	670.3	670.2	670.3	0.0
90	8,979	3,329	3,587	345	1,180	2.8	212 / 133	222 / 133	673.2	673.4	673.2	673.7	0.5
98	9,796	3,329	3,587	330	1,800	1.8	28 / 302	86 / 499	677.6	678.2	677.6	677.7	0.2
103	10,331	3,229	3,483	510	1,884	1.7	24 / 486	139 / 673	677.7	678.3	677.7	678.0	0.3
109	10,856	3,229	3,483	412	1,409	2.3	77 / 338	156 / 377	677.8	678.3	677.8	678.1	0.3
113	11,278	3,229	3,483	211	494	6.5	189 / 22	293 / 23	678.6	678.9	678.6	678.9	0.3
118	11,756	2,899	3,031	260	948	3.1	138 / 122	139 / 124	681.7	681.8	681.7	682.0	0.3
123	12,276	2,899	3,031	465	2,052	1.4	223 / 243	238 / 253	684.9	685.0	684.9	685.2	0.4
126	12,582	2,899	3,031	455	1,491	1.9	311 / 144	311 / 144	685.0	685.1	685.0	685.3	0.4
130	13,009	2,899	3,031	212	588	4.9	189 / 23	199 / 46	685.2	685.3	685.2	685.5	0.2
132	13,165	2,899	3,031	340	804	3.6	314 / 31	334 / 31	686.2	686.4	686.2	686.4	0.1
134	13,420	2,899	3,031	83	342	8.5	30 / 64	33 / 73	686.9	686.9	686.9	686.9	0.0
140	13,950	2,899	3,031	360	940	3.1	218 / 141	224 / 151	690.7	690.9	690.7	690.9	0.1
143	14,271	2,899	3,031	97	446	6.5	72 / 25	92 / 34	691.8	691.9	691.8	691.9	0.1
145	14,525	2,458	2,571	297	1,203	2.0	168 / 129	174 / 132	693.4	693.6	693.4	693.5	0.1
151	15,133	2,458	2,571	282	908	2.7	57 / 224	84 / 240	694.3	694.5	694.3	694.4	0.1
156	15,561	2,458	2,571	266	826	3.0	51 / 215	60 / 226	695.2	695.4	695.2	695.4	0.1
159	15,937	2,458	2,571	214	480	5.1	174 / 53	180 / 58	696.4	696.5	696.4	696.5	0.1
162	16,222	2,458	2,571	224	792	3.1	190 / 34	197 / 36	698.5	698.7	698.5	698.7	0.1
167	16,666	2,458	2,571	277	916	2.7	95 / 182	105 / 189	700.0	700.1	700.0	700.1	0.1
170	17,017	2,458	2,571	105	393	6.2	59 / 68	75 / 73	700.4	700.5	700.4	700.5	0.1
172	17,169	2,458	2,571	125	828	3.0	85 / 40	100 / 42	701.4	701.5	701.4	701.5	0.1
173	17,324	1,919	2,015	145	591	3.2	53 / 92	53 / 92	701.6	701.7	701.6	701.7	0.1

		1% Flood Discharges		Floodway			Non-Encroachment Offsets		Water Surface Elevation				
Cross Section	Distance (Feet Above Mouth)	Existing Land Use Conditions	Future Land Use Conditions	Width (Feet)	Section Area (Square Feet)	Mean Velocity (Feet Per Second)	Floodway	Community Encroachment Area	Regulatory	1% Annual Chance Future Water-Surface Elevation	Without Floodway	With Floodway	Increase
176	17,577	1,919	2,015	201	541	3.6	80 / 121	100 / 124	702.5	702.7	702.5	702.6	0.1
179	17,907	1,919	2,015	81	202	9.5	79 / 119	79 / 121	703.2	703.2	703.2	703.3	0.1
184	18,364	1,919	2,015	112	469	4.1	54 / 58	58 / 85	706.9	706.9	706.9	707.1	0.2
2	181	3,575	3,839	214	1,241	2.9	101 / 113	101 / 123	655.4[1]	655.7[1]	653.6	653.6	0.0
South Prong West Branch Rocky River Tributary													
1	117	1,404	1,613	43	195	7.2	17 / 25	18 / 155	677.7[1]	678.3[1]	674.2	674.6	0.4
6	616	1,404	1,613	135	272	5.2	96 / 104	256 / 104	677.7[1]	678.3[1]	676.6	676.8	0.3
10	983	1,404	1,613	29	165	8.5	39 / 12	69 / 13	678.3	678.6	678.3	678.6	0.3
13	1,297	1,404	1,613	96	359	3.9	77 / 19	108 / 23	680.9	681.3	680.9	681.3	0.3
16	1,627	1,404	1,613	81	309	4.5	64 / 17	111 / 17	682.1	682.4	682.1	682.5	0.4
20	2,001	1,122	1,364	27	214	5.2	14 / 14	15 / 38	683.6	683.9	683.6	684.0	0.5
28	2,819	1,122	1,364	24	129	8.7	12 / 12	12 / 12	686.1	686.7	686.1	686.2	0.2
32	3,176	1,122	1,364	32	193	5.8	16 / 16	18 / 16	689.4	690.2	689.4	689.5	0.1
37	3,714	1,122	1,364	41	197	5.7	21 / 21	21 / 21	692.2	692.9	692.2	692.3	0.1
41	4,075	1,122	1,364	20	114	9.8	10 / 10	10 / 11	694.9	695.4	694.9	695.0	0.1
44	4,352	712	896	90	186	3.8	17 / 74	46 / 92	697.7	698.3	697.7	697.8	0.1
49	4,855	712	896	21	84	8.5	10 / 11	10 / 11	699.8	699.8	699.8	699.8	0.0
Steele Creek													
3	300	7,970	8,956	365	3,416	2.3	289 / 76	328 / 185	570.0	570.7	570.0	570.5	0.5
9	900	3,665	3,962	570	5,219	0.7	244 / 326	270 / 395	570.6	571.2	570.6	571.1	0.5
19	1,900	3,665	3,962	390	3,317	1.1	102 / 288	114 / 304	570.9	571.5	570.9	571.4	0.5
29	2,900	3,665	3,962	185	1,578	2.3	101 / 84	112 / 104	571.8	572.4	571.8	572.3	0.5
38	3,750	3,665	3,962	240	2,171	1.7	21 / 219	38 / 243	573.1	573.6	573.1	573.6	0.5
49	4,900	3,435	3,655	260	2,225	1.5	110 / 150	199 / 179	575.4	576.1	575.4	575.8	0.4
57	5,700	3,435	3,655	300	2,184	1.6	185 / 115	200 / 145	575.9	576.5	575.9	576.4	0.4
67	6,700	3,435	3,655	200	1,368	2.5	90 / 110	231 / 132	577.5	578.0	577.5	578.0	0.5
77	7,700	3,393	3,612	240	1,475	2.3	149 / 91	177 / 110	579.2	579.5	579.2	579.7	0.5
87	8,700	3,393	3,612	310	1,396	2.4	159 / 151	232 / 181	581.2	581.4	581.2	581.6	0.5
97	9,700	3,191	3,433	340	2,074	1.5	225 / 115	257 / 181	583.2	583.4	583.2	583.7	0.5
111	11,100	3,191	3,433	285	2,463	1.3	176 / 109	315 / 138	589.0	589.9	589.0	589.4	0.4
121	12,100	3,191	3,433	150	1,320	2.4	118 / 32	359 / 155	591.4	591.6	591.4	591.4	0.0
130	13,010	2,376	2,659	375	2,444	1.0	139 / 236	144 / 293	591.5	591.7	591.5	591.8	0.2
138	13,800	2,376	2,659	330	1,586	1.5	180 / 150	180 / 150	591.8	592.0	591.8	592.0	0.2
147	14,700	2,032	2,368	320	1,468	1.4	240 / 80	366 / 148	592.7	593.0	592.7	593.1	0.4
159	15,850	2,019	2,365	170	1,033	2.0	151 / 19	221 / 33	597.1	598.7	597.1	597.4	0.3
167	16,700	2,019	2,365	300	1,320	1.5	138 / 162	181 / 206	597.7	599.1	597.7	598.2	0.4
176	17,600	2,019	2,365	205	823	2.4	113 / 92	150 / 100	599.6	600.3	599.6	600.0	0.4
186	18,600	1,622	2,016	275	788	2.1	71 / 204	99 / 250	602.4	602.8	602.4	602.9	0.5
195	19,455	1,264	1,638	33	180	7.0	16 / 17	16 / 59	604.3	604.9	604.3	604.8	0.4
206	20,600	1,264	1,638	51	355	3.6	25 / 25	66 / 131	609.9	611.1	609.9	610.1	0.2
217	21,700	1,124	1,505	40	155	7.3	22 / 18	22 / 18	614.8	615.2	614.8	615.2	0.5
229	22,900	523	745	85	227	2.3	50 / 35	70 / 59	621.2	621.8	621.2	621.7	0.5
237	23,700	448	668	115	375	1.2	100 / 15	133 / 15	626.2	626.5	626.2	626.7	0.5
Stevens Creek													
5	522	2,058	2,333	85	317	6.5	60 / 25	150 / 43	626.0[1]	626.0[1]	625.1	625.5	0.4
15	1,469	2,058	2,333	115	426	4.8	100 / 15	195 / 25	629.8	630.8	629.8	630.2	0.4
20	2,028	2,058	2,333	120	542	3.8	70 / 50	200 / 50	632.7	633.1	632.7	633.0	0.4
27	2,715	2,058	2,333	185	647	3.2	110 / 75	150 / 129	635.5	635.8	635.5	636.0	0.5
34	3,425	2,058	2,333	235	644	3.2	220 / 15	265 / 90	638.1	638.4	638.1	638.6	0.5

