FLOOD INSURANCE STUDY

FEDERAL EMERGENCY MANAGEMENT AGENCY

VOLUME 1 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

33015CV001B

Version Number 2.3.3.0

FEMA

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FLOOD INSURANCE STUDY REPORT
ROCKINGHAM COUNTY, NEW HAMPSHIRE

SECTION 1.0 – INTRODUCTION

1.1 The National Flood Insurance Program

The National Flood Insurance Program (NFIP) is a voluntary Federal program that enables property owners in participating communities to purchase insurance protection against losses from flooding. This insurance is designed to provide an alternative to disaster assistance to meet the escalating costs of repairing damage to buildings and their contents caused by floods.

For decades, the national response to flood disasters was generally limited to constructing flood-control works such as dams, levees, sea-walls, and the like, and providing disaster relief to flood victims. This approach did not reduce losses nor did it discourage unwise development. In some instances, it may have actually encouraged additional development. To compound the problem, the public generally could not buy flood coverage from insurance companies, and building techniques to reduce flood damage were often overlooked.

In the face of mounting flood losses and escalating costs of disaster relief to the general taxpayers, the U.S. Congress created the NFIP. The intent was to reduce future flood damage through community floodplain management ordinances, and provide protection for property owners against potential losses through an insurance mechanism that requires a premium to be paid for the protection.

The U.S. Congress established the NFIP on August 1, 1968, with the passage of the National Flood Insurance Act of 1968. The NFIP was broadened and modified with the passage of the Flood Disaster Protection Act of 1973 and other legislative measures. It was further modified by the National Flood Insurance Reform Act of 1994 and the Flood Insurance Reform Act of 2004. The NFIP is administered by the Federal Emergency Management Agency (FEMA), which is a component of the Department of Homeland Security (DHS).

Participation in the NFIP is based on an agreement between local communities and the Federal Government. If a community adopts and enforces floodplain management regulations to reduce future flood risks to new construction and substantially improved structures in Special Flood Hazard Areas (SFHAs), the Federal Government will make flood insurance available within the community as a financial protection against flood losses. The community's floodplain management regulations must meet or exceed criteria established in accordance with Title 44 Code of Federal Regulations (CFR) Part 60.3, *Criteria for Land Management and Use*.

SFHAs are delineated on the community's Flood Insurance Rate Maps (FIRMs). Under the NFIP, buildings that were built before the flood hazard was identified on the community's FIRMs are generally referred to as "Pre-FIRM" buildings. When the NFIP was created, the U.S. Congress recognized that insurance for Pre-FIRM buildings would be prohibitively expensive if the premiums were not subsidized by the Federal

Government. Congress also recognized that most of these floodprone buildings were built by individuals who did not have sufficient knowledge of the flood hazard to make informed decisions. The NFIP requires that full actuarial rates reflecting the complete flood risk be charged on all buildings constructed or substantially improved on or after the effective date of the initial FIRM for the community or after December 31, 1974, whichever is later. These buildings are generally referred to as "Post-FIRM" buildings.

1.2 Purpose of this Flood Insurance Study Report

This Flood Insurance Study (FIS) report revises and updates information on the existence and severity of flood hazards for the study area. The studies described in this report developed flood hazard data that will be used to establish actuarial flood insurance rates and to assist communities in efforts to implement sound floodplain management.

In some states or communities, floodplain management criteria or regulations may exist that are more restrictive than the minimum Federal requirements. Contact your State NFIP Coordinator to ensure that any higher State standards are included in the community's regulations.

1.3 Jurisdictions Included in the Flood Insurance Study Project

This FIS report covers the geographic area of Rockingham County, New Hampshire.

The jurisdictions that are included in this project area, along with the Community Identification Number (CID) for each community and the 8-digit Hydrologic Unit Codes (HUC-8) sub-basins affecting each, are shown in Table 1. The Flood Insurance Rate Map (FIRM) panel numbers that affect each community are also listed. If the flood hazard data for the community is not included in this FIS Report, the location of that data is identified.

Table 1: Listing of NFIP Jurisdictions

Community	CID	HUC-8 Sub-Basin(s)	Located on FIRM Panel(s)	If Not Included, Location of Flood Hazard Data
Atkinson, Town of	330175	01060003, 01070006	33015C0552E, 33015C0556E, 33015C0558E, 33015C0560E, 33015C0576E, 33015C0578E	—
Auburn, Town of	330176	01070006	33015C0145E, 33015C0165E, 33015C0170E, 33015C0307E, 33015C0309E, 33015C0328E, 33015C0330E, 33015C0335E	—

Table 1: Listing of NFIP Jurisdictions (continued)

Community	CID	HUC-8 Sub-Basin(s)	Located on FIRM Panel(s)	If Not Included, Location of Flood Hazard Data
Brentwood, Town of	330125	01060003	33015C0215E, 33015C0218E, 33015C0220E, 33015C0379E, 33015C0380E, 33015C0381E 33015C0382F, 33015C0383E, 33015C0384F, 33015C0401E	—
Candia, Town of	330126	01060003, 01070006	33015C0145E, 33015C0155E, 33015C0160E, 33015C0165E, 33015C0170E, 33015C0178E, 33015C0186E	—
Chester, Town of	330182	01060003, 01070006	33015C0170E, 33015C0335E, 33015C0341E, 33015C0342E, 33015C0355E, 33015C0360E, 33015C0365E	—
Danville, Town of	330199	01060003, 01070006	33015C0360E, 33015C0370E, 33015C0378E, 33015C0379E, 33015C0390E	—
Deerfield, Town of	330127	01060003, 01070006	33015C0060E, 33015C0065E, 33015C0070E, 33015C0090E, 33015C0095E, 33015C0155E, 33015C0160E, 33015C0178E, 33015C0180E, 33015C0185E	—

Table 1: Listing of NFIP Jurisdictions (continued)

Community	CID	HUC-8 Sub-Basin(s)	Located on FIRM Panel(s)	If Not Included, Location of Flood Hazard Data
Derry, Town of	330128	01060003, 01070006	33015C0328E, 33015C0330E, 33015C0336E, 33015C0337E, 33015C0339E, 33015C0341E, 33015C0342E, 33015C0343E, 33015C0344E, 33015C0363E, 33015C0365E, 33015C0527E, 33015C0529E, 33015C0531E, 33015C0532E, 33015C0533E, 33015C0551E, 33015C0552E	—
East Kingston, Town of	330203	01060003, 01070006	33015C0383E, 33015C0384E, 33015C0395E, 33015C0403F, 33015C0413E, 33015C0415E	—
Epping, Town of	330129	01060003	33015C 0185E, 33015C0192E, 33015C0194E, 33015C0205E, 33015C0210F, 33015C0215E, 33015C0218E, 33015C0220F	—
Exeter, Town of	330130	01060003	33015C0220F, 33015C0236F, 33015C0238F, 33015C0239F, 33015C0245F, 33015C0382E, 33015C0384F, 33015C0401F, 33015C0402F, 33015C0403F, 33015C0404F, 33015C0406F, 33015C0408F, 33015C0410F	—

Table 1: Listing of NFIP Jurisdictions (continued)

Community	CID	HUC-8 Sub-Basin(s)	Located on FIRM Panel(s)	If Not Included, Location of Flood Hazard Data
Fremont, Town of	330131	01060003	33015C0193E, 33015C0194E, 33015C0215E, 33015C0360E, 33015C0378E, 33015C0379E, 33015C0380E	—
Greenland, Town of	330210	01060003	33015C0235F, 33015C0245F, 33015C0255F, 33015C0265F, 33015C0270F	—
Hampstead, Town of	330211	01060003, 01070006	33015C0363E, 33015C0365E, 33015C0370E, 33015C0390E, 33015C0552E, 33015C0556E, 33015C0560E	—
Hampton Falls, Town of	330133	01060003	33015C0410F, 33015C0428F, 33015C0430F, 33015C0433F, 33015C0436F, 33015C0437F, 33015C0439F, 33015C0441F, 33015C0443F	—
Hampton, Town of	330132	01060003	33015C0408F, 33015C0410F, 33015C0420F, 33015C0428F, 33015C0436F, 33015C0437F, 33015C0438F, 33015C0439F	—
Kensington, Town of	330216	01060003, 01070006	33015C0403F, 33015C0404F, 33015C0408F, 33015C0413E, 33015C0415E, 33015C0420F	—

Table 1: Listing of NFIP Jurisdictions (continued)

Community	CID	HUC-8 Sub-Basin(s)	Located on FIRM Panel(s)	If Not Included, Location of Flood Hazard Data
Kingston, Town of	330217	01060003, 01070006	33015C0370F, 33015C0378E, 33015C0379E, 33015C0383E, 33015C0384F, 33015C0390E, 33015C0395E, 33015C0403F, 33015C0576E, 33015C0577E	—
Londonderry, Town of	330134	01070006	33015C0309E, 33015C0315E, 33015C0316E, 33015C0317E, 33015C0318E, 33015C0319E, 33015C0328E, 33015C0336E, 33015C0337E, 33015C0338E, 33015C0339E, 33015C0506E, 33015C0507E, 33015C0508E, 33015C0509E, 33015C0526E, 33015C0527E, 33015C0528E, 33015C0536E	—
New Castle, Town of	330135	01060003	33015C0278F, 33015C0279F, 33015C0286F, 33015C0287F	—
Newfields, Town of	330228	01060003	33015C0220F, 33015C0236F, 33015C0237F, 33015C0238F, 33015C0239F, 33015C0245F	—
Newington, Town of	330229	01060003	33015C0235F, 33015C0255F, 33015C0260F, 33015C0265F	—

Table 1: Listing of NFIP Jurisdictions (continued)

Community	CID	HUC-8 Sub-Basin(s)	Located on FIRM Panel(s)	If Not Included, Location of Flood Hazard Data
Newmarket, Town of	330136	01060003	33015C0210F, 33015C0220F, 33015C0230F, 33015C0235F, 33015C0236F, 33015C0237F, 33015C0245F	—
Newton, Town of	330240	01070006	33015C 0395, 33015C0577, 33015C0579, 33015C0585	—
North Hampton, Town of	330232	01060003	33015C0265F, 33015C0270F, 33015C0410F, 33015C0426F, 33015C0428F, 33015C0430F, 33015C0431F, 33015C0432F, 33015C0433F, 33015C0434F	—
Northwood, Town of	330855	01060003, 01070006	33015C0020E[1], 33015C0040E[1], 33015C0060E, 33015C0070E, 33015C0080E, 33015C0085E, 33015C0090E, 33015C0095E	—
Nottingham, Town of	330137	01060003	33015C0085E, 33015C0090E, 33015C0095E, 33015C0105E, 33015C0115E, 33015C0120E, 33015C0180E, 33015C0185E, 33015C0205E, 33015C0210F	—

Table 1: Listing of NFIP Jurisdictions (continued)

Community	CID	HUC-8 Sub-Basin(s)	Located on FIRM Panel(s)	If Not Included, Location of Flood Hazard Data
Plaistow, Town of	330138	01070006	33015C0390E, 33015C0560E, 33015C0577E, 33015C0578E, 33015C0579E, 33015C0585E, 33015C0590E	—
Portsmouth, City of	330139	01060003	33015C0255F, 33015C0259F, 33015C0260F, 33015C0265F, 33015C0269F, 33015C0270F, 33015C0278F, 33015C0286F	—
Raymond, Town of	330140	01060003	33015C0170E, 33015C0178E, 33015C0180E, 33015C0185E, 33015C0186E, 33015C0187E, 33015C0190E, 33015C0191E, 33015C0192E, 33015C0193E, 33015C0194E, 33015C0335E, 33015C0355E, 33015C0360E	—
Rye, Town of	330141	01060003	33015C0265F, 33015C0269F, 33015C0270F, 33015C0286F, 33015C0287F, 33015C0288F, 33015C0431F, 33015C0432F, 33015C 0434F, 33015C0451F, 33015C0457F, 33015C0459F, 33015C0476F, 33015C0478F	—

Table 1: Listing of NFIP Jurisdictions (continued)

Community	CID	HUC-8 Sub-Basin(s)	Located on FIRM Panel(s)	If Not Included, Location of Flood Hazard Data
Salem, Town of	330142	01070006	33015C0545E, 33015C0551E, 33015C0552E, 33015C0553E, 33015C0554E, 33015C0561E, 33015C0562E, 33015C0563E, 33015C0564E, 33015C0570E, 33015C0657E[1], 33015C0676E, 33015C0677E	—
Sandown, Town of	330191	01060003, 01070006	33015C0355E, 33015C0360E, 33015C0365E, 33015C0370E	—
Seabrook, Town of	330143	01060003	33015C0420F, 33015C0438F, 33015C0439F, 33015C0443F, 33015C0626F, 33015C0627F	—
Seabrook Beach Village District	330854	01060003	33015C0439F, 33015C0627F	—
South Hampton, Town of	330193	01060003, 01070006	33015C0395E, 33015C0413E, 33015C0415E, 33015C0420F, 33015C0585E, 33015C0601E, 33015C0602E	—
Stratham, Town of	330197	01060003	33015C0239F, 33015C0245F, 33015C0265F, 33015C0402F, 33015C0406F, 33015C0410F, 33015C0426F	—

Table 1: Listing of NFIP Jurisdictions (continued)

Community	CID	HUC-8 Sub-Basin(s)	Located on FIRM Panel(s)	If Not Included, Location of Flood Hazard Data
Windham, Town of	330144	01070006	33015C0529E, 33015C0531E, 33015C0532E, 33015C0533E, 33015C0534E, 33015C0536E, 33015C0537E, 33015C0538E, 33015C0539E, 33015C0541E, 33015C0543E, 33015C0545E, 33015C0551E, 33015C0553E, 33015C0561E	—

[1] Panel Not Printed

1.4 Considerations for using this Flood Insurance Study Report

The NFIP encourages State and local governments to implement sound floodplain management programs. To assist in this endeavor, each FIS Report provides floodplain data, which may include a combination of the following: 10-, 4-, 2-, 1-, and 0.2-percent annual chance flood elevations (the 1% annual chance flood elevation is also referred to as the Base Flood Elevation (BFE)); delineations of the 1% annual chance and 0.2% annual chance floodplains; and 1% annual chance floodway. This information is presented on the FIRM and/or in many components of the FIS Report, including Flood Profiles, Floodway Data tables, Summary of Non-Coastal Stillwater Elevations tables, and Coastal Transect Parameters tables (not all components may be provided for a specific FIS).

This section presents important considerations for using the information contained in this FIS Report and the FIRM, including changes in format and content. Figures 1, 2, and 3 present information that applies to using the FIRM with the FIS Report.

- Part or all of this FIS Report may be revised and republished at any time. In addition, part of this FIS Report may be revised by a Letter of Map Revision (LOMR), which does not involve republication or redistribution of the FIS Report. Refer to Section 6.5 of this FIS Report for information about the process to revise the FIS Report and/or FIRM.

  It is, therefore, the responsibility of the user to consult with community officials by contacting the community repository to obtain the most current FIS Report components. Communities participating in the NFIP have established repositories of flood hazard data for floodplain management and flood insurance

purposes. Community map repository addresses are provided in Table 31, "Map Repositories," within this FIS Report.

- New FIS Reports are frequently developed for multiple communities, such as entire counties. A countywide FIS Report incorporates previous FIS Reports for individual communities and the unincorporated area of the county (if not jurisdictional) into a single document and supersedes those documents for the purposes of the NFIP.

  The initial Countywide FIS Report for Rockingham County became effective on May 17, 2005. Refer to Table 28 for information about subsequent revisions to the FIRMs.

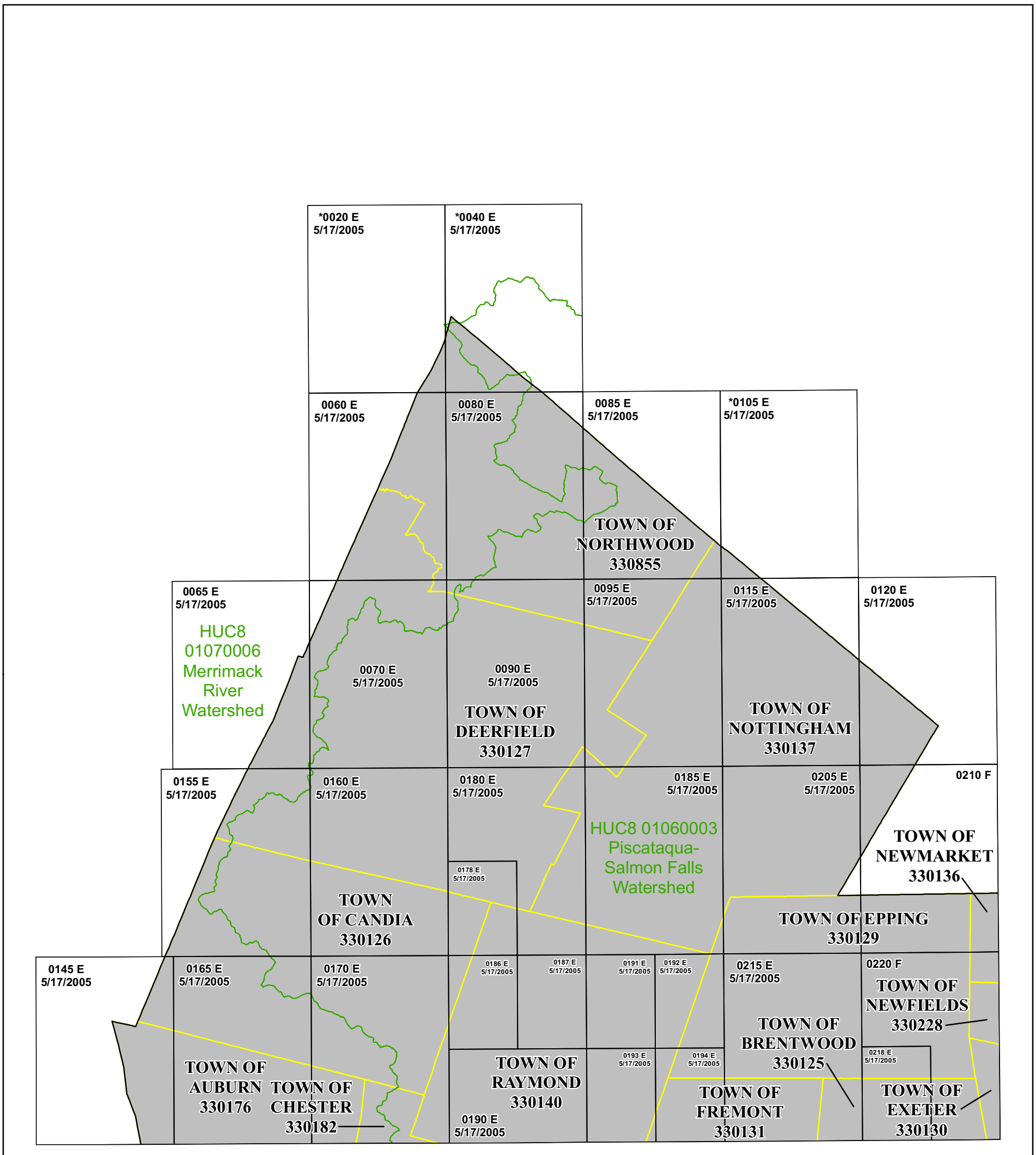
- Selected FIRM panels for the community may contain information (such as floodways and cross sections) that was previously shown separately on the corresponding Flood Boundary and Floodway Map (FBFM) panels. In addition, former flood hazard zone designations have been changed as follows:

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

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

The FIRM Panel Index in Figure 1 shows the overall FIRM panel layout within Rockingham County, and also displays the panel number and effective date for each FIRM panel in the county. Other information shown on the FIRM Panel Index includes community boundaries, flooding sources, watershed boundaries, and United States Geological Survey (USGS) Hydrologic Unit Code – 8 (HUC-8) codes.

Figure 1: FIRM Panel Index



1 inch = 2 miles

Miles

0 1 2 4

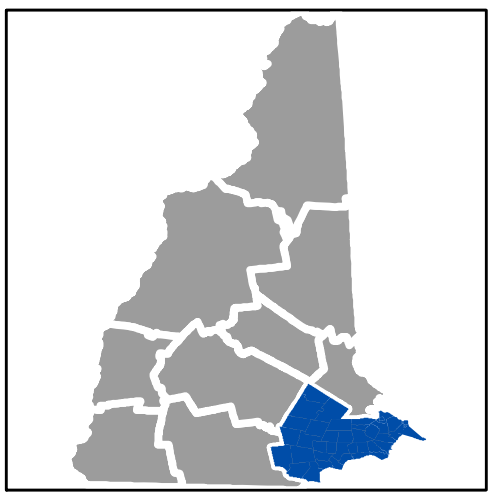
Map Projection:
New Hampshire State Plane Feet
FIPS Zone 2800
NAD1983

THE INFORMATION DEPICTED ON THIS MAP AND SUPPORTING DOCUMENTATION ARE ALSO AVAILABLE IN DIGITAL FORMAT AT

HTTP://MSC.FEMA.GOV

SEE FIS REPORT FOR ADDITIONAL INFORMATION

* PANEL NOT PRINTED - NO SPECIAL FLOOD HAZARD AREAS



NATIONAL FLOOD INSURANCE PROGRAM

FLOOD INSURANCE RATE MAP INDEX

ROCKINGHAM COUNTY, NEW HAMPSHIRE
(ALL JURISDICTIONS)

PANELS PRINTED:

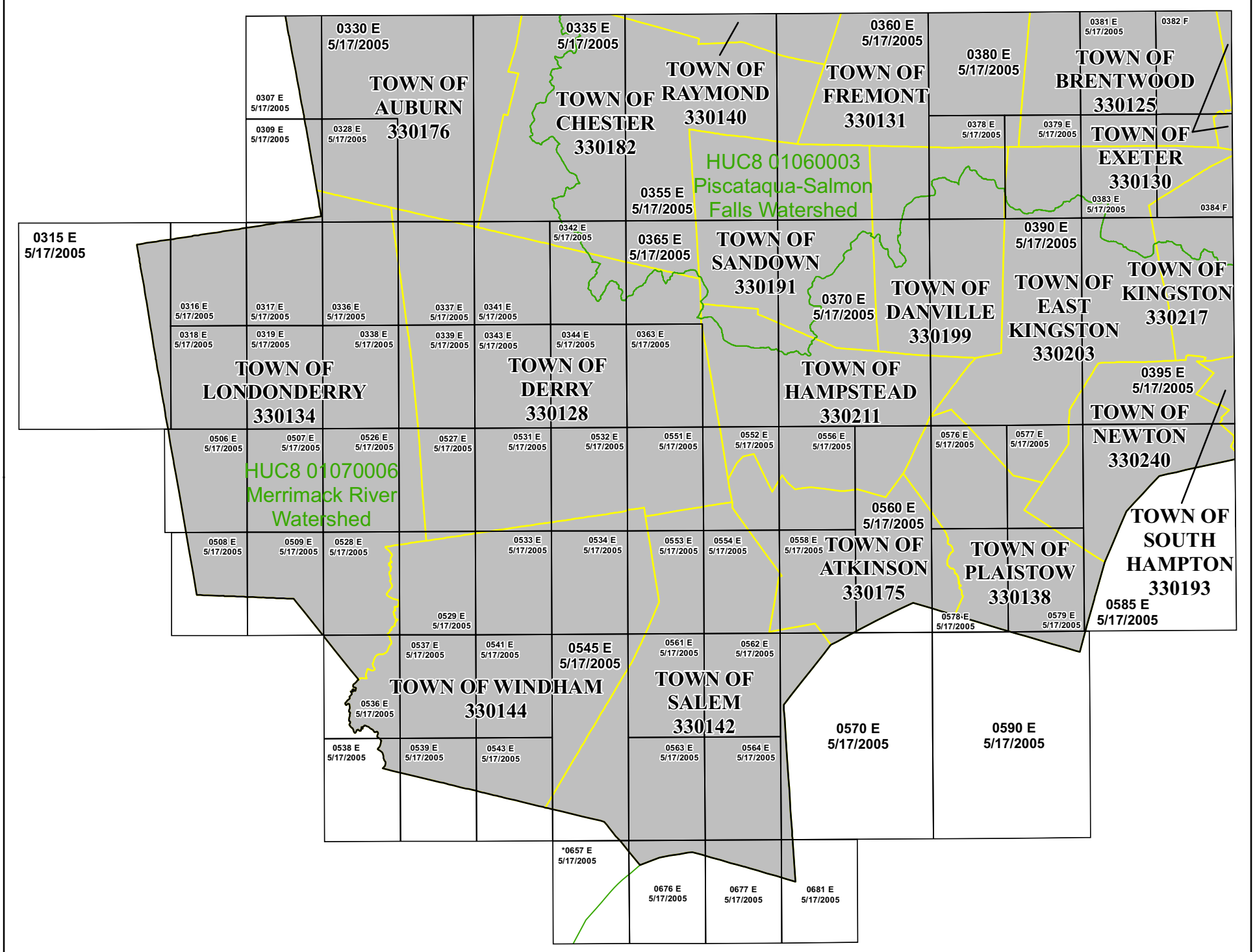
0060, 0065, 0070, 0080, 0085, 0090, 0095, 0115, 0120, 0145, 0155, 0160, 0165, 0170, 0178, 0180, 0185, 0186, 0187, 0190, 0191, 0192, 0193, 0194, 0205, 0210, 0215, 0218, 0220

