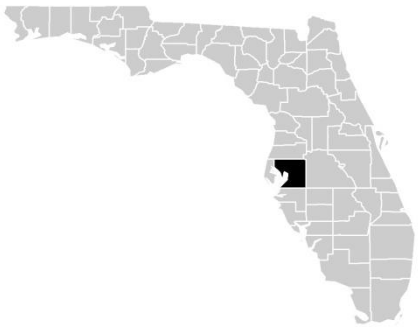
FLOOD INSURANCE STUDY

FEDERAL EMERGENCY MANAGEMENT AGENCY

VOLUME 2 OF 11



HILLSBOROUGH COUNTY, FLORIDA

AND INCORPORATED AREAS

COMMUNITY NAME	COMMUNITY NUMBER
HILLSBOROUGH COUNTY, UNINCORPORATED AREAS	120112
PLANT CITY, CITY OF	120113
TAMPA, CITY OF	120114
TEMPLE TERRACE, CITY OF	120115

FEMA

REVISED PRELIMINARY 09/24/2020

REVISED:

TBD

FLOOD INSURANCE STUDY NUMBER
12057CV002C

Version Number 2.4.3.5

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Flood Insurance Rate Map (FIRM)

5.2 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. Base flood elevations on the FIRM represent the elevations shown on the Flood Profiles and in the Floodway Data tables in the FIS Report. Rounded whole-foot elevations may be shown on the FIRM in coastal areas, areas of ponding, and other areas with static base flood elevations. These whole-foot elevations may not exactly reflect the elevations derived from the hydraulic analyses. 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. The hydraulic analyses for this FIS were based on unobstructed flow. The flood elevations shown on the profiles are thus considered valid only if hydraulic structures remain unobstructed, operate properly, and do not fail.

For streams for which hydraulic analyses were based on cross sections, locations of selected cross sections are shown on the Flood Profiles (Exhibit 1). For stream segments for which a floodway was computed (Section 6.3), selected cross sections are also listed in Table 23, “Floodway Data.”

A summary of the methods used in hydraulic analyses performed for this project is provided in Table 12. Roughness coefficients are provided in Table 13. Roughness coefficients are values representing the frictional resistance water experiences when passing overland or through a channel. They are used in the calculations to determine water surface elevations. Greater detail (including assumptions, analysis, and results) is available in the archived project documentation.

Table 12: Summary of Hydrologic and Hydraulic Analyses

Flooding Source	Study Limits Downstream Limit	Study Limits Upstream Limit	Hydrologic Model or Method Used	Hydraulic Model or Method Used	Date Analyses Completed	Flood Zone on FIRM	Special Considerations
Alafia River	Approximately 1 mile downstream of U.S. Highway 41	Approximately 2.1 miles upstream of confluence of Buckhorn Creek	*	Combined probability calculation spreadsheet	08/2017	AE w/ Floodway	Combined probability analysis was calculated for each riverine cross section that intersected the coastal surge.
Alafia River	Approximately 2.1 miles upstream of confluence of Buckhorn Creek	Confluence of North Prong Alafia River/ South Prong Alafia River	SCS Runoff Curve Number Method and HEC-1	HEC-2	03/2003	AE w/ Floodway	Revised 1-percent annual chance floodplain boundaries were compared to the 1992 boundaries, and the more conservative result in each area was depicted on the 2008 countywide FIRM. The hydrologic and hydraulic analyses were completed in August 2002 by Parsons Engineering Science, Inc. (FEMA 2013).
Alderman Creek	Confluence with Manatee River	Approximately 2.4 miles upstream of Taylor Gill Road	SCS Runoff Curve Number Method and HEC-1	SWMM 4.31 and EXTRAN	02/2003	AE w/ Floodway	The hydrologic and hydraulic analyses were completed in June 2002 by PBS&J (FEMA 2013).
Archie Creek	Approximately 200 feet downstream of 78th Street South	Approximately 0.4 miles upstream of 78th Street South	*	Combined probability calculation spreadsheet	08/2017	AE w/ Floodway	Combined probability analysis was calculated for each riverine node that intersected the coastal surge.
Archie Creek	Approximately 0.4 miles upstream of 78th Street South	Approximately 1,820 feet upstream of Interstate 75	SCS Runoff Curve Number Method and HEC-1	SWMM 4.31 and EXTRAN	07/2003	AE w/ Floodway	The hydrologic and hydraulic analyses were completed in April 2002 by Hillsborough County Engineering Department. (FEMA 2013).
Baker Canal	Confluence with Lake Thonotosassa Tributary and Baker Creek	Approximately 1,800 feet upstream of Walden Sheffield Road	SCS Runoff Curve Number Method and HEC-1	SWMM 4.31 and EXTRAN	03/2004	AE w/ Floodway	The hydrologic and hydraulic analyses were completed in December 2001 by Hillsborough County Engineering Department. (FEMA 2013).
Baker Canal Tributary 1	Taylor Road	Confluence with Baker Canal	SCS Runoff Curve Number Method and HEC-1	SWMM 4.31 and EXTRAN	03/2004	AE w/ Floodway	The hydrologic and hydraulic analyses were completed in December 2001 by Hillsborough County Engineering Department. (FEMA 2013).

Table 12: Summary of Hydrologic and Hydraulic Analyses (continued)

Flooding Source	Study Limits Downstream Limit	Study Limits Upstream Limit	Hydrologic Model or Method Used	Hydraulic Model or Method Used	Date Analyses Completed	Flood Zone on FIRM	Special Considerations
Baker Canal Tributary 2	Confluence with Baker Canal	Approximately 0.5 miles upstream of Gallagher Road	SCS Runoff Curve Number Method and HEC-1	SWMM 4.31 and EXTRAN	12/2001	AE	The hydrologic and hydraulic analyses were completed by Hillsborough County Engineering Department. (FEMA 2013).
Baker Canal Tributary 3	Confluence with Baker Canal	Approximately 1,050 feet upstream of U.S. Highway 92	SCS Runoff Curve Number Method and HEC-1	SWMM 4.31 and EXTRAN	12/2001	AE	The hydrologic and hydraulic analyses were completed by Hillsborough County Engineering Department. (FEMA 2013).
Baker Canal Tributary 5	Confluence with Baker Canal	Approximately 25 feet upstream of McIntosh Road	SCS Runoff Curve Number Method and HEC-1	SWMM 4.31 and EXTRAN	12/2001	AE	The hydrologic and hydraulic analyses were completed by Hillsborough County Engineering Department. (FEMA 2013).
Baker Canal Tributary 6	Confluence with Baker Canal	Approximately 0.8 miles upstream of confluence with Baker Canal	SCS Runoff Curve Number Method and HEC-1	SWMM 4.31 and EXTRAN	12/2001	AE	The hydrologic and hydraulic analyses were completed by Hillsborough County Engineering Department. (FEMA 2013).
Baker Canal Tributary 7	Confluence with Baker Canal	Approximately 0.6 miles upstream of Dover Road North	SCS Runoff Curve Number Method and HEC-1	SWMM 4.31 and EXTRAN	12/2001	AE	The hydrologic and hydraulic analyses were completed by Hillsborough County Engineering Department. (FEMA 2013).
Baker Canal Tributary 8	Confluence with Baker Canal	Approximately 0.7 miles upstream of Walden Sheffield Road	SCS Runoff Curve Number Method and HEC-1	SWMM 4.31 and EXTRAN	12/2001	AE	The hydrologic and hydraulic analyses were completed by Hillsborough County Engineering Department. (FEMA 2013).
Baker Creek/ Pemberton Creek/ Mill Creek	Confluence with Lake Thonotosassa and Baker Canal	Approximately 130 feet upstream of North Wheeler Street	SCS Runoff Curve Number Method and HEC-1	SWMM 4.31 and EXTRAN	03/2004	AE w/ Floodway	The hydrologic and hydraulic analyses were completed in December 2001 by Hillsborough County Engineering Department. (FEMA 2013).
Baker Creek Tributary 1	Confluence with Pemberton Creek	Approximately 0.8 miles upstream of Emerald Acres Avenue	SCS Runoff Curve Number Method and HEC-1	SWMM 4.31 and EXTRAN	12/2001	AE	The hydrologic and hydraulic analyses were completed by Hillsborough County Engineering Department. (FEMA 2013).
Baker Creek Tributary 2	Confluence with Baker Creek Tributary 1	Approximately 0.7 miles upstream of confluence with Baker Creek Tributary 1	SCS Runoff Curve Number Method and HEC-1	SWMM 4.31 and EXTRAN	12/2001	AE	The hydrologic and hydraulic analyses were completed by Hillsborough County Engineering Department. (FEMA 2013).

Table 12: Summary of Hydrologic and Hydraulic Analyses (continued)

Flooding Source	Study Limits Downstream Limit	Study Limits Upstream Limit	Hydrologic Model or Method Used	Hydraulic Model or Method Used	Date Analyses Completed	Flood Zone on FIRM	Special Considerations
Basset Branch	Confluence with Hillsborough River	At Pasco County boundary	SCS Runoff Curve Number Method and HEC-1	SWMM 4.31 and EXTRAN	01/2003	AE w/ Floodway	The hydrologic and hydraulic analyses were completed in March 2002 by Ayers Associates, Inc. (FEMA 2013).
Bell Creek	Confluence with Alafia River	Approximately 1.4 miles upstream of Rhodine Road	SCS Runoff Curve Number Method and HEC-1	HEC-2	08/2002	AE	Revised 1-percent annual chance floodplain boundaries were compared to the 1992 boundaries, and the more conservative result in each area was depicted on the 2008 countywide FIRM. The hydrologic and hydraulic analyses were completed by Parsons Engineering Science, Inc. (FEMA 2013).
Big Bend	Confluence with Bullfrog Creek	Approximately 0.7 miles upstream of Simmons Loop	SCS Runoff Curve Number Method and HEC-1	SWMM 4.31 and EXTRAN	11/2002	AE w/ Floodway	The hydrologic and hydraulic analyses were completed in September 2001 by Dames & Moore Corporation (FEMA 2013).
Blackwater Creek	Confluence with Hillsborough River	Approximately 0.9 miles upstream of Canaan Avenue	SCS Runoff Curve Number Method and HEC-1	SWMM 4.31 and EXTRAN	01/2003	AE w/ Floodway	The hydrologic and hydraulic analyses were completed in March 2002 by Ayers Associates, Inc. (FEMA 2013).
Brooker Creek	At Pinellas County boundary	Approximately 0.7 miles upstream of Farmer Road	SCS Runoff Curve Number Method and HEC-1	SWMM 4.31 and EXTRAN	03/2003	AE w/ Floodway	The hydrologic and hydraulic analyses were completed in July 2002 by Advantage Engineering Inc. (FEMA 2013).
Brushy Creek	Confluence with Rocky Creek	Approximately 860 feet upstream of Round Oak Drive	SCS Runoff Curve Number Method and HEC-1	SWMM 4.31 and EXTRAN	06/2004	AE w/ Floodway	The hydrologic and hydraulic analyses were completed in December 2001 by Hillsborough County Engineering Department (FEMA 2013).
Brushy Creek Branch 2	Confluence with Brushy Creek	Approximately 25 feet upstream of Hutchison Road	SCS Runoff Curve Number Method and HEC-1	SWMM 4.31 and EXTRAN	06/2004	AE w/ Floodway	The hydrologic and hydraulic analyses were completed in December 2001 by Hillsborough County Engineering Department (FEMA 2013).
Brushy Creek Tributary 1	Confluence with Brushy Creek	Approximately 40 feet upstream of Country Lake Drive	SCS Runoff Curve Number Method and HEC-1	SWMM 4.31 and EXTRAN	06/2004	AE w/ Floodway	The hydrologic and hydraulic analyses were completed in December 2001 by Hillsborough County Engineering Department (FEMA 2013).

Table 12: Summary of Hydrologic and Hydraulic Analyses (continued)

Flooding Source	Study Limits Downstream Limit	Study Limits Upstream Limit	Hydrologic Model or Method Used	Hydraulic Model or Method Used	Date Analyses Completed	Flood Zone on FIRM	Special Considerations
Buckhorn Creek	Confluence with Alafia River	Kings Avenue South	SCS Runoff Curve Number Method and HEC-1	HEC-2	08/2002	AE	Revised 1-percent annual chance floodplain boundaries were compared to the 1992 boundaries, and the more conservative result in each area was depicted on the 2008 countywide FIRM. The hydrologic and hydraulic analyses were completed by Parsons Engineering Science, Inc. (FEMA 2013).
Bullfrog Creek	Confluence with Hillsborough Bay	Approximately 40 feet upstream of Symmes Road	*	Combined probability calculation spreadsheet	08/2017	AE w/ Floodway	Combined probability analysis was calculated for each riverine node that intersected the coastal surge.
Bullfrog Creek	Approximately 40 feet upstream of Symmes Road	Approximately 0.6 miles upstream of Edina Street	SCS Runoff Curve Number Method and HEC-1	SWMM 4.31 and EXTRAN	11/2002	AE w/ Floodway	The hydrologic and hydraulic analyses were completed in September 2001 by Dames & Moore Corporation (FEMA 2013).
Bullfrog Creek Tributary 1	Confluence with Bullfrog Creek	Approximately 25 feet upstream of Lincoln Road	SCS Runoff Curve Number Method and HEC-1	SWMM 4.31 and EXTRAN	09/2001	AE	The hydrologic and hydraulic analyses were completed by Dames & Moore Corporation (FEMA 2013).
Bullfrog Creek Tributary 2	Confluence with Bullfrog Creek	Approximately 0.4 miles upstream of West Lake Drive	SCS Runoff Curve Number Method and HEC-1	SWMM 4.31 and EXTRAN	11/2002	AE w/ Floodway	The hydrologic and hydraulic analyses were completed in September 2001 by Dames & Moore Corporation (FEMA 2013).
Bullfrog Creek Tributary 3	Confluence with Bullfrog Creek	Approximately 53 feet upstream of County Road 672	SCS Runoff Curve Number Method and HEC-1	SWMM 4.31 and EXTRAN	11/2002	AE w/ Floodway	The hydrologic and hydraulic analyses were completed in September 2001 by Dames & Moore Corporation (FEMA 2013).
Cabbagehead Bayou	Approximately 100 feet upstream of Hillsborough Avenue	Confluence with Rocky Creek	*	*	08/2017	AE w/ Floodway	Cabbagehead Bayou is completely inundated by coastal flooding effects, and therefore does not have an applicable riverine Flood Profile.
Campbell Branch	Confluence with Flint Creek	Approximately 960 feet upstream of Thonotosassa Road	SCS Runoff Curve Number Method and HEC-1	SWMM 4.31 and EXTRAN	03/2004	AE w/ Floodway	The hydrologic and hydraulic analyses were completed in December 2001 by Hillsborough County Engineering Department (FEMA 2013).

Table 12: Summary of Hydrologic and Hydraulic Analyses (continued)

Flooding Source	Study Limits Downstream Limit	Study Limits Upstream Limit	Hydrologic Model or Method Used	Hydraulic Model or Method Used	Date Analyses Completed	Flood Zone on FIRM	Special Considerations
Campbell Branch Tributary 1	Confluence with Campbell Branch	Approximately 0.5 miles upstream of McIntosh Road	SCS Runoff Curve Number Method and HEC-1	SWMM 4.31 and EXTRAN	12/2001	AE	The hydrologic and hydraulic analyses were completed by Hillsborough County Engineering Department (FEMA 2013).
Carlton Branch	Confluence with Little Manatee River	Approximately 1,600 feet upstream of Huckleberry Road	SCS Runoff Curve Number Method and HEC-1	SWMM 4.31 and EXTRAN	02/2003	AE w/ Floodway	The hydrologic and hydraulic analyses were completed in June 2002 by PBS&J (FEMA 2013).
Carlton Branch Tributary 1	Confluence with Carlton Branch	Approximately 24 feet upstream of Leonard Lee Road	SCS Runoff Curve Number Method and HEC-1	SWMM 4.31 and EXTRAN	02/2003	AE w/ Floodway	The hydrologic and hydraulic analyses were completed in June 2002 by PBS&J (FEMA 2013).
Carlton Branch Tributary 2	Confluence with Carlton Branch	Approximately 0.5 miles upstream of Balm Wimauma Road	SCS Runoff Curve Number Method and HEC-1	SWMM 4.31 and EXTRAN	02/2003	AE w/ Floodway	The hydrologic and hydraulic analyses were completed in June 2002 by PBS&J (FEMA 2013).
Carlton Branch Tributary 3	Confluence with Carlton Branch	Just upstream of Sweat Loop Road	SCS Runoff Curve Number Method and HEC-1	SWMM 4.31 and EXTRAN	02/2003	AE w/ Floodway	The hydrologic and hydraulic analyses were completed in June 2002 by PBS&J (FEMA 2013).
Carlton Branch Tributary 3.1	Confluence with Carlton Branch Tributary 3	Approximately 40 feet upstream of Balm Wimauma Road	SCS Runoff Curve Number Method and HEC-1	SWMM 4.31 and EXTRAN	06/2002	AE	The hydrologic and hydraulic analyses were completed by PBS&J (FEMA 2013).
Clay Gulley East	Confluence with Hillsborough River	Approximately 1.8 miles upstream of Five Acre Road	SCS Runoff Curve Number Method and HEC-1	SWMM 4.31 and EXTRAN	01/2003	AE w/ Floodway	The hydrologic and hydraulic analyses were completed in March 2002 by Ayers Associates, Inc. (FEMA 2013).
Clay Gulley East Tributary 2	Confluence with Clay Gulley East	Five Acre Road	SCS Runoff Curve Number Method and HEC-1	SWMM 4.31 and EXTRAN	01/2003	AE w/ Floodway	The hydrologic and hydraulic analyses were completed in March 2002 by Ayers Associates, Inc. (FEMA 2013).
Clay Gulley East Tributary 4	Confluence with Clay Gulley East Tributary 6	Approximately 75 feet upstream of Five Acre Road	SCS Runoff Curve Number Method and HEC-1	SWMM 4.31 and EXTRAN	01/2003	AE w/ Floodway	The hydrologic and hydraulic analyses were completed in March 2002 by Ayers Associates, Inc. (FEMA 2013).

Table 12: Summary of Hydrologic and Hydraulic Analyses (continued)

Flooding Source	Study Limits Downstream Limit	Study Limits Upstream Limit	Hydrologic Model or Method Used	Hydraulic Model or Method Used	Date Analyses Completed	Flood Zone on FIRM	Special Considerations
Clay Gulley East Tributary 5	Confluence with Clay Gulley Tributary 7	Approximately 80 feet upstream of Burnt Barn Avenue	SCS Runoff Curve Number Method and HEC-1	SWMM 4.31 and EXTRAN	01/2003	AE w/ Floodway	The hydrologic and hydraulic analyses were completed in March 2002 by Ayers Associates, Inc. (FEMA 2013).
Clay Gulley East Tributary 6	Confluence with Clay Gulley East	Approximately 1 mile upstream of confluence of Clay Gulley East Tributary 4	SCS Runoff Curve Number Method and HEC-1	SWMM 4.31 and EXTRAN	01/2003	AE w/ Floodway	The hydrologic and hydraulic analyses were completed in March 2002 by Ayers Associates, Inc. (FEMA 2013).
Clay Gulley East Tributary 7	Confluence with Clay Gulley East	Approximately 480 feet upstream of Warren Byrd Lane	SCS Runoff Curve Number Method and HEC-1	SWMM 4.31 and EXTRAN	01/2003	AE w/ Floodway	The hydrologic and hydraulic analyses were completed in March 2002 by Ayers Associates, Inc. (FEMA 2013).
Clay Gulley East Tributary 8	Confluence with Clay Gulley East	Approximately 0.7 miles upstream of confluence with Clay Gulley East	SCS Runoff Curve Number Method and HEC-1	SWMM 4.31 and EXTRAN	03/2002	AE	The hydrologic and hydraulic analyses were completed by Ayers Associates, Inc. (FEMA 2013).
Clay Gulley West	Confluence with Hillsborough River	At Pasco County boundary	SCS Runoff Curve Number Method and HEC-1	SWMM 4.31 and EXTRAN	01/2003	AE w/ Floodway	The hydrologic and hydraulic analyses were completed in March 2002 by Ayers Associates, Inc. (FEMA 2013).
Cow House Creek	Confluence with Hillsborough River	Confluence of Hillsborough River	SCS Runoff Curve Number Method and HEC-1	SWMM 4.31 and EXTRAN	01/2003	AE w/ Floodway	The hydrologic and hydraulic analyses were completed in March 2002 by Ayers Associates, Inc. (FEMA 2013).
Curiosity Creek	Confluence with Little Manatee River	Approximately 0.5 miles upstream of confluence of Curiosity Creek Tributary 1	*	Combined probability calculation spreadsheet	08/2017	AE w/ Floodway	Combined probability analysis was calculated for each riverine node that intersected the coastal surge.
Curiosity Creek	Approximately 0.5 miles upstream of confluence of Curiosity Creek Tributary 1	Approximately 1.1 miles upstream of Lightfoot Road	SCS Runoff Curve Number Method and HEC-1	SWMM 4.31 and EXTRAN	02/2003	AE w/ Floodway	The hydrologic and hydraulic analyses were completed in June 2002 by PBS&J (FEMA 2013).

