FLOOD INSURANCE STUDY

FEDERAL EMERGENCY MANAGEMENT AGENCY

VOLUME 2 OF 5

ROCKINGHAM COUNTY, NEW HAMPSHIRE

(ALL JURISDICTIONS)

COMMUNITY NAME	NUMBER	COMMUNITY NAME	NUMBER
ATKINSON, TOWN OF	330175	NEW CASTLE, TOWN OF	330135
AUBURN, TOWN OF	330176	NEWFIELDS, TOWN OF	330228
BRENTWOOD, TOWN OF	330125	NEWINGTON, TOWN OF	330229
CANDIA, TOWN OF	330126	NEWMARKET, TOWN OF	330136
CHESTER, TOWN OF	330182	NEWTON, TOWN OF	330240
DANVILLE, TOWN OF	330199	NORTH HAMPTON, TOWN OF	330232
DEERFIELD, TOWN OF	330127	NORTHWOOD, TOWN OF	330855
DERRY, TOWN OF	330128	NOTTINGHAM, TOWN OF	330137
EAST KINGSTON, TOWN OF	330203	PLAISTOW, TOWN OF	330138
EPPING, TOWN OF	330129	PORTSMOUTH, CITY OF	330139
EXETER, TOWN OF	330130	RAYMOND, TOWN OF	330140
FREMONT, TOWN OF	330131	RYE, TOWN OF	330141
GREENLAND, TOWN OF	330210	SALEM, TOWN OF	330142
HAMPSTEAD, TOWN OF	330211	SANDOWN, TOWN OF	330191
HAMPTON FALLS, TOWN OF	330133	SEABROOK, TOWN OF	330143
HAMPTON, TOWN OF	330132	SEABROOK BEACH VILLAGE DISTRICT	330854
KENSINGTON, TOWN OF	330216	SOUTH HAMPTON, TOWN OF	330193
KINGSTON, TOWN OF	330217	STRATHAM, TOWN OF	330197
LONDONDERRY, TOWN OF	330134	WINDHAM, TOWN OF	330144

REVISED:

PRELIMINARY: 12/20/2018

FLOOD INSURANCE STUDY NUMBER

33015CV002B

Version Number 2.3.3.0

FEMA

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Table 13: 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
Exeter River	At Exeter – Brentwood Town boundary	Approximately 900 feet miles upstream of confluence with Stream 1001	Gage weighted Regression	HEC-RAS 4.1	12/22/2017	AE w/Floodway	Hydraulic models incorporated field measured bridge and culvert data. Gage 1073600 used in hydrologic analysis.
Exeter River	Approximately 300 feet downstream of the Raymond - Fremont Town boundary	Approximately 1000 feet miles upstream of the Raymond - Chester Town boundary	Gage weighted Regression	HEC-RAS 4.1	12/22/2017	AE w/Floodway	Hydraulic models incorporated field measured bridge and culvert data. Gage 1073600 used in hydrologic analysis.
Ezekial Pond	Entire Shoreline	Entire Shoreline	Regional Flood Frequency Equations	*	04/15/1981	A	
Fardway Brook	At confluence of Exeter River	Approximately 800ft above corporate limit with Town of Chester	2008 New Hampshire regression equations	HEC-RAS 4.1	12/22/2017	A	
Farm Brook	At confluence of Hunts Island Creek	Approximately 180ft downstream of Dows Lane	2008 New Hampshire regression equations	HEC-RAS 4.1	04/01/2014	AE	
Flatrock Brook	At confluence of Seavey Pond	At confluence of Ezekial Pond	Regional Flood Frequency Equations	*	04/15/1981	A	

Table 13: 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
Flatrock Brook	At confluence of Shadow Lake	At confluence of Seavey Pond	Regional Flood Frequency Equations	*	04/15/1981	AE w/Floodway	
Follets Brook	At confluence of Piscassic River	Strafford County Boundary	2008 New Hampshire regression equations	HEC-RAS 4.1	04/01/2014	A	
Foss Brook	At confluence of Great Bay	Approximately 220ft downstream of Great Bay Road	2008 New Hampshire regression equations	HEC-RAS 4.1	04/01/2014	A	
Fresh River	At approximately 150 feet downstream of the Epping-Exeter boundary	Points of one square mileage of drainage area	2008 New Hampshire regression equations	HEC-RAS 4.1	12/22/2017	A	
Garland Brook	At confluence of Little River #2	Woodland Road	2008 New Hampshire regression equations	HEC-RAS 4.1	04/01/2014	AE	
Golden Brook	Hillsborough County Boundary	At confluence of Moekel Pond	Regional Flood Frequency Equations	*	11/03/1989	AE w/Floodway	
Grapevine Run	At confluence of Taylor River	Points of one square mileage of drainage area	2008 New Hampshire regression equations	HEC-RAS 4.1	04/01/2014	A	
Grassy Brook	At confluence of Taylor River	Massachusetts State Boundary	Regional Flood Frequency Equations	*	07/15/1992	A	

Table 13: 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
Great Bay	At confluence of Piscataqua River	At confluence with Squamscott River	2008 New Hampshire regression equations	HEC-RAS 4.1	04/01/2014	AE	
Great Brook	At confluence of Exeter River	Points of one square mileage of drainage area	2008 New Hampshire regression equations	HEC-RAS 4.1	12/22/2017	A	
Great Meadows Brook	At confluence of Exeter River	Points of one square mileage of drainage area	2008 New Hampshire regression equations	HEC-RAS 4.1	04/01/2014	A	
Great Pond	Entire Shoreline	Entire Shoreline	Regional Flood Frequency Equations	*	04/15/1992	AE	
Griffin Brook	Merrimack County Boundary	Approximately 0.3 miles downstream of James Road	Regional Flood Frequency Equations	*	09/01/1989	A	
Halfmoon Pond	Entire Shoreline	Entire Shoreline	Regional Flood Frequency Equations	*	04/15/1992	A	
Hall Mtn Marsh	Merrimack County Boundary	Town of Deerfield Corporate limits	Regional Flood Frequency Equations	*	06/28/1974	A	
Hampton Falls River	At confluence with Exeter River	Confluence with Great Brook	2008 New Hampshire regression equations	HEC-RAS 4.1	04/01/2014	A, AE	

Table 13: 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
Hampton River	Outlet into Atlantic Ocean	At confluence of Taylor River	2008 New Hampshire regression equations	HEC-RAS 4.1	04/01/2014	AE, VE	
Harantis Lake	Entire Shoreline	Entire Shoreline	Regional Flood Frequency Equations	*	03/01/2000	A	
Hartford Brook	At confluence with Lamprey River	At Mudd Pond	2008 New Hampshire regression equations	HEC-RAS 4.1	12/22/2017	A	
Harvey Lake	Entire Shoreline	Entire Shoreline	Regional Flood Frequency Equations	*	01/02/1987	A	
Hidden Valley Brook	Approximately 120 feet downstream of Londonderry Road	At Gertrude Road	Regional Flood Frequency Equations	*	11/05/1980	A	
Hidden Valley Brook	At confluence of Beaver Brook	Approximately 120 feet downstream of Londonderry Road	Regional Flood Frequency Equations	*	11/05/1980	AE w/Floodway	
Hill Brook	At Sherry Lane	At Route 111	Regional Flood Frequency Equations	*	06/16/1993	AE	
Hittytity Brook	At confluence of Shadow Lake	At Millville Street	Regional Flood Frequency Equations	*	04/06/1998	A	

Table 13: 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
Hodges Mill Pond	Entire Shoreline	Entire Shoreline	Regional Flood Frequency Equations	*	04/02/1993	A	
Hog Hill Brook	Town of Salem Corporate limits	At Island Pond Road	Regional Flood Frequency Equations	WSPRO	04/02/1993	AE	
Hog Hill Brook	At confluence of Providence Hill Brook	Town of Atkinson Corporate limits	Regional Flood Frequency Equations	*	04/02/1993	A	
Hog Hill Pond	Entire Shoreline	Entire Shoreline	Regional Flood Frequency Equations	*	06/16/1993	A	
Hoods Pond	Entire Shoreline	Entire Shoreline	Regional Flood Frequency Equations	*	04/15/1981	AE w/Floodway	
Hook Brook	At confluence of Little Massabesic Lake	Approximately 325 feet downstream of Chester Turnpike	Regional Flood Frequency Equations	*	02/28/1975	A	
Hornes Brook	At confluence of Hornes Pond	At confluence of Beaver Brook	Regional Flood Frequency Equations	*	04/15/1981	AE w/Floodway	
Hornes Pond	At confluence of Little Massabesic Lake	Approximately 325 feet downstream of Chester Turnpike	Regional Flood Frequency Equations	*	04/15/1981	AE w/Floodway	
Hunts Island Creek	At confluence with Brown River	Limit of coastal study	2008 New Hampshire regression equations	HEC-RAS 4.1	04/01/2014	AE	

Table 13: 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
Island Pond	Entire Shoreline	Entire Shoreline	Regional Flood Frequency Equations	HEC 2	04/02/1993	AE	
Kelly Brook	Approximately 80 feet upstream of Main Street	Approximately 170 feet upstream of the Town of Hampstead Corporate limits	Regional Flood Frequency Equations	HEC 2	06/16/1993	A	
Kelly Brook	At confluence of Little River No. 3	Approximately 80 feet upstream of Main Street	Regional Flood Frequency Equations	HEC 2	06/16/1993	AE w/Floodway	
Kelsey Brook	At confluence of Narrows Brook	At confluence of Harvey Lake	Regional Flood Frequency Equations	HEC 2	01/02/1987	A	
Kenney Brook	At confluence with Taylor River	Limit of coastal study	2008 New Hampshire regression equations	HEC-RAS 4.1	04/01/2014	AE	
Knight Brook	At confluence with Little Bay	Limit of coastal study	2008 New Hampshire regression equations	HEC-RAS 4.1	04/01/2014	AE	
Lamprey River	At the Strafford County Boundary	At approximately 950 feet upstream of the Deerfield-Raymond boundary	Gage Weighted Regression	HEC-RAS 4.1	12/22/2017	AE w/Floodway	Hydraulic models incorporated field measured bridge and culvert data. Gage 10723500 used in hydrologic analysis.

Table 13: 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
Lamprey River (Town of Newmarket)	At confluence of Great Bay	Strafford County Boundary	2008 New Hampshire regression equations	HEC-RAS 4.1	04/01/2014	A	
Lamprey River and Zone A Tributaries	At confluence of Stream252	Points of one square mileage of drainage area	2008 New Hampshire regression equations	HEC-RAS 4.1	12/22/2017	A	
Little Bay	At confluence of Piscataqua River	At confluence with Great Bay	2008 New Hampshire regression equations	HEC-RAS 4.1	04/01/2014	AE	
Little Cohas Brook	Hillsborough County Boundary	Approximately 75 feet downstream of Industrial Drive	Regional Flood Frequency Equations	HEC 2	11/051980	A	
Little Cohas Brook	Approximately 75 feet downstream of Industrial Drive	At Litchfield Road	Regional Flood Frequency Equations	HEC 2	11/051980	AE w/Floodway	
Little Harbor	Atlantic Ocean	Outlet for Sagamore Creek	2008 New Hampshire regression equations	HEC-RAS 4.1	04/01/2014	VE	
Little Massabesic Lake	Entire Shoreline	Entire Shoreline	Regional Flood Frequency Equations	*	02/28/1975	A	
Little River	Strafford County Boundary	Outlet for Nottingham Lake	2008 New Hampshire regression equations	HEC-RAS 4.1	04/01/2014	A	

Table 13: 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 River 1	Just downstream from the Exeter – Brentwood boundary	Points of one square mileage of drainage area	2008 New Hampshire regression equations	HEC-RAS 4.1	12/22/2017	A	
Little River 1	At confluence of Exeter River	At Brentwood Road	Gage weighted Regression	HEC-RAS 4.1	12/22/2017	AE w/Floodway	
Little River 2	At confluence of Exeter River	Points of one square mileage of drainage area	2008 New Hampshire regression equations	HEC-RAS 4.1	12/22/2017	A	
Little River 3	At the Town of Barrington corporate limits	At the Strafford County boundary	2008 New Hampshire regression equations	HEC-RAS 4.1	12/22/2017	A	
Little River 3	Massachusetts State Boundary	Town of Kingston corporate limits	Regional Flood Frequency Equations	HEC 2	04/15/1992	AE w/Floodway	
Locke Pond	Entire Shoreline	Entire Shoreline	2008 New Hampshire regression equations	HEC-RAS 4.1	04/01/2014	A	
Lower Beaver Lake	Entire Shoreline	Entire Shoreline	Regional Flood Frequency Equations	*	04/15/1981	AE	
Lower Shields Pond	Entire Shoreline	Entire Shoreline	Regional Flood Frequency Equations	*	04/15/1981	AE	
Lubberland Creek	At confluence of Great Bay	Points of one square mileage of drainage area	2008 New Hampshire regression equations	HEC-RAS 4.1	2013	A, AE	

Table 13: 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
Lucas Pond	At confluence of North River	Lucas Pond	2008 New Hampshire regression equations	HEC-RAS 4.1	12/22/2017	A	
Maple Falls Brook	Merrimack County Boundary	At confluence of Tower Hill Pond	Regional Flood Frequency Equations	*	06/28/1974	A	
Marsh Brook	At confluence of Winnicut River	Points of one square mileage of drainage area	2008 New Hampshire regression equations	HEC-RAS 4.1	2013	A	
Massabesic Brook	At confluence of Clark Pond	At confluence of Little Massabesic Lake	Regional Flood Frequency Equations	*	02/28/1975	A	
Massabesic Lake	Entire Shoreline	Hillsborough County Boundary	Regional Flood Frequency Equations	*	02/28/1975	A	
Meadow Pond	Entire Shoreline	Entire Shoreline	2008 New Hampshire regression equations	HEC-RAS 4.1	2013	AE	
Mile Brook	At confluence of Bean River	At confluence of Back Creek	2008 New Hampshire regression equations	HEC-RAS 4.1	12/22/2017	A	
Mill Brook	At confluence of Great Brook 1	Points of one square mileage of drainage area	2008 New Hampshire regression equations	HEC-RAS 4.1	12/22/2017	A	

Table 13: 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
Mill Pond	Entire Shoreline	Entire Shoreline	2008 New Hampshire regression equations	HEC-RAS 4.1	2013	A	
Mill Pond	Entire Shoreline	Entire Shoreline	Regional Flood Frequency Equations	*	04/15/1992	A	
Mitchell Pond	Entire Shoreline	Entire Shoreline	Regional Flood Frequency Equations	*	11/03/1989	A	
Moeckel Pond	Entire Shoreline	Entire Shoreline	Regional Flood Frequency Equations	*	11/03/1989	A	
Moonlight Brook	Points of one square mileage of drainage area	Points of one square mileage of drainage area	2008 New Hampshire regression equations	HEC-RAS 4.1	2013	A	
Moose Meadow Brook	Merrimack County Boundary	Points of one square mileage of drainage area	Regional Flood Frequency Equations	*	06/28/1974	A	
Mountain Brook	At confluence of Mile Brook	Points of one square mileage of drainage area	2008 New Hampshire regression equations	HEC-RAS 4.1	12/22/2017	A	
Mudds Canal	At confluence of Hampton River	At confluence of Taylor River	2008 New Hampshire regression equations	HEC-RAS 4.1	2013	AE	
Murray Mill Brook	Points of one square mileage of drainage area	Points of one square mileage of drainage area	Regional Flood Frequency Equations	*	06/28/1974	A	

