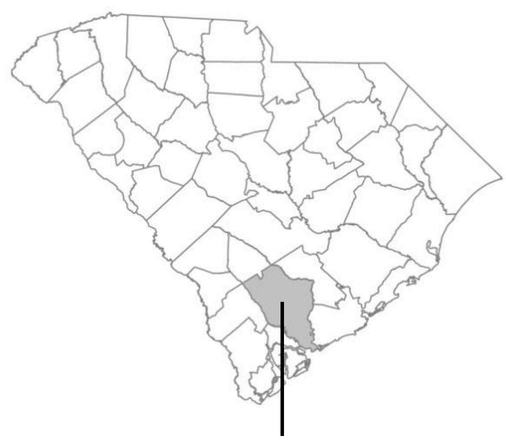
FLOOD INSURANCE STUDY

COLLETON COUNTY, SOUTH CAROLINA
AND INCORPORATED AREAS

VOLUME 1 OF 2

Community Name	Community Number
COLLETON COUNTY (UNINCORPORATED AREAS)	450056
COTTAGEVILLE, TOWN OF	450253
EDISTO BEACH, TOWN OF	455414
LODGE, TOWN OF*	450252
SMOAKS, TOWN OF	450057
WALTERBORO, CITY OF	450058
WILLIAMS, TOWN OF	450059

** NO SPECIAL FLOOD HAZARD AREAS IDENTIFIED*



COLLETON COUNTY

REVISED: **PRELIMINARY** **NOV 20 2015**

Federal Emergency Management Agency

FLOOD INSURANCE STUDY NUMBER
45029CV001B

NOTICE TO
FLOOD INSURANCE STUDY USERS

Communities participating in the National Flood Insurance Program (NFIP) 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. Please contact the Community Map repository for any additional data.

The Federal Emergency Management Agency (FEMA) may revise and republish part of all of the FIS Report at any time. In addition, FEMA may revise part of the FIS Report by the Letter of Map Revision process, which does not involve republication or redistribution of the FIS. Therefore, users should consult with community officials and check the Community Map repository to obtain the most current FIS Report components.

Initial Countywide FIS
Effective Date: November 7, 2001

Revised Dates:

This preliminary revised Flood Insurance Study contains profiles presented at a reduced scale to minimize reproduction costs. All profiles will be included and printed at full scale in the final published report.

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FLOOD INSURANCE STUDY
COLLETON COUNTY, SOUTH CAROLINA AND INCORPORATED AREAS

1.0 INTRODUCTION

1.1 Purpose of Study

This countywide Flood Insurance Study (FIS) revises and updates the previous countywide FIS/Flood Insurance Rate Map (FIRM) for the geographic area of Colleton County, South Carolina, including the Towns of Cottageville, Edisto Beach, Lodge, Smoaks, and Williams; the City of Walterboro; and the unincorporated areas of Colleton County (hereinafter referred to collectively as Colleton County).

The Town of Lodge has no identified Special Flood Hazard Areas (SFHA).

This FIS aids in the administration of the National Flood Insurance Act of 1968 and the Flood Disaster Protection Act of 1973. This FIS has developed flood risk data for various areas of the community that will be used to establish actuarial flood insurance rates. This information will also be used by Colleton County to update existing floodplain regulations as part of the Regular Phase of the National Flood Insurance Program (NFIP), and by local and regional planners to further promote sound land use and floodplain development. Minimum floodplain management requirements for participation in the NFIP are set forth in the Code of Federal regulations at 44 CFR, 60.3.

In some states or communities, floodplain management criteria or regulations may exist that are more restrictive or comprehensive than the minimum Federal requirements. In such cases, the more restrictive criteria take precedence, and the State (or other jurisdictional agency) will be able to explain them.

1.2 Authority and Acknowledgments

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

The original November 7, 2001 countywide FIS was prepared to include incorporated communities within Colleton County in a countywide FIS. Information on the authority and acknowledgments for each jurisdiction was compiled from their previously printed FIS reports, and is shown below.

Colleton County (Unincorporated Areas):	The hydrologic and hydraulic analyses for the FIS report dated April 17, 1987, were prepared by Post, Buckley, Schuh & Jernigan, Inc. for FEMA, under Contract

	No. EMW-C-0947. That work was completed in December 1984.
Town of Edisto Beach:	The hydrologic and hydraulic analyses for the FIS report dated July 16, 1987, were prepared by Post, Buckley, Schuh & Jernigan, Inc. for FEMA, under Contract No. EMW-C-0947. That work was completed in December 1984.
City of Walterboro:	The hydrologic and hydraulic analyses for the FIS report dated April 17, 1987, were prepared by the U.S. Army Corps of Engineers (USACE), Charleston District, for FEMA, under Inter-Agency Agreement (IAA) No. EMW-84-E-1506, Project Order No. 1, Amendment No. 4. That work was completed in December 1984.

The authority and acknowledgements for the Towns of Cottageville, Lodge, Smoaks, and Williams were not summarized above because these communities did not have previously printed FIS reports.

For the November 7, 2001, revision, the hydrologic and hydraulic analyses were prepared by Hayes, Seay, Mattern & Mattern, Inc., for FEMA, under Contract No. EMA-96-CO-0019. This work was completed in October 1997. The revised wave height analysis for Edisto Beach was prepared by Dewberry & Davis LLC. This work was completed in September 1997.

For this revision the hydrologic and hydraulic analyses were prepared by AECOM under contract to South Carolina Department of Natural Resources (SCDNR) for FEMA, under Contract No. EMA-2011-CA-5619. This study was completed in April 2013.

Base map information shown on the FIRM for Colleton County was provided in digital format by Colleton County.

The coordinate system used for producing this FIRM is NAD 1983 State Plane South Carolina FIPS 3900. Corner coordinates shown on the FIRM are in latitude and longitude referenced to the NAD 1983 State Plane South Carolina FIPS 3900, Lambert Conformal Conic projection, with geographic NAD 1983, Spheroid GRS 1980. Differences in the datum and spheroid used in the production of FIRMs for adjacent counties may result in slight positional differences in map features at the county boundaries. These differences do not affect the accuracy of information shown on the FIRM.

1.3 Coordination

An initial Consultation Coordination Officer's (CCO) meeting is held with representatives from FEMA, the community, and the study contractor to explain the nature and purpose of a FIS, and to identify the streams to be studied by detailed methods. A final CCO meeting is held with representatives from FEMA, the community, and the study contractor to review the results of the study. The final CCO meeting is now referred to as a Preliminary DFIRM Community Coordination (PDCC) meeting.

The dates of the historical initial and final CCO meetings held for Colleton County and the incorporated communities within its boundaries are shown in the following tabulation:

Table 1 – Initial and Final CCO Meeting Dates (Pre-Countywide)

Community Name	Initial CCO Date	Final CCO Date
Colleton County (Unincorporated Areas)	November 7, 1983	May 28, 1986
Edisto Beach, Town of	*	August 21, 1986
Walterboro, City of	July 28, 1983	May 28, 1986

*** – denotes data unavailable**

For the November 7, 2001, revision, an initial CCO meeting was held on September 19, 1995, and was attended by representatives of Hayes, Seay, Mattern & Mattern, Inc., FEMA, and Colleton County. A final CCO meeting was held on June 30, 1999, and was attended by representatives of Hayes, Seay, Mattern & Mattern, Inc., FEMA, and Colleton County.

In the course of the November 7, 2001, revision, the South Carolina Department of Transportation, the U.S. Geological Survey (USGS), FEMA, and Dewberry & Davis LLC were contacted to supply relevant information concerning the studied streams.

For this countywide FIS, an initial CCO (Scoping) meeting was held on June 28, 2007, and attended by representatives of AECOM (the study contractor), FEMA, the Town of Edisto Beach, Colleton County, SCDNR, South Carolina Department of Transportation (SCDOT), and the State NFIP Coordinator. A PDCC meeting was held on --/--/---- to review the results of the study. The meeting was attended by AECOM, FEMA, and Colleton County representatives.

2.0 AREA STUDIED

2.1 Scope of Study

This FIS covers the geographic area of Colleton County, South Carolina.

Historic Study Scopes

All or portions of the following flooding sources have been studied by detailed methods in previous studies: Ashepoo River, Chessey Creek, Edisto River, Great Swamp, Horseshoe Creek, Ireland Creek, and Wolf Creek.

Prior to the countywide FIS, in the previous FIS reports for the unincorporated areas of Colleton County and the Town of Edisto Beach, a detailed coastal flooding analysis was performed along the entire coastline of Colleton County, where the flooding source is the Atlantic Ocean.

For the November 7, 2001, countywide FIS, updated analyses were included for the following flooding sources:

Table 2 – Flooding Sources Studied by Detailed Methods (November 7, 2001)

Flooding Source	Downstream Limit	Upstream Limit	Length (miles)
Ashepoo River	Approximately 2.4 miles downstream of CSX Transportation	Approximately 190 feet upstream of Ritter Road	10.7
Chessey Creek	Confluence with Horseshoe Creek	Approximately 80 feet upstream of Charleston Highway	6.2
Edisto River	Approximately 0.4 miles downstream of U.S. Route 17	Approximately 17.7 miles upstream of Interstate Route 95	72.4
Great Swamp	Approximately 3.8 miles downstream of South Jeffries Boulevard	Approximately 320 feet upstream of Interstate Route 95	5.6
Horseshoe Creek	Confluence with Ashepoo River	Approximately 60 feet upstream of Charleston Highway	6.0
Ireland Creek	Confluence with Great Swamp	Approximately 50 feet upstream of Industrial Road	5.5

Table 2 – Flooding Sources Studied by Detailed Methods (November 7, 2001) – continued

Flooding Source	Downstream Limit	Upstream Limit	Length (miles)
Wolf Creek	Confluence with Jones Swamp Creek	Approximately 180 feet upstream of Quail Drive	2.4

In addition, annexations by the Town of Edisto Beach have been incorporated; the wave height analysis for Edisto Beach was revised; and Hayes, Seay, Mattern & Mattern, Inc., used updated topographic information to redelineate areas studied by approximate methods.

Also, the November 7, 2001, countywide FIS, incorporated a determination Letter of Map Revision (LOMR) issued by FEMA, on May 14, 1999, to revise an area of the Coastal Barrier Resources System; and numerous flooding sources were studied by approximate methods.

Current Study Scopes

For this revision streams were studied by approximate, and limited detailed methods, these are listed in Table 3, and Table 4, respectively.

Table 3 – Flooding Sources Studied by Approximate Methods (Current Revision)

Flooding Source New Name	Flooding Source Effective Name	Length (miles)
Allen Creek	**	1.7
Ashepoo River	Ashepoo River	6.4
Ashepoo River Tributary 1	**	1.3
Baptist Church Branch	Baptist Church Branch / St. Johns Swamp	6.0
Baptist Church Branch Tributary 1	**	2.8
Baptist Church Branch North	**	2.3
Bear Branch	Bear Branch	6.5
Bear Branch Tributary 3	**	0.7
Bluehouse Swamp	Bluehouse Swamp	2.8
Boston Branch	Big Bay Swamp	1.3

Table 3 – Flooding Sources Studied by Approximate Methods (Current Revision) – continued

Flooding Source New Name	Flooding Source Effective Name	Length (miles)
Buckhead Creek	Buckhead Creek	15.5
Buckhead Creek Tributary 5	**	1.5
Bull Creek	Bull Creek	1.5
Chessey Creek	Chessey Creek	4.5
Chessey Creek Tributary 3	**	2.7
Craven Branch	Craven Branch	0.6
Cuckolds Creek Tributary 2	**	8.1
Cuckolds Creek Tributary 2-1	**	0.8
Cuckolds Creek Tributary 2-1-1	**	0.4
Cuckolds Creek Tributary 2-2	**	1.5
Cuckolds Creek Tributary 2-4	**	4.0
Cuckolds Creek Tributary 2-4-1	**	0.2
Cuckolds Creek Tributary 2-4-2	**	0.6
Cuckolds Creek Tributary 2-4-3	**	0.6
Cuckolds Creek Tributary 3	**	2.1
Deed Creek	Deep Creek	4.9
Doctors Creek	Doctors Creek / Great Swamp	4.0
Dry Branch	Dry Branch	1.9
Dry Branch Tributary 1	**	0.4
Edisto River Tributary 1	**	2.4
Edisto River Tributary 3	**	4.1
Fally Creek	**	7.2
Fally Creek Tributary 1	**	2.3
Hog Branch	Hog Branch	4.9
Hog Branch Tributary 2	**	1.4
Hog Branch Tributary 3	**	0.9
Horseshoe Lead Creek	Horseshoe Lead Creek	6.4

Table 3 – Flooding Sources Studied by Approximate Methods (Current Revision) – continued

Flooding Source New Name	Flooding Source Effective Name	Length (miles)
Ireland Creek	Ireland Creek	4.6
Ireland Creek Tributary 1	**	0.9
Johno Creek	Johno Creek	4.9
Johno Creek Tributary 1	**	0.5
Johno Creek Tributary 2	**	1.7
Jones Swamp Creek	Jones Swamp Creek	8.2
Little Salkehatchie River	Little Salkehatchie River	28.0
Little Salkehatchie River Tributary 2	Deer Creek	3.4
Perry Creek	Perry Creek	2.1
Pringle Creek	Pringle Creek	4.7
Pringle Creek Tributary 1	**	1.8
Pringle Creek Tributary 2	**	1.1
Ricepatch Creek	Ricepatch Creek	6.5
Ricepatch Creek North	**	3.8
Salkehatchie River Tributary 2	**	2.5
Sandy Dam Branch	Sandy Dam Branch	5.3
Sandy Run	Sandy Run	2.5
Sandy Run 2	Craven Branch	2.1
Savannah Creek	Savannah Creek	3.5
Shereau Branch Tributary 1	**	1.4
Shereau Branch Tributary 2	**	2.4
Steedley Branch	Steedley Branch	0.5
Willow Swamp	Willow Swamp	9.4
Wolf Creek	Wolf Creek	3.7

**** – denotes stream that is unnamed on the effective FIRM**

Table 4 – Flooding Sources Studied by Limited Detailed Methods (Current Revision)

Flooding Source	Downstream Limit	Upstream Limit	Length (miles)
Baptist Church Branch	0.8 miles downstream of Round O Road	Confluence of Baptist Church Branch North and Oats Hole Branch	3.0
Baptist Church Branch North [1]	Confluence with Baptist Church Branch	0.4 miles upstream of Jenkins Club Road	0.9
Black Creek	Confluence with Combahee River	0.3 miles upstream of Winding Creek Drive	12.0
Black Creek Tributary 1	Confluence with Black Creek	0.8 miles upstream of Magellan Road	2.2
Chessey Creek 2	Confluence with Horseshoe Lead Creek	1.0 miles upstream of confluence of Chessey Creek 2 Tributary 2	7.4
Chessey Creek 2 Tributary 1	Confluence with Chessey Creek 2	0.5 miles upstream of confluence of Chessey Creek 2 Tributary 1-1	2.5
Chessey Creek 2 Tributary 1-1	Confluence with Chessey Creek 2 Tributary 1	0.4 miles upstream of confluence with Chessey Creek 2 Tributary 1	0.4
Chessey Creek 2 Tributary 2	Confluence with Chessey Creek 2	Approximately 600 feet upstream of Finlay Lane	1.1
Combahee River	0.2 miles downstream of U.S. Highway 17	Confluence of Black Creek	6.4
Fuller Swamp Creek	Confluence with Horseshoe Lead Creek	0.2 miles upstream of Coolers Dairy Road	5.7
Fuller Swamp Creek Tributary 2	Confluence with Fuller Swamp Creek	0.4 miles upstream of Merrick Drive	1.8
Horseshoe Lead Creek	0.4 miles downstream of confluence of Chessey Creek 2 and Fuller Swamp Creek	Confluence of Chessey Creek 2 and Fuller Swamp Creek	0.4

Table 4 – Flooding Sources Studied by Limited Detailed Methods (Current Revision) – continued

Flooding Source	Downstream Limit	Upstream Limit	Length (miles)
Oats Hole Branch	Confluence with Baptist Church Branch	0.5 miles upstream of Alt Highway 17	4.5
Shereau Branch	Confluence with Chessey Creek	0.9 miles upstream of confluence of Shereau Branch Tributary 1	3.9

[1] – denotes stream is completely inundated by the Baptist Church Branch and its specific flood data has been removed from the FIS and the database

Floodplain boundaries of streams that were previously studied by approximate, limited detailed, and detailed methods and have not been restudied in this revision have been redelineated using more up-to-date topographic information.