Table 12: Summary of Hydrologic and Hydraulic Analyses (continued)

Flooding Source	Study Limits Downstream Limit	Study Limits Upstream Limit	Hydrologic Model or Method Used	Hydraulic Model or Method Used	Date Analyses Completed	Flood Zone on FIRM	Special Considerations
Curiosity Creek (near City of Tampa)	Approximately 1,450 feet downstream of 122nd Avenue	Approximately 1,000 feet upstream of Bearss Avenue	SCS Runoff Curve Number Method and HEC-1	SWMM 4.31 and EXTRAN	03/2002	AE w/ Floodway	The hydrologic and hydraulic analyses were completed in October 2001 by Kisinger Campo and Associates, Inc. (FEMA 2013).
Curiosity Creek Tributary 1	Confluence with Curiosity Creek	Approximately 0.7 miles upstream of confluence with Curiosity Creek	*	Combined probability calculation spreadsheet	08/2017	AE w/ Floodway	Combined probability analysis was calculated for each riverine node that intersected the coastal surge.
Curiosity Creek Tributary 1	Approximately 0.7 miles upstream of confluence with Curiosity Creek	Just upstream of Pinetree Circle	SCS Runoff Curve Number Method and HEC-1	SWMM 4.31 and EXTRAN	02/2003	AE w/ Floodway	The hydrologic and hydraulic analyses were completed in June 2002 by PBS&J (FEMA 2013).
Curiosity Creek Tributary 1.1	Confluence with Curiosity Creek Tributary 1	Approximately 0.7 miles upstream of Butch Cassidy Trail	SCS Runoff Curve Number Method and HEC-1	SWMM 4.31 and EXTRAN	02/2003	AE w/ Floodway	The hydrologic and hydraulic analyses were completed in June 2002 by PBS&J (FEMA 2013).
Cypress Creek	Confluence with Little Manatee River	Just upstream of 19th Avenue NE	SCS Runoff Curve Number Method and HEC-1	SWMM 4.31 and EXTRAN	02/2003	AE w/ Floodway	The hydrologic and hydraulic analyses were completed in June 2002 by PBS&J (FEMA 2013).
Cypress Creek (near City of Tampa)	Confluence with Hillsborough River	County Line Road	SCS Runoff Curve Number Method and HEC-1	SWMM 4.31 and EXTRAN	02/2003	AE w/ Floodway	The hydrologic and hydraulic analyses were completed in June 2002 by URS Southern Corporation (FEMA 2013).
Delaney Creek	Approximately 1.2 miles downstream of 50th Street	78th Street South	*	Combined probability calculation spreadsheet	08/2017	AE w/ Floodway	Combined probability analysis was calculated for each riverine node that intersected the coastal surge.
Delaney Creek	78th Street South	Approximately 1,000 feet upstream of I-75	HC-SWMM and SCS method	HC-SWMM EXTRAN	2011	AE w/ Floodway	
Delaney Creek	Approximately 1,000 feet upstream of I-75	Approximately 1,700 feet upstream of Lakewood Drive South	SCS Runoff Curve Number Method and HEC-1	SWMM 4.31 and EXTRAN	07/2003	AE w/ Floodway	The hydrologic and hydraulic analyses were completed in April 2002 by Hillsborough County Engineering Department (FEMA 2013).

Table 12: Summary of Hydrologic and Hydraulic Analyses (continued)

Flooding Source	Study Limits Downstream Limit	Study Limits Upstream Limit	Hydrologic Model or Method Used	Hydraulic Model or Method Used	Date Analyses Completed	Flood Zone on FIRM	Special Considerations
Delaney Creek Lateral C	Confluence with Delaney Creek	Approximately 15 feet upstream of Rideout Road	HC-SWMM and SCS method	HC-SWMM EXTRAN	2011	AE w/ Floodway	
Delaney Creek Lateral D	Confluence with Delaney Creek	Approximately 710 feet upstream of Ridein Road	HC-SWMM and SCS method	HC-SWMM EXTRAN	2011	AE	
Delaney Creek Lateral E	Confluence with Delaney Creek	Approximately 770 feet upstream of Palm River Road	HC-SWMM and SCS method	HC-SWMM EXTRAN	2011	AE w/ Floodway	
Delaney Creek Tributary 1	Confluence with Delaney Creek	Approximately 30 feet upstream of Maydell Drive	*	Combined probability calculation spreadsheet	08/2017	AE w/ Floodway	Combined probability analysis was calculated for each riverine node that intersected the coastal surge.
Delaney Creek Tributary 2	Confluence with Delaney Creek	Approximately 0.2 miles upstream of confluence with Delaney Creek	*	Combined probability calculation spreadsheet	08/2017	AE w/ Floodway	Combined probability analysis was calculated for each riverine node that intersected the coastal surge.
Delaney Creek Tributary 2	Approximately 0.2 miles upstream of confluence with Delaney Creek	Approximately 920 feet upstream of Robindale Road	SCS Runoff Curve Number Method and HEC-1	SWMM 4.31 and EXTRAN	07/2003	AE w/ Floodway	The hydrologic and hydraulic analyses were completed in April 2002 by Hillsborough County Engineering Department (FEMA 2013).
Dug Creek	Confluence with Little Manatee River	Approximately 800 feet upstream of State Road 674	AdICPR	AdICPR	02/2003	AE w/ Floodway	The hydrologic and hydraulic analyses were completed in June 2002 by PBS&J (FEMA 2013).
Dug Creek Tributary 1	Confluence with Dug Creek	Approximately 2,100 feet upstream of Ed Lane	SCS Runoff Curve Number Method and HEC-1	SWMM 4.31 and EXTRAN	06/2002	AE	The hydrologic and hydraulic analyses were completed by PBS&J (FEMA 2013).
Dug Creek Tributary 2	Confluence with Dug Creek	Approximately 1,150 feet upstream of West Lake Drive	SCS Runoff Curve Number Method and HEC-1	SWMM 4.31 and EXTRAN	02/2003	AE w/ Floodway	The hydrologic and hydraulic analyses were completed in June 2002 by PBS&J (FEMA 2013).
Dug Creek Tributary 3	Confluence with Dug Creek	Approximately 20 feet upstream of West Lake Drive	SCS Runoff Curve Number Method and HEC-1	SWMM 4.31 and EXTRAN	06/2002	AE	The hydrologic and hydraulic analyses were completed by PBS&J (FEMA 2013).

Table 12: Summary of Hydrologic and Hydraulic Analyses (continued)

Flooding Source	Study Limits Downstream Limit	Study Limits Upstream Limit	Hydrologic Model or Method Used	Hydraulic Model or Method Used	Date Analyses Completed	Flood Zone on FIRM	Special Considerations
East Canal	Confluence with Itchepackesassa Creek	Approximately 1,200 feet upstream of East Terrace Drive	SCS Runoff Curve Number Method and HEC-1	SWMM 4.31 and EXTRAN	01/2003	AE w/ Floodway	The hydrologic and hydraulic analyses were completed in March 2002 by Ayers Associates, Inc. (FEMA 2013).
East Canal (upstream of Frontage Road)	Frontage Road	Approximately 1,275 feet upstream of Alabama Street	SCS Runoff Curve Number Method and HEC-1	SWMM 4.31 and EXTRAN	03/2002	AE	The hydrologic and hydraulic analyses were completed by Ayers Associates, Inc. (FEMA 2013).
East Canal Tributary	Confluence at East Canal	Approximately 740 feet upstream of Crystal Terrace	SCS Runoff Curve Number Method and HEC-1	SWMM 4.31 and EXTRAN	03/2002	AE	The hydrologic and hydraulic analyses were completed by Ayers Associates, Inc. (FEMA 2013).
Fishhawk Creek	Confluence with Alafia River	Boyette Road	SCS Runoff Curve Number Method and HEC-1	HEC-2	08/2002	AE	Revised 1-percent annual chance floodplain boundaries were compared to the 1992 boundaries, and the more conservative result in each area was depicted on the 2008 countywide FIRM. The hydrologic and hydraulic analyses were completed by Parsons Engineering Science, Inc. (FEMA 2013).
Flint Creek	U.S. Highway 301	Confluence of Campbell Branch	SCS Runoff Curve Number Method and HEC-1	SWMM 4.31 and EXTRAN	03/2004	AE w/ Floodway	The hydrologic and hydraulic analyses were completed in December 2001 by Hillsborough County Engineering Department (FEMA 2013).
Gulley Branch	Confluence with Little Manatee River	Approximately 2.5 miles upstream of confluence with Little Manatee River	SCS Runoff Curve Number Method and HEC-1	SWMM 4.31 and EXTRAN	02/2003	AE w/ Floodway	The hydrologic and hydraulic analyses were completed in June 2002 by PBS&J (FEMA 2013).
Halfmoon Lake Branch	Confluence with Rocky Creek	Approximately 1 mile upstream of DJ Drive	SCS Runoff Curve Number Method and HEC-1	SWMM 4.31 and EXTRAN	06/2004	AE w/ Floodway	The hydrologic and hydraulic analyses were completed in December 2001 by Hillsborough County Engineering Department (FEMA 2013).
Hillsborough River	Tampa Dam	At Pasco County boundary	SCS Runoff Curve Number Method and HEC-1	SWMM 4.31 and EXTRAN	01/2003	AE w/ Floodway	The hydrologic and hydraulic analyses were completed in March 2002 by Ayers Associates, Inc. (FEMA 2013).

Table 12: Summary of Hydrologic and Hydraulic Analyses (continued)

Flooding Source	Study Limits Downstream Limit	Study Limits Upstream Limit	Hydrologic Model or Method Used	Hydraulic Model or Method Used	Date Analyses Completed	Flood Zone on FIRM	Special Considerations
Hollomans Branch	Confluence with Hillsborough River	Approximately 0.7 miles upstream of West Knights Griffin Road	SCS Runoff Curve Number Method and HEC-1	SWMM 4.31 and EXTRAN	01/2003	AE w/ Floodway	The hydrologic and hydraulic analyses were completed in March 2002 by Ayers Associates, Inc. (FEMA 2013).
Hollomans Branch Tributary 1	Confluence with Hollomans Branch	Approximately 25 feet upstream of Dormany Road	SCS Runoff Curve Number Method and HEC-1	SWMM 4.31 and EXTRAN	01/2003	AE w/ Floodway	The hydrologic and hydraulic analyses were completed in March 2002 by Ayers Associates, Inc. (FEMA 2013).
Hollomans Branch Tributary 2	Confluence with Hollomans Branch	Approximately 0.4 miles upstream of Frazier Road	SCS Runoff Curve Number Method and HEC-1	SWMM 4.31 and EXTRAN	01/2003	AE w/ Floodway	The hydrologic and hydraulic analyses were completed in March 2002 by Ayers Associates, Inc. (FEMA 2013).
Hollomans Branch Tributary 3	Confluence with Hollomans Branch	Approximately 1.25 miles upstream of Knights Griffin Road	SCS Runoff Curve Number Method and HEC-1	SWMM 4.31 and EXTRAN	01/2003	AE w/ Floodway	The hydrologic and hydraulic analyses were completed in March 2002 by Ayers Associates, Inc. (FEMA 2013).
Howard Prairie Branch	Confluence with Little Manatee River	Just upstream of South County Road 39	SCS Runoff Curve Number Method and HEC-1	SWMM 4.31 and EXTRAN	02/2003	AE w/ Floodway	The hydrologic and hydraulic analyses were completed in June 2002 by PBS&J (FEMA 2013).
Howard Prairie Branch Tributary 1	Confluence with Howard Prairie Branch	Approximately 3.2 miles upstream of Grange Hall Loop	SCS Runoff Curve Number Method and HEC-1	SWMM 4.31 and EXTRAN	02/2003	AE w/ Floodway	The hydrologic and hydraulic analyses were completed in June 2002 by PBS&J (FEMA 2013).
Howard Prairie Branch Tributary 2	Confluence with Howard Prairie Branch	Just upstream of South County Road 39	SCS Runoff Curve Number Method and HEC-1	SWMM 4.31 and EXTRAN	02/2003	AE w/ Floodway	The hydrologic and hydraulic analyses were completed in June 2002 by PBS&J (FEMA 2013).
Itchepackesassa Creek	Confluence with Blackwater Creek	Approximately 1.3 miles upstream of Knights Griffin Road	SCS Runoff Curve Number Method and HEC-1	SWMM 4.31 and EXTRAN	01/2003	AE w/ Floodway	The hydrologic and hydraulic analyses were completed in March 2002 by Ayers Associates, Inc. (FEMA 2013).
Itchepackesassa Creek Tributary 1	Confluence with Itchepackesassa Creek	Approximately 1.3 miles upstream of Knights Griffin Road	SCS Runoff Curve Number Method and HEC-1	SWMM 4.31 and EXTRAN	01/2003	AE w/ Floodway	The hydrologic and hydraulic analyses were completed in March 2002 by Ayers Associates, Inc. (FEMA 2013).

Table 12: Summary of Hydrologic and Hydraulic Analyses (continued)

Flooding Source	Study Limits Downstream Limit	Study Limits Upstream Limit	Hydrologic Model or Method Used	Hydraulic Model or Method Used	Date Analyses Completed	Flood Zone on FIRM	Special Considerations
Itchepackesassa Creek Tributary 2	Confluence with Itchepackesassa Creek	Approximately 0.4 miles upstream of confluence with Itchepackesassa Creek	SCS Runoff Curve Number Method and HEC-1	SWMM 4.31 and EXTRAN	01/2003	AE w/ Floodway	The hydrologic and hydraulic analyses were completed in March 2002 by Ayers Associates, Inc. (FEMA 2013).
Lake Thonotosassa Tributary	Thonotosassa Road	Confluence with Baker Creek and Baker Canal	SCS Runoff Curve Number Method and HEC-1	SWMM 4.31 and EXTRAN	03/2004	AE w/ Floodway	The hydrologic and hydraulic analyses were completed in December 2001 by Hillsborough County Engineering Department (FEMA 2013).
Little Bullfrog Creek	Confluence with Bullfrog Creek	Approximately 0.6 miles upstream of Big Bend Road	SCS Runoff Curve Number Method and HEC-1	SWMM 4.31 and EXTRAN	11/2002	AE w/ Floodway	The hydrologic and hydraulic analyses were completed in September 2001 by Dames & Moore Corporation (FEMA 2013).
Little Manatee River	Confluence with Ruskin Inlet/ Marsh Branch	Approximately 0.8 miles upstream of confluence of Little Manatee River Tributary 2	*	Combined probability calculation spreadsheet	08/2017	AE w/ Floodway	Combined probability analysis was calculated for each riverine node that intersected the coastal surge.
Little Manatee River	Approximately 0.8 miles upstream of confluence of Little Manatee River Tributary 2	Approximately 2.2 miles upstream of Taylor Gill Road	SCS Runoff Curve Number Method and HEC-1	SWMM 4.31 and EXTRAN	02/2003	AE w/ Floodway	The hydrologic and hydraulic analyses were completed in June 2002 by PBS&J (FEMA 2013).
Little Manatee River Tributary 1	Confluence with Little Manatee River	30th Street SE	*	Combined probability calculation spreadsheet	08/2017	AE w/ Floodway	Combined probability analysis was calculated for each riverine node that intersected the coastal surge.
Little Manatee River Tributary 2	Confluence with Little Manatee River	Approximately 0.6 miles upstream of confluence of Little Manatee River Tributary 2.2	*	Combined probability calculation spreadsheet	08/2017	AE w/ Floodway	Combined probability analysis was calculated for each riverine node that intersected the coastal surge.
Little Manatee River Tributary 2	Approximately 0.6 miles upstream of confluence of Little Manatee River Tributary 2.2	Approximately 60 feet upstream of U.S. Highway 301	SCS Runoff Curve Number Method and HEC-1	SWMM 4.31 and EXTRAN	02/2003	AE w/ Floodway	The hydrologic and hydraulic analyses were completed in June 2002 by PBS&J (FEMA 2013).

Table 12: Summary of Hydrologic and Hydraulic Analyses (continued)

Flooding Source	Study Limits Downstream Limit	Study Limits Upstream Limit	Hydrologic Model or Method Used	Hydraulic Model or Method Used	Date Analyses Completed	Flood Zone on FIRM	Special Considerations
Little Manatee River Tributary 2.1	Confluence with Little Manatee River Tributary 2	Approximately 0.4 miles upstream of confluence with Little Manatee River Tributary 2	*	Combined probability calculation spreadsheet	08/2017	AE w/ Floodway	Combined probability analysis was calculated for each riverine node that intersected the coastal surge.
Little Manatee River Tributary 2.1	Approximately 0.4 miles upstream of confluence with Little Manatee River Tributary 2	Approximately 1,020 feet upstream of Lightfoot Road	SCS Runoff Curve Number Method and HEC-1	SWMM 4.31 and EXTRAN	02/2003	AE w/ Floodway	The hydrologic and hydraulic analyses were completed in June 2002 by PBS&J (FEMA 2013).
Little Manatee River Tributary 2.2	Confluence with Little Manatee River Tributary 2	Approximately 410 feet upstream of confluence with Little Manatee River Tributary 2	*	Combined probability calculation spreadsheet	08/2017	AE w/ Floodway	Combined probability analysis was calculated for each riverine node that intersected the coastal surge.
Little Manatee River Tributary 2.2	Approximately 410 feet upstream of confluence with Little Manatee River Tributary 2	Approximately 550 feet upstream of Butch Cassidy Trail	SCS Runoff Curve Number Method and HEC-1	SWMM 4.31 and EXTRAN	02/2003	AE w/ Floodway	The hydrologic and hydraulic analyses were completed in June 2002 by PBS&J (FEMA 2013).
Little Manatee River Tributary 3	Confluence with Little Manatee River	Approximately 0.5 miles upstream of confluence with Little Manatee River	SCS Runoff Curve Number Method and HEC-1	SWMM 4.31 and EXTRAN	02/2003	AE w/ Floodway	The hydrologic and hydraulic analyses were completed in June 2002 by PBS&J (FEMA 2013).
Little Manatee River Tributary 4	Confluence with Little Manatee River	Approximately 1.3 miles upstream of confluence with Little Manatee River	SCS Runoff Curve Number Method and HEC-1	SWMM 4.31 and EXTRAN	02/2003	AE w/ Floodway	The hydrologic and hydraulic analyses were completed in June 2002 by PBS&J (FEMA 2013).
Little Manatee River Tributary 5	Confluence with Little Manatee River	Approximately 1.4 miles upstream of confluence of Little Manatee River Tributary 5.1	SCS Runoff Curve Number Method and HEC-1	SWMM 4.31 and EXTRAN	02/2003	AE w/ Floodway	The hydrologic and hydraulic analyses were completed in June 2002 by PBS&J (FEMA 2013).