Table 13: 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
Narrows Brook	At confluence of Northwood Lake	At Main Street	Regional Flood Frequency Equations	*	01/02/1987	A	
Nesenkeag Brook	Hillsborough County Boundary	Points of one square mileage of drainage area	Regional Flood Frequency Equations	*	11/051980	AE w/Floodway	
Nicholls Brook	At confluence of Lamprey River	Points of one square mileage of drainage area	2008 New Hampshire regression equations	HEC-RAS 4.1	12/22/2017	A	
North Branch River and Zone A Tributaries	At confluence of Lamprey River	Points of one square mileage of drainage area	2008 New Hampshire regression equations	HEC-RAS 4.1	12/22/2017	A	
North Brook	At confluence of Little River # 2	Points of one square mileage of drainage area	2008 New Hampshire regression equations	HEC-RAS 4.1	2013	A	
North Mill Pond	At confluence of Piscataqua River	Bartlett Street Bridge	2008 New Hampshire regression equations	HEC-RAS 4.1	2013	AE	
North River and Zone A tributaries	At confluence of Lamprey River	At confluence of Stream056	2008 New Hampshire regression equations	HEC-RAS 4.1	12/22/2017	A	
Northwood Lake	Merrimack County Boundary	Entire Shoreline	Regional Flood Frequency Equations	*	01/02/1987	A	

Table 13: 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
Norton Brook	At confluence of Winnicut River	Points of one square mileage of drainage area	2008 New Hampshire regression equations	HEC-RAS 4.1	2013	A	
Nottingham Lake	Entire Shoreline	Strafford County Boundary	2008 New Hampshire regression equations	HEC-RAS 4.1	12/22/2017	A	
Old River	At confluence of Taylor River	Points of one square mileage of drainage area	2008 New Hampshire regression equations	HEC-RAS 4.1	2013	A	
Pawtuckaway Pond	Entire Shoreline	Entire Shoreline	2008 New Hampshire regression equations	HEC-RAS 4.1	12/22/2017	A	
Pawtuckaway River	At confluence of Lamprey River	Points of one square mileage of drainage area	2008 New Hampshire regression equations	HEC-RAS 4.1	12/22/2017	A	
Packer Brook	At confluence of Winnicut River	Points of one square mileage of drainage area	2008 New Hampshire regression equations	HEC-RAS 4.1	2013	A, AE	
Parting Brook	At confluence of Squamscott River	At confluence of Piscassic River	2008 New Hampshire regression equations	HEC-RAS 4.1	2013	A, AE	
Pickering Brook	At confluence of Great Bay	Points of one square mileage of drainage area	2008 New Hampshire regression equations	HEC-RAS 4.1	2013	A, AE	

Table 13: 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
Piscassic River and Zone A Tributaries	At the Epping-Newfields Town boundary	Points of one square mileage of drainage area	2008 New Hampshire regression equations	HEC-RAS 4.1	12/22/2017	A	
Piscataqua River	At confluence of Atlantic Ocean	Strafford County Boundary	2008 New Hampshire regression equations	HEC-RAS 4.1	2013	AE, VE	
Pleasant Lake	Entire Shoreline	Entire Shoreline	Regional Flood Frequency Equations	*	09/01/1989	A	
Policy Brook	At confluence of Spicket River	Approximately 1000 feet upstream of Rockingham Park Blvd	Regional Flood Frequency Equations	*	04/06/1998	A	
Policy Brook	Approximately 600 feet downstream of Main Street	Approximately 1000 feet upstream of Rockingham Park Blvd	Regional Flood Frequency Equations	*	04/06/1998	AE w/Floodway	
Porcupine Brook	At Route 93	Approximately 1200 feet downstream of Pelham Road	Regional Flood Frequency Equations	*	04/06/1998	A	
Porcupine Brook	Approximately 1200 feet downstream of Pelham Road	Approximately 1500 feet upstream of Pelham Road	Regional Flood Frequency Equations	*	04/06/1998	AE	

Table 13: 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
Porcupine Brook Tributary	At confluence of Porcupine Brook	Approximately 75 feet upstream of Quill Lane	Regional Flood Frequency Equations	HEC 2	04/06/1998	AE	
Powwow Pond	Entire Shoreline	Entire Shoreline	Regional Flood Frequency Equations	*	02/28/1975	AE	
Powwow River	Town of Newton corporate limits	At confluence of Great Pond	Regional Flood Frequency Equations	*	04/15/1992	AE	
Powwow River (Downstream Reach)	Massachusetts State Boundary	Massachusetts State Boundary	Regional Flood Frequency Equations	*	07/15/1992	AE	
Powwow River (Upstream Reach)	At confluence of Tuxbury Pond	Approximately 100 feet upstream of Chase Road	Regional Flood Frequency Equations	*	07/15/1992	AE	
Preston Brook	At confluence of Little Massabesic Lake	Points of one square mileage of drainage area	Regional Flood Frequency Equations	*	02/28/1975	A	
Rainbow Lake	Entire Shoreline	Entire Shoreline	Regional Flood Frequency Equations	*	04/15/1981	A	
Red Brook	At confluence of Stream565	Points of one square mileage of drainage area	2008 New Hampshire regression equations	HEC-RAS 4.1	12/22/2017	A	
Rock Hill Brook	At confluence of Stream565	Approximately 150ft downstream of Newfields Road	2008 New Hampshire regression equations	HEC-RAS 4.1	2013	AE	

Table 13: 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
Rock Pond	Entire Shoreline	Entire Shoreline	Regional Flood Frequency Equations	*	11/03/1989	AE	
Rollins Brook	Strafford County Boundary	Points of one square mileage of drainage area	2008 New Hampshire regression equations	HEC-RAS 4.1	12/22/2017	A	
Sagamore Creek	At confluence of Piscataqua River	Approximately 120ft downstream of Peverly Hill Road	2008 New Hampshire regression equations	HEC-RAS 4.1	12/22/2017	AE	
Scamen Brook	At confluence of Little River 1	Approximately 320ft downstream of Tamarind Lane	2008 New Hampshire regression equations	HEC-RAS 4.1	2013	AE	
Seavey Pond	Entire Shoreline	Entire Shoreline	Regional Flood Frequency Equations	*	11/03/1989	A	
Shadow Lake	Entire Shoreline	Entire Shoreline	Regional Flood Frequency Equations	*	04/06/1998	A	
Shaw Brook	At confluence of Great Bay	Points of one square mileage of drainage area	2008 New Hampshire regression equations	HEC-RAS 4.1	2013	A, AE	
Shields Brook	At confluence of Hoods Pond	At confluence of Lower Shields Pond	Regional Flood Frequency Equations	*	04/15/1981	AE w/Floodway	
Simpson Mill Brook	Town of Exeter Corporate limits	Hillsborough County Boundary	Regional Flood Frequency Equations	*	04/06/1998	A	

Table 13: 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
South Mill Pond	Entire Shoreline	Entire Shoreline	2008 New Hampshire regression equations	HEC-RAS 4.1	2013	AE	
Spicket River and Zone A Tributaries	Massachusetts State Boundary	At confluence of Wilson Lake	Regional Flood Frequency Equations	*	04/06/1998	AE w/Floodway	
Spring Brook	At confluence of Great Brook	Approximately 300ft upstream of N. Haverhill Road	2008 New Hampshire regression equations	HEC-RAS 4.1	12/22/2017	A	
Spruce Swamp	At confluence of Preston Brook	Points of one square mileage of drainage area	Regional Flood Frequency Equations	*	02/28/1975	A	
Squamscott River	At confluence of Great Bay	At confluence of Exeter River	2008 New Hampshire regression equations	HEC-RAS 4.1	2013	AE	
Stream 1000	At confluence of North River	Points of one square mileage of drainage area	2008 New Hampshire regression equations	HEC-RAS 4.1	12/22/2017	A	
Stream 1001	At confluence of Exeter River	Points of one square mileage of drainage area	2008 New Hampshire regression equations	HEC-RAS 4.1	12/22/2017	A	
Stream025	At confluence of Hartford Brook	Approximately 300ft upstream of Middle Road	2008 New Hampshire regression equations	HEC-RAS 4.1	12/22/2017	A	

Table 13: 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
Stream03	At confluence of Back Creek	Points of one square mileage of drainage area	2008 New Hampshire regression equations	HEC-RAS 4.1	12/22/2017	A	
Stream036	At confluence of Dudley Brook 2	Points of one square mileage of drainage area	2008 New Hampshire regression equations	HEC-RAS 4.1	12/22/2017	A	
Stream039	At confluence of Lamprey River	Points of one square mileage of drainage area	2008 New Hampshire regression equations	HEC-RAS 4.1	12/22/2017	A, AE	
Stream054	At confluence of Lucas Pond	Points of one square mileage of drainage area	2008 New Hampshire regression equations	HEC-RAS 4.1	12/22/2017	A	
Stream056	At confluence of North River	Points of one square mileage of drainage area	2008 New Hampshire regression equations	HEC-RAS 4.1	12/22/2017	A	
Stream059	At confluence of North River	Points of one square mileage of drainage area	2008 New Hampshire regression equations	HEC-RAS 4.1	12/22/2017	A	
Stream067	At confluence of Little River 3	Points of one square mileage of drainage area	2008 New Hampshire regression equations	HEC-RAS 4.1	12/22/2017	A	
Stream068	At confluence of Stream297	Strafford County Boundary	2008 New Hampshire regression equations	HEC-RAS 4.1	12/22/2017	A	

Table 13: 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
Stream080	At confluence of Exeter River	Points of one square mileage of drainage area	2008 New Hampshire regression equations	HEC-RAS 4.1	12/22/2017	A	
Stream082	At confluence of Exeter River	Points of one square mileage of drainage area	2008 New Hampshire regression equations	HEC-RAS 4.1	12/22/2017	A	
Stream085	At confluence of Exeter River	Points of one square mileage of drainage area	2008 New Hampshire regression equations	HEC-RAS 4.1	12/22/2017	A	
Stream087	At confluence of Stream310	Points of one square mileage of drainage area	2008 New Hampshire regression equations	HEC-RAS 4.1	12/22/2017	A	
Stream090	At confluence of Exeter River	Points of one square mileage of drainage area	2008 New Hampshire regression equations	HEC-RAS 4.1	12/22/2017	A	
Stream098	At confluence of Little River 2	Points of one square mileage of drainage area	2008 New Hampshire regression equations	HEC-RAS 4.1	12/22/2017	A	
Stream10	At confluence of Stream262	Points of one square mileage of drainage area	2008 New Hampshire regression equations	HEC-RAS 4.1	12/22/2017	A	
Stream109	At confluence of Dudley Brook	At the downstream side of State Route 101	2008 New Hampshire regression equations	HEC-RAS 4.1	2013	A	

Table 13: 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
Stream 202	Strafford County Boundary	Points of one square mileage of drainage area	2008 New Hampshire regression equations	HEC-RAS 4.1	12/22/2017	A	
Stream245	At confluence of Lamprey River	Points of one square mileage of drainage area	2008 New Hampshire regression equations	HEC-RAS 4.1	12/22/2017	A	
Stream247	At confluence of Nicholls Brook	Points of one square mileage of drainage area	2008 New Hampshire regression equations	HEC-RAS 4.1	12/22/2017	A	
Stream249	At confluence of Hartford Brook	At Hidden Drive	2008 New Hampshire regression equations	HEC-RAS 4.1	12/22/2017	A	
Stream251	At confluence of Hartford Brook	Points of one square mileage of drainage area	2008 New Hampshire regression equations	HEC-RAS 4.1	12/22/2017	A	
Stream252	At confluence of Lamprey River	Points of one square mileage of drainage area	2008 New Hampshire regression equations	HEC-RAS 4.1	12/22/2017	A	
Stream253	At confluence of Stream252	Points of one square mileage of drainage area	2008 New Hampshire regression equations	HEC-RAS 4.1	12/22/2017	A	
Stream254	At confluence of Lamprey River	Points of one square mileage of drainage area	2008 New Hampshire regression equations	HEC-RAS 4.1	12/22/2017	A	

Table 13: 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
Stream255	At confluence of North Branch River	Points of one square mileage of drainage area	2008 New Hampshire regression equations	HEC-RAS 4.1	12/22/2017	A	
Stream256	At confluence of Stream255	Points of one square mileage of drainage area	2008 New Hampshire regression equations	HEC-RAS 4.1	12/22/2017	A	
Stream257	At confluence of Stream255	Points of one square mileage of drainage area	2008 New Hampshire regression equations	HEC-RAS 4.1	12/22/2017	A	
Stream259	At confluence of North Branch River	Points of one square mileage of drainage area	2008 New Hampshire regression equations	HEC-RAS 4.1	12/22/2017	A	
Stream262	At confluence of North Lamprey River	Points of one square mileage of drainage area	2008 New Hampshire regression equations	HEC-RAS 4.1	12/22/2017	A	
Stream263	At confluence of Stream262	Points of one square mileage of drainage area	2008 New Hampshire regression equations	HEC-RAS 4.1	12/22/2017	A	
Stream264	At confluence of Stream262	Upstream end of Onway Lake	2008 New Hampshire regression equations	HEC-RAS 4.1	12/22/2017	A	
Stream266	At confluence of Stream639	Points of one square mileage of drainage area	2008 New Hampshire regression equations	HEC-RAS 4.1	12/22/2017	A	

Table 13: 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
Stream270	At confluence of Pawtuckaway River	Town of Epping corporate limits	2008 New Hampshire regression equations	HEC-RAS 4.1	12/22/2017	A	
Stream272	At confluence of Lamprey River	Points of one square mileage of drainage area	2008 New Hampshire regression equations	HEC-RAS 4.1	12/22/2017	A	
Stream274	At confluence of Lamprey River	Points of one square mileage of drainage area	2008 New Hampshire regression equations	HEC-RAS 4.1	12/22/2017	A	
Stream276	At confluence of Back Creek	Points of one square mileage of drainage area	2008 New Hampshire regression equations	HEC-RAS 4.1	12/22/2017	A	
Stream277	At confluence of Stream276	Points of one square mileage of drainage area	2008 New Hampshire regression equations	HEC-RAS 4.1	12/22/2017	A	
Stream278	At confluence of Back Creek	Points of one square mileage of drainage area	2008 New Hampshire regression equations	HEC-RAS 4.1	12/22/2017	A	
Stream281	At confluence of Bean River	Points of one square mileage of drainage area	2008 New Hampshire regression equations	HEC-RAS 4.1	12/22/2017	A	
Stream284	At confluence of North River	Points of one square mileage of drainage area	2008 New Hampshire regression equations	HEC-RAS 4.1	12/22/2017	A	

Table 13: 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
Stream285	At confluence of North River	Points of one square mileage of drainage area	2008 New Hampshire regression equations	HEC-RAS 4.1	12/22/2017	A	
Stream286	At confluence of North River	Points of one square mileage of drainage area	2008 New Hampshire regression equations	HEC-RAS 4.1	12/22/2017	A	
Stream289	At confluence of Rollins Brook	Approximately 300 feet downstream from Stage Road	2008 New Hampshire regression equations	HEC-RAS 4.1	12/22/2017	A	
Stream292	Strafford County Boundary	Points of one square mileage of drainage area	2008 New Hampshire regression equations	HEC-RAS 4.1	12/22/2017	A	
Stream297	At confluence of Little River 3	Points of one square mileage of drainage area	2008 New Hampshire regression equations	HEC-RAS 4.1	12/22/2017	A	
Stream310	At confluence of Exeter River	Points of one square mileage of drainage area	2008 New Hampshire regression equations	HEC-RAS 4.1	12/22/2017	A	
Stream313	At confluence of Exeter River	Points of one square mileage of drainage area	2008 New Hampshire regression equations	HEC-RAS 4.1	12/22/2017	A	