MAP NUMBER
33015CIND1B

MAP REVISED

FEMA

Figure 1: FIRM Panel Index (continued)



1 inch = 3 miles

N

0 1 2 4 Miles

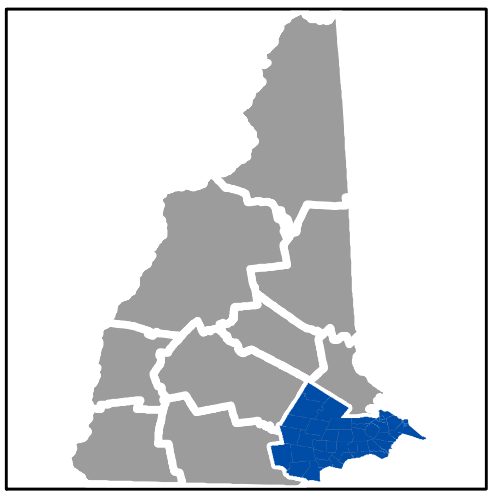
Map Projection:
New Hampshire State Plane Feet
FIPS Zone 2800
NAD1983

THE INFORMATION DEPICTED ON THIS MAP AND SUPPORTING DOCUMENTATION ARE ALSO AVAILABLE IN DIGITAL FORMAT AT

HTTP://MSC.FEMA.GOV

SEE FIS REPORT FOR ADDITIONAL INFORMATION

* PANEL NOT PRINTED - NO SPECIAL FLOOD HAZARD AREAS



NATIONAL FLOOD INSURANCE PROGRAM

FLOOD INSURANCE RATE MAP INDEX

ROCKINGHAM COUNTY, NEW HAMPSHIRE
(ALL JURISDICTIONS)

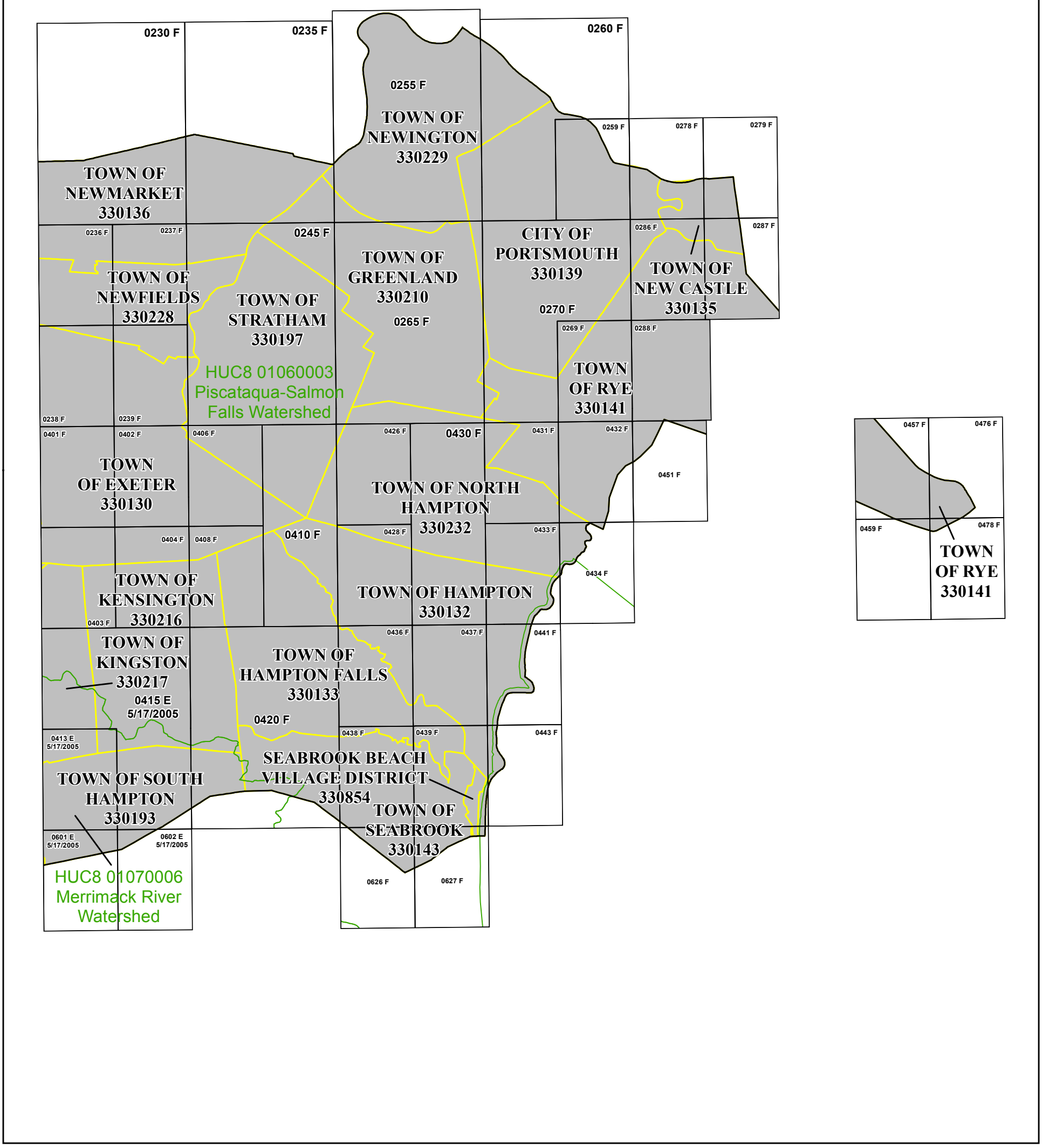
PANELS PRINTED:

0307, 0309, 0315, 0316, 0317, 0318, 0319, 0328, 0330, 0335, 0336, 0337, 0338, 0339, 0341, 0342, 0343, 0344, 0355, 0360, 0363, 0365, 0370, 0378, 0379, 0380, 0381, 0382, 0383, 0384, 0390, 0395, 0506, 0507, 0508, 0509, 0526, 0527, 0528, 0529, 0531, 0532, 0533, 0534, 0536, 0537, 0538, 0539, 0541, 0543, 0545, 0551, 0552, 0553, 0554, 0556, 0558, 0560, 0561, 0562, 0563, 0564, 0570, 0576, 0577, 0578, 0579, 0585, 0590, 0676, 0677, 0681

MAP NUMBER
33015CIND2B

MAP REVISED

Figure 1: FIRM Panel Index (continued)



1 inch = 2 miles

N

0 1 2 4 Miles

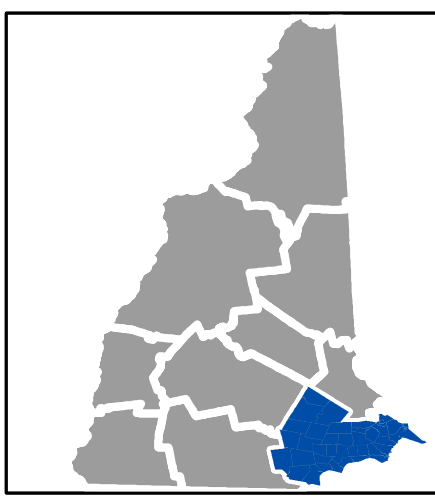
Map Projection:
New Hampshire State Plane Feet
FIPS Zone 2800
NAD1983

THE INFORMATION DEPICTED ON THIS MAP AND SUPPORTING DOCUMENTATION ARE ALSO AVAILABLE IN DIGITAL FORMAT AT

HTTP://MSC.FEMA.GOV

SEE FIS REPORT FOR ADDITIONAL INFORMATION

* PANEL NOT PRINTED - NO SPECIAL FLOOD HAZARD AREAS



NATIONAL FLOOD INSURANCE PROGRAM

FLOOD INSURANCE RATE MAP INDEX

ROCKINGHAM COUNTY, NEW HAMPSHIRE
(ALL JURISDICTIONS)

PANELS PRINTED:

0230, 0235, 0236, 0237, 0238, 0239, 0245, 0255, 0259, 0260, 0265, 0269, 0270, 0278, 0279, 0286, 0287, 0288, 0401, 0402, 0403, 0404, 0406, 0408, 0410, 0413, 0415, 0420, 0426, 0428, 0430, 0431, 0432, 0433, 0434, 0436, 0437, 0438, 0439, 0441, 0443, 0451, 0457, 0459, 0476, 0478, 0601, 0602, 0626, 0627

FEMA

MAP NUMBER
33015CIND3B

MAP REVISED

Each FIRM panel may contain specific notes to the user that provide additional information regarding the flood hazard data shown on that map. However, the FIRM panel does not contain enough space to show all the notes that may be relevant in helping to better understand the information on the panel. Figure 2 contains the full list of these notes.

Figure 2: FIRM Notes to Users

NOTES TO USERS

For information and questions about this map, available products associated with this FIRM including historic versions of this FIRM, how to order products, or the National Flood Insurance Program in general, please call the FEMA Map Information eXchange at 1-877-FEMA-MAP (1-877-336-2627) or visit the FEMA Flood Map Service Center website at msc.fema.gov. Available products may include previously issued Letters of Map Change, a Flood Insurance Study Report, and/or digital versions of this map. Many of these products can be ordered or obtained directly from the website. Users may determine the current map date for each FIRM panel by visiting the FEMA Flood Map Service Center website or by calling the FEMA Map Information eXchange.

Communities annexing land on adjacent FIRM panels must obtain a current copy of the adjacent panel as well as the current FIRM Panel Index. These may be ordered directly from the Flood Map Service Center at the number listed above.

For community and countywide map dates, refer to Table 28 in this FIS Report.

To determine if flood insurance is available in the community, contact your insurance agent or call the National Flood Insurance Program at 1-800-638-6620.

PRELIMINARY FIS REPORT: FEMA maintains information about map features, such as street locations and names, in or near designated flood hazard areas. Requests to revise information in or near designated flood hazard areas may be provided to FEMA during the community review period, at the final Consultation Coordination Officer's meeting, or during the statutory 90-day appeal period. Approved requests for changes will be shown on the final printed FIRM

The map is for use in administering the NFIP. It may not identify all areas subject to flooding, particularly from local drainage sources of small size. Consult the community map repository to find updated or additional flood hazard information.

BASE FLOOD ELEVATIONS: For more detailed information in areas where Base Flood Elevations (BFEs) and/or floodways have been determined, consult the Flood Profiles and Floodway Data and/or Summary of Non-Coastal Stillwater Elevations tables within this FIS Report. Use the flood elevation data within the FIS Report in conjunction with the FIRM for construction and/or floodplain management.

Coastal Base Flood Elevations shown on the map apply only landward of 0.0' North American Vertical Datum of 1988 (NAVD88). Coastal flood elevations are also provided in the Coastal Transect Parameters table in the FIS Report for this jurisdiction. Elevations shown in the Coastal Transect Parameters table should be used for construction and/or floodplain management purposes when they are higher than the elevations shown on the FIRM.

FLOODWAY INFORMATION: Boundaries of the floodways were computed at cross sections and interpolated between cross sections. The floodways were based on hydraulic considerations with regard to requirements of the National Flood Insurance Program. Floodway widths and other pertinent floodway data are provided in the FIS Report for this jurisdiction.

Figure 2: FIRM Notes to Users (continued)

FLOOD CONTROL STRUCTURE INFORMATION: Certain areas not in Special Flood Hazard Areas may be protected by flood control structures. Refer to Section 4.3 "Non-Levee Flood Protection Measures" of this FIS Report for information on flood control structures for this jurisdiction.

PROJECTION INFORMATION: The projection used in the preparation of the map was North American Datum of 1983 (NAD83) New Hampshire State Plane Feet, FIPS Zone 2800, Transverse Mercator. The horizontal datum was NAD83, Spheroid GRS 1980. Differences in datum, spheroid, projection or State Plane zones used in the production of FIRMs for adjacent jurisdictions may result in slight positional differences in map features across jurisdiction boundaries. These differences do not affect the accuracy of the FIRM.

ELEVATION DATUM: Flood elevations on the FIRM are referenced to the North American Vertical Datum of 1988 or National Geodetic Vertical Datum of 1929. These flood elevations must be compared to structure and ground elevations referenced to the same vertical datum. For information regarding conversion between the National Geodetic Vertical Datum of 1929 and the North American Vertical Datum of 1988, visit the National Geodetic Survey website at www.ngs.noaa.gov or contact the National Geodetic Survey at the following address:

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

Local vertical monuments may have been used to create the map. To obtain current monument information, please contact the appropriate local community listed in Table 31 of this FIS Report.

BASE MAP INFORMATION: Base map information shown on this FIRM was provided in digital format by the United States Geological Survey (USGS). This information was derived from digital orthophotography at a 1-foot resolution from photography dated 2015.

The map reflects more detailed and up-to-date stream channel configurations than those shown on the previous FIRM for these jurisdictions. The floodplains and floodways that were transferred from the previous FIRM may have been adjusted to conform to these new stream channel configurations. As a result, the Flood Profiles and Floodway Data tables may reflect stream channel distances that differ from what is shown on the map.

Corporate limits shown on the map are based on the best data available at the time of publication. Because changes due to annexations or de-annexations may have occurred after the map was published, map users should contact appropriate community officials to verify current corporate limit locations.

Figure 2: FIRM Notes to Users (continued)

NOTES FOR FIRM INDEX

REVISIONS TO INDEX: As new studies are performed and FIRM panels are updated within Rockingham County, New Hampshire, corresponding revisions to the FIRM Panel Index will be incorporated within the FIS Report to reflect the effective dates of those panels. Please refer to Table 28 of this FIS Report to determine the most recent FIRM revision date for each community. The most recent FIRM panel effective date will correspond to the most recent index date.

ATTENTION: The corporate limits shown are based on the best information available at the time of publication of this FIRM Panel Index. As such, they may be more current than those shown on FIRM panels issued before April of 2009.

SPECIAL NOTES FOR SPECIFIC FIRM PANELS

This Notes to Users section was created specifically for Rockingham County, NH, effective XXXX, XXXX.

ELEVATION DATUM: There are two flood elevations shown on the FIRM that are referenced to the North American Vertical Datum of 1988 (NAVD) or National Geodetic Vertical Datum of 1929 (NVGD). NAVD is shown in all areas in Rockingham County that are within the Piscataqua/Salmon Falls Watershed and NGVD is shown in all areas that are within the Merrimack River Watershed.

LIMIT OF MODERATE WAVE ACTION: Zone AE has been divided by a Limit of Moderate Wave Action (LiMWA). The LiMWA represents the approximate landward limit of the 1.5-foot breaking wave. The effects of wave hazards between Zone VE and the LiMWA (or between the shoreline and the LiMWA for areas where Zone VE is not identified) will be similar to, but less severe than, those in Zone VE.

FLOOD RISK REPORT: A Flood Risk Report (FRR) may be available for many of the flooding sources and communities referenced in this FIS Report. The FRR is provided to increase public awareness of flood risk by helping communities identify the areas within their jurisdictions that have the greatest risks. Although non-regulatory, the information provided within the FRR can assist communities in assessing and evaluating mitigation opportunities to reduce these risks. It can also be used by communities developing or updating flood risk mitigation plans. These plans allow communities to identify and evaluate opportunities to reduce potential loss of life and property. However, the FRR is not intended to be the final authoritative source of all flood risk data for a project area; rather, it should be used with other data sources to paint a comprehensive picture of flood risk.

Each FIRM panel contains an abbreviated legend for the features shown on the maps. However, the FIRM panel does not contain enough space to show the legend for all map features. Figure 3 shows the full legend of all map features. Note that not all of these features may appear on the FIRM panels in Rockingham County.

Figure 3: Map Legend for FIRM

SPECIAL FLOOD HAZARD AREAS: *The 1% annual chance flood, also known as the base flood or 100-year flood, has a 1% chance of happening or being exceeded each year. Special Flood Hazard Areas are subject to flooding by the 1% annual chance flood. The Base Flood Elevation is the water surface elevation of the 1% annual chance flood. The floodway is the channel of a stream plus any adjacent floodplain areas that must be kept free of encroachment so that the 1% annual chance flood can be carried without substantial increases in flood heights. See note for specific types. If the floodway is too narrow to be shown, a note is shown.*

	Special Flood Hazard Areas subject to inundation by the 1% annual chance flood (Zones A, AE, AH, AO, AR, A99, V and VE).
Zone A	The flood insurance rate zone that corresponds to the 1% annual chance floodplains. No base (1% annual chance) flood elevations (BFEs) or depths are shown within this zone.
Zone AE	The flood insurance rate zone that corresponds to the 1% annual chance floodplains. Base flood elevations derived from the hydraulic analyses are shown within this zone, either at cross section locations or as static whole-foot elevations that apply throughout the zone.
Zone AH	The flood insurance rate zone that corresponds to the areas of 1% annual chance shallow flooding (usually areas of ponding) where average depths are between 1 and 3 feet. Whole-foot BFEs derived from the hydraulic analyses are shown at selected intervals within this zone.
Zone AO	The flood insurance rate zone that corresponds to the areas of 1% annual chance shallow flooding (usually sheet flow on sloping terrain) where average depths are between 1 and 3 feet. Average whole-foot depths derived from the hydraulic analyses are shown within this zone.
Zone AR	The flood insurance rate zone that corresponds to areas that were formerly protected from the 1% annual chance flood by a flood control system that was subsequently decertified. Zone AR indicates that the former flood control system is being restored to provide protection from the 1% annual chance or greater flood.
Zone A99	The flood insurance rate zone that corresponds to areas of the 1% annual chance floodplain that will be protected by a Federal flood protection system where construction has reached specified statutory milestones. No base flood elevations or flood depths are shown within this zone.
Zone V	The flood insurance rate zone that corresponds to the 1% annual chance coastal floodplains that have additional hazards associated with storm waves. Base flood elevations are not shown within this zone.
Zone VE	Zone VE is the flood insurance rate zone that corresponds to the 1% annual chance coastal floodplains that have additional hazards associated with storm waves. Base flood elevations derived from the coastal analyses are shown within this zone as static whole-foot elevations that apply throughout the zone.

Figure 3: Map Legend for FIRM (continued)

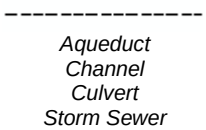
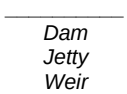
	Regulatory Floodway determined in Zone AE.
	Non-encroachment zone (see Section 2.4 of this FIS Report for more information)
OTHER AREAS OF FLOOD HAZARD	
	Shaded Zone X: Areas of 0.2% annual chance flood hazards and areas of 1% annual chance flood hazards with average depths of less than 1 foot or with drainage areas less than 1 square mile.
	Future Conditions 1% Annual Chance Flood Hazard – Zone X: The flood insurance rate zone that corresponds to the 1% annual chance floodplains that are determined based on future-conditions hydrology. No base flood elevations or flood depths are shown within this zone.
	Area with Reduced Flood Risk due to Levee: Areas where an accredited levee, dike, or other flood control structure has reduced the flood risk from the 1% annual chance flood.
OTHER AREAS	
	Zone D (Areas of Undetermined Flood Hazard): The flood insurance rate zone that corresponds to unstudied areas where flood hazards are undetermined, but possible.
	Unshaded Zone X: Areas of minimal flood hazard.
FLOOD HAZARD AND OTHER BOUNDARY LINES	
(ortho) (vector)	Flood Zone Boundary (white line on ortho-photography-based mapping; gray line on vector-based mapping)
	Limit of Study
	Jurisdiction Boundary
	Limit of Moderate Wave Action (LiMWA): Indicates the inland limit of the area affected by waves greater than 1.5 feet
GENERAL STRUCTURES	
	Aqueduct, Channel, Culvert, or Storm Sewer
	Dam, Jetty, Weir

Figure 3: Map Legend for FIRM (continued)

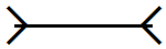
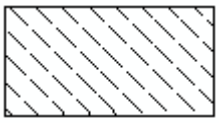
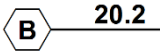
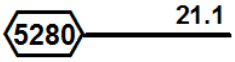
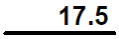
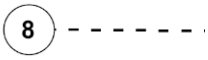
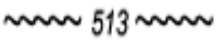
	Levee, Dike or Floodwall
 *Bridge*	Bridge
COASTAL BARRIER RESOURCES SYSTEM (CBRS) AND OTHERWISE PROTECTED AREAS (OPA): *CBRS areas and OPAs are normally located within or adjacent to Special Flood Hazard Areas.*	
 **CBRS AREA 09/30/2009**	Coastal Barrier Resources System Area: Labels are shown to clarify where this area shares a boundary with an incorporated area or overlaps with the floodway.
 **OTHERWISE PROTECTED AREA 09/30/2009**	Otherwise Protected Area
REFERENCE MARKERS	
	River Mile Markers
CROSS SECTION & TRANSECT INFORMATION	
	Lettered Cross Section with Regulatory Water Surface Elevation (BFE)
	Numbered Cross Section with Regulatory Water Surface Elevation (BFE)
	Unlettered Cross Section with Regulatory Water Surface Elevation (BFE)
	Coastal Transect
	Profile Baseline: Indicates the modeled flow path of a stream and is shown on FIRM panels for all valid studies with profiles or otherwise established base flood elevation.
	Coastal Transect Baseline: Used in the coastal flood hazard model to represent the 0.0-foot elevation contour and the starting point for the transect and the measuring point for the coastal mapping.
	Base Flood Elevation Line (shown for flooding sources for which no cross sections or profile are available)

Figure 3: Map Legend for FIRM (continued)

ZONE AE (EL 16)	Static Base Flood Elevation value (shown under zone label)
ZONE AO (DEPTH 2)	Zone Designation with Depth
ZONE AO (DEPTH 2) (VEL 15 FPS)	Zone Designation with Depth and Velocity
BASE MAP FEATURES	
Lamprey River	River, Stream or Other Hydrographic Feature
	Interstate Highway
	U.S. Highway
	State Highway
	County Highway
	Street, Road, Avenue Name, or Private Drive if shown on Flood Profile
	Railroad
	Horizontal Reference Grid Line
	Horizontal Reference Grid Ticks
+	Secondary Grid Crosshairs
Land Grant	Name of Land Grant
7	Section Number
R. 43 W. T. 22 N.	Range, Township Number
$^{42}76^{000m}$E	Horizontal Reference Grid Coordinates (UTM)
365000 FT	Horizontal Reference Grid Coordinates (State Plane)
80° 16’ 52.5”	Corner Coordinates (Latitude, Longitude)

SECTION 2.0 – FLOODPLAIN MANAGEMENT APPLICATIONS

2.1 Floodplain Boundaries

To provide a national standard without regional discrimination, the 1% annual chance (100-year) flood has been adopted by FEMA as the base flood for floodplain management purposes. The 0.2% annual chance (500-year) flood is employed to indicate additional areas of flood hazard in the community.