Approximate analyses are used to study those areas having low development potential or minimal flood hazards.

The areas studied by limited detailed methods were selected with moderate priority given to all known flood hazard areas, and areas of projected development and proposed construction.

Limits of detailed studies are indicated on the Flood Profiles (Exhibit 1) and on the FIRM (Exhibit 3). The areas studied by detailed methods were selected with priority given to all known flood hazard areas, and areas of projected development and proposed construction.

The scope and methods of study were proposed to, and agreed upon by, FEMA, SCDNR, and Colleton County.

2.2 Community Description

Colleton County is located in the southwestern region of South Carolina, on the Atlantic Ocean. It is bordered by Bamburg and Orangeburg Counties to the north, Allendale and Hampton Counties to the west, the Atlantic Ocean and Beaufort County to the south, Charleston County to the east, and Dorchester County to the northeast. The county encompasses an area of 1,052 square miles.

The Atlantic Ocean coastline accounts for approximately 6 miles of the county's border. According to U.S. Census Bureau figures the population has increased from 38,264 in 2000 to 38,892 in 2010, a 1.6% increase (Reference 1).

The county is situated on a low coastal plain, with a significant portion of its area consisting of tidal marshes and swamps. Elevations range from sea level at the coast to approximately 125 feet mean sea level (msl) in the northern portion of the county.

The majority of the land situated in the floodplains is undeveloped marshland with some residential, commercial, and industrial development.

2.3 Principal Flood Problems

Colleton County is subject to flooding caused by hurricanes and tropical storms. The primary factor contributing to flooding in Colleton County is its exposure to Atlantic Ocean surges. The principal streams within the county have wide mouths and are bordered by extensive areas of low marsh. In addition, the terrain at the coast is generally too low to provide an effective barrier to flooding. Offshore depths are shallow for a large distance, which contributes to high Atlantic Ocean surges during hurricanes and tropical storms.

Historical hurricane data for Colleton County have not been recorded in the past because no significant development has been established along the county's flood-prone areas. However, detailed data have been compiled and documented for Charleston County, South Carolina, which forms the eastern boundary of Colleton County.

2.4 Flood Protection Measures

Federal and State funded protection measures have not been employed in Colleton County. However, scattered flood and erosion protection measures have been constructed on private properties. These protection measures offer minimal protection from flooding.

3.0 ENGINEERING METHODS

For the flooding sources studied by limited detailed and detailed methods in the community, standard hydrologic and hydraulic study methods were used to determine the flood hazard data required for this study. Flood events of a magnitude that are expected to be equaled or exceeded once on the average during any 10-, 50-, 100-, or 500-year period (recurrence interval) have been selected as having special significance for floodplain management and for flood insurance rates. These events, commonly termed the 10-, 50-, 100-, and 500-year floods, have a 10-, 2-, 1-, and 0.2-percent chance, respectively, of being equaled or exceeded during any year. Although the recurrence interval represents the long-term, average period between floods of a specific magnitude, rare floods could occur at short intervals or even within the same year. The risk of experiencing a rare flood increases when periods greater than 1 year are considered. For example, the risk of having a flood that equals or exceeds the 1-

percent-annual-chance flood in any 50-year period is approximately 40 percent (4 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.

3.1 Hydrologic Analyses

Hydrologic analyses were carried out to establish peak discharge-frequency relationships for each flooding source studied affecting Colleton County, including incorporated communities, and unincorporated areas.

Pre-countywide Analyses

The Town of Edisto Beach, the City of Walterboro, and the unincorporated areas of Colleton County have previously printed FIS reports. Those hydrologic analyses not revised in the November 7, 2001, countywide FIS have been compiled and are summarized below.

Inundation from the Atlantic Ocean caused by passage of storms (storm surge) was determined by the joint probability method (Reference 2). The storm populations were described by probability distributions of five parameters that influence surge heights. These parameters were central pressure depression (which measures the intensity of the storm), storm radius to maximum winds, forward speed of the storm, shoreline crossing point, and crossing angle. These characteristics were described statistically based on an analysis of observed storms in the vicinity of Colleton County. Primary sources of data for this analysis were the National Oceanic and Atmospheric Administration (NOAA), Neumann, Cry, and Ho, Schwerdt, and Goodyear (Reference 3, 4, 5, & 6).

For areas subject to flooding directly from the Atlantic Ocean, the FEMA standard storm surge model was used to simulate the coastal surge generated by any chosen storm (that is, any combination of the five storm parameters defined previously). By performing such simulations for a large number of storms, each of known total probability, the frequency distribution of surge height can be established as a function of coastal location. These distributions incorporate the large-scale surge behavior, but do not include an analysis of the added effects associated with much finer scale wave phenomena, such as wave height or runup. As the final step in the calculations, the astronomic tide for the region is then statistically combined with the computed storm surge to yield recurrence intervals of total water level (Reference 7).

Revised Analyses for the November 7, 2001, Countywide FIS

The detailed study areas were divided into two regions; the Ashepoo River watershed, and the Edisto River watershed. The Ashepoo River watershed contains all of the flooding sources studied by detailed methods except for the Edisto River.

The hydrologic analyses for the Ashepoo River watershed were performed using the USACE HEC-1 Flood Hydrograph Package (HEC-1) rainfall-runoff model (Reference 8). The U.S. Department of Agriculture – Natural Resources Conservation Service (NRCS) dimensionless unit hydrograph was used as the method to calculate the hydrograph for each sub-basin. The storage method was used for the routing methodology. The raw data for the drainage areas, curve numbers, and the lag and routing times was obtained from USGS 7.5-Minute Series Topographic Maps (Reference 9 & 10). The hypothetical storm information was obtained from the U.S. Weather Bureau Technical Paper No. 40 (TP-40) publication (Reference 11). The analyses were based on historical high-water marks obtained from interviews of county residents.

Discharges for the Edisto River were determined from a log-Pearson Type III frequency analysis following Bulletin 17B guidelines (Reference 12). Data collected at USGS stream gage stations; Edisto River near Branchville, SC (02174000) and Edisto River near Givhans, SC (02175000) from a 50-year record span were used. The Edisto River near Branchville, SC (02174000) gage was transposed downstream to more accurately reflect discharges in the upstream reach of the detailed study. The Edisto River near Givhans, SC (02175000) gage was transposed to the downstream limit of the study.

This Countywide Analysis

For this report streams which were studied were divided into two classifications; approximate, and limited detailed, based on their method of study.

Peak flood discharges for the 1-percent-annual-chance storm event for all streams studied by approximate and limited detailed methods were determined using USGS regression equations for South Carolina, described in USGS Water-Resource Investigations Report (WRIR) 02-4140 (Reference 13). WRIR 02-4140 describes methods for determining peak flood discharges for watershed areas considered rural, or less than 10% impervious land cover. Since no areas were calculated with greater than 10% impervious only rural regression equations were used. There was no applicable stream gage data available, therefore regression equation estimates were not adjusted based on gage data.

A summary of drainage area-peak discharge relationships for streams studied by detailed methods is shown in Table 5, “Summary of Discharges”.

Table 5 – Summary of Discharges

Flooding Source and Location	Drainage Area (mi.^{2})	Peak Discharges (cfs)				
		10% Annual Chance	4% Annual Chance	2% Annual Chance	1% Annual Chance	0.2% Annual Chance
ASHEPOO RIVER						
Approximately 11,600 feet downstream of Railroad	289.5	4,700	*	8,320	10,500	17,800
Approximately 960 feet upstream of U.S. Highway 17	153.0	3,290	*	6,250	7,990	14,100
Approximately 15,460 feet upstream of U.S. Highway 17	148.7	3,310	*	6,270	8,020	14,200
Approximately 6,740 feet downstream of State Highway 303	136.4	3,300	*	6,270	8,010	14,200
Approximately 2,360 feet downstream of State Highway 303	131.3	3,260	*	6,150	7,870	13,900
At State Highway 41	127.8	3,270	*	6,180	7,910	14,000
CHESSEY CREEK						
At confluence with Horseshoe Creek	20.8	990	*	1,930	2,470	4,370
Approximately 16,400 feet downstream of Old State Highway 64	16.9	1,230	*	2,240	2,830	4,860
Approximately 7,500 feet downstream of Old State Highway 64	14.0	1,650	*	3,180	4,020	6,960
EDISTO RIVER						
Approximately 2,000 feet downstream of U.S. Highway 17	2,820	19,100	*	27,300	30,800	39,100
Approximately 20,000 feet downstream of County Highway 611[1]	2,720	18,900	*	26,200	29,100	35,700
Approximately 10,000 feet upstream of County Highway 611[1]	2,080	14,900	*	21,800	24,800	31,300
Downstream of upstream of County Highway 211[1]	1,900	13,900	*	20,600	23,600	30,000
Downstream of U.S. Highway 15	1,850	14,200	*	20,300	23,000	29,200
Approximately 13,000 feet downstream of the Colleton–Bamberg–Orangeburg County Boundary	1,720	10,500	*	15,000	17,000	22,100

Table 5 – Summary of Discharges – continued

Flooding Source and Location	Drainage Area (mi.^{2})	Peak Discharges (cfs)				
		10% Annual Chance	4% Annual Chance	2% Annual Chance	1% Annual Chance	0.2% Annual Chance
GREAT SWAMP						
At confluence with Ashepoo River	118.5	3,340	*	6,360	8,130	14,300
Approximately 17,100 feet downstream of Jeffries Boulevard	108.0	3,350	*	6,380	8,130	14,300
Approximately 260 feet downstream of State Highway 17	64.9	3,050	*	5,480	6,850	11,500
Approximately 4,000 feet downstream of Interstate-95	63.2	3,060	*	5,540	6,930	11,600
HORSESHOE CREEK						
At confluence with Ashepoo River	132.9	3,140	*	5,770	7,390	13,100
Approximately 9,600 feet upstream of confluence with Ashepoo River	108.5	3,100	*	5,680	7,290	13,000
Approximately 12,500 feet downstream of State Highway 64	107.6	3,130	*	5,760	7,430	13,400
Approximately 1,240 feet upstream of State Highway 64	83.0	2,980	*	5,520	6,940	11,800
IRELAND CREEK						
At confluence with Great Swamp	36.4	1,140	*	2,170	2,780	4,970
Approximately 8,940 feet upstream of State Highway 63	34.3	1,170	*	2,200	2,820	5,010
Approximately 15,120 feet upstream of State Highway 63	31.3	1,200	*	2,170	2,720	4,600
At State Highway 459	28.1	1,190	*	2,100	2,620	4,380
WOLF CREEK						
At confluence with Jones Swamp Creek	9.6	390	*	690	860	1,390
Approximately 900 feet upstream of Interstate-95	8.8	390	*	680	840	1,350
Approximately 2,600 feet upstream of Mount Carmel Road	7.8	370	*	650	800	1,280

[1] – denotes discharge data obtained from Dorchester County, South Carolina Unincorporated Areas, FIS, Dated April 15, 1994

*** – denotes data unavailable**

3.2 Hydraulic Analyses

Analyses of the hydraulic characteristics of flooding from the sources studied were carried out to provide estimates of the elevations of floods of the selected recurrence intervals. Users should be aware that flood elevations shown on the FIRM represent rounded whole-foot elevations and may not exactly reflect the elevations shown on the Flood Profiles or in the Floodway Data Tables in the FIS report. Flood elevations shown on the FIRM are primarily intended for flood insurance rating purposes. For construction and/or floodplain management purposes, users are cautioned to use the flood elevation data presented in this FIS report in conjunction with the data shown on the FIRM.

Locations of selected cross-sections used in the hydraulic analyses are shown on the Flood Profiles (Exhibit 1). For stream segments for which a floodway was computed (Section 4.2), selected cross-section locations are also shown on the FIRM.

Flood profiles were drawn showing the computed water-surface elevations for floods of the selected recurrence intervals.

Along certain portions of streams, a profile base line is shown on the maps to represent channel distances as indicated on the Flood Profiles and Floodway Data Tables.

The hydraulic analyses for this study were based on unobstructed flow. The flood elevations shown on the Flood Profiles (Exhibit 1) are thus considered valid only if hydraulic structures remain unobstructed, operate properly, and do not fail.