Table 13: 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
Stream318	At confluence of Stream662	Points of one square mileage of drainage area	2008 New Hampshire regression equations	HEC-RAS 4.1	12/22/2017	A	
Stream328	At confluence of Dudley Brook	Points of one square mileage of drainage area	2008 New Hampshire regression equations	HEC-RAS 4.1	12/22/2017	A	
Stream436	At confluence of Winkley Brook	Points of one square mileage of drainage area	2008 New Hampshire regression equations	HEC-RAS 4.1	12/22/2017	A	
Stream553	At confluence of Little River 2	At Bean Road	2008 New Hampshire regression equations	HEC-RAS 4.1	12/22/2017	A	
Stream554	At confluence of Lamprey River	Points of one square mileage of drainage area	2008 New Hampshire regression equations	HEC-RAS 4.1	12/22/2017	A	
Stream565	At confluence of Exeter River	Points of one square mileage of drainage area	2008 New Hampshire regression equations	HEC-RAS 4.1	12/22/2017	A	
Stream566	At confluence of Great Brook	Approximately 200ft upstream of Drinkwater Road	2008 New Hampshire regression equations	HEC-RAS 4.1	12/22/2017	A	
Stream572	At confluence of North Branch River	Points of one square mileage of drainage area	2008 New Hampshire regression equations	HEC-RAS 4.1	12/22/2017	A	

Table 13: 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
Stream573	At confluence of Fardway Brook	Approximately 0.4 miles upstream of Fardway Brook confluence	2008 New Hampshire regression equations	HEC-RAS 4.1	12/22/2017	A	
Stream576	At confluence of Stream276	Approximately 0.5 miles upstream of Stream276	2008 New Hampshire regression equations	HEC-RAS 4.1	12/22/2017	A	
Stream578	At confluence of Stream257	Approximately 1,800ft upstream of State Route 27	2008 New Hampshire regression equations	HEC-RAS 4.1	12/22/2017	A	
Stream580	At confluence of Piscassic River	Approximately 100ft downstream of Karlin Road	2008 New Hampshire regression equations	HEC-RAS 4.1	12/22/2017	A	
Stream583	At confluence of Lamprey River	Points of one square mileage of drainage area	2008 New Hampshire regression equations	HEC-RAS 4.1	12/22/2017	A	
Stream586	At confluence of Piscassic River	Points of one square mileage of drainage area	2008 New Hampshire regression equations	HEC-RAS 4.1	12/22/2017	A	
Stream588	At confluence of Fardway Brook	At Town of Candia corporate limits	2008 New Hampshire regression equations	HEC-RAS 4.1	12/22/2017	A	

Table 13: 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
Stream597	At confluence of Exeter River	Points of one square mileage of drainage area	2008 New Hampshire regression equations	HEC-RAS 4.1	12/22/2017	A	
Stream599	At confluence of Piscassic River	Points of one square mileage of drainage area	2008 New Hampshire regression equations	HEC-RAS 4.1	12/22/2017	A	
Stream603	At confluence of Great Brook	Points of one square mileage of drainage area	2008 New Hampshire regression equations	HEC-RAS 4.1	12/22/2017	A	
Stream609	At confluence of Exeter River	Points of one square mileage of drainage area	2008 New Hampshire regression equations	HEC-RAS 4.1	12/22/2017	A	
Stream612	At confluence of Stream262	At Patten Hill Road	2008 New Hampshire regression equations	HEC-RAS 4.1	12/22/2017	A	
Stream626	At confluence of Lamprey River	Points of one square mileage of drainage area	2008 New Hampshire regression equations	HEC-RAS 4.1	12/22/2017	A	
Stream629	At confluence of Lamprey River	Points of one square mileage of drainage area	2008 New Hampshire regression equations	HEC-RAS 4.1	12/22/2017	A	
Stream639	At confluence of Lamprey River	Points of one square mileage of drainage area	2008 New Hampshire regression equations	HEC-RAS 4.1	12/22/2017	A	

Table 13: 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
Stream646	Rockingham County boundary	At Bow Lake Road	2008 New Hampshire regression equations	HEC-RAS 4.1	12/22/2017	A	
Stream651	At confluence of Stream255	Approximately 0.7 miles upstream of North Road	2008 New Hampshire regression equations	HEC-RAS 4.1	12/22/2017	A	
Stream655	At confluence of Lamprey River	Points of one square mileage of drainage area	2008 New Hampshire regression equations	HEC-RAS 4.1	12/22/2017	A	
Stream657	At confluence of Lamprey River	Points of one square mileage of drainage area	2008 New Hampshire regression equations	HEC-RAS 4.1	12/22/2017	A	
Stream658	At confluence of Lamprey River	Points of one square mileage of drainage area	2008 New Hampshire regression equations	HEC-RAS 4.1	12/22/2017	A	
Stream661	At confluence of North Branch River	Points of one square mileage of drainage area	2008 New Hampshire regression equations	HEC-RAS 4.1	12/22/2017	A	
Stream662	At confluence of Fardway Brook	Points of one square mileage of drainage area	2008 New Hampshire regression equations	HEC-RAS 4.1	12/22/2017	A	
Stream667	At confluence of Lamprey River	Points of one square mileage of drainage area	2008 New Hampshire regression equations	HEC-RAS 4.1	12/22/2017	A	

Table 13: 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
Stream669	At confluence of Stream255	At Currier Road	2008 New Hampshire regression equations	HEC-RAS 4.1	12/22/2017	A	
Stream676	At confluence of Lamprey River	Points of one square mileage of drainage area	2008 New Hampshire regression equations	HEC-RAS 4.1	12/22/2017	A	
Stream696	At confluence of Piscassic River	Points of one square mileage of drainage area	2008 New Hampshire regression equations	HEC-RAS 4.1	12/22/2017	A	
Stream8004	At confluence of Stream284	Points of one square mileage of drainage area	2008 New Hampshire regression equations	HEC-RAS 4.1	12/22/2017	A	
Stream9079	At confluence of Exeter River	Points of one square mileage of drainage area	2008 New Hampshire regression equations	HEC-RAS 4.1	12/22/2017	A	
Stream919	At confluence of Exeter River	Points of one square mileage of drainage area	2008 New Hampshire regression equations	HEC-RAS 4.1	12/22/2017	A	
Stream9272	At confluence of Lamprey River	Points of one square mileage of drainage area	2008 New Hampshire regression equations	HEC-RAS 4.1	12/22/2017	A	
Stream952	At confluence of Bean River	Points of one square mileage of drainage area	2008 New Hampshire regression equations	HEC-RAS 4.1	12/22/2017	A	

Table 13: 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
Stream9659	At confluence of Exeter River	Points of one square mileage of drainage area	2008 New Hampshire regression equations	HEC-RAS 4.1	12/22/2017	A	
Taylor Brook	At confluence of Island Pond	At confluence of Ballard Pond	*	*	04/15/1981	AE w/Floodway	
Taylor Brook	At confluence of Ballard Pond	Points of one square mileage of drainage area	*	*	04/15/1981	A	
Taylor River	At confluence of Winkley Brook	Approximately 350 feet upstream of Kensington Road	2008 New Hampshire regression equations	HEC-RAS 4.1	04/01/2014	A, AE	
Taylors Reservoir	Entire Shoreline	Entire Shoreline	*	*	04/06/1998	A	
Thompson Brook	At confluence of Winkley Brook	Approximately 350ft upstream of Kensington Road	2008 New Hampshire regression equations	HEC-RAS 4.1	04/01/2014	A	
Tower Hill Pond	Entire Shoreline	Entire Shoreline	Regional Flood Frequency Equations	*	02/28/1975	A	
Tributary A	At confluence of Golden Brook	Points of one square mileage of drainage area	Regional Flood Frequency Equations	*	11/03/1989	A	
Tributary B	At confluence of Golden Brook	Approximately 800 feet upstream of London Bridge Road	Regional Flood Frequency Equations	*	11/03/1989	A	

Table 13: 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
Tributary C	At confluence of Cobbetts Pond	Points of one square mileage of drainage area	Regional Flood Frequency Equations	*	11/03/1989	A	
Tributary C to Beaver Brook	At confluence of Beaver Brook	At Pillsbury Road	Regional Flood Frequency Equations	*	11/05/1980	AE w/Floodway	
Tributary E to Little Cohas Brook	At confluence of Little Cohas Brook	Approximately 100 feet downstream of Rail Trail	Regional Flood Frequency Equations	*	11/05/1980	AE w/Floodway	
Tributary F to Beaver Lake	At confluence of Beaver Lake	At confluence of Adams Pond	Regional Flood Frequency Equations	*	04/15/1981	AE w/Floodway	
Tributary F to Beaver Lake	At confluence of Adams Pond	Points of one square mileage of drainage area	Regional Flood Frequency Equations	*	04/15/1981	AE w/Floodway	
Tributary G to Beaver Brook	At confluence of Beaver Brook	Approximately 700 feet upstream of Bowers Road	Regional Flood Frequency Equations	*	04/15/1981	A	
Tributary H to Drew Brook	At confluence of Drew Brook	Approximately 950 feet upstream of Hampstead Road	Regional Flood Frequency Equations	*	04/15/1981	AE w/Floodway	
Tributary H to Nesenkeag Brook	At confluence of Nesenkeag Brook	At Wiley Hill Road	Regional Flood Frequency Equations	*	11/05/1980	AE w/Floodway	

Table 13: 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
Tributary J to Black Brook	At confluence of Black Brook	Approximately 100 feet upstream of Mammoth Road	Regional Flood Frequency Equations	*	11/05/1980	AE w/Floodway	
Tributary J to Black Brook	Approximately 100 feet upstream of Mammoth Road	Hillsborough County corporate limits	Regional Flood Frequency Equations	*	11/05/1980	A	
Tributary O to Beaver Brook	At confluence of Beaver Brook	At Interstate 93	Regional Flood Frequency Equations	*	04/15/1981	AE w/Floodway	
Tributary to Adams Pond	At confluence of Adams Pond	Points of one square mileage of drainage area	Regional Flood Frequency Equations	*	04/15/1981	A	
Tucker Brook	At confluence of Harvey Lake	Approximately 900 feet upstream of Main Street	Regional Flood Frequency Equations	*	01/02/1987	A	
Tuxbury Pond	Massachusetts State Boundary	Entire Shoreline	Regional Flood Frequency Equations	*	07/15/1992	A	
Unnamed Brook	Approximately 600 feet downstream of Main Street	Approximately 1000 feet upstream of Main Street	Regional Flood Frequency Equations	*	04/06/1998	AE w/Floodway	
Unnamed Brook	Approximately 1000 feet upstream of Main Street	Approximately 850 feet upstream of Main Street	Regional Flood Frequency Equations	*	04/06/1998	A	
Upper Beaver Brook	At confluence of Shields Brook	At Rail Trail	Regional Flood Frequency Equations	*	11/05/1980	AE w/Floodway	

Table 13: 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
Wash Pond	Entire Shoreline	Entire Shoreline	Regional Flood Frequency Equations	*	06/16/1993	AE	
Watts Brook	Hillsborough County Boundary	Points of one square mileage of drainage area	Regional Flood Frequency Equations	*	11/05/1980	A	
West Channel Policy Brook	At confluence of Canobie Lake	Approximately 330 feet downstream of Northeastern Blvd	Regional Flood Frequency Equations	*	04/06/1998	AE	
West Channel Policy Brook	Approximately 330 feet downstream of Northeastern Blvd	Approximately 150 feet upstream of Pleasant Street	Regional Flood Frequency Equations	*	04/06/1998	A	
West Running Brook	At confluence of Tributary G to Beaver Brook	Points of one square mileage of drainage area	Regional Flood Frequency Equations	*	04/15/1981	A	
Wheelwright Creek	At confluence of Winnicut River	Approximately 400ft upstream of Greenland	2008 New Hampshire regression equations	HEC-RAS 4.1	04/01/2014	A	
Winkley Brook	At confluence of Hampton Falls River	Points of one square mileage of drainage area	2008 New Hampshire regression equations	HEC-RAS 4.1	12/22/2017	A	
Winniconic Brook	At confluence of Winnicut River	Approximately 350ft upstream of Union Road	2008 New Hampshire regression equations	HEC-RAS 4.1	2013	A	

Table 13: 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
Winnicut River	At confluence of Great Bay	At Exeter-Hampton Expressway	2008 New Hampshire regression equations	HEC-RAS 4.1	2013	A, AE	
World End Brook	At Lawrence Road	At confluence of World End Pond	Regional Flood Frequency Equations	*	04/06/1998	AE	
World End Brook	Massachusetts State Boundary	At Lawrence Road	Regional Flood Frequency Equations	*	04/06/1998	A	
World End Pond	Entire Shoreline	Entire Shoreline	Regional Flood Frequency Equations	*	04/06/1998	AE	

*Data not available

Table 14: Roughness Coefficients

Flooding Source	Channel “n”	Overbank “n”
Back Creek and Zone A Tributaries	0.035-0.150	0.035-0.150
Beaver Brook	0.020-0.055	0.040-0.100
Bean River and Zone A Tributaries	0.050-0.150	0.050-0.150
Black Brook	0.020-0.055	0.040-0.100
Bryant Brook	0.035-0.040	0.060-0.090
Cohas Brook	0.020-0.055	0.040-0.100
Cunningham Brook	0.035-0.055	0.065-1.000
Drew Brook	0.035-0.055	0.065-1.000
Dudley Brook	0.030-0.155	0.030-0.155
Dudley Brook 2	0.030-0.150	0.050-0.150
Exeter River and Zone A Tributaries	0.015-0.150	0.015-0.150
Fardway Brook	0.050-0.120	0.050-0.120
Flatrock Brook	0.030-0.040	0.050-0.080
Fresh River	0.050-0.120	0.050-0.120
Golden Brook	0.022-0.045	0.060-0.080
Grassy Brook	0.030-0.040	0.140
Great Brook	0.050-0.120	0.050-0.120
Hartford Brook	0.030-0.120	0.050-0.120
Hidden Valley Brook	0.025-0.045	0.045-0.090
Hill Brook	0.040-0.055	0.035-0.110
Hog Hill Brook	0.035-0.065	0.075-0.100
Hornes Brook	0.035-0.055	0.065-1.000
Island Pond	0.035-0.055	0.065-1.000
Kelly Brook	0.030-0.040	0.050-0.090
Lamprey River and Zone A Tributaries	0.030-0.150	0.035-0.150
Little Cohas Brook	0.020-0.055	0.040-0.100
Little River 1	0.070	0.050-0.120
Little River 2	0.030-0.120	0.050-0.120
Little River 3	0.030-0.120	0.050-0.120
Lucas Pond	0.030-0.120	0.050-0.120
Mile Brook	0.030-0.120	0.050-0.120

Table 14: Roughness Coefficients (continued)

Flooding Source	Channel “n”	Overbank “n”
Mill Brook	0.030-0.100	0.030-0.120
Nesenkeag Brook	0.020-0.055	0.040-0.100
Nicholls Brook	0.030-0.120	0.050-0.120
North Branch River and Zone A Tributaries	0.030-0.150	0.030-0.150
North River and Zone A Tributaries	0.030-0.120	0.050-0.120
Pawtuckaway River	0.070-0.100	0.100
Pickering Brook	0.040-0.120	0.070-0.120
Piscassic River and Zone A Tributaries	0.040-0.150	0.050-0.180
Policy Brook – Unnamed Brook	0.020-0.060	0.100
Porcupine Brook	0.020-0.060	0.100
Porcupine Brook Tributary	0.020-0.060	0.100
Powwow Pond System	0.025-0.035	0.030-0.090
Powwow River	0.030-0.040	0.035-0.140
Red Brook	0.050-0.120	0.050-0.120
Shields Brook	0.020-0.055	0.040-1.000
Spicket River	0.035	0.080
Taylor Brook (including Ballard Pond)	0.035-0.055	0.065-1.000
Tributary C to Beaver Brook	0.020-0.055	0.040-0.100
Tributary E to Beaver Lake	0.020-0.055	0.040-0.100
Tributary E to Little Cohas Brook	0.035-0.055	0.065-1.000
Tributary F to Beaver Lake	0.035-0.055	0.065-1.000
Tributary G to Beaver Brook	0.035-0.055	0.065-1.000
Tributary H to Drew Brook	0.020-0.055	0.040-0.100
Tributary H to Nesenkeag Brook	0.035-0.055	0.065-1.000
Tributary J to Black Brook	0.020-0.055	0.040-0.100
Tributary O to Beaver Brook	0.035-0.055	0.065-1.000
Upper Beaver Brook	0.020-0.055	0.040-0.100
Wash Pond Tributary	0.035-0.055	0.030-0.100
West Channel Policy Brook	0.020-0.060	0.100
Winnicut River	0.020-0.050	0.070
World End Brook and Pond	0.020-0.060	0.100

5.3 Coastal Analyses

For the areas of Rockingham 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 15 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 15: Summary of Coastal Analyses

Flooding Source	Study Limits From	Study Limits To	Hazard Evaluated	Model or Method Used	Date Analysis was Completed
Atlantic Ocean	Entire coastline of Rockingham County	Entire coastline of Rockingham County	Overland Wave Propagation	WHAFIS	09/01/2013
Atlantic Ocean	Entire coastline of Rockingham County	Entire coastline of Rockingham County	Wave Runup	TAW/Runup 2.0	09/01/2013
Piscataqua River	Estuary	Estuary	Storm Surge	1-D Model	09/01/1987
Great Bay	Estuary	Estuary	Storm Surge	1-D Model	09/01/1987
Squamscott River	Estuary	Estuary	Storm Surge	1-D Model	09/01/1987

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 17. The stillwater elevation that was used for each transect in the coastal analyses is shown in Table 17, “Coastal Transect Parameters.” Table 17 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

[Not Applicable to this Flood Risk Project]

Table 16: Tide Gage Analysis Specifics

[Not Applicable to this Flood Risk Project]

5.3.2 Waves

This section is not applicable to this Flood Risk Project.