Each flooding source included in the project scope has been studied and mapped using professional engineering and mapping methodologies that were agreed upon by FEMA and Rockingham County as appropriate to the risk level. Flood risk is evaluated based on factors such as known flood hazards and projected impact on the built environment. Engineering analyses were performed for each studied flooding source to calculate its 1% annual chance flood elevations; elevations corresponding to other floods (e.g. 10, 4, 2, 0.2-percent annual chance, etc.) may have also been computed for certain flooding sources. Engineering models and methods are described in detail in Section 5.0 of this FIS Report. The modeled elevations at cross sections were used to delineate the floodplain boundaries on the FIRM; between cross sections, the boundaries were interpolated using elevation data from various sources. More information on specific mapping methods is provided in Section 6.0 of this FIS Report.

Depending on the accuracy of available topographic data (Table 23), study methodologies employed (Section 5.0), and flood risk, certain flooding sources may be mapped to show both the 1% and 0.2% annual chance floodplain boundaries, regulatory water surface elevations (BFEs), and/or a regulatory floodway. Similarly, other flooding sources may be mapped to show only the 1% annual chance floodplain boundary on the FIRM, without published water surface elevations. In cases where the 1% and 0.2% annual chance floodplain boundaries are close together, only the 1% annual chance floodplain boundary is shown on the FIRM. Figure 3, “Map Legend for FIRM”, describes the flood zones that are used on the FIRMs to account for the varying levels of flood risk that exist along flooding sources within the project area. Table 2 and Table 3 indicate the flood zone designations for each flooding source and each community within Rockingham County.

Table 2, “Flooding Sources Included in this FIS Report,” lists each flooding source, including its study limits, affected communities, mapped zone on the FIRM, and the completion date of its engineering analysis from which the flood elevations on the FIRM and in the FIS Report were derived. Descriptions and dates for the latest hydrologic and hydraulic analyses of the flooding sources are shown in Table 13. Floodplain boundaries for these flooding sources are shown on the FIRM (published separately) using the symbology described in Figure 3. On the map, the 1% annual chance floodplain corresponds to the SFHAs. The 0.2% annual chance floodplain shows areas that, although out of the regulatory floodplain, are still subject to flood hazards.

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 procedures to remove these areas from the SFHA are described in Section 6.5 of this FIS Report.

Table 2: Flooding Sources Included in this FIS Report

Flooding Source	Community	Downstream Limit	Upstream Limit	HUC-8 Sub-Basin(s)	Length (mi) (streams or coastlines)	Area (mi^2) (estuaries or ponding)	Floodway (Y/N)	Zone shown on FIRM	Date of Analysis
Adams Pond	Derry, Town of	Entire Shoreline	Entire Shoreline	01070006		0.04	N	AE	2005
Arlington Mill Reservoir	Salem, Town of	Entire Shoreline	Entire Shoreline	01070006		0.4	N	AE	2005
Ash Brook	Exeter, Town of; Hampton, Town of; Hampton Falls, Town of; Stratham, Town of	At Taylor River confluence	Points of one square mileage of drainage area	01060003	0.4		N	A	2013
Atlantic Ocean	Hampton, Town of; New Castle, Town of; North Hampton, Town of; Rye, Town of; Seabrook, Town of	State Boundary with Massachusetts	State Boundary with Maine	01060003	13		N	VE	2013
Back Creek and Zone A Tributaries	Deerfield, Town of; Nottingham, Town of	At confluence of Mile Brook	Points of one square mileage of drainage area	01060003	9		N	A	2017
Bailey Brook	Rye, Town of	At confluence of Burke Pond	Points of one square mileage of drainage area	01060003	2.2		N	A	2013
Ballard Pond	Derry, Town of	Entire Shoreline	Entire Shoreline	01070006		0.2	N	AE	2005
Barton Brook	Greenland, Town of; North Hampton, Town of	At confluence of Winnicut River	Points of one square mileage of drainage area	01060003	0.2		N	A	2013
Bean River and Zone A Tributaries	Deerfield, Town of; Nottingham, Town of; Northwood, Town of	At confluence of North River	Approximately 1,500 feet above upstream of confluence with Stream281	01060003	6.4		N	A	2017
Bear Brook	Deerfield; Town of	Merrimack County Boundary	Approximately 0.5 miles upstream of Spruce Pond Road	01070006	2.8		N	A	2005

Table 2: Flooding Sources Included in this FIS Report (continued)

Flooding Source	Community	Downstream Limit	Upstream Limit	HUC-8 Sub-Basin(s)	Length (mi) (streams or coastlines)	Area (mi^2) (estuaries or ponding)	Floodway (Y/N)	Zone shown on FIRM	Date of Analysis
Beaver Brook and Zone A Tributaries	Derry, Town of; Londonderry, Town of; Windham, Town of	Hillsborough County Boundary	At confluence of Lower Beaver Lake	01070006	12.4		Y	AE	2005
Beaver Lake and Zone A Tributaries	Derry, Town of	Entire Shoreline	Entire Shoreline	01070006		0.3	N	AE	2005
Beech Hill Brook	Exeter, Town of	At confluence of Fresh River	Points of one square mileage of drainage area	01060003	0.2		N	A	2013
Berry's Brook	Portsmouth, City of; Rye, Town of	At confluence of Seavey Creek	Points of one square mileage of drainage area	01060003	6.7		N	A	2013
Black Brook	Londonderry, Town of	Approximately 320 feet downstream of Mammoth Road	Approximately 60 feet upstream of Pillsbury Road	0107006	1.6		N	A	2005
Black Brook	Londonderry, Town of	At confluence of Beaver Brook	Approximately 320 feet downstream of Mammoth Road	0107006	2.8		Y	AE	2005
Blackwater River	Hampton, Town of; Seabrook, Town of	At confluence of Hampton River	Massachusetts/New Hampshire Corporate Limits	01060003	2.4		N	AE	2013
Bloody Brook	Exeter, Town of	At confluence of Little River	State Route 101	01060003	1.2		N	A	2013
Bow Lake	Northwood, Town of	Entire Shoreline	Strafford County Boundary	01060003		0.09	N	A	2005
Bracked Brook	Greenland, Town of	At confluence of Great Bay	Points of one square mileage of drainage area	01060003	0.9		N	A	2013
Brickyard Brook	East Kingston, Town of	At confluence of Great Brook	Points of one square mileage of drainage area	01060003	0.3		N	A	2013
Brown River	Hampton Falls, Town of; Seabrook, Town of	At confluence of Blackwater River	Springfield Terminal Powerlines	01060003	2.7		N	AE	2013

Table 2: Flooding Sources Included in this FIS Report (continued)

Flooding Source	Community	Downstream Limit	Upstream Limit	HUC-8 Sub-Basin(s)	Length (mi) (streams or coastlines)	Area (mi^2) (estuaries or ponding)	Floodway (Y/N)	Zone shown on FIRM	Date of Analysis
Bryant Brook	Atkinson, Town of; Plaistow, Town of	At confluence of Little River No. 3	At East Road	0107006	1.6		Y	AE	2005
Bryant Brook	Atkinson, Town of; Plaistow, Town of	At East Road	Points of one square mileage of drainage area	0107006	0.6		N	A	2005
Burke Pond	Rye, Town of	Entire Shoreline	Entire Shoreline	01060003		0.04	N	A	2013
Cains Brook	Seabrook, Town of	At confluence of Shepherd River	Massachusetts/New Hampshire Corporate Limits	01060003	2.6		N	A	2013
Camp Brook	Atkinson, Town of; Plaistow, Town of	At confluence of Little River No. 3	Massachusetts State Boundary	0107006	0,5		N	A	2005
Canobie Lake	Salem, Town of; Windham, Town of	Entire Shoreline	Entire Shoreline	01070006		0.6	N	A	2005
Captain Pond Brook	Salem, Town of	At confluence of Captain Pond	At Shannon Road	01070006	1.2		N	A	2005
Chapel Brook	North Hampton, Town of	At confluence of Philbrook Pond	At confluence of Little River #2	01060003			N	AE	2013
Clark Pond	Auburn, Town of	Entire Shoreline	Entire Shoreline	0107006		0.06	N	A	2005
Cobbetts Pond	Windham, Town of	Entire Shoreline	Entire Shoreline	0107006		0.47	N	A	2005
Cohas Brook	Londonderry, Town of	Approximately 190 feet downstream of Auburn Road	Town of Exeter Corporate limits	0107006	0.4		N	A	2005
Cohas Brook	Londonderry, Town of	Town of Exeter Corporate limits	Approximately 190 feet downstream of Auburn Road	0107006	1.4		Y	AE	2005
Colby Brook	Danville, Town of	At confluence of Cub Pond	Approximately 1500 feet upstream of Shadow Lake Road	0107006	2.9		N	A	2005

Table 2: Flooding Sources Included in this FIS Report (continued)

Flooding Source	Community	Downstream Limit	Upstream Limit	HUC-8 Sub-Basin(s)	Length (mi) (streams or coastlines)	Area (mi^2) (estuaries or ponding)	Floodway (Y/N)	Zone shown on FIRM	Date of Analysis
Colcord Pond	Exeter, Town of	Entire Shoreline	Entire Shoreline	01060003		0.03	N	A	2013
Cornelius Brook	North Hampton, Town of	At confluence of Winnicut River	Approximately 650 feet upstream of Lovering Road	01060003	0.3		N	AE	2013
Country Pond	Kingston, Town of; Newton, Town of	Entire Shoreline	Entire Shoreline	0107006		0.48	N	AE	2005
Cub Pond	Danville, Town of; Sandown, Town of	Entire Shoreline	Entire Shoreline	0107006		0.09	N	A	2005
Cunningham Brook	Derry, Town of	At confluence of Winnicut River	At Hampstead Road	0107006	1.7		N	A	2005
Cunningham Brook	Derry, Town of	At Hampstead Road	Approximately 650 feet upstream of Lovering Road	0107006	0.8		Y	AE	2005
Don Pond	Deerfield, Town of	Entire Shoreline	Entire Shoreline	01070006			N	A	2005
Dearborn Brook	North Hampton, Town of; Stratham, Town of	Rollins Farm Drive	Walnut Avenue	01060003	0.8		N	A	2013
Dodge Ponds	Hampton Falls, Town of	Entire Shoreline	Entire Shoreline	01060003		0.004	N	A	2013
Drakes River	Hampton, Town of; Hampton Falls, Town of	At confluence of Taylor River	Approximately 650 feet downstream of Towle Farm Road	01060003	1.8		N	AE	2013
Drew Brook	Derry, Town of	At confluence of Island Pond	At confluence of Cunningham Brook	0107006	1.6		Y	AE	2005
Dudley Brook	Exeter, Town of; Brentwood, Town of	Approximately 700 feet above North Road	At North Road	01060003	2.5		N	A	2017
Dudley Brook	Exeter, Town of; Brentwood, Town of	Town of Exeter Corporate limits	Approximately 600ft upstream of North Road	01060003	4.0		Y	AE	2017

Table 2: Flooding Sources Included in this FIS Report (continued)

Flooding Source	Community	Downstream Limit	Upstream Limit	HUC-8 Sub-Basin(s)	Length (mi) (streams or coastlines)	Area (mi^2) (estuaries or ponding)	Floodway (Y/N)	Zone shown on FIRM	Date of Analysis
Dudley Brook 2	Nottingham, Town of; Raymond, Town of	At confluence of Lamprey River	Points of one square mileage of drainage area	01060003	2.4		N	A	2017
Eel Pond	Rye, Town of	Entire Shoreline	Entire Shoreline	01060003		0.16	N	AE	2013
Exeter Reservoir	Exeter, Town of	Entire Shoreline	Entire Shoreline	01060003		0.08	N	A	2013
Exeter River and Zone A Tributaries	Fremont, Town of;	Approximately 900 feet miles upstream of confluence with Stream 1001	Approximately 300 feet downstream of the Raymond - Fremont Town boundary	01060003	8.9		N	A	2017
Exeter River and Zone A Tributaries	Chester, Town of; Danville, Town of; Fremont, Town of; Sandown, Town of	Approximately 1000 feet miles upstream of the Raymond - Chester Town boundary	Points of one square mileage of drainage area	01060003	15.8		N	A	2017
Exeter River	Exeter, Town of;	At String Bridge	At Exeter – Brentwood Town boundary	01060003	8.3		Y	AE	2013
Exeter River	Brentwood, Town of;; Fremont, Town of;	At Exeter – Brentwood Town boundary	Approximately 900 feet miles upstream of confluence with Stream 1001	01060003	8.5		Y	AE	2017
Exeter River	Chester, Town of; Fremont, Town of; Raymond, Town of;	Approximately 300 feet downstream of the Raymond - Fremont Town boundary	Approximately 1000 feet miles upstream of the Raymond - Chester Town boundary	01060003	7.4		Y	AE	2017
Ezekial Pond	Derry, Town of	Entire Shoreline	Entire Shoreline	0107006		0.02	N	A	2005
Fardway Brook	Chester, Town of; Raymond, Town of	At confluence of Exeter River	Approximately 800ft upstream of corporate limit with Town of Chester	01060003	6.6		N	A	2017
Farm Brook	Seabrook, Town of	At confluence of Hunts Island Creek	Approximately 180ft downstream of Dows Lane	01060003	0.8		N	AE	2013

Table 2: Flooding Sources Included in this FIS Report (continued)

Flooding Source	Community	Downstream Limit	Upstream Limit	HUC-8 Sub-Basin(s)	Length (mi) (streams or coastlines)	Area (mi^2) (estuaries or ponding)	Floodway (Y/N)	Zone shown on FIRM	Date of Analysis
Flatrock Brook	Derry, Town of; Windham, Town of	At confluence of Seavey Pond	At confluence of Ezekial Pond	0107006	2.9		N	A	2005
Flatrock Brook	Windham, Town of	At confluence of Shadow Lake	At confluence of Seavey Pond	0107006	1.7		Y	AE	2005
Follets Brook	Newmarket, Town of	At confluence of Piscassic River	Strafford County Boundary	01060003	0.6		N	A	2013
Foss Brook	Greenland, Town of	At confluence of Great Bay	Approximately 220ft downstream of Great Bay Road	01060003	1.5		N	A	2013
Fresh River	Brentwood, Town of; Epping, Town of; Exeter, Town of;	At approximately 150 feet downstream of the Epping-Exeter boundary	Points of one square mileage of drainage area	01060003	2.7		N	A	2017
Garland Brook	North Hampton, Town of	At confluence of Little River #2	Woodland Road	01060003	0.9		N	AE	2013
Golden Brook	Windham, Town of	Hillsborough County Boundary	At confluence of Moekel Pond	01070006	3.7		Y	AE	2005
Grapevine Run	Hampton, Town of; Hampton Falls, Town of	At confluence of Taylor River	Points of one square mileage of drainage area	01060003	0.7		N	A	2013
Grassy Brook	South Hampton, Town of	At confluence of Taylor River	Massachusetts State Boundary	01070006	2.3		N	A	2005
Great Bay	Greenland, Town of; Newington, Town of; Newmarket, Town of; Stratham, Town of	At confluence of Piscataqua River	At confluence of Squamscott River	01060003	4.6	21.4	N	AE	2013
Great Brook	Exeter, Town of; East Kingston, Town of; Kensington, Town of	At confluence of Exeter River	Points of one square mileage of drainage area	01060003	5.6		N	A	2017

Table 2: Flooding Sources Included in this FIS Report (continued)

Flooding Source	Community	Downstream Limit	Upstream Limit	HUC-8 Sub-Basin(s)	Length (mi) (streams or coastlines)	Area (mi^2) (estuaries or ponding)	Floodway (Y/N)	Zone shown on FIRM	Date of Analysis
Great Meadows Brook	Kensington, Town of	At confluence of Exeter River	Points of one square mileage of drainage area	01060003	1.1		N	A	2017
Great Pond	Kingston, Town of,	Entire Shoreline	Entire Shoreline	0107006		0.42	N	AE	2005
Griffin Brook	Deerfield, Town of,	Merrimack County Boundary	Approximately 0.3 miles downstream of James Road	0107006	0.9		N	A	2005
Halfmoon Pond	Kingston, Town of,	Entire Shoreline	Entire Shoreline	0107006		0.03	N	A	2005
Hall Mtn Marsh	Candia, Town of	Merrimack County Boundary	Town of Deerfield Corporate limits	01070006	0.3		N	A	2005
Hampton Falls River	Hampton Falls, Town of; Seabrook, Town of	At confluence with Exeter River	Confluence with Great Brook	01060003	4.5		N	A	2013
Hampton River	Hampton, Town of; Hampton Falls, Town of	Outlet into Atlantic Ocean	At confluence of Taylor River	01060003	4.1		N	AE	2013
Harantis Lake	Chester, Town of	Entire Shoreline	Entire Shoreline	0107006		0.03	N	A	2005
Hartford Brook	Deerfield, Town of	At confluence with Lamprey River	At Mudd Pond	01060003	7.5		N	A	2017
Harvey Lake	Northwood, Town of	Entire Shoreline	Entire Shoreline	0107006		0.02	N	A	2005
Hidden Valley Brook	Londonderry, Town of; Windham, Town of	Approximately 120 feet downstream of Londonderry Road	At Gertrude Road	01070006	0.8		N	A	2005
Hidden Valley Brook	Londonderry, Town of; Windham, Town of	At confluence of Beaver Brook	Approximately 120 feet downstream of Londonderry Road	01070006	1.8		Y	AE	2005
Hill Brook	Hampstead, Town of	At Sherry Lane	At Route 111	01070006	0.4		N	AE	2005

Table 2: Flooding Sources Included in this FIS Report (continued)

Flooding Source	Community	Downstream Limit	Upstream Limit	HUC-8 Sub-Basin(s)	Length (mi) (streams or coastlines)	Area (mi^2) (estuaries or ponding)	Floodway (Y/N)	Zone shown on FIRM	Date of Analysis
Hittytity Brook	Salem, Town of	At confluence of Shadow Lake	At Millville Street	0107006	2.0		N	A	2005
Hodges Mill Pond	Atkinson, Town of	Entire Shoreline	Entire Shoreline	0107006		0.004	N	A	2005
Hog Hill Brook	Atkinson, Town of	Town of Salem Corporate limits	At Island Pond Road	01070006	1.7		N	AE	2005
Hog Hill Brook	Salem, Town of	At confluence of Providence Hill Brook	Town of Atkinson Corporate limits	01070006	0.4		N	A	2005
Hog Hill Pond	Hampstead, Town of	Entire Shoreline	Entire Shoreline	0107006		0.01	N	A	2005
Hoods Pond	Derry, Town of	Entire Shoreline	Entire Shoreline	0107006		0.008	Y	AE	2005
Hook Brook	Auburn, Town of	At confluence of Little Massabesic Lake	Approximately 325 feet downstream of Chester Turnpike	01070006	0.7		N	A	2005
Hornes Brook	Derry, Town of	At confluence of Hornes Pond	At confluence of Beaver Brook	01070006	0.8		Y	AE	2005
Hornes Pond	Derry, Town of	At confluence of Little Massabesic Lake	Approximately 325 feet downstream of Chester Turnpike	0107006		0.003	Y	AE	2005
Hunts Island Creek	Seabrook, Town of	At confluence with Brown River	Limit of coastal study	01060003	0.9		N	AE	2013
Island Pond	Atkinson, Town of; Derry, Town of; Hampstead, Town of	Entire Shoreline	Entire Shoreline	0107006		0.83	N	AE	2005
Kelly Brook	Plaistow, Town of; Hampstead, Town of	Approximately 80 feet upstream of Main Street	Approximately 170 feet upstream of the Town of Hampstead Corporate limits	0107006	1.4		N	A	2005

Table 2: Flooding Sources Included in this FIS Report (continued)

Flooding Source	Community	Downstream Limit	Upstream Limit	HUC-8 Sub-Basin(s)	Length (mi) (streams or coastlines)	Area (mi^2) (estuaries or ponding)	Floodway (Y/N)	Zone shown on FIRM	Date of Analysis
Kelly Brook	Plaistow, Town of	At confluence of Little River No. 3	Approximately 80 feet upstream of Main Street	0107006	1.7		Y	AE	2005
Kelsey Brook	Northwood, Town of	At confluence of Narrows Brook	At confluence of Harvey Lake	0107006	2.4		N	A	2005
Kenney Brook	Hampton Falls, Town of	At confluence with Taylor River	Limit of coastal study	01060003	0.5		N	AE	2013
Knight Brook	Newington, Town of	At confluence with Little Bay	Limit of coastal study	01060003	0.2		N	AE	2013
Lamprey River	Epping, Town of; Raymond, Town of	At the Strafford County Boundary	At approximately 950 feet upstream of the Deerfield-Raymond boundary	01060003	23.		Y	AE	2017
Lamprey River	Newmarket, Town of	At confluence of Great Bay	Strafford County Boundary	01060003	2.6		Y	AE	2013
Lamprey River and Zone A Tributaries	Deerfield, Town of; Northwood, Town of;	At confluence of Stream252	Points of one square mileage of drainage area	01060003	10		N	A	2017
Little Bay	Newington, Town of	At confluence of Piscataqua River	At confluence of Great Bay	01060003	7	21.4	N	AE	2013
Little Cohas Brook	Londonderry, Town of	Hillsborough County Boundary	Approximately 75 feet downstream of Industrial Drive	01070006	1.0		N	A	2005
Little Cohas Brook	Londonderry, Town of	Approximately 75 feet downstream of Industrial Drive	At Litchfield Road	01070006	3.2		Y	AE	2005
Little Harbor	New Castle, Town of; Rye, Town of	Atlantic Ocean	Outlet for Sagamore Creek	01060003			N	VE	2013
Little Massabesic Lake	Auburn, Town of	Entire Shoreline	Entire Shoreline	01070006		0.08	N	A	2005

Table 2: Flooding Sources Included in this FIS Report (continued)

Flooding Source	Community	Downstream Limit	Upstream Limit	HUC-8 Sub-Basin(s)	Length (mi) (streams or coastlines)	Area (mi^2) (estuaries or ponding)	Floodway (Y/N)	Zone shown on FIRM	Date of Analysis
Little River	Nottingham, Town of	Strafford County Boundary	Outlet for Nottingham Lake	01060003	0.5		N	A	2017
Little River 1	Brentwood, Town of;	Just downstream from the Exeter – Brentwood boundary	Points of one square mileage of drainage area	01060003	0.8		N	A	2013
Little River 1	Exeter, Town of	At confluence of Exeter River	At Brentwood Road	01060003	2.5		Y	AE	2013
Little River 2	Brentwood, Town of; Kingston, Town of	At confluence of Exeter River	Points of one square mileage of drainage area	01060003	3.2		N	A	2013
Little River 3	Nottingham, Town of	At the Town of Barrington corporate limits	Strafford County Boundary	01060003	5.2		N	A	2017
Little River 3	Plaistow, Town of; Newton, Town of	Massachusetts State Boundary	Town of Kingston corporate limits	01070006	4.7		Y	AE	2005
Locke Pond	Rye, Town of	Entire Shoreline	Entire Shoreline	01060003		0.01	N	A	2013
Lower Beaver Lake	Derry, Town of	Entire Shoreline	Entire Shoreline	01070006		0.27	N	AE	2005
Lower Shields Pond	Derry, Town of	Entire Shoreline	Entire Shoreline	01070006		0.009	N	A	2005
Lubberland Creek	Newmarket, Town of	At confluence of Great Bay	Points of one square mileage of drainage area	01060003	2.1		N	A	2013
Lucas Pond	Northwood, Town of; Nottingham, Town of	At confluence of North River	Lucas Pond	01060003	0.5	0.16	N	A	2013
Maple Falls Brook	Candia, Town of	Merrimack County Boundary	At confluence of Tower Hill Pond	01070006	1.1		N	A	2013
Marsh Brook	Greenland, Town of	At confluence of Winnicut River	Points of one square mileage of drainage area	01060003	0.7		N	A	2013
Massabesic Brook	Auburn, Town of	At confluence of Clark Pond	At confluence of Little Massabesic Lake	01070006	1.4		N	A	2005

