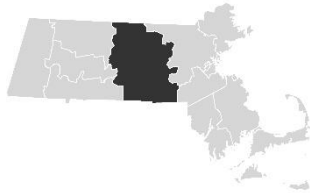


# FLOOD INSURANCE STUDY

## FEDERAL EMERGENCY MANAGEMENT AGENCY

VOLUME 6 OF 12



## WORCESTER COUNTY, MASSACHUSETTS

(ALL JURISDICTIONS)

COMMUNITY NAME	NUMBER	COMMUNITY NAME	NUMBER
ASHBURNHAM, TOWN OF	250290	NEW BRAINTREE, TOWN OF	250320
ATHOL, TOWN OF	250291	NORTH BROOKFIELD, TOWN OF	250323
AUBURN, TOWN OF	250292	NORTHBOROUGH, TOWN OF	250321
BARRE, TOWN OF	250293	NORTHBRIDGE, TOWN OF	250322
BERLIN, TOWN OF	250294	OAKHAM, TOWN OF	250324
BLACKSTONE, TOWN OF	250295	OXFORD, TOWN OF	250325
BOLTON, TOWN OF	250296	PAXTON, TOWN OF	250326
BOYLSTON, TOWN OF	250297	PETERSHAM, TOWN OF	250327
BROOKFIELD, TOWN OF	250298	PHILLIPSTON, TOWN OF	250328
CHARLTON, TOWN OF	250299	PRINCETON, TOWN OF	250329
CLINTON, TOWN OF	250300	ROYALSTON, TOWN OF	250330
DOUGLAS, TOWN OF	250301	RUTLAND, TOWN OF	250331
DUDLEY, TOWN OF	250302	SHREWSBURY, TOWN OF	250332
EAST BROOKFIELD, TOWN OF	250303	SOUTHBOROUGH, TOWN OF	250333
FITCHBURG, CITY OF	250304	SOUTHBRIDGE, TOWN OF	250334
GARDNER, CITY OF	250305	SPENCER, TOWN OF	250335
GRAFTON, TOWN OF	250306	STERLING, TOWN OF	250336
HARDWICK, TOWN OF	250307	STURBRIDGE, TOWN OF	250337
HARVARD, TOWN OF	250308	SUTTON, TOWN OF	250338
HOLDEN, TOWN OF	250309	TEMPLETON, TOWN OF	250339
HOPEDALE, TOWN OF	250310	UPTON, TOWN OF	250340
HUBBARDSTON, TOWN OF	250311	UXBRIDGE, TOWN OF	250341
LANCASTER, TOWN OF	250312	WARREN, TOWN OF	250342
LEICESTER, TOWN OF	250313	WEBSTER, TOWN OF	250343
LEOMINSTER, CITY OF	250314	WEST BOYLSTON, TOWN OF	250345
LUNENBURG, TOWN OF	250315	WEST BROOKFIELD, TOWN OF	250346
MENDON, TOWN OF	250316	WESTBOROUGH, TOWN OF	250344
MILFORD, TOWN OF	250317	WESTMINSTER, TOWN OF	250347
MILLBURY, TOWN OF	250318	WINCHENDON, TOWN OF	250348
MILLVILLE, TOWN OF	250319	WORCESTER, CITY OF	250349

**REVISED:**

**JULY 8, 2025**

FLOOD INSURANCE STUDY NUMBER  
**25027CV006D**

Version Number 2.6.3.6



**FEMA**

# TABLE OF CONTENTS

## Volume 1

	<u>Page</u>
<b>SECTION 1.0 – INTRODUCTION</b>	<b>1</b>
1.1 The National Flood Insurance Program	1
1.2 Purpose of this Flood Insurance Study Report	2
1.3 Jurisdictions Included in the Flood Insurance Study Project	2
1.4 Considerations for using this Flood Insurance Study Report	10
 <b>SECTION 2.0 – FLOODPLAIN MANAGEMENT APPLICATIONS</b>	 <b>22</b>
2.1 Floodplain Boundaries	22
2.2 Floodways	54
2.3 Base Flood Elevations	55
2.4 Non-Encroachment Zones	55
2.5 Coastal Flood Hazard Areas	55
2.5.1 Water Elevations and the Effects of Waves	55
2.5.2 Floodplain Boundaries and BFEs for Coastal Areas	55
2.5.3 Coastal High Hazard Areas	56
2.5.4 Limit of Moderate Wave Action	56
 <b>SECTION 3.0 – INSURANCE APPLICATIONS</b>	 <b>56</b>
3.1 National Flood Insurance Program Insurance Zones	56
 <b>SECTION 4.0 – AREA STUDIED</b>	 <b>58</b>
4.1 Basin Description	58
4.2 Principal Flood Problems	59
4.3 Non-Levee Flood Protection Measures	61
4.4 Levees	62
 <b>SECTION 5.0 – ENGINEERING METHODS</b>	 <b>65</b>
5.1 Hydrologic Analyses	65

### Figures

	<u>Page</u>
Figure 1: FIRM Panel Index	13
Figure 2: FIRM Notes to Users	15
Figure 3: Map Legend for FIRM	18
Figure 4: Floodway Schematic	54
Figure 5: Wave Runup Transect Schematic	55
Figure 6: Coastal Transect Schematic	56

### Tables

	<u>Page</u>
Table 1: Listing of NFIP Jurisdictions	2

Table 2: Flooding Sources Included in this FIS Report	23
Table 3: Flood Zone Designations by Community	56
Table 4: Basin Characteristics	58
Table 5: Principal Flood Problems	59
Table 6: Historic Flooding Elevations	60
Table 7: Non-Levee Flood Protection Measures	62
Table 8: Levees	64
Table 9: Summary of Discharges	67

## Volume 2

	<u>Page</u>
5.2     Hydraulic Analyses	108

### Figures

	<u>Page</u>
Figure 7: Frequency Discharge-Drainage Area Curves	104

### Tables

	<u>Page</u>
Table 9: Summary of Discharges	86
Table 10: Summary of Non-Coastal Stillwater Elevations	105
Table 11: Stream Gage Information used to Determine Discharges	107
Table 12: Summary of Hydrologic and Hydraulic Analyses	110

## Volume 3

	<u>Page</u>
5.3     Coastal Analyses	196
5.3.1   Total Stillwater Elevations	197
5.3.2   Waves	197
5.3.3   Coastal Erosion	197
5.3.4   Wave Hazard Analyses	197
5.4     Alluvial Fan Analyses	197