5.3.3 Coastal Erosion

This section is not applicable to this Flood Risk Project.

5.3.4 Wave Hazard Analyses

The 10-, 2-, 1- and 0.2 percent annual chance stillwater elevations for the coastal areas within Rockingham County were derived from FEMA (2008) "Updating Tidal Profiles for the New England Coastline" updating the U.S. Army Corps of Engineers 1988 tidal gage profiles developed for the entire New England Coastline. The New England Tidal Flood Profiles, from Bergen Point, New York, to the Maine border with Canada, were updated by conducting new flood frequency analyses of long-term tide gage records available from the NOS and USACE. Parametric probability distributions were fit to the tide gage data using the method of L moments. The suite of probability distributions applied to the gage records included the original Pearson Type III distribution to enable comparisons between the old tidal flood profiles and the results from the new analyses. The tidal flood profiles were updated using the best fitting probability distribution, as determined by goodness-of-fit criteria.

Areas of coastline subject to significant wave attack are referred to as coastal high hazard zones. The USACE has established the 3-foot breaking wave as the criterion for identifying the limit of coastal high hazard zones (USACE 1975; USACE 1973). The 3-foot wave has been determined as the minimum size wave capable of causing major damage to conventional wood frame or brick veneer structures. Damages to structures from wave heights between 1.5 and 3 feet are similar to, but less severe than, those in areas where wave heights are greater than 3 feet. These areas have been designated as areas of moderate wave action, and areas up to the Limit of Moderate Wave Action (LiMWA) have been mapped on the FIRM.

Overland wave height analyses were performed along each transect using the FEMA Wave Hazard Analysis for Flood Insurance Studies (WHAFIS) model to determine wave heights and corresponding wave crest elevations for the areas inundated by the tidal flooding. A wave runup analysis was performed to determine the height and extent of runup beyond the limit of tidal inundation. The results of these analyses were combined into a wave envelope, which was constructed by extending the wave runup elevation seaward to its intersection with the wave crest profile.

Deepwater wave characteristics used as starting wave conditions to the wave setup, overland and wave runup analyses were derived from the USACE Wave Information Studies (WIS) hindcast stations, located off the New Hampshire coast. The USACE website (http://wis.usace.army.mil/) provides an extreme wave analysis performed on the yearly maxima (1980-1999) at the selected stations used as the source of the 1-percent annual chance event significant wave height. The wave period associated with the 1-percent wave significant wave height was derived using a wave steepness factor

of 0.035, the average wave steepness of tropical and extra-tropical events. Such wave conditions were applied to all transects facing the Atlantic Ocean shoreline. Starting wave conditions for the New Castle area, located along the Piscataqua River, were derived using a limited fetch approach within the WHAFIS model.

FEMA guidelines for Zone V mapping define H_S as the significant wave height or the average over the highest one third of waves and T_S as the significant wave period associated with the significant wave height. Mean wave conditions are described as:

$$\overline{H} = H_s \times 0.626$$

$$\overline{T} = T_s \times 0.85$$

where $\overline{H}$ is the average wave height of all waves and $\overline{T}$ is the average wave period.

Wave heights and wave runup were computed along transects which were located perpendicular to the shoreline. The transects were located with consideration given to the physical and cultural characteristics of the land so that they would closely represent conditions in their locality. Transects were spaced close together in areas of complex topography and dense development. In areas having more uniform characteristics, the transects were spaced at larger intervals. It was also necessary to locate transects in areas where unique flooding existed and in areas where computed wave heights varied significantly between adjacent transects.

The transect profiles were obtained using topographic and bathymetric data from various sources.

The NOS Bathymetric data was acquired over several years by various agencies. The data is compiled and distributed by NOAA NOS. The bathymetric data for this project is a compilation of data acquired in 1947, 1950, 1953, 1954, 1955, 1997, 2000 and 2005. The NOS states that the accuracy of the data acquired before 1965 is difficult to determine but data acquired after 1965 must comply with standards set forth in the NOS Hydrographic Surveys Specifications and Deliverables. All bathymetric data received from the NOS has been found to meet these specifications. The data was received in Mean Low Datum and converted to NAD_1983_StatePlane_New Hampshire_FIPS_1600_Feet for use in this project.

LiDAR was collected at a 2.0 meter nominal post spacing (2.0m GSD) for approximately 8,200 mi2 of coastal areas including parts of Maine, New Hampshire, Massachusetts, Rhode Island, Connecticut, and New York, as part of the American Recovery and Reinvestment Act (ARRA) of 2010. No snow was on the ground and rivers were at or below normal levels. Some areas of the project required 1.0 meter nominal post spacing (1.0m GSD), and a required 9.25cm Vertical Accuracy. The area covered by the Piscataqua/Salmon Falls study area was covered by 1.0 meter post spacing LiDAR data and a portion of the contributing drainage area was covered by the 2.0 meter post spacing LiDAR data. A seamless Digital Elevation Model (DEM) at a 10 ft resolution was created combining the above datasets to create a base elevation for the coastal analyses.

Figure 9, “Transect Location Map”, illustrates the location of the transects for the coastal study area.

Dune erosion was applied as per standard FEMA (2007) Guidelines and Specifications

for Flood Hazard Mapping Partners methodology and VE Zones were mapped up to the extent of the Primary Frontal Dune (PFD).

Nearshore wave-induced processes, such as wave setup and wave runup, constitute a greater part of the combined wave envelope than storm surge due to location exposed to ocean waves. The Direct Integrated Method (FEMA 2007) was used to determine wave setup along the coastline.

Wave height calculations used in this study follow the methodology described in the FEMA (2007) Guidelines and Specifications for Flood Hazard Mapping Partners. Overland wave analyses were performed along each transects using the FEMA WHAFIS 4.0 model.

Wave runup was computed in agreement with the FEMA (2005) "Procedure Memorandum No. 37" that recommends the use of the 2% wave runup for determining base flood elevations. For mild sandy beaches, Runup 2.0 was employed using mean wave conditions. Along armored shorelines, wave runup was determined using the Technical Advisory Committee for Water Retaining Structures (TAW) method (van der Meer 2002). The Shore Protection Manual (SPM) Method was applied in cases of wave runup on vertical structures. For wave run-up at the crest of a slope that transitions to a plateau or down-slope, run-up values were determined using the "Methodology for wave run-up on a hypothetical slope" as described in the FEMA (2007) Guidelines and Specifications for Flood Hazard Mapping Partners. In areas where the wave runup overtopped the crest of a structure/bluff, the wave runup elevation was capped at 3 ft above the structure crest.

The transect data for Rockingham County is presented in Table 17, "Coastal Transect Parameters," which describes the location of each transect.

Table 17: Coastal Transect Parameters

Flood Source	Coastal Transect	Starting Wave Conditions for the 1% Annual Chance		Starting Stillwater Elevations (ft NAVD88) Range of Stillwater Elevations (ft NAVD88)				
		Significant Wave Height H_s (ft)	Peak Wave Period T_p (sec)	10% Annual Chance	4% Annual Chance	2% Annual Chance	1% Annual Chance	0.2% Annual Chance
Atlantic Ocean	1	12.37	*	7.24	*	7.98	8.36	9.43
Atlantic Ocean	2	11.5	*	7.24	*	7.98	8.36	9.43
Atlantic Ocean	3	11.82	*	7.24	*	7.98	8.36	9.43
Atlantic Ocean	4	11.93	*	7.24	*	7.98	8.36	9.43
Atlantic Ocean	5	18.5[1]	*	7.24	*	7.98	8.36	9.43
Atlantic Ocean	6	18.42	*	7.24	*	7.98	8.36	9.43
Atlantic Ocean	7	18.36	*	7.24	*	7.98	8.36	9.43

Table 17: Coastal Transect Parameters (continued)

Flood Source	Coastal Transect	Starting Wave Conditions for the 1% Annual Chance		Starting Stillwater Elevations (ft NAVD88) Range of Stillwater Elevations (ft NAVD88)				
		Significant Wave Height H_s (ft)	Peak Wave Period T_p (sec)	10% Annual Chance	4% Annual Chance	2% Annual Chance	1% Annual Chance	0.2% Annual Chance
Atlantic Ocean	8	20.1	*	7.24	*	7.98	8.36	9.43
Atlantic Ocean	9	18.79	*	7.24	*	7.98	8.36	9.43
Atlantic Ocean	10	17.27	*	7.24	*	7.98	8.36	9.43
Atlantic Ocean	11	17.16	*	7.24	*	7.98	8.36	9.43
Atlantic Ocean	12	17.16	*	7.24	*	7.98	8.36	9.43
Atlantic Ocean	13	16.88	*	7.24	*	7.98	8.36	9.43
Atlantic Ocean	14	16.83	*	7.24	*	7.98	8.36	9.43

Table 17: Coastal Transect Parameters (continued)

Flood Source	Coastal Transect	Starting Wave Conditions for the 1% Annual Chance		Starting Stillwater Elevations (ft NAVD88) Range of Stillwater Elevations (ft NAVD88)				
		Significant Wave Height H_s (ft)	Peak Wave Period T_p (sec)	10% Annual Chance	4% Annual Chance	2% Annual Chance	1% Annual Chance	0.2% Annual Chance
Atlantic Ocean	15	17.65	*	7.24	*	7.98	8.36	9.43
Atlantic Ocean	16	17.67	*	7.24	*	7.98	8.36	9.43
Atlantic Ocean	17	17.79	*	7.24	*	7.98	8.36	9.43
Atlantic Ocean	18	17.74	*	7.24	*	7.98	8.36	9.43
Atlantic Ocean	19	18.10	*	7.24	*	7.98	8.36	9.43
Atlantic Ocean	20	20.1	*	7.24	*	7.98	8.36	9.43
Atlantic Ocean	21	17.95	*	7.24	*	7.98	8.36	9.43

Table 17: Coastal Transect Parameters (continued)

Flood Source	Coastal Transect	Starting Wave Conditions for the 1% Annual Chance		Starting Stillwater Elevations (ft NAVD88) Range of Stillwater Elevations (ft NAVD88)				
		Significant Wave Height H_s (ft)	Peak Wave Period T_p (sec)	10% Annual Chance	4% Annual Chance	2% Annual Chance	1% Annual Chance	0.2% Annual Chance
Atlantic Ocean	22	17.94	*	7.24	*	7.98	8.36	9.43
Atlantic Ocean	23	17.83	*	7.24	*	7.98	8.36	9.43
Atlantic Ocean	24	18.00	*	7.24	*	7.98	8.36	9.43
Atlantic Ocean	25	20.00	*	7.24	*	7.98	8.36	9.43
Atlantic Ocean	26	18.8	*	7.24	*	7.98	8.36	9.43
Atlantic Ocean	27	17.63	*	7.24	*	7.98	8.36	9.43
Atlantic Ocean	28	19.2	*	7.24	*	7.98	8.36	9.43

Table 17: Coastal Transect Parameters (continued)

Flood Source	Coastal Transect	Starting Wave Conditions for the 1% Annual Chance		Starting Stillwater Elevations (ft NAVD88) Range of Stillwater Elevations (ft NAVD88)				
		Significant Wave Height H_s (ft)	Peak Wave Period T_p (sec)	10% Annual Chance	4% Annual Chance	2% Annual Chance	1% Annual Chance	0.2% Annual Chance
Atlantic Ocean	29	20.7	*	7.24	*	7.98	8.36	9.43
Atlantic Ocean	30	21.3	*	7.24	*	7.98	8.36	9.43
Atlantic Ocean	31	19.69	*	7.24	*	7.98	8.36	9.43
Atlantic Ocean	32	17.98	*	7.24	*	7.98	8.36	9.43
Atlantic Ocean	33	18.00	*	7.24	*	7.98	8.36	9.43
Atlantic Ocean	34	18.2	*	7.24	*	7.98	8.36	9.43
Atlantic Ocean	35	19.4	*	7.24	*	7.98	8.36	9.43

Table 17: Coastal Transect Parameters (continued)

Flood Source	Coastal Transect	Starting Wave Conditions for the 1% Annual Chance		Starting Stillwater Elevations (ft NAVD88) Range of Stillwater Elevations (ft NAVD88)				
		Significant Wave Height H_s (ft)	Peak Wave Period T_p (sec)	10% Annual Chance	4% Annual Chance	2% Annual Chance	1% Annual Chance	0.2% Annual Chance
Atlantic Ocean	36	19.4	*	7.24	*	7.98	8.36	9.43
Atlantic Ocean	37	17.63	*	7.24	*	7.98	8.36	9.43
Atlantic Ocean	38	17.70	*	7.24	*	7.98	8.36	9.43
Atlantic Ocean	39	17.71	*	7.24	*	7.98	8.36	9.43
Atlantic Ocean	40	17.68	*	7.24	*	7.98	8.36	9.43
Atlantic Ocean	41	20.90	*	7.24	*	7.98	8.36	9.43
Atlantic Ocean	42	17.38	*	7.24	*	7.98	8.36	9.43

Table 17: Coastal Transect Parameters (continued)

Flood Source	Coastal Transect	Starting Wave Conditions for the 1% Annual Chance		Starting Stillwater Elevations (ft NAVD88) Range of Stillwater Elevations (ft NAVD88)				
		Significant Wave Height H_s (ft)	Peak Wave Period T_p (sec)	10% Annual Chance	4% Annual Chance	2% Annual Chance	1% Annual Chance	0.2% Annual Chance
Atlantic Ocean	43	17.57	*	7.24	*	7.98	8.36	9.43
Atlantic Ocean	44	17.90	*	7.24	*	7.98	8.36	9.43
Atlantic Ocean	45	17.60	*	7.24	*	7.98	8.36	9.43
Atlantic Ocean	46	20.10	*	7.24	*	7.98	8.36	9.43
Atlantic Ocean	47	23.60	*	7.24	*	7.98	8.36	9.43
Atlantic Ocean	48	21.73	*	7.24	*	7.98	8.36	9.43
Atlantic Ocean	49	18.30	*	7.24	*	7.98	8.36	9.43