Table 2: Flooding Sources Included in this FIS Report (continued)

Flooding Source	Community	Downstream Limit	Upstream Limit	HUC-8 Sub-Basin(s)	Length (mi) (streams or coastlines)	Area (mi^2) (estuaries or ponding)	Floodway (Y/N)	Zone shown on FIRM	Date of Analysis
Massabesic Lake	Auburn, Town of	Entire Shoreline	Hillsborough County Boundary	01070006		4.0	N	A	2005
Meadow Pond	Hampton, Town of	Entire Shoreline	Entire Shoreline	01060003		0.21	N	AE	2013
Mile Brook	Nottingham, Town of	At confluence of Bean River	At confluence of Back Creek	01060003	1.6		N	A	2017
Mill Brook	Kensington, Town of	At confluence of Great Brook 1	Points of one square mileage of drainage area	01060003	2.8		N	A	2017
Mill Pond	North Hampton, Town of	Entire Shoreline	Entire Shoreline	01060003		0.05	N	A	2013
Mill Pond	Kingston, Town of	Entire Shoreline	Entire Shoreline	01070006		0.025	N	A	2005
Mitchell Pond	Windham, Town of	Entire Shoreline	Entire Shoreline	01070006		0.021	N	A	2005
Moeckel Pond	Windham, Town of	Entire Shoreline	Entire Shoreline	01070006		0.05	N	A	2005
Moonlight Brook	Newmarket, Town of	Points of one square mileage of drainage area	Points of one square mileage of drainage area	01060003	0.3		N	A	2013
Moose Meadow Brook	Candia, Town of	Merrimack County Boundary	Points of one square mileage of drainage area	01070006	2. 1		N	A	2005
Mountain Brook	Deerfield, Town of; Nottingham, Town of	At confluence of Mile Brook	Points of one square mileage of drainage area	01060003	7.4		N	A	2017
Mudds Canal	Hampton, Town of	At confluence of Hampton River	At confluence of Taylor River	01060003	0.6		N	AE	2013
Murray Mill Brook	Candia, Town of	Points of one square mileage of drainage area	Points of one square mileage of drainage area	01070006	1.1		N	A	2005
Narrows Brook	Northwood, Town of	At confluence of Northwood Lake	At Main Street	01070006	0.9		N	A	2005

Table 2: Flooding Sources Included in this FIS Report (continued)

Flooding Source	Community	Downstream Limit	Upstream Limit	HUC-8 Sub-Basin(s)	Length (mi) (streams or coastlines)	Area (mi^2) (estuaries or ponding)	Floodway (Y/N)	Zone shown on FIRM	Date of Analysis
Nesenkeag Brook	Londonderry, Town of	Hillsborough County Boundary	Points of one square mileage of drainage area	01070006	3.2		Y	AE	2005
Nicholls Brook	Deerfield, Town of	At confluence of Lamprey River	Points of one square mileage of drainage area	01060003	5.5		N	A	2017
North Branch River and Zone A Tributaries	Candia, Town of; Deerfield, Town of; Raymond, Town of	At confluence of Lamprey River	Points of one square mileage of drainage area	01060003	16		N	A	2017
North Brook	North Hampton, Town of	At confluence of Little River # 2	Points of one square mileage of drainage area	01060003	0.3		N	A	2013
North Mill Pond	Portsmouth, City of	At confluence of Piscataqua River	Bartlett Street Bridge	01060003		0.32	N	AE	2013
North River and Zone A Tributaries	Epping, Town of; Nottingham, Town of	At confluence of Lamprey River	At confluence of Stream056	01060003	10		N	A	2017
Northwood Lake	Northwood, Town of; Deerfield, Town of	Merrimack County Boundary	Entire Shoreline	01070006		1.0	N	A	2005
Norton Brook	Greenland, Town of	At confluence of Winnicut River	Points of one square mileage of drainage area	01060003	1.3		N	A	2013
Nottingham Lake	Nottingham, Town of	Entire Shoreline	Strafford County Boundary	01060003		0.14	N	A	2017
Old River	Hampton, Town of	At confluence of Taylor River	Points of one square mileage of drainage area	01060003	2.6		N	A	2013
Pawtuckaway Pond	Nottingham, Town of	Entire Shoreline	Entire Shoreline	01060003		3.2	N	A	2017
Pawtuckaway River	Epping, Town of; Raymond, Town of; Nottingham, Town of	At confluence of Lamprey River	Points of one square mileage of drainage area	01060003	3.0		N	A	2017
Packer Brook	Greenland, Town of; Portsmouth, City of	At confluence of Winnicut River	Points of one square mileage of drainage area	01060003	3.5		N	A	2013

Table 2: Flooding Sources Included in this FIS Report (continued)

Flooding Source	Community	Downstream Limit	Upstream Limit	HUC-8 Sub-Basin(s)	Length (mi) (streams or coastlines)	Area (mi^2) (estuaries or ponding)	Floodway (Y/N)	Zone shown on FIRM	Date of Analysis
Parting Brook	Newfields, Town of	At confluence of Squamscott River	At confluence of Piscassic River	01060003	2.3		N	A	2013
Pickering Brook	Epping, Town of; Nottingham, Town of; Raymond, Town of	At confluence of Great Bay	Points of one square mileage of drainage area	01060003	2.3		N	A	2013
Piscassic River and Zone A Tributaries	Brentwood, Town of; Exeter, Town of; Epping, Town of; Fremont, Town of; Newfields, Town of; Newmarket, Town of	At the Epping-Newfields Town boundary	Points of one square mileage of drainage area	01060003	15.5		N	A	2013, 2017
Piscataqua River	New Castle, Town of; Portsmouth, City of	At confluence of Atlantic Ocean	Strafford County Boundary	01060003	4.8		N	AE	2017
Pleasant Lake	Northwood, Town of; Deerfield, Town of	Entire Shoreline	Entire Shoreline	01070006		0.75	N	A	2005
Policy Brook	Salem, Town of	At confluence of Spicket River	Approximately 1000 feet upstream of Rockingham Park Blvd	01070006	2.5		N	A	2005
Policy Brook	Salem, Town of	Approximately 600 feet downstream of Main Street	Approximately 1000 feet upstream of Rockingham Park Blvd	01070006	0.8		Y	AE	2005
Porcupine Brook	Salem, Town of	At Route 93	Approximately 1200 feet downstream of Pelham Road	01070006	0.9		N	A	2005
Porcupine Brook	Salem, Town of	Approximately 1200 feet downstream of Pelham Road	Approximately 1500 feet upstream of Pelham Road	01070006	0.5		N	AE	2005
Porcupine Brook Tributary	Salem, Town of	At confluence of Porcupine Brook	Approximately 75 feet upstream of Quill Lane	01070006	0.4		N	AE	2005

Table 2: Flooding Sources Included in this FIS Report (continued)

Flooding Source	Community	Downstream Limit	Upstream Limit	HUC-8 Sub-Basin(s)	Length (mi) (streams or coastlines)	Area (mi^2) (estuaries or ponding)	Floodway (Y/N)	Zone shown on FIRM	Date of Analysis
Powwow Pond	East Kingston, Town of; Kingston, Town of	Entire Shoreline	Entire Shoreline	01070006		0.4	N	AE	2005
Powwow River	Kingston, Town of	Town of Newton corporate limits	At confluence of Great Pond	01070006	2.8		N	AE	2005
Powwow River (Downstream Reach)	South Hampton, Town of	Massachusetts State Boundary	Massachusetts State Boundary	01070006	0.7		N	AE	2005
Powwow River (Upstream Reach)	South Hampton, Town of	At confluence of Tuxbury Pond	Approximately 100 feet upstream of Chase Road		2.4		N	AE	2005
Preston Brook	Auburn, Town of	At confluence of Little Massabesic Lake	Points of one square mileage of drainage area	01070006	0.9		N	A	2005
Rainbow Lake	Derry, Town of	Entire Shoreline	Entire Shoreline	01070006		0.018	N	A	2005
Red Brook	Fremont, Town of	At confluence of Stream565	Points of one square mileage of drainage area	01060003	2.3		N	A	2017
Rock Hill Brook	Exeter, Town of	At confluence of Stream565	Approximately 150ft downstream of Newfields Road	01060003	0.5		N	AE	2013
Rock Pond	Windham, Town of	Entire Shoreline	Entire Shoreline	01070006		0.052	N	AE	2005
Rollins Brook	Epping, Town of; Nottingham, Town of	Strafford County Boundary	Points of one square mileage of drainage area	01060003	3.9		N	A	2017
Sagamore Creek	Portsmouth, City of; Town of Rye	At confluence of Piscataqua River	Approximately 120ft downstream of Peverly Hill Road	01060003	3.3		N	AE	2017
Scamen Brook	Exeter, Town of	At confluence of Little River 1	Approximately 320ft downstream of Tamarind Lane	01060003	0.4		N	AE	2013
Seavey Pond	Windham, Town of	Entire Shoreline	Entire Shoreline	01070006		0.017	N	A	2005

Table 2: Flooding Sources Included in this FIS Report (continued)

Flooding Source	Community	Downstream Limit	Upstream Limit	HUC-8 Sub-Basin(s)	Length (mi) (streams or coastlines)	Area (mi^2) (estuaries or ponding)	Floodway (Y/N)	Zone shown on FIRM	Date of Analysis
Shadow Lake	Salem, Town of; Windham, Town of	Entire Shoreline	Entire Shoreline	01070006		0.056	N	A	2005
Shaw Brook	Greenland, Town of	At confluence of Great Bay	Points of one square mileage of drainage area	01060003	1.1		N	A	2013
Shields Brook	Derry, Town of, Londonderry, Town of	At confluence of Hoods Pond	At confluence of Lower Shields Pond	01070006	3.2		Y	AE	2005
Simpson Mill Brook	Windham, Town of	Town of Exeter Corporate limits	Hillsborough County Boundary	01070006	1.4		N	A	2005
South Mill Pond	Portsmouth, City of	Entire Shoreline	Entire Shoreline	01060003		0.36	N	AE	2013
Spicket River and Zone A Tributaries	Salem, Town of	Massachusetts State Boundary	At confluence of Wilson Lake	01070006	7.8		Y	AE	2005
Spring Brook	Kensington, Town of	At confluence of Great Brook	Approximately 300ft upstream of N. Haverhill Road	01060003	0.3		N	A	2017
Spruce Swamp	Auburn, Town of	At confluence of Preston Brook	Points of one square mileage of drainage area	01070006	1.3		N	A	2005
Squamscott River	Exeter, Town of; Newfields, Town of; Newmarket, Town of; Stratham, Town of	At confluence of Great Bay	At confluence of Exeter River	01060003	6.5		N	AE	2013
Stream 1000	Epping, Town of	At confluence of North River	Points of one square mileage of drainage area	01060003	1.1		N	A	2017
Stream 1001	Fremont, Town of	At confluence of Exeter River	Points of one square mileage of drainage area	01060003	0.4		N	AE	2017
Stream025	Deerfield, Town of	At confluence of Hartford Brook	Approximately 300ft upstream of Middle Road	01060003	0.9		N	A	2017
Stream03	Deerfield, Town of	At confluence of Back Creek	Points of one square mileage of drainage area	01060003	0.4		N	A	2017

Table 2: Flooding Sources Included in this FIS Report (continued)

Flooding Source	Community	Downstream Limit	Upstream Limit	HUC-8 Sub-Basin(s)	Length (mi) (streams or coastlines)	Area (mi^2) (estuaries or ponding)	Floodway (Y/N)	Zone shown on FIRM	Date of Analysis
Stream036	Raymond, Town of	At confluence of Dudley Brook 2	Points of one square mileage of drainage area	01060003	0.3		N	A	2017
Stream039	Raymond, Town of	At confluence of Lamprey River	Points of one square mileage of drainage area	01060003	0.9		N	A	2017
Stream054	Northwood, Town of	At confluence of Lucas Pond	Points of one square mileage of drainage area	01060003	1.1		N	A	2017
Stream056	Nottingham, Town of	At confluence of North River	Points of one square mileage of drainage area	01060003	1.2		N	A	2017
Stream059	Nottingham, Town of	At confluence of North River	Points of one square mileage of drainage area	01060003	1.3		N	A	2017
Stream067	Nottingham, Town of	At confluence of Little River 3	Points of one square mileage of drainage area	01060003	2.6		N	A	2017
Stream068	Nottingham, Town of	At confluence of Stream297	Strafford County Boundary	01060003	0.5		N	A	2017
Stream080	Chester, Town of	At confluence of Exeter River	Points of one square mileage of drainage area	01060003	0.8		N	A	2017
Stream082	Sandown, Town of	At confluence of Exeter River	Points of one square mileage of drainage area	01060003	1.5		N	A	2017
Stream085	Sandown, Town of	At confluence of Exeter River	Points of one square mileage of drainage area	01060003	1.1		N	A	2017
Stream087	Chester, Town of	At confluence of Stream310	Points of one square mileage of drainage area	01060003	0.3		N	A	2017
Stream090	Chester, Town of	At confluence of Exeter River	Points of one square mileage of drainage area	01060003	2.4		N	A	2017
Stream098	East Kingston, Town of; Kingston, Town of	At confluence of Little River 2	Points of one square mileage of drainage area	01060003	1.3		N	A	2017
Stream10	Raymond, Town of	At confluence of Stream262	Points of one square mileage of drainage area	01060003	0.30		N	A	2017

Table 2: Flooding Sources Included in this FIS Report (continued)

Flooding Source	Community	Downstream Limit	Upstream Limit	HUC-8 Sub-Basin(s)	Length (mi) (streams or coastlines)	Area (mi^2) (estuaries or ponding)	Floodway (Y/N)	Zone shown on FIRM	Date of Analysis
Stream109	Exeter, Town of	At confluence of Dudley Brook	At the downstream side of State Route 101	01060003	1.0		N	A	2013
Stream202	Northwood, Town of	Strafford County Boundary	Points of one square mileage of drainage area	01060003	1.6		N	A	2017
Stream245	Deerfield, Town of	At confluence of Lamprey River	Points of one square mileage of drainage area	01060003	1.0		N	A	2017
Stream247	Deerfield, Town of	At confluence of Nicholls Brook	Points of one square mileage of drainage area	01060003	0.52		N	A	2017
Stream249	Deerfield, Town of	At confluence of Hartford Brook	At Hidden Drive	01060003	2.36		N	A	2017
Stream251	Deerfield, Town of	At confluence of Hartford Brook	Points of one square mileage of drainage area	01060003	1.60		N	A	2017
Stream252	Deerfield, Town of	At confluence of Lamprey River	Points of one square mileage of drainage area	01060003	1.1		N	A	2017
Stream253	Deerfield, Town of	At confluence of Stream252	Points of one square mileage of drainage area	01060003	0.80		N	A	2017
Stream254	Deerfield, Town of; Raymond, Town of	At confluence of Lamprey River	Points of one square mileage of drainage area	01060003	1.1		N	A	2017
Stream255	Candia, Town of	At confluence of North Branch River	Points of one square mileage of drainage area	01060003	5.0		N	A	2017
Stream256	Candia, Town of	At confluence of Stream255	Points of one square mileage of drainage area	01060003	1.5		N	A	2017
Stream257	Candia, Town of	At confluence of Stream255	Points of one square mileage of drainage area	01060003	1.2		N	A	2017
Stream259	Candia, Town of	At confluence of North Branch River	Points of one square mileage of drainage area	01060003	2.5		N	A	2017
Stream262	Candia, Town of; Raymond, Town of	At confluence of Lamprey River	Points of one square mileage of drainage area	01060003	8.3		N	A	2017

Table 2: Flooding Sources Included in this FIS Report (continued)

Flooding Source	Community	Downstream Limit	Upstream Limit	HUC-8 Sub-Basin(s)	Length (mi) (streams or coastlines)	Area (mi^2) (estuaries or ponding)	Floodway (Y/N)	Zone shown on FIRM	Date of Analysis
Stream263	Candia, Town of	At confluence of Stream262	Points of one square mileage of drainage area	01060003	1.6		N	A	2017
Stream264	Raymond, Town of	At confluence of Stream262	Upstream end of Onway Lake	01060003	0.61		N	A	2017
Stream266	Fremont, Town of	At confluence of Stream639	Points of one square mileage of drainage area	01060003	0.76		N	A	2017
Stream270	Nottingham, Town of	At confluence of Pawtuckaway River	Town of Epping corporate limits	01060003	0.6		N	A	2017
Stream272	Epping, Town of	At confluence of Lamprey River	Points of one square mileage of drainage area	01060003	1.8		N	A	2017
Stream274	Epping, Town of	At confluence of Lamprey River	Points of one square mileage of drainage area	01060003	2.7		N	A	2017
Stream276	Deerfield, Town of	At confluence of Back Creek	Points of one square mileage of drainage area	01060003	1.7		N	A	2017
Stream277	Deerfield, Town of	At confluence of Stream276	Points of one square mileage of drainage area	01060003	1.8		N	A	2017
Stream278	Nottingham, Town of	At confluence of Back Creek	Points of one square mileage of drainage area	01060003	0.9		N	A	2017
Stream281	Deerfield, Town of	At confluence of Bean River	Points of one square mileage of drainage area	01060003	0.5		N	A	2017
Stream284	Northwood, Town of	At confluence of North River	Points of one square mileage of drainage area	01060003	2.9		N	A	2017
Stream285	Nottingham, Town of	At confluence of North River	Points of one square mileage of drainage area	01060003	1.2		N	A	2017
Stream286	Nottingham, Town of	At confluence of North River	Points of one square mileage of drainage area	01060003	2.4		N	A	2017

Table 2: Flooding Sources Included in this FIS Report (continued)

Flooding Source	Community	Downstream Limit	Upstream Limit	HUC-8 Sub-Basin(s)	Length (mi) (streams or coastlines)	Area (mi^2) (estuaries or ponding)	Floodway (Y/N)	Zone shown on FIRM	Date of Analysis
Stream289	Nottingham, Town of	At confluence of Rollins Brook	Approximately 300 feet downstream from Stage Road	01060003	1.9		N	A	2017
Stream292	Newfields, Town of; Newmarket, Town of	Strafford County Boundary	Points of one square mileage of drainage area	01060003	4.0		N	A	2017
Stream297	Nottingham, Town of	At confluence of Little River 3	Points of one square mileage of drainage area	01060003	0.5		N	A	2017
Stream310	Chester, Town of; Sandown, Town of	At confluence of Exeter River	Points of one square mileage of drainage area	01060003	6.3		N	A	2017
Stream313	Chester, Town of; Fremont, Town of	At confluence of Exeter River	Points of one square mileage of drainage area	01060003	0.8		N	A	2017
Stream318	Raymond, Town of	At confluence of Stream662	Points of one square mileage of drainage area	01060003	0.8		N	A	2017
Stream328	Brentwood, Town of	At confluence of Dudley Brook	Points of one square mileage of drainage area	01060003	0.8		N	A	2017
Stream436	Seabrook, Town of	At confluence of Winkley Brook	Points of one square mileage of drainage area	01060003	0.1		N	A	2013
Stream553	Kingston, Town of	At confluence of Little River 2	At Bean Road	01060003	1.1		N	A	2017
Stream554	Raymond, Town of	At confluence of Lamprey River	Points of one square mileage of drainage area	01060003	0.5		N	A	2017
Stream565	Fremont, Town of	At confluence of Exeter River	Points of one square mileage of drainage area	01060003	1.6		N	A	2017
Stream566	Exeter, Town of; Kensington, Town of	At confluence of Great Brook	Approximately 200 feet upstream of Drinkwater Road	01060003	0.7		N	A	2017
Stream572	Candia, Town of	At confluence of North Branch River	Points of one square mileage of drainage area	01060003	0.8		N	A	2017

Table 2: Flooding Sources Included in this FIS Report (continued)

Flooding Source	Community	Downstream Limit	Upstream Limit	HUC-8 Sub-Basin(s)	Length (mi) (streams or coastlines)	Area (mi^2) (estuaries or ponding)	Floodway (Y/N)	Zone shown on FIRM	Date of Analysis
Stream573	Raymond, Town of	At confluence of Fardway Brook	Approximately 0.4 miles upstream of Fardway Brook confluence	01060003	0.4		N	A	2017
Stream576	Deerfield, Town of	At confluence of Stream276	Approximately 0.5 miles upstream of Stream276	01060003	0.5		N	A	2017
Stream578	Candia, Town of	At confluence of Stream257	Approximately 1,800ft upstream of State Route 27	01060003	0.7		N	A	2017
Stream580	Brentwood, Town of; Fremont, Town of	At confluence of Piscassic River	Approximately 100ft downstream of Karlin Road	01060003	1.2		N	A	2017
Stream583	Raymond, Town of	At confluence of Lamprey River	Points of one square mileage of drainage area	01060003	2.2		N	A	2017
Stream586	Fremont, Town of	At confluence of Piscassic River	Points of one square mileage of drainage area	01060003	0.6		N	A	2017
Stream588	Raymond, Town of; Candia, Town of	At confluence of Fardway Brook	At Town of Candia corporate limits	01060003	1.9		N	A	2017
Stream597	Chester, Town of	At confluence of Exeter River	Points of one square mileage of drainage area	01060003	0.5		N	A	2017
Stream599	Chester, Town of	At confluence of Piscassic River	Points of one square mileage of drainage area	01060003	0.5		N	A	2017
Stream603	Kensington, Town of	At confluence of Great Brook	Points of one square mileage of drainage area	01060003	0.7		N	A	2017
Stream609	Danville, Town of; Sandown, Town of	At confluence of Exeter River	Points of one square mileage of drainage area	01060003	1.9		N	A	2017
Stream612	Candia, Town of	At confluence of Stream262	At Patten Hill Road	01060003	0.8		N	A	2017

Table 2: Flooding Sources Included in this FIS Report (continued)

Flooding Source	Community	Downstream Limit	Upstream Limit	HUC-8 Sub-Basin(s)	Length (mi) (streams or coastlines)	Area (mi^2) (estuaries or ponding)	Floodway (Y/N)	Zone shown on FIRM	Date of Analysis
Stream626	Deerfield, Town of	At confluence of Lamprey River	Points of one square mileage of drainage area	01060003	0.9		N	A	2017
Stream629	Epping, Town of; Fremont, Town of	At confluence of Lamprey River	Points of one square mileage of drainage area	01060003	0.7		N	A	2017
Stream639	Fremont, Town of; Raymond, Town of	At confluence of Lamprey River	Points of one square mileage of drainage area	01060003	1.1		N	A	2017
Stream646	Northwood, Town of	Rockingham County boundary	At Bow Lake Road	01060003	0.2		N	A	2017
Stream651	Candia, Town of	At confluence of Stream255	Approximately 0.7 miles upstream of North Road	01060003	1.2		N	A	2017
Stream655	Epping, Town of	At confluence of Lamprey River	Points of one square mileage of drainage area	01060003	1.5		N	A	2017
Stream657	Deerfield, Town of	At confluence of Lamprey River	Points of one square mileage of drainage area	01060003	1.0		N	A	2017
Stream658	Deerfield, Town of	At confluence of Lamprey River	Points of one square mileage of drainage area	01060003	1.1		N	A	2017
Stream661	Deerfield, Town of	At confluence of North Branch River	Points of one square mileage of drainage area	01060003	0.4		N	A	2017
Stream662	Raymond, Town of	At confluence of Fardway Brook	Points of one square mileage of drainage area	01060003	1.6		N	A	2017
Stream667	Epping, Town of	At confluence of Lamprey River	Points of one square mileage of drainage area	01060003	1.4		N	A	2017
Stream669	Candia, Town of	At confluence of Stream255	At Currier Road	01060003	1.2		N	A	2017
Stream676	Deerfield, Town of	At confluence of Lamprey River	Points of one square mileage of drainage area	01060003	1.1		N	A	2017
Stream696	Fremont, Town of	At confluence of Piscassic River	Points of one square mileage of drainage area	01060003	0.8		N	A	2017