Revised Analyses for the November 7, 2001, Countywide FIS

Cross-sections for the flooding sources studied by detailed methods were obtained from field surveys. All bridges, dams, and culverts were field surveyed to obtain elevation data and structural geometry. The channel cross-sections were located at close intervals upstream and downstream of structures. The overbank cross-section data were obtained from USGS topographic maps at a scale of 1:24,000 with a contour interval of 5 feet (Reference 9 & 10). For Great Swamp and Ireland Creek, the overbank data was obtained from topographic maps provided by USACE at a scale of 1:2,400 with a contour interval of 2 feet (Reference 14).

Water-surface elevations of floods of the selected recurrence intervals were computed using the USACE HEC-2 step-backwater computer program (Reference 15 & 16).

Starting water-surface elevations were computed using the slope/area method or by using mean high-tide elevation if starting conditions produced water-surface elevations below mean high-tide.

Channel and overbank roughness factors (Manning's 'n') used in the hydraulic computations were based on field observations of the streams and floodplain areas. For all streams studied by detailed methods prior to the current revision the channel and overbank roughness coefficients (Manning's 'n') are compiled in Table 6.

Table 6 – Summary of Roughness Coefficients (Historical)

Flooding Source	Manning's 'n' Channel	Manning's 'n' Overbank
Ashepoo River	0.042–0.050	0.105–0.210
Chessey Creek	0.040–0.048	0.095–0.143
Edisto River	0.039–0.044	0.118–0.150
Great Swamp	0.053–0.058	0.116–0.210
Horseshoe Creek	0.042–0.050	0.100–0.150
Ireland Creek	0.047–0.054	0.116–0.158
Wolf Creek	0.049–0.050	0.120–0.150

This Countywide Analysis

For this report streams which were studied were divided into two classifications; approximate, and limited detailed, based on their method of study. For approximate streams, a total of 222.5 miles were studied. For limited detailed streams, a total of 52.2 miles and 38 hydraulic structures were studied. Hydraulic structures are defined as bridges, culverts, or dams.

Hydraulic cross-section geometries were obtained from LiDAR data. Hydraulic structures were field surveyed to obtain elevation data and structural geometry.

Water-surface elevations (WSELs) along each stream segment for the 1-percent-annual-chance exceedance discharges for approximate and limited detailed methods were computed using the USACE Hydrologic Engineering Center – River Analysis System (HEC-RAS) version 3.1.2 step-backwater computer program (Reference 17).

If applicable, a tie-in water-surface elevation was used as the starting condition for various hydraulic models. Otherwise, model starting conditions were set to normal depth using starting slopes calculated from channel elevation values taken from the LiDAR data.

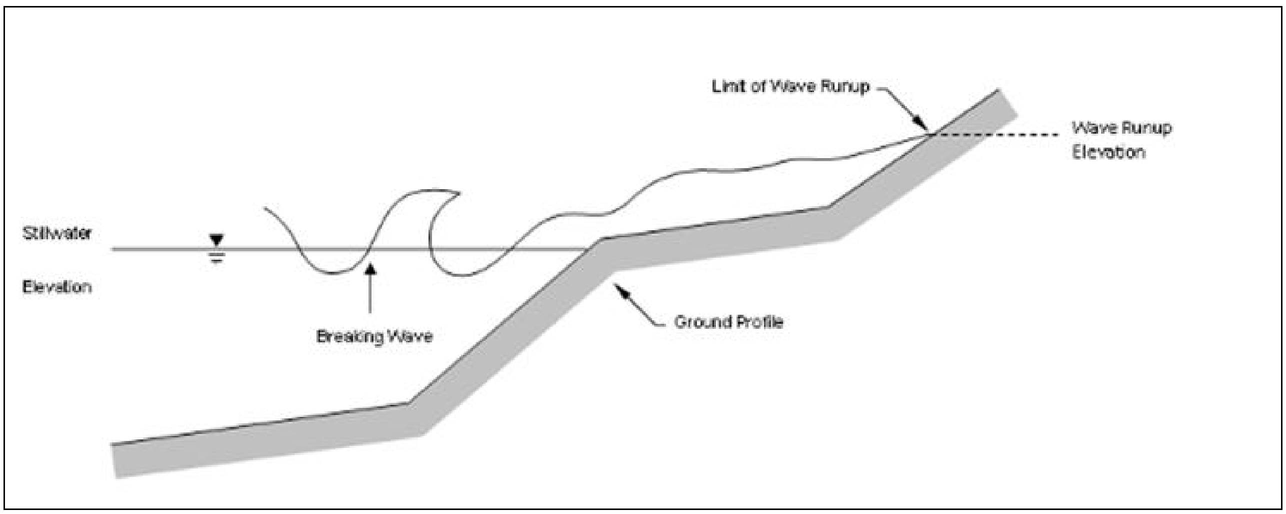
Manning's n-values were estimated using USGS Digital Orthophoto Quarter Quads (DOQQ) for both channel and overbank areas. Manning's n-values ranged from 0.035 to 0.050 for the channel and from 0.080 to 0.150 for the overbanks.

3.3 Coastal Analyses

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

Coastal BFEs are calculated as the total stillwater elevation (stillwater elevation including storm surge plus wave setup) for the 1-percent-annual-storm plus the additional flood hazard from overland wave effects (storm-induced erosion, overland wave propagation, wave runup and wave overtopping).

Figure 1 – Wave Runup Transect Schematic



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

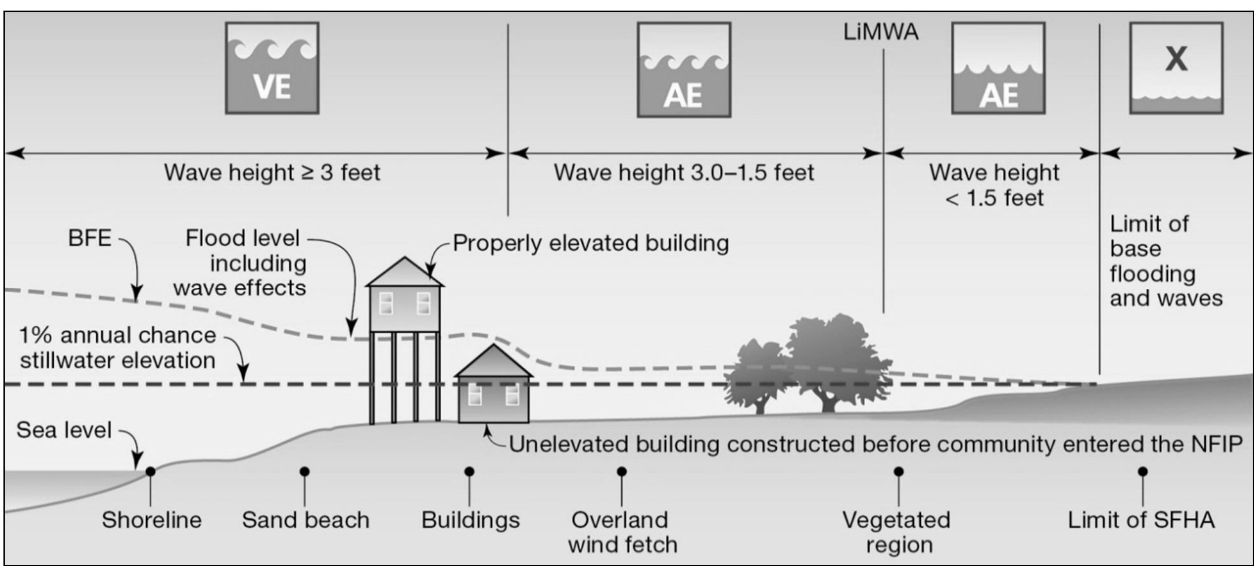
Figure 2, "Coastal Transect Schematic," illustrates the relationship between the BFE, the 1-percent-annual-chance stillwater elevation, and the ground profile as well as the location of the Zone VE and Zone AE areas in an area without a Primary Frontal Dune (PFD) subject to overland wave propagation. This figure also illustrates energy dissipation and regeneration of a wave as it moves inland, as well as the Limit of Moderate Wave Action (LiMWA).

For areas subject to flooding directly from the Atlantic Ocean, flood estimates were derived by simulating a large number of storm events using a coupling of two-dimensional (2D) hydrodynamic and wave models (e.g., the ADCIRC – Advanced CIRCulation model and the SWAN – Simulating Waves Nearshore model).

Underwater depths and land heights for the unstructured model grid were obtained from USACE and NOAA bathymetric survey datasets, bathymetric Digital Elevation Models (DEMs), and numerous sources of high-resolution LiDAR data. Topographic data was supplemented with USGS DEMs where LiDAR data was not available.

From ADCIRC + SWAN modeling simulations, the Joint Probability Method with Optimal Sampling (JPM-OS), developed by Resio (Reference 18) and Toro et al. (Reference 19 & 20), was applied to compute Stillwater Elevations (SWELs), including both the storm surge as well as the wave setup component. This statistical analysis resulted in an updated storm surge analysis of the entire South Carolina coast for the low frequency (2-, 1-, and 0.2-percent-annual-chance) events. Within coastal counties surrounding Colleton County, 1-percent-annual-chance SWELs ranged from approximately 8.5-feet to 11.5-feet, referenced to the North American Vertical Datum of 1988 (NAVD88). The 0.2-percent-annual-chance SWELs ranged from approximately 13.5-feet to 16.5-feet, referenced to the NAVD88. Stillwater elevations at the open coast were generally higher than those values moving inland towards the study area.

Figure 2 – Coastal Transect Schematic



High frequency (the 50-, 20-, 10-, and 4-percent-annual-chance) events were computed using L-moments type regional frequency analyses. L-moments were used to fit parametric extreme value probability distributions to annual maximum water levels recorded at tide gages along the Atlantic Coast of North Carolina, South Carolina, Georgia, and Florida. Regional frequency relationships were developed to predict the high frequency SWELs for the entire South Carolina coast.

The following subsections provide summaries of how each coastal process was considered for this FIS report. Greater detail (including assumptions, analysis, and results) is available in the archived project documentation. Table 7 summarizes the methods and/or models used for the referenced coastal analyses.

Table 7 – Summary of Coastal Analyses

Flooding Source	Study Limits		Hazard Evaluated	Model or Method Used	Date Analysis was Completed
	From	To			
Atlantic Ocean	Entire coastline of Colleton County	Entire coastline of Colleton County	Storm Climatology Statistical Analysis	JPM-OS	04/01/2012
Atlantic Ocean	Entire coastline of Colleton County	Entire coastline of Colleton County	Storm Surge including Regional Wave Setup	ADCIRC + SWAN	11/01/2013
Atlantic Ocean	Entire coastline of Colleton County	Entire coastline of Colleton County	Stillwater Frequency Analyses	Regional Frequency Analysis	11/01/2013
Atlantic Ocean	Entire coastline of Colleton County	Entire coastline of Colleton County	Dune Erosion	FEMA's Erosion Assessment	05/20/2015
Atlantic Ocean	Entire coastline of Colleton County	Entire coastline of Colleton County	Overland Wave Propagation	WHAFIS	05/20/2015
Atlantic Ocean	Entire coastline of Colleton County	Entire coastline of Colleton County	Wave Runup	RUNUP2.0	05/20/2015

Stillwater Elevations

The stillwater elevations (i.e., storm surge plus wave setup) for the 1-percent-annual-chance event were determined for areas subject to coastal flooding. The models and methods that were used to determine storm surge and wave setup are listed in Table 7. The statistical analysis used to determine the 2-, 1-, and 0.2-percent-annual-chance SWEL was detailed earlier in Section 3.2. The stillwater elevation that was used for each transect in coastal analyses is shown in Table 9, "Coastal Transect Parameters".

Table 8 provides the gage name, gage identifier, managing agency, gage type, start date, end date, and statistical methodology applied to gages nearest to the study area that were used to determine the stillwater elevations. For areas between gages, stillwater elevations for selected recurrence intervals were estimated by interpolating between gages.

Table 8 – Tide Gage Analysis Specifics

Gage Name	Managing Agency of Tide Gage Record	Gage Type	Start Date	End Date	Statistical Methodology
Duck, NC - 8651370	NOAA	Tide	1977	Present	L-moments, Generalized Logistic
Oregon Inlet, NC - 8652587	NOAA	Tide	1974	Present	L-moments, Generalized Logistic
Cape Hatteras Pier, NC - 8654400	NOAA	Tide	1973	2003	L-moments, Generalized Logistic
Beaufort, NC - 8656483	NOAA	Tide	1964	Present	L-moments, Generalized Logistic
Wilmington, NC - 8658120	NOAA	Tide	1908	Present	L-moments, Generalized Logistic
Springmaid Pier, SC - 8662245	NOAA	Tide	1976	Present	L-moments, Generalized Logistic
Charleston, SC - 8665530	NOAA	Tide	1899	Present	L-moments, Generalized Logistic
Fort Pulaski, GA - 8670870	NOAA	Tide	1935	Present	L-moments, Generalized Logistic
Fernandina Beach, FL - 8720030	NOAA	Tide	1898	Present	L-moments, Generalized Logistic
Mayport Ferry Depot, FL - 8720220	NOAA	Tide	1928	2008	L-moments, Generalized Logistic

Wave Setup Analysis

Wave setup was computed during the storm surge modeling through the models listed in Table 7 and was included in the frequency analysis for the determination of the total stillwater elevations.

Starting Wave Conditions

The methodology for analyzing the effects of wave heights associated with coastal storm surge flooding is based on the ADCIRC+SWAN coupled model. Within this model, the SWAN component develops the spectral offshore and nearshore waves, which develop wave radiation stress gradients that produce wave-induced water level fluctuations near the coast. For each 2D model node, wave statistics were designated. SWAN modeling results of the significant wave height (H_{mo}) and peak wave period (T_p) were produced at each node contained in the ADCIRC grid based on a selection of wave conditions corresponding to modeled storms with the desired recurrence interval. These results provided valuable information on the wave conditions that can be expected to occur during the types of extreme storm events that would produce storm surge elevations with 1- and 0.2-percent-annual-chance probabilities of occurrence. The results from the JPM-OS ADCIRC + SWAN modeling were used to develop starting wave conditions for the transect-based wave hazard analyses.

Coastal Erosion

A single storm episode can cause extensive erosion in coastal areas. Storm-induced erosion was evaluated to determine the modification to existing topography that is expected to be associated with flooding events. For open coast transects where a distinguishable PFD could be identified, erosion was evaluated using the method listed in Table 7. FEMA-prescribed dune geometries were implemented in all cases where it was reasonable to do so, as outlined in Section D.2.9 of the FEMA Guidelines and Specifications (Reference 21 & 22). The dune erosion process was applied based on the cross-sectional area of the dune reservoir. Dune reservoirs with an area less than 540 sq-ft were removed, whereas dune reservoirs with an area greater than 540 sq-ft were modified with dune retreat.