Table 17: Coastal Transect Parameters (continued)

Flood Source	Coastal Transect	Starting Wave Conditions for the 1% Annual Chance		Starting Stillwater Elevations (ft NAVD88) Range of Stillwater Elevations (ft NAVD88)				
		Significant Wave Height H_s (ft)	Peak Wave Period T_p (sec)	10% Annual Chance	4% Annual Chance	2% Annual Chance	1% Annual Chance	0.2% Annual Chance
Atlantic Ocean	50	26.9[1]	*	7.24	*	7.98	8.36	9.43
Atlantic Ocean	51	16.71	*	7.24	*	7.98	8.36	9.43
Atlantic Ocean	52	17.92	*	7.24	*	7.98	8.36	9.43
Atlantic Ocean	53	17.92	*	7.24	*	7.98	8.36	9.43
Atlantic Ocean	54	18.2	*	7.24	*	7.98	8.36	9.43
Atlantic Ocean	55	18.00	*	7.24	*	7.98	8.36	9.43
Atlantic Ocean	56	20.00	*	7.24	*	7.98	8.36	9.43

Table 17: Coastal Transect Parameters (continued)

Flood Source	Coastal Transect	Starting Wave Conditions for the 1% Annual Chance		Starting Stillwater Elevations (ft NAVD88) Range of Stillwater Elevations (ft NAVD88)				
		Significant Wave Height H_s (ft)	Peak Wave Period T_p (sec)	10% Annual Chance	4% Annual Chance	2% Annual Chance	1% Annual Chance	0.2% Annual Chance
Atlantic Ocean	57	19.60	*	7.24	*	7.98	8.36	9.43
Atlantic Ocean	58	17.86	*	7.24	*	7.98	8.36	9.43
Atlantic Ocean	59	16.70	*	7.24	*	7.98	8.36	9.43
Atlantic Ocean	60	17.70	*	7.24	*	7.98	8.36	9.43
Atlantic Ocean	61	17.77	*	7.24	*	7.98	8.36	9.43
Atlantic Ocean	62	17.74	*	7.24	*	7.98	8.36	9.43
Atlantic Ocean	63	17.74	*	7.24	*	7.98	8.36	9.43

Table 17: Coastal Transect Parameters (continued)

Flood Source	Coastal Transect	Starting Wave Conditions for the 1% Annual Chance		Starting Stillwater Elevations (ft NAVD88) Range of Stillwater Elevations (ft NAVD88)				
		Significant Wave Height H_s (ft)	Peak Wave Period T_p (sec)	10% Annual Chance	4% Annual Chance	2% Annual Chance	1% Annual Chance	0.2% Annual Chance
Atlantic Ocean	64	17.79	*	7.24	*	7.98	8.36	9.43
Atlantic Ocean	65	17.70	*	7.24	*	7.98	8.36	9.43
Atlantic Ocean	66	17.70	*	7.24	*	7.98	8.36	9.43
Atlantic Ocean	67	17.86	*	7.24	*	7.98	8.36	9.43
Atlantic Ocean	68	17.74	*	7.24	*	7.98	8.36	9.43
Atlantic Ocean	69	16.53	*	7.24	*	7.98	8.36	9.43
Atlantic Ocean	70	17.03	*	7.24	*	7.98	8.36	9.43

Table 17: Coastal Transect Parameters (continued)

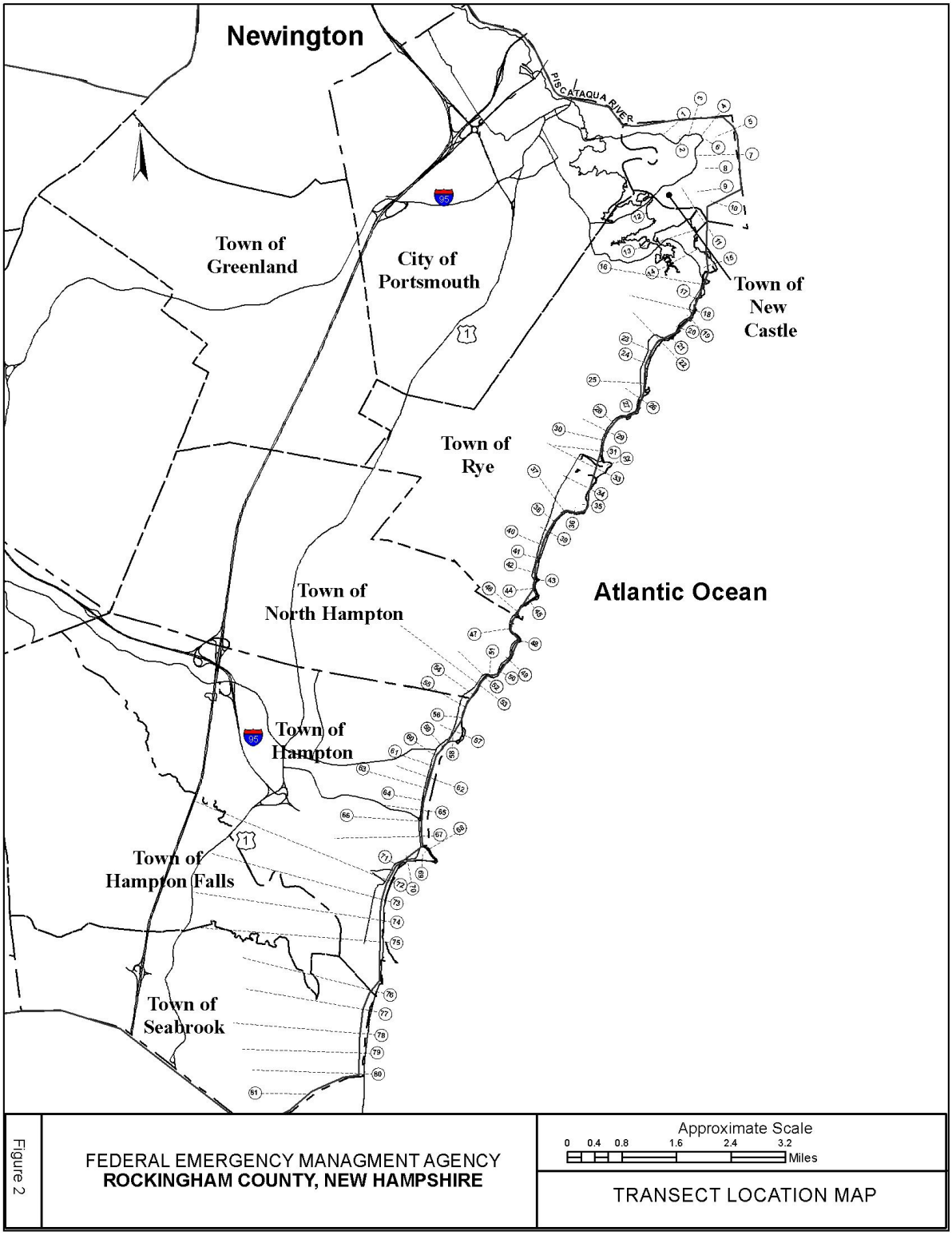
Flood Source	Coastal Transect	Starting Wave Conditions for the 1% Annual Chance		Starting Stillwater Elevations (ft NAVD88) Range of Stillwater Elevations (ft NAVD88)				
		Significant Wave Height H_s (ft)	Peak Wave Period T_p (sec)	10% Annual Chance	4% Annual Chance	2% Annual Chance	1% Annual Chance	0.2% Annual Chance
Atlantic Ocean	71	17.62	*	7.24	*	7.98	8.36	9.43
Atlantic Ocean	72	17.62	*	7.24	*	7.98	8.36	9.43
Atlantic Ocean	73	17.60	*	7.24	*	7.98	8.36	9.43
Atlantic Ocean	74	17.60	*	7.24	*	7.98	8.36	9.43
Atlantic Ocean	75	17.6	*	7.24	*	7.98	8.36	9.43
Atlantic Ocean	76	17.83	*	7.24	*	7.98	8.36	9.43
Atlantic Ocean	77	17.82	*	7.24	*	7.98	8.36	9.43

Table 17: Coastal Transect Parameters (continued)

Flood Source	Coastal Transect	Starting Wave Conditions for the 1% Annual Chance		Starting Stillwater Elevations (ft NAVD88) Range of Stillwater Elevations (ft NAVD88)				
		Significant Wave Height H_s (ft)	Peak Wave Period T_p (sec)	10% Annual Chance	4% Annual Chance	2% Annual Chance	1% Annual Chance	0.2% Annual Chance
Atlantic Ocean	78	17.92	*	7.24	*	7.98	8.36	9.43
Atlantic Ocean	79	17.95	*	7.24	*	7.98	8.36	9.43
Atlantic Ocean	80	17.76	*	7.24	*	7.98	8.36	9.43
Atlantic Ocean	81	10.04	*	7.24	*	7.98	8.36	9.43

[1]Wave runup elevation
*Data not available

Figure 9: Transect Location Map



5.4 Alluvial Fan Analyses

This section is not applicable to this Flood Risk Project.

Table 18: Summary of Alluvial Fan Analyses

[Not Applicable to this Flood Risk Project]

Table 19: 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, or contact the National Geodetic Survey (NGS) at the following address:

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

Temporary vertical monuments are often established during the preparation of a flood hazard analysis for the purpose of establishing local vertical control. Although these monuments are not shown on the FIRM, they may be found in the archived project documentation associated with the FIS Report and the 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 contact the Information Services Branch of the NGS at (301) 713-3242, or visit their website at www.ngs.noaa.gov.

The datum conversion locations and values that were calculated for Rockingham County are provided in Table 20.

Table 20: Countywide Vertical Datum Conversion

Quadrangle Name	Quadrangle Corner	Latitude	Longitude	Conversion from NGVD29 to NAVD88 (feet)
All in Rockingham County	-	-	-	-0.7
Average Conversion from NGVD29 to NAVD88 = -0.7 feet				

Table 21: 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 22.

Table 22: Base Map Sources

Data Type	Data Provider	Data Date	Data Scale	Data Description
Digital Orthophoto	U.S. Geological Survey	2015	1 foot GSD	High resolution orthoimages for New Hampshire
General Structures	New Hampshire Department of Transportation	2010 and 2017	1:12,000	Major and significant NFHL recorded structures
Political boundaries	Earth Systems Research Center, University of New Hampshire	2016	*	New Hampshire municipal and county boundaries

Table 22: Base Map Sources (continued)

Data Type	Data Provider	Data Date	Data Scale	Data Description
Political boundaries	Earth Systems Research Center, University of New Hampshire	2013 and 2016	*	New Hampshire Conservation/Public Lands
Political boundaries	Earth Systems Research Center, University of New Hampshire	1992	1:24,000	Municipal and county boundaries were derived from NFHL data
Political boundaries	Rockingham County	2004	N/A	Municipal and county boundaries were derived from Rockingham County data
Transportation Features	New Hampshire Department of Transportation	2010 and 2017	*	New Hampshire road centerlines
Surface Water Features	U.S. Geological Survey	2016	1:12,000	Streams, rivers, and lakes were derived from National Hydrography Data Set
Surface Water Features	Rockingham County	2004	N/A	Streams, rivers, and lakes were derived from Rockingham County data

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 23. 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 23.

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 24, “Floodway Data.”

Certain flooding sources may have been studied that do not have published BFEs on the FIRMs, or for which there is a need to report the 1% annual chance flood elevations at selected cross sections because a published Flood Profile does not exist in this FIS Report. These streams may have also been studied using methods to determine non-encroachment zones rather than floodways. For these flooding sources, the 1% annual chance floodplain boundaries 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 23. All topographic data used for modeling or mapping has been converted as necessary to NAVD88. The 1% annual chance elevations for selected cross sections along these flooding sources, along with their non-encroachment widths, if calculated, are shown in Table 25, “Flood Hazard and Non-Encroachment Data for Selected Streams.”

Table 23: Summary of Topographic Elevation Data used in Mapping

Community	Flooding Source	Source for Topographic Elevation Data					
		Description	Scale	Contour Interval	Vertical Accuracy	Horizontal Accuracy	Citation
Rockingham County	All within Rockingham County	LiDAR	N/A	N/A	15 cm	*	USGS 2011

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 24: Floodway Data

LOCATION		FLOODWAY			1% ANNUAL CHANCE FLOOD WATER SURFACE ELEVATION (FEET NGVD29)			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQ. FEET)	MEAN VELOCITY (FEET/SEC)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
A	13.926	135/25[2]	707	4.3	152.0	152.0	152.5	0.5
B	13.947	50/30[2]	415	7.4	154.7	154.7	154.7	0.0
C	14.037	85/65[2]	553	5.6	156.5	156.5	157.5	1.0
D	14.738	85/55[2]	573	5.4	163.5	163.5	164.1	0.6
E	14.942	180/120[2]	1,423	2.2	166.9	166.9	167.0	0.1
F	15.646	210/20[2]	1,266	2.4	167.8	167.8	168.8	1.0
G	15.990	150/20[2]	463	6.3	172.6	172.6	172.6	0.0
H	16.417	165/25[2]	1,105	2.6	175.4	175.4	175.9	0.5
I	17.057	160	663	4.2	176.7	176.7	177.7	1.0
J	17.964	50	327	8.2	192.1	192.1	193.1	1.0
K	18.993	110	821	3.3	209.1	209.1	209.1	0.0
L	20.017	50	444	6.1	210.0	210.0	211.0	1.0
M	20.482	90	634	4.2	213.5	213.5	214.2	0.7
N	21.305	80	617	3.7	219.2	219.2	220.2	1.0
O	21.799	195	560	3.3	219.9	219.9	220.6	0.7
P	22.802	260	1,565	1.3	226.0	226.0	227.0	1.0
Q	23.392	40	341	6.0	230.9	230.9	230.9	0.0
R	23.816	300	1,344	1.5	231.8	231.8	232.7	0.9
S	24.233	110	606	3.4	235.9	235.9	236.5	0.6
T	24.694	180	910	2.3	238.0	238.0	238.9	0.9
U	25.075	100	654	2.2	241.2	241.2	241.3	0.1
V	25.546	100	598	2.4	242.7	242.7	243.4	0.7
W	25.789	127	962	1.5	244.4	244.4	245.1	0.7
X	26.233	230	2,276	0.6	248.0	248.0	248.9	0.9
Y	26.648	300	2,677	0.2	248.0	248.0	248.9	0.9
Z	26.870	350	1,801	0.2	248.0	248.0	248.9	0.9

[1] Miles above confluence with Merrimack River
[2] Width/width within county boundary

TABLE 24

FEDERAL EMERGENCY MANAGEMENT AGENCY

ROCKINGHAM COUNTY, NEW HAMPSHIRE

(ALL JURISDICTIONS)

FLOODWAY DATA

FLOODING SOURCE: BEAVER BROOK

LOCATION		FLOODWAY			1% ANNUAL CHANCE FLOOD WATER SURFACE ELEVATION (FEET NGVD29)			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQ. FEET)	MEAN VELOCITY (FEET/SEC)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
AA	27.244	80	437	1.0	248.1	248.1	248.9	0.8
AB	27.580	24	55	7.8	253.6	253.6	253.8	0.2
AC	27.652	32	112	3.8	263.7	263.7	263.9	0.2
AD	27.838	30	59	7.3	282.0	282.0	282.1	0.1