Table 12: Summary of Hydrologic and Hydraulic Analyses (continued)

Flooding Source	Study Limits Downstream Limit	Study Limits Upstream Limit	Hydrologic Model or Method Used	Hydraulic Model or Method Used	Date Analyses Completed	Flood Zone on FIRM	Special Considerations
Little Manatee River Tributary 5.1	Confluence with Little Manatee River Tributary 5	Approximately 0.9 miles upstream of confluence with Little Manatee River Tributary 5	SCS Runoff Curve Number Method and HEC-1	SWMM 4.31 and EXTRAN	02/2003	AE w/ Floodway	The hydrologic and hydraulic analyses were completed in June 2002 by PBS&J (FEMA 2013).
Little Manatee River Tributary 6	Confluence with Little Manatee River	Approximately 1,525 feet upstream of Leonard Lee Road	SCS Runoff Curve Number Method and HEC-1	SWMM 4.31 and EXTRAN	02/2003	AE w/ Floodway	The hydrologic and hydraulic analyses were completed in June 2002 by PBS&J (FEMA 2013).
Little Manatee River Tributary 7	Confluence with Little Manatee River	Approximately 1.1 miles upstream of confluence of Little Manatee River Tributary 7.1	SCS Runoff Curve Number Method and HEC-1	SWMM 4.31 and EXTRAN	02/2003	AE w/ Floodway	The hydrologic and hydraulic analyses were completed in June 2002 by PBS&J (FEMA 2013).
Little Manatee River Tributary 7.1	Confluence with Little Manatee River Tributary 7	Approximately 1.0 mile upstream of confluence with Little Manatee River Tributary 7	SCS Runoff Curve Number Method and HEC-1	SWMM 4.31 and EXTRAN	02/2003	AE w/ Floodway	The hydrologic and hydraulic analyses were completed in June 2002 by PBS&J (FEMA 2013).
Little Manatee River Tributary 8	Confluence with Little Manatee River	Approximately 0.5 miles upstream of Grange Hall Loop	SCS Runoff Curve Number Method and HEC-1	SWMM 4.31 and EXTRAN	02/2003	AE w/ Floodway	The hydrologic and hydraulic analyses were completed in June 2002 by PBS&J (FEMA 2013).
Little Manatee River Tributary 9	Confluence with Little Manatee River	Approximately 1.6 miles upstream of Grange Hall Loop	SCS Runoff Curve Number Method and HEC-1	SWMM 4.31 and EXTRAN	02/2003	AE w/ Floodway	The hydrologic and hydraulic analyses were completed in June 2002 by PBS&J (FEMA 2013).
Little Manatee River Tributary 10	Confluence with Little Manatee River	Approximately 1.1 miles upstream of State Highway 674	SCS Runoff Curve Number Method and HEC-1	SWMM 4.31 and EXTRAN	02/2003	AE w/ Floodway	The hydrologic and hydraulic analyses were completed in June 2002 by PBS&J (FEMA 2013).
Little Manatee River Tributary 11	Confluence with Little Manatee River	Approximately 1.6 miles upstream of confluence with Little Manatee River	SCS Runoff Curve Number Method and HEC-1	SWMM 4.31 and EXTRAN	02/2003	AE w/ Floodway	The hydrologic and hydraulic analyses were completed in June 2002 by PBS&J (FEMA 2013).

Table 12: Summary of Hydrologic and Hydraulic Analyses (continued)

Flooding Source	Study Limits Downstream Limit	Study Limits Upstream Limit	Hydrologic Model or Method Used	Hydraulic Model or Method Used	Date Analyses Completed	Flood Zone on FIRM	Special Considerations
Little Manatee River Tributary 12	Confluence with Little Manatee River	Approximately 50 feet upstream of State Highway 674	SCS Runoff Curve Number Method and HEC-1	SWMM 4.31 and EXTRAN	02/2003	AE w/ Floodway	The hydrologic and hydraulic analyses were completed in June 2002 by PBS&J (FEMA 2013).
Little Manatee River Tributary 13	Confluence with Little Manatee River	Approximately 1,618 feet upstream of State Highway 674	SCS Runoff Curve Number Method and HEC-1	SWMM 4.31 and EXTRAN	06/2002	AE	The hydrologic and hydraulic analyses were completed by PBS&J (FEMA 2013).
Lower Sweetwater Creek Tributary 1	Confluence with Sweetwater Creek	Approximately 1,050 feet upstream of Veterans Expressway	*	Combined probability calculation spreadsheet	08/2017	AE	Combined probability analysis was calculated for each riverine node that intersected the coastal surge.
Lower Sweetwater Creek Tributary 1	Approximately 1,050 feet upstream of Veterans Expressway	Approximately 1 mile upstream of West Paris Street	SCS Runoff Curve Number Method and HEC-1	SWMM 4.31 and EXTRAN	06/2002	AE	The hydrologic and hydraulic analyses were completed by Hillsborough County Engineering Department (FEMA 2013).
Mill Creek Tributary 1	Confluence with Mill Creek	Approximately 50 feet upstream of Bennet Road	SCS Runoff Curve Number Method and HEC-1	SWMM 4.31 and EXTRAN	03/2004	AE w/ Floodway	The hydrologic and hydraulic analyses were completed in December 2001 by Hillsborough County Engineering Department (FEMA 2013).
Mill Creek Tributary 2	Confluence with Mill Creek	Approximately 0.6 miles upstream of I-4	SCS Runoff Curve Number Method and HEC-1	SWMM 4.31 and EXTRAN	03/2004	AE w/ Floodway	The hydrologic and hydraulic analyses were completed in December 2001 by Hillsborough County Engineering Department (FEMA 2013).
Mill Lake Tributary	Approximately 0.4 miles downstream of Livingston Avenue	Approximately 58 feet downstream of Livingston Avenue	SCS Runoff Curve Number Method and HEC-1	SWMM 4.31 and EXTRAN	06/2002	AE	The hydrologic and hydraulic analyses were completed in December 2002 by URS Southern Corporation (FEMA 2013).
New River	Confluence with Hillsborough River	Approximately 0.6 miles upstream of Morris Bridge Road	SCS Runoff Curve Number Method and HEC-1	SWMM 4.31 and EXTRAN	01/2003	AE w/ Floodway	The hydrologic and hydraulic analyses were completed in March 2002 by Ayers Associates, Inc. (FEMA 2013).

Table 12: Summary of Hydrologic and Hydraulic Analyses (continued)

Flooding Source	Study Limits Downstream Limit	Study Limits Upstream Limit	Hydrologic Model or Method Used	Hydraulic Model or Method Used	Date Analyses Completed	Flood Zone on FIRM	Special Considerations
New River East	Confluence with New River	At Pasco County boundary	SCS Runoff Curve Number Method and HEC-1	SWMM 4.31 and EXTRAN	01/2003	AE w/ Floodway	The hydrologic and hydraulic analyses were completed in March 2002 by Ayers Associates, Inc. (FEMA 2013).
North Archie Creek	Approximately 0.5 miles downstream of 78th Street South	Approximately 0.5 miles upstream of 82nd Street South	*	Combined probability calculation spreadsheet	08/2017	AE w/ Floodway	Combined probability analysis was calculated for each riverine node that intersected the coastal surge.
North Archie Creek	Approximately 0.5 miles upstream of 82nd Street South	Approximately 20 feet upstream of Valhalla Pond Drive	SCS Runoff Curve Number Method and HEC-1	SWMM 4.31 and EXTRAN	07/2003	AE w/ Floodway	The hydrologic and hydraulic analyses were completed in April 2002 by Hillsborough County Engineering Department (FEMA 2013).
North Lake Tributary	North Pebble Beach Boulevard	Approximately 1,750 feet upstream of Cherry Hill Drive	SCS Runoff Curve Number Method and HEC-1	SWMM 4.31 and EXTRAN	06/2002	AE	The hydrologic and hydraulic analyses were completed by PBS&J (FEMA 2013).
North Prong Alafia River	Confluence with Alafia River and South Prong Alafia River	At Polk County boundary	SCS Runoff Curve Number Method and HEC-1	HEC-2	03/2003	AE w/ Floodway	Revised 1-percent annual chance floodplain boundaries were compared to the 1992 boundaries, and the more conservative result in each area was depicted on the 2008 countywide FIRM. The hydrologic and hydraulic analyses were completed in August 2002 by Parsons Engineering Science, Inc. (FEMA 2013).
North Prong Bullfrog Creek	Confluence with Bullfrog Creek	Approximately 1.4 miles upstream of confluence with Bullfrog Creek	SCS Runoff Curve Number Method and HEC-1	SWMM 4.31 and EXTRAN	11/2002	AE w/ Floodway	The hydrologic and hydraulic analyses were completed in September 2001 by Dames & Moore Corporation (FEMA 2013).
Pemberton Creek Tributary 1	Confluence with Pemberton Creek	Approximately 1,280 feet upstream of Glen Harwell Road	SCS Runoff Curve Number Method and HEC-1	SWMM 4.31 and EXTRAN	12/2001	AE	The hydrologic and hydraulic analyses were completed by Hillsborough County Engineering Department (FEMA 2013).
Pierce Branch	Confluence with Little Manatee River	Approximately 2.1 miles upstream of confluence of Pierce Branch Tributary 3	SCS Runoff Curve Number Method and HEC-1	SWMM 4.31 and EXTRAN	02/2003	AE w/ Floodway	The hydrologic and hydraulic analyses were completed in June 2002 by PBS&J (FEMA 2013).

Table 12: Summary of Hydrologic and Hydraulic Analyses (continued)

Flooding Source	Study Limits Downstream Limit	Study Limits Upstream Limit	Hydrologic Model or Method Used	Hydraulic Model or Method Used	Date Analyses Completed	Flood Zone on FIRM	Special Considerations
Pierce Branch Tributary 1	Confluence with Pierce Branch	Approximately 0.8 miles upstream of confluence with Pierce Branch	SCS Runoff Curve Number Method and HEC-1	SWMM 4.31 and EXTRAN	02/2003	AE w/ Floodway	The hydrologic and hydraulic analyses were completed in June 2002 by PBS&J (FEMA 2013).
Pierce Branch Tributary 2	Confluence with Pierce Branch	Approximately 1.9 miles upstream of confluence with Pierce Branch	SCS Runoff Curve Number Method and HEC-1	SWMM 4.31 and EXTRAN	02/2003	AE w/ Floodway	The hydrologic and hydraulic analyses were completed in June 2002 by PBS&J (FEMA 2013).
Pierce Branch Tributary 3	Confluence with Pierce Branch	Approximately 25 feet upstream of Sweat Loop Road	SCS Runoff Curve Number Method and HEC-1	SWMM 4.31 and EXTRAN	06/2002	AE	The hydrologic and hydraulic analyses were completed by PBS&J (FEMA 2013).
Rice Creek	Confluence with Alafia River	Approximately 1 mile upstream of Oak Forest Drive	SCS Runoff Curve Number Method and HEC-1	HEC-2	03/2003	AE w/ Floodway	Revised 1-percent annual chance floodplain boundaries were compared to the 1992 boundaries, and the more conservative result in each area was depicted on the 2008 countywide FIRM. The hydrologic and hydraulic analyses were completed in August 2002 by Parsons Engineering Science, Inc. (FEMA 2013).
Rocky Creek	Approximately 100 feet downstream of Sheldon Road	Approximately 0.5 miles upstream of Linebaugh Avenue	*	Combined probability calculation spreadsheet	08/2017	AE w/ Floodway	Combined probability analysis was calculated for each riverine node that intersected the coastal surge.
Rocky Creek	Approximately 0.5 miles upstream of Linebaugh Avenue	Approximately 300 feet upstream of Hammock Woods Drive	SCS Runoff Curve Number Method and HEC-1	SWMM 4.31 and EXTRAN	06/2004	AE w/ Floodway	The hydrologic and hydraulic analyses were completed in December 2001 by Hillsborough County Engineering Department (FEMA 2013).
Rocky Creek Tributary 1	Confluence with Turkey Ford Lake	Approximately 0.8 miles upstream of Fishermans Bend Drive	SCS Runoff Curve Number Method and HEC-1	SWMM 4.31 and EXTRAN	12/2001	AE	The hydrologic and hydraulic analyses were completed by Hillsborough County Engineering Department (FEMA 2013).
Ruskin Inlet/ Marsh Branch	Confluence with Little Manatee River	Approximately 0.5 miles upstream of College Avenue	*	Combined probability calculation spreadsheet	08/2017	AE w/ Floodway	Combined probability analysis was calculated for each riverine node that intersected the coastal surge.

Table 12: Summary of Hydrologic and Hydraulic Analyses (continued)

Flooding Source	Study Limits Downstream Limit	Study Limits Upstream Limit	Hydrologic Model or Method Used	Hydraulic Model or Method Used	Date Analyses Completed	Flood Zone on FIRM	Special Considerations
Ruskin Inlet/ Marsh Branch	Approximately 0.5 miles upstream of College Avenue	Approximately 0.8 miles upstream of 14th Avenue SE	SCS Runoff Curve Number Method and HEC-1	SWMM 4.31 and EXTRAN	02/2003	AE w/ Floodway	The hydrologic and hydraulic analyses were completed in June 2002 by PBS&J (FEMA 2013).
Six Mile Creek	Confluence at Tampa Bypass Canal	Approximately 1,590 feet upstream of Danny Bryan Boulevard	*	Combined probability calculation spreadsheet	08/2017	AE	Combined probability analysis was calculated for each riverine node that intersected the coastal surge.
Six Mile Creek	Approximately 1,590 feet upstream of Danny Bryan Boulevard	Approximately 480 feet upstream of Orient Road	SCS Runoff Curve Number Method and HEC-1	SWMM 4.31 and EXTRAN	01/2002	AE	The hydrologic and hydraulic analyses were completed by Hillsborough County Engineering Department (FEMA 2013).
South Fork Little Manatee River	Confluence with Little Manatee River	At Manatee County boundary	SCS Runoff Curve Number Method and HEC-1	SWMM 4.31 and EXTRAN	02/2003	AE w/ Floodway	The hydrologic and hydraulic analyses were completed in June 2002 by PBS&J (FEMA 2013).
South Prong Alafia River	Confluence with Alafia River and North Prong Alafia River	Approximately 2.7 miles upstream of Jameson Road	SCS Runoff Curve Number Method and HEC-1	HEC-2	03/2003	AE w/ Floodway	Revised 1-percent annual chance floodplain boundaries were compared to the 1992 boundaries, and the more conservative result in each area was depicted on the 2008 countywide FIRM. The hydrologic and hydraulic analyses were completed in August 2002 by Parsons Engineering Science, Inc. (FEMA 2013).
Spartman Branch	Confluence with Pemberton Creek	Mud Lake Road	SCS Runoff Curve Number Method and HEC-1	SWMM 4.31 and EXTRAN	03/2004	AE w/ Floodway	The hydrologic and hydraulic analyses were completed in December 2001 by Hillsborough County Engineering Department (FEMA 2013).
Sweetwater Creek	Confluence with Rocky Creek	Approximately 1,270 feet upstream of Veterans Expressway	*	Combined probability calculation spreadsheet	08/2017	AE w/ Floodway	Combined probability analysis was calculated for each riverine node that intersected the coastal surge.

Table 12: Summary of Hydrologic and Hydraulic Analyses (continued)

Flooding Source	Study Limits Downstream Limit	Study Limits Upstream Limit	Hydrologic Model or Method Used	Hydraulic Model or Method Used	Date Analyses Completed	Flood Zone on FIRM	Special Considerations
Sweetwater Creek	Approximately 1,270 feet upstream of Veterans Expressway	Orange Grove Drive	SCS Runoff Curve Number Method and HEC-1	SWMM 4.31 and EXTRAN	03/2003	AE w/ Floodway	The hydrologic and hydraulic analyses were completed in September 2002 by Ayers Associates, Inc. (FEMA 2013).
Sweetwater Creek Channel H	Confluence with Sweetwater Creek	Approximately 0.7 miles upstream of Thatcher Avenue	SCS Runoff Curve Number Method and HEC-1	SWMM 4.31 and EXTRAN	03/2003	AE w/ Floodway	The hydrologic and hydraulic analyses were completed in September 2002 by Ayers Associates, Inc. (FEMA 2013).
Tadpole Creek	Confluence with Bullfrog Creek	Approximately 65 feet upstream of U.S. Highway 301	SCS Runoff Curve Number Method and HEC-1	SWMM 4.31 and EXTRAN	11/2002	AE w/ Floodway	The hydrologic and hydraulic analyses were completed in September 2001 by Dames & Moore Corporation (FEMA 2013).
Tampa Bypass Canal	Approximately 0.7 miles downstream of Broadway Avenue East	Confluence of Cow House Creek	SCS Runoff Curve Number Method and HEC-1	SWMM 4.31 and EXTRAN	01/2003	AE w/ Floodway	The hydrologic and hydraulic analyses were completed in March 2002 by Ayers Associates, Inc. (FEMA 2013).
Tampa Bypass Canal Main Ditch	Confluence with Tampa Bypass Canal	Approximately 0.7 miles upstream of Eureka Springs Road	SCS Runoff Curve Number Method and HEC-1	SWMM 4.31 and EXTRAN	03/2002	AE	The hydrologic and hydraulic analyses were completed by Ayers Associates, Inc. (FEMA 2013).
Tampa Bypass Canal Tributary 1	Confluence with Tampa Bypass Canal	Approximately 1,552 feet upstream of Raga Boulevard	*	Combined probability calculation spreadsheet	08/2017	AE	Combined probability analysis was calculated for each riverine node that intersected the coastal surge.
Tampa Bypass Canal Tributary 1	Confluence with Tampa Bypass Canal	Approximately 0.5 miles upstream of Williams Road	SCS Runoff Curve Number Method and HEC-1	SWMM 4.31 and EXTRAN	03/2002	AE	The hydrologic and hydraulic analyses were completed by Ayers Associates, Inc. (FEMA 2013).
Tampa Bypass Canal Tributary 1 South Branch	Confluence with Tampa Bypass Canal Tributary 1	Approximately 300 feet upstream of confluence with Tampa Bypass Canal Tributary 1	SCS Runoff Curve Number Method and HEC-1	SWMM 4.31 and EXTRAN	03/2002	AE	The hydrologic and hydraulic analyses were completed by Ayers Associates, Inc. (FEMA 2013).