Table 2: Flooding Sources Included in this FIS Report (continued)

Flooding Source	Community	Downstream Limit	Upstream Limit	HUC-8 Sub-Basin(s)	Length (mi) (streams or coastlines)	Area (mi^2) (estuaries or ponding)	Floodway (Y/N)	Zone shown on FIRM	Date of Analysis
Stream8004	Northwood, Town of	At confluence of Stream284	Points of one square mileage of drainage area	01060003	0.3		N	A	2017
Stream9079	Chester, Town of	At confluence of Exeter River	Points of one square mileage of drainage area	01060003	1.3		N	A	2017
Stream919	Fremont, Town of	At confluence of Exeter River	Points of one square mileage of drainage area	01060003	1.7		N	A	2017
Stream9272	Epping, Town of	At confluence of Lamprey River	Points of one square mileage of drainage area	01060003	1.2		N	A	2017
Stream952	Deerfield, Town of Nottingham, Town of; Northwood, Town of	At confluence of Bean River	Points of one square mileage of drainage area	01060003	4.0		N	A	2017
Stream9659	Danville, Town of	At confluence of Exeter River	Points of one square mileage of drainage area	01060003	0.9		N	A	2017
Taylor Brook	Derry, Town of	At confluence of Island Pond	At confluence of Ballard Pond	01070006	1.4		Y	AE	2005
Taylor Brook	Derry, Town of	At confluence of Ballard Pond	Points of one square mileage of drainage area	01070006	0.6		N	A	2005
Taylor River	Hampton, Town of; Hampton Falls, Town of	At confluence of Winkley Brook	Approximately 350 feet upstream of Kensington Road	01060003	9.6		N	A	2013
Taylors Reservoir	Salem, Town of	Entire Shoreline	Entire Shoreline	01070006		0.013	N	A	2005
Thompson Brook	Greenland, Town of; Stratham, Town of	At confluence of Winkley Brook	Approximately 350ft upstream of Kensington Road	01060003	1.5		N	A	2013
Tower Hill Pond	Auburn, Town of; Candia, Town of	Entire Shoreline	Entire Shoreline	01070006		0.29	N	A	2005
Tributary A	Windham, Town of	At confluence of Golden Brook	Points of one square mileage of drainage area	01070006	1.6		N	A	2005

Table 2: Flooding Sources Included in this FIS Report (continued)

Flooding Source	Community	Downstream Limit	Upstream Limit	HUC-8 Sub-Basin(s)	Length (mi) (streams or coastlines)	Area (mi^2) (estuaries or ponding)	Floodway (Y/N)	Zone shown on FIRM	Date of Analysis
Tributary B	Windham, Town of	At confluence of Golden Brook	Approximately 800 feet upstream of London Bridge Road	01070006	1.0		N	A	2005
Tributary C	Windham, Town of	At confluence of Cobbetts Pond	Points of one square mileage of drainage area	01070006	0.3		N	A	2005
Tributary C to Beaver Brook	Londonderry, Town of	At confluence of Beaver Brook	At Pillsbury Road	01070006	2.1		Y	AE	2005
Tributary E to Little Cohas Brook	Londonderry, Town of	At confluence of Little Cohas Brook	Approximately 100 feet downstream of Rail Trail	01070006	1.5		Y	AE	2005
Tributary F to Beaver Lake	Derry, Town of	At confluence of Beaver Lake	At confluence of Adams Pond	01070006	1.0		Y	AE	2005
Tributary F to Beaver Lake	Derry, Town of	At confluence of Adams Pond	Points of one square mileage of drainage area	01070006	1.1		N	A	2005
Tributary G to Beaver Brook	Derry, Town of	At confluence of Beaver Brook	Approximately 700 feet upstream of Bowers Road	01070006	1.7		Y	AE	2005
Tributary H to Drew Brook	Derry, Town of	At confluence of Drew Brook	Approximately 950 feet upstream of Hampstead Road	01070006	1.1		Y	AE	2005
Tributary H to Nesenkeag Brook	Londonderry, Town of	At confluence of Nesenkeag Brook	At Wiley Hill Road	01070006	1.1		Y	AE	2005
Tributary J to Black Brook	Londonderry, Town of	At confluence of Black Brook	Approximately 100 feet upstream of Mammoth Road	01070006	1.0		Y	AE	2005
Tributary J to Black Brook	Londonderry, Town of	Approximately 100 feet upstream of Mammoth Road	Hillsborough County corporate limits	01070006	1.1		N	A	2005
Tributary O to Beaver Brook	Londonderry, Town of	At confluence of Beaver Brook	At Interstate 93	01070006	0.5		Y	AE	2005

Table 2: Flooding Sources Included in this FIS Report (continued)

Flooding Source	Community	Downstream Limit	Upstream Limit	HUC-8 Sub-Basin(s)	Length (mi) (streams or coastlines)	Area (mi^2) (estuaries or ponding)	Floodway (Y/N)	Zone shown on FIRM	Date of Analysis
Tributary to Adams Pond	Derry, Town of	At confluence of Adams Pond	Points of one square mileage of drainage area	01070006	1.0		N	A	2005
Tucker Brook	Northwood, Town of	At confluence of Harvey Lake	Approximately 900 feet upstream of Main Street	01070006	0.8		N	A	2005
Tuxbury Pond	South Hampton, Town of	Massachusetts State Boundary	Entire Shoreline	01070006		0.12	N	A	2005
Unnamed Brook	Salem, Town of	Approximately 600 feet downstream of Main Street	Approximately 1000 feet upstream of Main Street	01070006	0.3		Y	AE	2005
Unnamed Brook	Salem, Town of	Approximately 1000 feet upstream of Main Street	Approximately 850 feet upstream of Main Street	01070006	0.6		N	A	2005
Upper Beaver Brook	Londonderry, Town of	At confluence of Shields Brook	At Rail Trail	01070006	1.4		Y	AE	2005
Wash Pond	Hampstead, Town of	Entire Shoreline	Entire Shoreline	01070006		0.27	N	AE	2005
Watts Brook	Londonderry, Town of	Hillsborough County Boundary	Points of one square mileage of drainage area	01070006	2.4		N	A	2005
West Channel Policy Brook	Salem, Town of	At confluence of Canobie Lake	Approximately 330 feet downstream of Northeastern Blvd	01070006	0.9		N	AE	2005
West Channel Policy Brook	Salem, Town of	Approximately 330 feet downstream of Northeastern Blvd	Approximately 150 feet upstream of Pleasant Street	01070006	0.8		N	A	2005
West Running Brook	Derry, Town of	At confluence of Tributary G to Beaver Brook	Points of one square mileage of drainage area	01070006	0.6		N	A	2005
Wheelwright Creek	Exeter, Town of	At confluence of Winnicut River	Approximately 400ft upstream of Greenland	01060003	0.7		N	A	2013

Table 2: Flooding Sources Included in this FIS Report (continued)

Flooding Source	Community	Downstream Limit	Upstream Limit	HUC-8 Sub-Basin(s)	Length (mi) (streams or coastlines)	Area (mi^2) (estuaries or ponding)	Floodway (Y/N)	Zone shown on FIRM	Date of Analysis
Winkley Brook	Hampton Falls, Town of; Kensington, Town of	At confluence of Hampton Falls River	Points of one square mileage of drainage area	01060003	2.5		N	A	2013, 2017
Winniconic Brook	Greenland, Town of; Stratham, Town of	At confluence of Winnicut River	Approximately 350ft upstream of Union Road	01060003	0.6		N	A	2013
Winnicut River	Greenland, Town of; North Hampton, Town of; Stratham, Town of	At confluence of Great Bay	At Exeter-Hampton Expressway	01060003	8.3		N	A, AE	2013
World End Brook	Salem, Town of	At Lawrence Road	At confluence of World End Pond	01070006	0.3		N	AE	2005
World End Brook	Salem, Town of	Massachusetts State Boundary	At Lawrence Road	01070006	0.8		N	A	2005
World End Pond	Salem, Town of	Entire Shoreline	Entire Shoreline	01070006		0.15	N	AE	2005

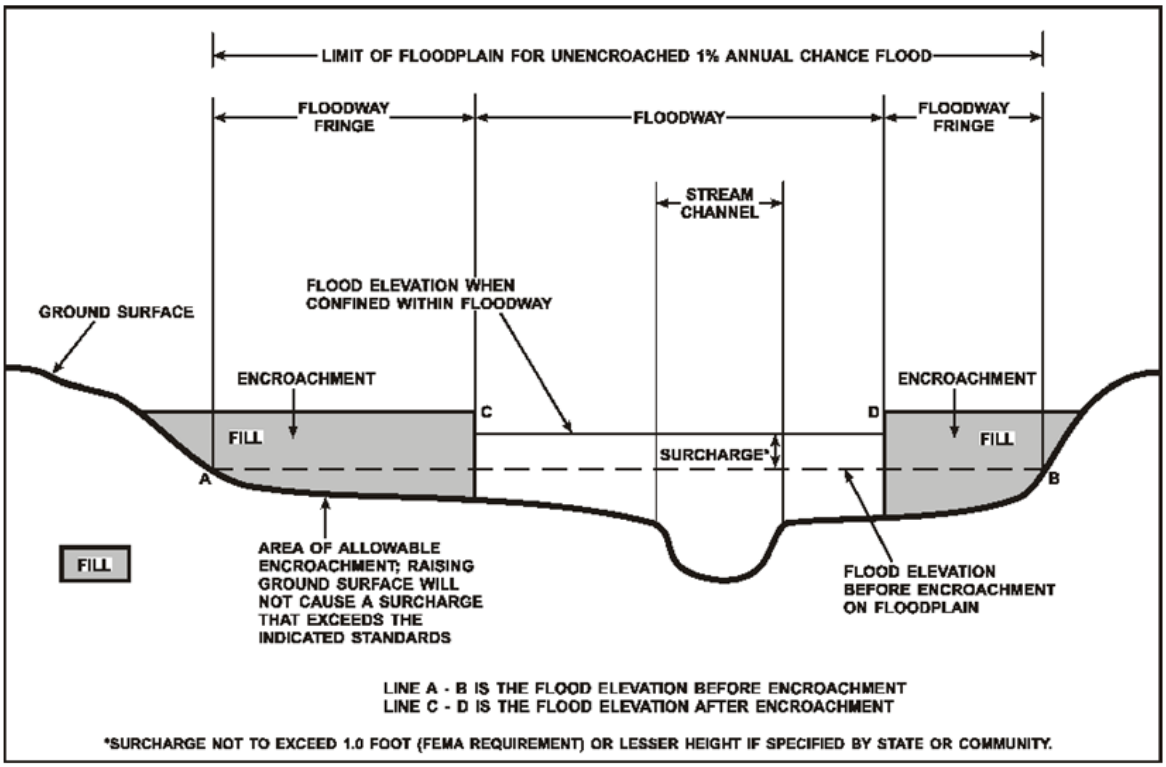
2.2 Floodways

Encroachment on floodplains, such as structures and fill, reduces flood-carrying capacity, increases flood heights and velocities, and increases flood hazards in areas beyond the encroachment itself. One aspect of floodplain management involves balancing the economic gain from floodplain development against the resulting increase in flood hazard.

For purposes of the NFIP, a floodway is used as a tool to assist local communities in balancing floodplain development against increasing flood hazard. With this approach, the area of the 1% annual chance floodplain on a river is divided into a floodway and a floodway fringe based on hydraulic modeling. The floodway is the channel of a stream, plus any adjacent floodplain areas, that must be kept free of encroachment in order to carry the 1% annual chance flood. The floodway fringe is the area between the floodway and the 1% annual chance floodplain boundaries where encroachment is permitted. The floodway must be wide enough so that the floodway fringe could be completely obstructed without increasing the water surface elevation of the 1% annual chance flood more than 1 foot at any point. Typical relationships between the floodway and the floodway fringe and their significance to floodplain development are shown in Figure 4.

To participate in the NFIP, Federal regulations require communities to limit increases caused by encroachment to 1.0 foot, provided that hazardous velocities are not produced. Regulations for New Hampshire require communities in Rockingham County to limit increases caused by encroachment to 1.0 foot and several communities have adopted additional restrictions. The floodways in this project are presented to local agencies as minimum standards that can be adopted directly or that can be used as a basis for additional floodway projects.

Figure 4: Floodway Schematic



Floodway widths presented in this FIS Report and on the FIRM were computed at cross sections. Between cross sections, the floodway boundaries were interpolated. For certain stream segments, floodways were adjusted so that the amount of floodwaters conveyed on each side of the floodplain would be reduced equally. The results of the floodway computations have been tabulated for selected cross sections and are shown in Table 24, “Floodway Data.”

All floodways that were developed for this Flood Risk Project are shown on the FIRM using the symbology described in Figure 3. In cases where the floodway and 1% annual chance floodplain boundaries are either close together or collinear, only the floodway boundary has been shown on the FIRM. For information about the delineation of floodways on the FIRM, refer to Section 6.3.

2.3 Base Flood Elevations

The hydraulic characteristics of flooding sources were analyzed to provide estimates of the elevations of floods of the selected recurrence intervals. The Base Flood Elevation (BFE) is the elevation of the 1% annual chance flood. These BFEs are most commonly rounded to the whole foot, as shown on the FIRM, but in certain circumstances or locations they may be rounded to 0.1 foot. Cross section lines shown on the FIRM may also be labeled with the BFE rounded to 0.1 foot. Whole-foot BFEs derived from engineering analyses that apply to coastal areas, areas of ponding, or other static areas with little elevation change may also be shown at selected intervals on the FIRM.

Cross sections with BFEs shown on the FIRM correspond to the cross sections shown in the Floodway Data table and Flood Profiles in this FIS Report. BFEs are primarily intended for flood insurance rating purposes. For construction and/or floodplain management purposes, users are cautioned to use the flood elevation data presented in this FIS Report in conjunction with the data shown on the FIRM.

2.4 Non-Encroachment Zones

Some States and communities use non-encroachment zones to manage floodplain development. For flooding sources with medium flood risk, field surveys are often not collected and surveyed bridge and culvert geometry is not developed. Standard hydrologic and hydraulic analyses are still performed to determine BFEs in these areas. However, floodways are not typically determined, since specific channel profiles are not developed. To assist communities with managing floodplain development in these areas, a "non-encroachment zone" may be provided. While not a FEMA designated floodway, the non-encroachment zone represents that area around the stream that should be reserved to convey the 1% annual chance flood event. As with a floodway, all surcharges must fall within the acceptable range in the non-encroachment zone.

General setbacks can be used in areas of lower risk (e.g. unnumbered Zone A), but these are not considered sufficient where an unnumbered Zone A is replaced by Zone AE. The NFIP requires communities to ensure that any development in a non-encroachment area causes no increase in BFEs. Communities must generally prohibit development within the area defined by the non-encroachment width to meet the NFIP requirement. Regulations for New Hampshire require communities in Rockingham County to limit increases caused by encroachment to 1.0 foot and several communities have adopted additional restrictions for non-encroachment areas.

Non-encroachment determinations may be delineated where it is not possible to delineate floodways because specific channel profiles with bridge and culvert geometry were not developed. Any non-encroachment determinations for this Flood Risk Project have been tabulated for selected cross sections and are shown in Table 25, "Flood Hazard and Non-Encroachment Data for Selected Streams." Areas for which non-encroachment zones are provided show BFEs and the 1% annual chance floodplain boundaries mapped as Zone AE on the FIRM but no floodways.

2.5 Coastal Flood Hazard Areas

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

Coastal flooding sources that are included in this Flood Risk Project are shown in Table 2.

2.5.1 Water Elevations and the Effects of Waves

Specific terminology is used in coastal analyses to indicate which components have been included in evaluating flood hazards.

The stillwater elevation (SWEL or still water level) is the surface of the water resulting from astronomical tides, storm surge, and freshwater inputs, but excluding wave setup contribution or the effects of waves.

- Astronomical tides are periodic rises and falls in large bodies of water caused by the rotation of the earth and by the gravitational forces exerted by the earth, moon and sun.
- Storm surge is the additional water depth that occurs during large storm events. These events can bring air pressure changes and strong winds that force water up against the shore.
- Freshwater inputs include rainfall that falls directly on the body of water, runoff from surfaces and overland flow, and inputs from rivers.

The 1% annual chance stillwater elevation is the stillwater elevation that has been calculated for a storm surge from a 1% annual chance storm. The 1% annual chance storm surge can be determined from analyses of tidal gage records, statistical study of regional historical storms, or other modeling approaches. Stillwater elevations for storms of other frequencies can be developed using similar approaches.

The total stillwater elevation (also referred to as the mean water level) is the stillwater elevation plus wave setup contribution but excluding the effects of waves.

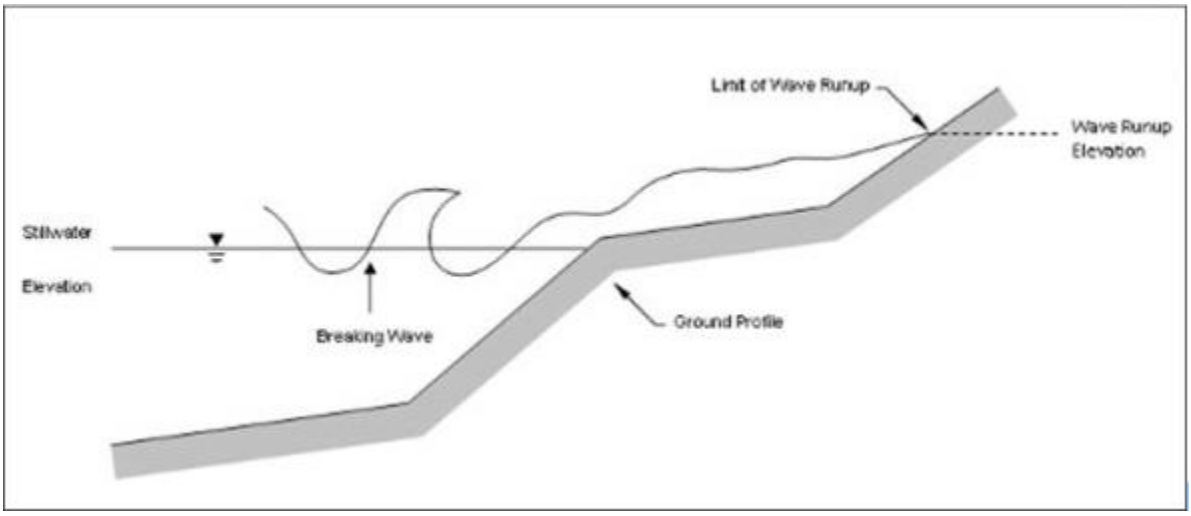
- Wave setup is the increase in stillwater elevation at the shoreline caused by the reduction of waves in shallow water. It occurs as breaking wave momentum is transferred to the water column.

Like the stillwater elevation, the total stillwater elevation is based on a storm of a particular frequency, such as the 1% annual chance storm. Wave setup is typically estimated using standard engineering practices or calculated using models, since tidal gages are often sited in areas sheltered from wave action and do not capture this information.

Coastal analyses may examine the effects of overland waves by analyzing storm-induced erosion, overland wave propagation, wave runup, and/or wave overtopping.

- Storm-induced erosion is the modification of existing topography by erosion caused by a specific storm event, as opposed to general erosion that occurs at a more constant rate.
- Overland wave propagation describes the combined effects of variation in ground elevation, vegetation, and physical features on wave characteristics as waves move onshore.
- Wave runup is the uprush of water from wave action on a shore barrier. It is a function of the roughness and geometry of the shoreline at the point where the stillwater elevation intersects the land.
- Wave overtopping refers to wave runup that occurs when waves pass over the crest of a barrier.

Figure 5: Wave Runup Transect Schematic



2.5.2 Floodplain Boundaries and BFEs for Coastal Areas

For coastal communities along the Atlantic and Pacific Oceans, the Gulf of Mexico, the Great Lakes, and the Caribbean Sea, flood hazards must take into account how storm surges, waves, and extreme tides interact with factors such as topography and vegetation. Storm surge and waves must also be considered in assessing flood risk for certain communities on rivers or large inland bodies of water.

Beyond areas that are affected by waves and tides, coastal communities can also have riverine floodplains with designated floodways, as described in previous sections.

Floodplain Boundaries

In many coastal areas, storm surge is the principle component of flooding. The extent of the 1% annual chance floodplain in these areas is derived from the total stillwater elevation (stillwater elevation including storm surge plus wave setup) for the 1% annual chance storm. The methods that were used for calculation of total stillwater elevations for coastal areas are described in Section 5.3 of this FIS Report. Location of total stillwater elevations for coastal areas are shown in Figure 8, “1% Annual Chance Total Stillwater Levels for Coastal Areas.”

In some areas, the 1% annual chance floodplain is determined based on the limit of wave runup or wave overtopping for the 1% annual chance storm surge. The methods that were used for calculation of wave hazards are described in Section 5.3 of this FIS Report.

Table 26 presents the types of coastal analyses that were used in mapping the 1% annual chance floodplain in coastal areas.

Coastal BFEs

Coastal BFEs are calculated as the total stillwater elevation (stillwater elevation including storm surge plus wave setup) for the 1% annual chance storm plus the additional flood hazard from overland wave effects (storm-induced erosion, overland wave propagation, wave runup and wave overtopping). Where they apply, coastal BFEs are calculated along transects extending from offshore to the limit of coastal flooding onshore. Results of these analyses are accurate until local topography, vegetation, or development type and density within the community undergoes major changes.

Parameters that were included in calculating coastal BFEs for each transect included in this FIS Report are presented in Table 17, "Coastal Transect Parameters." The locations of transects are shown in Figure 9, "Transect Location Map." More detailed information about the methods used in coastal analyses and the results of intermediate steps in the coastal analyses are presented in Section 5.3 of this FIS Report. Additional information on specific mapping methods is provided in Section 6.4 of this FIS Report.

2.5.3 Coastal High Hazard Areas

Certain areas along the open coast and other areas may have higher risk of experiencing structural damage caused by wave action and/or high-velocity water during the 1% annual chance flood. These areas will be identified on the FIRM as Coastal High Hazard Areas (CHHAs).