[1] Miles above confluence with Merrimack River

TABLE 24

FEDERAL EMERGENCY MANAGEMENT AGENCY

ROCKINGHAM COUNTY, NEW HAMPSHIRE

(ALL JURISDICTIONS)

FLOODWAY DATA

FLOODING SOURCE: BEAVER BROOK

LOCATION		FLOODWAY			1% ANNUAL CHANCE FLOOD WATER SURFACE ELEVATION (FEET NGVD29)			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQ. FEET)	MEAN VELOCITY (FEET/SEC)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
A	0.400	115	288	0.9	214.0	214.0[2]	212.8	0.8
B	1.000	30	90	2.9	216.4	216.4	216.8	0.4
C	1.545	20	43	6.2	257.2	257.2	257.2	0.0
D	1.737	20	19	4.7	264.5	264.5	246.5	0.0
E	2.095	30	17	5.3	281.5	281.5	281.5	0.0
F	2.369	20	14	6.4	298.6	298.6	298.6	0.0
G	3.176	25	23	3.9	321.0	321.0	321.0	0.0

[1] Miles above confluence with Beaver Brook

[2] Elevation computed without consideration of backwater effects from Beaver Brook

TABLE 24

FEDERAL EMERGENCY MANAGEMENT AGENCY

ROCKINGHAM COUNTY, NEW HAMPSHIRE

(ALL JURISDICTIONS)

FLOODWAY DATA

FLOODING SOURCE: BLACK BROOK

LOCATION		FLOODWAY			1% ANNUAL CHANCE FLOOD WATER SURFACE ELEVATION (FEET NGVD29)			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQ. FEET)	MEAN VELOCITY (FEET/SEC)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
A	330	27	59	6.4	47.8	47.8	48.8	1.0
B	1,370	27	41	8.7	67.3	67.3	67.3	0.0
C	1,760	15	37	9.6	73.3	73.3	73.7	0.4
D	2,815	228	473	0.8	74.7	74.7	75.7	1.0
E	4,010	96	193	1.8	76.3	76.3	77.3	1.0
F	5,955	80	240	1.5	78.7	78.7	79.7	1.0
G	6,810	238	395	0.9	79.3	79.3	80.3	1.0

[1] Feet above confluence with Little River No. 3

TABLE 24

FEDERAL EMERGENCY MANAGEMENT AGENCY

ROCKINGHAM COUNTY, NEW HAMPSHIRE

(ALL JURISDICTIONS)

FLOODWAY DATA

FLOODING SOURCE: BRYANT BROOK

LOCATION		FLOODWAY			1% ANNUAL CHANCE FLOOD WATER SURFACE ELEVATION (FEET NGVD29)			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQ. FEET)	MEAN VELOCITY (FEET/SEC)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
A	0.000	30	155	6.3	227.3	227.3	28.3	1.0
B	0.312	30	120	8.2	233.7	233.7	234.1	0.4
C	0.700	50	202	4.9	245.0	245.0	246.0	1.0
D	1.032	40	163	6.0	249.4	249.4	250.1	0.7
E	1.350	80	348	2.8	259.7	259.7	260.4	0.7

[1] Miles above county boundary

TABLE 24

FEDERAL EMERGENCY MANAGEMENT AGENCY

ROCKINGHAM COUNTY, NEW HAMPSHIRE

(ALL JURISDICTIONS)

FLOODWAY DATA

FLOODING SOURCE: COHAS BROOK

LOCATION		FLOODWAY			1% ANNUAL CHANCE FLOOD WATER SURFACE ELEVATION (FEET NGVD29)			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQ. FEET)	MEAN VELOCITY (FEET/SEC)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
A	0.155	31	149	2.5	218.9	218.9	218.9	0.0
B	0.514	24	55	6.7	251.6	251.6	252.1	0.5
C	1.040	276	833	0.4	296.0	296.0	297.0	1.0

[1] Miles above confluence with Drew Brook

TABLE 24

FEDERAL EMERGENCY MANAGEMENT AGENCY

ROCKINGHAM COUNTY, NEW HAMPSHIRE

(ALL JURISDICTIONS)

FLOODWAY DATA

FLOODING SOURCE: CUNNINGHAM BROOK

LOCATION		FLOODWAY			1% ANNUAL CHANCE FLOOD WATER SURFACE ELEVATION (FEET NGVD29)			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQ. FEET)	MEAN VELOCITY (FEET/SEC)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
A	0.100	170	974	0.4	206.8	206.8	207.8	1.0
B	0.425	140	854	0.4	207.6	207.6	208.0	0.4
C	0.705	65	376	0.9	208.9	208.9	208.9	0.0
D	1.043	40	165	2.1	209.2	209.2	209.4	0.2
E	1.800	70	129	2.7	213.8	213.8	214.0	0.2

[1] Miles above confluence with Island Pond

TABLE 24

FEDERAL EMERGENCY MANAGEMENT AGENCY

ROCKINGHAM COUNTY, NEW HAMPSHIRE

(ALL JURISDICTIONS)

FLOODWAY DATA

FLOODING SOURCE: DREW BROOK

LOCATION		FLOODWAY			1% ANNUAL CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD88)			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQ. FEET)	MEAN VELOCITY (FEET/SEC)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
A	4,939	249	574	1.0	80.1	80.1	80.8	0.7
B	5,972	207	574	1.0	81.6	81.6	82.3	0.7
C	8,218	483	3,331	0.2	89.7	89.7	89.7	0.0
D	11,233	316	1,682	0.3	89.7	89.7	89.8	0.1
E	14,776	43	205	2.6	92.1	92.1	92.5	0.4
F	16,979	68	281	1.9	94.3	94.3	95.0	0.7
G	18,867	194	533	1.0	95.5	95.5	96.2	0.7
H	22,304	36	167	2.5	98.3	98.3	98.9	0.6
I	24,159	42	119	2.1	100.4	100.4	100.8	0.4
J	25,617	38	145	1.7	102.3	102.3	102.9	0.6
K	26,833	34	87	2.9	104.3	104.3	104.8	0.5
L	28,551	27	125	1.4	108.8	108.8	109.3	0.5

[1] Feet above confluence with Little River No. 1

TABLE 24

FEDERAL EMERGENCY MANAGEMENT AGENCY

ROCKINGHAM COUNTY, NEW HAMPSHIRE

(ALL JURISDICTIONS)

FLOODWAY DATA

FLOODING SOURCE: DUDLEY BROOK

LOCATION		FLOODWAY			1% ANNUAL CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD88)			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQ. FEET)	MEAN VELOCITY (FEET/SEC)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
A	0	269	644	8.8	5.4	5.4	5.4	0.0
B	160	172	555	10.2	11.5	11.5	11.5	0.0
C	411	101	467	12.2	20.1	20.1	20.1	0.0
D	484	135	1,531	3.7	27.9	27.9	28.8	0.9
E	842	114	1,277	4.5	30.4	30.4	30.8	0.4
F	2,420	129	1,863	3.1	30.7	30.7	31.2	0.5
G	2,667	146	2,527	2.3	30.9	30.9	31.4	0.5
H	3,851	293	2,872	1.8	30.9	30.9	31.4	0.5
I	7,296	800	5,606	0.9	31.0	31.0	31.6	0.6
J	10,964	642	6,904	0.7	31.0	31.0	31.6	0.6
K	19,698	2,584[2]	11,676	0.4	31.4	31.4	31.9	0.5
L	24,394	114	1,259	3.5	31.4	31.4	31.9	0.5
M	24,478	87	718	6.1	31.5	31.5	32.0	0.5
N	26,903	125	1,123	3.9	33.0	33.0	33.5	0.5
O	28,049	554	3,831	1.1	33.3	33.3	33.9	0.6
P	31,235	522	3,782	1.2	33.5	33.5	34.1	0.6
Q	31,372	649	4,531	1.0	34.0	34.0	34.8	0.8
R	32,007	690	3,635	1.2	34.1	34.1	34.9	0.8
S	36,192	98	551	7.9	36.7	36.7	36.8	0.1
T	37,245	192	2,195	2.0	45.6	45.6	45.9	0.3
U	38,306	211	1,717	2.5	45.6	45.6	45.9	0.3
V	39,790	108	666	6.5	45.7	45.7	46.3	0.6
W	40,564	27	340	12.7	51.7	51.7	51.7	0.0
X	40,646	42	516	8.4	54.8	54.8	54.8	0.0
Y	40,765	90	918	4.7	58.2	58.2	58.9	0.7
Z	40,782	225	2,555	1.7	65.1	65.1	66.0	0.9

[1] Feet above confluence with Squamscott River

[2] Floodway width extends beyond the area of revision.

TABLE 24

FEDERAL EMERGENCY MANAGEMENT AGENCY

ROCKINGHAM COUNTY, NEW HAMPSHIRE

(ALL JURISDICTIONS)

FLOODWAY DATA

FLOODING SOURCE: EXETER RIVER (TOWN OF EXETER)

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
AA	42,700	135	1,276	2.9	65.9	65.9	66.0	0.1
AB	43,800	390	2,386	1.4	65.9	65.9	66.0	0.1

[1] Feet above confluence with Squamscott River

TABLE 24

FEDERAL EMERGENCY MANAGEMENT AGENCY

ROCKINGHAM COUNTY, NEW HAMPSHIRE

(ALL JURISDICTIONS)

FLOODWAY DATA

FLOODING SOURCE: EXETER RIVER (TOWN OF EXETER)

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
AC	56,283	350	3,357	0.9	68.0	68.0	68.9	0.9
AD	58,143	99	508	5.9	69.3	69.3	69.8	0.5
AE	58,315	59	327	9.2	69.6	69.6	70.0	0.4
AF	61,175	97	1,104	2.7	73.0	73.0	73.3	0.3
AG	65,655	88	682	4.4	74.7	74.7	75.1	0.4
AH	66,895	67	555	5.4	76.0	76.0	76.3	0.3
AI	69,895	74	621	4.8	79.6	79.6	79.9	0.3
AJ	71,490	73	424	7.1	82.3	82.3	82.7	0.4
AK	72,560	43	233	12.9	90.7	90.7	91.3	0.6
AL	72,763	70	274	11.0	99.9	99.9	99.9	0.0
AM	72,842	70	467	6.4	103.8	103.8	103.9	0.1
AN	72,887	74	503	6.0	104.0	104.0	104.1	0.1
AO	73,031	36	297	10.1	104.0	104.0	104.1	0.1
AP	73,165	164	1,218	2.5	106.5	106.5	106.5	0.0
AQ	77,960	190	1,009	3.0	115.3	115.3	116.3	1.0
AR	78,530	64	393	7.7	119.7	119.7	119.7	0.0
AS	78,701	52	760	4.0	129.0	129.0	129.0	0.0
AT	78,751	89	1,468	2.1	133.0	133.0	133.0	0.0
AU	78,936	136	1,489	2.0	133.0	133.0	133.1	0.1
AV	80,076	109	743	3.9	133.2	133.2	133.3	0.1
AW	80,323	109	760	3.8	133.3	133.3	133.4	0.1
AX	80,360	219	1,546	1.9	134.6	134.6	134.6	0.0
AY	82,740	275	2,762	1.0	134.8	134.8	134.8	0.0
AZ	84,960	185	1,684	1.9	134.9	134.9	135.1	0.2

[1] Feet above confluence with Squamscott River

TABLE 24

FEDERAL EMERGENCY MANAGEMENT AGENCY

ROCKINGHAM COUNTY, NEW HAMPSHIRE

(ALL JURISDICTIONS)

FLOODWAY DATA

FLOODING SOURCE: EXETER 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
BA	113,180	230	2,260	2	160.7	160.7	161.5	0.8
BB	115,640	310	3,181	1.4	161.8	161.8	162.5	0.7
BC	116,900	355	3,720	1.2	162.5	162.5	163.3	0.8
BD	118,900	830	7,085	0.6	162.8	162.8	163.6	0.8
BE	120,660	400	3,295	1.3	163.7	163.7	164.6	0.9
BF	122,200	160	1,767	2.4	166.0	166.0	166.6	0.6
BG	123,640	145	1,444	2.9	166.6	166.6	167.4	0.8
BH	124,570	205	2,222	1.9	167.6	167.6	168.4	0.8
BI	126,000	315	2,981	1.4	168.3	168.3	169.2	0.9
BJ	127,140	350	3,093	1.3	168.7	168.7	169.6	0.9
BK	128,200	210	2,120	2.0	168.9	168.9	169.8	0.9
BL	130,400	270	2,191	1.3	169.7	169.7	170.4	0.7

[1] Feet above confluence with Squamscott River

TABLE 24

FEDERAL EMERGENCY MANAGEMENT AGENCY

ROCKINGHAM COUNTY, NEW HAMPSHIRE

(ALL JURISDICTIONS)

FLOODWAY DATA

FLOODING SOURCE: EXETER RIVER

LOCATION		FLOODWAY			1% ANNUAL CHANCE FLOOD WATER SURFACE ELEVATION (FEET NGVD29)			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQ. FEET)	MEAN VELOCITY (FEET/SEC)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
A	0.209	35	140	5.0	165.3	165.3	165.3	0.0
B	0.447	68	272	2.6	169.1	169.1	170.0	0.9
C	0.737	17	130	5.4	182.4	182.4	182.4	0.0
D	0.969	37	180	2.9	182.9	182.9	183.9	1.0
E	1.325	21	61	8.6	232.7	232.7	232.8	0.1
F	1.800	24	89	4.0	240.1	240.1	240.8	0.7

[1] Miles above confluence with Shadow Lake

TABLE 24

FEDERAL EMERGENCY MANAGEMENT AGENCY

ROCKINGHAM COUNTY, NEW HAMPSHIRE

(ALL JURISDICTIONS)

FLOODWAY DATA

FLOODING SOURCE: FLATROCK BROOK

LOCATION		FLOODWAY			1% ANNUAL CHANCE FLOOD WATER SURFACE ELEVATION (FEET NGVD29)			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQ. FEET)	MEAN VELOCITY (FEET/SEC)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
A	3.705	75	349	3.0	139.8	139.8	139.9	0.1
B	4.880	100	524	1.4	151.4	151.4	152.3	0.9
C	5.728	110	641	1.2	156.2	156.2	156.3	0.1
D	7.390	21	57	6.7	177.9	177.9	177.9	0.0
E	7.962	25	51	7.5	188.8	188.8	189.1	0.3
F	8.535	21	65	5.9	208.4	208.4	208.7	0.3
G	8.649	11	102	3.7	221.4	221.4	221.6	0.2

[1] Miles above mouth

TABLE 24

FEDERAL EMERGENCY MANAGEMENT AGENCY

ROCKINGHAM COUNTY, NEW HAMPSHIRE

(ALL JURISDICTIONS)

FLOODWAY DATA

FLOODING SOURCE: GOLDEN BROOK

LOCATION		FLOODWAY			1% ANNUAL CHANCE FLOOD WATER SURFACE ELEVATION (FEET NGVD29)			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQ. FEET)	MEAN VELOCITY (FEET/SEC)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
A	0.200	17	81	3.6	210.2	208.4[2]	209.1	0.7
B	0.500	13	93	3.1	218.0	218.0	218.0	0.0
C	0.900	15	38	7.5	240.1	240.1	240.3	0.2
D	1.125	20	51	4.1	249.1	249.1	249.5	0.4
E	1.383	75	168	1.0	251.2	251.2	252.1	0.9
F	1.591	40	63	2.7	267.7	267.7	267.9	0.2
G	2.073	17	48	4.4	276.0	276.0	277.0	1.0

[1] Miles above confluence with Beaver Brook

[2] Elevation computed without consideration of backwater effects from Beaver Brook