## **SECTION 6.0 – MAPPING METHODS** **198**

6.1     Vertical and Horizontal Control	198
6.2     Base Map	198
6.3     Floodplain and Floodway Delineation	199

### Figures

	<u>Page</u>
Figure 8: 1% Annual Chance Total Stillwater Elevations for Coastal Areas	197
Figure 9: Transect Location Map	197

<u>Tables</u>	<u>Page</u>
Table 12: Summary of Hydrologic and Hydraulic Analyses	165
Table 13: Roughness Coefficients	188
Table 14: Summary of Coastal Analyses	197
Table 15: Tide Gage Analysis Specifics	197
Table 16: Coastal Transect Parameters	197
Table 17: Summary of Alluvial Fan Analyses	197
Table 18: Results of Alluvial Fan Analyses	197
Table 19: Countywide Vertical Datum Conversion	198
Table 20: Stream-Based Vertical Datum Conversion	198
Table 21: Base Map Sources	199
Table 22: Summary of Topographic Elevation Data used in Mapping	200
Table 23: Floodway Data	204

#### **Volume 4**

<u>Tables</u>	<u>Page</u>
Table 23: Floodway Data	249

#### **Volume 5**

<u>Tables</u>	<u>Page</u>
Table 23: Floodway Data	334

#### **Volume 6**

	<u>Page</u>
6.4 Coastal Flood Hazard Mapping	400
6.5 FIRM Revisions	400
6.5.1 Letters of Map Amendment	400
6.5.2 Letters of Map Revision Based on Fill	401
6.5.3 Letters of Map Revision	401
6.5.4 Physical Map Revisions	401
6.5.5 Contracted Restudies	402
6.5.6 Community Map History	402
<b>SECTION 7.0 – CONTRACTED STUDIES AND COMMUNITY COORDINATION</b>	<b>406</b>
7.1 Contracted Studies	406
7.2 Community Meetings	431

**SECTION 8.0 – ADDITIONAL INFORMATION 443**

**SECTION 9.0 – BIBLIOGRAPHY AND REFERENCES 446**

Tables

	<u>Page</u>
Table 24: Flood Hazard and Non-Encroachment Data for Selected Streams	400
Table 25: Summary of Coastal Transect Mapping Considerations	400
Table 26: Incorporated Letters of Map Change	401
Table 27: Community Map History	403
Table 28: Summary of Contracted Studies Included in this FIS Report	406
Table 29: Community Meetings	432
Table 30: Map Repositories	443
Table 31: Additional Information	445
Table 32: Bibliography and References	447

**Volume 7**

Exhibits

Flood Profiles	<u>Panel</u>
Assabet River	001-005 P
Assabet River (Lower Reach)	006-007 P
Assabet River (Upper Reach)	008 P
Assabet River Branch No. 2	009 P
Axtell Brook	010 P
Babcock Brook	011-012 P
Baker Brook 1	013-015 P
Baker Brook 2	016-025 P
Beaver Brook	026-027 P
Bennetts Brook	028 P
Big Bummet Brook	029-033 P
Blackstone River	034-046 P
Bowers Brook	047-053 P
Broad Meadow Brook	054-055 P
Brook to Saima Pond	056-058 P
Cady Brook	059-068 P
Canesto Brook	069-074 P
Catacoonamug Brook	075-076 P
Cedar Meadow Brook	077-080 P
Cedar Pond	081-082 P
Center Brook	083 P
Charles River	084-091 P

**Volume 8**  
Exhibits

Flood Profiles	<u>Panel</u>
Cohasse Brook	092-094 P
Cold Harbor Brook (Lower Reach)	095-096 P
Cold Harbor Brook (Town of Boylston)	097 P
Cold Harbor Brook (Upper Reach)	098-099 P
Cold Spring Brook (Town of Harvard)	100 P
Cold Spring Brook (Town of Sutton)	101-102 P
Connelly Brook	103-105 P
Counterpane Brook	106-107 P
Cronin Brook	108 P
Dark Brook	109 P
Dark Brook No. 1	110 P
Dark Brook No. 2	111-113 P
Deans Brook	114-119 P
Denny Brook	120-122 P
Denny Brook Tributary 1	123-124 P
Dorothy Brook	125 P
Dorothy Pond	126 P
Dunns Brook	127 P
East Branch Ware River (Hubbardston)	128-133 P
East Branch Ware River (Rutland)	134-136 P
East Wachusett Brook	137-139 P
Elizabeth Brook	140-141 P
Fall Brook	142-147 P
Flagg Brook	148-150 P
Foster Brook	151-154 P
French River	155-167 P
Gates Brook	168-169 P
Godfrey Brook	170-173 P
Goodridge Brook	174 P
Governor Brook	175 P
Great Brook	176-181 P
Greenwood Brook	182 P

**Volume 9**  
Exhibits

Flood Profiles	<u>Panel</u>
Hamant Brook	183-188 P
Hop Brook	189-193 P
Hop Brook Tributary 4	194-197 P
Hop Brook Tributary 4.1	198 P
Howard Brook	199-200 P
Howard Brook Split Flow	201 P
Huckleberry Brook	202-203 P
Ivy Brook	204 P
Jackstraw Brook	205-208 P

Kettle Brook (East)	209 P
Kettle Brook (Town of Auburn)	210 P
Kettle Brook (West)	211-217 P
Keyes Brook	218-220 P
Leadmine Brook	221-225 P
Lebanon Brook	226-228 P
Little Nugget Brook	229-231 P
Little River	232-235 P
Lowes Brook	236-238 P
Lynde Brook	239-243 P
Mahoney Brook	244-247 P
McKinstry Brook	248 P
Meadow Brook	249 P
Middle River	250-251 P
Mill Brook (Town of Bolton)	252-253 P
Mill Brook (Town of Webster)	254 P
Mill Brook Conduit	255-256 P
Mill River	257-268 P
Miscoe Brook	269-270 P

## Volume 10

### Exhibits

Flood Profiles	<u>Panel</u>
Monoosnoc Brook	271-275 P
Moulton Pond Brook	276-278 P
Muddy Brook	279-281 P
Mulpus Brook	282 P
Mumford River	283-295 P
Nashua River	296-312 P
North Brook	313-315 P
North Nashua River	316-336 P
O'Brien Brook	337 P
Otter River	338-340 P
Pearl Hill Brook	341-343 P
Perley Brook	344-347 P

## Volume 11

### Exhibits

Flood Profiles	<u>Panel</u>
Phillips Brook	348-365 P
Piccadilly Brook	366-367 P
Pikes Pond Tributary	368-370 P
Pond Brook	371-373 P
Quick Stream	374 P
Quinapoxet River	375 P
Quinebaug River	376-384 P
Quinsigamond River	385-389 P
Ramshorn Brook (Town of Auburn)	390 P