Wave Hazard Analyses

Overland wave hazards were evaluated to determine the combined effects of ground elevation, vegetation, and physical features on overland wave propagation, in accordance with the "Wave Height Analysis for Flood Insurance Studies" (Reference 23). These analyses were performed at representative transects along all shorelines for which waves were expected to be present during the floods of the selected recurrence intervals. The results of these analyses were used to determine elevations for the 1-percent-annual-chance flood.

Transect locations were chosen with consideration given to the physical land characteristics as well as development type and density so that they would closely represent conditions in their locality. Additional consideration was given to changes in the total stillwater elevation. Transects were spaced close together in areas of complex topography and dense development or where total stillwater elevations varied. In areas having more uniform characteristics, transects were spaced at larger intervals. Transects shown in Figure 3, "Transect Location Map," are also depicted on the FIRM. Table 9 provides the location, stillwater elevations, and starting wave conditions for each transect evaluated for overland wave hazards. In this table, “starting” indicates the parameter values offshore of the transect

Wave Runup Analysis

Wave runup analyses were performed to determine the height and extent of runup beyond the limit of stillwater inundation for the 1-percent-annual-chance flood. Wave runup elevations were modeled using the model(s) listed in Table 7.

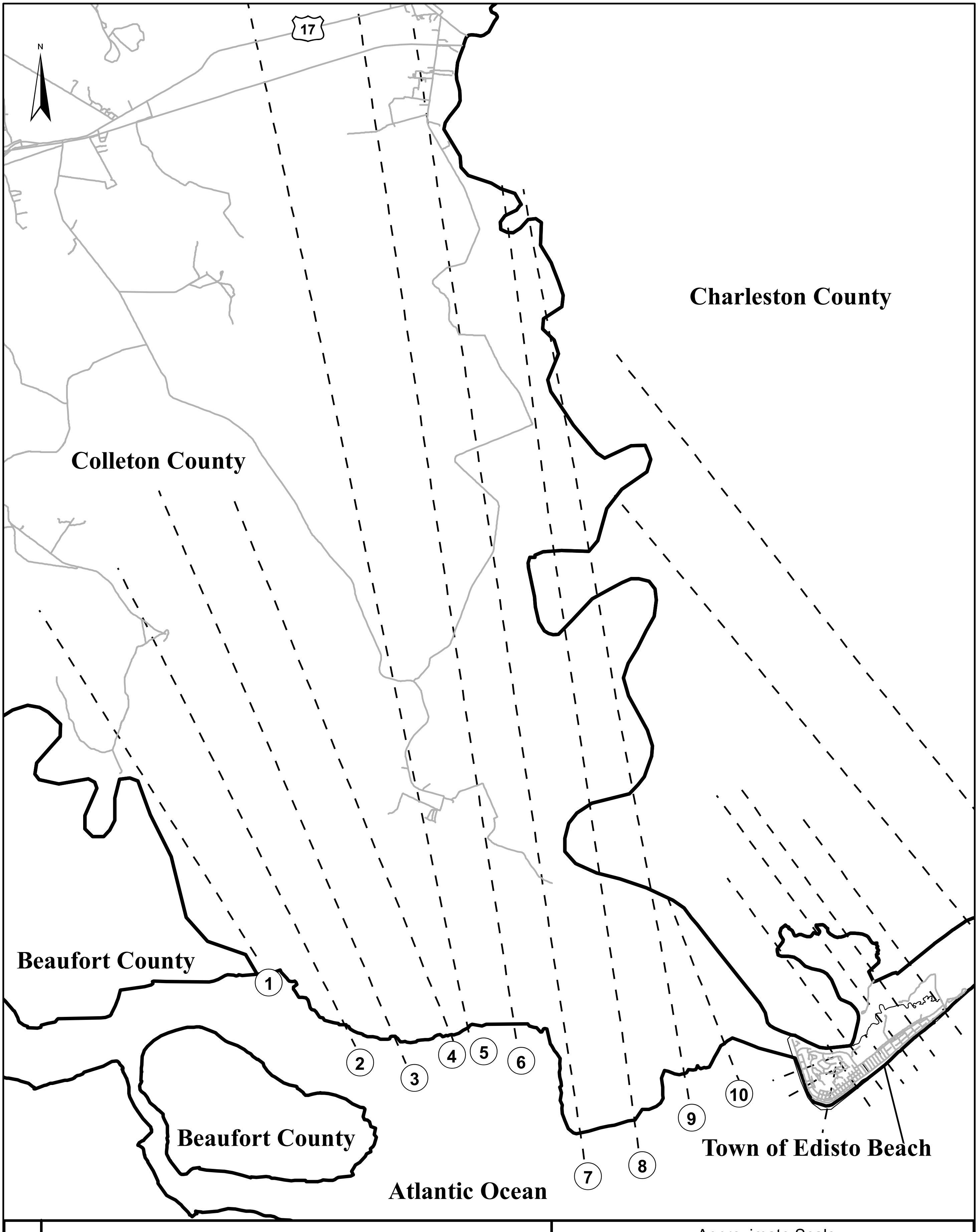


Figure 3

FEDERAL EMERGENCY MANAGMENT AGENCY
COLLETON COUNTY, SOUTH CAROLINA

Approximate Scale
0 1 2 4 6 Miles

TRANSECT LOCATION MAP

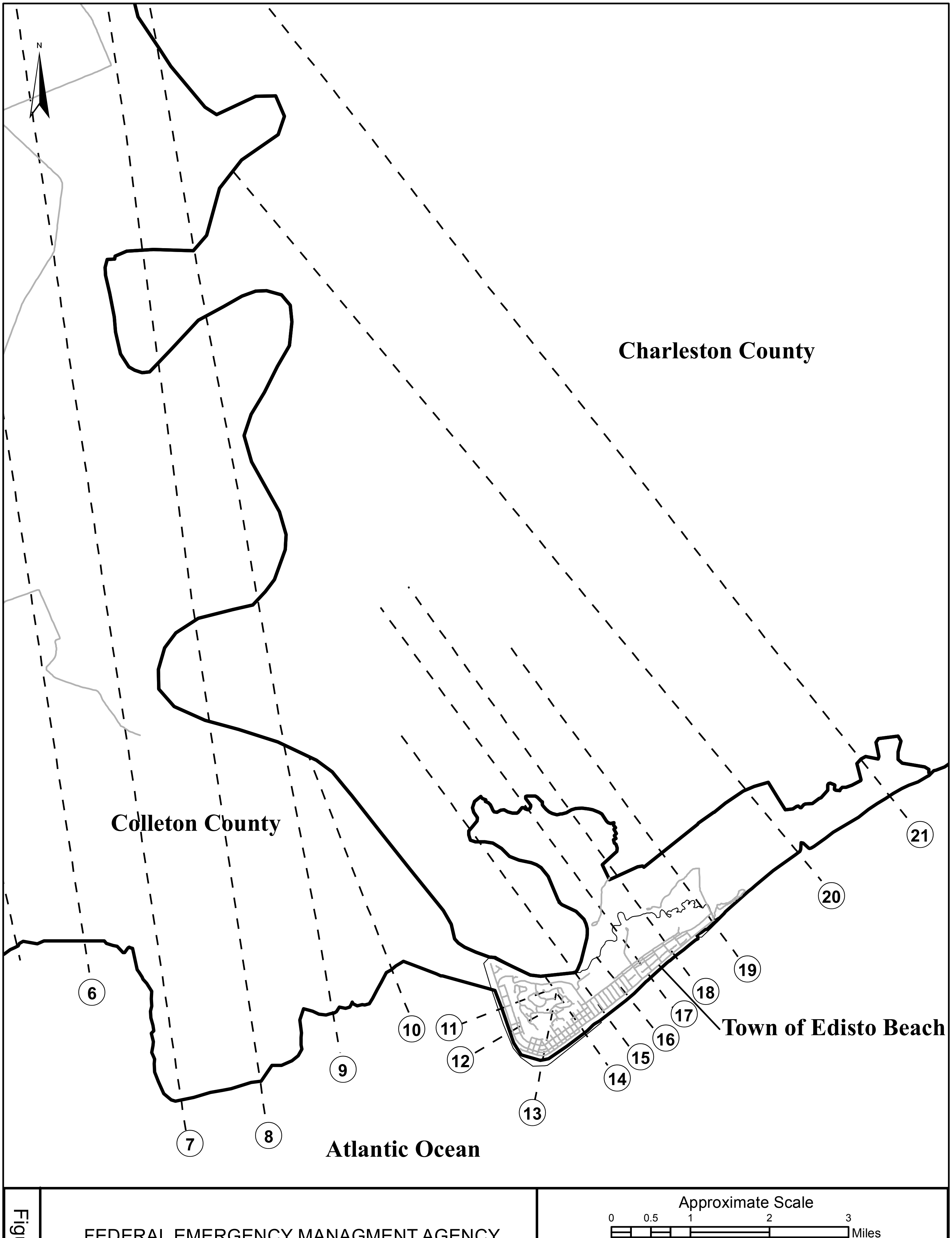


Figure 3

FEDERAL EMERGENCY MANAGMENT AGENCY
COLLETON COUNTY, SOUTH CAROLINA

TRANSECT LOCATION MAP

Table 9 – Coastal Transect Parameters

Flood Source	Coastal Transect	Starting Wave Conditions for the 1%-Annual-Chance		Starting Stillwater Elevations (ft NAVD88) Range of Stillwater Elevations (ft NAVD88)				
		Significant Wave Height H_s (ft)	Peak Wave Period T_p (sec)	10%-Annual-Chance	4%-Annual-Chance	2%-Annual-Chance	1%-Annual-Chance	0.2%-Annual-Chance
Atlantic Ocean	1	6.91	5.04	5.80 5.70 - 5.8	6.30 6.29 - 6.30	7.65 7.47 - 7.67	9.95 8.35 - 9.95	14.94 14.68 - 15.23
Atlantic Ocean	2	6.91	5.04	5.80 5.70 - 5.81	6.30 6.28 - 6.30	7.55 6.49 - 8.07	9.86 9.39 - 10.02	14.55 14.47 - 15.31
Atlantic Ocean	3	6.91	5.04	5.80 5.70 - 5.82	6.30 6.28 - 6.30	7.63 6.34 - 8.08	9.90 9.18 - 10.00	15.10 14.41 - 15.57
Atlantic Ocean	4	6.91	5.04	5.80 5.78 - 5.81	6.30 6.28 - 6.30	7.62 4.63 - 7.66	10.00 8.73 - 10.00	15.03 13.91 - 15.11
Atlantic Ocean	5	6.91	5.04	5.80 5.78 - 5.81	6.30 6.28 - 6.30	7.60 4.85 - 7.63	9.95 2.61 - 9.96	14.95 9.19 - 15.15
Atlantic Ocean	6	6.91	5.04	5.80 5.78 - 5.81	6.30 6.28 - 6.31	7.51 1.00 - 7.52	9.82 2.40 - 9.84	14.77 9.39 - 14.83
Atlantic Ocean	7	9.34	6.53	5.80 5.79 - 5.80	6.30 6.29 - 6.30	7.34 0.94 - 8.26	9.49 4.11 - 10.09	14.34 9.36 - 14.82
Atlantic Ocean	8	9.34	6.53	5.81 5.79 - 5.81	6.30 6.28 - 6.30	7.37 0.87 - 7.68	9.96 4.64 - 10.02	14.51 9.24 - 15.11
Atlantic Ocean	9	9.34	6.53	5.79 5.77 - 5.79	6.29 6.27 - 6.29	7.51 0.95 - 7.58	9.84 4.08 - 9.86	14.69 8.83 - 14.84
Atlantic Ocean	10	9.21	12.92	5.78 5.77 - 5.78	6.28 6.26 - 6.28	7.37 6.78 - 7.44	9.66 9.12 - 9.67	14.35 13.74 - 14.57
Atlantic Ocean	11	5.62	12.03	5.78 5.78 - 5.78	6.28 6.28 - 6.28	7.24 7.22 - 7.24	9.01 8.50 - 9.21	13.97 13.69 - 13.97
Atlantic Ocean	12	7.04	12.36	5.79 5.79 - 5.79	6.29 6.28 - 6.29	7.22 7.18 - 7.22	9.04 8.32 - 9.15	13.93 12.63 - 13.93
Atlantic Ocean	13	10.48	11.99	5.80 5.79 - 5.80	6.30 6.29 - 6.30	7.04 6.91 - 7.04	8.72 8.18 - 8.73	13.55 13.15 - 13.96

Table 9 – Coastal Transect Parameters – continued

Flood Source	Coastal Transect	Starting Wave Conditions for the 1%-Annual-Chance		Starting Stillwater Elevations (ft NAVD88) Range of Stillwater Elevations (ft NAVD88)				
		Significant Wave Height H_s (ft)	Peak Wave Period T_p (sec)	10%-Annual-Chance	4%-Annual-Chance	2%-Annual-Chance	1%-Annual-Chance	0.2%-Annual-Chance
Atlantic Ocean	14	10.48	11.99	5.79 5.79 - 5.79	6.29 6.28 - 6.29	7.26 7.24 - 7.28	9.93 8.05 - 9.97	14.26 13.51 - 15.23
Atlantic Ocean	15	10.48	11.99	5.79 5.78 - 5.79	6.29 6.28 - 6.29	7.32 2.93 - 7.50	9.77 7.65 - 9.78	14.44 13.54 - 14.98
Atlantic Ocean	16	10.48	11.99	5.78 5.78 - 5.78	6.28 6.27 - 6.28	7.34 7.34 - 7.48	9.72 8.16 - 9.73	14.52 13.69 - 14.86
Atlantic Ocean	17	10.48	11.99	5.78 5.77 - 5.8	6.28 6.27 - 6.28	7.35 6.60 - 7.49	9.79 7.60 - 9.79	14.58 12.41 - 14.94
Atlantic Ocean	18	10.48	11.99	5.77 5.77 - 5.77	6.27 6.26 - 6.27	7.35 7.00 - 7.52	9.87 7.53 - 9.87	14.63 13.22 - 15.09
Atlantic Ocean	19	10.48	11.99	5.77 5.76 - 5.77	6.26 6.25 - 6.26	7.34 6.93 - 7.44	9.89 7.51 - 9.90	14.63 13.06 - 15.05
Atlantic Ocean	20	10.48	11.99	5.75 5.74 - 5.75	6.24 6.23 - 6.24	7.35 5.51 - 7.52	10.21 7.52 - 10.75	14.74 11.92 - 16.08
Atlantic Ocean	21	10.48	11.99	5.73 5.72 - 5.73	6.23 6.21 - 6.23	7.31 3.26 - 7.51	10.13 7.53 - 10.68	14.69 11.36 - 16.26

3.4 Vertical Datum

All FIS reports and FIRM panels 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. Until recently, the standard vertical datum in use for newly created or revised FIS reports and FIRM panels was the National Geodetic Vertical Datum of 1929 (NGVD29). With the finalization of the North American Vertical Datum of 1988 (NAVD88), many FIS reports and FIRM panels are being prepared using NAVD88 as the referenced vertical datum.