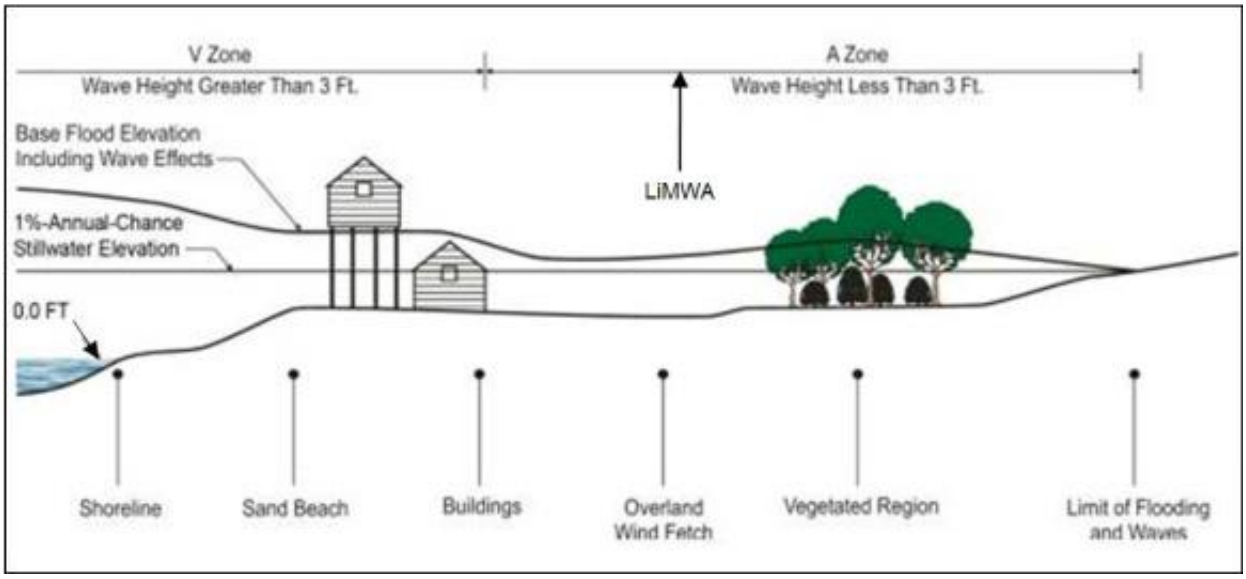
CHHAs are designated as "V" zones (for "velocity wave zones") and are subject to more stringent regulatory requirements and a different flood insurance rate structure. The areas of greatest risk are shown as VE on the FIRM. Zone VE is further subdivided into elevation zones and shown with BFEs on the FIRM.

The landward limit of the Primary Frontal Dune (PFD) occurs at a point where there is a distinct change from a relatively steep slope to a relatively mild slope; this point represents the landward extension of Zone VE. Areas of lower risk in the CHHA are designated with Zone V on the FIRM. More detailed information about the identification and designation of Zone VE is presented in Section 6.4 of this FIS Report.

Areas that are not within the CHHA but are SFHAs may still be impacted by coastal flooding and damaging waves; these areas are shown as "A" zones on the FIRM.

Figure 6, "Coastal Transect Schematic," illustrates the relationship between the base flood elevation, the 1% annual chance stillwater elevation, and the ground profile as well as the location of the Zone VE and Zone AE areas in an area without a PFD subject to overland wave propagation. This figure also illustrates energy dissipation and regeneration of a wave as it moves inland.

Figure 6: Coastal Transect Schematic



2.5.4 Limit of Moderate Wave Action (LIMWA)

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

Therefore, a LiMWA boundary may be shown on the FIRM as an informational layer to assist coastal communities in safe rebuilding practices. The LiMWA represents the approximate landward limit of the 1.5-foot breaking wave. The location of the LiMWA relative to Zone VE and Zone AE is shown in Figure 6.

The effects of wave hazards in Zone AE between Zone VE (or the shoreline where Zone VE is not identified) and the limit of the LiMWA boundary are similar to, but less severe than, those in Zone VE where 3-foot or greater breaking waves are projected to occur during the 1% annual chance flooding event. Communities are therefore encouraged to adopt and enforce more stringent floodplain management requirements than the minimum NFIP requirements in the LiMWA. The NFIP Community Rating System provides credits for these actions.

Where wave runup elevations dominate over wave heights, there is no evidence to date of significant damage to residential structures by runup depths less than 3 feet. Examples of these areas include areas with steeply sloped beaches, bluffs, or flood protection structures that lie parallel to the shore. In these areas, the FIRM shows the LiMWA immediately landward of the VE/AE boundary. Similarly, in areas where the zone

VE designation is based on the presence of a primary frontal dune or wave overtopping, the LiMWA is delineated immediately landward of the Zone VE/AE boundary.

SECTION 3.0 – INSURANCE APPLICATIONS

3.1 National Flood Insurance Program Insurance Zones

For flood insurance applications, the FIRM designates flood insurance rate zones as described in Figure 3, "Map Legend for FIRM." Flood insurance zone designations are assigned to flooding sources based on the results of the hydraulic or coastal analyses. Insurance agents use the zones shown on the FIRM and depths and base flood elevations in this FIS Report in conjunction with information on structures and their contents to assign premium rates for flood insurance policies.

The 1% annual chance floodplain boundary corresponds to the boundary of the areas of special flood hazards (e.g. Zones A, AE, V, VE, etc.), and the 0.2% annual chance floodplain boundary corresponds to the boundary of areas of additional flood hazards.

Table 3 lists the flood insurance zones in this Flood Risk Project Area within Rockingham County.

Table 3: Flood Zone Designations by Community

Community	Flood Zone(s)
Atkinson, Town of	A, AE, X
Auburn, Town of	A, X
Brentwood, Town of	A, AE, X
Candia, Town of	A, AE, X
Chester, Town of	A, AE, X
Danville, Town of	A, X
Deerfield, Town of	A, AE, X
Derry, Town of	A, AE, X
East Kingston, Town of	A, AE, X
Epping, Town of	A, AE, X
Exeter, Town of	A, AE, X
Fremont, Town of	A, AE, X
Greenland, Town of	A, AE, X
Hampstead, Town of	A, AE, X
Hampton Falls, Town of	A, AE, X
Hampton, Town of	A, AE, AO, VE, X

Table 3: Flood Zone Designations by Community (continued)

Community	Flood Zone(s)
Kensington, Town of	A, X
Kingston, Town of	A, AE, X
Londonderry, Town of	A, AE, X
New Castle, Town of	A, AE, VE, X
Newfields, Town of	A, AE, X
Newington, Town of	A, AE, X
Newmarket, Town of	A, AE, X
Newton, Town of	A, AE, X
North Hampton, Town of	A, AE, VE, X
Northwood, Town of	A, X
Nottingham, Town of	A, X
Plaistow, Town of	A, AE, X
Portsmouth, City of	A, AE, X
Raymond, Town of	A, AE, X
Rye, Town of	A, AE, AO, VE, X
Salem, Town of	A, AE, X
Sandown, Town of	A, X
Seabrook Beach, Village District of	A, AE, VE, X
Seabrook, Town of	A, AE, VE, X
South Hampton, Town of	A, AE, X
Stratham, Town of	A, AE, X
Windham, Town of	A, AE, X

3.2 Coastal Barrier Resources System

This section is not applicable to this Flood Risk Project.

Table 4: Coastal Barrier Resources System Information
[Not Applicable to this Flood Risk Project]

SECTION 4.0 – AREA STUDIED

4.1 Basin Description

Table 5 contains a description of the characteristics of the HUC-8 sub-basins within

which each community falls. The table includes the main flooding sources within each basin, a brief description of the basin, and its drainage area.

Table 5: Basin Characteristics

HUC-8 Sub-Basin Name	HUC-8 Sub-Basin Number	Primary Flooding Source	Description of Affected Area	Drainage Area (square miles)
Piscataqua-Salmon Falls	01060003	Exeter River	The watershed is bordered by the Charles, Concord, Contoocook, Miller, Nashua, Pemigewasset, Piscataqua- Salmon Falls and Winnipesaukee River Watersheds. The topography of the area is primarily flat coastal plains to the east with more hilly terrain to the west. At its outlet, the Piscataqua-Salmon Falls River drainage area measures approximately 944.47 square miles. Development within Strafford and Rockingham counties is primarily residential.	1,621
Merrimack River	01070006	Merrimack River	The watershed is bordered by the Saco River, Winnipesaukee River, and Merrimack River Watersheds. The watershed is the fourth largest in New England and is within Massachusetts and New Hampshire. The Merrimack River is formed by the confluence of the Pemigewasset and Winnipesaukee rivers. There are three counties within the NH portion of the watershed that are residential, rural and urban (Manchester and Concord).	5010

4.2 Principal Flood Problems

Table 6 contains a description of the principal flood problems that have been noted for Rockingham County by flooding source.

Table 6: Principal Flood Problems

Flooding Source	Description of Flood Problems
Atlantic Ocean	The low-lying areas along the Atlantic coast are subject to the periodic flooding and wave attack that accompany northeasters and hurricanes. The majority of these storms cause damage only to low coastal roads, boats, and seawalls. Occasionally, a major storm accompanied by strong onshore winds and high tides results in surge and wave activity that cause extensive property damage and erosion. Some of the more significant storms include those of December 1909, December 1959, February 1972, and February 1978. The recurrence intervals for these storms were 160 years, 15 years, 10 years, and 70 years, respectively. Other significant storms occurred in the vicinity of North Hampton in November 1945, November 1963, November 1968, and November 1969. These storms damaged harbors, marinas, and commercial and residential developments along the flood-prone coastline (FEMA 1982). Other more recent noteworthy storms causing significant flooding in the area have included May 2006, April 2007, and March 2010.
Exeter River	During spring runoff periods, the Exeter River frequently flooded roads on the south side of the Town of Exeter, including Court Street, Crawford Avenue, and Portsmouth Avenue. A USGS surface-water discharge station was active on the Exeter River at the Haigh Road Bridge in Brentwood during a 1996 storm and recorded a peak discharge of 3,060 cfs. This event had a recurrence interval of approximately 100 years. Additional areas were flooded by the Exeter River, due to rainfall associated with hurricanes in 1938 and 1954. The area on the north side of the Exeter River in Tib's Grove is subject to occasional backwater flooding from Phillips dam in the Town of Brentwood.
Great Bay	Low-lying areas adjacent to Great Bay are subject to periodic flooding. Little significant damage occurs in these areas due to the general absence of buildings and other structures.
Kelly Brook	Flooding problems have occurred in the past and may be expected to occur in the future at the undersized culvert at State Route 125 crossing of Kelly Brook. Such situations can create backwaters of depth sufficient to inundate extensive areas of land.
Lamprey River	Low-lying areas are subject to periodic flooding caused by overflows of the Lamprey River, Exeter River, and Squamscott River. The most severe flooding occurs in early spring as a result of snowmelt and heavy rains. In the past, portions of Prescott Road along Lamprey River have flooded nearly every year. The 1989 replacement of the Prescott Road Bridge over the Lamprey River should help alleviate this condition. During the April 1987 flood, up to two feet of water covered portions of Harriman Hill Road. Old Manchester Road and Main Street were also affected by flooding of the Lamprey River in 1987.
Pickering Brook	Areas along Pickering Brook are subject to flooding. Present damage potential is slight due to absence of structures in affected marshes. However, future flood damage could be significant if development upstream of State Route 151 is allowed to lower the road elevation of 31 feet. This road crest is the emergency spillway necessary if debris clogs the only culvert through the dam-like road fill. The extensive upstream beaver action and by-products of urbanization could be sources of flood-creating debris.

Table 6: Principal Flood Problems (continued)

Flooding Source	Description of Flood Problems
Piscassic River	Minor damage to Cuba Road frequently occurs due to flooding of the Piscassic River. This flooding usually occurs during March and April during spring rains and snowmelt. Floods occurring during other seasons are often associated with debris clogging culverts. Due to the natural and manmade hydraulic structures along the Piscassic River, and the number of beavers in the watershed, collection of debris generally compounds flooding.
Policy Brook	The middle reach of Policy Brook between Rockingham Park Boulevard and Pleasant Street is subject to periodic flooding due to its flat gradient and the many restrictions caused by inadequately sized pipes and culverts.
Powwow Pond	Extensive flooding in the low-lying areas surrounding the Powwow Pond system occurred in March 1983. During the flood, elevations on Great Pond peaked at approximately 2 feet above the dam crest. According to records at the New Hampshire Department of Water Resources, this is the maximum recorded elevation for Great Pond.
Spicket River	The major portion of the Spicket River floodplain lies between the Arlington Mill Reservoir and the Massachusetts State line. Because of its flat gradient and the numerous swamps and lakes in the watershed, peak flows and stages on the Spicket River are a function of high-volume rainfall.
Squamscott River	The Squamscott River periodically floods the Swasey Parkway and other low-lying areas during unusually high tides. In the past, within the Town of Greenland, little significant damage has occurred in these areas, however, due to the general absence of buildings and other structures.

Table 7 contains information about historic flood elevations in the communities within Rockingham County.

Table 7: Historic Flooding Elevations

Flooding Source	Location	Historic Peak (Feet NAVD88)	Event Date	Approximate Recurrence Interval (years)	Source of Data
Atlantic Ocean	Low-lying areas along Atlantic coast	-	December 1909, December 1959, February 1972, February 1978	160, 15, 10, 70	FEMA 1982
Exeter River	Town of Exeter	-	1996	100	USGS

4.3 Non-Levee Flood Protection Measures

Table 8 contains information about non-levee flood protection measures within Rockingham County such as dams, jetties, and or dikes. Levees are addressed in Section 4.4 of this FIS Report.

Table 8: Non-Levee Flood Protection Measures

Flooding Source	Structure Name	Type of Measure	Location	Description of Measure
Atlantic Ocean	N/A	Seawalls and stone revetments	Along Coastal highway	Constructed by State of New Hampshire
Atlantic Ocean	N/A	Shoreline protection measures	Wallis Sands State Beach and Hampton Beach	New England River Basins Commission 1980
Atlantic Ocean	N/A	Timber and sheet piles, bulkheads, stone revetments, concrete seawalls and pre-cast concrete units	Along Coast	Constructed by local municipalities and private property owners to satisfy their individual requirements and financial capabilities.
Atlantic Ocean	N/A	Breakwater	Town of Rye	Maintained by the USACE
Atlantic Ocean	N/A	Breakwater	North shore of Hampton Harbor Inlet	Protects mouth of Hampton and Seabrook Harbors from wave action.
Powwow Pond	Trickling Falls Dam	Dam	Outlet of Powwow Pond	Controlled by the Water Division of the New Hampshire Department of Environmental Services.
Squamscott River	N/A	Preventative Zoning	Town of Stratham	150 feet from the Squamscott River and 100 feet of major freshwater

4.4 Levees

This section is not applicable to this Flood Risk Project.

Table 9: Levees

[Not Applicable to this Flood Risk Project]

SECTION 5.0 – ENGINEERING METHODS

For the flooding sources in the county, standard hydrologic and hydraulic study methods were used to determine the flood hazard data required for this study. Flood events of a magnitude that are expected to be equaled or exceeded at least once on the average during any 10-, 25-, 50-, 100-, or 500-year period (recurrence interval) have been selected as having special significance for floodplain management and for flood insurance rates. These events commonly termed the 10-, 25-, 50-, 100-, and 500-year floods, have a 10-, 4-, 2-, 1-, and 0.2% annual chance, respectively, of being equaled or exceeded during any year.

Although the recurrence interval represents the long-term, average period between floods of a specific magnitude, rare floods could occur at short intervals or even within the same year. The risk of experiencing a rare flood increases when periods greater than 1 year are considered. For example, the risk of having a flood that equals or exceeds the 100-year flood (1-percent chance of annual exceedance) during the term of a 30-year mortgage is approximately 26 percent (about 3 in 10); for any 90-year period, the risk increases to approximately 60 percent (6 in 10). The analyses reported herein reflect flooding potentials based on conditions existing in the county at the time of completion of this study. Maps and flood elevations will be amended periodically to reflect future changes.

The engineering analyses described here incorporate the results of previously issued Letters of Map Change (LOMCs) listed in Table 27, “Incorporated Letters of Map Change”, which include Letters of Map Revision (LOMRs). For more information about LOMRs, refer to Section 6.5, “FIRM Revisions.”

5.1 Hydrologic Analyses

Hydrologic analyses were carried out to establish the peak elevation-frequency relationships for floods of the selected recurrence intervals for each flooding source studied. Hydrologic analyses are typically performed at the watershed level. Depending on factors such as watershed size and shape, land use and urbanization, and natural or man-made storage, various models or methodologies may be applied. A summary of the hydrologic methods applied to develop the discharges used in the hydraulic analyses for each stream is provided in Table 13. Greater detail (including assumptions, analysis, and results) is available in the archived project documentation.

A summary of the discharges is provided in Table 10. Frequency Discharge-Drainage Area Curves used to develop the hydrologic models may also be shown in Figure 7 for selected flooding sources. A summary of stillwater elevations developed for non-coastal flooding sources is provided in Table 11. (Coastal stillwater elevations are discussed in Section 5.3 and shown in Table 17.) Stream gage information is provided in Table 12.

Table 10: Summary of Discharges

Flooding Source	Location	Drainage Area (Square Miles)	Peak Discharge (cfs)				
			10% Annual Chance	4% Annual Chance	2% Annual Chance	1% Annual Chance	0.2% Annual Chance
Back Creek	At Town of Brentwood corporate limits	8.3	547	732	884	1,069	1,518
Back Creek	Upstream of Pawtuckaway Lake	7.7	503	673	814	985	1,400
Back Creek	At Town of Deerfield corporate limits	6.7	484	642	777	939	1,332
Back Creek	At Stream276 confluence	3.0	235	320	390	476	686
Back Creek	At Stream03 confluence	2.2	195	267	327	400	582
Back Creek	Downstream of Perry Road	1.9	176	241	296	362	526
Back Creek	Approximately 1.6 miles upstream of Perry Road	1.0	133	183	226	278	406
Bean River	Approximately 0.89 miles upstream of North River confluence	6.3	436	584	706	854	1,211
Bean River	Approximately 2.54 miles upstream of North River confluence	6.2	435	583	705	853	1,210
Bean River	Approximately 3.35 miles upstream of North River confluence	5.3	404	542	656	794	1,125
Bean River	Approximately 4.4 miles upstream of North River confluence	4.3	373	502	610	739	1,051
Bean River	Approximately 5 miles upstream of North River confluence	1.2	95	131	162	199	292
Bean River	Upstream of confluence with Stream281	0.7	74	103	128	158	235

Table 10: Summary of Discharges: Summary of Discharges (continued)

Flooding Source	Location	Drainage Area (Square Miles)	Peak Discharge (cfs)				
			10% Annual Chance	4% Annual Chance	2% Annual Chance	1% Annual Chance	0.2% Annual Chance
Beaver Brook	At Pelham-Windham corporate limits	51.0	1,500	*	2,560	3,180	4,930
Beaver Brook	At Pelham-Windham-Hudson corporate limits	48.6	1,450	*	2,470	3,070	4,750
Beaver Brook	Downstream of Robinson Pond Brook	48.3	1,400	*	2,430	3,010	4,670
Beaver Brook	Upstream of Robinson Pond Brook	45.0	1,310	*	2,360	2,900	4,490
Beaver Brook	At Londonderry-Windham-Hudson corporate limits	44.2	1,200	*	2,120	2,800	4,150
Beaver Brook	At Black Brook confluence	38.3	1,040	*	2,100	2,580	4,050
Beaver Brook	Upstream of Tributary C to Beaver Brook near Station 20.5	32.7	860	*	1,760	2,160	3,600
Beaver Brook	From upstream of Tributary C to Beaver Brook in Londonderry to downstream of Tributary O to Beaver Brook in Derry[1]	32.7[2]	800	*	1,660	2,050	3,500
Beaver Brook	From upstream of Tributary O to Beaver Brook to downstream of Hornes Brook[1]	24.3[2]	750	*	1,520	1,860	3,300
Beaver Brook	At Londonderry-Windham-Derry corporate limits	27.0	720	*	1,510	1,860	3,300
Beaver Brook	From upstream of Hornes Brook to downstream of Tributary G to Beaver Brook[1]	17.5[2]	400	*	1,150	1,440	2,880
Beaver Brook	At Londonderry-Derry corporate limits	26.3	720	*	1,510	1,860	3,300
Beaver Brook	From upstream of Tributary G to Beaver Brook to downstream of Tributary B to Beaver Brook	12.5[2]	130	*	510	650	1,410

Table 10: Summary of Discharges: Summary of Discharges (continued)

Flooding Source	Location	Drainage Area (Square Miles)	Peak Discharge (cfs)				
			10% Annual Chance	4% Annual Chance	2% Annual Chance	1% Annual Chance	0.2% Annual Chance
Beaver Brook	From upstream of Tributary B to Beaver Brook to approximately 650 feet downstream of outlet of Beaver Lake[1]	12.0[2]	65	*	380	430	960
Beaver Brook	At outlet of Beaver Lake	11.2	32	*	240	320	730
Black Brook	At mouth	5.6	185	*	345	425	830
Black Brook	At Adams Road	2.0	20	*	60	90	290
Bryant Brook	Downstream limit of detailed study	3.9	175	*	290	355	550
Cohas Brook	At Londonderry-Manchester corporate limits	12.3	410	*	760	990	1,550
Cunningham Brook	At Drew Brook confluence	3.4	245	*	630	775	1,540
Cunningham Brook	At Tributary H to Nesenkeag Brook confluence	2.0	145	*	390	480	1,000
Cunningham Brook	At Hampstead Road	1.1	75	*	215	260	560
Drew Brook	From Island Pond to confluence of Cunningham Brook[1]	5.0[2]	115	*	285	350	700
Dudley Brook	Approximately 0.85 miles upstream of Little River 1 confluence	7.11	331	445	540	656	950
Dudley Brook	Approximately 700 feet upstream of Pickpocket Road	6.22	312	407	491	592	852
Dudley Brook	Approximately 400 feet downstream of Middle Road	5.32	312	406	485	576	812
Dudley Brook	Downstream of the confluence with Stream107	5.06	297	384	458	541	759
Dudley Brook	Downstream of the confluence with Stream328	3.32	250	282	343	416	604

Table 10: Summary of Discharges: Summary of Discharges (continued)

Flooding Source	Location	Drainage Area (Square Miles)	Peak Discharge (cfs)				
			10% Annual Chance	4% Annual Chance	2% Annual Chance	1% Annual Chance	0.2% Annual Chance
Dudley Brook	Downstream of North Road	1.76	116	161	200	248	360
Dudley Brook	Downstream of the Rockingham County Jail	1.21	81	114	141	175	264
Dudley Brook	Approximately 1.5 miles upstream of North Road	0.89	73	102	127	158	239
Dudley Brook	At the downstream side of North Road	0.32	45	65	82	103	159
Exeter River (Town of Exeter)	At High St. Bridge	107	2,910	*	4,740	5,690	8,350
Exeter River (Town of Exeter)	At Little River confluence	107	2,905	*	4,730	5,670	8,330
Exeter River (Town of Exeter)	At Great Brook confluence	87.8	2,510	*	4,080	4,890	7,190
Exeter River (Town of Exeter)	At Linden St. Bridge	75.7	2,240	*	3,650	4,370	6,430
Exeter River (Town of Exeter)	At Perkins Brook confluence	75.3	2,230	*	3,630	4,360	6,410
Exeter River (Town of Exeter)	At Pickpocket Dam	74.1	2,210	*	3,590	4,310	6,330
Exeter River (Town of Exeter)	At Haigh Road	63.5	1,970	*	3,200	3,830	5,630
Exeter River	At Haigh Road	63.3	2,695	3,809	4,787	5,933	9,x200
Exeter River	Approximately 2 miles upstream of Haigh Road	63.2	2,695	3,807	4,785	5,930	9,194
Exeter River	At Crawley Falls Road	62.4	2,630	3,639	4,570	5,668	8,800
Exeter River	Approximately 1,800 feet upstream of State Route 125	61.5	2,616	3,606	4,529	5,612	8,688

Table 10: Summary of Discharges: Summary of Discharges (continued)