Ramshorn Brook (Town of Millbury)	391-392 P
Rawson Hill Brook	393-394 P
Riverdale Mills Sluice Gates & Tail Race	395 P
Round Meadow Pond Brook	396-400 P
Rutters Brook	401-402 P
Rutters Brook Tributary 1	403-404 P
Rutters Brook Tributary 1.1	405-406 P
Sevenmile River	407-408 P
Sewall Brook	409-411 P
Singletary Brook	412 P
Smith Brook	413 P
Southwick Brook	414 P
Stall Brook	415 P
Stillwater River	416-420 P
Stone Brook	421 P
Stony Brook	422-424 P
Stony Brook Tributary 2	425 P
Sudbury River	426-427 P
Sudbury River Split 1	428 P
Sudbury River Tributary 12	429 P
Sullivan Brook	430-431 P
Tatnuck Brook	432-434 P

## Volume 12

### Exhibits

Flood Profiles	<u>Panel</u>
Town Meadow Brook	435-443 P
Tributary 1	444-445 P
Tributary A to Fall Brook	446-449 P
Tributary B to Fall Brook	450-452 P
Tributary C to Fall Brook	453-457 P
Tributary to Catacoonamug Brook	458-460 P
Tributary to Elizabeth Brook	461 P
Tributary to Monoosnoc Brook	462-464 P
Tributary to Pearl Hill Brook	465-466 P
Tributary to Round Meadow Pond	467-473 P
Tributary to Waushacum Brook	474 P
Tributary to Wyman Pond	475 P
Unnamed Tributary	476 P
Unnamed Tributary to Mayo Pond	477 P
Walker Pond	478-480 P
Waushacum Brook	481 P
Wekepeke Brook	482 P
West Brook	483-484 P
West River	485-488 P
West River (Town of Uxbridge)	489-492 P
Whitman River (Lower Reach)	493-494 P
Whitman River (Upper Reach)	495-498 P
Wilder Brook	499-500 P



Wrack Meadow Brook  
Wyman Pond Brook

501 P  
502-506 P

**Published Separately**

Flood Insurance Rate Map (FIRM)

**Table 24: Flood Hazard and Non-Encroachment Data for Selected Streams**

[Not Applicable to this Flood Risk Project]

## **6.4 Coastal Flood Hazard Mapping**

This section is not applicable to this Flood Risk Project.

**Table 25: Summary of Coastal Transect Mapping Considerations**

[Not Applicable to this Flood Risk Project]

## **6.5 FIRM Revisions**

This FIS Report and the FIRM are based on the most up-to-date information available to FEMA at the time of its publication; however, flood hazard conditions change over time. Communities or private parties may request flood map revisions at any time. Certain types of requests require submission of supporting data. FEMA may also initiate a revision. Revisions may take several forms, including Letters of Map Amendment (LOMAs), Letters of Map Revision Based on Fill (LOMR-Fs), Letters of Map Revision (LOMRs) (referred to collectively as Letters of Map Change (LOMCs)), Physical Map Revisions (PMRs), and FEMA-contracted restudies. These types of revisions are further described below. Some of these types of revisions do not result in the republishing of the FIS Report. To assure that any user is aware of all revisions, it is advisable to contact the community repository of flood-hazard data (shown in Table 30, “Map Repositories”).

### **6.5.1 Letters of Map Amendment**

A LOMA is an official revision by letter to an effective NFIP map. A LOMA results from an administrative process that involves the review of scientific or technical data submitted by the owner or lessee of property who believes the property has incorrectly been included in a designated SFHA. A LOMA amends the currently effective FEMA map and establishes that a specific property is not located in a SFHA. A LOMA cannot be issued for properties located on the PFD (primary frontal dune).

To obtain an application for a LOMA, visit [www.fema.gov/floodplain-management/letter-map-amendment-loma](http://www.fema.gov/floodplain-management/letter-map-amendment-loma) and download the form “MT-1 Application Forms and Instructions for Conditional and Final Letters of Map Amendment and Letters of Map Revision Based on Fill”. Visit the “Flood Map-Related Fees” section to determine the cost, if any, of applying for a LOMA.

FEMA offers a tutorial on how to apply for a LOMA. The LOMA Tutorial Series can be accessed at [www.fema.gov/online-tutorials](http://www.fema.gov/online-tutorials).

For more information about how to apply for a LOMA, call the FEMA Mapping and Insurance eXchange; toll free, at 1-877-FEMA MAP (1-877-336-2627).

### 6.5.2 Letters of Map Revision Based on Fill

A LOMR-F is an official revision by letter to an effective NFIP map. A LOMR-F states FEMA’s determination concerning whether a structure or parcel has been elevated on fill above the base flood elevation and is, therefore, excluded from the SFHA.

Information about obtaining an application for a LOMR-F can be obtained in the same manner as that for a LOMA, by visiting [www.fema.gov/floodplain-management/letter-map-amendment-loma](http://www.fema.gov/floodplain-management/letter-map-amendment-loma) for the “MT-1 Application Forms and Instructions for Conditional and Final Letters of Map Amendment and Letters of Map Revision Based on Fill” or by calling the FEMA Mapping and Insurance eXchange, toll free, at 1-877-FEMA MAP (1-877-336-2627). Fees for applying for a LOMR-F, if any, are listed in the “Flood Map-Related Fees” section.

A tutorial for LOMR-F is available at [www.fema.gov/online-tutorials](http://www.fema.gov/online-tutorials).

### 6.5.3 Letters of Map Revision

A LOMR is an official revision to the currently effective FEMA map. It is used to change flood zones, floodplain and floodway delineations, flood elevations and planimetric features. All requests for LOMRs should be made to FEMA through the chief executive officer of the community, since it is the community that must adopt any changes and revisions to the map. If the request for a LOMR is not submitted through the chief executive officer of the community, evidence must be submitted that the community has been notified of the request.

To obtain an application for a LOMR, visit [www.fema.gov/national-flood-insurance-program-flood-hazard-mapping/mt-2-application-forms-and-instructions](http://www.fema.gov/national-flood-insurance-program-flood-hazard-mapping/mt-2-application-forms-and-instructions) and download the form “MT-2 Application Forms and Instructions for Conditional Letters of Map Revision and Letters of Map Revision”. Visit the “Flood Map-Related Fees” section to determine the cost of applying for a LOMR. For more information about how to apply for a LOMR, call the FEMA Mapping and Insurance eXchange; toll free, at 1-877-FEMA MAP (1-877-336-2627) to speak to a Map Specialist.