Table 12: Summary of Hydrologic and Hydraulic Analyses (continued)

Flooding Source	Study Limits Downstream Limit	Study Limits Upstream Limit	Hydrologic Model or Method Used	Hydraulic Model or Method Used	Date Analyses Completed	Flood Zone on FIRM	Special Considerations
Tampa Bypass Canal Tributary 2	Confluence with Tampa Bypass Canal	Approximately 120 feet upstream of U.S. Highway 301	*	Combined probability calculation spreadsheet	08/2017	AE	Combined probability analysis was calculated for each riverine node that intersected the coastal surge.
Tampa Bypass Canal Tributary 2	Confluence with Tampa Bypass Canal	Approximately 1,150 feet upstream of U.S. Highway 30	SCS Runoff Curve Number Method and HEC-1	SWMM 4.31 and EXTRAN	03/2002	AE	The hydrologic and hydraulic analyses were completed by Ayers Associates, Inc. (FEMA 2013).
Tiger Creek	Confluence with Blackwater Creek	Approximately 30 feet upstream of Half Mile Road	SCS Runoff Curve Number Method and HEC-1	SWMM 4.31 and EXTRAN	01/2003	AE w/ Floodway	The hydrologic and hydraulic analyses were completed in March 2002 by Ayers Associates, Inc. (FEMA 2013).
Tributary Canal	Confluence with Buckhorn Creek	Approximately 0.7 miles upstream of confluence with Buckhorn Creek	SCS Runoff Curve Number Method and HEC-1	HEC-2	08/2002	AE	Revised 1-percent annual chance floodplain boundaries were compared to the 1992 boundaries, and the more conservative result in each area was depicted on the 2008 countywide FIRM. The hydrologic and hydraulic analyses were completed by Parsons Engineering Science, Inc. (FEMA 2013).
Trout Creek	Confluence with Hillsborough River	At Pasco County boundary	SCS Runoff Curve Number Method and HEC-1	SWMM 4.31 and EXTRAN	01/2003	AE w/ Floodway	The hydrologic and hydraulic analyses were completed in March 2002 by Ayers Associates, Inc. (FEMA 2013).
Tucker Rhodine	Confluence with Bullfrog Creek	Approximately 0.6 miles upstream of confluence with Bullfrog Creek	SCS Runoff Curve Number Method and HEC-1	SWMM 4.31 and EXTRAN	11/2002	AE w/ Floodway	The hydrologic and hydraulic analyses were completed in September 2001 by Dames & Moore Corporation (FEMA 2013).
Two Hole Branch	Confluence with Hillsborough River	Approximately 1.5 miles upstream of Bruton Road	SCS Runoff Curve Number Method and HEC-1	SWMM 4.31 and EXTRAN	01/2003	AE w/ Floodway	The hydrologic and hydraulic analyses were completed in March 2002 by Ayers Associates, Inc. (FEMA 2013).
Two Hole Branch Tributary 1	Confluence with Two Hole Branch	Approximately 2.2 miles upstream of Bob Smith Avenue	SCS Runoff Curve Number Method and HEC-1	SWMM 4.31 and EXTRAN	01/2003	AE w/ Floodway	The hydrologic and hydraulic analyses were completed in March 2002 by Ayers Associates, Inc. (FEMA 2013).

Table 12: Summary of Hydrologic and Hydraulic Analyses (continued)

Flooding Source	Study Limits Downstream Limit	Study Limits Upstream Limit	Hydrologic Model or Method Used	Hydraulic Model or Method Used	Date Analyses Completed	Flood Zone on FIRM	Special Considerations
Wildcat Creek	Confluence with Little Manatee River	Stephens Road	*	Combined probability calculation spreadsheet	08/2017	AE w/ Floodway	Combined probability analysis was calculated for each riverine node that intersected the coastal surge.
Wildcat Creek	Stephens Road	Approximately 0.7 miles upstream of Stephens Road	SCS Runoff Curve Number Method and HEC-1	SWMM 4.31 and EXTRAN	02/2003	AE w/ Floodway	The hydrologic and hydraulic analyses were completed in June 2002 by PBS&J (FEMA 2013).
Zone A Flooding Sources	Within Hillsborough County	Within Hillsborough County	*	*	06/2004	A	
Zone AE Ponding Areas	Within Hillsborough County	Within Hillsborough County	*	*	06/2004	AE	

*Data not available

Table 13: Roughness Coefficients

Flooding Source	Channel "n"	Overbank "n"
Baker Canal	0.025-0.11	0.03-0.20
Bassett Branch	0.035-0.085	0.035-0.10
Blackwater Creek	0.02-0.10	0.04-0.09
Brooker Creek	0.04-0.05	0.07-0.08
Brushy Creek System	0.025-0.11	0.035-0.125
Bullfrog Creek	0.025-0.08	0.16
Campbell Branch/Antioch/Flint Creek System	0.025-0.11	0.03-0.20
Clay Gulley East	0.035-0.06	0.035-0.08
Clay Gulley West	0.045-0.10	0.075-0.08
Curiosity Creek	0.05-0.08	0.07-0.14
Curiosity Creek (near City of Tampa)	0.035-0.045	0.04-0.08
Cypress Creek	0.09-0.16	0.17-0.25
Delaney Creek	0.025-0.10	0.025-0.24
East Canal	0.02-0.04	0.045-0.45
Hillsborough River	0.025-0.06	0.025-0.25
Hollomans Branch	0.03-0.12	0.03-0.12
Itchepackesassa Creek	0.02-0.05	0.035-0.08
Little Manatee River	0.011-0.15	0.025-0.80
Lower Sweetwater	0.015-0.04	0.025-0.05
Marsh Branch	0.04-0.09	0.07-0.10
New River	0.045-0.08	0.04-0.075
North Archie Creek	0.03-0.08	0.025-0.08
Pemberton Creek System	0.04-0.11	0.02-0.20
Rocky Creek System	0.035-0.09	0.05-0.125
South Fork Little Manatee River	0.013-0.04	0.03-0.14
Sweetwater Creek	0.015-0.095	0.03-0.12
Tampa Bypass	0.03-0.10	0.032-0.10
Tiger Creek	0.02-0.045	0.03-0.081
Trout Creek	0.045-0.065	0.045-0.10

Table 13: Roughness Coefficients (continued)

Flooding Source	Channel "n"	Overbank "n"
Two Hole Branch	0.035-0.09	0.04-0.09
Wildcat Creek	0.03-0.09	0.0-0.17

5.3 Coastal Analyses

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

The following subsections provide summaries of how each coastal process was considered for this FIS Report. Greater detail (including assumptions, analysis, and results) is available in the archived project documentation. Table 14 summarizes the methods and/or models used for the coastal analyses. Refer to Section 2.5.1 for descriptions of the terms used in this section.

Table 14: Summary of Coastal Analyses

Flooding Source	Study Limits		Hazard Evaluated	Model or Method Used	Date Analysis was Completed
	From	To			
Gulf of Mexico	Entire coastline of Hillsborough County	Entire coastline of Hillsborough County	Overland Wave Propagation	WHAFIS	2017
Gulf of Mexico	Entire coastline of Hillsborough County	Entire coastline of Hillsborough County	Statistical Analysis	JPM	2017
Gulf of Mexico	Entire coastline of Hillsborough County	Entire coastline of Hillsborough County	Storm Surge	ADCIRC	2017
Gulf of Mexico	Entire coastline of Hillsborough County	Entire coastline of Hillsborough County	Wave Generation	SWAN	2017
Gulf of Mexico	Entire coastline of Hillsborough County	Entire coastline of Hillsborough County	Wave Runup	CHAMP/ Runup 2.0/ TAW	2017
Gulf of Mexico	Entire coastline of Hillsborough County	Entire coastline of Hillsborough County	Wave Setup	SWAN	2017

Table 14: Summary of Coastal Analyses (continued)

Flooding Source	Study Limits		Hazard Evaluated	Model or Method Used	Date Analysis was Completed
	From	To			
Hillsborough Bay	Entire coastline of Hillsborough County	Entire coastline of Hillsborough County	Overland Wave Propagation	WHAFIS	2017
Hillsborough Bay	Entire coastline of Hillsborough County	Entire coastline of Hillsborough County	Statistical Analysis	JPM	2017
Hillsborough Bay	Entire coastline of Hillsborough County	Entire coastline of Hillsborough County	Storm Surge	ADCIRC	2017
Hillsborough Bay	Entire coastline of Hillsborough County	Entire coastline of Hillsborough County	Wave Generation	SWAN	2017
Hillsborough Bay	Entire coastline of Hillsborough County	Entire coastline of Hillsborough County	Wave Runup	CHAMP/ Runup 2.0/ TAW	2017
Hillsborough Bay	Entire coastline of Hillsborough County	Entire coastline of Hillsborough County	Wave Setup	SWAN	2017
Old Tampa Bay	Entire coastline of Hillsborough County	Entire coastline of Hillsborough County	Overland Wave Propagation	WHAFIS	2017
Old Tampa Bay	Entire coastline of Hillsborough County	Entire coastline of Hillsborough County	Statistical Analysis	JPM	2017
Old Tampa Bay	Entire coastline of Hillsborough County	Entire coastline of Hillsborough County	Storm Surge	ADCIRC	2017
Old Tampa Bay	Entire coastline of Hillsborough County	Entire coastline of Hillsborough County	Wave Generation	SWAN	2017

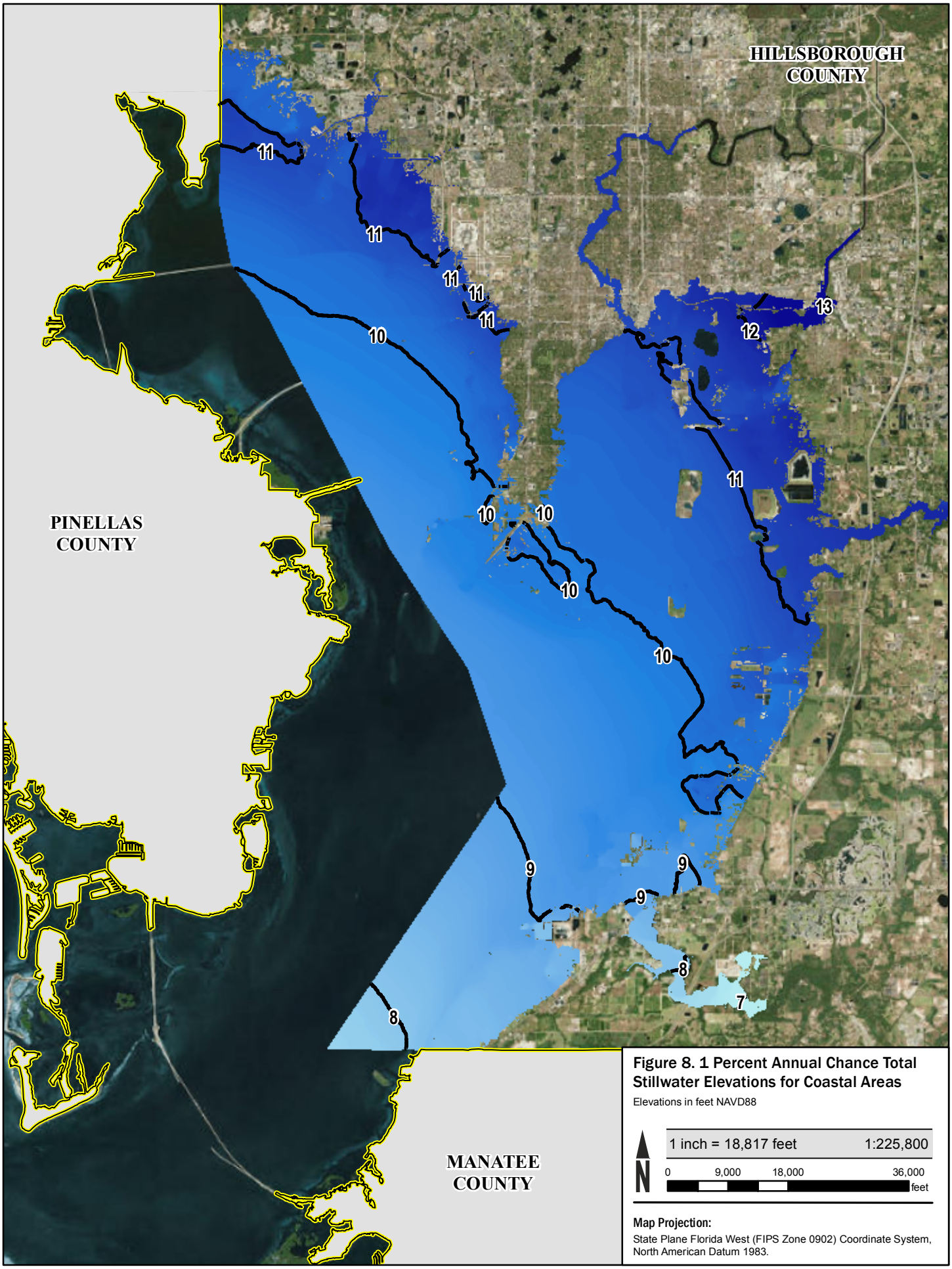
Table 14: Summary of Coastal Analyses (continued)

Flooding Source	Study Limits		Hazard Evaluated	Model or Method Used	Date Analysis was Completed
	From	To			
Old Tampa Bay	Entire coastline of Hillsborough County	Entire coastline of Hillsborough County	Wave Runup	CHAMP/ Runup 2.0/ TAW	2017
Old Tampa Bay	Entire coastline of Hillsborough County	Entire coastline of Hillsborough County	Wave Setup	SWAN	2017
Tampa Bay	Entire coastline of Hillsborough County	Entire coastline of Hillsborough County	Overland Wave Propagation	WHAFIS	2017
Tampa Bay	Entire coastline of Hillsborough County	Entire coastline of Hillsborough County	Statistical Analysis	JPM	2017
Tampa Bay	Entire coastline of Hillsborough County	Entire coastline of Hillsborough County	Storm Surge	ADCIRC	2017
Tampa Bay	Entire coastline of Hillsborough County	Entire coastline of Hillsborough County	Wave Generation	SWAN	2017
Tampa Bay	Entire coastline of Hillsborough County	Entire coastline of Hillsborough County	Wave Runup	CHAMP/ Runup 2.0/ TAW	2017
Tampa Bay	Entire coastline of Hillsborough County	Entire coastline of Hillsborough County	Wave Setup	SWAN	2017

5.3.1 Total Stillwater Elevations

The total stillwater elevations (stillwater including storm surge plus wave setup) for the 1% annual chance flood were determined for areas subject to coastal flooding. The models and methods that were used to determine storm surge and wave setup are listed in Table 14. The stillwater elevation that was used for each transect in coastal analyses is shown in Table 16, “Coastal Transect Parameters.” Figure 8 shows the total stillwater elevations for the 1% annual chance flood that was determined for this coastal analysis.

Figure 8: 1% Annual Chance Total Stillwater Elevations for Coastal Areas



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

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

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

Table 15: Tide Gage Analysis Specifics

[Not Applicable to this Flood Risk Project]

Combined Riverine and Tidal Effects
A combined rate of occurrence analysis was conducted to compute a 1-percent-annual-chance BFE for areas subject to flooding by both coastal and riverine flooding mechanisms. Since riverine and coastal analyses were based on independent events, the resulting combined BFE would be higher than that of their individual occurrence. In other words, at the location where the computed 1-percent-annual-chance coastal flood level equals the computed 1-percent-annual-chance riverine flood level, there was a greater than 1-percent-annual-chance of this flood level being equaled or exceeded.

In Hillsborough County, combined probability calculations were performed for Alafia River, Archie Creek, Bullfrog Creek, Curiosity Creek, Curiosity Creek Tributary 1, Delaney Creek, Delaney Creek Tributary 1, Delaney Creek Tributary 2, Little Manatee River, Little Manatee River Tributary 1, Little Manatee River Tributary 2, Little Manatee River Tributary 2.1, Little Manatee River Tributary 2.2, Lower Sweetwater Creek Tributary 1, North Archie Creek, Rocky Creek, Ruskin Inlet/Marsh Branch, Six Mile Creek, Sweetwater Creek, Tampa Bypass Canal Tributary 1, Tampa Bypass Canal Tributary 2, and Wildcat Creek.

Wave Setup Analysis
Wave setup was computed during the storm surge modeling through the methods and models listed in Table 14 and included in the frequency analysis for the determination of the total stillwater elevations.

5.3.2 Waves

The SWAN coastal wave model was used to calculate the nearshore wave field required for the addition of wave setup effects. The SWAN model is tightly coupled to the ADCIRC hydrodynamic model so that forces are passed between models as they run (Dietrich, et al., 2011). This results in the wave setup from breaking waves being part of the computed water elevations.

5.3.3 Coastal Erosion

A single storm episode can cause extensive erosion in coastal areas. Storm-induced erosion was evaluated to determine the modification to existing topography that is expected to be associated with flooding events. Erosion was evaluated using the methods listed in Table 14. The post-event eroded profile was used for the subsequent transect-based onshore wave hazard analyses.

5.3.4 Wave Hazard Analyses

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

Transect locations were chosen with consideration given to the physical land characteristics as well as development type and density so that they would closely represent conditions in their locality. Additional consideration was given to changes in the total stillwater elevation. Transects were spaced close together in areas of complex topography and dense development or where total stillwater elevations varied. In areas having more uniform characteristics, transects were spaced at larger intervals. Transects shown in Figure 9, “Transect Location Map,” are also depicted on the FIRM. Table 16 provides the location, stillwater elevations, and starting wave conditions for each transect evaluated for overland wave hazards. In this table, “starting” indicates the parameter value at the beginning of the transect.

Wave Height Analysis

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

Wave heights and wave crest elevations were modeled using the methods and models listed in Table 14, “Summary of Coastal Analyses”. For the 0.2-percent-annual-chance event, wave profiles were created to indicate the results of the wave height analysis at each transect (FEMA 2007). Such wave profiles may show greater detail than the mapping product, due to limitations of the map scales and smoothing tolerances applied during boundary cleanup. Wave runup analysis for the 0.2-percent-annual-chance event was not performed for this study and is not included in the profiles.

Wave Runup Analysis

Wave runup analyses were performed to determine the height and extent of runup beyond the limit of stillwater inundation for the 1% annual chance flood. Wave runup is defined as the maximum vertical extent of wave uprush on a beach or structure. FEMA’s 2007 Guidelines and Specifications require the 2-percent wave runup level be computed for the coastal feature being evaluated (cliff, coastal bluff, dune, or structure) (FEMA, February 2007). The 2-percent runup level is the highest 2 percent of wave runup affecting the shoreline during the 1-percent-annual- chance flood event. Each transect defined within the study area was evaluated for the applicability of wave runup,

and if necessary, the appropriate runup methodology was selected and applied to each transect. Runup elevations were then compared to WHAFIS results to determine the dominant process affecting BFEs and associated flood hazard levels. Based on wave runup rates, wave overtopping was computed following the FEMA 2007 Guidelines and Specifications. Wave runup elevations were modeled using the methods and models listed in Table 14.