Flooding Source	Location	Drainage Area (Square Miles)	Peak Discharge (cfs)				
			10% Annual Chance	4% Annual Chance	2% Annual Chance	1% Annual Chance	0.2% Annual Chance
Exeter River	At the downstream side of Mill Road	60.51	2,600	3,577	4,486	5,553	8,570
Exeter River	Approximately 800 feet upstream of confluence with Stream1001	59.72	2,588	3,553	4,451	5,505	8,475
Exeter River	At Stream565 confluence	59.25	2,581	3,540	4,431	5,477	8,419
Exeter River	Downstream of Stream919 confluence	55.3	2,517	3,372	4,193	5,158	7,820
Exeter River	Approximately 2,000 feet upstream of State Route 111A	53.6	2,391	3,310	4,103	5,033	7,569
Exeter River	At upstream side of Rockingham Recreational Trail	52.9	2,381	3,292	4,076	4,996	7,496
Exeter River	Approximately 1,000 feet downstream of Scribner Road	52.86	2,380	3,289	4,072	4,991	7,487
Exeter River	Approximately 0.39 miles upstream of Scribner Road	51.8	2,319	3,199	3,955	4,845	7,244
Exeter River	Approximately 0.43 miles downstream of Sandown Road	50.8	2,302	3,168	3,910	4,784	7,126
Exeter River	Approximately 0.43 miles upstream of Sandown Road	50.2	2,266	3,101	3,822	4,669	6,937
Exeter River	Town of Fremont corporate limits	49.5	2,255	3,026	3,725	4,546	6,735
Exeter River	Approximately 1,500 feet upstream of Town of Fremont corporate limits	48.6	2,241	2,982	3,662	4,461	6,571
Exeter River	Approximately 0.81 miles downstream of Blueberry Hill Road	48.5	2,238	2,977	3,655	4,451	6,553

Table 10: Summary of Discharges: Summary of Discharges (continued)

Flooding Source	Location	Drainage Area (Square Miles)	Peak Discharge (cfs)				
			10% Annual Chance	4% Annual Chance	2% Annual Chance	1% Annual Chance	0.2% Annual Chance
Exeter River	Approximately 1 mile downstream of Blueberry Hill Road	47.5	2,222	2,865	3,510	4,268	6,256
Exeter River	Approximately 300 feet downstream of Blueberry Hill Road	46.6	2,206	2,834	3,466	4,211	6,150
Exeter River	Approximately 4,200 feet upstream of Blueberry Hill Road	46.1	2,197	2,813	3,435	4,165	6,055
Exeter River	At Fardway Brook confluence	45.7	2,191	2,802	3,419	4,143	6,015
Exeter River	At Stream090 confluence	35.3	1,480	1,940	2,316	2,763	3,825
Exeter River	At Stream310 confluence	31.9	1,327	1,742	2,082	2,488	3,449
Exeter River	At Stream091 confluence	25.2	921	1,193	1,417	1,684	2,304
Exeter River	At Stream313 confluence	23.1	801	1,044	1,242	1,480	2,034
Exeter River	Approximately 0.49 miles downstream of Sandown Rd	20.6	732	960	1,147	1,373	1,907
Exeter River	Approximately 300 feet downstream of corporate limit of Town of Fremont	19.9	732	960	1,147	1,373	1,907
Exeter River	Approximately 1,300 feet downstream of confluence with Stream9659	19.3	716	919	1,099	1,318	1,838
Exeter River	At Stream9659 confluence	19.1	716	919	1,099	1,318	1,838
Exeter River	At Stream609 confluence	18.3	712	909	1,088	1,304	1,817
Exeter River	At Rockingham Recreational Trail	17.2	673	886	1,061	1,273	1,778
Exeter River	Approximately 0.87 miles upstream of Odell Road	16.4	642	846	1,014	1,217	1,702
Exeter River	At Stream085 confluence	15.4	620	817	978	1,172	1,634

Table 10: Summary of Discharges: Summary of Discharges (continued)

Flooding Source	Location	Drainage Area (Square Miles)	Peak Discharge (cfs)				
			10% Annual Chance	4% Annual Chance	2% Annual Chance	1% Annual Chance	0.2% Annual Chance
Exeter River	At Stream082 confluence	13.0	599	745	894	1,073	1,501
Exeter River	At Stream9081 confluence	7.7	471	591	715	865	1,231
Exeter River	At corporate limits of the Town of Sandown	6.5	397	534	647	786	1,127
Exeter River	At Stream080 confluence	6.1	364	490	594	721	1,034
Exeter River	At Stream9079 confluence	3.6	211	286	348	424	610
Exeter River	At Stream597confluence	1.7	119	163	200	245	358
Exeter River	Approximately 0.51 miles upstream of Stream597 confluence	0.5	45	64	79	98	148
Fardway Brook	At Stream662 confluence	9.8	2,287	2,918	3,439	4,066	5,511
Fardway Brook	Approximately 0.41 miles upstream of Stream662 confluence	7.6	2,287	2,918	3,439	4,066	5,511
Fardway Brook	At Stream573 confluence	7.3	2,287	2,918	3,439	4,066	5,511
Fardway Brook	Approximately 1,600 feet downstream of Lane Road	6.3	2,287	2,918	3,439	4,066	5,511
Fardway Brook	Approximately 0.64 miles downstream of Old Bye Road	5.4	2,287	2,918	3,439	4,066	5,511
Fardway Brook	Approximately 0.64 miles upstream of Lane Road	4.4	2,287	2,918	3,439	4,066	5,511
Fardway Brook	At Stream588 confluence	3.5	2,287	2,918	3,439	4,066	5,511
Fardway Brook	Approximately 600 feet upstream of Shatagee Road	2.7	2,287	2,918	3,439	4,066	5,511
Fardway Brook	Approximately 0.49 miles upstream of Shatagee Road	1.7	2,287	2,918	3,439	4,066	5,511
Flatrock Brook	At inlet to Shadow Lake	7.3	270	*	640	760	1,450

Table 10: Summary of Discharges: Summary of Discharges (continued)

Flooding Source	Location	Drainage Area (Square Miles)	Peak Discharge (cfs)				
			10% Annual Chance	4% Annual Chance	2% Annual Chance	1% Annual Chance	0.2% Annual Chance
Flatrock Brook	Downstream of tributary near Station 0.9	6.9	220	*	540	640	1,230
Flatrock Brook	Upstream of tributary near Station 0.9	5.9	190	*	460	550	1,030
Flatrock Brook	At outlet to Seavey Pond	5.3	170	*	420	495	960
Fresh River	At Piscassic River confluence	3.39	75	102	125	153	223
Fresh River	At upstream end of confluence with Piscassic River	2.6	62	84	103	127	186
Fresh River	At Beech Hill Road	1.99	56	77	94	116	171
Fresh River	At Town of Exeter corporate limits	1.32	47	65	81	100	148
Fresh River	At upstream end of Town of Brentwood corporate limits	0.35	39	57	72	91	142
Golden Brook	At outlet to Moeckel (Simpson – Rock Ponds)	11.5	100	*	550	750	1,490
Golden Brook	At inlet to Moeckel (Simpson – Rock Ponds)	10.5	340	*	805	960	1,700
Golden Brook	At downstream confluence of Tributary B	5.9	273	*	665	791	1,400
Golden Brook	At upstream confluence of Tributary B	3.1	142	*	369	439	860
Golden Brook	At downstream confluence of Tributary A	2.4	103	*	273	325	630
Grassy Brook	At Powwow River confluence	1.67	*	*	*	198	*
Great Brook 1	At Stream566 confluence	11.7	388	456	548	661	929
Great Brook 1	Approximately 700 feet upstream of Stream566 confluence	11.0	388	449	541	652	919

Table 10: Summary of Discharges: Summary of Discharges (continued)

Flooding Source	Location	Drainage Area (Square Miles)	Peak Discharge (cfs)				
			10% Annual Chance	4% Annual Chance	2% Annual Chance	1% Annual Chance	0.2% Annual Chance
Great Brook 1	At Mill Brook confluence	11.0	388	449	541	652	919
Great Brook 1	Approximately 0.56 miles upstream of Mill Brook confluence	7.6	262	351	425	514	731
Great Brook 1	Approximately 1,600 feet upstream Amesbury Road	7.6	262	351	425	514	731
Great Brook 1	At Stream603 confluence	7.2	261	349	423	512	728
Great Brook 1	Approximately 0.53 miles upstream Stream603 confluence	6.5	242	324	393	477	679
Great Brook 1	Approximately 0.96 miles downstream of Bioteau Drive	6.2	225	303	367	445	636
Great Brook 1	At Stream101 confluence	6.0	213	286	347	422	603
Great Brook 1	Approximately 1,400 feet upstream of State Route 108	3.6	122	166	203	248	361
Great Brook 1	At Stream099 confluence	3.3	115	156	191	234	341
Great Brook 1	Approximately 1,300 feet upstream of Stream099 confluence	1.1	47	65	81	100	150
Hartford Brook	Approximately 1,000 feet upstream of State Route 43	11.1	962	1,273	1,527	1,830	2,548
Hartford Brook	Approximately 2,000 feet downstream of Stream251 confluence	10.2	924	1,213	1,456	1,748	2,439
Hartford Brook	At Stream251 confluence	9.8	924	1,194	1,434	1,721	2,401
Hartford Brook	Upstream of Middle Road	8.8	833	1,106	1,329	1,596	2,231
Hartford Brook	At Stream025 confluence	8.0	767	1,007	1,212	1,458	2,042
Hartford Brook	At Stream249 confluence	5.6	549	736	890	1,074	1,516

Table 10: Summary of Discharges: Summary of Discharges (continued)

Flooding Source	Location	Drainage Area (Square Miles)	Peak Discharge (cfs)				
			10% Annual Chance	4% Annual Chance	2% Annual Chance	1% Annual Chance	0.2% Annual Chance
Hartford Brook	Approximately 0.45 miles upstream of Mount Delight Road	2.1	227	310	379	463	669
Hartford Brook	Approximately 1,500 feet upstream of Whittier Road	1.6	175	240	295	361	527
Hidden Valley Brook	At Beaver Brook confluence	2.5	150	*	270	325	540
Hidden Valley Brook	At culvert near Station 1.0	1.9	120	*	220	260	430
Hidden Valley Brook	At Londonderry Road culvert	1.1	75	*	135	165	275
Hill Brook	At State Route 111	1.52	*	*	*	120	*
Hog Hill Brook	At Haverhill Road	8.38	*	*	*	680	*
Hog Hill Brook	At Kathi Lane	5.52	*	*	*	410	*
Hog Hill Brook	At Island Pond Road in the Town of Atkinson	4.75	*	*	*	380	*
Hornes Brook	From Beaver Brook to Hornes Pond[1]	6.82	260	*	313	368	500
Kelly Brook	Downstream limit of detailed study	4.9	285	*	405	495	735
Lamprey River	At Stream274 confluence	75.6	4,327	5,561	6,559	7,761	10,532
Lamprey River	Approximately 1,300 feet upstream of State Route 87	73.0	4,327	5,561	6,559	7,761	10,532
Lamprey River	At Stream9272 confluence	72.6	4,327	5,561	6,559	7,761	10,532
Lamprey River	Approximately 400 feet downstream of State Route 125	70.4	4,251	5,453	6,423	7,589	10,266
Lamprey River	Approximately 300 feet downstream of Main Street	69.9	4,251	5,453	6,423	7,589	10,266

Table 10: Summary of Discharges: Summary of Discharges (continued)

Flooding Source	Location	Drainage Area (Square Miles)	Peak Discharge (cfs)				
			10% Annual Chance	4% Annual Chance	2% Annual Chance	1% Annual Chance	0.2% Annual Chance
Lamprey River	At Stream272 confluence	69.3	4,238	5,427	6,392	7,552	10,215
Lamprey River	At Stream667 confluence	67.1	4,120	5,233	6,165	7,286	9,861
Lamprey River	Upstream of Stream667 confluence	66.1	4,048	5,195	6,121	7,233	9,789
Lamprey River	Approximately 1,400 feet downstream of Blake Road	65.3	4,047	5,138	6,054	7,155	9,684
Lamprey River	At Pawtuckaway River confluence	64.6	4,047	5,138	6,054	7,155	9,683
Lamprey River	At State Route 27	59.6	3,730	4,792	5,650	6,682	9,055
Lamprey River	Approximately 0.68 miles upstream of State Route 27	58.7	3,728	4,792	5,650	6,682	9,055
Lamprey River	Approximately 0.72 miles downstream of Rockingham Recreational Trail	57.8	3,691	4,742	5,590	6,608	8,948
Lamprey River	Approximately 300 feet downstream of State Route 101	57.4	3,677	4,716	5,558	6,571	8,895
Lamprey River	At Stream629 confluence	56.8	3,677	4,700	5,541	6,551	8,870
Lamprey River	At Stream639 confluence	55.9	3,626	4,658	5,491	6,490	8,784
Lamprey River	Approximately 2,000 feet upstream Stream639 confluence	54.7	3,599	4,623	5,447	6,436	8,699
Lamprey River	At downstream side of State Route 101	53.7	3,599	4,623	5,447	6,436	8,699
Lamprey River	Approximately 1,500 feet upstream of State Route 101	53.6	3,593	4,602	5,422	6,405	8,655
Lamprey River	At Stream039 confluence	53.0	3,593	4,595	5,414	6,395	8,640
Lamprey River	At Stream583 confluence	51.1	3,549	4,421	5,207	6,149	8,301

Table 10: Summary of Discharges: Summary of Discharges (continued)

Flooding Source	Location	Drainage Area (Square Miles)	Peak Discharge (cfs)				
			10% Annual Chance	4% Annual Chance	2% Annual Chance	1% Annual Chance	0.2% Annual Chance
Lamprey River	At Stream262 confluence	49.0	3,549	4,353	5,128	6,055	8,175
Lamprey River	At downstream side of Landford Road	38.5	2,932	3,774	4,453	5,266	7,135
Lamprey River	At Dudley Brook 2 confluence	38.4	2,929	3,732	4,402	5,204	7,046
Lamprey River	Approximately 400 feet upstream of Dudley Brook 2 confluence	35.4	2,849	3,509	4,141	4,898	6,638
Lamprey River	At Stream554 confluence	35.3	2,849	3,495	4,127	4,882	6,620
Lamprey River	Approximately 500 feet upstream of Stream554 confluence	34.4	2,849	3,460	4,083	4,827	6,538
Lamprey River	Approximately 1,200 feet upstream of Dudley Road	34.4	2,101	2,595	3,084	3,670	5,045
Lamprey River	Approximately 0.68 miles downstream of Stream254 confluence	33.9	2,101	2,595	3,084	3,670	5,045
Lamprey River	At Stream254 confluence	33.6	2,101	2,595	3,084	3,670	5,045
Lamprey River	Approximately 0.54 miles upstream of Stream254 confluence	32.3	2,101	2,595	3,084	3,670	5,045
Lamprey River	Approximately 0.64 upstream of Stream254 confluence	32.0	2,101	2,595	3,084	3,670	5,045
Lamprey River	Approximately 1,200 feet upstream of Cotton Road	31.1	2,101	2,595	3,084	3,670	5,045
Lamprey River	At Stream252 confluence	30.4	2,101	2,595	3,084	3,670	5,045
Lamprey River	Upstream of Stream252 confluence	27.5	2,101	2,405	2,862	3,410	4,699
Lamprey River	At Nichols Brook confluence	16.3	1,177	1,501	1,798	2,156	3,010

Table 10: Summary of Discharges: Summary of Discharges (continued)

Flooding Source	Location	Drainage Area (Square Miles)	Peak Discharge (cfs)				
			10% Annual Chance	4% Annual Chance	2% Annual Chance	1% Annual Chance	0.2% Annual Chance
Lamprey River	Approximately 1,300 feet upstream of Nichols Brook confluence	11.7	797	1,056	1,271	1,530	2,156
Lamprey River	At Stream676 confluence	11.4	776	1,031	1,241	1,495	2,109
Lamprey River	Approximately 900 feet upstream of Stream676 confluence	9.6	668	889	1,071	1,291	1,826
Lamprey River	At Stream657 confluence	9.4	663	880	1,061	1,280	1,809
Lamprey River	At Stream8277 confluence	8.5	644	810	978	1,180	1,671
Lamprey River	At Stream245 confluence	7.9	644	775	935	1,129	1,599
Lamprey River	At Stream626 confluence	6.8	539	686	830	1,003	1,425
Lamprey River	Approximately 1,100 feet below Blakes Hill Road	6.2	487	653	790	956	1,362
Lamprey River	At Stream658 confluence	5.7	482	617	748	907	1,294
Lamprey River	Approximately 700 feet upstream of Stream658 confluence	4.9	388	523	636	773	1,110
Lamprey River	Approximately 1 mile upstream of Old Coffeetown Road	4.3	335	453	552	672	968
Lamprey River	Approximately 0.87 miles downstream of Mountain Road	3.7	302	409	498	606	873
Lamprey River	Approximately 0.72 miles upstream of Mountain Road	2.8	225	307	375	458	663
Little Cohas Brook	At Industrial Road	6.7	190	*	365	480	770
Little Cohas Brook	At Harvey Road	6.3	150	*	310	385	540
Little Cohas Brook	At Litchfield Road	1.0	70	*	135	170	275
Little River No. 1	At Exeter River confluence	13.9	345	*	528	624	874

Table 10: Summary of Discharges: Summary of Discharges (continued)

Flooding Source	Location	Drainage Area (Square Miles)	Peak Discharge (cfs)				
			10% Annual Chance	4% Annual Chance	2% Annual Chance	1% Annual Chance	0.2% Annual Chance
Little River No. 1	Approximately 1 mile upstream of Exeter River confluence	12.69	546	728	881	1,067	1,526
Little River No. 1	Approximately 0.43 miles downstream of State Route 111	12.07	537	717	868	1,051	1,505
Little River No. 1	At Brentwood Road	11.08	481	643	780	947	1,360
Little River No. 1	At Dudley Brook confluence	10.18	439	573	696	847	1,223
Little River No. 1	At Stream109 confluence	2.27	110	152	187	230	339
Little River No. 1	Approximately 0.47 miles upstream of Stream109 confluence	2.2	108	149	184	227	335
Little River No. 1	At State Route 101	2.0	108	149	184	227	335
Little River No. 1	At Pine Road	1.0	59	82	102	126	189
Little River No. 1	Approximately 0.58 miles upstream of State Route 101	0.6	28	40	50	62	94
Little River No. 2	Approximately 700 feet upstream of Exeter River confluence	9.9	341	454	548	662	938
Little River No. 2	Approximately 0.66 miles downstream of South Road	9.69	330	440	531	641	909
Little River No. 2	At Little River Road	8.8	290	387	467	565	801
Little River No. 2	Approximately 1.1 miles upstream of Little River Road	4.9	142	191	232	281	403
Little River No. 2	Approximately 1,100 feet downstream of State Route 107	4.02	127	172	209	254	364
Little River No. 2	Approximately 0.72 miles upstream of Stream553 confluence	2.06	70	95	116	142	207
Little River No. 2	Just downstream of North Road	1.47	52	72	89	109	160

Table 10: Summary of Discharges: Summary of Discharges (continued)

Flooding Source	Location	Drainage Area (Square Miles)	Peak Discharge (cfs)				
			10% Annual Chance	4% Annual Chance	2% Annual Chance	1% Annual Chance	0.2% Annual Chance
Little River No. 3	Approximately 1,500 feet upstream of Lamprey River confluence	16.0	974	1,283	1,537	1,843	2,573
Little River No. 3	Approximately 0.49 downstream of Stream624 confluence	16.0	969	1,277	1,530	1,835	2,561
Little River No. 3	At Stream624confluence	15.7	964	1,269	1,520	1,823	2,541
Little River No. 3	At Stream633 confluence	15.1	956	1,237	1,482	1,777	2,478
Little River No. 3	At Kelsey Road	14.0	956	1,200	1,439	1,726	2,410
Little River No. 3	Approximately 0.91 miles upstream of Mill Pond Road	12.2	723	960	1,155	1,391	1,955
Little River No. 3	Approximately 0.7 miles downstream of Smoke Street	11.3	702	932	1,122	1,350	1,897
Little River No. 3	Approximately 600 feet upstream of Smoke Street	10.4	636	846	1,019	1,228	1,728
Lucas Pond	At Stream054 confluence	3.94	375	453	553	672	969
Lucas Pond	Approximately 1,800 feet downstream of Lucas Pond Road	1.12	99	137	169	207	305
Lucas Pond	Approximately 0.51 miles upstream of Lucas Pond Road	1	89	123	152	187	275
Mile Brook	At Back Creek confluence	20.35	1,051	1,260	1,505	1,799	2,494
Mile Brook	Upstream of Back Creek confluence	7.8	395	444	660	806	1,170
Mile Brook	Approximately 0.72 miles downstream of State Park Road	7.8	395	444	660	806	1,170
Mile Brook	At Stream051 confluence	6.5	395	428	660	806	1,170

Table 10: Summary of Discharges: Summary of Discharges (continued)

Flooding Source	Location	Drainage Area (Square Miles)	Peak Discharge (cfs)				
			10% Annual Chance	4% Annual Chance	2% Annual Chance	1% Annual Chance	0.2% Annual Chance
Mile Brook	Approximately 0.42 miles upstream of Stream051 confluence	3.8	313	426	520	635	918
Mile Brook	At confluence with Mountain Brook	3.7	313	426	520	635	918
Mill Brook	At Stream102 confluence	3.18	179	184	225	275	399
Mill Brook	Approximately 0.77 miles upstream of Osgood Road	0.99	54	75	93	115	171
Mountain Brook	Approximately 0.85 miles upstream of State Park Road	3.6	304	414	506	618	895
Mountain Brook	At upstream end of Mountain Road	2.8	243	332	407	498	725
Mountain Brook	Approximately 1,700 feet upstream of Reservation Road	1.5	130	180	223	276	413
Mountain Brook	Approximately 3,100feet upstream Reservation Road	0.93	79	111	138	171	258
Nesenkeag Brook	At Londonderry-Litchfield corporate limits	6.9	380	*	720	870	1,390
Nesenkeag Brook	At confluence of Tributary H to Nesenkeag Brook	4.8	260	*	500	625	1,000
Nichols Brook	At Stream247 confluence	4.03	380	514	626	761	1,092
Nichols Brook	Approximately 1,500 feet downstream of Lang Road	2.63	265	361	442	540	785
Nichols Brook	At Babb Road	1.88	188	258	317	388	569
Nichols Brook	Approximately 600 feet upstream of Griffin Road	1.01	128	177	219	270	399
North Branch River	Approximately 1,500 feet upstream of Lamprey River confluence	17.55	980	1,287	1,539	1,841	2,559

Table 10: Summary of Discharges: Summary of Discharges (continued)

Flooding Source	Location	Drainage Area (Square Miles)	Peak Discharge (cfs)				
			10% Annual Chance	4% Annual Chance	2% Annual Chance	1% Annual Chance	0.2% Annual Chance
North Branch River	Approximately 0.62 miles downstream of State Route 27	17.15	951	1,250	1,494	1,788	2,485
North Branch River	At Stream259confluence	17.08	951	1,250	1,494	1,788	2,485
North Branch River	Approximately 1,500 feet upstream of Stream259 confluence	14.86	802	1,055	1,263	1,513	2,108
North Branch River	Approximately 1.2 miles upstream of Stream259 confluence	13.24	674	887	1,062	1,273	1,777
North Branch River	At Stream572 confluence	11.11	624	716	860	1,034	1,451
North Branch River	Approximately 1,400 feet upstream of New Boston Road	4.63	232	312	379	459	657
North Branch River	Approximately 1.1 miles upstream of New Boston Road	4.44	232	312	379	459	657
North Branch River	At Stream661 confluence	3.44	`182	245	298	362	518
North Branch River	Approximately 1,600 feet upstream of Stream661 confluence	2.37	114	155	189	230	331
North Branch River	At Beaver Pond	1.9	86	117	142	173	249
North Branch River	At Spruce Pond	1.07	33	46	56	68	98
North River	Approximately 2,200 feet downstream of Calef Highway	57.79	2,673	3,453	4,085	4,847	6,618
North River	Approximately 1,800 feet upstream Calef Highway	56.86	2,660	3,428	4,056	4,812	6,566
North River	Approximately 0.81 miles upstream of Calef Highway	56.33	2,660	3,320	3,929	4,664	6,375
North River	At Stream606 confluence	55.34	2,660	3,264	3,864	4,587	6,269
North River	At Rollins Brook confluence	54.52	2,660	3,185	3,772	4,480	6,132

Table 10: Summary of Discharges: Summary of Discharges (continued)