TABLE 24

FEDERAL EMERGENCY MANAGEMENT AGENCY

ROCKINGHAM COUNTY, NEW HAMPSHIRE

(ALL JURISDICTIONS)

FLOODWAY DATA

FLOODING SOURCE: HIDDEN VALLEY BROOK

LOCATION		FLOODWAY			1% ANNUAL CHANCE FLOOD WATER SURFACE ELEVATION (FEET NGVD29)			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQ. FEET)	MEAN VELOCITY (FEET/SEC)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
A	0.083	18	91	4.0	241.0	239.4[2]	240.1	0.7
B	0.347	16	81	4.5	243.2	243.2	244.0	0.8
C	0.620	18	84	4.4	250.6	250.6	251.3	0.7
D	0.758	20	92	4.0	252.8	252.8	253.7	0.9

[1] Miles above confluence with Beaver Brook

[2] Elevation computed without consideration of backwater effects from Beaver Brook

TABLE 24

FEDERAL EMERGENCY MANAGEMENT AGENCY

ROCKINGHAM COUNTY, NEW HAMPSHIRE

(ALL JURISDICTIONS)

FLOODWAY DATA

FLOODING SOURCE: HORNES BROOK

LOCATION		FLOODWAY			1% ANNUAL CHANCE FLOOD WATER SURFACE ELEVATION (FEET NGVD29)			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQ. FEET)	MEAN VELOCITY (FEET/SEC)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
A	575	25	114	4.4	96.4	96.4	97.4	1.0
B	1,160	40	122	4.1	98.2	98.2	98.9	0.7
C	4,000	65	697	0.7	111.9	111.9	112.0	0.1
D	5,410	40	328	1.5	111.9	111.9	112.1	0.2
E	6,930	20	160	3.1	116.3	116.3	117.1	0.8
F	7,490	30	143	3.5	116.7	116.7	117.6	0.9
G	8,880	45	104	4.8	123.5	123.5	124.1	0.6
H	9,135	30	76	6.5	125.6	125.6	125.9	0.3

[1] Feet above confluence with Little River No. 3

TABLE 24

FEDERAL EMERGENCY MANAGEMENT AGENCY

ROCKINGHAM COUNTY, NEW HAMPSHIRE

(ALL JURISDICTIONS)

FLOODWAY DATA

FLOODING SOURCE: KELLY BROOK

LOCATION		FLOODWAY			1% ANNUAL CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD88)			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQ. FEET)	MEAN VELOCITY (FEET/SEC)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
A	61,200	358	4,427	2.0	101.6	101.6	102.3	0.7
B	72,400	374	4,331	1.8	103.4	103.4	104.1	0.7
C	80,000	309	4,538	1.7	105.7	105.7	106.5	0.8
D	87,700	450	5,368	1.5	107.3	107.3	108.2	0.9
E	95,000	175	1,964	3.9	109.6	109.6	110.5	0.9
F	100,000	180	2,379	3.2	114.1	114.1	114.8	0.7
G	105,667	486	6,873	1.1	119.7	119.7	120.3	0.6
H	113,503	88	1,224	5.9	126.0	126.0	126.9	0.9
I	119,623	232	3,388	2.0	143.3	143.3	144.1	0.8
J	123,962	775	5,529	1.2	148.6	148.6	148.9	0.3
K	129,139	205	1,805	3.6	155.0	155.0	155.1	0.1
L	131,462	95	940	7.0	160.1	160.1	160.1	0.0
M	136,050	124	1,393	4.7	166.8	166.8	167.4	0.6
N	137,735	754	9,958	0.7	168.1	168.1	168.9	0.8
O	140,141	499	5,391	1.2	168.7	168.7	169.4	0.7
P	145,455	180	2,064	3.1	185.2	185.2	185.4	0.2
Q	149,447	167	2,669	2.4	189.5	189.5	189.8	0.3
R	152,447	829	11,648	0.5	189.8	189.8	190.3	0.5
S	155,947	349	5,991	1.0	190.2	190.2	190.7	0.5
T	159,947	293	2,828	1.9	190.5	190.5	191.0	0.5
U	163,949	271	1,724	3.0	198.2	198.2	198.9	0.7
V	167,999	160	2,007	2.4	205.6	205.6	206.5	0.9
W	171,468	167	1,911	2.6	208.0	208.0	208.7	0.7
X	173,468	775	6,666	0.7	208.3	208.3	209.0	0.7
Y	176,357	59	632	5.8	212.5	212.5	213.1	0.6
Z	180,590	109	1,155	3.2	215.0	215.0	215.8	0.8
AA	185,202	130	666	5.5	217.2	217.2	217.9	0.7

[1] Feet above confluence with Piscassic River

TABLE 24

FEDERAL EMERGENCY MANAGEMENT AGENCY

ROCKINGHAM COUNTY, NEW HAMPSHIRE

(ALL JURISDICTIONS)

FLOODWAY DATA

FLOODING SOURCE: LAMPREY 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
Lamprey River								
A	0	86	597	14.9	10.3	10.3	10.3	0.0
B	36	140	3068	2.9	33.5	33.5	34.5	1.0
C	206	139	3494	2.6	33.6	33.6	34.6	1.0
D	247	92	1552	5.8	33.6	33.6	34.5	0.9
E	310	68	1406	6.4	34.6	34.6	35.4	0.8
F	345	132	2082	4.3	34.9	34.9	35.9	1.0
G	546	135	3039	2.9	35.1	35.1	36.1	1.0
H	754	195	4697	1.9	35.2	35.2	36.1	0.9
I	1764	203	4276	2.1	35.3	35.3	36.2	0.9
J	1947	277	5516	1.6	35.3	35.3	36.2	0.9
K	2885	385	7368	1.2	35.4	35.4	36.3	0.9

[1] Feet above MacCallen Dam

TABLE 24

FEDERAL EMERGENCY MANAGEMENT AGENCY

ROCKINGHAM COUNTY, NEW HAMPSHIRE

(ALL JURISDICTIONS)

FLOODWAY DATA

FLOODING SOURCE: LAMPREY RIVER (TOWN OF NEWMARKET)

LOCATION		FLOODWAY			1% ANNUAL CHANCE FLOOD WATER SURFACE ELEVATION (FEET NGVD29)			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQ. FEET)	MEAN VELOCITY (FEET/SEC)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
A	0.141	20	52	9.2	200.4	200.4	200.4	0.0
B	0.547	30	112	4.3	212.1	212.1	212.2	0.1
C	0.678	30	3	6.6	229.2	229.2	229.2	0.0
D	0.900	40	56	6.9	242.7	242.7	242.7	0.0
E	.165	180	720	0.5	261.1	261.1	261.1	0.0
F	1.228	630	3,062	0.1	263.7	263.7	263.7	0.0
G	1.775	105	487	0.8	263.7	263.7	263.7	0.0
H	2.365	30	175	1.8	264.3	264.3	264.4	0.1
I	2.717	300	396	0.8	264.3	264.3	265.1	0.8
J	3.405	20	25	6.8	306.8	306.8	306.8	0.0

[1] Miles above Industrial Drive

TABLE 24

FEDERAL EMERGENCY MANAGEMENT AGENCY

ROCKINGHAM COUNTY, NEW HAMPSHIRE

(ALL JURISDICTIONS)

FLOODWAY DATA

FLOODING SOURCE: LITTLE COHAS BROOK

LOCATION		FLOODWAY			1% ANNUAL CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD88)			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQ. FEET)	MEAN VELOCITY (FEET/SEC)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
A	400	195	1,679	0.4	30.9	28.1[2]	28.1	0.0
B	610	80	803	0.8	30.9	28.1[2]	28.1	0.0
C	2,460	70	615	1.0	30.9	28.1[2]	28.2	0.1
D	2,604	99	839	0.7	30.9	28.2[2]	28.3	0.1
E	4,104	29	183	3.4	30.9	28.3[2]	28.4	0.1
F	5,104	44	351	1.8	30.9	28.3[2]	29.1	0.8
G	5,234	214	1,118	0.6	30.9	28.7[2]	29.5	0.8
H	7,634	76	504	1.2	30.9	29.0[2]	29.8	0.8
I	7,934	76	696	0.9	30.9	29.1[2]	30.0	0.9
J	8,069	78	287	2.2	30.9	29.9[2]	30.5	0.6
K	9,219	122	427	1.5	30.9	30.8[2]	31.5	0.7
L	10,169	164	800	0.8	31.0	31.0	31.7	0.7
M	10,246	21	128	4.9	31.0	31.0	31.7	0.7
N	10,566	80	430	1.5	31.7	31.7	32.3	0.6
O	11,866	23	173	3.6	32.0	32.0	32.7	0.7
P	12,666	55	87	7.2	39.7	39.7	40.0	0.3
Q	12,799	205	1,221	0.5	46.8	46.8	46.9	0.1

[1] Feet above confluence with Exeter River

[2] Elevation computed without consideration of backwater effects from Exeter River

TABLE 24

FEDERAL EMERGENCY MANAGEMENT AGENCY

ROCKINGHAM COUNTY, NEW HAMPSHIRE

(ALL JURISDICTIONS)

FLOODWAY DATA

FLOODING SOURCE: LITTLE RIVER NO. 1

LOCATION		FLOODWAY			1% ANNUAL CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD88)			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQ. FEET)	MEAN VELOCITY (FEET/SEC)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
A	3,048	67	304	0.7	9.3	9.3	9.4	0.1
B	5,048	*	78	2.9	9.6	9.6	10.1	0.5
C	5,185	*	59	3.8	10.0	10.0	10.4	0.4
D	5,385	*	32	7.2	11.8	11.8	11.8	0.0
E	5,490	*	31	7.3	13.8	13.8	14.0	0.2
F	5,780	*	25	9.0	20.9	20.9	21.0	0.1
G	6,420	*	31	7.4	26.3	26.3	26.3	0.0
H	6,495	*	32	7.2	30.9	30.9	31.0	0.1
I	6,561	75	410	0.6	34.6	34.6	34.8	0.2
J	6,771	*	25	9.0	34.8	34.8	34.8	0.0
K	6,867	*	49	4.6	38.3	38.3	38.3	0.0

[1]Feet above downstream dam in Town of North Hampton

*Floodway coincident with channel banks

TABLE 24

FEDERAL EMERGENCY MANAGEMENT AGENCY

ROCKINGHAM COUNTY, NEW HAMPSHIRE

(ALL JURISDICTIONS)

FLOODWAY DATA

FLOODING SOURCE: LITTLE RIVER NO. 2

LOCATION		FLOODWAY			1% ANNUAL CHANCE FLOOD WATER SURFACE ELEVATION (FEET NGVD29)			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQ. FEET)	MEAN VELOCITY (FEET/SEC)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
A	290	40	213	6.0	39.7	39.7	40.4	0.7
B	1,600	30	281	4.5	42.2	42.2	42.9	0.7
C	3,110	119	614	1.8	43.1	43.1	44.1	1.0
D	3,265	85	574	1.9	43.7	43.7	44.5	0.8
E	4,640	91	285	3.8	45.0	45.0	45.9	0.9
F	5,035	42	243	4.4	47.4	47.4	47.5	0.1
G	5,340	35	205	5.2	49.9	49.9	49.9	0.0
H	7,490	32	197	5.5	54.6	54.6	55.1	0.5
I	8,704	40	120	9.0	58.4	58.4	58.4	0.0
J	10,030	135	850	0.9	60.1	60.1	61.1	1.0
K	10,480	60	327	2.4	61.8	61.8	62.6	0.8
L	11,450	145	880	1.0	61.9	61.9	62.8	0.9
M	12,660	70	278	3.0	62.6	62.6	63.4	0.8
N	14,850	48	250	3.0	64.7	64.7	65.4	0.7
O	15,730	53	163	5.0	68.3	68.3	69.1	0.8
P	16,850	20	161	4.9	81.8	81.8	81.8	0.0
Q	17,770	39	91	8.7	86.4	86.4	86.4	0.0
R	19,420	33	142	5.6	93.3	93.3	93.8	0.5
S	20,690	70	314	2.5	95.2	95.2	96.0	0.8
T	21,970	34	153	5.2	96.3	96.3	97.1	0.8
U	23,066	50	254	1.9	102.9	102.9	102.9	0.0
V	25,410	51	326	1.5	103.1	103.1	103.5	0.4
W	27,555	58	225	1.5	103.5	103.5	104.2	0.7
X	28,240	22	127	2.6	106.9	106.9	106.9	0.0

[1]Feet above New Hampshire-Massachusetts State boundary

TABLE 24

FEDERAL EMERGENCY MANAGEMENT AGENCY

ROCKINGHAM COUNTY, NEW HAMPSHIRE

(ALL JURISDICTIONS)

FLOODWAY DATA

FLOODING SOURCE: LITTLE RIVER NO. 3

LOCATION		FLOODWAY			1% ANNUAL CHANCE FLOOD WATER SURFACE ELEVATION (FEET NGVD29)			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQ. FEET)	MEAN VELOCITY (FEET/SEC)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
A	0.278	150	228	3.3	178.7	178.7	179.4	0.7
B	0.730	20	37	5.7	190.9	190.9	191.1	0.2
C	1.262	20	62	3.4	196.1	196.1	196.6	0.5
D	1.665	30	33	6.4	225.2	225.2	225.2	0.0
E	1.900	30	89	2.4	229.6	229.6	229.8	0.2
F	2.245	30	30	7.0	251.9	251.9	251.9	0.0
G	3.247	30	210	1.0	271.7	271.7	272.6	0.9
H	3.381	20	123	1.7	273.6	273.6	273.6	0.0
I	3.533	10	137	1.5	289.6	289.6	289.6	0.0

[1]Miles above county boundary

TABLE 24

FEDERAL EMERGENCY MANAGEMENT AGENCY

ROCKINGHAM COUNTY, NEW HAMPSHIRE

(ALL JURISDICTIONS)

FLOODWAY DATA

FLOODING SOURCE: NESENKEAG BROOK

LOCATION		FLOODWAY			1% ANNUAL CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD88)			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQ. FEET)	MEAN VELOCITY (FEET/SEC)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
A	4,630	68.000	341	1.1	91.4	91.4	92.4	1.0
B	6,530	30	177	2.1	94.2	94.2	95.2	1.0
C	7,120	26	121	3.1	97.9	97.9	98.9	1.0
D	9,575	95	305	1.2	100.1	100.1	101.1	1.0

[1]Feet above Ice Pond Dam

TABLE 24

FEDERAL EMERGENCY MANAGEMENT AGENCY

ROCKINGHAM COUNTY, NEW HAMPSHIRE

(ALL JURISDICTIONS)

FLOODWAY DATA

FLOODING SOURCE: PISCASSIC RIVER

LOCATION		FLOODWAY			1% ANNUAL CHANCE FLOOD WATER SURFACE ELEVATION (FEET NGVD29)			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQ. FEET)	MEAN VELOCITY (FEET/SEC)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
Policy Brook								
A	0	50	160	4.1	124.0	124.0	125.0	1.0
B	1,030	50	170	3.9	126.0	126.0	126.6	0.6
C	1,105	50	250	1.8	126.4	126.4	127.0	0.6
D	1,190	50	230	2.0	126.5	126.5	127.1	0.6
E	1,240.000	50	400	1.1	126.5	126.5	127.1	0.6
F	3,185.000	50	300	1.1	126.6	126.6	127.3	0.7
G	4,025.000	50	280	0.7	126.6	126.6	127.3	0.7
Unnamed Brook								
H	4,075.000	50	210	0.6	126.6	126.6	127.3	0.7
I	4,750.000	50	95	1.3	127.0	127.0	127.7	0.7
J	4,965	50	170	0.7	127.1	127.1	127.8	0.7
K	5,755	50	95	0.6	127.1	127.1	127.9	0.8