		1% Flood Discharges		Floodway			Non-Encroachment Offsets		Water Surface Elevation				
Cross Section	Distance (Feet Above Mouth)	Existing Land Use Conditions	Future Land Use Conditions	Width (Feet)	Section Area (Square Feet)	Mean Velocity (Feet Per Second)	Floodway	Community Encroachment Area	Regulatory	1% Annual Chance Future Water-Surface Elevation	Without Floodway	With Floodway	Increase
41	4,146	2,058	2,333	110	511	4.0	50 / 60	145 / 85	642.1	642.4	642.1	642.3	0.2
50	4,951	1,247	1,386	40	212	5.9	25 / 15	29 / 23	645.3	645.6	645.3	645.6	0.3
59	5,873	1,247	1,386	45	204	6.1	20 / 25	31 / 67	650.5	650.8	650.5	650.8	0.4
66	6,589	1,140	1,280	55	261	4.4	35 / 20	129 / 22	654.4	654.7	654.4	654.9	0.5
74	7,404	1,140	1,280	55	284	4.0	15 / 40	15 / 60	658.7	658.9	658.7	659.0	0.4
82	8,206	1,140	1,280	134	415	2.8	24 / 110	28 / 170	663.0	663.2	663.0	663.5	0.5
89	8,864	866	988	24	136	6.4	14 / 10	20 / 35	666.1	666.5	666.1	666.5	0.5
96	9,630	600	721	21	121	5.0	10 / 11	10 / 12	670.3	670.8	670.3	670.5	0.2
104	10,363	600	721	21	98	6.1	10 / 11	10 / 12	676.0	676.5	676.0	676.0	0.0
111	11,053	600	721	21	85	7.1	10 / 11	10 / 11	680.0	680.5	680.0	680.1	0.1
Stevens Creek Tributary													
1	66	844	1,016	110	328	2.6	75 / 35	150 / 80	642.5	642.8	642.5	643.0	0.5
9	904	844	1,016	37	141	6.0	18 / 19	55 / 36	646.1	646.4	646.1	646.4	0.2
17	1,673	844	1,016	92	347	2.4	70 / 23	140 / 23	651.6	653.0	651.6	651.7	0.1
24	2,434	844	1,016	30	142	5.9	18 / 12	50 / 95	654.2	654.2	654.2	654.6	0.4
32	3,156	812	1,015	33	127	6.4	12 / 21	18 / 21	658.9	659.4	658.9	659.1	0.2
38	3,758	812	1,015	70	187	4.3	30 / 40	30 / 85	662.5	663.1	662.5	662.7	0.2
Stewart Creek													
7	700	6,184	6,396	299	1,667	3.7	197 / 102	299 / 149	642.0[1]	644.0[1]	632.2	632.6	0.5
18	1,800	6,184	6,396	84	845	7.3	33 / 50	115 / 61	642.0[1]	644.0[1]	635.3	635.8	0.5
27	2,720	5,802	6,040	110	1,001	5.8	80 / 30	123 / 38	642.0[1]	644.0[1]	638.2	638.6	0.4
37	3,665	5,802	6,040	78	958	6.1	42 / 36	112 / 49	642.0[1]	644.0[1]	641.3	641.6	0.2
47	4,681	5,802	6,040	230	1,752	3.3	239 / 29	289 / 35	642.5	644.0[1]	642.5	642.9	0.4
57	5,700	5,802	6,040	245	2,499	2.3	84 / 161	198 / 208	645.3	645.6	645.3	645.8	0.5
68	6,800	5,802	6,040	175	2,203	2.6	39 / 136	55 / 140	650.7	651.1	650.7	651.2	0.5
78	7,785	5,802	6,040	200	1,761	3.3	101 / 99	126 / 106	651.1	651.4	651.1	651.6	0.5
86	8,626	5,802	6,040	186	1,651	3.5	90 / 97	103 / 115	651.5	651.9	651.5	652.0	0.5
93	9,250	5,028	5,565	109	951	5.3	68 / 41	103 / 67	652.8	653.0	652.8	653.2	0.4
97	9,700	5,028	5,565	215	1,658	3.0	115 / 100	115 / 115	656.6	658.3	656.6	656.6	0.0
106	10,600	5,028	5,565	182	1,066	4.7	99 / 83	134 / 134	657.1	658.6	657.1	657.3	0.2
115	11,500	5,028	5,565	106	904	5.6	78 / 28	93 / 28	662.4	663.0	662.4	663.0	0.5
132	13,225	5,028	5,565	425	4,072	1.2	299 / 126	479 / 173	671.7	673.4	671.7	672.0	0.3
143	14,300	5,028	5,565	336	2,979	1.7	37 / 299	66 / 454	676.4	677.1	676.4	676.6	0.2
151	15,100	4,929	5,488	280	2,993	1.6	61 / 219	79 / 238	676.9	677.5	676.9	677.3	0.4
159	15,850	4,929	5,488	448	3,720	1.3	161 / 287	205 / 305	677.1	677.7	677.1	677.5	0.4
168	16,800	4,929	5,488	221	1,251	3.9	97 / 124	147 / 248	677.7	678.3	677.7	678.2	0.5
175	17,500	3,643	4,155	155	1,196	3.0	131 / 24	263 / 51	678.7	679.2	678.7	679.1	0.4
184	18,350	3,643	4,155	212	1,305	2.8	189 / 24	255 / 47	680.0	680.6	680.0	680.5	0.5
193	19,300	3,643	4,155	73	927	3.9	40 / 32	50 / 40	688.6	689.1	688.6	689.0	0.5
204	20,400	3,643	4,155	117	1,109	3.3	85 / 32	95 / 57	690.6	691.3	690.6	691.1	0.5
214	21,400	3,615	4,118	127	918	3.9	77 / 50	92 / 79	692.1	692.7	692.1	692.5	0.5
223	22,300	3,615	4,118	135	893	4.0	35 / 100	43 / 119	696.8	697.5	696.8	697.2	0.4
236	23,600	3,615	4,118	166	1,335	2.7	31 / 135	43 / 151	703.1	703.7	703.1	703.5	0.4
248	24,800	2,038	2,401	40	274	7.4	19 / 21	24 / 42	708.6	709.4	708.6	708.7	0.1
258	25,750	2,038	2,401	102	560	3.6	82 / 19	113 / 19	712.6	713.2	712.6	713.2	0.5
268	26,750	2,038	2,401	57	396	5.2	34 / 23	44 / 33	718.4	719.0	718.4	718.7	0.3
280	28,000	2,038	2,401	184	1,386	1.5	165 / 19	179 / 32	728.7	729.3	728.7	729.3	0.5
Stewart Creek Tributary 1													
10	1,000	2,774	2,907	24	224	12.4	12 / 12	19 / 16	642.0[1]	644.0[1]	641.5	641.9	0.5

		1% Flood Discharges		Floodway			Non-Encroachment Offsets		Water Surface Elevation				
Cross Section	Distance (Feet Above Mouth)	Existing Land Use Conditions	Future Land Use Conditions	Width (Feet)	Section Area (Square Feet)	Mean Velocity (Feet Per Second)	Floodway	Community Encroachment Area	Regulatory	1% Annual Chance Future Water-Surface Elevation	Without Floodway	With Floodway	Increase
22	2,200	2,774	2,907	35	306	9.1	17 / 17	22 / 22	652.3	652.5	652.3	652.7	0.4
31	3,100	2,299	2,412	75	251	9.2	55 / 20	85 / 23	656.1	656.2	656.1	656.1	0.0
34	3,406	2,299	2,412	160	618	3.7	50 / 110	50 / 158	658.3	658.5	658.3	658.8	0.5
40	4,000	2,299	2,412	44	267	8.6	21 / 23	21 / 23	661.2	661.3	661.2	661.6	0.4
Stewart Creek Tributary 2													
5	500	3,472	3,605	38	271	12.8	20 / 18	20 / 20	652.6	652.8[1]	652.6	653.1	0.5
14	1,400	3,328	3,450	222	1,479	2.2	92 / 130	132 / 160	658.7	658.9	658.7	659.3	0.5
27	2,700	3,328	3,450	171	897	3.7	150 / 21	107 / 124	665.3	665.5	665.3	665.4	0.1
38	3,800	3,328	3,450	84	576	5.8	64 / 20	75 / 44	671.5	671.7	671.5	671.8	0.4
49	4,900	2,682	2,754	78	496	5.4	59 / 19	146 / 55	674.2	674.3	674.2	674.6	0.4
60	5,950	2,682	2,754	115	683	3.9	57 / 58	68 / 79	682.6	682.7	682.6	683.2	0.6
68	6,800	2,446	2,500	72	293	8.4	15 / 57	15 / 73	692.5	692.5	692.5	692.8	0.3
77	7,700	2,446	2,500	194	1,483	1.6	119 / 75	199 / 94	702.9	703.2	702.9	703.3	0.4
83	8,320	1,336	1,366	215	2,024	0.7	139 / 76	321 / 131	708.8	709.4	708.8	709.3	0.5
Stewart Creek Tributary 3													
5	530	1,626	1,675	29	214	7.6	15 / 15	20 / 15	678.2[1]	678.8[1]	675.6	675.8	0.2
17	1,700	1,626	1,675	100	925	1.8	54 / 47	84 / 72	690.0	690.7	690.0	690.2	0.2
29	2,900	1,518	1,562	82	308	4.9	19 / 63	28 / 96	693.5	693.5	693.5	693.9	0.4
37	3,700	1,518	1,562	80	1,535	1.0	40 / 39	40 / 39	720.2	720.4	720.2	720.6	0.5
45	4,465	1,518	1,562	65	1,259	1.2	36 / 30	51 / 82	720.2	720.4	720.2	720.6	0.5
56	5,560	1,391	1,635	40	525	2.6	21 / 19	35 / 33	720.5	720.7	720.5	721.1	0.5
Stony Creek													
2	167	3,675	4,161	401	2,330	1.6	65 / 336	88 / 367	592.3[1]	593.1[1]	585.7	586.1	0.4
6	572	3,675	4,161	131	986	3.7	63 / 68	77 / 99	592.3[1]	593.1[1]	586.1	586.5	0.4
13	1,265	3,675	4,161	41	395	9.3	20 / 20	28 / 24	592.3[1]	593.1[1]	588.0	588.3	0.3
15	1,506	3,650	4,145	42	407	9	21 / 21	21 / 24	592.3[1]	593.1[1]	590.1	590.3	0.2
18	1,755	3,650	4,145	36	323	11.3	18 / 18	19 / 19	592.3[1]	593.1[1]	592.1	592.2	0.1
20	2,037	3,650	4,145	35	375	9.7	16 / 19	16 / 19	595.9	596.7	595.9	596.0	0.1
24	2,357	3,650	4,145	123	1,124	3.2	26 / 97	32 / 207	598.3	599.3	598.3	598.5	0.1
27	2,700	3,650	4,145	111	774	4.7	26 / 85	32 / 112	598.7	599.6	598.7	599.0	0.4
29	2,928	3,650	4,145	140	1,006	3.6	102 / 38	202 / 63	599.7	600.6	599.7	600.0	0.2
31	3,144	3,650	4,145	179	1,186	3.1	153 / 26	238 / 27	600.3	601.1	600.3	600.6	0.2
41	4,069	3,650	4,145	66	802	4.6	29 / 37	36 / 49	609.9	610.6	609.9	609.9	0.0
43	4,305	3,458	3,919	64	644	5.4	34 / 30	40 / 35	610.2	610.9	610.2	610.2	0.0
47	4,680	3,458	3,919	128	1,074	3.2	62 / 66	78 / 77	611.2	611.9	611.2	611.3	0.1
49	4,934	3,458	3,919	90	611	5.7	28 / 62	45 / 97	611.4	612.1	611.4	611.5	0.1
52	5,241	3,458	3,919	85	578	6	47 / 38	63 / 63	612.8	613.4	612.8	613.0	0.2
54	5,439	3,120	3,302	65	467	6.7	42 / 22	69 / 39	613.8	614.4	613.8	614.0	0.3
57	5,675	3,120	3,302	109	759	4.1	26 / 83	32 / 111	615.2	615.6	615.2	615.6	0.4
59	5,927	3,120	3,302	105	725	4.3	39 / 66	81 / 83	615.8	616.1	615.8	616.2	0.4
61	6,122	3,120	3,302	131	778	4	64 / 67	102 / 85	616.4	616.7	616.4	616.9	0.4
64	6,381	3,120	3,302	132	769	4.1	67 / 66	91 / 91	617.3	617.6	617.3	617.7	0.4
67	6,680	3,120	3,302	180	988	3.2	146 / 34	185 / 81	618.2	618.5	618.2	618.6	0.4
70	6,970	3,120	3,302	198	1,016	3.1	68 / 130	90 / 176	619.0	619.2	619.0	619.5	0.5
73	7,304	3,120	3,302	238	1,243	2.5	105 / 133	127 / 244	620.0	620.2	620.0	620.4	0.5
77	7,652	3,120	3,302	255	1,366	2.3	125 / 130	170 / 172	621.0	621.2	621.0	621.5	0.4
81	8,092	3,120	3,302	183	1,055	3.0	27 / 156	27 / 279	622.0	622.2	622.0	622.4	0.4
94	9,376	3,120	3,302	130	847	3.7	46 / 85	81 / 143	626.7	627.1	626.7	626.9	0.2
97	9,667	3,103	3,285	120	653	4.7	42 / 78	47 / 138	627.3	627.7	627.3	627.7	0.3