Table 16: 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
Old Tampa Bay	1	5.4	3.9	7.0 6.6 - 7.0	8.6 8.0 - 8.6	9.9 9.5 - 9.9	11.1 10.6 - 11.1	13.7 13.7 - 13.7
Old Tampa Bay	2	5.0	3.9	6.8 6.8 - 7.0	8.4 8.4 - 8.6	9.6 9.6 - 9.9	10.8 10.8 - 11.1	13.4 13.4 - 13.5
Old Tampa Bay	3	5.0	4.2	6.7 6.7 - 7.0	8.3 8.3 - 8.7	9.6 9.6 - 10.0	10.7 10.7 - 11.2	13.3 13.3 - 14.0
Old Tampa Bay	4	5.0	4.5	6.7 6.7 - 7.0	8.3 8.3 - 8.7	9.5 9.5 - 10.0	10.7 10.7 - 11.2	13.2 13.2 - 14.0
Old Tampa Bay	5	4.9	4.5	6.7 6.7 - 6.9	8.3 8.3 - 8.6	9.5 9.5 - 9.9	10.7 10.7 - 11.4	13.2 13.2 - 13.6
Old Tampa Bay	6	8.7	5.4	6.5 6.5 - 6.7	8.0 8.0 - 8.3	9.2 9.2 - 9.5	10.4 10.4 - 10.7	12.9 12.9 - 13.3
Old Tampa Bay	7	8.7	5.5	6.5 6.5 - 6.9	8.0 8.0 - 8.7	9.3 9.3 - 9.9	10.4 10.4 - 11.4	12.9 12.9 - 13.7
Old Tampa Bay	8	8.5	5.5	6.5 6.5 - 7.0	8.1 8.1 - 8.7	9.3 9.3 - 10.0	10.5 10.5 - 11.4	13.1 13.1 - 15.1
Old Tampa Bay	9	8.4	5.7	6.5 6.5 - 7.0	8.1 8.1 - 8.7	9.3 9.3 - 10	10.5 10.5 - 11.5	13.1 13.1 - 15.1
Old Tampa Bay	10	8.0	5.7	6.5 6.5 - 6.9	8.1 8.1 - 8.6	9.3 9.3 - 10.1	10.5 10.5 - 11.7	13.0 13.0 - 15.2
Old Tampa Bay	11	6.0	5.2	6.6 6.6 - 6.9	8.2 8.2 - 8.8	9.5 9.5 - 10.2	10.7 10.7 - 11.7	13.4 13.4 - 14.7

Table 16: 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
Old Tampa Bay	12	5.7	5.4	6.6 6.6 - 6.7	8.3 8.3 - 8.1	9.6 9.6 - 9.5	10.8 10.8 - 10.9	13.5 13.5 - 14.5
Old Tampa Bay	13	7.2	5.0	6.6 6.6 - 6.6	8.2 8.2 - 8.2	9.5 9.5 - 9.7	10.8 10.8 - 11.1	13.5 13.5 - 14.6
Old Tampa Bay	14	7.1	4.9	6.5 6.5 - 6.6	8.1 8.1 - 8.2	9.4 9.4 - 9.6	10.6 10.6 - 11	13.3 13.3 - 14.8
Old Tampa Bay	15	6.4	4.4	6.5 6.5 - 6.3	8.1 8.1 - 8.2	9.4 9.4 - 9.6	10.7 10.7 - 11.3	13.4 13.4 - 14.9
Old Tampa Bay	16	5.9	5.1	6.4 6.4 - 6.3	8 8.0 - 8.1	9.3 9.3 - 9.5	10.6 10.6 - 11.3	13.3 13.3 - 15.0
Old Tampa Bay	17	5.8	5.0	6.3 6.3 - 6.4	7.9 7.9 - 8.1	9.3 9.3 - 9.6	10.5 10.5 - 10.9	13.2 13.2 - 14.4
Old Tampa Bay	18	6.4	5.1	6.3 6.2 - 6.3	7.9 7.9 - 8.1	9.2 9.2 - 9.5	10.4 10.4 - 10.8	13.2 13.2 - 14.0
Old Tampa Bay	19	6.3	5.1	6.3 6.2 - 6.3	7.9 7.9 - 7.8	9.2 9.2 - 9.3	10.4 10.4 - 10.7	13.2 13.2 - 13.9
Old Tampa Bay	20	7.6	5.2	6.3 6.2 - 6.3	7.9 7.9 - 7.8	9.2 9.2 - 9.2	10.4 10.4 - 10.6	13.1 13.1 - 14.1
Old Tampa Bay	21	7.0	5.1	6.2 6.2 - 6.2	7.7 7.7 - 7.8	9.0 9.0 - 9.2	10.2 10.2 - 10.6	13.0 13.0 - 14.2
Old Tampa Bay	22	5.7	5.5	6.1 6.1 - 6.1	7.7 7.7 - 7.7	9.0 9.0 - 9.1	10.2 10.2 - 10.7	12.9 12.9 - 14.0

Table 16: 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
Old Tampa Bay	23	7.5	5.5	6.1 6.1 - 6.1	7.7 7.7 - 7.7	8.9 8.9 - 9	10.1 10.1 - 10.6	12.8 12.8 - 14.2
Old Tampa Bay	24	7.1	5.5	6.1 6.1 - 6.1	7.6 7.6 - 7.7	8.9 8.9 - 9.1	10.0 10.0 - 10.5	12.7 12.7 - 14.4
Old Tampa Bay	25	8.9	5.4	5.9 5.9 - 6.0	7.4 7.4 - 7.7	8.6 8.6 - 8.9	9.7 9.7 - 10.1	12.4 12.4 - 13.3
Old Tampa Bay	26	7.7	5.3	6.0 6.0 - 6.0	7.5 7.5 - 7.6	8.8 8.8 - 8.9	9.9 9.9 - 10.1	12.6 12.6 - 13.3
Old Tampa Bay	27	8.2	5.3	6.0 5.9 - 6.0	7.5 7.5 - 7.5	8.7 8.7 - 8.8	9.9 9.9 - 9.9	12.6 12.6 - 13.0
Old Tampa Bay	28	8.1	5.3	5.9 5.9 - 5.9	7.4 7.4 - 7.4	8.6 8.6 - 8.7	9.8 9.8 – 10.0	12.4 12.4 - 12.8
Old Tampa Bay	29	6.9	5.2	5.9 5.9 - 5.9	7.3 7.3 - 7.5	8.5 8.5 - 8.7	9.6 9.6 - 9.8	12.2 12.2 - 12.5
Old Tampa Bay	30	8.7	5.0	5.8 5.8 - 6.0	7.2 7.2 - 7.5	8.4 8.4 - 8.7	9.5 9.5 - 9.9	12.0 12.0 - 12.5
Old Tampa Bay	31	8.5	4.9	5.8 5.8 - 5.8	7.2 7.2 - 7.4	8.4 8.4 - 8.6	9.4 9.4 - 9.8	12.0 12.0 - 12.4
Tampa Bay	32	7.1	4.9	5.9 5.9 - 6.0	7.4 7.4 - 7.5	8.5 8.5 - 8.7	9.6 9.6 - 9.9	12.3 12.3 - 13.0
Tampa Bay	33	7.3	4.8	5.9 5.9 - 6.0	7.3 7.3 - 7.6	8.5 8.5 - 8.8	9.7 9.7 – 10.0	12.3 12.3 - 13.4

Table 16: 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
Tampa Bay	34	7.3	5.4	5.9 5.9 - 6.0	7.4 7.4 - 7.5	8.6 8.6 - 8.8	9.7 9.7 - 10.1	12.4 12.4 - 12.8
Tampa Bay	35	7.3	5.8	5.9 5.9 - 6.0	7.4 7.4 - 7.5	8.6 8.6 - 8.7	9.8 9.8 - 10.1	12.5 12.5 - 13
Tampa Bay	36	7.2	6.0	5.9 5.9 - 5.9	7.4 7.4 - 7.4	8.6 8.6 - 8.8	9.8 9.8 - 10.1	12.6 12.6 - 12.9
Tampa Bay	37	6.1	6.2	5.9 5.9 - 5.9	7.4 7.4 - 7.5	8.7 8.7 - 8.8	9.9 9.9 - 10.1	12.7 12.7 - 12.9
Tampa Bay	38	6.8	6.7	5.9 5.9 - 5.8	7.4 7.4 - 7.4	8.7 8.7 - 8.7	9.9 9.9 - 9.9	12.7 12.7 - 12.8
Tampa Bay	39	6.0	6.6	5.8 5.8 - 5.9	7.3 7.3 - 7.5	8.6 8.6 - 8.8	9.9 9.9 - 10.0	12.7 12.7 - 12.9
Hillsborough Bay	40	6.1	4.4	5.9 5.8 - 5.9	7.4 7.3 - 7.4	8.8 8.8 - 8.6	10.0 9.9 - 10.0	12.9 12.9 - 12.9
Hillsborough Bay	41	5.7	4.2	5.9 5.9 - 5.9	7.5 7.5 - 7.4	8.8 8.8 - 8.5	10.1 9.9 – 10.1	13.0 13.0 - 12.9
Hillsborough Bay	42	5.8	4.8	5.9 5.9 - 5.9	7.5 7.5 - 7.5	8.9 8.5 - 8.9	10.1 9.9 - 10.1	13.1 12.9 - 13.1
Hillsborough Bay	43	4.9	3.5	6.0 5.7 - 6.0	7.6 7.2 - 7.6	8.9 8.5 - 8.9	10.2 9.9 - 10.2	13.1 13.0 - 13.1
Hillsborough Bay	44	4.4	3.0	6.0 5.9 - 6.0	7.6 7.6 - 7.6	8.9 8.8 - 8.9	10.2 9.9 - 10.2	13.1 12.9 - 13.1

Table 16: 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
Hillsborough Bay	45	4.1	2.9	6.0 5.9 - 6.0	7.6 7.4 - 7.6	8.9 8.8 - 8.9	10.2 10.1 - 10.2	13.1 12.9 - 13.1
Hillsborough Bay	46	3.8	2.9	6.0 6.0 - 6.0	7.6 7.5 - 7.6	8.9 8.7 - 8.9	10.2 10.0 - 10.2	13.1 12.3 - 13.1
Hillsborough Bay	47	4.2	3.3	6.0 6.0 - 6.0	7.6 7.6 - 7.6	8.9 8.9 - 8.9	10.2 10.1 - 10.2	13.1 13.1 - 13.2
Hillsborough Bay	48	4.9	4.0	6.0 6.0 - 6.0	7.6 7.6 - 7.6	9.0 9.0 - 9.0	10.2 10.1 - 10.2	13.1 13.1 - 13.1
Hillsborough Bay	49	5.1	4.4	6.0 6.0 - 6.0	7.6 7.6 - 7.6	9.0 8.9 - 9.0	10.3 10.1 - 10.3	13.2 13.2 - 13.2
Hillsborough Bay	50	4.6	3.9	6.1 6.1 - 6.1	7.7 7.7 - 7.7	9.0 8.9 - 9.0	10.3 10.1 - 10.3	13.2 13.2 - 13.3
Hillsborough Bay	51	4.1	3.9	6.1 6.1 - 6.1	7.7 7.7 - 7.7	9.1 9.0 - 9.1	10.3 10.3 - 10.3	13.2 13.2 - 14.4
Hillsborough Bay	52	4.7	3.7	6.1 6.1 - 6.1	7.7 7.7 - 7.7	9.1 9.1 - 9.1	10.4 10.4 - 10.7	13.2 13.2 - 13.9
Hillsborough Bay	53	4.8	4.0	6.1 6.1 - 6.2	7.8 7.8 - 7.8	9.2 9.2 - 9.2	10.4 10.4 - 10.6	13.3 13.3 - 14.1
Hillsborough Bay	54	5.0	4.1	6.2 6.2 - 6.2	7.8 7.8 - 7.8	9.2 9.2 - 9.4	10.5 10.5 - 10.7	13.4 13.4 - 13.9
Hillsborough Bay	55	5.6	4.1	6.2 6.2 - 6.3	7.9 7.9 - 8.1	9.3 9.3 - 9.6	10.6 10.6 - 11.0	13.5 13.5 - 14.9

Table 16: 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
Hillsborough Bay	56	6.4	4.5	6.3 6.3 - 6.3	8.0 8.0 - 8.0	9.4 9.4 - 9.5	10.7 10.7 - 10.8	13.6 13.6 - 13.7
Hillsborough Bay	57	6.1	4.6	6.3 6.3 - 6.4	8.0 8.0 - 8.2	9.4 9.4 - 9.7	10.8 10.8 - 11.1	13.7 13.7 - 14.1
Hillsborough Bay	58	5.6	4.6	6.4 6.4 - 6.5	8.1 8.1 - 8.2	9.5 9.5 - 9.7	10.9 10.9 - 11.1	13.9 13.9 - 14.1
Hillsborough Bay	59	7.7	4.7	6.4 6.4 - 6.5	8.1 8.1 - 8.2	9.6 9.6 - 9.8	11.0 11.0 - 11.2	14.0 14.0 - 14.3
Hillsborough Bay	60	6.3	4.7	6.4 6.4 - 6.4	8.1 8.1 - 8.1	9.5 9.5 - 9.6	10.9 10.9 - 11.0	13.9 13.9 - 14.1
Hillsborough Bay	61	7.4	4.6	6.3 6.3 - 6.3	8.0 8.0 - 8.0	9.5 9.5 - 9.5	10.8 10.8 - 10.9	13.8 13.8 - 14.0
Hillsborough Bay	62	7.9	4.5	6.2 6.2 - 6.2	7.9 7.9 - 7.9	9.4 9.4 - 9.4	10.7 10.7 - 10.8	13.7 13.7 - 14.0
Hillsborough Bay	63	7.0	4.4	6.2 6.2 - 6.3	7.9 7.9 - 8	9.3 9.3 - 9.5	10.6 10.6 - 10.8	13.6 13.6 - 13.9
Hillsborough Bay	64	7.9	4.7	6.2 6.2 - 6.2	7.9 7.9 - 7.9	9.3 9.3 - 9.4	10.6 10.6 - 10.8	13.7 13.7 - 13.9
Hillsborough Bay	65	8.3	5.2	6.2 6.2 - 6.3	7.9 7.9 - 8.0	9.3 9.3 - 9.5	10.7 10.7 - 10.9	13.7 13.7 - 14.0
Hillsborough Bay	66	8.7	5.2	6.3 6.3 - 6.3	8.0 8.0 - 8.1	9.5 9.5 - 9.7	10.8 10.8 - 11.1	13.9 13.9 - 14.3

Table 16: 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
Hillsborough Bay	67	10.4	5.4	6.2 6.2 - 6.3	7.9 7.9 - 8.0	9.4 9.4 - 9.5	10.8 10.8 - 11	13.9 13.9 - 14.4
Hillsborough Bay	68	9.5	5.3	6.3 6.3 - 6.3	8.0 8.0 – 8.0	9.5 9.5 - 9.6	10.9 10.9 - 11	14.1 14.1 - 14.2
Hillsborough Bay	69	9.1	5.3	6.4 6.3 - 6.4	8.1 8.1 - 8.1	9.6 9.6 - 9.6	11.1 11.1 - 11	14.2 14.1 - 14.2
Hillsborough Bay	70	8.8	5.2	6.4 6.4 - 6.4	8.1 8.1 - 8.1	9.6 9.6 - 9.6	11.0 11.0 - 11.0	14.2 14.1 - 14.2
Hillsborough Bay	71	8.8	5.2	6.4 6.4 - 6.4	8.1 8.1 - 8.1	9.6 9.6 - 9.7	11.1 11.1 - 11.1	14.2 14.2 - 14.3
Hillsborough Bay	72	8.2	5.0	6.5 6.4 - 6.5	8.3 8.2 - 8.3	9.8 9.7 - 9.8	11.2 11.2 - 11.2	14.4 14.3 - 14.4
Hillsborough Bay	73	9.0	5.3	6.6 6.6 - 6.9	8.4 8.4 - 8.7	10.0 10.0 - 10.2	11.5 11.5 - 11.6	14.7 14.7 - 14.8
Hillsborough Bay	74	9.0	5.3	6.7 6.7 - 7.4	8.5 8.5 - 9.3	10.1 10.1 - 11.1	11.6 11.6 - 12.8	14.8 14.8 - 16.4
Hillsborough Bay	75	9.1	5.3	6.6 6.6 - 7.4	8.4 8.4 - 9.3	9.9 9.9 - 11.1	11.4 11.4 - 12.7	14.7 14.7 - 15.7
Hillsborough Bay	76	9.6	5.3	6.5 6.2 - 6.5	8.2 7.8 - 8.2	9.7 9.4 - 9.7	11.1 11.0 - 11.1	14.3 14.3 - 14.5
Hillsborough Bay	77	5.8	4.5	6.4 6.2 - 6.4	8.2 7.8 - 8.2	9.7 9.7 - 9.7	11.2 11.0 - 11.2	14.4 14.3 - 14.4

Table 16: 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
Hillsborough Bay	78	5.9	4.5	6.5 6.5 - 6.6	8.2 8.2 - 8.4	9.8 9.8 - 10.0	11.3 11.3 - 11.6	14.5 14.5 - 15.0
Hillsborough Bay	79	5.8	4.6	6.4 6.4 - 7.4	8.2 8.2 - 8.3	9.8 9.8 - 9.9	11.2 10.9 - 11.2	14.5 14.5 - 15.4
Hillsborough Bay	80	6.2	5.0	6.4 6.4 - 6.5	8.2 8.2 - 8.3	9.8 9.8 - 9.9	11.2 11.2 - 11.8	14.5 14.5 - 15.3
Hillsborough Bay	81	6.2	5.1	6.4 6.4 - 6.5	8.2 8.2 - 8.4	9.7 9.7 - 9.9	11.2 11.2 - 11.8	14.5 14.5 - 14.9
Hillsborough Bay	82	6.5	5.4	6.3 6.3 - 6.4	8.0 8.0 - 8.3	9.6 9.6 - 10.0	11.1 11.1 - 11.6	14.3 14.3 - 15.4
Hillsborough Bay	83	5.9	5.2	6.3 6.3 - 6.4	8.0 8.0 - 8.3	9.6 9.6 - 10.0	11.0 11.0 - 11.5	14.3 14.3 - 15.1
Hillsborough Bay	84	5.8	4.8	6.2 6.2 - 6.4	7.9 7.9 - 8.3	9.4 9.4 - 9.9	10.8 10.8 - 11.5	14.1 14.1 - 15.1
Hillsborough Bay	85	5.0	4.6	6.2 6.2 - 6.2	7.9 7.9 - 8.4	9.5 9.5 - 10.0	11.0 11.0 - 11.8	14.3 14.3 - 15.5
Hillsborough Bay	86	5.1	4.8	6.2 6.2 - 6.3	7.9 7.9 - 8.2	9.5 9.5 - 9.9	11.0 11.0 - 11.4	14.3 14.3 - 15.0
Hillsborough Bay	87	5.1	5.1	6.1 6.1 - 6.3	7.9 7.9 - 8.2	9.5 9.5 - 9.8	11.0 11.0 - 11.4	14.3 14.3 - 15.0
Hillsborough Bay	88	5.8	5.3	6.1 6.1 - 6.2	7.8 7.8 - 8.0	9.4 9.4 - 9.7	10.9 10.9 - 11.1	14.2 14.2 - 14.8

Table 16: 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
Hillsborough Bay	89	5.2	4.7	6.0 6.0 - 6.0	7.8 7.8 - 7.8	9.3 9.3 - 9.5	10.8 10.8 - 10.9	14.1 14.1 - 14.5
Hillsborough Bay	90	4.8	3.7	6.0 5.9 - 6.0	7.7 7.5 - 7.7	9.3 9.3 - 9.3	10.7 10.7 - 10.9	14.0 14.0 - 14.5
Tampa Bay	91	7.6	5.5	5.9 5.9 - 5.9	7.5 7.5 - 7.7	8.9 8.9 - 9.2	10.3 10.3 - 10.8	13.4 13.4 - 14.2
Tampa Bay	92	5.3	5.5	5.8 5.8 - 5.9	7.5 7.5 - 7.7	9.0 9.0 - 9.2	10.4 10.4 - 10.7	13.6 13.6 - 14.0
Tampa Bay	93	6.8	5.8	5.8 5.8 - 6	7.5 7.5 - 7.7	8.9 8.9 - 9.0	10.3 10.3 - 10.6	13.4 13.4 - 13.4
Tampa Bay	94	7.4	5.8	5.8 5.8 - 5.7	7.4 7.4 - 7.4	8.8 8.8 - 8.7	10.1 10.1 - 10.3	13.3 13.3 - 13.6
Tampa Bay	95	7.7	5.8	5.7 5.7 - 5.7	7.3 7.3 - 7.3	8.7 8.7 - 8.7	10.1 10.1 - 10.2	13.2 13.2 - 13.4
Tampa Bay	96	8.0	5.7	5.7 5.7 - 5.7	7.3 7.3 - 7.3	8.7 8.7 - 8.8	10.0 10.0 - 10.2	13.1 13.1 - 13.5
Tampa Bay	97	7.7	5.5	5.7 5.7 - 5.8	7.2 7.2 - 7.4	8.6 8.6 - 8.8	9.9 9.9 - 10.2	12.9 12.9 - 13.4
Tampa Bay	98	5.7	5.4	5.7 5.7 - 5.7	7.3 7.0 - 7.3	8.7 8.3 - 8.7	10.0 9.8 – 10.0	13.1 13.1 - 13.5
Tampa Bay	99	5.0	4.3	5.7 5.5 - 5.7	7.2 7.0 - 7.2	8.6 8.1 - 8.6	9.9 9.4 - 9.9	12.9 12.9 - 13.0