Previously issued mappable LOMCs (including LOMRs) that have been incorporated into the Worcester County FIRM are listed in Table 26. Please note that this table only includes LOMCs that have been issued on the FIRM panels updated by this map revision. For all other areas within this county, users should be aware that revisions to the FIS Report made by prior LOMRs may not be reflected herein and users will need to continue to use the previously issued LOMRs to obtain the most current data.

**Table 26: Incorporated Letters of Map Change**

Case Number	Effective Date	Flooding Source	FIRM Panel(s)
14-01-1553P	07/17/2014	Elizabeth Brook	25027C0481G

### 6.5.4 Physical Map Revisions

Physical Map Revisions (PMRs) are an official republication of a community’s NFIP map to effect changes to base flood elevations, floodplain boundary delineations, regulatory floodways and planimetric features. These changes typically occur as a result of structural works or improvements, annexations resulting in additional flood hazard areas or correction to base flood elevations or SFHAs.

The community's chief executive officer must submit scientific and technical data to FEMA to support the request for a PMR. The data will be analyzed and the map will be revised if warranted. The community is provided with copies of the revised information and is afforded a review period. When the base flood elevations are changed, a 90-day appeal period is provided. A 6-month adoption period for formal approval of the revised map(s) is also provided.

For more information about the PMR process, please visit [www.fema.gov](http://www.fema.gov) and visit the "Flood Map Revision Processes" section.

### **6.5.5 Contracted Restudies**

The NFIP provides for a periodic review and restudy of flood hazards within a given community. FEMA accomplishes this through a national watershed-based mapping needs assessment strategy, known as the Coordinated Needs Management Strategy (CNMS). The CNMS is used by FEMA to assign priorities and allocate funding for new flood hazard analyses used to update the FIS Report and FIRM. The goal of CNMS is to define the validity of the engineering study data within a mapped inventory. The CNMS is used to track the assessment process, document engineering gaps and their resolution, and aid in prioritization for using flood risk as a key factor for areas identified for flood map updates. Visit [www.fema.gov](http://www.fema.gov) to learn more about the CNMS or contact the FEMA Regional Office listed in Section 8 of this FIS Report.

### **6.5.6 Community Map History**

The current FIRM presents flooding information for the entire geographic area of Worcester County. Previously, separate FIRMs, Flood Hazard Boundary Maps (FHBM) and/or Flood Boundary and Floodway Maps (FBFM) may have been prepared for the incorporated communities and the unincorporated areas in the county that had identified SFHAs. Current and historical data relating to the maps prepared for the project area are presented in Table 27, "Community Map History." A description of each of the column headings and the source of the date is also listed below.

- *Community Name* includes communities falling within the geographic area shown on the FIRM, including those that fall on the boundary line, nonparticipating communities, and communities with maps that have been rescinded. Communities with No Special Flood Hazards are indicated by a footnote. If all maps (FHBM, FBFM, and FIRM) were rescinded for a community, it is not listed in this table unless SFHAs have been identified in this community.
- *Initial Identification Date (First NFIP Map Published)* is the date of the first NFIP map that identified flood hazards in the community. If the FHBM has been converted to a FIRM, the initial FHBM date is shown. If the community has never been mapped, the upcoming effective date or "pending" (for Preliminary FIS Reports) is shown. If the community is listed in Table 27 but not identified on the map, the community is treated as if it were unmapped.
- *Initial FHBM Effective Date* is the effective date of the first Flood Hazard Boundary Map (FHBM). This date may be the same date as the Initial NFIP Map Date.
- *FHBM Revision Date(s)* is the date(s) that the FHBM was revised, if applicable.

- *Initial FIRM Effective Date* is the date of the first effective FIRM for the community.
- *FIRM Revision Date(s)* is the date(s) the FIRM was revised, if applicable. This is the revised date that is shown on the FIRM panel, if applicable. As countywide studies are completed or revised, each community listed should have its FIRM dates updated accordingly to reflect the date of the countywide study. Once the FIRMs exist in countywide format, as Physical Map Revisions (PMR) of FIRM panels within the county are completed, the FIRM Revision Dates in the table for each community affected by the PMR are updated with the date of the PMR, even if the PMR did not revise all the panels within that community.

The initial effective date for the Worcester County FIRMs in countywide format was 07/04/2011.

**Table 27: Community Map History**

Community Name	Initial Identification Date	Initial FHBM Effective Date	FHBM Revision Date(s)	Initial FIRM Effective Date	FIRM Revision Date(s)
Ashburnham, Town of	07/19/1974	07/19/1974	09/17/1976	06/15/1984	07/08/2025
Auburn, Town of	08/16/1974	08/16/1974	12/10/1976	06/01/1978	06/07/2023 07/04/2011 06/03/1991
Berlin, Town of	10/18/1974	10/18/1974	01/21/1977	06/18/1980	07/08/2025 07/16/2014 07/04/2011
Blackstone, Town of	07/26/1974	07/26/1974	None	09/30/1977	07/08/2025 07/04/2011
Bolton, Town of	06/28/1974	06/28/1974	None	06/18/1980	07/08/2025 07/16/2014 07/04/2011
Boylston, Town of	08/23/1974	08/23/1974	10/15/1976	07/02/1981	07/08/2025 07/16/2014 07/04/2011 07/03/1985
Charlton, Town of	07/26/1974	07/26/1974	11/19/1976	07/19/1982	06/07/2023 07/04/2011
Clinton, Town of	08/09/1974	08/09/1974	08/06/1976	06/15/1982	07/08/2025 07/16/2014 07/04/2011
Douglas, Town of	06/07/1974	06/07/1974	10/22/1976	06/01/1982	06/07/2023 07/04/2011
Dudley, Town of	04/05/1974	04/05/1974	07/30/1976	06/15/1982	06/07/2023 07/04/2011
Fitchburg, City of	04/05/1974	04/05/1974	10/03/1975	05/16/1983	07/08/2025 09/18/1991 01/18/1989
Gardner, City of	09/06/1974	09/06/1974	03/12/1976	07/02/1981	07/08/2025