		1% Flood Discharges		Floodway			Non-Encroachment Offsets		Water Surface Elevation				
Cross Section	Distance (Feet Above Mouth)	Existing Land Use Conditions	Future Land Use Conditions	Width (Feet)	Section Area (Square Feet)	Mean Velocity (Feet Per Second)	Floodway	Community Encroachment Area	Regulatory	1% Annual Chance Future Water-Surface Elevation	Without Floodway	With Floodway	Increase
99	9,915	3,103	3,285	159	882	3.5	133 / 26	253 / 29	628.5	628.8	628.5	628.8	0.3
111	11,084	3,103	3,285	240	2,821	1.1	123 / 117	243 / 232	641.3	642.7	641.3	641.3	0.0
114	11,413	3,622	3,866	314	3,299	1.1	62 / 252	88 / 392	641.4	642.8	641.4	641.4	0.1
118	11,788	3,622	3,866	301	2,607	1.4	91 / 210	149 / 261	641.5	642.8	641.5	641.6	0.1
124	12,430	3,622	3,866	292	1,918	1.9	254 / 38	359 / 49	641.9	643.1	641.9	642.1	0.2
129	12,855	2,630	2,741	122	613	4.3	44 / 78	96 / 153	642.4	643.4	642.4	642.7	0.3
132	13,188	2,630	2,741	182	793	3.3	69 / 114	170 / 291	644.2	644.6	644.2	644.6	0.4
136	13,622	2,630	2,741	180	699	3.8	157 / 23	280 / 151	646.2	646.4	646.2	646.6	0.4
141	14,066	3,284	3,488	117	545	6.0	27 / 90	92 / 130	649.5	649.6	649.5	649.9	0.4
145	14,497	3,284	3,488	99	557	5.9	20 / 79	31 / 94	653.9	654.1	653.9	654.3	0.4
149	14,865	3,284	3,488	71	461	7.1	42 / 29	58 / 42	657.6	657.8	657.6	658.0	0.4
152	15,190	3,284	3,488	146	876	3.7	35 / 112	52 / 139	660.5	660.8	660.5	661.0	0.5
154	15,447	3,111	3,310	86	528	5.9	60 / 26	82 / 54	661.5	661.8	661.5	662.0	0.4
159	15,901	3,111	3,310	93	545	5.7	37 / 56	55 / 80	663.8	663.9	663.8	664.1	0.4
161	16,090	3,111	3,310	139	792	3.9	83 / 56	113 / 78	665.1	665.3	665.1	665.4	0.4
163	16,303	3,111	3,310	109	602	5.2	57 / 52	84 / 65	665.8	666.0	665.8	666.3	0.5
167	16,688	3,111	3,310	158	795	3.9	87 / 71	111 / 85	668.3	668.5	668.3	668.8	0.5
170	17,032	3,111	3,310	136	636	4.9	58 / 77	95 / 102	669.8	670.0	669.8	670.2	0.4
174	17,429	3,111	3,310	126	634	4.9	59 / 67	97 / 93	671.8	672.0	671.8	672.2	0.4
178	17,758	3,111	3,310	218	838	3.7	171 / 47	217 / 112	673.6	673.8	673.6	674.0	0.4
181	18,120	3,111	3,310	230	960	3.2	137 / 93	183 / 135	675.4	675.5	675.4	675.8	0.4
184	18,410	3,111	3,310	122	448	6.9	81 / 41	108 / 74	677.1	677.3	677.1	677.4	0.3
187	18,684	2,836	3,010	43	314	9.0	22 / 22	35 / 26	680.7	680.8	680.7	681.1	0.4
191	19,089	2,836	3,010	68	639	4.4	38 / 30	60 / 38	689.9	690.1	689.9	690.4	0.4
196	19,565	2,836	3,010	130	686	4.1	108 / 22	128 / 45	691.3	691.5	691.3	691.7	0.4
201	20,072	1,695	1,812	133	666	2.5	71 / 62	95 / 89	693.7	693.9	693.7	694.2	0.4
204	20,366	1,695	1,812	111	510	3.3	81 / 30	104 / 46	694.6	694.8	694.6	695.0	0.4
208	20,783	1,695	1,812	93	365	4.6	19 / 74	25 / 111	696.6	696.8	696.6	697.0	0.4
211	21,113	1,695	1,812	189	635	2.7	116 / 73	156 / 96	699.2	699.4	699.2	699.7	0.5
216	21,580	1,695	1,812	151	567	3.0	122 / 29	157 / 76	701.4	701.6	701.4	701.8	0.4
Stony Creek Tributary													
6	563	1,516	1,753	56	252	6.0	28 / 28	136 / 29	641.5[1]	642.8[1]	637.0	637.2	0.2
8	823	1,516	1,753	37	169	9.0	19 / 19	28 / 19	641.5[1]	642.8[1]	639.0	639.2	0.2
10	1,044	1,516	1,753	45	246	6.2	21 / 24	34 / 43	642.0	642.8[1]	642.0	642.2	0.1
15	1,467	1,516	1,753	70	327	4.6	19 / 50	27 / 105	644.6	645.1	644.6	645.0	0.4
21	2,076	1,516	1,753	102	650	2.3	29 / 74	38 / 94	652.2	652.4	652.2	652.6	0.5
23	2,318	1,516	1,753	74	436	3.5	21 / 53	47 / 74	652.6	652.9	652.6	653.0	0.4
26	2,623	1,516	1,753	67	316	4.8	17 / 50	24 / 72	653.7	654.1	653.7	654.1	0.4
29	2,859	1,516	1,753	39	190	8.0	15 / 24	15 / 24	655.9	656.3	655.9	656.3	0.4
31	3,123	1,516	1,753	56	341	4.4	29 / 27	68 / 43	659.1	659.7	659.1	659.3	0.2
34	3,388	1,516	1,753	44	193	7.8	27 / 17	53 / 24	660.6	661.0	660.6	661.1	0.5
37	3,734	1,516	1,753	57	327	4.6	35 / 23	47 / 35	664.2	664.6	664.2	664.6	0.4
41	4,063	1,516	1,753	50	229	6.6	33 / 18	53 / 21	665.8	666.3	665.8	666.2	0.3
44	4,402	1,516	1,753	62	304	5.0	45 / 17	67 / 43	668.3	668.6	668.3	668.7	0.4
47	4,695	1,516	1,753	46	240	6.3	25 / 21	70 / 21	669.8	670.2	669.8	670.3	0.5
50	4,955	1,400	1,626	64	246	5.7	17 / 47	36 / 93	671.9	672.3	671.9	672.2	0.3
52	5,201	1,400	1,626	44	209	6.7	28 / 16	77 / 27	674.4	674.7	674.4	674.9	0.5
54	5,447	1,400	1,626	38	181	7.7	19 / 19	33 / 20	677.3	677.7	677.3	677.8	0.4
57	5,724	1,400	1,626	59	215	6.5	17 / 42	21 / 75	681.0	681.5	681.0	681.2	0.2