All flood elevations shown in this FIS report and on the FIRM are referenced to the NAVD88. Structure and ground elevations in the community must, therefore, be referenced to NAVD88. In this current revision redelineated elevations from prior FIS reports were subjected to a vertical datum shift of -0.939 feet from NGVD29 to NAVD88 for Colleton County. It is important to note that adjacent communities may be referenced to NGVD29. This may result in differences in BFEs across the corporate limits between the communities.

For more information regarding conversion between the NGVD29 and NAVD88, see the FEMA publication entitled Converting the National Flood Insurance Program to the North American Vertical Datum of 1988, (Reference 24) visit the National Geodetic Survey website at http://www.ngs.noaa.gov, or contact the National Geodetic Survey at the following address:

NGS Information Services
NOAA, N/NGS12
National Geodetic Survey
SSMC-3, #9202
1315 East-West Highway
Silver Spring, Maryland 20910-3282
(301) 713-3242

Temporary vertical monuments 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, they may be found in the archived project documentation associated with the FIS report and the FIRM panels for this community. Interested individuals may contact FEMA to access these data.

To obtain current elevation, description, and/or location information for benchmarks in the area, please contact the Information Services Branch of the NGS at (301) 713-3242, or visit their website at http://www.ngs.noaa.gov.

4.0 FLOODPLAIN MANAGEMENT APPLICATIONS

The NFIP encourages State and local governments to adopt sound floodplain management programs. To assist in this endeavor, each FIS provides 1-percent-annual-chance floodplain data, which may include a combination of the following: 10-, 2-, 1-, and 0.2-percent-annual-chance flood elevations; delineations of the 1- and 0.2-percent-annual-chance floodplains; and a 1-percent-annual-chance floodway. This information is presented on the FIRM and in many components of the FIS, including Flood Profiles, Floodway Data Tables, and Summary of Stillwater Elevation Tables. Users should reference the data presented in the FIS as well as additional information that may be available at the local community map repository before making flood elevation and/or floodplain boundary determinations.

4.1 Floodplain Boundaries

To provide a national standard without regional discrimination, the 1-percent-annual-chance flood has been adopted by FEMA as the base flood, also called the Special Flood Hazard Area (SFHA), for floodplain management purposes. The 0.2-percent-annual-chance flood is employed to indicate additional areas of flood risk in the community.

The 1- and 0.2-percent-annual-chance floodplain boundaries are shown on the FIRM. On this map, the 1-percent-annual-chance floodplain boundaries correspond to the boundaries of the areas of special food hazard (Zones A, AE, V and VE), and the 0.2-percent-annual-chance floodplain boundaries correspond to the boundaries of areas of moderate flood hazard. In cases where the 1- and 0.2-percent-annual-chance floodplain boundaries are close together, only the 1-percent-annual-chance floodplain boundaries have 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.

In this countywide FIS the streams studied by approximate or limited detailed methods have only the 1-percent-annual-chance floodplain boundaries delineated on the FIRM. The boundaries were interpolated from flood elevations determined at each cross-section using LiDAR data at a scale of 2 meters with contour interval of 1 foot (Reference 25).

The boundaries of streams that were previously studied by approximate, limited detailed, and detailed methods and have not been restudied in this revision have been redelineated using more up-to-date topographic information.

Flood insurance zones and BFEs including the wave effects were identified on each transect based on the results from the onshore wave hazard analyses. Between transects, elevations were interpolated using topographic maps, land-use and land-cover data, and knowledge of coastal flood processes to determine the aerial extent of flooding. Sources for topographic data are LiDAR at a 10 foot scale (Reference 26). Controlling features affecting the elevations were identified and considered in relation to their positions at a particular transect and their variation between transects.

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

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

Certain areas along the open coast and other areas may have higher risk of experiencing structural damage caused by wave action and/or high-velocity water during the 1-percent-annual-chance flood. These areas are referred to as coastal high hazard zones. The coastal high hazard zone is depicted on the FIRM panels as Zone VE. The USACE has established the 3-foot breaking wave as the criterion for identifying the limit of coastal high hazard zones. The one exception to the 3-foot wave criteria is where a primary frontal dune exists. The limit of the open coast high hazard area must extend landward to the primary frontal dune location, even if the controlling wave height decreases below 3 feet. The delineation of the landward toe of the primary frontal dune is based on the methodologies described in the FEMA guidance (Reference 21 & 22). In Colleton County, the primary frontal dune extends along the open coast shoreline, except for at the inlet openings. Zone AE is depicted on the FIRM where the delineated flood hazard includes wave heights less than three feet.

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

To help community officials and property owners recognize this increased potential for damage due to wave action in Zone AE areas, a LiMWA boundary may be shown on the FIRM as an informational layer to assist coastal communities in safe rebuilding practices. The LiMWA represents the approximate landward limit of the 1.5-foot breaking wave. The location of the LiMWA relative to Zone VE and Zone AE is shown in Figure 2.

FEMA does not impose floodplain management requirements or special insurance ratings based on Limit of Moderate Wave Action (LiMWA) delineations at this time. If the LiMWA is shown on the FIRM, it is being provided by FEMA as information only. For communities that do adopt Zone VE building standards in the area defined by the LiMWA, additional Community Rating System (CRS) credits are available.

Table 10 indicates the coastal analyses used for floodplain mapping and the criteria used to determine the inland limit of the open-coast Zone VE and the SFHA boundary at each transect.

Table 10 – Summary of Coastal Transect Mapping Considerations

		Wave Runup Analysis	Wave Height Analysis		
Coastal Transect	Primary Frontal Dune (PFD) Identified	Zone Designation and BFE (ft NAVD 88)	Zone Designation and BFE (ft NAVD 88)	Zone VE Limit	SFHA Boundary
1		N/A	VE 13-15 AE 8-10	Wave Height	SWEL
2		N/A	VE 12-15 AE 8-11	Wave Height	SWEL
3		N/A	VE 12-15 AE 8-12	Wave Height	SWEL
4		N/A	VE 12-15 AE 8-11	Wave Height	SWEL
5		N/A	VE 12-15 AE 3-11	Wave Height	SWEL
6		N/A	VE 12-15 AE 3-11	Wave Height	SWEL
7	ü	N/A	VE 12-15 AE 4-11	PFD	SWEL
8	ü	N/A	VE 11-15 AE 5-12	PFD	SWEL
9		N/A	VE 11-15 AE 6-11	Wave Height	SWEL
10	ü	N/A	VE 12-15 AE 11-12	PFD	SWEL
11	ü	N/A	VE 11-14 AE 9-10	PFD	SWEL
12	ü	N/A	VE 11-14 AE 8-9	PFD	SWEL
13	ü	N/A	VE 11-14 AE 8-10	PFD	SWEL
14	ü	N/A	VE 12-15 AE 8-10	PFD	SWEL
15	ü	N/A	VE 12-15 AE 8-10	PFD	SWEL
16	ü	N/A	VE 12-15 AE 8-10	PFD	SWEL
17	ü	N/A	VE 12-15 AE 8-11	PFD	SWEL

Table 10 – Summary of Coastal Transect Mapping Considerations – continued

Coastal Transect	Primary Frontal Dune (PFD) Identified	Wave Runup Analysis	Wave Height Analysis	Zone VE Limit	SFHA Boundary
		Zone Designation and BFE (ft NAVD 88)	Zone Designation and BFE (ft NAVD 88)		
18	ü	N/A	VE 12-15 AE 8-11	PFD	SWEL
19	ü	N/A	VE 12-15 AE 8-11	PFD	SWEL
20	ü	N/A	VE 12-15 AE 10-12	PFD	SWEL
21	ü	N/A	VE 13-16	Wave Height	SWEL

A LiMWA boundary has also been added in coastal areas subject to wave action for use by local communities in safe rebuilding practices. The LiMWA represents the approximate landward limit of the 1.5-foot breaking wave. To simplify representation, the LiMWA was continued immediately landward of the VE/AE boundary in areas where wave runup elevations dominate. Similarly, in areas where the Zone VE designation is based on the presence of a primary frontal dune or wave overtopping, the LiMWA was delineated immediately landward of the Zone VE/AE boundary.

4.2 Floodways

Encroachment on floodplains, such as 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 National Flood Insurance Program, a floodway is used as a tool to assist local communities in this aspect of floodplain management. Under this concept, the area of the 1-percent-annual-chance 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-percent-annual-chance flood can be carried without substantial increases in flood heights. Minimum Federal standards limit such increases to 1.0 foot, provided that hazardous velocities are not produced. The floodways in this study are presented to local agencies as a minimum standard that can be adopted directly or that can be used as a basis for additional floodway studies.

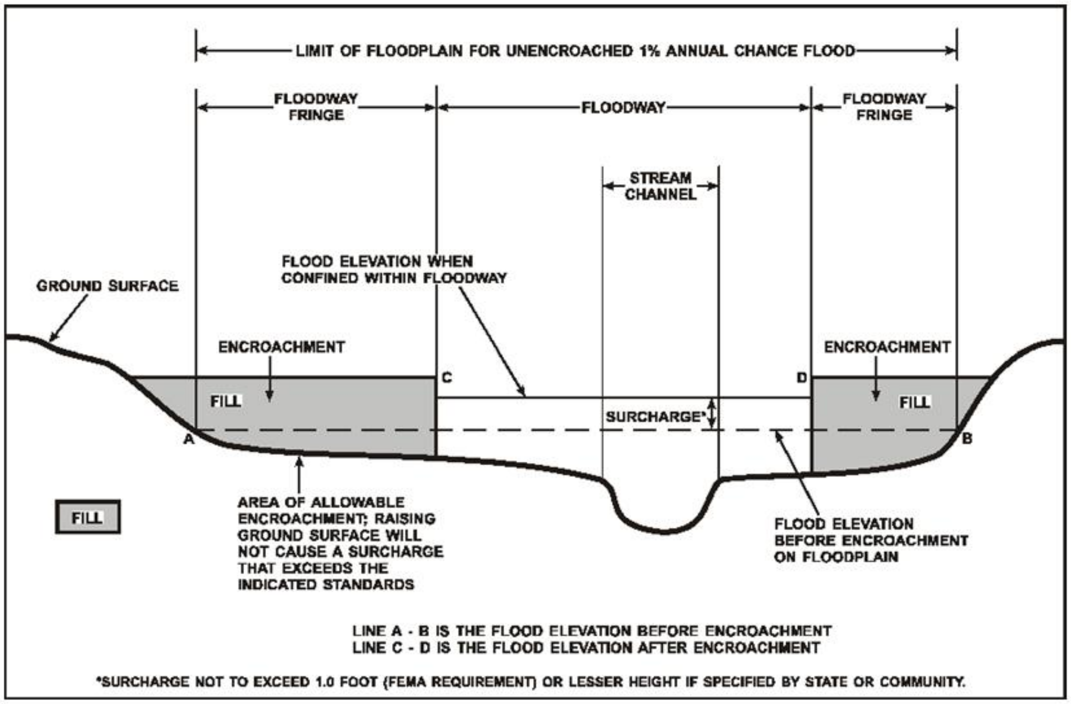
The floodways presented in this study were computed for certain stream segments on the basis of equal-conveyance reduction from each side of the floodplain. Floodway widths were computed at cross-sections. Between cross-sections, the floodway boundaries were interpolated. The results of the floodway computations for detailed studied stream are tabulated for selected cross-sections in Table 11, "Floodway Data". The computed floodway is shown on the FIRM. In cases where the floodway and 1-percent-annual-chance floodplain boundaries are either too close together or collinear, only the floodway boundary is shown. Similarly, for limited detailed studied streams, BFE computations have been compiled in Table 12, "Flood Hazard Data for Selected Streams".

Near the confluences of streams studied in detail, floodway computations were made without regard to flood elevations on the receiving water body. Therefore, "*Without Floodway*" elevations presented in Table 11, for certain downstream cross-sections of selected streams are lower than the regulatory flood elevations in that area, which must take into account the 1-percent-annual-chance flooding due to backwater from other sources.

Encroachment into areas subject to inundation by floodwaters having hazardous velocities aggravates the risk of flood damage, and heightens potential flood hazards by further increasing velocities. A listing of stream velocities at selected cross-sections is provided in Table 11. In order to reduce the risk of property damage in areas where the stream velocities are high, the community may wish to restrict development in areas outside the floodway.

The area between the floodway and 1-percent-annual-chance floodplain boundaries is termed the floodway fringe. The floodway fringe encompasses the portion of the floodplain that could be completely obstructed without increasing the water-surface elevation of the 1-percent-annual-chance flood by more than 1.0 foot at any point. Typical relationships between the floodway and the floodway fringe and their significance to floodplain development are shown in Figure 4.