**Table 27: Community Map History**

Community Name	Initial Identification Date	Initial FHBM Effective Date	FHBM Revision Date(s)	Initial FIRM Effective Date	FIRM Revision Date(s)
Grafton, Town of	04/05/1974	04/05/1974	03/14/1980 10/15/1976	05/02/1983	07/16/2014 07/04/2011 09/30/1992
Harvard, Town of	08/02/1974	08/02/1974	10/29/1976	06/15/1983	07/08/2025 07/16/2014 07/04/2011
Holden, Town of	09/06/1974	09/06/1974	04/08/1977	07/02/1981	07/08/2025
Hopedale, Town of	07/26/1974	07/26/1974	10/15/1976	07/19/1982	07/08/2025 07/04/2011
Hubbardston, Town of	09/06/1974	09/06/1974	12/24/1976	06/01/1984	07/08/2025
Lancaster, Town of	02/22/1974	02/22/1974	07/23/1976	07/05/1982	07/08/2025 07/16/2014 07/04/2011
Leicester, Town of	07/19/1974	07/19/1974	06/14/1977 09/03/1976	07/05/1982	06/07/2023 07/04/2011
Leominster, City of	03/22/1974	03/22/1974	10/17/1975	09/16/1982	04/03/1989
Lunenburg, Town of	09/06/1974	09/06/1974	12/10/1976	06/15/1982	07/08/2025
Mendon, Town of	09/06/1974	09/06/1974	11/19/1976	07/19/1982	07/08/2025 07/16/2014 07/04/2011
Milford, Town of	07/26/1974	07/26/1974	12/17/1976	07/05/1984	07/08/2025 07/04/2011
Millbury, Town of	02/22/1974	02/22/1974	None	07/02/1979	06/07/2023 07/04/2011 01/07/2000
Millville, Town of	06/28/1974	06/28/1974	10/15/1976	07/19/1982	07/04/2011
Northborough, Town of	11/29/1974	11/29/1974	None	11/15/1979	07/16/2014 07/04/2011
Northbridge, Town of	07/26/1974	07/26/1974	10/15/1976	06/15/1983	07/16/2014 07/04/2011 02/02/2002
Oxford, Town of	06/28/1974	06/28/1974	11/05/1976	01/20/1982	06/07/2023 07/04/2011
Paxton, Town of	07/26/1974	07/26/1974	None	02/18/1981	07/08/2025 06/07/2023 07/04/2011
Princeton, Town of	08/30/1974	08/30/1974	12/17/1976	07/02/1981	07/08/2025
Rutland, Town of	12/06/1974	12/06/1974	07/30/1976	07/16/1984	07/08/2025

**Table 27: Community Map History**

Community Name	Initial Identification Date	Initial FHBM Effective Date	FHBM Revision Date(s)	Initial FIRM Effective Date	FIRM Revision Date(s)
Shrewsbury, Town of	09/06/1974	09/06/1974	11/05/1976	06/04/1980	07/08/2025 07/16/2014 07/04/2011
Southborough, Town of	08/02/1974	08/02/1974	08/27/1976	10/15/1981	07/16/2014 07/04/2011
Southbridge, Town of	03/22/1974	03/22/1974	10/29/1976	03/15/1982	06/07/2023 07/04/2011
Spencer, Town of	09/13/1974	09/13/1974	10/22/1976	07/02/1981	06/07/2023 07/04/2011 09/14/1990
Sterling, Town of	07/19/1974	07/19/1974	12/17/1976	06/15/1982	07/08/2025
Sturbridge, Town of	09/13/1974	09/13/1974	03/04/1977	07/19/1982	06/07/2023 07/04/2011
Sutton, Town of	08/09/1974	08/09/1974	03/25/1977	06/01/1982	06/07/2023 07/04/2011
Upton, Town of	08/16/1974	08/16/1974	01/21/1977	08/02/1982	07/08/2025 07/16/2014 07/04/2011
Uxbridge, Town of	08/02/1974	08/02/1974	10/29/1976	06/01/1983	07/04/2011
Webster, Town of	07/19/1974	07/19/1974	03/04/1977	07/05/1982	06/07/2023 07/04/2011 06/16/1993
West Boylston, Town of	07/26/1974	07/26/1974	04/08/1977	07/02/1981	07/08/2025 07/04/2011 08/02/1990
Westborough, Town of	03/08/1974	03/08/1974	11/05/1976	05/15/1980	07/16/2014 07/04/2011
Westminster, Town of	07/26/1974	07/26/1974	08/13/1976	07/19/1982	07/08/2025
Worcester, City of	08/02/1974	08/02/1974	None	08/15/1980	07/08/2025 06/07/2023 07/04/2011 01/16/2003

## SECTION 7.0 – CONTRACTED STUDIES AND COMMUNITY COORDINATION

### 7.1 Contracted Studies

Table 28 provides a summary of the contracted studies, by flooding source, that are included in this FIS Report.

**Table 28: Summary of Contracted Studies Included in this FIS Report**

Flooding Source	FIS Report Dated	Contractor	Number	Work Completed Date	Affected Communities
Asnebumskit Brook	7/8/2025	USGS	HSFE01-17-IRWA-0001	July 2019	Holden, Town of
Asnebumskit Brook Tributary A	7/8/2025	USGS	HSFE01-17-IRWA-0001	July 2019	Holden, Town of
Asnebumskit Brook Tributary B	7/8/2025	USGS	HSFE01-17-IRWA-0001	July 2019	Holden, Town of
Assabet River	5/1/1979	Harris-Toups Associates	H-4024	November 1977	Northborough, Town of
Assabet River	7/16/2014	STARR	EMP-2003-CO-2606	October 2012	Berlin, Town of; Northborough, Town of
Assabet River (Lower Reach)	11/1/1979	Harris-Toups Associates	H-4024	March 1978	Westborough, Town of
Assabet River (Upper Reach)	11/1/1979	Harris-Toups Associates	H-4024	March 1978	Westborough, Town of
Assabet River Branch No. 2	12/1/1979	Harris-Toups Associates	H-4024	November 1977	Berlin, Town of
Auburn Pond	12/1/1977	Camp Dresser & McKee	H-3861	January 1977	Auburn, Town of
Axtell Brook	9/30/1992	Rivers Engineering	EMW-89-C-2821	November 1989	Grafton, Town of
Babcock Brook	1/2/1981	Schoenfeld Associates	H-4794	July 1979	Princeton, Town of
Babcock Brook	7/8/2025	USGS	HSFE01-17-IRWA-0001	July 2019	Princeton, Town of
Babcock Brook Tributary A	7/8/2025	USGS	HSFE01-17-IRWA-0001	July 2019	Princeton, Town of