		1% Flood Discharges		Floodway			Non-Encroachment Offsets		Water Surface Elevation				
Cross Section	Distance (Feet Above Mouth)	Existing Land Use Conditions	Future Land Use Conditions	Width (Feet)	Section Area (Square Feet)	Mean Velocity (Feet Per Second)	Floodway	Community Encroachment Area	Regulatory	1% Annual Chance Future Water-Surface Elevation	Without Floodway	With Floodway	Increase
59	5,898	1,400	1,626	34	207	6.8	17 / 17	21 / 30	682.7	683.0	682.7	683.1	0.4
61	6,141	1,400	1,626	55	271	5.2	22 / 33	41 / 48	684.7	685.2	684.7	685.0	0.3
65	6,452	1,400	1,626	55	319	4.4	38 / 17	66 / 17	686.6	687.1	686.6	687.0	0.4
66	6,609	1,400	1,626	29	167	8.4	15 / 14	15 / 14	687.1	687.4	687.1	687.6	0.5
70	7,021	1,400	1,626	242	1,950	0.7	50 / 192	77 / 208	693.0	693.3	693.0	693.4	0.4
75	7,465	1,400	1,626	135	966	1.5	112 / 23	122 / 33	693.0	693.3	693.0	693.4	0.4
83	8,328	1,400	1,626	210	818	1.7	92 / 119	148 / 177	693.9	694.2	693.9	694.1	0.3
87	8,672	1,400	1,626	206	585	2.4	177 / 29	228 / 60	694.2	694.6	694.2	694.6	0.4
90	9,021	1,291	1,506	161	408	3.2	143 / 19	231 / 30	695.4	695.7	695.4	695.8	0.4
92	9,245	1,291	1,506	224	433	3.0	207 / 17	276 / 17	696.4	696.7	696.4	696.9	0.4
105	10,459	1,291	1,506	108	273	4.7	15 / 93	15 / 153	704.3	704.6	704.3	704.6	0.2
108	10,790	1,291	1,506	57	241	5.4	38 / 19	59 / 28	706.7	707.1	706.7	707.0	0.3
111	11,079	1,291	1,506	39	216	6.0	19 / 19	20 / 90	708.2	708.6	708.2	708.6	0.3
113	11,330	1,142	1,341	109	258	4.4	16 / 94	16 / 137	710.2	710.5	710.2	710.5	0.3
118	11,796	1,142	1,341	91	259	4.4	45 / 46	58 / 76	713.2	713.4	713.2	713.5	0.3
120	12,020	1,142	1,341	113	313	3.6	55 / 59	86 / 94	714.2	714.4	714.2	714.7	0.5
Stowe Branch													
4	421	1,478	1,636	91	536	2.8	50 / 41	64 / 52	571.7	572.0	571.7	572.2	0.5
11	1,064	1,478	1,636	134	506	2.9	16 / 119	16 / 204	573.0	573.3	573.0	573.5	0.5
16	1,615	1,478	1,636	50	248	6.0	16 / 34	16 / 64	576.6	576.9	576.6	577.1	0.5
22	2,215	1,478	1,636	44	235	6.3	28 / 16	68 / 24	580.4	580.7	580.4	580.9	0.4
29	2,856	1,478	1,636	78	319	4.6	15 / 63	20 / 99	584.8	585.1	584.8	585.3	0.5
37	3,659	1,322	1,460	67	279	4.7	50 / 17	78 / 52	589.7	590.0	589.7	590.2	0.5
41	4,143	1,322	1,460	155	1,206	1.1	94 / 61	105 / 71	597.1	597.2	597.1	597.5	0.5
Sugar Creek													
0	2	16,996	18,889	282	4,057	4.2	204 / 77	230 / 96	537.9	538.8	537.9	538.4	0.5
7	712	16,996	18,889	481	6,557	2.6	307 / 174	334 / 214	539.1	540.0	539.1	539.6	0.5
18	1,752	16,996	18,889	763	12,063	1.4	524 / 239	572 / 265	540.4	541.4	540.4	540.9	0.5
30	2,967	16,996	18,889	939	14,368	1.2	702 / 238	731 / 280	540.7	541.7	540.7	541.2	0.5
41	4,092	16,996	18,889	1,075	11,206	1.5	453 / 622	692 / 697	541.3	542.1	541.3	541.7	0.4
49	4,867	16,996	18,889	1,321	10,848	1.6	295 / 1026	348 / 1026	541.6	542.4	541.6	542.0	0.5
60	5,972	16,996	18,889	2,008	19,557	0.9	1087 / 921	1548 / 1106	541.9	542.7	541.9	542.4	0.5
69	6,852	16,996	18,889	1,080	11,711	1.4	657 / 423	707 / 423	543.4	543.9	543.4	543.9	0.5
82	8,152	16,996	18,889	416	6,091	2.8	162 / 254	189 / 274	544.1	544.6	544.1	544.6	0.5
91	9,052	16,996	18,889	1,090	10,816	1.6	202 / 889	279 / 1026	544.9	545.5	544.9	545.4	0.5
101	10,087	16,996	18,889	378	4,688	3.6	283 / 95	322 / 98	545.0	545.6	545.0	545.4	0.4
109	10,852	16,996	18,889	662	8,225	2.1	442 / 220	613 / 266	546.3	547.0	546.3	546.8	0.5
118	11,802	16,996	18,889	399	4,829	3.5	185 / 214	247 / 802	546.9	547.7	546.9	547.5	0.5
128	12,772	16,996	18,889	450	5,545	3.1	379 / 71	546 / 101	548.0	548.5	548.0	548.6	0.5
137	13,652	16,996	18,889	476	6,009	2.8	281 / 195	364 / 237	548.9	549.5	548.9	549.4	0.5
146	14,552	16,996	18,889	441	5,271	3.2	211 / 230	261 / 274	549.8	550.4	549.8	550.3	0.5
153	15,252	16,996	18,889	310	4,439	3.8	124 / 186	148 / 199	551.4	552.1	551.4	551.9	0.5
161	16,052	16,996	18,889	243	3,296	5.2	94 / 149	110 / 157	552.4	553.1	552.4	552.9	0.5
170	17,022	16,687	18,467	431	5,841	2.9	87 / 344	190 / 387	554.8	555.7	554.8	555.3	0.5
180	17,952	16,687	18,467	1,021	13,551	1.2	447 / 573	691 / 603	555.6	556.4	555.6	556.1	0.5
191	19,052	16,687	18,467	409	5,785	2.9	124 / 285	165 / 385	558.3	559.2	558.3	558.3	0.0
203	20,252	16,687	18,467	214	3,035	5.5	59 / 155	72 / 195	558.9	559.8	558.9	559.1	0.2
215	21,452	16,687	18,467	265	3,934	4.2	228 / 36	265 / 47	561.3	562.3	561.3	561.7	0.3
227	22,652	16,687	18,467	266	4,071	4.1	215 / 51	230 / 67	563.9	564.9	563.9	564.3	0.4

		1% Flood Discharges		Floodway			Non-Encroachment Offsets		Water Surface Elevation				
Cross Section	Distance (Feet Above Mouth)	Existing Land Use Conditions	Future Land Use Conditions	Width (Feet)	Section Area (Square Feet)	Mean Velocity (Feet Per Second)	Floodway	Community Encroachment Area	Regulatory	1% Annual Chance Future Water-Surface Elevation	Without Floodway	With Floodway	Increase
239	23,852	16,687	18,467	123	2,193	7.6	44 / 79	52 / 99	564.9	565.9	564.9	565.1	0.2
248	24,752	16,687	18,467	288	4,391	3.8	88 / 200	93 / 258	566.7	567.8	566.7	567.2	0.5
259	25,902	16,687	18,467	600	10,285	1.6	290 / 311	325 / 331	569.1	570.4	569.1	569.6	0.5
267	26,707	16,687	18,467	456	7,562	2.2	291 / 165	320 / 199	569.3	570.6	569.3	569.8	0.5
279	27,852	16,687	18,467	236	3,239	5.2	99 / 137	119 / 155	569.9	571.1	569.9	570.4	0.5
289	28,917	16,687	18,467	364	5,680	2.9	196 / 168	213 / 209	571.9	573.1	571.9	572.4	0.5
300	30,042	16,687	18,467	669	9,740	1.7	490 / 179	517 / 308	572.7	573.8	572.7	573.2	0.5
311	31,107	16,687	18,467	181	2,565	6.5	68 / 113	72 / 122	573.3	574.4	573.3	573.8	0.5
327	32,702	16,687	18,467	266	4,346	3.8	180 / 86	201 / 99	576.4	577.5	576.4	576.7	0.4
342	34,152	16,687	18,467	491	8,509	2.0	333 / 158	388 / 242	577.9	579.0	577.9	578.3	0.4
351	35,117	14,493	15,764	745	11,635	1.3	38 / 706	78 / 811	578.3	579.3	578.3	578.7	0.4
363	36,257	14,493	15,764	548	7,798	1.9	196 / 353	292 / 416	578.6	579.7	578.6	579.0	0.4
373	37,252	14,493	15,764	446	5,511	2.6	354 / 91	554 / 104	578.9	579.9	578.9	579.3	0.4
385	38,502	14,493	15,764	368	4,988	2.9	301 / 67	324 / 202	579.8	580.7	579.8	580.2	0.4
394	39,352	14,493	15,764	515	5,312	2.7	447 / 68	977 / 98	580.5	581.4	580.5	580.9	0.4
406	40,552	14,493	15,764	578	7,642	1.9	387 / 191	436 / 286	581.5	583.9	581.5	582.0	0.4
418	41,817	14,493	15,764	625	8,687	1.7	71 / 554	109 / 554	582.7	584.7	582.7	583.2	0.5
427	42,702	14,493	15,764	832	9,072	1.6	400 / 432	400 / 432	583.1	585.0	583.1	583.6	0.5
436	43,552	14,493	15,764	560	5,926	2.5	385 / 175	451 / 305	583.4	585.2	583.4	583.9	0.5
445	44,537	14,493	15,764	300	3,617	4.0	143 / 157	143 / 219	584.2	585.7	584.2	584.7	0.5
455	45,502	14,493	15,764	567	6,457	2.2	292 / 275	375 / 344	585.3	586.7	585.3	585.8	0.5
464	46,352	14,493	15,764	427	5,136	2.8	184 / 244	208 / 272	586.0	587.3	586.0	586.5	0.5
475	47,532	14,493	15,764	658	6,083	2.4	260 / 399	334 / 460	587.3	588.4	587.3	587.8	0.5
485	48,512	14,493	15,764	737	7,281	2.0	444 / 293	533 / 442	588.0	589.0	588.0	588.6	0.5
495	49,452	14,493	15,764	609	6,894	2.1	367 / 242	398 / 294	588.6	589.5	588.6	589.1	0.5
506	50,602	14,493	15,764	520	5,716	2.5	149 / 370	569 / 417	590.8	591.6	590.8	590.9	0.1
517	51,692	14,493	15,764	517	6,075	2.4	99 / 419	140 / 443	591.8	592.5	591.8	592.2	0.4
527	52,702	14,493	15,764	869	9,705	1.5	105 / 764	153 / 806	592.4	593.1	592.4	592.8	0.4
537	53,652	14,493	15,764	269	3,111	4.7	120 / 150	182 / 188	592.7	593.4	592.7	593.1	0.4
549	54,912	14,493	15,764	709	5,562	2.6	449 / 381	566 / 392	594.2	594.9	594.2	594.7	0.5
559	55,947	14,493	15,764	725	7,306	2.0	288 / 437	327 / 567	595.1	595.8	595.1	595.6	0.5
570	56,952	14,493	15,764	406	4,067	3.6	297 / 109	422 / 223	595.9	596.6	595.9	596.3	0.4
578	57,752	14,493	15,764	171	2,149	6.7	46 / 125	80 / 228	596.3	596.9	596.3	596.8	0.5
586	58,552	14,493	15,764	188	2,429	6.0	128 / 59	224 / 76	597.9	598.6	597.9	598.2	0.4
597	59,727	14,493	15,764	93	1,595	9.1	41 / 53	130 / 67	598.8	599.4	598.8	599.2	0.4
608	60,802	14,493	15,764	103	1,626	8.9	67 / 36	81 / 45	601.2	602.0	601.2	601.6	0.5
620	61,952	14,493	15,764	182	2,718	5.3	134 / 48	168 / 77	604.5	605.3	604.5	604.8	0.4
631	63,052	14,493	15,764	328	4,549	3.2	139 / 189	191 / 264	608.0	608.4	608.0	608.5	0.5
640	63,970	14,493	15,764	406	5,443	2.7	220 / 185	254 / 223	608.6	609.1	608.6	609.1	0.5
Swan Run													
5	470	1,559	1,661	40	231	6.8	17 / 24	20 / 24	562.6[1]	563.8[1]	554.4	554.6	0.1
15	1,470	1,559	1,661	105	558	2.8	30 / 75	55 / 75	562.6[1]	563.8[1]	560.6	561.0	0.4
22	2,170	1,559	1,661	38	335	4.7	13 / 25	19 / 65	562.6[1]	563.8[1]	562.2	562.6	0.4
35	3,470	1,559	1,661	47	311	5.0	22 / 25	22 / 25	564.3	564.6	564.3	564.7	0.4
44	4,370	1,559	1,661	100	394	4.0	30 / 70	35 / 70	571.0	571.2	571.0	571.0	0.0
55	5,470	1,206	1,300	125	342	3.5	70 / 55	120 / 90	577.3	577.5	577.3	577.4	0.0
62	6,207	1,206	1,300	34	169	7.1	14 / 20	21 / 25	583.5	583.7	583.5	583.5	0.0
72	7,170	1,121	1,215	34	146	7.7	10 / 25	18 / 27	593.7	594.0	593.7	594.2	0.5
Taggart Creek													