[1]Feet above Rockingham park culvert

TABLE 24

FEDERAL EMERGENCY MANAGEMENT AGENCY

ROCKINGHAM COUNTY, NEW HAMPSHIRE

(ALL JURISDICTIONS)

FLOODWAY DATA

FLOODING SOURCE: POLICY BROOK – UNNAMED BROOK

LOCATION		FLOODWAY			1% ANNUAL CHANCE FLOOD WATER SURFACE ELEVATION (FEET NGVD29)			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQ. FEET)	MEAN VELOCITY (FEET/SEC)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
A	1.149	20	45	8.2	263.8	263.8	263.8	0.0
B	1.415	16	96	3.8	276.3	276.3	276.3	0.0
C	1.815	45	47	5.9	294.0	294.0	294.0	0.0
D	1.949	30	41	6.7	297.9	297.9	297.9	0.0
E	2.030	47	158	1.7	301.6	301.6	302.2	0.6
F	2.116	18	157	1.8	307.1	307.1	307.1	0.0
G	2.170	40	240	1.2	307.3	307.3	307.3	0.0
H	2.669	94	167	1.7	307.7	307.7	308.6	0.9
I	2.852	20	92	3.0	313.1	313.1	314.1	1.0
J	3.008	8	27	10.2	333.6	333.6	333.6	0.0
K	3.178	9	86	1.7	351.6	351.6	352.0	0.4
L	3.372	20	123	1.2	352.7	352.7	353.3	0.6
M	3.953	20	82	1.8	366.0	366.0	366.9	0.9
N	4.488	16	96	1.6	374.2	374.2	374.2	0.0

[1]Miles above confluence with Beaver Creek

TABLE 24

FEDERAL EMERGENCY MANAGEMENT AGENCY

ROCKINGHAM COUNTY, NEW HAMPSHIRE

(ALL JURISDICTIONS)

FLOODWAY DATA

FLOODING SOURCE: SHIELDS BROOK

LOCATION		FLOODWAY			1% ANNUAL CHANCE FLOOD WATER SURFACE ELEVATION (FEET NGVD29)			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQ. FEET)	MEAN VELOCITY (FEET/SEC)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
A	33.12	300	1,710	1.1	112.0	112.0	113.0	1.0
B	33.78	300	1,440	1.1	112.3	112.3	113.3	1.0
C	34.60	250	1,310	1.2	113.0	113.0	113.9	0.9
D	34.74	140	630	2.5	114.4	114.4	115.3	0.9
E	35.05	250	1,680	1.0	114.9	114.9	115.7	0.8
F	35.62	250	1,560	1.0	115.0	115.0	115.8	0.8
G	36.45	250	1,420	1.1	115.5	115.5	116.2	0.7
H	36.92	190	1,180	1.4	115.7	115.7	116.4	0.7
I	36.97	300	1,500	1.1	116.5	116.5	117.2	0.7
J	38.05	300	2,040	0.8	117.3	117.3	118.0	0.7
K	38.46	300	980	1.6	117.5	117.5	118.2	0.7
L	38.93	100	620	2.6	119.0	119.0	119.3	0.3
M	38.98	100	560	2.9	119.6	119.6	119.7	0.1
N	39.27	200	1,320	1.2	119.7	119.7	120.2	0.5
O	39.59	130	730	2.2	119.8	119.8	120.3	0.5
P	39.64	250	1,340	1.2	119.9	119.9	120.4	0.5
Q	40.66	250	1,380	1.2	120.6	120.6	121.1	0.5
R	40.82	250	1,500	1.2	120.7	120.7	121.3	0.6
S	40.87	250	1,840	0.8	121.8	121.8	122.5	0.7
T	41.87	180	760	1.8	122.3	122.3	122.9	0.6
U	42.47	200	1,350	1.0	126.3	126.3	126.3	0.0
V	42.74	60	460	1.6	126.4	126.4	126.5	0.1
W	43.11	100	450	1.7	127.1	127.1	127.2	0.1

[1]Miles above Newburyport Light

TABLE 24

FEDERAL EMERGENCY MANAGEMENT AGENCY

ROCKINGHAM COUNTY, NEW HAMPSHIRE

(ALL JURISDICTIONS)

FLOODWAY DATA

FLOODING SOURCE: SPICKET RIVER

LOCATION		FLOODWAY			1% ANNUAL CHANCE FLOOD WATER SURFACE ELEVATION (FEET NGVD29)			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQ. FEET)	MEAN VELOCITY (FEET/SEC)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
A	0.225	30	110	3.9	207.0	207.0	207.8	0.8
B	0.933	19	87	4.9	218.2	218.2	218.9	0.7
C	1.638	20	58	7.3	238.5	238.5	238.9	0.4
D	2.950	208	1,085	0.8	258.4	258.4	259.4	1.0
E	3.153	49	553	1.5	262.9	262.9	262.9	0.0

[1]Miles above confluence with Island Pond

TABLE 24

FEDERAL EMERGENCY MANAGEMENT AGENCY

ROCKINGHAM COUNTY, NEW HAMPSHIRE

(ALL JURISDICTIONS)

FLOODWAY DATA

FLOODING SOURCE: TAYLOR BROOK

LOCATION		FLOODWAY			1% ANNUAL CHANCE FLOOD WATER SURFACE ELEVATION (FEET NGVD29)			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQ. FEET)	MEAN VELOCITY (FEET/SEC)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
A	0.092	70	290	1.3	223.4	219.4	220.3	0.9
B	0.571	25	52	7.3	234.3	234.3	234.3	0.0
C	0.755	30	51	7.5	247.1	247.1	247.1	0.0
D	0.960	20	187	1.3	279.0	279.0	279.0	0.0
E	1.310	40	47	5.1	292.3	292.3	292.3	0.0
F	1.800	80	202	1.2	299.6	299.6	300.1	0.5
G	2.215	160	230	1.0	304.6	304.6	305.6	1.0

[1]Miles above confluence with Beaver Brook

TABLE 24

FEDERAL EMERGENCY MANAGEMENT AGENCY

ROCKINGHAM COUNTY, NEW HAMPSHIRE

(ALL JURISDICTIONS)

FLOODWAY DATA

FLOODING SOURCE: TRIBUTARY C TO BEAVER BROOK

LOCATION		FLOODWAY			1% ANNUAL CHANCE FLOOD WATER SURFACE ELEVATION (FEET NGVD29)			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQ. FEET)	MEAN VELOCITY (FEET/SEC)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
A	0.395	50	489	1.5	248.0	243.7	244.7	1.0
B	0.822	18	532	1.0	265.4	265.4	265.8	0.4
C	1.181	81	547	0.9	273.2	273.2	274.0	0.8
D	1.735	16	567	0.9	281.9	281.9	282.8	0.9

[1] Miles above confluence with Beaver Brook

TABLE 24

FEDERAL EMERGENCY MANAGEMENT AGENCY

ROCKINGHAM COUNTY, NEW HAMPSHIRE

(ALL JURISDICTIONS)

FLOODWAY DATA

FLOODING SOURCE: TRIBUTARY G TO BEAVER BROOK

LOCATION		FLOODWAY			1% ANNUAL CHANCE FLOOD WATER SURFACE ELEVATION (FEET NGVD29)			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQ. FEET)	MEAN VELOCITY (FEET/SEC)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
A	0.019	30	48	5.2	239.1	235.0	235.3	0.3
B	0.184	35	104	2.4	239.1	237.9	238.7	0.8
C	0.387	20	38	6.1	245.9	245.9	246.2	0.3
D	0.585	20	107	2.2	283.6	283.6	283.6	0.0
E	0.726	350	2,576	0.1	285.4	285.4	285.4	0.0
F	0.926	20	38	6.1	286.1	286.1	286.1	0.0
G	1.009	30	114	2.0	290.4	290.4	291.2	0.8
H	1.12	10	92	2.5	292.1	292.1	292.9	0.8
I	1.23	20	101	2.3	305.4	305.4	305.4	0.0
J	1.453	10	29	7.9	320.3	320.3	320.5	0.2

[1]Miles above confluence with Beaver Brook

TABLE 24

FEDERAL EMERGENCY MANAGEMENT AGENCY

ROCKINGHAM COUNTY, NEW HAMPSHIRE

(ALL JURISDICTIONS)

FLOODWAY DATA

FLOODING SOURCE: TRIBUTARY O TO BEAVER BROOK

LOCATION		FLOODWAY			1% ANNUAL CHANCE FLOOD WATER SURFACE ELEVATION (FEET NGVD29)			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQ. FEET)	MEAN VELOCITY (FEET/SEC)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
Tributary E to Beaver Lake								
A	0.000	28	162	2.3	289.6	289.6	290.6	1.0
B	0.184	36	467	0.8	293.6	293.6	294.3	0.7
Tributary F to Beaver Lake								
A	0.169	102	589	1.1	297.6	297.6	298.6	1.0
B	0.471	311	1,133	0.6	299.3	299.3	300.2	0.9
C	0.770	59	226	2.9	303.5	303.5	304.5	1.0
D	1.064	19	65	10.1	320.7	320.7	320.7	0.0

[1]Miles above confluence with Beaver Lake

TABLE 24

FEDERAL EMERGENCY MANAGEMENT AGENCY

ROCKINGHAM COUNTY, NEW HAMPSHIRE

(ALL JURISDICTIONS)

FLOODWAY DATA

FLOODING SOURCE: TRIBUTARY E TO BEAVER LAKE – TRIBUTARY F TO BEAVER LAKE

LOCATION		FLOODWAY			1% ANNUAL CHANCE FLOOD WATER SURFACE ELEVATION (FEET NGVD29)			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQ. FEET)	MEAN VELOCITY (FEET/SEC)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
A	0.191		33	5.0	215.4	215.4	216.0	0.6
B	0.400	20	94	1.8	221.1	221.1	221.5	0.4
C	0.613	60	207	0.8	221.2	221.2	221.9	0.7
D	0.951	30	103	1.6	221.8	221.8	222.8	1.0
E	1.145	30	75	2.2	224.5	224.5	225.4	0.9

[1]Miles above confluence with Black Brook

TABLE 24

FEDERAL EMERGENCY MANAGEMENT AGENCY

ROCKINGHAM COUNTY, NEW HAMPSHIRE

(ALL JURISDICTIONS)

FLOODWAY DATA

FLOODING SOURCE: TRIBUTARY J TO BLACK BROOK

LOCATION		FLOODWAY			1% ANNUAL CHANCE FLOOD WATER SURFACE ELEVATION (FEET NGVD29)			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQ. FEET)	MEAN VELOCITY (FEET/SEC)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
A	0.235	26	52	4.8	216.9	216.9	217.3	0.4
B	0.503	10	60	4.2	226.1	226.1	226.4	0.3
C	0.810	14	30	8.4	245.1	245.1	245.3	0.2
D	1.030	13	33	7.6	263.6	263.6	264.1	0.5
E	1.156	17	40	6.3	277.3	277.3	277.6	0.3

[1]Miles above confluence with Drew Brook

TABLE 24

FEDERAL EMERGENCY MANAGEMENT AGENCY

ROCKINGHAM COUNTY, NEW HAMPSHIRE

(ALL JURISDICTIONS)

FLOODWAY DATA

FLOODING SOURCE: TRIBUTARY H TO DREW BROOK

LOCATION		FLOODWAY			1% ANNUAL CHANCE FLOOD WATER SURFACE ELEVATION (FEET NGVD29)			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQ. FEET)	MEAN VELOCITY (FEET/SEC)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
A	0.240	60	205	2.1	264.1	262.4[2]	263.2	0.8
B	0.700	40	118	2.8	264.1	262.5[2]	263.5	1.0
C	0.950	30	107	3.1	266.1	266.1	266.1	0.0
D	1.083	20	127	2.3	272.5	272.5	272.7	0.2
E	1.300	100	538	0.5	276.9	276.9	277.3	0.4
F	1.535	25	168	1.7	279.6	279.6	280.1	0.5
G	1.596	10	63	4.6	281.3	281.3	281.3	0.0

[1]Miles above confluence with Little Cohas Brook

[2]Elevation computed without consideration of backwater effects from Little Cohas Brook

TABLE 24

FEDERAL EMERGENCY MANAGEMENT AGENCY

ROCKINGHAM COUNTY, NEW HAMPSHIRE

(ALL JURISDICTIONS)

FLOODWAY DATA

FLOODING SOURCE: TRIBUTARY E TO LITTLE COHAS BROOK

LOCATION		FLOODWAY			1% ANNUAL CHANCE FLOOD WATER SURFACE ELEVATION (FEET NGVD29)			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQ. FEET)	MEAN VELOCITY (FEET/SEC)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
A	0.065	30	69	5.4	185.0	185.0	185.0	0.0
B	0.350	20	21	7.6	202.1	202.1	202.1	0.0
C	0.700	20	23	7.0	232.3	232.3	232.3	0.0
D	1.151	35	121	1.3	236.2	236.2	237.0	0.8

[1]Miles above confluence with Nesenkeag Brook

TABLE 24

FEDERAL EMERGENCY MANAGEMENT AGENCY

ROCKINGHAM COUNTY, NEW HAMPSHIRE

(ALL JURISDICTIONS)

FLOODWAY DATA

FLOODING SOURCE: TRIBUTARY H TO NESENKEAG BROOK

LOCATION		FLOODWAY			1% ANNUAL CHANCE FLOOD WATER SURFACE ELEVATION (FEET NGVD29)			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQ. FEET)	MEAN VELOCITY (FEET/SEC)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
A	0.120	20	38	5.7	314.3	314.3	314.3	0.0
B	0.300	20	68	3.2	319.4	319.4	319.5	0.1
C	0.592	20	45	4.8	331.6	331.6	331.6	0.0
D	0.900	150	390	0.6	331.6	331.6	332.5	0.9
E	1.415	300	824	0.3	331.7	331.7	332.7	1.0

[1]Miles above confluence with Shields Brook

TABLE 24

FEDERAL EMERGENCY MANAGEMENT AGENCY

ROCKINGHAM COUNTY, NEW HAMPSHIRE

(ALL JURISDICTIONS)

FLOODWAY DATA

FLOODING SOURCE: UPPER BEAVER BROOK

LOCATION		FLOODWAY			1% ANNUAL CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD88)			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQ. FEET)	MEAN VELOCITY (FEET/SEC)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
A	1200	32	112	1.8	40.9	40.9	40.9	0.0
B	3040	*	112	1.8	41.8	41.8	42.6	0.8
C	4240	97	261	0.8	42.3	42.3	43.3	1.0
D	4372	51	239	0.8	44.5	44.5	44.5	0.0
E	6272	*	74	2.7	44.6	44.6	45.1	0.5
F	7472	54	223	0.9	44.8	44.8	45.5	0.7
G	7662	*	126	1.6	48.7	48.7	48.9	0.2
H	9762	505	2,667	0.1	48.7	48.7	48.9	0.2
I	12322	90	581	0.3	48.7	48.7	49.0	0.3
J	13842	256	630	0.3	48.7	48.7	49.0	0.3
K	14056	250	1,866	0.1	52.5	52.5	52.6	0.1
L	15056	240	1,060	0.2	52.5	52.5	52.6	0.1
M	15,279	340	3,607	0.1	55.8	55.8	55.8	0.0

[1]Feet above Town of North Hampton corporate limits

*Floodway coincident with channel banks

TABLE 24

FEDERAL EMERGENCY MANAGEMENT AGENCY

ROCKINGHAM COUNTY, NEW HAMPSHIRE

(ALL JURISDICTIONS)

FLOODWAY DATA

FLOODING SOURCE: WINNICUT RIVER