**Table 28: Summary of Contracted Studies Included in this FIS Report**

Flooding Source	FIS Report Dated	Contractor	Number	Work Completed Date	Affected Communities
Babcock Brook Tributary B	7/8/2025	USGS	HSFE01-17-IRWA-0001	July 2019	Princeton, Town of
Baker Brook 1	1/2/1981	Anderson-Nichols & Co.	H-4019	May 1978	Gardner, City of
Baker Brook 2	7/8/2025	USGS	HSFE01-17-IRWA-0001	July 2019	Fitchburg, City of; Leominster, City of; Lunenburg, Town of
Baker Brook 2 Tributary A	7/8/2025	USGS	HSFE01-17-IRWA-0001	July 2019	Fitchburg, City of
Baldwin Hill pond	7/8/2025	USGS	HSFE01-17-IRWA-0001	November 2019	Westminster, Town of
Barrett Pond	7/8/2025	USGS	HSFE01-17-IRWA-0001	November 2019	Leominster, City of
Bartlett Pond Brook	7/8/2025	USGS	HSFE01-17-IRWA-0001	July 2019	Leominster, City of; Sterling, Town of
Beaver Brook	1/16/2003	Hydraulic & Water Resources Engineers	EMB-96-CO-0406	September 2001	Worcester, City of
Beaver Brook (Bellingham)	7/8/2025	USGS	HSFE01-14-X-0075	April 2018	Milford, Town of
Beaver Brook 4 Tributary B	7/8/2025	USGS	HSFE01-17-IRWA-0001	July 2019	Harvard, Town of
Beaver Brook 4 Tributary B pond	7/8/2025	USGS	HSFE01-17-IRWA-0001	June 2019	Harvard, Town of
Beaver Brook 4 Tributary C	7/8/2025	USGS	HSFE01-17-IRWA-0001	July 2019	Harvard, Town of
Beaver Pond Brook	7/8/2025	USGS	HSFE01-17-IRWA-0001	July 2019	Lunenburg, Town of
Bennetts Brook	12/15/1982	Howard, Needles, Tammen and Bergendoff	H-4004	January 1978	Harvard, Town of
Bennetts Brook	7/8/2025	USGS	HSFE01-17-IRWA-0001	July 2019	Harvard, Town of
Bennetts Brook Tributary H	7/8/2025	USGS	HSFE01-17-IRWA-0001	July 2019	Harvard, Town of
Bennetts Brook Tributary I	7/8/2025	USGS	HSFE01-17-IRWA-0001	July 2019	Harvard, Town of

**Table 28: Summary of Contracted Studies Included in this FIS Report**

Flooding Source	FIS Report Dated	Contractor	Number	Work Completed Date	Affected Communities
Bennetts Brook Tributary J	7/8/2025	USGS	HSFE01-17-IRWA-0001	July 2019	Harvard, Town of
Big Bummet Brook	12/1/1979	Harris-Toups Associates	H-4024	March 1978	Grafton, Town of; Shrewsbury, Town of
Blackstone River	7/4/2011	CDM	EME-2003-CO-0340	March 2007	Blackstone, Town of; Grafton, Town of; Millbury, Town of; Millville, Town of; Northbridge, Town of; Sutton, Town of; Uxbridge, Town of; Worcester, City of
Blood Hill ponding	7/8/2025	USGS	HSFE01-17-IRWA-0001	June 2019	Ashburnham, Town of
Bow Brook	7/8/2025	USGS	HSFE01-17-IRWA-0001	July 2019	Lancaster, Town of
Bow Brook Tributary A	7/8/2025	USGS	HSFE01-17-IRWA-0001	July 2019	Lancaster, Town of
Bowers Brook	12/15/1982	Howard, Needles, Tammen and Bergendoff	H-4004	January 1978	Harvard, Town of
Bowers Brook	7/8/2025	USGS	HSFE01-17-IRWA-0001	July 2019	Harvard, Town of
Brierly Pond	1/1/1979	Camp Dresser & McKee	H-3861	January 1978	Millbury, Town of
Broad Meadow Brook	1/16/2003	Hydraulic & Water Resources Engineers	EMB-96-CO-0406	February 2000	Worcester, City of
Brook to Saima Pond	5/16/1983	Howard, Needles, Tammen and Bergendoff	H-4004	June 1980	Fitchburg, City of
Brown Brook	7/8/2025	USGS	HSFE01-17-IRWA-0001	July 2019	Ashburnham, Town of
Brown Brook Tributary A	7/8/2025	USGS	HSFE01-17-IRWA-0001	July 2019	Ashburnham, Town of
Bryant Pond	7/8/2025	USGS	HSFE01-17-IRWA-0001	November 2019	Holden, Town of

**Table 28: Summary of Contracted Studies Included in this FIS Report**

Flooding Source	FIS Report Dated	Contractor	Number	Work Completed Date	Affected Communities
Cady Brook	1/19/1982	Schoenfeld Associates	H-4794	July 1980	Charlton, Town of
Cady Brook	9/15/1981	Schoenfeld Associates	H-4794	August 1980	Southbridge, Town of
Calamint Hill swamp	7/8/2025	USGS	HSFE01-17-IRWA-0001	November 2019	Princeton, Town of
Canada Mills pond	7/8/2025	USGS	HSFE01-17-IRWA-0001	November 2019	Holden, Town of
Canesto Brook	12/1/1983	D. Baugh & Associates	H-4826	June 1980	Hubbardston, Town of
Catacoonamug Brook	12/15/1981	Howard, Needles, Tammen and Bergendoff	H-4004	January 1978	Lunenburg, Town of
Catacoonamug Brook	7/8/2025	USGS	HSFE01-17-IRWA-0001	July 2019	Lunenburg, Town of
Catacoonamug Brook Tributary A	7/8/2025	USGS	HSFE01-17-IRWA-0001	July 2019	Leominster, City of; Lunenburg, Town of
Cedar Meadow Brook	1/19/1982	Schoenfeld Associates	H-4794	November 1980	Sturbridge, Town of
Cedar Pond	1/19/1982	Schoenfeld Associates	H-4794	November 1980	Sturbridge, Town of
Center Brook	2/2/1982	Vollmer Associates	H-4792	August 1980	Upton, Town of
Chace Hill Road swamp	7/8/2025	USGS	HSFE01-17-IRWA-0001	November 2019	Lancaster, Town of
Chaffin Pond Tributary A	7/8/2025	USGS	HSFE01-17-IRWA-0001	July 2019	Holden, Town of
Chaffin Pond Tributary B	7/8/2025	USGS	HSFE01-17-IRWA-0001	July 2019	Holden, Town of
Charles River	1/5/1984	Vollmer Associates	H-4792	July 1980	Hopedale, Town of; Mendon, Town of; Milford, Town of
Cobb Brook	7/8/2025	USGS	HSFE01-17-IRWA-0001	July 2019	Princeton, Town of
Cohasse Brook	6/7/2023	Compass	HSFE60-15-D-0003	October 2019	Southbridge, Town of