		1% Flood Discharges		Floodway			Non-Encroachment Offsets		Water Surface Elevation				
Cross Section	Distance (Feet Above Mouth)	Existing Land Use Conditions	Future Land Use Conditions	Width (Feet)	Section Area (Square Feet)	Mean Velocity (Feet Per Second)	Floodway	Community Encroachment Area	Regulatory	1% Annual Chance Future Water-Surface Elevation	Without Floodway	With Floodway	Increase
9	850	5,120	5,474	64	825	6.2	33 / 31	44 / 62	608.6[1]	609.1[1]	603.2	603.6	0.4
21	2,100	5,120	5,474	172	1,572	3.3	146 / 27	183 / 82	609.2	610.0	609.2	609.3	0.2
31	3,100	5,120	5,474	97	1,250	4.1	75 / 22	90 / 35	612.5	613.1	612.5	613.0	0.5
40	3,980	4,933	5,267	413	3,933	1.3	335 / 78	368 / 110	613.7	614.3	613.7	614.1	0.5
52	5,200	4,753	5,055	94	812	5.9	48 / 46	65 / 63	614.3	614.9	614.3	614.8	0.5
66	6,550	4,532	4,838	46	675	6.7	22 / 24	29 / 26	622.3	623.5	622.3	622.7	0.4
73	7,290	4,532	4,838	53	566	8.0	26 / 27	31 / 32	624.4	625.2	624.4	624.8	0.4
83	8,250	3,449	3,670	228	1,805	1.9	115 / 113	147 / 126	628.6	629.0	628.6	629.1	0.5
92	9,200	3,449	3,670	124	544	6.3	67 / 56	93 / 105	630.1	630.4	630.1	630.5	0.4
102	10,190	3,449	3,670	117	1,094	3.2	22 / 95	140 / 140	637.9	638.6	637.9	637.9	0.0
114	11,410	3,449	3,670	150	1,307	2.6	75 / 75	120 / 105	640.2	640.9	640.2	640.6	0.4
123	12,345	1,940	2,014	55	435	4.5	30 / 25	35 / 35	643.2	643.4	643.2	643.2	0.0
132	13,240	1,940	2,014	39	285	6.8	20 / 20	29 / 41	646.8	647.1	646.8	646.8	0.0
140	13,960	1,646	1,725	64	343	4.8	32 / 32	32 / 32	649.1	649.2	649.1	649.4	0.4
150	14,950	1,646	1,725	38	584	2.8	19 / 19	99 / 66	676.4	678.3	676.4	676.4	0.0
161	16,100	1,646	1,725	82	705	2.3	62 / 20	127 / 33	676.7	678.5	676.7	677.0	0.3
173	17,285	1,304	1,328	190	1,001	1.3	68 / 122	68 / 122	680.4	681.2	680.4	680.8	0.4
182	18,200	1,260	1,401	94	303	4.2	35 / 59	35 / 59	682.6	682.8	682.6	683.2	0.5
Ticer Branch													
7	730	2,360	3,172	302	1,432	1.6	40 / 262	86 / 299	578.8[1]	580.2[1]	577.0	577.5	0.5
13	1,337	2,360	3,172	247	1,031	2.3	33 / 214	79 / 261	578.8[1]	580.2[1]	578.2	578.7	0.5
20	1,964	2,360	3,172	196	820	2.9	18 / 178	18 / 218	580.5	581.1	580.5	581.0	0.5
26	2,590	1,768	2,224	114	602	2.9	59 / 55	62 / 55	583.0	583.8	583.0	583.5	0.5
32	3,239	1,768	2,224	83	371	4.8	54 / 29	54 / 29	585.3	587.5	585.3	585.6	0.3
38	3,800	1,768	2,224	152	549	3.2	22 / 130	22 / 130	587.2	588.6	587.2	587.5	0.3
46	4,620	1,768	2,224	41	258	6.8	21 / 21	21 / 34	592.0	592.7	592.0	592.2	0.2
53	5,264	1,768	2,224	59	234	7.6	41 / 18	74 / 18	597.1	597.8	597.1	597.3	0.3
59	5,894	1,768	2,224	105	715	2.5	73 / 32	83 / 33	607.1	609.9	607.1	607.1	0.0
66	6,596	1,768	2,224	85	260	6.8	66 / 19	77 / 29	609.5	610.5	609.5	609.5	0.0
72	7,156	1,768	2,224	31	143	12.4	13 / 18	14 / 18	628.1	629.1	628.1	628.1	0.0
78	7,791	774	961	152	452	1.7	78 / 74	109 / 85	643.1	643.7	643.1	643.5	0.4
82	8,151	774	961	65	270	2.9	17 / 48	26 / 62	643.9	644.2	643.9	644.2	0.3
Toby Creek													
8	845	2,598	2,908	332	1,208	2.2	306 / 26	384 / 27	600.9[1]	602.0[1]	592.9	593.4	0.4
16	1,618	2,598	2,908	293	1,025	2.5	251 / 42	393 / 47	600.9[1]	602.0[1]	594.7	595.1	0.4
25	2,464	2,598	2,908	160	708	3.7	113 / 47	157 / 116	600.9[1]	602.0[1]	596.8	597.3	0.5
32	3,150	2,598	2,908	255	1,188	2.2	170 / 85	217 / 201	600.9[1]	602.0[1]	599.1	599.6	0.5
35	3,531	2,598	2,908	184	716	3.6	99 / 85	189 / 86	600.9[1]	602.0[1]	599.9	600.3	0.4
38	3,802	2,598	2,908	90	442	5.9	65 / 25	84 / 41	600.9[1]	602.0[1]	600.7	601.0	0.4
40	4,031	2,598	2,908	132	540	4.8	100 / 32	136 / 41	601.7	602.0[1]	601.7	602.1	0.4
46	4,577	2,598	2,908	138	739	3.5	94 / 44	108 / 68	605.1	605.3	605.1	605.5	0.4
47	4,721	2,537	3,058	145	692	3.7	78 / 67	92 / 85	605.4	605.6	605.4	605.8	0.4
49	4,857	2,537	3,058	148	642	4.0	66 / 82	85 / 95	605.7	606.0	605.7	606.1	0.4
49	4,883	2,537	3,058	164	612	4.1	77 / 87	113 / 97	605.9	606.2	605.9	606.2	0.4
52	5,176	2,537	3,058	402	1,990	1.3	114 / 288	135 / 303	606.5	606.9	606.5	607.1	0.6
56	5,568	2,537	3,058	251	1,046	2.4	80 / 170	115 / 209	607.0	607.5	607.0	607.5	0.4
59	5,885	2,537	3,058	251	1,143	2.2	138 / 113	172 / 140	608.0	608.5	608.0	608.5	0.4
66	6,577	2,537	3,058	361	1,989	1.3	179 / 182	269 / 231	611.1	612.4	611.1	611.4	0.3
69	6,883	2,537	3,058	380	1,867	1.4	238 / 142	318 / 182	611.4	612.6	611.4	611.7	0.3