Figure 4 – Floodway Schematic



LOCATION		FLOODWAY			1% ANNUAL CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD88)			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQ. FEET)	MEAN VELOCITY (FEET/SEC)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
A	163,670	320	2,960	3.5	5.1	1.3[2]	1.6	0.3
B	174,423	314	3,532	3.0	5.2	5.2	5.4	0.2
C	175,972	400	5,508	1.9	5.8	5.8	5.9	0.1
D	177,364	370	4,928	2.1	6.0	6.0	6.1	0.1
E	182,403	373	3,249	2.5	6.2	6.2	6.5	0.3
F	187,306	470	4,482	1.8	6.5	6.5	7.3	0.8
G	191,275	1,600	10,656	0.7	6.8	6.8	7.8	1.0
H	193,810	1,600	9,496	0.8	7.1	7.1	8.1	1.0
I	197,805	1,950	12,349	0.6	7.6	7.6	8.6	1.0
J	200,569	3,100	16,080	0.5	7.9	7.9	8.9	1.0
K	206,515	850	6,077	1.3	8.8	8.8	9.7	0.9
L	208,274	1,200	9,616	0.8	9.7	9.7	10.7	1.0
M	215,090	2,800	20,252	0.4	10.5	10.5	11.5	1.0
N	217,655	1,700	11,134	0.7	10.7	10.7	11.7	1.0

[1] Feet above confluence with Atlantic Ocean
[2] Elevation computed without consideration of backwater effects from Atlantic Ocean

TABLE 11

FEDERAL EMERGENCY MANAGEMENT AGENCY

COLLETON COUNTY, SOUTH CAROLINA

AND INCORPORATED AREAS

FLOODWAY DATA

ASHEPOO RIVER

LOCATION		FLOODWAY			1% ANNUAL CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD88)			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQ. FEET)	MEAN VELOCITY (FEET/SEC)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
A	7,339	238	1,057	2.3	6.1	4.1[2]	4.2	0.1
B	13,642	825	3,410	0.7	6.1	5.6[2]	6.6	1.0
C	19,270	1,100	7,858	0.4	6.6	6.6	7.6	1.0
D	21,044	1,300	9,734	0.3	6.7	6.7	7.7	1.0
E	24,346	1,920	13,833	0.3	6.9	6.9	7.9	1.0
F	29,105	1,375	10,240	0.4	7.1	7.1	8.1	1.0
G	30,032	1,625	6,956	0.6	7.2	7.2	8.2	1.0
H	30,956	1,740	7,875	0.5	7.4	7.4	8.4	1.0

[1] Feet above confluence with Horseshoe Creek
[2] Elevation computed without consideration of backwater effects from Ashepoo River

TABLE 11

FEDERAL EMERGENCY MANAGEMENT AGENCY

COLLETON COUNTY, SOUTH CAROLINA

AND INCORPORATED AREAS

FLOODWAY DATA

CHESSEY CREEK

LOCATION		FLOODWAY			1% ANNUAL CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD88)			
CROSS SECTION	DISTANCE[1]	WIDTH[2] (FEET)	SECTION AREA (SQ. FEET)	MEAN VELOCITY (FEET/SEC)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
A	178,055	2,038 / 3,100	30,727	1.0	11.3	11.3	12.1	0.8
B	182,018	3,273 / 4,880	36,293	0.8	11.6	11.6	12.5	0.9
C	185,791	2,604 / 5,300	42,160	0.7	12.0	12.0	13.0	1.0
D	189,789	1,962 / 3,650	33,413	0.9	12.5	12.5	13.5	1.0
E	193,627	3,456 / 5,450	34,422	0.9	13.2	13.2	14.2	1.0
F	197,695	3,594 / 4,370	31,777	1.0	14.0	14.0	15.0	1.0
G	201,739	2,808 / 4,350	32,030	1.0	14.8	14.8	15.8	1.0
H	221,763	617 / 2,698	25,184	1.2	17.4	17.4	18.4	1.0
I	227,219	116 / 2,740	25,590	1.1	18.1	18.1	19.1	1.0
J	238,979	3,760 / 4,091	35,776	0.8	19.6	19.6	20.6	1.0
K	249,493	1,348 / 4,134	34,614	0.8	20.5	20.5	21.5	1.0
L	257,323	129 / 2,844	21,418	1.4	21.8	21.8	22.8	1.0
M	261,988	602 / 1,934	18,473	1.6	22.8	22.8	23.8	1.0
N	286,588	640 / 2,800	26,712	1.1	29.1	29.1	30.0	0.9

[1] Feet above confluence with Atlantic Ocean
[2] Width within county / total width

TABLE 11

FEDERAL EMERGENCY MANAGEMENT AGENCY

COLLETON COUNTY, SOUTH CAROLINA

AND INCORPORATED AREAS

FLOODWAY DATA

EDISTO RIVER

LOCATION		FLOODWAY			1% ANNUAL CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD88)			
CROSS SECTION	DISTANCE[1]	WIDTH[2] (FEET)	SECTION AREA (SQ. FEET)	MEAN VELOCITY (FEET/SEC)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
O	322,956	2,656 / 3,024	10,820	2.7	36.1	36.1	37.1	1.0
P	358,336	661 / 1,991	16,549	1.5	41.4	41.4	42.3	0.9
Q	397,869	215 / 935	3,152	7.5	48.5	48.5	49.3	0.8
R	402,608	1,489 / 2,515	17,251	1.4	52.7	52.7	53.7	1.0
S	408,580	438 / 3,600	25,953	0.9	54.6	54.6	55.6	1.0
T	416,288	840 / 4,040	28,409	0.8	56.5	56.5	57.5	1.0
U	418,266	799 / 3,700	26,339	0.9	56.9	56.9	57.9	1.0
V	422,263	509 / 2,640	17,770	1.3	58.1	58.1	59.1	1.0
W	426,244	541 / 4,055	24,452	1.0	59.3	59.3	60.3	1.0
X	430,348	141 / 3,730	37,386	0.6	59.9	59.9	60.9	1.0
Y	434,822	252 / 4,595	46,924	0.5	60.3	60.3	61.3	1.0
Z	438,759	93 / 4,155	38,500	0.6	60.6	60.6	61.5	0.9
AA	442,540	224 / 4,715	25,700	0.9	61.5	61.5	62.5	1.0
AB	446,783	101 / 3,085	33,420	0.7	64.2	64.2	65.1	0.9
AC	448,909	85 / 5,075	12,665	1.8	64.2	64.2	65.2	1.0
AD	452,288	239 / 4,220	31,062	0.7	65.1	65.1	66.1	1.0
AE	456,305	266 / 3,500	18,414	1.2	66.6	66.6	67.6	1.0
AF	458,767	729 / 4,535	37,856	0.6	67.3	67.3	68.3	1.0
AG	462,504	104 / 2,640	15,738	1.5	68.2	68.2	69.1	0.9
AH	468,707	503 / 2,475	18,961	1.2	70.7	70.7	71.7	1.0
AI	472,767	230 / 3,130	24,864	0.9	71.6	71.6	72.5	0.9

[1] Feet above confluence with Atlantic Ocean
[2] Width within county / total width

TABLE 11

FEDERAL EMERGENCY MANAGEMENT AGENCY

COLLETON COUNTY, SOUTH CAROLINA

AND INCORPORATED AREAS

FLOODWAY DATA

EDISTO RIVER

LOCATION		FLOODWAY			1% ANNUAL CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD88)			
CROSS SECTION	DISTANCE[1]	WIDTH[2] (FEET)	SECTION AREA (SQ. FEET)	MEAN VELOCITY (FEET/SEC)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
AJ	476,642	1,388 / 4,570	36,822	0.6	72.3	72.3	73.2	0.9
AK	480,710	1,628 / 5,020	36,253	0.6	72.7	72.7	73.7	1.0
AL	484,611	1,545 / 4,375	31,234	0.7	73.2	73.2	74.2	1.0
AM	488,597	1,307 / 3,810	28,171	0.8	73.9	73.9	74.9	1.0
AN	494,712	1,417 / 3,725	27,811	0.8	75.1	75.1	76.1	1.0
AO	499,511	791 / 2,090	14,713	1.6	76.4	76.4	77.3	0.9
AP	503,554	770 / 2,100	13,269	1.7	78.1	78.1	79.1	1.0
AQ	508,603	2,804 / 2,885	24,312	0.9	80.1	80.1	81.0	0.9
AR	513,865	3,600 / 4,100	31,926	0.7	81.1	81.1	82.1	1.0
AS	515,492	3,723 / 3,875	24,564	0.9	81.4	81.4	82.4	1.0
AT	518,462	2,524 / 2,670	20,034	1.1	82.5	82.5	83.5	1.0
AU	522,207	2,790 / 3,000	19,741	1.2	83.5	83.5	84.5	1.0
AV	526,505	1,719 / 3,150	24,715	0.9	84.7	84.7	85.7	1.0

[1] Feet above confluence with Atlantic Ocean
[2] Width within county / total width

TABLE 11

FEDERAL EMERGENCY MANAGEMENT AGENCY

COLLETON COUNTY, SOUTH CAROLINA

AND INCORPORATED AREAS

FLOODWAY DATA

EDISTO RIVER

LOCATION		FLOODWAY			1% ANNUAL CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD88)			
CROSS SECTION	DISTANCE[1]	WIDTH[2] (FEET)	SECTION AREA (SQ. FEET)	MEAN VELOCITY (FEET/SEC)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
AW	528,534	3,091 / 4,050	27,898	0.8	85.2	85.2	86.2	1.0
AX	533,642	3,502 / 4,485	26,421	0.9	86.4	86.4	87.3	0.9
AY	539,971	2,890 / 4,800	31,897	0.7	87.4	87.4	88.4	1.0
AZ	544,107	750 / 3,300	22,866	0.7	88.2	88.2	89.2	1.0
BA	547,996	834 / 2,335	15,093	1.1	89.1	89.1	90.0	0.9
BB	552,034	859 / 3,850	26,817	0.6	89.8	89.8	90.8	1.0
BC	557,699	101 / 2,235	13,838	1.2	91.2	91.2	92.2	1.0

[1] Feet above confluence with Atlantic Ocean
[2] Width within county / total width

TABLE 11

FEDERAL EMERGENCY MANAGEMENT AGENCY

COLLETON COUNTY, SOUTH CAROLINA

AND INCORPORATED AREAS

FLOODWAY DATA

EDISTO RIVER

LOCATION		FLOODWAY			1% ANNUAL CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD88)			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQ. FEET)	MEAN VELOCITY (FEET/SEC)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
A	43,822	2,800	8,102	1.0	19.9	19.9	20.2	0.3
B	48,208	3,500	12,467	0.7	21.3	21.3	22.3	1.0
C	52,464	3,900	12,371	0.7	23.1	23.1	23.9	0.8
D	56,585	2,400	8,604	0.9	25.5	25.5	26.1	0.6
E	59,696	2,200	10,757	0.8	27.5	27.5	28.1	0.6
F	62,434	2,050	9,382	0.9	29.5	29.5	29.9	0.4
G	66,588	2,380	12,426	0.6	32.0	32.0	32.8	0.8
H	69,189	1,500	7,154	1.0	33.6	33.6	34.1	0.5
I	71,813	975	6,247	1.1	35.3	35.3	36.1	0.8

[1] Feet above confluence with Ashepoo River

TABLE 11

FEDERAL EMERGENCY MANAGEMENT AGENCY

COLLETON COUNTY, SOUTH CAROLINA

AND INCORPORATED AREAS

FLOODWAY DATA

GREAT SWAMP

LOCATION		FLOODWAY			1% ANNUAL CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD88)			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQ. FEET)	MEAN VELOCITY (FEET/SEC)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
A	6,241	263	3,106	2.4	6.1	2.5[2]	2.6	0.1
B	17,019	400	2,533	2.9	6.1	5.2[2]	5.9	0.7
C	18,700	630	3,787	2.0	6.7	6.7	7.6	0.9
D	20,671	1,450	8,053	0.9	7.8	7.8	8.8	1.0
E	24,264	2,100	11,649	0.6	8.8	8.8	9.8	1.0
F	26,525	1,650	10,498	0.7	9.6	9.6	10.6	1.0
G	28,410	850	6,701	1.1	10.3	10.3	11.3	1.0
H	30,223	1,050	8,282	0.9	10.9	10.9	11.9	1.0

[1] Feet above confluence with Ashepoo River
[2] Elevation computed without consideration of backwater effects from Ashepoo River

TABLE 11

FEDERAL EMERGENCY MANAGEMENT AGENCY

COLLETON COUNTY, SOUTH CAROLINA

AND INCORPORATED AREAS

FLOODWAY DATA

HORSESHOE CREEK

LOCATION		FLOODWAY			1% ANNUAL CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD88)			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQ. FEET)	MEAN VELOCITY (FEET/SEC)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
A	2,794	1,800	5,272	0.5	31.9	31.0[2]	31.1	0.1
B	6,658	885	2,012	1.4	32.9	32.9	33.5	0.6
C	8,732	585	1,953	1.4	35.2	35.2	36.1	0.9
D	10,772	325	1,920	1.5	38.7	38.7	39.4	0.7
E	14,306	950	5,752	0.5	39.4	39.4	40.3	0.9
F	16,055	1,000	4,299	0.7	40.4	40.4	41.2	0.8
G	18,392	580	2,839	1.0	41.4	41.4	42.1	0.7
H	20,071	670	2,832	1.0	42.4	42.4	43.0	0.6
I	21,525	400	2,001	1.4	44.2	44.2	44.8	0.6
J	23,479	380	1,839	1.5	45.2	45.2	45.8	0.6
K	26,279	650	3,322	0.8	46.8	46.8	47.7	0.9
L	28,583	680	3,843	0.7	48.1	48.1	48.9	0.8

[1] Feet above confluence with Great Swamp
[2] Elevation computed without consideration of backwater effects from Great Swamp

TABLE 11

FEDERAL EMERGENCY MANAGEMENT AGENCY

COLLETON COUNTY, SOUTH CAROLINA

AND INCORPORATED AREAS

FLOODWAY DATA

IRELAND CREEK

LOCATION		FLOODWAY			1% ANNUAL CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD88)			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQ. FEET)	MEAN VELOCITY (FEET/SEC)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
A	2,890	540	1,537	0.6	45.2	45.2	46.2	1.0
B	4,172	200	654	1.3	48.5	48.5	48.9	0.4
C	6,850	180	953	0.9	56.3	56.3	57.0	0.7
D	8,661	125	540	1.5	57.5	57.5	58.5	1.0
E	9,473	175	721	1.1	58.5	58.5	59.5	1.0
F	11,588	90	394	2.0	61.2	61.2	62.1	0.9