**Table 28: Summary of Contracted Studies Included in this FIS Report**

Flooding Source	FIS Report Dated	Contractor	Number	Work Completed Date	Affected Communities
Cold Brook	7/8/2025	USGS	HSFE01-17-IRWA-0001	July 2019	Holden, Town of
Cold Harbor Brook (Lower Reach)	5/1/1979	Harris-Toups Associates	H-4024	November 1977	Northborough, Town of
Cold Harbor Brook (Lower Reach)	N/A (LOMR)	unknown	unknown	October 2013	Northborough, Town of
Cold Harbor Brook (Lower Reach)	5/1/1979	Harris-Toups Associates	H-4024	November 1977	Northborough, Town of
Cold Harbor Brook (Town of Boylston)	7/3/1985	Schoenfeld Associates	H-4794	June 1979	Boylston, Town of
Cold Harbor Brook (Upper Reach)	5/1/1979	Harris-Toups Associates	H-4024	November 1977	Northborough, Town of
Cold Spring Brook (Town of Harvard)	12/15/1982	Howard, Needles, Tammen and Bergendoff	H-4004	January 1978	Harvard, Town of
Cold Spring Brook (Town of Sutton)	12/1/1981	Vollmer Associates	H-4792	November 1980	Sutton, Town of
Connelly Brook	7/8/2025	USGS	HSFE01-17-IRWA-0001	July 2019	Sterling, Town of
Connelly Brook	12/15/1981	Howard, Needles, Tammen and Bergendoff	H-4004	January 1978	Sterling, Town of
Connelly Brook	7/8/2025	USGS	HSFE01-17-IRWA-0001	July 2019	Sterling, Town of
Counterpane Brook	12/15/1981	USACE	IAA-H-10-77	May 1979	Clinton, Town of
Counterpane Brook	7/8/2025	USGS	HSFE01-17-IRWA-0001	July 2019	Clinton, Town of; Lancaster, Town of; Sterling, Town of
Coweas Hill swamp	7/8/2025	USGS	HSFE01-17-IRWA-0001	November 2019	Westminster, Town of
Cranberry Pond	7/8/2025	USGS	HSFE01-17-IRWA-0001	November 2019	Lancaster, Town of

**Table 28: Summary of Contracted Studies Included in this FIS Report**

Flooding Source	FIS Report Dated	Contractor	Number	Work Completed Date	Affected Communities
Cronin Brook	9/30/1992	Rivers Engineering	EMW-89-C-2821	November 1989	Grafton, Town of
Curtis Pond	2/15/1980	Camp Dresser & McKee	H-3861	January 1978	Worcester, City of
Dark Brook	12/1/1981	Vollmer Associates	H-4792	November 1980	Sutton, Town of
Dark Brook No. 1	6/3/1991	Rivers Engineering	EMW-89-C-2821	June 1989	Auburn, Town of
Dark Brook No. 2	12/1/1977	Camp Dresser & McKee	H-3861	January 1977	Auburn, Town of
Deans Brook	1/19/1982	Schoenfeld Associates	H-4794	July 1980	Charlton, Town of
Deer Brook	7/8/2025	USGS	HSFE01-14-X-0075	April 2018	Milford, Town of
Denny Brook	7/16/2014	STARR	EMP-2003-CO-2606	October 2012	Westborough, Town of
Denny Brook	7/16/2014	STARR	EMP-2003-CO-2606	October 2012	Westborough, Town of
Denny Brook	11/1/1979	Harris-Toups Associates	H-4024	March 1978	Westborough, Town of
Denny Brook Tributary 1	7/16/2014	STARR	EMP-2003-CO-2606	October 2012	Westborough, Town of
Dorothy Brook	1/1/1979	Camp Dresser & McKee	H-3861	January 1978	Millbury, Town of
Dorothy Pond	1/7/2000	Green International	EMW-93-C-4144	June 1996	Millbury, Town of
Dunns Brook	12/1/1977	Camp Dresser & McKee	H-3861	January 1977	Auburn, Town of
East Branch Ware River (Hubbardston)	12/1/1983	D. Baugh & Associates	H-4826	June 1980	Hubbardston, Town of
East Branch Ware River (Rutland)	1/16/1984	D. Baugh & Associates	H-4826	June 1980	Rutland, Town of
East Wachusett Brook	7/8/2025	USGS	HSFE01-17-IRWA-0001	July 2019	Princeton, Town of; Sterling, Town of

**Table 28: Summary of Contracted Studies Included in this FIS Report**

Flooding Source	FIS Report Dated	Contractor	Number	Work Completed Date	Affected Communities
East Wachusett Brook	1/2/1981	Schoenfeld Associates	H-4794	July 1979	Princeton, Town of
East Wachusett Brook	7/8/2025	USGS	HSFE01-17-IRWA-0001	July 2019	Princeton, Town of
East Wachusett Brook Tributary A	7/8/2025	USGS	HSFE01-17-IRWA-0001	July 2019	Princeton, Town of; Sterling, Town of
East Washacum Pond	12/15/1981	Howard, Needles, Tammen and Bergendoff	H-4004	January 1978	Sterling, Town of
Easter Brook	7/8/2025	USGS	HSFE01-17-IRWA-0001	July 2019	Lunenburg, Town of
Easter Brook Tributary A	7/8/2025	USGS	HSFE01-17-IRWA-0001	July 2019	Leominster, City of; Lunenburg, Town of
Echo Lake	7/8/2025	USGS	HSFE01-14-X-0075	April 2018	Milford, Town of
Elizabeth Brook	7/16/2014	STARR	EMP-2003-CO-2606	October 2012	Harvard, Town of
Fairbanks Street swamp	7/8/2025	USGS	HSFE01-17-IRWA-0001	November 2019	West Boylston, Town of
Fall Brook	7/8/2025	USGS	HSFE01-17-IRWA-0001	July 2019	Leominster, City of
Fall Brook Reservoir	7/8/2025	USGS	HSFE01-17-IRWA-0001	July 2019	Leominster, City of
Fitch Basin	7/8/2025	USGS	HSFE01-17-IRWA-0001	November 2019	Sterling, Town of
Flagg Brook	5/16/1983	Howard, Needles, Tammen and Bergendoff	H-4004	June 1980	Fitchburg, City of; Westminster, Town of
Flagg Brook	7/8/2025	USGS	HSFE01-17-IRWA-0001	July 2019	Fitchburg, City of; Princeton, Town of; Westminster, Town of
Flagg Brook Tributary A	7/8/2025	USGS	HSFE01-17-IRWA-0001	July 2019	Fitchburg, City of; Leominster, City of
Flagg Street Pond	2/15/1980	Camp Dresser & McKee	H-3861	January 1978	Worcester, City of