		1% Flood Discharges		Floodway			Non-Encroachment Offsets		Water Surface Elevation				
Cross Section	Distance (Feet Above Mouth)	Existing Land Use Conditions	Future Land Use Conditions	Width (Feet)	Section Area (Square Feet)	Mean Velocity (Feet Per Second)	Floodway	Community Encroachment Area	Regulatory	1% Annual Chance Future Water-Surface Elevation	Without Floodway	With Floodway	Increase
72	7,231	2,537	3,058	355	1,538	1.6	210 / 145	283 / 215	611.8	612.9	611.8	612.2	0.4
76	7,611	2,537	3,058	350	1,281	2.0	212 / 138	250 / 168	612.4	613.3	612.4	612.9	0.5
86	8,610	2,537	3,058	135	808	3.1	113 / 22	142 / 53	617.4	619.1	617.4	617.4	0.0
90	9,010	2,537	3,058	254	1,746	1.4	136 / 118	156 / 175	620.9	623.5	620.9	620.9	0.1
92	9,161	2,537	3,058	172	1,251	2.0	85 / 87	122 / 134	620.9	623.5	620.9	621.0	0.1
97	9,657	2,537	3,058	285	2,069	1.2	97 / 188	131 / 213	621.7	623.7	621.7	622.2	0.4
100	9,952	2,537	3,058	296	1,943	1.3	119 / 177	152 / 197	621.9	623.8	621.9	622.3	0.4
104	10,419	2,537	3,058	419	2,199	1.2	165 / 254	342 / 348	622.3	624.1	622.3	622.7	0.4
108	10,812	2,735	3,374	296	1,395	2.0	129 / 167	254 / 226	622.5	624.2	622.5	623.0	0.5
112	11,221	2,735	3,374	182	787	3.5	124 / 58	199 / 111	623.1	624.5	623.1	623.7	0.5
117	11,679	2,735	3,374	188	633	4.3	109 / 80	177 / 146	624.6	625.5	624.6	625.0	0.5
121	12,143	2,735	3,374	55	268	10.2	29 / 26	94 / 116	626.4	627.5	626.4	626.9	0.5
124	12,360	2,735	3,374	55	412	6.6	33 / 22	133 / 55	628.9	629.4	628.9	629.2	0.3
126	12,594	2,735	3,374	62	452	6.0	35 / 27	172 / 53	629.5	630.1	629.5	629.9	0.5
130	13,029	2,521	2,973	104	504	5.0	55 / 49	129 / 121	630.9	631.7	630.9	631.3	0.4
133	13,313	2,521	2,973	151	420	6.0	44 / 107	95 / 126	631.5	632.2	631.5	631.9	0.4
135	13,549	2,521	2,973	86	462	5.4	26 / 60	60 / 105	633.1	633.6	633.1	633.4	0.3
140	13,962	2,521	2,973	184	1,451	1.7	110 / 74	145 / 85	639.4	639.8	639.4	639.8	0.4
144	14,350	2,014	2,422	74	531	3.8	36 / 38	66 / 38	639.5	639.9	639.5	640.0	0.5
147	14,729	2,014	2,422	120	447	4.5	95 / 25	130 / 25	640.5	641.1	640.5	641.0	0.5
149	14,928	2,014	2,422	61	275	7.3	31 / 30	48 / 35	641.6	642.1	641.6	642.1	0.5
152	15,166	2,014	2,422	40	218	9.2	20 / 20	20 / 20	644.2	644.7	644.2	644.3	0.1
154	15,357	2,014	2,422	31	175	11.5	17 / 14	17 / 14	646.2	646.8	646.2	646.2	0.0
156	15,645	2,014	2,422	110	344	5.9	47 / 63	49 / 65	651.9	652.2	651.9	651.8	0.0
158	15,795	2,014	2,422	43	194	10.4	24 / 19	26 / 21	654.0	654.8	654.0	654.0	0.0
160	15,971	1,714	2,043	68	212	8.1	18 / 50	19 / 52	657.5	658.2	657.5	657.5	0.0
164	16,427	1,714	2,043	86	659	2.6	41 / 45	48 / 61	667.7	670.2	667.7	667.7	0.0
166	16,600	1,714	2,043	29	190	9.0	14 / 15	14 / 20	667.9	670.3	667.9	668.0	0.1
167	16,749	1,714	2,043	35	160	10.7	21 / 14	33 / 16	672.2	672.6	672.2	672.3	0.1
169	16,947	1,714	2,043	41	234	7.3	15 / 26	23 / 47	675.4	676.0	675.4	676.0	0.5
171	17,120	1,714	2,043	60	253	6.8	27 / 33	51 / 54	676.8	677.3	676.8	677.2	0.4
174	17,375	1,714	2,043	78	423	4.0	28 / 50	34 / 59	678.6	679.3	678.6	679.1	0.5
Torrence Creek													
7	749	6,272	6,951	710	4,180	1.5	279 / 431	343 / 560	675.0[1]	675.4[1]	671.3	671.8	0.5
13	1,290	6,272	6,951	571	3,358	1.9	531 / 40	681 / 40	675.0[1]	675.4[1]	671.9	672.4	0.5
22	2,246	6,272	6,951	496	2,820	2.2	325 / 172	386 / 259	675.0[1]	675.4[1]	673.5	674.0	0.5
30	3,034	6,272	6,951	573	2,776	2.3	425 / 148	500 / 211	675.0[1]	675.4[1]	674.8	675.3	0.5
39	3,876	5,115	5,758	546	3,802	1.3	291 / 254	332 / 316	678.3	678.6	678.3	678.6	0.4
48	4,762	5,115	5,758	724	3,144	1.6	195 / 529	296 / 581	679.2	679.6	679.2	679.6	0.4
54	5,405	3,761	4,350	337	1,479	2.5	234 / 103	299 / 136	680.9	681.3	680.9	681.4	0.5
63	6,256	3,761	4,350	190	979	3.8	57 / 133	73 / 180	684.5	684.9	684.5	685.0	0.5
68	6,782	3,761	4,350	176	1,124	3.4	149 / 27	167 / 44	686.8	687.3	686.8	687.3	0.5
75	7,465	3,761	4,350	121	1,013	3.7	68 / 53	88 / 73	689.1	689.7	689.1	689.6	0.5
81	8,114	3,260	3,785	280	2,185	1.5	128 / 152	250 / 205	690.9	691.3	690.9	691.1	0.2
86	8,580	3,260	3,785	320	2,019	1.6	277 / 43	338 / 97	691.1	691.4	691.1	691.4	0.3
93	9,329	3,260	3,785	295	939	3.5	51 / 244	51 / 264	691.6	692.0	691.6	692.0	0.4
102	10,215	3,260	3,785	105	557	5.9	31 / 74	34 / 114	696.1	697.2	696.1	696.6	0.5
110	11,009	2,976	3,552	63	386	7.7	42 / 42	45 / 45	698.7	699.4	698.7	698.9	0.2
118	11,766	2,976	3,552	238	983	3.0	32 / 206	53 / 275	702.8	703.8	702.8	703.2	0.4

		1% Flood Discharges		Floodway			Non-Encroachment Offsets		Water Surface Elevation				
Cross Section	Distance (Feet Above Mouth)	Existing Land Use Conditions	Future Land Use Conditions	Width (Feet)	Section Area (Square Feet)	Mean Velocity (Feet Per Second)	Floodway	Community Encroachment Area	Regulatory	1% Annual Chance Future Water-Surface Elevation	Without Floodway	With Floodway	Increase
126	12,553	1,807	2,166	119	629	2.9	99 / 21	111 / 32	706.7	707.6	706.7	706.7	0.0
134	13,415	1,391	1,513	205	671	2.1	190 / 14	298 / 18	708.1	708.7	708.1	708.5	0.4
139	13,864	1,391	1,513	172	367	3.8	139 / 32	180 / 59	710.2	710.3	710.2	710.7	0.4
143	14,326	1,391	1,513	187	510	2.7	16 / 171	26 / 215	713.2	713.4	713.2	713.6	0.5
147	14,660	1,391	1,513	26	156	8.9	13 / 13	16 / 16	715.2	715.3	715.2	715.6	0.4
152	15,205	1,391	1,513	60	683	2.0	30 / 30	30 / 30	725.6	727.5	725.6	725.6	0.0
157	15,689	1,391	1,513	40	740	1.9	20 / 20	20 / 63	733.9	736.5	733.9	733.9	0.0
164	16,439	2,096	2,411	107	1,462	1.4	45 / 62	160 / 82	734.0	736.7	734.0	734.1	0.0
170	16,952	2,096	2,411	104	1,243	1.7	54 / 50	81 / 163	734.1	736.7	734.1	734.3	0.2
177	17,688	2,096	2,411	179	1,359	1.5	85 / 94	161 / 152	734.3	736.8	734.3	734.7	0.4
180	17,987	737	846	132	785	0.9	43 / 89	76 / 123	734.4	736.9	734.4	734.8	0.5
Torrence Creek Tributary 1													
4	378	1,363	1,451	102	438	3.1	48 / 54	64 / 90	675.0[1]	675.4[1]	673.2	673.7	0.5
9	856	1,363	1,451	66	412	3.3	43 / 24	49 / 46	675.0	675.2	675.0	675.5	0.5
17	1,671	1,385	1,472	250	1,711	0.8	102 / 149	113 / 149	679.8	680.0	679.8	680.3	0.4
25	2,521	1,385	1,472	212	993	1.4	45 / 168	75 / 195	680.3	680.4	680.3	680.7	0.4
30	3,041	1,385	1,472	173	599	2.3	18 / 155	32 / 201	681.1	681.2	681.1	681.5	0.4
37	3,711	1,385	1,472	37	173	8.0	18 / 18	18 / 44	682.9	683.0	682.9	683.4	0.5
44	4,435	1,385	1,472	83	639	2.2	33 / 50	33 / 228	688.0	688.4	688.0	688.5	0.5
50	4,973	1,385	1,472	164	782	1.8	16 / 148	23 / 185	688.4	688.8	688.4	688.9	0.5
58	5,847	1,385	1,472	185	686	2.0	43 / 142	99 / 193	690.6	690.8	690.6	691.1	0.5
63	6,332	1,385	1,472	204	717	1.9	50 / 154	95 / 217	691.6	691.7	691.6	692.1	0.5
72	7,231	1,385	1,472	190	498	2.8	16 / 174	16 / 273	694.2	694.3	694.2	694.6	0.5
78	7,751	1,385	1,472	206	601	2.3	53 / 153	97 / 226	696.0	696.2	696.0	696.5	0.5
85	8,468	1,213	1,326	41	212	5.7	19 / 22	19 / 125	698.9	699.2	698.9	699.1	0.2
92	9,158	1,213	1,326	40	209	5.8	18 / 22	18 / 42	702.4	702.7	702.4	702.4	0.0
101	10,089	1,052	1,085	104	443	2.4	54 / 51	103 / 88	706.8	707.0	706.8	707.2	0.4
107	10,732	1,052	1,085	59	240	4.4	39 / 20	78 / 45	709.1	709.1	709.1	709.5	0.4
111	11,090	1,052	1,085	59	226	4.6	20 / 39	48 / 65	710.7	710.7	710.7	711.1	0.4
117	11,704	1,052	1,085	88	795	1.3	46 / 42	56 / 55	719.7	720.1	719.7	719.7	0.0
125	12,503	1,052	1,085	96	1,020	1.0	49 / 46	142 / 171	725.1	725.3	725.1	725.2	0.1
133	13,337	1,284	1,338	150	983	1.3	63 / 87	117 / 157	725.2	725.3	725.2	725.3	0.2
138	13,846	1,284	1,338	111	548	2.3	68 / 42	118 / 84	725.4	725.5	725.4	725.7	0.3
Torrence Creek Tributary 2													
8	846	1,292	1,353	179	666	1.9	44 / 135	76 / 173	678.3[1]	678.6[1]	676.3	676.9	0.5
17	1,710	1,292	1,353	286	651	2.0	21 / 265	21 / 340	678.7	678.8	678.7	679.2	0.4
23	2,333	1,292	1,353	217	674	1.9	12 / 205	40 / 251	681.0	681.1	681.0	681.5	0.5
31	3,057	1,292	1,353	83	203	6.4	14 / 69	14 / 133	683.9	684.0	683.9	684.2	0.3
37	3,655	1,292	1,353	316	2,554	0.5	105 / 211	125 / 243	691.3	691.5	691.3	691.6	0.3
46	4,650	1,449	1,520	308	1,446	1.0	19 / 290	36 / 334	691.5	691.7	691.5	691.8	0.4
54	5,450	1,449	1,520	63	385	3.8	13 / 51	23 / 252	692.3	692.5	692.3	692.7	0.4
59	5,872	1,449	1,520	135	449	3.2	98 / 37	107 / 183	694.5	694.5	694.5	694.8	0.3
67	6,706	1,449	1,520	71	364	4.0	21 / 50	71 / 83	697.7	697.8	697.6	698.0	0.4
72	7,160	1,449	1,520	78	329	4.4	58 / 20	157 / 58	698.9	699.0	698.9	699.3	0.4
81	8,116	1,116	1,180	46	263	4.2	25 / 22	32 / 60	702.7	702.8	702.6	703.1	0.5
90	9,007	1,116	1,180	60	295	3.8	35 / 25	36 / 26	708.1	708.1	708.1	708.5	0.4
96	9,642	1,116	1,180	104	657	1.7	66 / 38	74 / 51	719.7	721.5	719.7	719.7	0.0
Walker Branch													
10	1,000	4,551	5,131	430	3,581	1.3	250 / 180	330 / 231	570.4[1]	571.2[1]	569.7	570.1	0.4