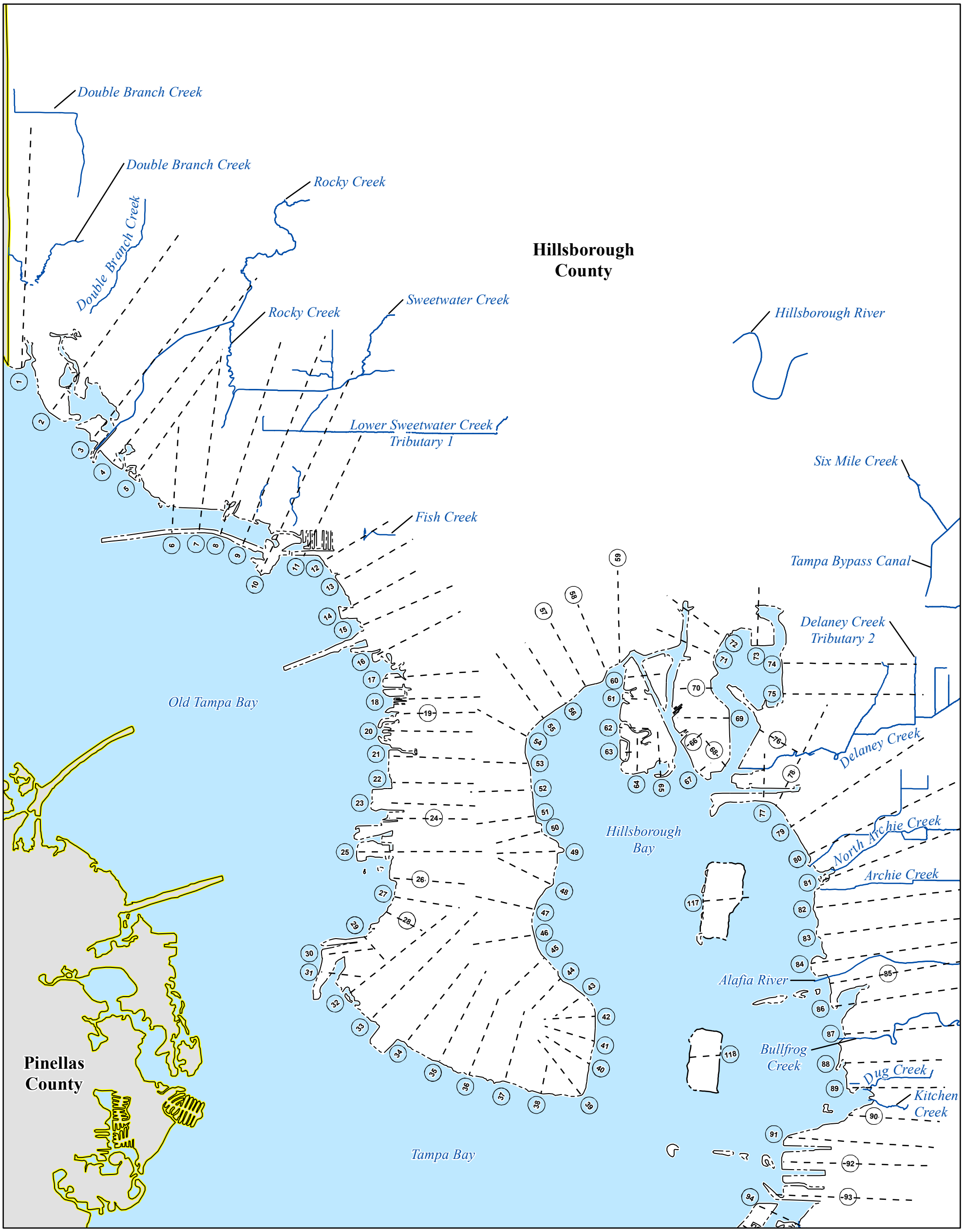
Table 16: Coastal Transect Parameters (continued)

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
Tampa Bay	100	5.2	4.1	5.7 5.3 - 5.7	7.2 6.7 - 7.2	8.5 7.9 - 8.5	9.8 9.4 - 9.8	12.7 12.1 - 12.7
Tampa Bay	101	5.1	4.1	5.6 4.5 - 5.6	7.1 5.6 - 7.1	8.4 6.4 - 8.4	9.7 7.1 - 9.7	12.6 11.5 - 12.6
Tampa Bay	102	5.0	3.9	5.6 4.8 - 5.6	7.1 6.0 - 7.1	8.3 7.6 - 8.3	9.6 9.1 - 9.6	12.5 11.9 - 12.5
Tampa Bay	103	5.2	4.0	5.6 4.8 - 5.6	7.0 6.0 - 7.0	8.3 7.0 - 8.3	9.5 8.1 - 9.5	12.4 11.0 - 12.4
Tampa Bay	104	5.2	4.9	5.5 4.8 - 5.5	7.0 6.0 - 7.0	8.2 7.0 - 8.2	9.4 8.1 - 9.4	12.2 10.7 - 12.2
Gulf of Mexico	105	6.9	5.5	4.8 4.5 - 4.8	5.9 5.5 - 5.9	6.8 6.3 - 6.8	7.8 7.0 - 7.8	10.6 9.2 - 10.2
Tampa Bay	106	6.7	4.5	5.5 5.1 - 5.5	7.0 6.4 - 7.0	8.2 7.6 - 8.2	9.5 8.8 - 9.5	12.3 11.6 - 12.3
Tampa Bay	107	4.7	4.8	5.5 4.7 - 5.5	6.9 5.9 - 6.9	8.2 6.9 - 8.2	9.3 7.9 - 9.3	12.1 10.5 - 12.1
Tampa Bay	108	5.1	3.8	5.4 4.8 - 5.4	6.9 6.1 - 6.9	8.1 7.1 - 8.1	9.2 8.1 - 9.2	12.0 10.8 - 12.0
Tampa Bay	109	7.2	5.1	5.4 4.9 - 5.4	6.8 6.2 - 6.8	8.0 7.7 - 8.0	9.1 9.1 - 9.1	11.8 11.7 - 11.8
Tampa Bay	110	6.7	5.0	5.4 4.7 - 5.4	6.7 6.0 - 6.7	7.9 7.1 - 7.9	9.0 8.5 - 9.0	11.7 11.6 - 11.7

Table 16: 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
Tampa Bay	111	4.5	4.9	5.3 4.8 - 5.3	6.7 6.0 - 6.7	7.8 7.2 - 7.8	8.9 8.5 - 8.8	11.5 11.5 - 11.5
Tampa Bay	112	5.6	5.7	5.3 4.8 - 5.3	6.6 6.4 - 6.6	7.7 7.5 - 7.7	8.8 8.5 - 8.8	11.4 11.4 - 11.5
Tampa Bay	113	4.7	4.4	5.2 5.0 - 5.2	6.5 6.3 - 6.5	7.6 7.5 - 7.6	8.7 8.6 - 8.7	11.3 11.3 - 11.4
Tampa Bay	114	6.1	6.1	5.2 4.8 - 5.2	6.5 6.1 - 6.5	7.5 7.3 - 7.5	8.5 8.5 - 8.5	11.1 11.1 - 11.2
Tampa Bay	115	6.5	6.0	5.1 4.7 - 5.1	6.4 6.0 - 6.4	7.4 7.2 - 7.4	8.4 8.4 - 8.4	10.9 10.9 - 11.1
Tampa Bay	116	7.0	6.0	5.0 4.8 - 5.0	6.3 6.1 - 6.3	7.3 7.2 - 7.3	8.3 8.3 - 8.3	10.7 10.7 - 10.9
Hillsborough Bay	117	8.2	5.3	6.1 6.1 - 6.1	7.7 7.7 - 7.8	9.1 9.1 - 9.3	10.5 10.5 - 10.7	13.5 13.5 - 13.9
Hillsborough Bay	118	6.7	4.2	5.9 5.9 - 5.9	7.5 7.5 - 7.5	8.9 8.8 - 8.9	10.3 10.1 - 10.3	13.4 13.1 - 13.4

Figure 9: Transect Location Map



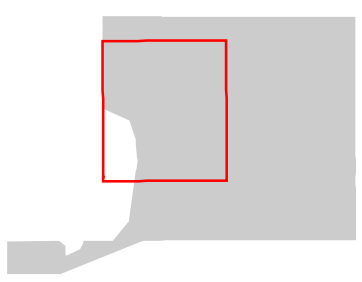
1 inch = 9,167 feet 1:110,000

0 2,300 4,600 9,200 13,800 18,400 Feet

N

Map Projection:
State Plane Florida West (FIPS Zone 0902) Coordinate System, North American Datum 1983,

HILLSBOROUGH COUNTY



NATIONAL FLOOD INSURANCE PROGRAM

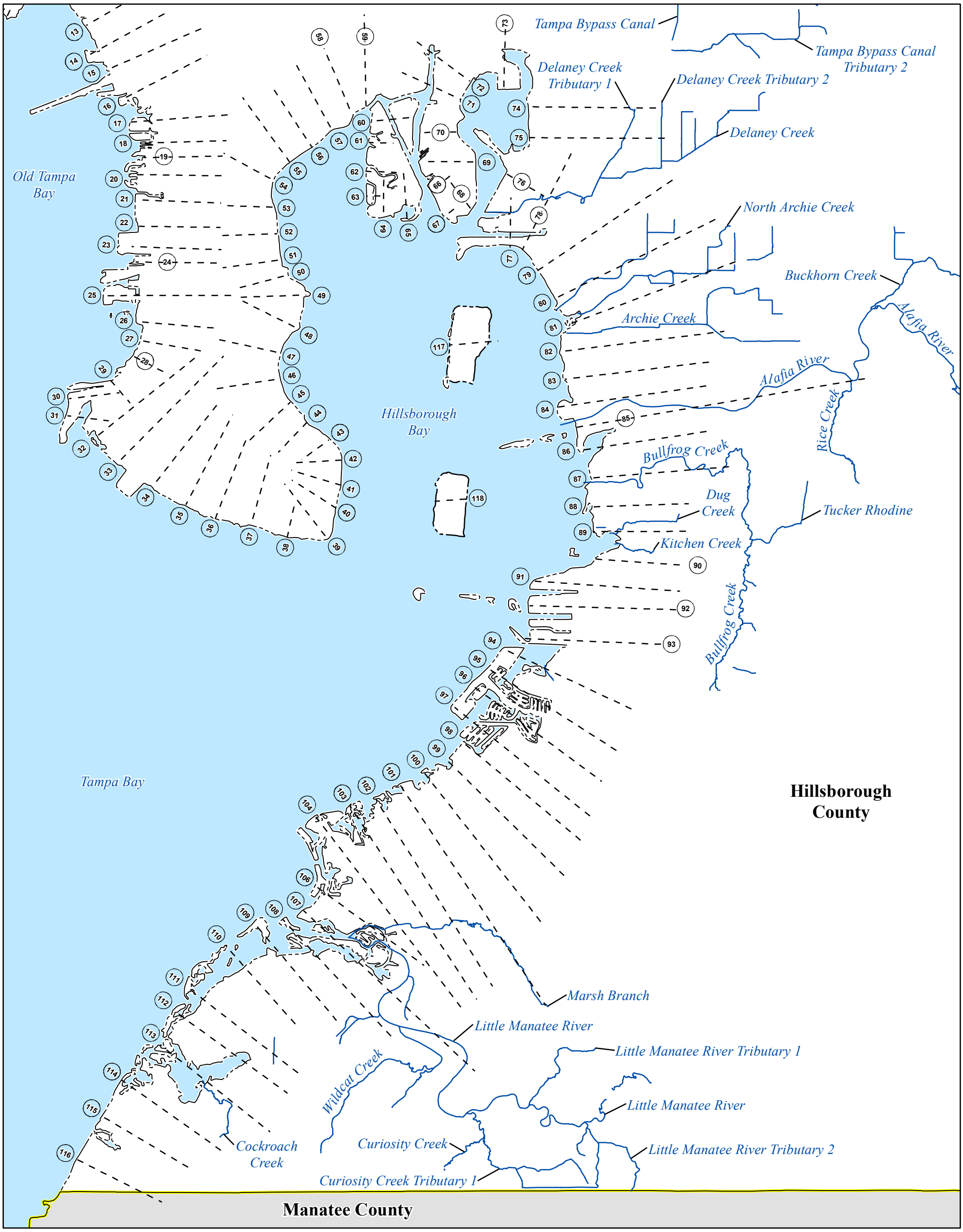
Transect Locator Map

PANELS WITH TRANSECTS

0159, 0167, 0169, 0186, 0187, 0188, 0189, 0193, 0326, 0327, 0329, 0331, 0332, 0333, 0334, 0341, 0342, 0343, 0344, 0353, 0354, 0358, 0359, 0361, 0362, 0363, 0366, 0367, 0368, 0369, 0386, 0388, 0456, 0457, 0458, 0459, 0476, 0478, 0479, 0481, 0482, 0483, 0484, 0491, 0492, 0494, 0501, 0502, 0503, 0511

FEMA

Figure 9: Transect Location Map (continued)



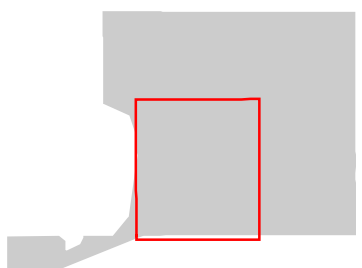
1 inch = 9,167 feet 1:110,000

0 2,300 4,600 9,200 13,800 18,400 Feet

N

Map Projection:
State Plane Florida West (FIPS Zone 0902) Coordinate System, North American Datum 1983,

HILLSBOROUGH COUNTY



NATIONAL FLOOD INSURANCE PROGRAM

Transect Locator Map

PANELS WITH TRANSECTS

0332, 0333, 0334, 0341, 0342, 0343, 0344, 0353, 0354, 0358, 0359, 0361, 0362, 0363, 0366, 0367, 0368, 0369, 0386, 0388, 0456, 0457, 0458, 0459, 0476, 0478, 0479, 0481, 0482, 0483, 0484, 0489, 0491, 0492, 0493, 0494, 0501, 0502, 0503, 0511, 0634, 0641, 0642, 0643, 0644, 0651, 0652, 0653, 0654, 0656, 0657, 0658, 0661, 0662, 0670, 0759

FEMA

5.4 Alluvial Fan Analyses

This section is not applicable to this Flood Risk Project.

Table 17: Summary of Alluvial Fan Analyses

[Not Applicable to this Flood Risk Project]

Table 18: Results of Alluvial Fan Analyses

[Not Applicable to this Flood Risk Project]

SECTION 6.0 – MAPPING METHODS

6.1 Vertical and Horizontal Control

All FIS Reports and FIRMs 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 used for newly created or revised FIS Reports and FIRMs was the National Geodetic Vertical Datum of 1929 (NGVD29). With the completion of the North American Vertical Datum of 1988 (NAVD88), many FIS Reports and FIRMs are now prepared using NAVD88 as the referenced vertical datum.

Flood elevations shown in this FIS Report and on the FIRMs are referenced to NAVD88. These flood elevations must be compared to structure and ground elevations referenced to the same vertical datum. For information regarding conversion between NGVD29 and NAVD88 or other datum conversion, visit the National Geodetic Survey website at www.ngs.noaa.gov.

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 FIRMs 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 visit the NGS website at www.ngs.noaa.gov.

A countywide conversion factor of -0.89 feet for riverine areas and -1.00 feet for the coastal areas was calculated for the previous Hillsborough County FIS (FEMA 2013).

Table 19: Countywide Vertical Datum Conversion

[Not Applicable to this Flood Risk Project]

Table 20: Stream-Based Vertical Datum Conversion

[Not Applicable to this Flood Risk Project]

6.2 Base Map

The FIRMs and FIS Report for this project have been produced in a digital format. The flood hazard information was converted to a Geographic Information System (GIS) format that meets FEMA's FIRM Database specifications and geographic information standards. This information is provided in a digital format so that it can be incorporated into a local GIS and be accessed more easily by the community. The FIRM Database includes most of the tabular information contained in the FIS Report in such a way that the data can be associated with pertinent spatial features. For example, the information contained in the Floodway Data table and Flood Profiles can be linked to the cross sections that are shown on the FIRMs. Additional information about the FIRM Database and its contents can be found in FEMA's *Guidelines and Standards for Flood Risk Analysis and Mapping*, www.fema.gov/guidelines-and-standards-flood-risk-analysis-and-mapping.

Base map information shown on the FIRM was derived from the sources described in Table 21.

Table 21: Base Map Sources

Data Type	Data Provider	Data Date	Data Scale	Data Description
Coastal Barrier Resources System (CBRS)	U.S. Fish and Wildlife Service	2018	1:24,000	John H. Chafee Coastal Barrier Resources System
Digital Orthophoto	Florida Department of Transportation	2017	1:100	Digital orthoimagery for Hillsborough, Manatee, and Pinellas County, Florida
Digital Orthophoto	United States Department of Agriculture – Farm Service Agency	2016	1:600	Digital orthoimagery for open water areas in Hillsborough County, Florida
Political boundaries	Hillsborough County	2018	1:5,000	Municipal boundaries
Public Land Survey System (PLSS)	Florida Resources and Environmental Analysis Center	2003	1:24,000	Public Land Survey System
Surface Water Features	Hillsborough County	2008	1:6,000	Base map surface water features
Transportation Features	Hillsborough County	2018	*	Roads and railroads within Hillsborough County, Florida

*Data not available

6.3 Floodplain and Floodway Delineation

The FIRM shows tints, screens, and symbols to indicate floodplains and floodways as well as the locations of selected cross sections used in the hydraulic analyses and floodway computations.

For riverine flooding sources, the mapped floodplain boundaries shown on the FIRM have been delineated using the flood elevations determined at each cross section; between cross sections, the boundaries were interpolated using the topographic elevation data described in Table 22. For each coastal flooding source studied as part of this FIS Report, the mapped floodplain boundaries on the FIRM have been delineated using the flood and wave elevations determined at each transect; between transects, boundaries were delineated using land use and land cover data, the topographic elevation data described in Table 22, and knowledge of coastal flood processes. In ponding areas, flood elevations were determined at each junction of the model; between junctions, boundaries were interpolated using the topographic elevation data described in Table 22.

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

The floodway widths presented in this FIS Report and on the FIRM 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. Table 2 indicates the flooding sources for which floodways have been determined. The results of the floodway computations for those flooding sources have been tabulated for selected cross sections and are shown in Table 23, “Floodway Data.”

Table 22: Summary of Topographic Elevation Data used in Mapping

Community	Flooding Source	Source for Topographic Elevation Data			
		Description	Vertical Accuracy	Horizontal Accuracy	Citation
Hillsborough County, Unincorporated Areas; Tampa, City of	Hillsborough Bay, Gulf of Mexico, Old Tampa Bay, Tampa Bay	Light Detection and Ranging data (LiDAR)	0.43 ft RMSEz	N/A	FDEM 2007
Hillsborough County, Unincorporated Areas	Delaney Creek, Delaney Creek Lateral C, Delaney Creek Lateral D, Delaney Creek Lateral E	Light Detection and Ranging data (LiDAR)	0.6 ft RMSEz	N/A	SWFWMD 2007

Table 22: Summary of Topographic Elevation Data used in Mapping (continued)

Community	Flooding Source	Source for Topographic Elevation Data			
		Description	Vertical Accuracy	Horizontal Accuracy	Citation
Hillsborough County, Unincorporated Areas; Plant City, City of; Tampa, City of; Temple Terrace, City of	All sources studied for the FIS dated 08/28/2008	Topographic maps	N/A	N/A	SWFWMD undated
Tampa, City of	Hillsborough Bay	As-Built Data	N/A	N/A	PTB 2018

BFEs shown at cross sections on the FIRM represent the 1% annual chance water surface elevations shown on the Flood Profiles and in the Floodway Data tables in the FIS Report. Rounded whole-foot elevations may be shown on the FIRM in coastal areas, areas of ponding, and other areas with static base flood elevations.