[1] Feet above confluence with Jones Swamp Creek

TABLE 11

FEDERAL EMERGENCY MANAGEMENT AGENCY

COLLETON COUNTY, SOUTH CAROLINA

AND INCORPORATED AREAS

FLOODWAY DATA

WOLF CREEK

Table 12 – Flood Hazard Data for Selected Streams

Flooding Source[1]	Cross Section	Stream Station[2]	1% Annual Chance Flood Discharge (cfs)	1% Annual Chance Water Surface Elevation (feet NAVD88)
Baptist Church Branch	129	12,931	1,816	15.6
	135	13,522	1,816	15.7
	140	14,000	1,816	15.9
	145	14,500	1,816	16.0
	148	14,845	1,792	16.0
	155	15,500	1,792	16.2
	160	16,000	1,750	16.3
	165	16,500	1,750	16.4
	170	17,000	1,750	16.5
	174	17,359	1,750	16.6
	174	17,410	1,750	17.6
	175	17,470	1,750	17.6
	180	18,000	1,750	17.8
	185	18,500	1,750	17.8
	190	19,000	1,750	17.9
	195	19,500	1,750	17.9
	200	20,000	1,750	18.0
	204	20,391	1,750	18.2
	204	20,447	1,750	18.8
	205	20,497	1,750	18.8
	210	21,000	1,750	18.9
	215	21,500	1,714	19.0
	220	22,000	1,714	19.1
	225	22,500	1,714	19.2
	230	23,000	1,714	19.3
	235	23,500	1,650	19.4
	240	24,000	1,650	19.5
	245	24,500	1,650	19.7
	250	25,000	1,650	19.8
	257	25,737	1,616	19.9
	263	26,262	1,616	20.0
	267	26,715	1,616	20.1
	270	27,000	1,616	20.3
	274	27,359	1,616	20.5
	274	27,409	1,616	20.5
	275	27,465	1,616	20.5
	277	27,717	1,616	20.6
	283	28,280	1,616	20.8
	285	28,500	1,616	20.8

Table 12 – Flood Hazard Data for Selected Streams – continued

Flooding Source[1]	Cross Section	Stream Station[2]	1% Annual Chance Flood Discharge (cfs)	1% Annual Chance Water Surface Elevation (feet NAVD88)
Baptist Church Branch (continued)	288	28,800	1,616	20.9
	290	28,974	1,616	21.0
Black Creek	030	3,000	2,727	18.3
	035	3,527	2,727	18.4
	039	3,877	2,727	18.6
	044	4,377	2,727	18.9
	054	5,424	2,727	19.7
	059	5,933	2,727	20.3
	064	6,393	2,727	20.9
	069	6,918	2,727	21.5
	072	7,223	2,727	21.8
	077	7,663	2,727	22.2
	081	8,082	2,727	22.5
	086	8,582	2,700	22.9
	091	9,082	2,700	23.3
	094	9,403	2,700	23.5
	099	9,918	2,700	23.8
	105	10,483	2,700	24.1
	109	10,877	2,700	24.4
	113	11,342	2,700	24.7
	117	11,718	2,700	25.0
	121	12,147	2,700	25.7
	122	12,225	2,700	28.9
	123	12,292	2,700	28.9
	128	12,796	2,700	29.2
	132	13,202	2,700	29.3
	138	13,826	2,524	29.3
	142	14,202	2,524	29.4
	147	14,702	2,524	29.4
	151	15,129	2,524	29.5
	158	15,754	2,475	29.6
	163	16,281	2,475	29.7
	168	16,781	2,475	29.9
	173	17,281	2,475	30.1
	178	17,782	2,475	30.4
	182	18,235	2,448	30.7
	187	18,735	2,448	30.9
	192	19,235	2,448	31.2
	197	19,735	2,433	31.5
	202	20,235	2,433	31.9
	210	21,017	2,433	32.6

Table 12 – Flood Hazard Data for Selected Streams – continued

Flooding Source[1]	Cross Section	Stream Station[2]	1% Annual Chance Flood Discharge (cfs)	1% Annual Chance Water Surface Elevation (feet NAVD88)
Black Creek (continued)	214	21,390	2,433	34.1
	214	21,428	2,433	35.3
	214	21,449	2,433	35.3
	215	21,534	2,433	35.4
	216	21,600	2,433	41.6
	217	21,650	2,433	41.6
	222	22,235	2,433	41.6
	227	22,735	2,433	41.6
	232	23,235	2,433	41.6
	237	23,735	2,404	41.7
	243	24,312	2,333	41.7
	246	24,627	2,333	41.7
	252	25,235	2,333	41.7
	257	25,735	2,333	41.8
	262	26,235	2,333	41.8
	267	26,735	2,333	41.8
	272	27,235	2,333	41.9
	277	27,735	2,333	41.9
	282	28,235	2,333	42.0
	287	28,735	2,313	42.0
	292	29,235	2,313	42.0
	297	29,735	2,313	42.1
	302	30,235	2,313	42.1
	307	30,735	2,257	42.2
	312	31,235	2,257	42.4
	317	31,711	2,257	42.6
	322	32,211	2,229	42.7
	328	32,824	2,229	42.9
	332	33,211	2,229	43.1
	337	33,711	2,229	43.3
	342	34,171	2,197	43.6
	347	34,671	2,197	43.9
	352	35,171	2,197	44.8
	352	35,219	2,197	48.0
	353	35,268	2,197	48.0
	362	36,166	2,197	48.7
	366	36,637	2,197	48.7
	370	37,009	2,186	48.7
	376	37,637	2,186	48.8
	381	38,137	2,186	48.8
	386	38,637	2,186	48.8
	391	39,137	2,108	48.9

Table 12 – Flood Hazard Data for Selected Streams – continued

Flooding Source[1]	Cross Section	Stream Station[2]	1% Annual Chance Flood Discharge (cfs)	1% Annual Chance Water Surface Elevation (feet NAVD88)
Black Creek (continued)	396	39,637	2,108	48.9
	401	40,137	2,108	49.0
	406	40,637	2,108	49.1
	411	41,137	2,108	49.2
	416	41,637	2,108	49.4
	421	42,137	2,048	49.5
	426	42,637	2,048	49.6
	431	43,137	2,048	49.7
	436	43,637	2,048	49.9
	441	44,137	2,048	50.1
	446	44,637	2,016	50.3
	451	45,137	2,016	50.4
	456	45,637	2,016	50.6
	461	46,148	1,993	50.7
	466	46,637	1,993	50.9
	471	47,137	1,993	51.2
	476	47,637	1,993	51.5
	481	48,137	1,993	51.9
	486	48,637	1,993	52.3
	491	49,137	1,870	52.5
	496	49,637	1,870	52.7
	501	50,137	1,870	52.9
	506	50,637	1,870	53.1
	511	51,140	1,870	53.4
	516	51,637	1,870	53.7
	521	52,137	1,870	54.0
	526	52,637	1,870	54.3
	530	52,990	1,870	54.6
	537	53,686	1,471	55.0
	541	54,091	1,471	55.2
	541	54,139	1,471	55.5
	542	54,192	1,471	55.5
	545	54,490	1,428	55.7
	550	54,990	1,428	56.0
	553	55,269	1,428	62.1
	555	55,490	1,428	62.1
	560	55,990	1,428	62.1
	565	56,490	1,428	62.3
	571	57,106	1,415	62.4
	577	57,672	1,415	62.6
	580	57,990	1,415	62.7
	585	58,490	1,415	62.8

Table 12 – Flood Hazard Data for Selected Streams – continued

Flooding Source[1]	Cross Section	Stream Station[2]	1% Annual Chance Flood Discharge (cfs)	1% Annual Chance Water Surface Elevation (feet NAVD88)
Black Creek (continued)	590	58,990	1,415	62.9
	595	59,490	1,415	63.0
	600	59,990	1,375	63.1
	605	60,462	1,375	63.3
	610	60,990	1,375	63.6
	615	61,490	1,375	64.0
	620	61,990	1,213	64.3
	621	62,092	1,213	64.3
	622	62,150	1,213	64.5
	622	62,182	1,213	64.5
	625	62,485	1,213	64.7
	630	62,990	1,213	65.0
	635	63,490	1,213	65.2
Black Creek Tributary 1	001	124	852	54.9[3]
	005	473	852	54.9[3]
	005	525	852	56.0
	006	588	852	56.0
	010	1,000	852	56.8
	015	1,500	852	57.3
	020	2,000	852	58.0
	026	2,579	838	59.0
	030	3,000	782	60.2
	035	3,500	782	61.5
	040	4,000	782	62.8
	045	4,500	782	64.4
	049	4,912	782	65.0
	049	4,941	782	66.5
	050	4,961	782	66.5
	055	5,500	782	66.8
	060	6,034	758	67.5
	065	6,500	758	68.6
	070	6,961	758	69.5
	075	7,474	758	70.0
	075	7,504	758	71.7
	075	7,547	758	71.7
	080	8,013	758	71.9
	085	8,500	698	72.3
	090	8,978	698	72.6
	095	9,500	698	73.0
	100	10,000	698	73.7
	104	10,442	698	74.2

Table 12 – Flood Hazard Data for Selected Streams – continued

Flooding Source[1]	Cross Section	Stream Station[2]	1% Annual Chance Flood Discharge (cfs)	1% Annual Chance Water Surface Elevation (feet NAVD88)
Black Creek Tributary 1 (continued)	110	11,000	641	75.2
	115	11,500	641	76.0
Chessey Creek 2	033	3,253	2,099	13.6[3]
	040	4,000	2,099	13.6[3]
	046	4,592	2,099	13.6[3]
	050	4,989	2,099	13.6[3]
	055	5,496	2,067	13.6[3]
	060	5,993	2,067	13.7
	061	6,077	2,067	15.5
	061	6,107	2,067	15.5
	065	6,496	2,067	15.5
	070	6,987	2,067	15.5
	076	7,601	2,067	15.5
	085	8,491	2,037	15.5
	089	8,880	2,037	15.5
	094	9,441	2,037	15.6
	099	9,890	2,037	15.7
	105	10,458	2,037	15.8
	110	11,044	2,004	15.9
	116	11,551	2,004	16.1
	116	11,612	2,004	16.5
	117	11,663	2,004	16.5
	126	12,564	1,975	17.0
	130	13,044	1,975	17.1
	135	13,536	1,975	17.1
	145	14,522	1,955	17.3
	159	15,850	1,955	17.5
	168	16,763	1,955	17.6
	175	17,474	1,955	17.7
	180	17,951	1,955	17.7
	184	18,376	1,955	17.8
	190	18,979	1,955	18.0
	200	19,968	1,691	18.1
	205	20,496	1,691	18.1
	210	21,005	1,691	18.1
	215	21,514	1,691	18.2
	221	22,092	1,691	18.2
	225	22,519	1,679	18.3
	230	23,019	1,679	18.3
	235	23,486	1,679	18.3
	241	24,137	1,679	18.4

Table 12 – Flood Hazard Data for Selected Streams – continued

Flooding Source[1]	Cross Section	Stream Station[2]	1% Annual Chance Flood Discharge (cfs)	1% Annual Chance Water Surface Elevation (feet NAVD88)
Chessey Creek 2 (continued)	250	25,011	1,679	18.4
	251	25,082	1,125	18.7
	251	25,129	1,125	18.7
	260	25,975	1,125	18.9
	267	26,728	1,125	19.0
	272	27,228	1,125	19.1
	282	28,213	1,125	19.2
	291	29,089	1,125	19.3
	298	29,751	1,125	19.4
	299	29,905	1,089	19.4
	299	29,938	1,089	20.2
	300	29,970	1,089	20.2
	302	30,248	1,089	20.2
	309	30,857	1,089	20.3
	318	31,801	1,089	20.3
	331	33,125	1,089	20.5
	336	33,562	1,089	20.5
	341	34,092	927	20.6
	346	34,622	927	20.7
	351	35,122	927	20.9
	357	35,733	927	21.4
	358	35,809	927	22.7
	359	35,852	927	22.7
	362	36,158	927	22.7
	368	36,752	927	22.8
	373	37,262	927	22.8
	380	38,018	927	22.9
	385	38,481	927	23.0
	392	39,165	732	23.3
Chessey Creek 2 Tributary 1	050	5,000	796	19.4
	054	5,421	796	19.6
	054	5,444	796	20.6
	055	5,466	796	20.6
	055	5,500	796	20.7
	060	6,000	796	20.7
	065	6,500	796	20.8
	068	6,847	796	20.8
	073	7,261	796	20.9
	078	7,755	690	20.9
	081	8,076	628	20.9
	081	8,099	628	22.0

Table 12 – Flood Hazard Data for Selected Streams – continued

Flooding Source[1]	Cross Section	Stream Station[2]	1% Annual Chance Flood Discharge (cfs)	1% Annual Chance Water Surface Elevation (feet NAVD88)
Chessey Creek 2 Tributary 1 (continued)	081	8,132	628	22.0
	085	8,500	628	22.1
	087	8,727	628	22.1
	087	8,744	628	22.1
	088	8,766	628	22.1
	090	9,000	628	22.2
	095	9,500	628	22.3
	100	10,000	628	22.5
	105	10,500	628	22.6
	112	11,192	446	22.9
	116	11,627	446	23.2
	123	12,253	446	24.5
	127	12,722	255	26.0
	128	12,832	255	26.5
	129	12,929	255	27.0
	130	13,043	255	27.5
	131	13,129	255	27.9
	132	13,226	255	28.3
	133	13,318	255	28.9
Chessey Creek 2 Tributary 1-1	004	447	310	22.8
	006	642	310	23.0
	007	686	310	25.2
	007	701	310	25.2
	008	802	310	25.2
	010	1,000	310	25.2
	013	1,250	310	25.3
	015	1,500	310	25.7
	018	1,827	310	26.9
	021	2,057	310	27.7
Chessey Creek 2 Tributary 2	018	1,843	266	20.8
	024	2,416	266	21.9
	028	2,811	266	22.8
	030	3,035	266	23.1
	031	3,058	266	24.7
	031	3,136	266	24.7
	034	3,403	266	24.8
	036	3,593	266	24.9
	037	3,723	266	25.2
	041	4,083	266	27.2

Table 12 – Flood Hazard Data for Selected Streams – continued

Flooding Source[1]	Cross Section	Stream Station[2]	1% Annual Chance Flood Discharge (cfs)	1% Annual Chance Water Surface Elevation (feet NAVD88)
Chessey Creek 2 Tributary 2 (continued)	046	4,583	266	28.9
	050	4,953	266	30.3
	052	5,155	202	31.5
	052	5,196	202	34.1
	052	5,227	202	34.1
	056	5,619	202	34.1
	058	5,802	202	34.1
Combahee River	843	84,280	17,889	6.4
	852	85,161	17,880	7.2
	853	85,271	17,880	7.5
	854	85,414	17,880	7.5
	860	86,000	17,880	7.7
	865	86,521	17,880	8.2
	871	87,138	17,880	8.7
	875	87,500	17,858	8.9
	878	87,798	17,858	9.0
	886	88,582	17,858	9.4
	890	89,000	17,819	9.6
	897	89,711	17,819	9.8
	903	90,272	17,819	10.0
	906	90,604	17,819	10.1
	913	91,334	17,771	10.3
	917	91,681	17,771	10.5
	920	91,960	17,771	10.5
	923	92,342	17,771	10.7
	930	93,000	17,771	10.9
	935	93,500	17,771	11.0
	939	93,857	17,771	11.1
	945	94,484	17,771	11.4
	950	95,000	17,765	11.6
	954	95,353	17,765	11.7
	966	96,601	17,765	12.0
	970	97,015	17,765	12.0
	977	97,713	17,765	12.3
	980	98,000	17,765	12.4
	985	98,500	17,765	12.5
	997	99,736	17,747	12.9
	1005	100,460	17,734	13.1
	1005	100,535	17,734	13.8
	1006	100,628	17,734	13.8
	1007	100,705	17,734	13.8