		1% Flood Discharges		Floodway			Non-Encroachment Offsets		Water Surface Elevation				
Cross Section	Distance (Feet Above Mouth)	Existing Land Use Conditions	Future Land Use Conditions	Width (Feet)	Section Area (Square Feet)	Mean Velocity (Feet Per Second)	Floodway	Community Encroachment Area	Regulatory	1% Annual Chance Future Water-Surface Elevation	Without Floodway	With Floodway	Increase
15	1,450	4,551	5,131	410	3,374	1.4	230 / 180	260 / 214	570.4[1]	571.2[1]	569.9	570.4	0.5
26	2,575	3,181	3,644	520	3,559	0.9	80 / 440	80 / 466	571.2	571.7	571.2	571.7	0.5
37	3,650	3,181	3,644	520	2,468	1.3	381 / 139	493 / 185	572.6	573.0	572.6	573.0	0.5
47	4,700	3,181	3,644	285	1,229	2.6	187 / 98	213 / 98	574.8	575.1	574.8	575.2	0.4
57	5,700	2,863	3,301	260	1,130	2.5	122 / 138	144 / 209	577.9	578.2	577.9	578.4	0.5
66	6,600	2,863	3,301	400	1,327	2.2	130 / 270	136 / 395	580.0	580.3	580.0	580.5	0.5
77	7,700	2,863	3,301	300	1,009	2.8	150 / 150	184 / 268	583.3	583.6	583.3	583.7	0.4
87	8,700	1,721	1,912	220	826	2.1	80 / 140	109 / 183	585.8	586.1	585.8	586.3	0.5
96	9,600	1,721	1,912	310	893	1.9	203 / 107	203 / 107	589.2	589.5	589.2	589.4	0.2
106	10,550	962	1,066	150	794	1.2	70 / 80	208 / 193	595.1	595.5	595.1	595.2	0.1
116	11,600	962	1,066	80	302	3.2	41 / 39	93 / 41	596.3	596.6	596.3	596.8	0.5
Walker Branch Tributary													
7	650	1,549	1,868	36	223	6.9	19 / 17	29 / 42	584.2	584.8	584.2	584.5	0.3
15	1,455	1,549	1,868	25	163	9.5	12 / 13	41 / 41	591.3	591.9	591.3	591.4	0.1
25	2,500	1,549	1,868	26	182	8.5	13 / 13	31 / 99	596.4	597.1	596.4	596.9	0.4
34	3,445	1,250	1,551	45	224	5.6	25 / 20	31 / 20	601.5	602.1	601.5	601.9	0.5
44	4,350	1,078	1,318	225	1,327	0.8	134 / 91	162 / 107	609.3	609.5	609.3	609.8	0.5
West Branch Rocky River													
2	201	8,344	8,813	1,059	6,378	1.3	577 / 482	655 / 485	646.1[1]	646.5[1]	643.9	644.2	0.3
8	768	8,344	8,813	960	6,260	1.3	725 / 235	761 / 410	646.1[1]	646.5[1]	644.1	644.4	0.3
14	1,413	8,344	8,813	735	3,397	2.5	628 / 107	677 / 293	646.1[1]	646.5[1]	644.3	644.6	0.3
19	1,922	8,344	8,813	398	1,862	4.5	370 / 28	410 / 144	646.1[1]	646.5[1]	644.7	645.1	0.3
24	2,359	8,344	8,813	356	1,990	4.2	259 / 97	300 / 221	646.1[1]	646.5[1]	645.6	646.0	0.4
29	2,945	8,344	8,813	288	2,024	4.1	256 / 32	298 / 112	648.9	649.2	648.9	649.2	0.4
34	3,410	8,344	8,813	317	2,363	3.5	280 / 37	313 / 37	649.6	649.9	649.6	650.0	0.4
41	4,093	8,344	8,813	237	1,791	4.7	173 / 64	186 / 101	650.4	650.7	650.4	650.8	0.4
46	4,602	8,344	8,813	211	1,695	4.9	183 / 28	207 / 28	651.4	651.7	651.4	651.8	0.4
51	5,092	8,344	8,813	466	3,941	2.1	253 / 213	335 / 382	652.6	652.9	652.6	653.1	0.4
55	5,469	8,344	8,813	475	3,513	2.4	264 / 211	355 / 230	652.8	653.1	652.8	653.3	0.5
58	5,837	8,344	8,813	290	2,587	3.2	43 / 247	53 / 287	653.3	653.6	653.3	653.8	0.5
62	6,203	8,344	8,813	550	4,211	2.0	203 / 347	242 / 371	654.0	654.3	654.0	654.5	0.5
66	6,586	8,344	8,813	717	5,591	1.5	254 / 463	261 / 594	654.4	654.7	654.4	654.9	0.5
68	6,819	8,344	8,813	679	5,026	1.7	483 / 196	511 / 205	654.5	654.9	654.5	655.0	0.5
77	7,740	5,207	5,440	421	2,981	1.8	104 / 317	152 / 333	656.1	656.4	656.1	656.4	0.3
83	8,305	5,207	5,440	80	806	6.5	40 / 40	40 / 40	656.4	656.7	656.4	656.9	0.5
85	8,515	5,207	5,440	321	2,430	2.1	268 / 53	350 / 77	657.3	657.6	657.3	657.6	0.3
92	9,153	5,207	5,440	465	3,313	1.6	273 / 192	363 / 337	659.3	659.4	659.3	659.6	0.3
99	9,884	5,207	5,440	205	1,493	3.5	71 / 134	115 / 168	659.6	659.7	659.6	660.1	0.5
106	10,552	5,207	5,440	521	3,833	1.4	298 / 224	301 / 225	661.0	661.2	661.0	661.5	0.5
110	10,981	5,207	5,440	301	2,321	2.2	267 / 35	294 / 68	661.4	661.5	661.4	661.8	0.4
116	11,623	5,207	5,440	662	4,332	1.2	364 / 297	433 / 384	662.1	662.3	662.1	662.6	0.4
122	12,152	5,207	5,440	641	3,852	1.4	351 / 289	433 / 339	662.4	662.6	662.4	662.8	0.5
128	12,753	5,207	5,440	496	2,633	2.0	230 / 266	260 / 323	662.8	663.0	662.8	663.3	0.5
135	13,538	5,207	5,440	441	1,860	2.8	218 / 223	283 / 283	664.2	664.4	664.2	664.6	0.4
143	14,274	5,207	5,440	425	2,003	2.6	303 / 122	340 / 221	665.5	665.6	665.5	665.9	0.4
149	14,923	5,207	5,440	278	1,207	4.3	213 / 65	271 / 71	666.2	666.3	666.2	666.6	0.4
153	15,349	5,207	5,440	99	610	8.5	41 / 58	103 / 58	667.0	667.1	667.0	667.3	0.3
161	16,052	5,207	5,440	235	1,105	4.7	136 / 99	177 / 143	669.7	669.8	669.7	670.1	0.4
167	16,695	5,207	5,440	255	1,119	4.7	94 / 161	101 / 253	671.0	671.2	671.0	671.4	0.4