Table 23: Floodway Data

LOCATION		FLOODWAY			1% ANNUAL CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD88)			
CROSS SECTION	DISTANCE[2]	WIDTH (FEET)	SECTION AREA (SQ. FEET)	MEAN VELOCITY (FEET/SEC)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
A[1]	1,800	N/A	N/A	N/A	*	2.5[4]	N/A	N/A
B[1]	4,200	N/A	N/A	N/A	*	3.1[4]	N/A	N/A
C[1]	8,160	N/A	N/A	N/A	*	3.9[4]	N/A	N/A
D	11,440	968	9,974	2.6	11.6[3]	4.9[4]	5.5	0.6
E	14,940	515	6,104	4.2	11.7[3]	5.9[4]	6.4	0.5
F	20,080	370	6,362	4.1	12.1[3]	8.2[4]	8.8	0.6
G	23,500	259	4,609	5.7	12.4[3]	9.2[4]	9.8	0.6
H	25,640	376	5,730	4.6	12.7[3]	10.2[4]	11.0	0.8
I	31,080	548	7,113	3.7	13.9[3]	13.1[4]	14.0	0.9
J	33,900	306	5,258	5.0	14.7[3]	14.2[4]	15.0	0.8
K	36,220	836	11,289	2.3	16.1[3]	15.8[4]	16.7	0.9
L	39,000	273	4,007	5.9	16.3[3]	16.0[4]	17.0	1.0
M	43,410	477	6,376	3.7	17.7[3]	17.6[4]	18.6	1.0
N	44,840	278	4,297	5.5	18.2[3]	18.1[4]	19.1	1.0
O	45,940	763	9,680	2.4	19.3	19.3	20.1	0.8
P	47,680	880	11,924	2.0	19.7	19.7	20.6	0.9
Q	52,140	341	3,628	6.5	20.8	20.8	21.6	0.8
R	55,210	528	6,056	3.9	23.3	23.3	24.0	0.7
S	57,720	391	5,910	4.0	25.4	25.4	26.2	0.8
T	60,560	339	6,093	3.9	27.0	27.0	27.8	0.8
U	62,840	1,043	17,450	1.4	27.8	27.8	28.7	0.9
V	65,400	967	16,040	1.5	28.3	28.3	29.2	0.9

[1]Floodway not shown for this cross section
[2]Feet above U.S. Highway 41
[3]Combined coastal and riverine effects from Gulf of Mexico and Alafia River
[4]Elevation computed without consideration of backwater effects from Gulf of Mexico
*Controlled by coastal flooding – see Flood Insurance Rate Map for regulatory base flood elevation

TABLE 23

FEDERAL EMERGENCY MANAGEMENT AGENCY

HILLSBOROUGH COUNTY, FLORIDA

AND INCORPORATED AREAS

FLOODWAY DATA

FLOODING SOURCE: ALAFIA 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
W	70,400	1,449	21,383	1.0	29.0	29.0	30.0	1.0
X	72,980	1,186	15,931	1.3	29.2	29.2	30.2	1.0
Y	74,480	552	8,381	2.5	29.3	29.3	30.3	1.0
Z	77,860	1,360	17,885	1.2	29.5	29.5	30.5	1.0
AA	81,400	969	12,408	1.7	30.4	30.4	31.3	0.9
AB	87,100	1,89	18,613	1.1	31.1	31.1	32.1	1.0
AC	90,020	1,780	17,238	1.2	32.0	32.0	33.0	1.0
AD	98,980	1,085	9,615	1.9	37.0	37.0	37.7	0.7
AE	105,700	1,462	16,620	1.1	40.4	40.4	41.3	0.9
AF	114,160	2,081	22,464	0.8	42.1	42.1	43.1	1.0
AG	120,990	949	11,155	1.6	45.0	45.0	45.9	0.9

[1]Feet above U.S. Highway 41

TABLE 23

FEDERAL EMERGENCY MANAGEMENT AGENCY

HILLSBOROUGH COUNTY, FLORIDA

AND INCORPORATED AREAS

FLOODWAY DATA

FLOODING SOURCE: ALAFIA RIVER

LOCATION			FLOODWAY			1% ANNUAL CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD88)			
JUNCTION NUMBER	CONDUIT NUMBER	DISTANCE[1]	WIDTH (FEET)	PEAK FLOW	VELOCITY	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
903945		0				82.1	82.1	82.8	0.7
	9985100		800	1,160	1.0				
985100		2,467				82.2	82.2	82.9	0.7
	9985150		395	1,250	2.1				
985150		3,294				84.8	84.8	84.8	0.0
	9985250		533	1,140	1.9				
985250		5,464				90.5	90.5	90.5	0.0
	9985400		236	2,170	0.4				
985400		7,492				90.5	90.5	90.5	0.0
	9985350		401	1,600	1.5				
985350		9,312				105.2	105.2	105.3	0.1
	1985445		550	1,600	9.2				
985445		9,341				105.6	105.6	105.6	0.0
	9985450		481	1,490	0.7				
985450		11,482				106.0	106.0	106.0	0.0
	9985540		297	1,010	1.0				
985540		14,072				108.9	108.9	108.9	0.0
	9985550		205	1,070	1.2				
985550		16,342				110.7	110.7	110.7	0.0
	9985900		280	600	0.8				
985900		19,057				113.0	113.0	113.0	0.0
	9985850		356	440	0.6				
985850		20,121				115.3	115.3	115.3	0.0
	9986000		498	198	0.5				
986000		21,617				119.4	119.4	119.4	0.0
	9986010		76	0.1	0.2				
986010		22,165				122.6	122.6	122.6	0.0

[1]Feet above confluence with Little Manatee River

LOCATION			FLOODWAY			1% ANNUAL CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD88)			
JUNCTION NUMBER	CONDUIT NUMBER	DISTANCE[2]	WIDTH (FEET)	PEAK FLOW	VELOCITY	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
280089[1]		0				*	10.4[4]	N/A	N/A
	9280300[1]		N/A	N/A	N/A				
280300[1]		200				*	11.1[4]	N/A	N/A
	1280305		28	433	2.4				
280305		232				12.3[3]	11.3[4]	11.3	0.0
	9280350		35	407	3.8				
280350		932				13.2[3]	12.7[4]	12.7	0.0
	1280354		30	136	7.3				
280354		953				14.6[3]	14.2[4]	14.2	0.0
	9280355		47	407	1.8				
280355		1,349				14.7[3]	14.3[4]	14.3	0.0
	9280375		40	616	4.1				
280375		1,745				14.7[3]	14.4[4]	14.4	0.0
	9280380		28	599	5.3				
280380		2,560				16.2	16.2	16.2	0.0
	9280385		38	596	3.3				
280385		3,530				17.0	17.0	17.0	0.0
	9280390		59	496	2.8				
280390		4,410				17.6	17.6	17.6	0.0
	9280392		95	384	1.7				
280392		5,630				17.8	17.8	17.8	0.0
	9280394		46	366	2.1				
280394		6,570				18.2	18.2	18.2	0.0
	1280397		30	366	4.2				
280397		6,590				18.7	18.7	18.7	0.0
	9280398		150	340	1.6				

[1]Floodway not shown
[2]Feet above Limit of Detailed Study (located at a point approximately 200 feet downstream of 78th Street South)
[3]Combined coastal and riverine effects from Gulf of Mexico and Archie Creek
[4]Elevation computed without consideration of backwater effects from Gulf of Mexico
*Controlled by coastal flooding – see Flood Insurance Rate Map for regulatory base flood elevation

LOCATION			FLOODWAY			1% ANNUAL CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD88)			
JUNCTION NUMBER	CONDUIT NUMBER	DISTANCE[1]	WIDTH (FEET)	PEAK FLOW	VELOCITY	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
280398		7,400				18.8	18.8	18.8	0.0
	1290000		45	150	3.7				
290000		7,665				19.2	19.2	19.2	0.0
	9290003		42	205	2.1				
290003		7,835				19.3	19.3	19.3	0.0
	9290006		36	178	2.1				
290006		8,690				19.5	19.5	19.5	0.0
	9290016		62	175	1.9				
290016		8,837				19.5	19.5	19.5	0.0
	9290017		61	175	1.5				
290017		9,459				19.5	19.5	19.5	0.0

[1]Feet above Limit of Detailed Study (located at a point approximately 200 feet downstream of 78th Street South)

LOCATION			FLOODWAY			1% ANNUAL CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD88)			
JUNCTION NUMBER	CONDUIT NUMBER	DISTANCE[1]	WIDTH (FEET)	PEAK FLOW	VELOCITY	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
330100		0				44.1	44.1	44.4	0.3
	9330140		315	779	1.1				
330140		470				44.1	44.1	44.1	0.0
	9330150		545	775	0.3				
330150		1,240				44.1	44.1	44.1	0.0
	9330200		710	770	0.3				
330200		1,660				44.1	44.1	44.1	0.0
	9330230		1,475	800	0.1				
330230		2,285				44.1	44.1	44.1	0.0
	9330240		668	414	0.3				
330240		3,125				44.1	44.1	44.1	0.0
	9330250		1,413	375	0.1				
330250		3,750				44.1	44.1	44.1	0.0
	9330260		80	368	0.6				
330260		4,485				44.1	44.1	44.1	0.0
	9330270		70	367	0.9				
330270		4,990				44.2	44.2	44.2	0.0
	1330280		50	368	2.5				
330280		5,055				44.2	44.2	44.2	0.0
	9330300		157	373	1.0				
330300		7,265				44.3	44.3	44.3	0.0
	9330400		138	617	N/A				
330400		7,385				44.3	44.3	44.3	0.0
	1330500		150	156	0.9				
330500		7,655				44.3	44.3	44.3	0.0
	9330600		151	320	0.6				
330600		9,075				44.3	44.3	44.3	0.0
	9330650		150	437	1.4				

[1]Feet above confluence with Baker Creek and Lake Thonotosassa Tributary

TABLE 23

FEDERAL EMERGENCY MANAGEMENT AGENCY

HILLSBOROUGH COUNTY, FLORIDA

AND INCORPORATED AREAS

FLOODWAY DATA

FLOODING SOURCE: BAKER CANAL

LOCATION			FLOODWAY			1% ANNUAL CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD88)			
JUNCTION NUMBER	CONDUIT NUMBER	DISTANCE[1]	WIDTH (FEET)	PEAK FLOW	VELOCITY	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
330650		9,925				44.3	44.3	44.3	0.0
	1330800		40	433	2.6				
330800		10,120				44.3	44.3	44.3	0.0
	9330850		37	280	1.1				
330850		16,145				45.2	45.2	45.2	0.0
	1330900		200	16	0.8				
330900		16,245				45.3	45.3	45.3	0.0
	9330950		100	293	1.1				
330950		16,815				45.6	45.6	45.6	0.0
	9331000		100	180	1.3				
331000		18,240				45.9	45.9	45.9	0.0
	9331050		100	213	1.0				
331050		19,235				46.2	46.2	46.2	0.0
	9331070		100	213	1.3				
331070		19,945				46.7	46.7	46.7	0.0
	1331080		135	213	1.1				
331080		19,995				46.7	46.7	46.7	0.0
	1331100		100	214	2.3				
331100		20,005				46.8	46.8	46.8	0.0
	9331150		69	220	0.6				
331150		21,890				47.3	47.3	47.3	0.0
	9331180		116	1,010	2.5				
331180		23,835				51.5	51.5	51.5	0.0
	1390050		200	150	3.6				
390050		23,980				51.7	51.7	51.7	0.0
	9390100		64	1,020	2.1				
390100		25,270				53.9	53.9	53.9	0.0
	9390150		251	900	0.9				

[1]Feet above confluence with Baker Creek and Lake Thonotosassa Tributary

TABLE 23

FEDERAL EMERGENCY MANAGEMENT AGENCY

HILLSBOROUGH COUNTY, FLORIDA

AND INCORPORATED AREAS

FLOODWAY DATA

FLOODING SOURCE: BAKER CANAL

LOCATION			FLOODWAY			1% ANNUAL CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD88)			
JUNCTION NUMBER	CONDUIT NUMBER	DISTANCE[1]	WIDTH (FEET)	PEAK FLOW	VELOCITY	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
390150		26,695				54.5	54.5	54.5	0.0
	9390180		151	903	1.5				
390180		28,560				56.5	56.5	56.5	0.0
	1390200		150	903	4.3				
390200		28,590				57.0	57.0	57.0	0.0
	9390260		100	877	3.3				
390260		29,410				59.6	59.6	59.6	0.0
	1390300		100	506	6.0				
390300		29,450				60.7	60.7	60.7	0.0
	9390350		76	876	3.2				
390350		29,850				63.6	63.6	63.6	0.0
	1390400		34	354	3.5				
390400		29,890				64.9	64.9	64.9	0.0
	9390500		100	875	1.3				
390500		30,640				65.1	65.1	65.1	0.0
	9390580		101	926	1.8				
390580		31,990				67.1	67.1	67.1	0.0
	1390600		25	927	4.8				
390600		32,050				67.8	67.8	67.8	0.0
	9390700		150	916	2.0				
390700		33,930				71.6	71.6	71.6	0.0
	9390900		51	644	3.3				
390900		35,395				73.5	73.5	73.5	0.0
	9391000		51	431	1.3				
391000		36,105				73.7	73.7	73.7	0.0
	9391100		51	683	2.8				

[1]Feet above confluence with Baker Creek and Lake Thonotosassa Tributary

TABLE 23

FEDERAL EMERGENCY MANAGEMENT AGENCY

HILLSBOROUGH COUNTY, FLORIDA

AND INCORPORATED AREAS

FLOODWAY DATA

FLOODING SOURCE: BAKER CANAL

LOCATION			FLOODWAY			1% ANNUAL CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD88)			
JUNCTION NUMBER	CONDUIT NUMBER	DISTANCE[1]	WIDTH (FEET)	PEAK FLOW	VELOCITY	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
391100		36,775				76.1	76.1	76.1	0.0
	9391180		39	252	2.0				
391180		38,626				76.9	76.9	76.9	0.0
	1391200		200	79	6.2				
391200		38,696				78.4	78.4	78.4	0.0
	9391280		30	183	2.6				
391280		39,626				78.6	78.6	78.6	0.0
	1391300		200	47	8.7				
391300		39,686				79.5	79.5	79.5	0.0
	9391380		30	135	2.0				
391380		40,411				81.1	81.1	81.1	0.0
	1391400		30	22	7.0				
391400		40,451				83.1	83.1	83.1	0.0
	9391480		32	64	1.1				
391480		41,512				84.2	84.2	84.2	0.0

[1]Feet above confluence with Baker Creek and Lake Thonotosassa Tributary

TABLE 23

FEDERAL EMERGENCY MANAGEMENT AGENCY

HILLSBOROUGH COUNTY, FLORIDA

AND INCORPORATED AREAS

FLOODWAY DATA

FLOODING SOURCE: BAKER CANAL

LOCATION			FLOODWAY			1% ANNUAL CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD88)			
JUNCTION NUMBER	CONDUIT NUMBER	DISTANCE[1]	WIDTH (FEET)	PEAK FLOW	VELOCITY	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
370710		0				41.1	41.1	41.1	0.0
	9370710		1,060	66	0.1				
370500		1,616				41.1	41.1	41.1	0.0
	9370500		1,175	152	0.1				
370210		3,326				41.1	41.1	41.1	0.0
	1370210		100	54	4.3				
370220		4,006				43.8	43.8	43.8	0.0
	9370220		105	108	0.2				
370100		6,366				43.8	43.8	43.8	0.0
	9370100		95	536	1.6				
330230		8,770				44.1	44.1	44.1	0.0

[1]Feet above Taylor Road

TABLE 23

FEDERAL EMERGENCY MANAGEMENT AGENCY

HILLSBOROUGH COUNTY, FLORIDA

AND INCORPORATED AREAS

FLOODWAY DATA

FLOODING SOURCE: BAKER CANAL TRIBUTARY 1

LOCATION			FLOODWAY			1% ANNUAL CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD88)			
JUNCTION NUMBER	CONDUIT NUMBER	DISTANCE[1]	WIDTH (FEET)	PEAK FLOW	VELOCITY	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
330100		0				44.1	44.1	44.4	0.3
	9340050		125	1,340	2.6				
340050		450				44.4	44.4	44.7	0.3
	1340100		60	1,200	2.4				
340100		525				44.5	44.5	44.8	0.3
	9340170		74	1,340	2.9				
340170		3,200				49.1	49.1	49.2	0.1
	9340200		98	1,410	2.3				
340200		4,110				49.5	49.5	49.8	0.3
	9340280		82	1,380	3.0				
340280		6,585				53.6	53.6	54.0	0.4
	1340300		50	1,070	7.6				
340300		6,630				54.7	54.7	55.2	0.5
	9340400		50	1,380	4.3				
340400		7,430				56.1	56.1	56.6	0.5
	9340480		98	1,130	2.0				
340480		9,810				57.5	57.5	58.1	0.6
	1340500		48	1,140	2.0				
340500		9,910				57.6	57.6	58.2	0.6
	9340550		74	1,130	2.9				
340550		10,160				58.2	58.2	58.2	0.0
	9340600		512	1,130	1.7				
340600		11,250				64.3	64.3	64.3	0.0
	9340900		348	1,090	1.3				
340900		13,610				67.1	67.1	68.0	0.9
	9341000		52	1,090	2.8				

[1]Feet above confluence with Lake Thonotosassa Tributary and Baker Canal

LOCATION			FLOODWAY			1% ANNUAL CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD88)			
JUNCTION NUMBER	CONDUIT NUMBER	DISTANCE[1]	WIDTH (FEET)	PEAK FLOW	VELOCITY	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
341000		15,510				69.8	69.8	70.6	0.8
	9341180		47	1,090	3.3				
341180		17,170				72.7	72.7	73.3	0.6
	1341200		125	273	2.9				
341200		17,320				72.9	72.9	73.5	0.6
	9341400		298	1,090	2.2				
341400		19,120				77.7	77.7	78.6	0.9
	9341600		243	1,100	0.7				
341600		20,120				78.0	78.0	79.0	1.0
	9341680		98	1,020	2.3				
341680		21,500				79.8	79.8	80.4	0.6
	1341700		110	255	6.4				
341700		21,675				80.6	80.6	80.6	0.0
	9341800		66	1,020	3.3				
341800		23,050				84.7	84.7	84.8	0.1
	9342000		98	986	2.0				
342000		25,650				87.8	87.8	88.5	0.7
	9342100		98	986	1.7				
342100		26,470				88.5	88.5	89.0	0.5
	9342180		810	590	0.5				
342180		27,470				88.5	88.5	89.0	0.5
	1342200		110	117	4.6				
342200		27,485				89.6	89.6	89.6	0.0
	1342300		26	601	3.3				
342300		27,995				89.8	89.8	89.8	0.0
	9342380		100	492	1.3				

[1]Feet above confluence with Lake Thonotosassa Tributary and Baker Canal

TABLE 23

FEDERAL EMERGENCY MANAGEMENT AGENCY

HILLSBOROUGH COUNTY, FLORIDA

AND INCORPORATED AREAS

FLOODWAY DATA

FLOODING SOURCE: BAKER CREEK/ PEMBERTON CREEK/ MILL CREEK

LOCATION			FLOODWAY			1% ANNUAL CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD88)			
JUNCTION NUMBER	CONDUIT NUMBER	DISTANCE[1]	WIDTH (FEET)	PEAK FLOW	VELOCITY	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
342380		31,395				94.8	94.8	94.8	0.0
	1342400		50	66	5.1				
342400		31,425				95.6	95.6	95.6	0.0
	9342480		100	370	1.4				
342480		36,895				103.2	103.2	103.2	0.0
	1342500		50	57	2.9				
342500		36,945				103.3	103.3	103.3	0.0
	9342540		70	377	1.4				
342540		40,920				104.8	104.8	104.8	0.0
	1342550		30	137	1.8				
342550		40,970				105.0	105.0	105.0	0.0
	9342700		338	378	0.6				
342700		41,670				105.0	105.0	105.0	0.0
	9342900		470	481	2.0				
342900		42,230				105.1	105.1	105.1	0.0
	9343000		370	482	1.6				
343000		43,440				105.1	105.1	105.1	0.0
	9343150		1,000	409	0.3				
343150		45,210				105.1	105.1	105.1	0.0
	9343300		500	454	0.8				
343300		46,460				105.1	105.1	105.1	0.0
	9346000		70	341	2.3				
346000		46,860				105.1	105.1	105.1	0.0
	93461 00		20	*	*				
346100		46,940				105.8	105.8	105.8	0.0
	9346200		638	296	0.9				