Table 12 – Flood Hazard Data for Selected Streams – continued

Flooding Source[1]	Cross Section	Stream Station[2]	1% Annual Chance Flood Discharge (cfs)	1% Annual Chance Water Surface Elevation (feet NAVD88)
Combahee River (continued)	1008	100,790	17,734	14.3
	1009	100,877	17,734	14.3
	1012	101,177	17,734	14.4
	1023	102,313	17,707	14.6
	1034	103,383	17,707	14.7
	1045	104,518	17,650	14.9
	1052	105,222	17,624	15.0
	1064	106,388	17,624	15.2
	1070	106,986	17,624	15.3
	1086	108,566	17,624	15.7
	1107	110,651	17,624	16.1
	1116	111,634	17,618	16.3
	1130	112,965	17,586	16.5
	1140	114,040	17,586	16.7
	1147	114,738	17,586	17.1
	1158	115,785	17,579	17.4
	1181	118,144	17,579	18.1
Fuller Swamp Creek	000	46	2,222	13.4
	013	1,302	2,222	13.5
	024	2,436	2,214	13.6
	035	3,500	2,214	13.9
	040	4,000	2,214	14.1
	045	4,500	2,214	14.3
	050	5,000	2,185	14.5
	055	5,500	2,185	14.7
	060	6,000	2,185	14.8
	065	6,500	2,114	14.9
	070	7,000	2,114	15.0
	075	7,500	2,114	15.2
	080	8,000	2,114	15.4
	087	8,661	2,114	15.7
	091	9,142	2,114	16.0
	098	9,806	2,114	16.2
	103	10,285	2,114	16.4
	110	11,000	2,114	16.5
	115	11,500	2,114	16.7
	120	12,000	2,083	16.8
	125	12,500	2,083	17.0
	130	13,000	2,083	17.4
	135	13,500	1,910	17.7
	140	14,000	1,910	18.0
	145	14,500	1,910	18.2

Table 12 – Flood Hazard Data for Selected Streams – continued

Flooding Source[1]	Cross Section	Stream Station[2]	1% Annual Chance Flood Discharge (cfs)	1% Annual Chance Water Surface Elevation (feet NAVD88)
Fuller Swamp Creek (continued)	150	15,000	1,890	18.4
	155	15,500	1,890	18.7
	158	15,837	1,890	18.8
	159	15,948	1,890	19.3
	161	16,146	1,890	19.3
	163	16,312	1,890	19.6
	174	17,377	1,613	19.7
	186	18,624	1,598	19.8
	195	19,500	1,598	20.0
	200	20,000	1,598	20.1
	208	20,777	1,598	20.6
	213	21,309	1,548	21.4
	220	22,000	1,548	22.0
	230	23,000	1,548	22.9
	235	23,500	1,548	23.5
	240	24,000	1,548	24.3
	245	24,522	1,475	24.9
	248	24,849	1,475	25.2
	254	25,382	1,475	25.8
	260	26,000	1,475	26.5
	266	26,585	1,475	27.0
	270	27,000	1,475	27.4
	276	27,552	1,475	28.0
	279	27,918	1,475	28.4
	285	28,500	1,475	29.2
	290	28,978	1,475	29.5
	291	29,083	1,475	29.8
	291	29,140	1,475	29.8
	300	30,000	1,447	30.2
Fuller Swamp Creek Tributary 2	035	3,497	675	20.6[3]
	040	4,000	675	20.7
	045	4,500	675	21.2
	050	5,000	642	21.5
	055	5,513	642	21.8
	061	6,093	501	22.2
	065	6,529	424	22.4
	072	7,185	424	22.6
	072	7,236	424	24.5
	073	7,284	424	24.5
	076	7,576	424	24.5
	081	8,076	424	24.8

Table 12 – Flood Hazard Data for Selected Streams – continued

Flooding Source[1]	Cross Section	Stream Station[2]	1% Annual Chance Flood Discharge (cfs)	1% Annual Chance Water Surface Elevation (feet NAVD88)
Fuller Swamp Creek Tributary 2 (continued)	086	8,576	424	26.1
	091	9,076	424	27.3
	093	9,323	424	27.9
Horseshoe Lead Creek	338	33,769	3,523	12.9
	341	34,102	3,523	13.0
	345	34,500	3,523	13.1
	350	35,000	3,523	13.2
	355	35,500	3,523	13.3
	361	36,095	3,523	13.4
Oats Hole Branch	001	59	1,193	21.0
	005	500	1,193	21.0
	010	1,000	1,193	21.0
	015	1,500	1,165	21.1
	020	2,000	1,165	21.3
	025	2,500	1,165	21.5
	030	3,000	1,165	21.6
	035	3,500	1,134	21.7
	040	4,000	1,134	21.8
	045	4,500	1,134	21.8
	050	5,000	1,134	21.8
	055	5,500	1,094	21.8
	060	6,000	1,094	21.9
	065	6,500	1,094	21.9
	070	7,000	1,094	21.9
	075	7,500	1,094	21.9
	080	8,000	1,054	22.0
	085	8,512	1,054	22.0
	085	8,543	1,054	22.0
	086	8,575	1,054	22.0
	088	8,814	1,054	22.0
	092	9,177	657	22.0
	097	9,655	657	22.0
	100	10,000	657	22.0
	105	10,500	657	22.0
	110	11,000	657	22.0
	115	11,500	657	22.0
	120	12,000	657	22.0
	122	12,207	600	22.0
	122	12,241	600	22.0
	123	12,278	600	22.0

Table 12 – Flood Hazard Data for Selected Streams – continued

Flooding Source[1]	Cross Section	Stream Station[2]	1% Annual Chance Flood Discharge (cfs)	1% Annual Chance Water Surface Elevation (feet NAVD88)
Oats Hole Branch (continued)	125	12,500	600	22.0
	130	13,000	600	22.0
	135	13,500	600	22.1
	140	14,000	531	22.1
	145	14,500	531	22.1
	148	14,830	531	22.1
	151	15,133	531	22.2
	155	15,500	531	22.2
	160	16,000	531	22.2
	165	16,500	531	22.4
	170	17,023	531	22.7
	175	17,500	476	22.9
	180	18,000	476	23.2
	185	18,500	476	23.3
	190	19,000	476	23.6
	196	19,603	476	24.1
	200	20,000	476	24.2
	203	20,254	476	24.3
	208	20,756	396	24.4
	208	20,804	396	24.7
	208	20,848	396	24.7
	211	21,140	396	24.9
	215	21,500	396	25.2
	219	21,922	396	26.0
	222	22,168	396	27.1
	225	22,500	396	27.8
	230	23,000	396	28.0
	235	23,500	396	28.8
Shereau Branch	000	25	2,104	13.8
	005	500	1,679	13.9
	008	764	1,679	14.0
	011	1,071	1,679	14.1
	011	1,112	1,679	14.2
	011	1,141	1,679	14.2
	015	1,500	1,679	14.3
	019	1,893	1,679	14.4
	025	2,500	1,679	14.5
	030	3,000	1,673	14.5
	035	3,500	1,673	14.6
	040	4,000	1,673	14.8
	045	4,500	1,637	15.0
	048	4,819	1,637	15.1

Table 12 – Flood Hazard Data for Selected Streams – continued

Flooding Source[1]	Cross Section	Stream Station[2]	1% Annual Chance Flood Discharge (cfs)	1% Annual Chance Water Surface Elevation (feet NAVD88)
Shereau Branch (continued)	053	5,316	1,637	15.1
	058	5,803	1,553	15.2
	059	5,857	1,553	15.2
	059	5,904	1,553	15.2
	065	6,500	1,553	15.3
	070	7,000	1,553	15.4
	075	7,500	1,553	15.5
	080	8,000	1,520	15.6
	085	8,500	1,520	15.7
	090	9,000	1,520	15.7
	095	9,500	1,520	15.8
	100	10,000	1,473	15.9
	105	10,500	1,473	16.1
	110	10,988	1,473	17.7
	110	11,020	1,473	19.9
	111	11,052	1,473	19.9
	115	11,500	1,473	19.9
	120	12,000	1,473	20.0
	125	12,500	1,473	20.0
	129	12,920	1,473	20.1
	135	13,500	1,070	20.2
	140	13,998	1,070	20.2
	141	14,050	1,070	20.4
	141	14,102	1,070	20.4
	147	14,671	1,070	20.4
	154	15,423	1,070	20.4
	159	15,928	1,028	20.5
	163	16,345	1,028	20.5
	170	17,000	1,028	20.7
	176	17,599	1,028	21.3
	185	18,500	1,028	22.5
	190	19,000	1,028	22.9
	195	19,500	1,028	23.7
	200	20,000	1,028	24.7
	207	20,747	693	26.4

[1] This table reflects all modeled cross-sections; some cross-sections shown in this table may not appear on the map

[2] Feet above mouth

[3] Elevation includes backwater effects

5.0 INSURANCE APPLICATIONS

For flood insurance rating purposes, flood insurance zone designations are assigned to a community based on the results of the engineering analyses. The zones are as follows:

Zone A

Zone A is the flood insurance rate zone that corresponds to the 1-percent-annual-chance floodplains that are determined in the FIS by approximate methods. Because detailed hydraulic analyses are not performed for such areas, no BFEs or depths are shown within this zone.

Zone AE

Zone AE is the flood insurance rate zone that corresponds to the 1-percent-annual-chance floodplains that are determined in the FIS by detailed methods. In most instances, whole-foot BFEs derived from the detailed hydraulic analyses are shown at selected intervals within this zone.

Zone VE

Zone VE is the flood insurance rate zone that corresponds to the 1-percent-annual-chance coastal floodplains that have additional hazards associated with storm waves. Whole-foot BFEs derived from the detailed hydraulic analyses are shown at selected intervals within this zone.

Zone X

Zone X is the flood insurance rate zone that corresponds to areas outside the 0.2-percent-annual-chance floodplain, areas within the 0.2-percent-annual-chance floodplain, areas of 1-percent-annual-chance flooding where average depths are less than 1.0 foot, areas of 1-percent-annual-chance flooding where the contributing drainage area is less than 1.0 square mile, and areas protected from the 1-percent-annual-chance flood by levees. No BFEs or depths are shown within this zone.

6.0 FLOOD INSURANCE RATE MAP

The FIRM is designed for flood insurance and floodplain management applications.

For flood insurance applications, the map designates flood insurance rate zones as described in Section 5.0 and, in the 1-percent-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.

For floodplain management applications, the map shows by tints, screens, and symbols, the 1- and 0.2-percent-annual-chance floodplains, floodways and the locations of selected cross-sections used in the hydraulic analyses and floodway computations.

The countywide FIRM presents flooding information for the entire geographic area of Colleton County. Previously, FIRM panels were prepared for each identified flood-prone incorporated community and the unincorporated areas of the county. This countywide FIRM also includes flood hazard information that was presented separately on Flood Boundary and Floodway Maps (FBFMs), where applicable. Historical data relating to the maps prepared for each community are presented in Table 13, "Community Map History".

7.0 OTHER STUDIES

This is a multi-volume FIS. Each volume may be revised separately, in which case it supersedes the previously printed volume. Users should refer to the Table of Contents in Volume 1 for the current effective date of each volume; volumes bearing these dates contain the most up-to-date flood hazard data.

FIS reports have been prepared for Allendale County, South Carolina, and Incorporated Areas, Bamberg County, South Carolina, and Incorporated Areas, Beaufort County, South Carolina, and Incorporated Areas: Unincorporated Areas, Charleston County, South Carolina, and Incorporated Areas, Dorchester County, South Carolina, and Incorporated Areas, Hampton County, South Carolina, and Incorporated Areas, and Orangeburg County, South Carolina, and Incorporated Areas (Reference 27, 28, 29, 30, 31, 32, & 33).

A study is in progress for Beaufort County, South Carolina, and Incorporated Areas: Unincorporated Areas (Reference 34). That report is in agreement with this study.

Because it is based on more up-to-date analyses, this FIS supersedes the previously printed countywide FIS for Colleton County, South Carolina, and Incorporated Areas (Reference 35).

Some flood related studies that are relevant to the study area include "Storm Tide Frequencies on the South Carolina Coast", "National Shoreline Study, Regional Inventory Report: South Atlantic-Gulf Region, Puerto Rico, and the Virgin Islands, Appendix A", and "Critical Analysis of Storm Surge and Wave Crest Elevation Along the South Carolina Shoreline" (Reference 36, 37, & 38).

8.0 LOCATION OF DATA

Information concerning the pertinent data used in the preparation of this study can be obtained by contacting FEMA, Mitigation Division, Koger Center - Rutgers Building, 3003 Chamblee Tucker Road, Atlanta, Georgia 30341.

COMMUNITY NAME	INITIAL IDENTIFICATION	FLOOD HAZARD BOUNDARY MAP REVISIONS DATE	FIRM EFFECTIVE DATE	FIRM REVISIONS DATE
Colleton County (Unincorporated Areas)	September 6, 1974	October 17,1975 October 1, 1983	April 17, 1987	October 16, 1992 November 7, 2001
Cottageville, Town of	November 7, 2001	—	November 7, 2001	
Edisto Beach, Town of	April 9, 1971	—	April 9, 1971	May 25, 1973 July 1, 1974 August 20, 1976 June 17, 1977 April 4, 1983 July 16, 1987 October 16, 1992 November 7, 2001
Lodge, Town of[1]	November 7, 2001	—	November 7, 2001	
Smoaks, Town of	September 6, 1974	June 18, 1976	November 7, 2001	
Walterboro, City of	June 7, 1974	April 30, 1976 June 3, 1977	April 17, 1987	November 7, 2001
Williams, Town of	January 10, 1975	—	July 17, 1986	November 7, 2001

[1] No Special Flood Hazard Areas Identified

TABLE 13

FEDERAL EMERGENCY MANAGEMENT AGENCY

COLLETON COUNTY, SC

AND INCORPORATED AREAS

COMMUNITY MAP HISTORY

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