		1% Flood Discharges		Floodway			Non-Encroachment Offsets		Water Surface Elevation				
Cross Section	Distance (Feet Above Mouth)	Existing Land Use Conditions	Future Land Use Conditions	Width (Feet)	Section Area (Square Feet)	Mean Velocity (Feet Per Second)	Floodway	Community Encroachment Area	Regulatory	1% Annual Chance Future Water-Surface Elevation	Without Floodway	With Floodway	Increase
171	17,073	3,912	4,138	195	890	4.4	98 / 97	117 / 236	671.8	672.0	671.8	672.2	0.4
175	17,516	3,912	4,138	269	1,173	3.3	176 / 92	198 / 127	672.9	673.1	672.9	673.4	0.5
179	17,896	3,912	4,138	174	1,046	3.7	107 / 67	145 / 105	673.4	673.6	673.4	673.8	0.4
184	18,410	3,912	4,138	265	1,077	3.6	48 / 217	116 / 270	674.1	674.3	674.1	674.5	0.4
192	19,220	3,912	4,138	209	844	4.6	181 / 29	244 / 32	676.3	676.5	676.3	676.7	0.4
200	20,008	3,912	4,138	182	940	4.2	150 / 32	195 / 50	678.1	678.3	678.1	678.5	0.4
203	20,300	3,912	4,138	232	1,032	3.8	190 / 42	286 / 42	678.6	678.8	678.6	679.0	0.4
208	20,770	3,780	4,026	103	560	6.8	74 / 28	108 / 29	679.5	679.6	679.5	679.8	0.3
215	21,456	3,780	4,026	122	747	5.1	88 / 34	103 / 67	681.8	682.1	681.8	682.2	0.3
221	22,108	3,780	4,026	331	2,146	1.8	256 / 74	276 / 131	684.6	685.0	684.6	684.9	0.4
224	22,433	3,780	4,026	385	2,222	1.7	294 / 91	469 / 206	684.7	685.2	684.7	685.1	0.4
228	22,836	3,780	4,026	344	2,195	1.7	257 / 87	415 / 145	684.8	685.2	684.8	685.2	0.4
233	23,268	3,780	4,026	262	1,662	2.3	166 / 96	173 / 107	684.9	685.3	684.9	685.4	0.5
West Branch Rocky River Tributary													
1	112	1,262	1,277	24	118	10.7	12 / 12	12 / 12	671.8[1]	672.0[1]	664.3	664.3	0.0
5	516	1,262	1,277	95	200	6.3	98 / 12	98 / 32	672.3	672.4	672.3	672.3	0.0
10	976	1,262	1,277	120	454	2.8	105 / 15	125 / 15	674.7	674.8	674.7	675.1	0.3
14	1,362	1,262	1,277	92	475	2.7	69 / 23	114 / 27	675.3	675.3	675.3	675.6	0.3
19	1,864	1,262	1,277	46	148	8.5	60 / 11	125 / 11	675.6	675.6	675.6	675.8	0.2
24	2,397	1,262	1,277	115	382	3.3	63 / 52	90 / 67	678.4	678.5	678.4	678.7	0.3
29	2,908	1,262	1,277	145	228	5.5	75 / 70	115 / 117	679.7	679.7	679.7	679.8	0.1
32	3,230	1,262	1,277	181	473	2.7	79 / 102	148 / 141	681.6	681.6	681.6	682.0	0.4
37	3,713	1,262	1,277	148	378	3.3	74 / 74	93 / 107	683.1	683.1	683.1	683.5	0.4
40	4,043	1,256	1,270	160	410	3.1	65 / 95	117 / 134	684.8	684.8	684.8	684.9	0.1
47	4,692	1,256	1,270	240	508	2.5	59 / 181	86 / 269	687.3	687.4	687.3	687.8	0.5
51	5,140	1,256	1,270	110	286	4.4	26 / 84	36 / 190	689.4	689.4	689.4	689.8	0.4
56	5,650	1,164	1,177	179	354	3.3	29 / 151	32 / 179	692.2	692.2	692.2	692.5	0.3
59	5,886	1,164	1,177	199	380	3.1	56 / 143	91 / 194	694.0	694.1	694.0	694.1	0.0
62	6,227	1,164	1,177	90	262	4.4	72 / 18	78 / 18	696.1	696.1	696.1	696.6	0.4
66	6,577	1,164	1,177	177	502	2.3	133 / 44	149 / 111	697.8	697.8	697.8	698.0	0.3
70	7,042	1,164	1,177	175	250	4.7	182 / 60	192 / 87	699.7	699.7	699.7	699.8	0.1
75	7,486	1,082	1,094	236	609	1.8	169 / 67	204 / 150	702.6	702.6	702.6	703.0	0.4
81	8,122	1,082	1,094	195	681	1.6	31 / 164	61 / 214	706.2	706.2	706.2	706.6	0.4
84	8,391	1,082	1,094	160	439	2.5	34 / 126	34 / 186	706.7	706.8	706.7	707.2	0.5
87	8,686	1,082	1,094	174	515	2.1	18 / 156	19 / 256	707.6	707.7	707.6	708.1	0.5

* Values not computed for this station

1- Elevations include backwater

2- Corresponds with Lettered Cross Section 50 on FIRM Panel

6.4. Coastal Flood Hazard Mapping

This section is not applicable to this FIS project.

7.0 Revising the FIS

This FIS is based on the most up-to-date data available to FEMA or the State at the time of production; however, flood hazard conditions change over time. Communities or private parties may request flood map revisions at any time; certain types of revisions will require the submission of supporting data. FEMA or the State may also initiate a revision. FIS revisions may take several forms; these include Letters of Map Amendment (LOMAs), Letters of Map Revision - based on Fill (LOMR-Fs), Letters of Map Revision (LOMRs), Physical Map Revisions (PMRs), and FEMA or the State-contracted restudies.

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 LOMR is a document issued by FEMA or a designated Cooperating Technical Partner (CTP) (such as Mecklenburg County of NCFMP) that revises a 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 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 CTP before construction takes place. This assures communities participating in the NFIP that proposed projects meet minimum NFIP requirements. The result of FEMA/CTP 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. 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. 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 Mecklenburg 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 initial 2/4/2004 countywide study is presented in Table 15.

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

Table 15 - Map Revision History

Community	Initial Identification Date	Initial FIRM Effective Date	FIS Revision Date
CITY OF CHARLOTTE	6/28/1974	8/15/1978	9/2/2015
MECKLENBURG COUNTY (Unincorporated Areas)	10/22/1976	6/1/1981	9/2/2015
TOWN OF CORNELIUS	10/22/1976	6/1/1981	9/2/2015
TOWN OF DAVIDSON	10/22/1976	6/1/1981	9/2/2015
TOWN OF HUNTERSVILLE	2/4/2004	2/4/2004	9/2/2015
TOWN OF MATTHEWS	2/4/2004	2/4/2004	9/2/2015
TOWN OF MINT HILL	2/4/2004	2/4/2004	9/2/2015
TOWN OF PINEVILLE	6/21/1974	3/18/1987	9/2/2015

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 Mecklenburg County and Incorporated Areas. The table below includes information for the previous countywide FIS revisions and for this revision.

Table 16 - Authority and Acknowledgments

Community	FIS Dated	Study Contracted By	Data Source / Study Contractor	Contract or IAA Number	Work Completed In
Mecklenburg County and Incorporated Areas	8/31/2016 (PRELIMINARY)	Mecklenburg County / NCFMP	ESP	N/A	November 2015
Mecklenburg County and Incorporated Areas	9/2/2015	Mecklenburg County	AECOM / Baker / Dewberry	N/A	October 2012
Mecklenburg County and Incorporated Areas	2/19/2014	Mecklenburg County	AECOM / Dewberry	N/A	August 2011
Mecklenburg County and Incorporated Areas	3/2/2009	NCFMP	Dewberry	N/A	August 2007
Mecklenburg County and Incorporated Areas	2/4/2004	Mecklenburg County	Watershed Concepts (now AECOM)	EMA-97-CO-0140	May 2001

This FIS Report was produced through a unique cooperative partnership between the Mecklenburg County, State of North Carolina, and FEMA. Traditionally FEMA has been responsible for updating and maintaining the FIS and FIRMs. However, both Mecklenburg County and the State of North Carolina participate in FEMA's Cooperating Technical Partners (CTP) Program. Through this program the County and the State assume primary ownership and responsibility for maintaining the FIS and FIRMs within their respective jurisdictions. Mecklenburg County has leveraged funding from the FEMA CTP to contract the FIS revisions starting from the initial countywide study, with the exception of the 2009 update, which was funded and contracted by the State. The cost of the initial 2004 countywide FIS was approximately $2.2 million, of which approximately 70% was funded with local funds. The estimated costs of the map maintenance PMR revisions (PMRs 1, 2, and 3) are $4.1 million, of which approximately 40% was funded with local funds.

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 Mecklenburg County and Incorporated Areas were compiled from the previous countywide FIS Report and are shown in Table 17.

Table 17 - Consultation Coordination Officer's Meetings

Community	For FIS Dated	Initial CCO Date	Attended By	Final CCO Date	Attended By
MECKLENBURG COUNTY AND INCORPORATED AREAS	3/31/16 (PRELIMINARY)	*	*	*	*
MECKLENBURG COUNTY AND INCORPORATED AREAS	9/2/2015	*	Representatives from Mecklenburg County	4/8/2014	*
MECKLENBURG COUNTY AND INCORPORATED AREAS	2/19/2014	9/25/2012 9/26/2012	Representatives from Mecklenburg County	*	*
MECKLENBURG COUNTY AND INCORPORATED AREAS	2/4/2004 3/2/2009	12/17/1999	Representatives from Mecklenburg County, FEMA, Watershed Concepts, and Dewberry	*	Representatives from Mecklenburg County, FEMA, Watershed Concepts, and Dewberry

* Data not available or not applicable

Preliminary Meetings are held in each county to disseminate and review the FIS Report and FIRM panels. Public Participation Meetings 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 the table below.

Table 18 - Preliminary and Public Participation Meetings

Community	For FIS Dated	Meeting Location	Preliminary Meeting Date	Attended By	Public Meeting Date	Attended By
MECKLENBURG COUNTY AND INCORPORATED AREAS	3/31/16 (PRELIMINARY)	*	*	*	*	*
MECKLENBURG COUNTY AND INCORPORATED AREAS	9/2/2015	W. Charlotte Rec Cntr Pineville (The Hut) Huntersville Town Hall	*	*	4/9/2014 4/22/2014 4/23/2014	Representatives from Mecklenburg County and the public
MECKLENBURG COUNTY AND INCORPORATED AREAS	2/19/2014	*	*	*	*	*
MECKLENBURG COUNTY AND INCORPORATED AREAS	2/4/2004 3/2/2009	*	*	*	*	*

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 Mecklenburg 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 19 - Map Repositories

Community	Address	City	State	Zip Code
Town of Pineville	Mecklenburg County Stormwater Services, 2145 Suttle Avenue	Charlotte	NC	28208
City of Charlotte	Mecklenburg County Stormwater Services, 2145 Suttle Avenue	Charlotte	NC	28208
Town of Mint Hill	Mint Hill Town Hall, 7151 Matthews-Mint Hill Road	Mint Hill	NC	28277
Town of Davidson	Town of Davidson Planning Department, 216 South Main Street	Davidson	NC	28036
Town of Cornelius	Cornelius Town Hall, 21445 Catawba Avenue	Cornelius	NC	28031
Town of Huntersville	Town of Huntersville Planning Department, 101 Huntersville-Concord Road	Huntersville	NC	28070

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. Mecklenburg County and NCFMP provide access to the digital flood hazard information through interactive websites. These websites allow users to search, view, and download flood hazard related information. Current links to the Mecklenburg County and NCFMP websites are listed below.

Mecklenburg County 3D Floodzone Mapping: http://meckmap.mecklenburgcountync.gov/3dfz/

NCFMP Flood Risk Information System (FRIS) Website: http://fris.nc.gov/fris/

Hard 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 County, NCFMP, or FEMA Regional Office at the address listed on the Notice to Flood Insurance Study Users page at the front of this report.

10.0 Appendix

10.1. Bibliography and References

All bibliography and reference information associated within this Flood Insurance Study are maintained by Mecklenburg County and/or the NCFMP. Users requiring more specific information should contact the County or NCFMP.