[1]Feet above confluence with Lake Thonotosassa Tributary and Baker Canal

*Data not available

TABLE 23

FEDERAL EMERGENCY MANAGEMENT AGENCY

HILLSBOROUGH COUNTY, FLORIDA

AND INCORPORATED AREAS

FLOODWAY DATA

FLOODING SOURCE: BAKER CREEK/ PEMBERTON CREEK/ MILL CREEK

LOCATION			FLOODWAY			1% ANNUAL CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD88)			
JUNCTION NUMBER	CONDUIT NUMBER	DISTANCE[1]	WIDTH (FEET)	PEAK FLOW	VELOCITY	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
346200		47,915				105.8	105.8	105.8	0.0
	9354000		664	241	0.5				
354000		48,580				105.8	105.8	105.8	0.0
	9354080		356	138	0.2				
354080		50,515				106.2	106.2	106.2	0.0
	1354100		175	71	7.7				
354100		50,565				111.3	111.3	111.3	0.0
	9354180		112	91	0.7				
354180		50,765				111.3	111.3	111.3	0.0
	1354200		175	44	4.5				
354200		50,877				111.7	111.7	111.7	0.0
	1354300		208	40	5.7				
354300		51,675				113.1	113.1	113.1	0.0
	1354400		202	35	7.1				
354400		51,819				114.8	114.8	114.8	0.0
	9354700		200	32	0.8				
354700		52,684				114.8	114.8	114.8	0.0

[1]Feet above confluence with Lake Thonotosassa Tributary and Baker Canal

LOCATION			FLOODWAY			1% ANNUAL CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD88)			
JUNCTION NUMBER	CONDUIT NUMBER	DISTANCE[1]	WIDTH (FEET)	PEAK FLOW	VELOCITY	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
605750		0				37.0	37.0	37.2	0.2
	9670000		1,008	1,540	1.72				
670000		6,768				45.1	45.1	45.1	0.0
	9670050		361	1,280	1.25				
670050		8,130				47.1	47.1	47.1	0.0
	1670100		300	1,020	6.62				
670100		8,242				48.4	48.4	48.4	0.0
	9670150		165	708	2.36				
670150		10,271				51.3	51.3	51.3	0.0
	9670151		116	705	1.9				
670151		12,797				53.9	53.9	54.2	0.3
	9670200		192	705	1.38				
670200		14,333				56.8	56.8	56.8	0.0
	9670250		160	705	1.47				
670250		14,851				57.2	57.2	57.2	0.0
	9670350		323	694	1.83				
670350		16,820				61.2	61.2	61.2	0.0
	6670400		305	333	0.0				
670400		19,488				62.3	62.3	62.3	0.0
	9670450		298	230	0.27				
670450		20,378				62.3	62.3	62.3	0.0
	1 670500		298	767	6.24				
670500		20,403				63.0	63.0	63.0	0.0

[1]Feet above confluence with Hillsborough River

TABLE 23

FEDERAL EMERGENCY MANAGEMENT AGENCY

HILLSBOROUGH COUNTY, FLORIDA

AND INCORPORATED AREAS

FLOODWAY DATA

FLOODING SOURCE: BASSETT BRANCH

LOCATION			FLOODWAY			1% ANNUAL CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD88)			
JUNCTION NUMBER	CONDUIT NUMBER	DISTANCE[1]	WIDTH (FEET)	PEAK FLOW	VELOCITY	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
810840		0				31.2	31.2	31.9	0.7
	9816040		211	848	3.53				
816040		2,646				35.1	35.1	35.1	0.0
	9816045		211	89	10.12				
816045		2,728				37.9	37.9	37.9	0.0
	9816050		211	634	1.94				
816050		4,154				40.4	40.4	40.4	0.0
	9816060		70	307	1.87				
816060		6,776				52.2	52.2	52.2	0.0

[1]Feet above confluence with Bullfrog Creek

TABLE 23

FEDERAL EMERGENCY MANAGEMENT AGENCY

HILLSBOROUGH COUNTY, FLORIDA

AND INCORPORATED AREAS

FLOODWAY DATA

FLOODING SOURCE: BIG BEND

LOCATION			FLOODWAY			1% ANNUAL CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD88)			
JUNCTION NUMBER	CONDUIT NUMBER	DISTANCE[1]	WIDTH (FEET)	PEAK FLOW	VELOCITY	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
606300		0				49.0	49.0	49.3	0.3
	9680000		1,874	7,070	1.77				
680000		1,682				49.0	49.0	49.4	0.4
	9680010		1,499	7,000	1.53				
680010		2,798				49.1	49.1	49.5	0.4
	9680020		415	7,040	3.87				
680020		5,026				49.3	49.3	49.8	0.5
	9680030		98	7,050	6.62				
680030		5,144				49.4	49.4	49.9	0.5
	9680040		405	7,060	2.66				
680040		6,366				49.4	49.4	49.9	0.5
	9680050		405	7,080	3.29				
680050		9,504				50.9	50.9	51.3	0.4
	9680075		367	7,040	3.63				
680075		11,256				52.5	52.5	52.9	0.4
	9680100		407	7,040	4.76				
680100		13,087				58.0	58.0	58.0	0.0
	9680110		360	6,850	11.73				
680110		13,690				58.3	58.3	58.3	0.0
	9680150		530	6,850	3.46				
680150		17,272				63.6	63.6	63.9	0.3
	9680200		646	6,720	2.78				
680200		20,426				65.4	65.4	65.8	0.4
	9680250		898	6,650	3.06				
680250		21,362				65.8	65.8	66.2	0.4
	9680300		645	6,520	4.15				

[1]Feet above confluence with Hillsborough River

TABLE 23

FEDERAL EMERGENCY MANAGEMENT AGENCY

HILLSBOROUGH COUNTY, FLORIDA

AND INCORPORATED AREAS

FLOODWAY DATA

FLOODING SOURCE: BLACKWATER CREEK

LOCATION			FLOODWAY			1% ANNUAL CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD88)			
JUNCTION NUMBER	CONDUIT NUMBER	DISTANCE[1]	WIDTH (FEET)	PEAK FLOW	VELOCITY	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
680300		22,884				66.3	66.3	66.9	0.6
	9680350		645	6,430	5.51				
680350		23,416				66.8	66.8	67.4	0.6
	9680355		516	6,310	4.65				
680355		24,257				68.7	68.7	69.2	0.5
	9680360		706	6,310	4.55				
680360		25,603				71.5	71.5	71.9	0.4
	9680365		706	6,310	5.1				
680365		27,581				73.9	73.9	74.3	0.4
	9680370		706	6,310	4.78				
680370		29,057				76.4	76.4	76.7	0.3
	9680375		393	6,310	2.76				
680375		30,750				76.5	76.5	76.9	0.4
	9680380		544	6,310	5.48				
680380		31,679				78.1	78.1	78.3	0.2
	1680390		300	865	5.7				
680390		31,857				79.0	79.0	79.1	0.1
	1680400		305	370	5.08				
680400		31,932				79.1	79.1	79.4	0.3
	9680450		67	6,220	9.98				
680450		33,241				80.3	80.3	80.7	0.4
	9680500		95	6,070	6.44				
680500		36,662				82.1	82.1	82.1	0.0
	9680520		290	5,910	5.29				
680520		38,512				83.1	83.1	83.1	0.0
	9680540		713	5,520	4.35				

[1]Feet above confluence with Hillsborough River

TABLE 23

FEDERAL EMERGENCY MANAGEMENT AGENCY

HILLSBOROUGH COUNTY, FLORIDA

AND INCORPORATED AREAS

FLOODWAY DATA

FLOODING SOURCE: BLACKWATER CREEK

LOCATION			FLOODWAY			1% ANNUAL CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD88)			
JUNCTION NUMBER	CONDUIT NUMBER	DISTANCE[1]	WIDTH (FEET)	PEAK FLOW	VELOCITY	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
680540		41,431				86.2	86.2	86.6	0.4
	9680550		990	5,520	3.72				
680550		41,981				86.9	86.9	87.3	0.4
	9680600		707	5,410	5.58				
680600		42,846				87.6	87.6	88.2	0.6
	9680650		1,080	2,160	0.88				
680650		45,730				88.0	88.0	88.3	0.3
	9680660		335	2,000	2.51				
680660		47,228				90.2	90.2	90.2	0.0
	9680670		58	2,000	4.86				
680670		47,372				90.4	90.4	90.4	0.0
	9680680		505	2,000	2.1				
680680		48,115				90.9	90.9	90.9	0.0
	9680700		607	2,000	2.16				
680700		50,981				93.3	93.3	93.3	0.0
	9680725		445	1,660	2.37				
680725		51,951				93.8	93.8	93.9	0.1
	9680750		457	1,670	1.76				
680750		53,762				94.3	94.3	94.4	0.1
	9680760		419	1,540	2.16				
680760		54,759				95.1	95.1	95.1	0.0
	9680770		245	1,540	2.81				
680770		55,417				95.6	95.6	96.1	0.5
	9680780		92	1,540	5.23				
680780		55,563				96.2	96.2	96.5	0.3
	9680790		131	1,540	3.73				

[1]Feet above confluence with Hillsborough River

LOCATION			FLOODWAY			1% ANNUAL CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD88)			
JUNCTION NUMBER	CONDUIT NUMBER	DISTANCE[1]	WIDTH (FEET)	PEAK FLOW	VELOCITY	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
680790		55,807				96.5	96.5	96.9	0.4
	9680800		170	1,540	2.82				
680800		57,076				97.9	97.9	98.3	0.4
	9680810		404	1,270	1.6				
680810		58,077				98.4	98.4	98.9	0.5
	9680830		377	1,270	1.7				
680830		60,209				99.8	99.8	100.0	0.2
	9680850		89	1,270	4.35				
680850		61,033				101.3	101.3	101.8	0.5
	9680852		130	450	8.57				
680852		61,078				101.5	101.5	101.6	0.1
	9680860		153	1,270	3.08				
680860		61,677				102.5	102.5	102.7	0.2
	9680862		448	1,150	4.11				
680862		61,734				102.5	102.5	102.7	0.2
	9680865		266	1,150	1.87				
680865		62,297				104.4	104.4	104.6	0.2
	9680870		284	1,150	1.05				
680870		64,364				104.6	104.6	104.7	0.1
	9680885		770	1,150	0.48				
680885		65,224				104.6	104.6	104.7	0.1
	9680890		282	1,150	1.66				
680890		65,870				104.7	104.7	104.8	0.1
	9680900		170	439	8.61				
680900		65,951				105.6	105.6	105.6	0.0
	9680940		83	747	2.98				

[1]Feet above confluence with Hillsborough River

LOCATION			FLOODWAY			1% ANNUAL CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD88)			
JUNCTION NUMBER	CONDUIT NUMBER	DISTANCE[1]	WIDTH (FEET)	PEAK FLOW	VELOCITY	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
680940		66,458				106.4	106.4	106.5	0.1
	9680950		85	92.4	4.99				
680950		66,506				106.6	106.6	106.6	0.0
	9680955		90	747	4.57				
680955		67,482				107.7	107.7	107.7	0.0
	9680958		88	85.8	6.76				
680958		68,732				108.5	108.5	108.7	0.2
	9680960		242	608	0.43				
680960		68,896				108.6	108.6	108.7	0.1
	9680965		288	609	1.53				
680965		70,766				108.8	108.8	109.0	0.2

[1]Feet above confluence with Hillsborough River

LOCATION			FLOODWAY			1% ANNUAL CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD88)			
JUNCTION NUMBER	CONDUIT NUMBER	DISTANCE[1]	WIDTH (FEET)	PEAK FLOW	VELOCITY	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
490000		1,898				27.4	27.4	27.7	0.3
	1490070		286	484	5.3				
490070		5,188				30.9	30.9	31.9	1.0
	9490110		168	1,270	1.7				
490110		7,438				31.7	31.7	32.6	0.9
	9490240		168	1,240	1.5				
490240		8,908				32.5	32.5	33.5	1.0
	9490250		160	1,180	1.7				
490250		11,213				34.2	34.2	34.7	0.5
	9490290		160	710	1.3				
490290		14,363				35.6	35.6	36.3	0.7
	9490370		262	422	0.8				
490370		16,513				37.0	37.0	37.0	0.0
	7490420		333	0	*				
490420		16,813				39.2	39.2	39.2	0.0
	7490430		402	291	*				
490430		20,716				42.1	42.1	42.1	0.0

[1]Feet above county boundary

*Data not available

TABLE 23

FEDERAL EMERGENCY MANAGEMENT AGENCY

HILLSBOROUGH COUNTY, FLORIDA

AND INCORPORATED AREAS

FLOODWAY DATA

FLOODING SOURCE: BROOKER CREEK

LOCATION			FLOODWAY			1% ANNUAL CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD88)			
JUNCTION NUMBER	CONDUIT NUMBER	DISTANCE[1]	WIDTH (FEET)	PEAK FLOW	VELOCITY	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
420690		0				25.0	24.8[2]	25.1	0.3
	9440000		378	2,550	2.58				
440000		2,460				26.3	26.3	26.4	0.1
	9440010		396	2,560	2.2				
440010		4,280				28.0	28.0	28.0	0.0
	9440020		*	2,560	5.37				
440020		4,410				28.1	28.1	28.2	0.1
	9440030		580	2,480	3.61				
440030		5,250				30.5	30.5	30.6	0.1
	9440040		504	2,480	2.55				
440040		6,315				32.0	32.0	32.0	0.0
	9440050		444	2,480	1.87				
440050		7,590				32.5	32.5	32.8	0.3
	440060		358	2,480	2.60				
440060		7,661				38.1	38.1	38.1	0.0
	9440070		358	2,480	3.30				
440070		9,195				38.8	38.8	39.1	0.3
	9440080		210	2,430	2.48				
440080		10,560				39.3	39.3	39.7	0.4
	9440090		196	2,230	2.38				
440090		11,395				39.7	39.7	40.0	0.3
	440100		130	2,230	3.00				
440100		11,487				39.8	39.8	39.9	0.1
	9440110		126	2,230	2.88				
440110		12,785				40.5	40.5	40.6	0.1
	440120		220	2,220	2.00				

[1]Feet above confluence with Rocky Branch

[2]Elevation does not consider maximum water-surface elevation at junction

*Data not available

TABLE 23

FEDERAL EMERGENCY MANAGEMENT AGENCY

HILLSBOROUGH COUNTY, FLORIDA

AND INCORPORATED AREAS

FLOODWAY DATA

FLOODING SOURCE: BRUSHY CREEK

LOCATION			FLOODWAY			1% ANNUAL CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD88)			
JUNCTION NUMBER	CONDUIT NUMBER	DISTANCE[1]	WIDTH (FEET)	PEAK FLOW	VELOCITY	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
440120		13,070				40.8	40.8	40.9	0.1
	9440130		330	2,220	5.1				
440130		15,505				41.5	41.5	41.5	0.0
	9440140		88	2,220	3.79				
440140		15,575				41.5	41.5	41.7	0.2
	9440150		262	2,170	1.52				
440150		17,475				42.3	42.3	42.4	0.1
	9440155		299	1,950	1.72				
440155		18,280				43.1	43.1	43.1	0.0
	9440160		225	1,820	1.8				
440160		19,568				44.1	44.1	44.1	0.0
	9440170		84	1,380	2.81				
440170		21,099				44.2	44.2	44.2	0.0
	9440180		242	1,280	1.67				
440180		21,915				44.8	44.8	44.9	0.0
	9440190		162	1,270	2.18				
440190		23,267				46.6	46.6	46.6	0.0
	9440200		130	922	2.70				
440200		25,082				47.6	47.6	47.8	0.2
	9440210		102	678	2.62				
440210		25,976				48.0	48.0	48.4	0.4
	440220		86	204	4.96				
440220		26,051				48.6	48.6	48.8	0.2
	9440230		85	689	1.36				
440230		27,876				48.9	48.9	49.1	0.2
	9440240		41	1,350	6.09				

[1]Feet above confluence with Rocky Branch

TABLE 23

FEDERAL EMERGENCY MANAGEMENT AGENCY

HILLSBOROUGH COUNTY, FLORIDA

AND INCORPORATED AREAS

FLOODWAY DATA

FLOODING SOURCE: BRUSHY CREEK

LOCATION			FLOODWAY			1% ANNUAL CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD88)			
JUNCTION NUMBER	CONDUIT NUMBER	DISTANCE[1]	WIDTH (FEET)	PEAK FLOW	VELOCITY	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
440240		29,627				49.1	49.1	49.1	0.0
	9440250		*	91.2	5.83				
440250		29,680				50.5	50.5	50.5	0.0
	9440260		60	211	1.6				
440260		31,371				51.1	51.1	51.1	0.0
	9440270		*	90.8	5.56				
440270		31,435				52.3	52.3	52.4	0.1
	9440280		50	220	1.5				
440280		32,833				52.9	52.9	53.0	0.1
	9440290		*	89.7	3.62				
440290		32,896				53.5	53.5	53.6	0.1
	9440300		21	176	1.72				
440300		34,246				53.6	53.6	53.6	0.0
	9440310		*	87.8	1.86				
440310		34,329				53.7	53.7	53.7	0.0
	9440320		74	175	1.16				
440320		35,151				53.7	53.7	53.8	0.1
	9440330		9	108	2.4				
440330		35,299				53.9	53.9	53.9	0.0
	9440340		65	108	*				
440340		35,380				54.0	54.0	54.1	0.1
	9440350		90	108	2.5				
440350		35,775				54.2	54.2	54.3	0.1
	9440360		35	108	3.4				
440360		35,855				54.2	54.2	54.3	0.1
	9440367		191	154	2.7				
440367		36,672				54.2	54.2	54.3	0.1

[1]Feet above confluence with Rocky Branch

*Data not available

LOCATION			FLOODWAY			1% ANNUAL CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD88)			
JUNCTION NUMBER	CONDUIT NUMBER	DISTANCE[1]	WIDTH (FEET)	PEAK FLOW	VELOCITY	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
440080		0				39.3	39.3	39.7	0.4
	9442000		82	258	0.9				
442000		1,054				39.5	39.5	39.5	0.0
	9442010		50	251	1.3				
442010		3,951				44.5	44.5	44.8	0.3
	9442020		50	66.4	5.6				
442020		4,012				44.7	44.7	44.7	0.0
	9442030		74	198	0.8				
442030		5,803				45.1	45.1	45.3	0.2
	9442040		*	210	5.2				
442040		5,927				45.7	45.7	45.8	0.1
	9442050		90	361	0.9				
442050		8,609				45.7	45.7	46.4	0.7
	9442055		20	77.9	0.9				
442055		9,967				45.8	45.8	46.4	0.6
	9442060		20	77.9	4.9				
442060		10,766				45.8	45.8	46.4	0.6
	9442070		20	79.6	5.0				
442070		10,916				49.6	49.6	49.6	0.0
	9442080		26	125	1.4				
442080		11,531				49.7	49.7	49.7	0.0
	9442090		22	51.8	4.1				
442090		11,557				50.2	50.2	50.2	0.0
	9442100		22	111	1.5				
442100		12,274				50.7	50.7	50.7	0.0
	9442110		22	37.2	5.1				
442110		12,329				51.7	51.7	51.4	0.0

[1]Feet above confluence with Brushy Creek

*Data not available

LOCATION			FLOODWAY			1% ANNUAL CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD88)			
JUNCTION NUMBER	CONDUIT NUMBER	DISTANCE[1]	WIDTH (FEET)	PEAK FLOW	VELOCITY	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
440190		0				46.6	46.6	46.6	0.0
	84450000		87	248	2.0				
445000		323				47.0	47.0	47.0	0.0
	1445010		60	37.4	7.51				
445010		527				48.9	48.9	48.9	0.0
	9445020		16	428	2.95				
445020		2,704				49.3	49.3	49.3	0.0
	1445030		16	50.1	7.15				
445030		2,786				50.9	50.9	50.9	0.0

[1]Feet above confluence with Brushy Creek