Flooding Source	Location	Drainage Area (Square Miles)	Peak Discharge (cfs)				
			10% Annual Chance	4% Annual Chance	2% Annual Chance	1% Annual Chance	0.2% Annual Chance
North River	Approximately 1,300 feet upstream of Rollins Brook confluence	46.94	2,246	2,702	3,205	3,812	5,235
North River	Approximately 0.7 miles downstream of McCrills Road	46.82	2,246	2,687	3,188	3,792	5,208
North River	Approximately 0.47 miles downstream of Stage Road	46.36	2,246	2,573	3,050	3,626	4,971
North River	Approximately 500 feet upstream of Stage Road	45.37	2,246	2,573	3,050	3,626	4,971
North River	At Bean River confluence	44.45	2,246	2,504	2,967	3,525	4,826
North River	Approximately 800 feet upstream of logging road	14.86	948	1,249	1,495	1,790	2,484
North River	At Stream286 confluence	14.25	936	1,204	1,442	1,727	2,398
North River	At Stream285 confluence	10.59	774	1,006	1,208	1,452	2,028
North River	Upstream of Stream285 confluence	9.48	696	925	1,114	1,340	1,878
North River	Approximately 0.45 miles upstream of Freeman Hall Road	8.83	647	861	1,037	1,248	1,753
North River	At Lucas Pond confluence	8.22	610	813	979	1,178	1,654
North River	Approximately 500 feet upstream of Lucas Pond confluence	3.28	256	346	421	512	731
Pawtuckaway River	Upstream of Folsom Mill Lane	4.33	317	431	526	643	931
Pawtuckaway River	Approximately 0.58 miles downstream of Stingy River Road	4.23	311	423	517	632	917
Pawtuckaway River	At Stream270 confluence	3.71	285	388	475	580	840

Table 10: Summary of Discharges: Summary of Discharges (continued)

Flooding Source	Location	Drainage Area (Square Miles)	Peak Discharge (cfs)				
			10% Annual Chance	4% Annual Chance	2% Annual Chance	1% Annual Chance	0.2% Annual Chance
Pawtuckaway River	Approximately 0.43 miles upstream of Stream270 confluence	1.8	147	203	250	306	449
Pawtuckaway River	At Raymond Road	0.73	68	95	118	146	217
Pickering Brook	At Portsmouth Avenue (State Route 151)	2.45	39	*	48	53	62
Pickering Brook	At access road	0.8	*	*	*	87	*
Piscassic River	Approximately 1.81 miles upstream of Fresh River confluence	10.83	334	446	540	655	940
Piscassic River	Approximately 1,500 feet downstream of Birch Road	10.36	334	446	540	655	940
Piscassic River	Approximately 2,000 feet downstream of State Route 27	9.4	317	425	516	627	904
Piscassic River	Approximately 0.56 miles upstream of State Route 27	8.43	306	412	501	609	878
Piscassic River	Approximately 0.47 miles upstream of State Route 101	7.45	306	412	501	609	878
Piscassic River	At State Route 125	6.64	266	359	437	533	772
Piscassic River	At Stream580 confluence	5.64	253	314	383	467	679
Piscassic River	Approximately 0.45 miles upstream of Martin Road	4.63	187	254	310	379	551
Piscassic River	Approximately 0.60 miles upstream of Martin Road	3.91	149	203	248	304	445
Piscassic River	Approximately 0.41 miles downstream of Leavitt Road	2.92	115	158	194	238	351
Piscassic River	Approximately 400 feet upstream of Leavitt Road	2.82	113	154	189	232	341

Table 10: Summary of Discharges: Summary of Discharges (continued)

Flooding Source	Location	Drainage Area (Square Miles)	Peak Discharge (cfs)				
			10% Annual Chance	4% Annual Chance	2% Annual Chance	1% Annual Chance	0.2% Annual Chance
Piscassic River	At Stream599 confluence	1.82	81	112	138	170	253
Piscassic River	Approximately 600 feet downstream of Beede Hill Road	1.75	76	105	129	160	238
Piscassic River	Approximately 900 feet upstream of Beede Hill Road	1.05	64	89	111	137	204
Piscassic River	At Stream696 confluence	0.68	51	64	79	98	148
Piscassic River	At Stream586 confluence	0.48	44	54	67	84	127
Piscassic River	Approximately 0.60 miles upstream of Stream586 confluence	0.26	29	42	53	66	103
Policy Brook	At Rockingham Park Inlet	5.9	350	*	550	660	880
Policy Brook	At State Route 28	5.2	250	*	390	460	620
Policy Brook	Approximately 2,000 feet upstream of State Route 28	5.0	180	*	290	330	440
Policy Brook	Approximately 700 feet downstream of Main Street	4.8	100	*	190	210	260
Porcupine Brook	At Interstate Route 93	3.1	*	*	*	650	*
Porcupine Brook	At Old Causeway	2.2	*	*	*	450	*
Porcupine Brook Tributary	At Quill Lane	0.8	*	*	*	210	*
Powwow River	At Lake Gardner Dam in Amesbury, Massachusetts	49.1	*	*	*	1,720	*
Powwow River	Downstream reach at corporate limits near Lake Gardner	48.3	*	*	*	1,700	*
Powwow River	At Tuxbury Pond Dam in Amesbury, Massachusetts	45.9	*	*	*	1,640	*

Table 10: Summary of Discharges: Summary of Discharges (continued)

Flooding Source	Location	Drainage Area (Square Miles)	Peak Discharge (cfs)				
			10% Annual Chance	4% Annual Chance	2% Annual Chance	1% Annual Chance	0.2% Annual Chance
Powwow River	Upstream reach at corporate limits in Tuxbury Pond	41.4	*	*	*	1,540	*
Red Brook	Approximately 0.72 miles upstream of Copp Drive	1.42	5	7	9	11	16
Shields Brook	From Hornes Pond to first crossing (looking upstream) of Derry-Londonderry corporate limits[1]	6.7[2]	260	*	313	368	500
Shields Brook	At first Londonderry-Derry corporate limits (looking upstream)	5.2	190	*	465	575	1,000
Shields Brook	From first crossing (looking upstream) of Derry-Londonderry corporate limits to second crossing (looking upstream) of Derry-Londonderry corporate limits	5.2[2]	146	*	234	276	362
Shields Brook	At Upper Beaver Brook confluence	4.6	160	*	405	500	880
Shields Brook	At second Londonderry-Derry corporate limits (looking upstream)	2.2	75	*	200	250	450
Shields Brook	From second crossing (looking upstream) of Derry-Londonderry corporate limits to upstream study limit[1]	2.22	84	*	127	146	200
Shop Pond	At outlet	2.52	*	*	*	150	*
Spicket River	At Hampshire Road	61.6	900	*	1,600	1,900	2,900
Spicket River	At Town Farm Road	47.9	800	*	1,300	1,600	2,400

Table 10: Summary of Discharges: Summary of Discharges (continued)

Flooding Source	Location	Drainage Area (Square Miles)	Peak Discharge (cfs)				
			10% Annual Chance	4% Annual Chance	2% Annual Chance	1% Annual Chance	0.2% Annual Chance
Spicket River	At confluence of Providence Hill Brook	40.0	700	*	1,200	1,400	2,100
Spicket River	At Arlington Mill Reservoir	26.8	350	*	650	750	1,100
Taylor Brook	At Island Pond	5.3	75	*	365	525	1345
Taylor Brook	At outlet to Ballard Pond	4.6	10	*	200[3]	320[3]	960[3]
Taylor Brook	At inlet to Ballard Pond	3.4	320	*	820	1,005	2,000
Taylor Brook	At confluence of Tributary J to Beaver Brook	2.5	210	*	560	690	1,400
The Powwow Pond System	At Powwow Pond / Powwow River outlet	29.6	*	*	*	850	*
The Powwow Pond System	At Country Pond outlet	14.2	*	*	*	410	*
The Powwow Pond System	At Great Pond outlet	9.96	*	*	*	290	*
Tributary C to Beaver Brook	At mouth	2.8	185	*	365	450	740
Tributary C to Beaver Brook	At Chester Road	2.3	120	*	235	310	490
Tributary D	At Londonderry-Derry corporate limits	1.5	70	*	200	245	520
Tributary E to Beaver Lake	At mouth	2.8	190	*	350	435	700
Tributary E to Beaver Lake	At Chester Road	1.6	125	*	235	290	470
Tributary E to Little Cohas Brook	At Beaver Lake	1.4	110	*	310	385	820
Tributary E to Little Cohas Brook	At Tsienneto Road	1.3	105	*	295	365	760

Table 10: Summary of Discharges: Summary of Discharges (continued)

Flooding Source	Location	Drainage Area (Square Miles)	Peak Discharge (cfs)				
			10% Annual Chance	4% Annual Chance	2% Annual Chance	1% Annual Chance	0.2% Annual Chance
Tributary F to Beaver Lake	At Beaver Lake	7.2	250	*	590	725	1,350
Tributary F to Beaver Lake	At outlet to Adams Pond	6.0	195	*	475	585	1,150
Tributary G to Beaver Brook	At confluence with Beaver Brook	3.6	245	*	625	770	1,500
Tributary G to Beaver Brook	Downstream of confluence of West Running Brook	3.5	210	*	540	660	1,290
Tributary G to Beaver Brook	Upstream of confluence of West Running Brook	2.1	180	*	495	610	1,250
Tributary G to Beaver Brook	At Windham Road	1.3	120	*	335	410	900
Tributary H to Drew Lake	At mouth	2.5	155	*	310	390	640
Tributary H to Nesenkeag Brook	At confluence with Drew Brook	1.4	110	*	305	375	795
Tributary H to Nesenkeag Brook	Approximately 1,000 feet upstream of Hampstead Road	1.0	25	*	40	120	150
Tributary J to Black Brook	At mouth	1.6	110	*	140	180	285
Tributary O to Beaver Brook	At confluence with Beaver Brook	1.7	75	*	205	255	535
Tributary O to Beaver Brook	At Derry-Londonderry corporate limits	1.5	70	*	200	245	520
Unnamed Brook	At State Route 97 bridge	0.7	70	*	100	120	170
Upper Beaver Brook	At mouth	2.0	65	*	160	215	430
Wash Pond	At outlet	2.42	*	*	*	150	*

Table 10: Summary of Discharges: Summary of Discharges (continued)

Flooding Source	Location	Drainage Area (Square Miles)	Peak Discharge (cfs)				
			10% Annual Chance	4% Annual Chance	2% Annual Chance	1% Annual Chance	0.2% Annual Chance
Wash Pond Tributary	At confluence with Wash Pond	1.03	*	*	*	62	*
Wash Pond Tributary	At Kent Farm Road	0.9	*	*	*	54	*
West Channel Policy Brook	At Pleasant Street	2.8	*	*	*	200	*
West Channel Policy Brook	At Pelham Road	2.5	*	*	*	380	*
Winkley Brook	At Town of Kensington corporate limits	2.84	128	175	215	264	386
Winkley Brook	Approximately 1,000 feet downstream of Amesbury Road	2.17	95	130	161	198	292
Winkley Brook	At Stream953 confluence	2.03	87	120	148	183	271
Winkley Brook	Approximately 0.72 miles upstream of Stream953 confluence	1.48	51	70	87	108	163
Winkley Brook	Approximately 1,200 feet downstream of South Road	1.03	29	41	51	63	95
Winnicut River	At the downstream corporate limits of town of North Hampton	5.97	113	*	168	198	275

[1] Reach Drainage
[2] Drainage area at downstream limit of reach
[3] Discharges reduced due to Ballard Pond Storage
* Data not available
** Due to diversion to Oyster River

Figure 7: Frequency Discharge-Drainage Area Curves

[Not Applicable to this Flood Risk Project]

Table 11: Summary of Non-Coastal Stillwater Elevations

Flooding Source	Location	Elevations (feet NGVD[1], NAVD[2])				
		10% Annual Chance	4% Annual Chance	2% Annual Chance	1% Annual Chance	0.2% Annual Chance
Adams Pond	At Derry	326.0[1]	*	327.1[1]	327.3[1]	328.1[1]
Beaver Lake	At Derry	287.9[1]	*	289.3[1]	289.6[1]	294.0[1]
Island Pond	At the Towns of Derry and Atkinson's corporate limits, in Derry, and the entire shoreline within Hampstead	205.5[1]	*	206.4[1]	206.8[1]	208.2[1]
Lower Ballard Pond	At Derry	251.5[1]	*	253.6[1]	254.6[1]	256.2[1]
Lower Beaver Lake	At Derry	287.9[1]	*	288.9[1]	289.2[1]	290.0[1]
Piscataqua River	At Newington	*	*	*	8.3[2]	*
Powwow Pond/Powwow River	Upstream of New Boston Road	*	*	*	120.8[1]	*
Powwow Pond/Powwow River	Upstream of Boston & Maine Railroad bridge	*	*	*	119.1[1]	*
Powwow Pond/Powwow River	Downstream of Boston & Maine Railroad bridge	*	*	*	118.2[1]	*
Seavey Pond	At Windham	*	*	*	248.6[1]	*
Squamscott River	Entire length within Stratham	6.2[2]	*	6.8[2]	7.0[2]	7.5[2]
Upper Ballard Pond	At Derry	253.7[1]	*	255.5[1]	258.4[1]	259.2[1]
Wash Pond	Entire shoreline within Hampstead	*	*	*	234.8[1]	*
World End Brook and Pond	At Lawrence Road in Salem	*	*	*	117.0[1]	*

[1] NGVD
[2] NAVD
* Data not available

Table 12: Stream Gage Information used to Determine Discharges

Flooding Source	Gage Identifier	Agency that Maintains Gage	Site Name	Drainage Area (Square Miles)	Period of Record	
					From	To
Dudley Brook	1073600	USGS	DUDLEY BROOK NEAR EXETER, NH	4.97	1963	2007
Exeter River	1073587	USGS	EXETER RIVER AT HAIGH ROAD, NEAR BRENTWOOD, NH	63.5	1997	2016
Lamprey River	10723500	USGS	LAMPREY RIVER NEAR NEWMARKET, NH	185	1935	2016

5.2 Hydraulic Analyses

Analyses of the hydraulic characteristics of flooding from the sources studied were carried out to provide estimates of the elevations of floods of the selected recurrence intervals. Base flood elevations on the FIRM represent the elevations shown on the Flood Profiles and in the Floodway Data tables in the FIS Report. Rounded whole-foot elevations may be shown on the FIRM in coastal areas, areas of ponding, and other areas with static base flood elevations. These whole-foot elevations may not exactly reflect the elevations derived from the hydraulic analyses. Flood elevations shown on the FIRM are primarily intended for flood insurance rating purposes. For construction and/or floodplain management purposes, users are cautioned to use the flood elevation data presented in this FIS Report in conjunction with the data shown on the FIRM. The hydraulic analyses for this FIS were based on unobstructed flow. The flood elevations shown on the profiles are thus considered valid only if hydraulic structures remain unobstructed, operate properly, and do not fail.

For streams for which hydraulic analyses were based on cross sections, locations of selected cross sections are shown on the Flood Profiles (Exhibit 1). For stream segments for which a floodway was computed (Section 6.3), selected cross sections are also listed on Table 24, “Floodway Data.”

A summary of the methods used in hydraulic analyses performed for this project is provided in Table 13. Roughness coefficients are provided in Table 14. Roughness coefficients are values representing the frictional resistance water experiences when passing overland or through a channel. They are used in the calculations to determine water surface elevations. Greater detail (including assumptions, analysis, and results) is available in the archived project documentation.

Table 13: Summary of Hydrologic and Hydraulic Analyses

Flooding Source	Study Limits Downstream Limit	Study Limits Upstream Limit	Hydrologic Model or Method Used	Hydraulic Model or Method Used	Date Analyses Completed	Flood Zone on FIRM	Special Considerations
Adams Pond	Entire Shoreline	Entire Shoreline	Regional Flood Frequency Equations	*	04/15/1981	AE	
Arlington Mill Reservoir	Entire Shoreline	Entire Shoreline	Regional Flood Frequency Equations	*	04/06/1998	AE	
Ash Brook	At Taylor River confluence	Points of one square mileage of drainage area	2008 New Hampshire regression equations	HEC-RAS 4.1	04/01/2014	A	
Atlantic Ocean	State Boundary with Massachusetts	State Boundary with Maine	USACE Tidal Gage Analysis	WHAFIS, Runup 2.0, TAW and SPM	04/01/2014	VE	
Back Creek and Zone A Tributaries	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	
Bailey Brook	At confluence of Burke Pond	Points of one square mileage of drainage area	2008 New Hampshire regression equations	HEC-RAS 4.1	04/01/2014	A	
Ballard Pond	Entire Shoreline	Entire Shoreline	Regional Flood Frequency Equations	HEC 2	04/15/1981	AE	
Barton Brook	At confluence of Winnicut River	Points of one square mileage of drainage area	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
Bean River and Zone A Tributaries	At confluence of North River	Approximately 1,500 feet above upstream of confluence with Stream281	2008 New Hampshire regression equations	HEC-RAS 4.1	12/22/2017	A	
Bear Brook	Merrimack County Boundary	Approximately 0.5 miles upstream of Spruce Pond Road	Regional Flood Frequency Equations	*	09/01/1989	A	
Beaver Brook and Zone A Tributaries	Hillsborough County Boundary	At confluence of Lower Beaver Lake	Regional Flood Frequency Equations	*	04/15/1981	AE w/Floodway	
Beaver Lake and Zone A Tributaries	Entire Shoreline	Entire Shoreline	Regional Flood Frequency Equations	*	04/15/1981	AE	
Beech Hill Brook	At confluence of Fresh River	Points of one square mileage of drainage area	2008 New Hampshire regression equations	HEC-RAS 4.1	04/01/2014	A	
Berry's Brook	At confluence of Seavey Creek	Points of one square mileage of drainage area	2008 New Hampshire regression equations	HEC-RAS 4.1	04/01/2014	A	
Black Brook	Approximately 320 feet downstream of Mammoth Road	Approximately 60 feet upstream of Pillsbury Road	Regional Flood Frequency Equations	*	11/051980	A	
Black Brook	At confluence of Beaver Brook	Approximately 320 feet downstream of Mammoth Road	Regional Flood Frequency Equations	*	11/051980	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
Blackwater River	At confluence of Hampton River	Massachusetts/ New Hampshire Corporate Limits	2008 New Hampshire regression equations	HEC-RAS 4.1	04/01/2014	AE	
Bloody Brook	At confluence of Little River	State Route 101	2008 New Hampshire regression equations	HEC-RAS 4.1	04/01/2014	A	
Bow Lake	Entire Shoreline	Strafford County Boundary	Regional Flood Frequency Equations	*	01/02/1987	A	
Bracked Brook	At confluence of Great Bay	Points of one square mileage of drainage area	2008 New Hampshire regression equations	HEC-RAS 4.1	04/01/2014	A	
Brickyard Brook	At confluence of Great Brook	Points of one square mileage of drainage area	2008 New Hampshire regression equations	HEC-RAS 4.1	04/01/2014	A	
Brown River	At confluence of Blackwater River	Springfield Terminal Powerlines	2008 New Hampshire regression equations	HEC-RAS 4.1	04/01/2014	AE	
Bryant Brook	At confluence of Little River No. 3	At East Road	Regional Flood Frequency Equations	WSPRO	04/02/1993	AE w/Floodway	
Bryant Brook	At East Road	Points of one square mileage of drainage area	Regional Flood Frequency Equations	*	04/02/1993	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
Burke Pond	Entire Shoreline	Entire Shoreline	2008 New Hampshire regression equations	HEC-RAS 4.1	04/01/2014	A	
Cains Brook	At confluence of Shepherd River	Massachusetts/ New Hampshire Corporate Limits	2008 New Hampshire regression equations	HEC-RAS 4.1	04/01/2014	A	
Camp Brook	At confluence of Little River No. 3	Massachusetts State Boundary	Regional Flood Frequency Equations	*	04/02/1993	A	
Canobie Lake	Entire Shoreline	Entire Shoreline	Regional Flood Frequency Equations	*	04/06/1998	A	
Captain Pond Brook	At confluence of Captain Pond	At Shannon Road	Regional Flood Frequency Equations	*	04/06/1998	A	
Chapel Brook	At confluence of Philbrook Pond	At confluence of Little River #2	2008 New Hampshire regression equations	HEC-RAS 4.1	04/01/2014	AE	
Clark Pond	Entire Shoreline	Entire Shoreline	Regional Flood Frequency Equations	*	02/28/1975	A	
Cobbetts Pond	Entire Shoreline	Entire Shoreline	Regional Flood Frequency Equations	*	11/03/1989	A	
Cohas Brook	Approximately 190 feet downstream of Auburn Road	Town of Exeter Corporate limits	Regional Flood Frequency Equations	*	11/05/1980	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
Cohas Brook	Town of Exeter Corporate limits	Approximately 190 feet downstream of Auburn Road	Regional Flood Frequency Equations	*	11/05/1980	AE w/Floodway	
Colby Brook	At confluence of Cub Pond	Approximately 1500 feet upstream of Shadow Lake Road	Regional Flood Frequency Equations	*	04/01/1994	A	
Colcord Pond	Entire Shoreline	Entire Shoreline	2008 New Hampshire regression equations	HEC-RAS 4.1	04/01/2014	A	
Cornelius Brook	At confluence of Winnicut River	Approximately 650 feet upstream of Lovering Road	2008 New Hampshire regression equations	HEC-RAS 4.1	04/01/2014	AE	
Country Pond	Entire Shoreline	Entire Shoreline	Regional Flood Frequency Equations	*	04/15/1992	AE	
Cub Pond	Entire Shoreline	Entire Shoreline	Regional Flood Frequency Equations	*	04/01/1994	A	
Cunningham Brook	At confluence of Winnicut River	At Hampstead Road	Regional Flood Frequency Equations	*	04/15/1981	A	
Cunningham Brook	At Hampstead Road	Approximately 650 feet upstream of Lovering Road	Regional Flood Frequency Equations	*	04/15/1981	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
Don Pond	Entire Shoreline	Entire Shoreline	Regional Flood Frequency Equations	*	09/01/1989	A	
Dearborn Brook	Rollins Farm Drive	Walnut Avenue	2008 New Hampshire regression equations	HEC-RAS 4.1	04/01/2014	A	
Dodge Ponds	Entire Shoreline	Entire Shoreline	2008 New Hampshire regression equations	HEC-RAS 4.1	04/01/2014	A	
Drakes River	At confluence of Taylor River	Approximately 650 feet downstream of Towle Farm Road	2008 New Hampshire regression equations	HEC-RAS 4.1	04/01/2014	AE	
Drew Brook	At confluence of Island Pond	At confluence of Cunningham Brook	Regional Flood Frequency Equations	*	04/15/1981	AE w/Floodway	
Dudley Brook	Approximately 700 feet above North Road	At North Road	2008 New Hampshire regression equations	HEC-RAS 4.1	12/22/2017	A	
Dudley Brook	Town of Exeter Corporate limits	Approximately 600ft above North Road	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.

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
Dudley Brook 2	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	
Eel Pond	Entire Shoreline	Entire Shoreline	2008 New Hampshire regression equations	HEC-RAS 4.1	04/01/2014	AE	
Exeter Reservoir	Entire Shoreline	Entire Shoreline	2008 New Hampshire regression equations	HEC-RAS 4.1	04/01/2014	A	
Exeter River and Zone A Tributaries	Approximately 900 feet miles upstream of confluence with Stream 1001	Approximately 300 feet downstream of the Raymond - Fremont Town boundary	2008 New Hampshire regression equations	HEC-RAS 4.1	12/22/2017	A	
Exeter River and Zone A Tributaries	Approximately 1000 feet miles upstream of the Raymond - Chester Town boundary	Points of one square mileage of drainage area	2008 New Hampshire regression equations	HEC-RAS 4.1	12/22/2017	A	
Exeter River	At String Bridge	At Exeter – Brentwood Town boundary	Gage weighted Regression	HEC-RAS 4.1	2013		