**Table 28: Summary of Contracted Studies Included in this FIS Report**

Flooding Source	FIS Report Dated	Contractor	Number	Work Completed Date	Affected Communities
Foster Brook	1/2/1981	Anderson-Nichols & Co.	H-4019	May 1978	Gardner, City of
French Brook	7/8/2025	USGS	HSFE01-17-IRWA-0001	July 2019	Boylston, Town of
French Brook pond	7/8/2025	USGS	HSFE01-17-IRWA-0001	November 2019	Boylston, Town of
French River	6/7/2023	Compass	HSFE60-15-D-0003	October 2019	Dudley, Town of; Oxford, Town of; Webster, Town of
French River	6/7/2023	Compass	HSFE60-15-D-0003	October 2019	Leicester, Town of; Oxford, Town of
Gates Brook	7/8/2025	USGS	HSFE01-17-IRWA-0001	July 2019	West Boylston, Town of
Gates Brook	8/2/1990	USACE	EMW-84-3-1506	May 1988	West Boylston, Town of
Gates Brook	7/8/2025	USGS	HSFE01-17-IRWA-0001	July 2019	West Boylston, Town of
Godfrey Brook	7/8/2025	USGS	HSFE01-14-X-0075	June 2017	Milford, Town of
Goodridge Brook	1/5/1982	Howard, Needles, Tammen and Bergendoff	H-4004	January 1978	Clinton, Town of; Lancaster, Town of
Goodridge Brook	7/8/2025	USGS	HSFE01-17-IRWA-0001	July 2019	Lancaster, Town of; Sterling, Town of
Governor Brook	7/8/2025	USGS	HSFE01-17-IRWA-0001	July 2019	Holden, Town of
Governor Brook	1/2/1981	Schoenfeld Associates	H-4794	July 1979	Holden, Town of; Princeton, Town of
Governor Brook Tributary A	7/8/2025	USGS	HSFE01-17-IRWA-0001	July 2019	Holden, Town of; Princeton, Town of
Great Brook	12/1/1979	Harris-Toups Associates	H-4024	April 1978	Bolton, Town of
Greenwood Brook	1/2/1981	Anderson-Nichols & Co.	H-4019	May 1978	Gardner, City of
Hamant Brook	1/19/1982	Schoenfeld Associates	H-4794	November 1980	Sturbridge, Town of

**Table 28: Summary of Contracted Studies Included in this FIS Report**

Flooding Source	FIS Report Dated	Contractor	Number	Work Completed Date	Affected Communities
Haynes Reservoir	7/8/2025	USGS	HSFE01-17-IRWA-0001	November 2019	Leominster, City of
Hop Brook	7/16/2014	STARR	EMP-2003-CO-2606	October 2012	Shrewsbury, Town of
Hop Brook Tributary 4	7/16/2014	STARR	EMP-2003-CO-2606	October 2012	Shrewsbury, Town of
Hop Brook Tributary 4.1	7/16/2014	STARR	EMP-2003-CO-2606	October 2012	Shrewsbury, Town of
Howard Brook	5/1/1979	Harris-Toups Associates	H-4024	November 1977	Northborough, Town of
Howard Brook	N/A (LOMR)	unknown	unknown	October 2013	Northborough, Town of
Howard Brook Split Flow	N/A (LOMR)	unknown	unknown	October 2013	Northborough, Town of
Huckleberry Brook	1/5/1984	Vollmer Associates	H-4792	July 1980	Milford, Town of
Indian Lake	2/15/1980	Camp Dresser & McKee	H-3861	January 1978	Worcester, City of
Ivy Brook	1/5/1984	Vollmer Associates	H-4792	July 1980	Milford, Town of
Jackstraw Brook	7/16/2014	STARR	EMP-2003-CO-2606	October 2012	Westborough, Town of
Justice Brook	7/8/2025	USGS	HSFE01-17-IRWA-0001	July 2019	Princeton, Town of; Sterling, Town of
Kettle Brook (East)	2/15/1980	Camp Dresser & McKee	H-3861	January 1978	Worcester, City of
Kettle Brook (Town of Auburn)	12/1/1977	Camp Dresser & McKee	H-3861	January 1977	Auburn, Town of
Kettle Brook (West)	2/15/1980	Camp Dresser & McKee	H-3861	January 1978	Worcester, City of
Keyes Brook	7/8/2025	USGS	HSFE01-17-IRWA-0001	July 2019	Princeton, Town of
Keyes Brook	1/2/1981	Schoenfeld Associates	H-4794	July 1979	Princeton, Town of



**Table 28: Summary of Contracted Studies Included in this FIS Report**

Flooding Source	FIS Report Dated	Contractor	Number	Work Completed Date	Affected Communities
Keyes Brook	7/8/2025	USGS	HSFE01-17-IRWA-0001	July 2019	Princeton, Town of; Westminster, Town of
Keyes Brook Tributary A	7/8/2025	USGS	HSFE01-17-IRWA-0001	July 2019	Princeton, Town of
Keyes Brook Tributary C	7/8/2025	USGS	HSFE01-17-IRWA-0001	July 2019	Princeton, Town of
Kilburn Street swamp	7/8/2025	USGS	HSFE01-17-IRWA-0001	November 2019	Lunenburg, Town of
Lake Shirley	12/15/1981	Howard, Needles, Tammen and Bergendoff	H-4004	January 1978	Lunenburg, Town of
Lake Webster	6/7/2023	Compass	HSFE60-15-D-0003	October 2019	Webster, Town of
Lake Whalom	12/15/1981	Howard, Needles, Tammen and Bergendoff	H-4004	January 1978	Leominster, City of; Lunenburg, Town of
Lane Pond	7/8/2025	USGS	HSFE01-17-IRWA-0001	November 2019	Lunenburg, Town of
Leadmine Brook	1/19/1982	Schoenfeld Associates	H-4794	November 1980	Sturbridge, Town of
Lebanon Brook	9/15/1981	Schoenfeld Associates	H-4794	August 1980	Southbridge, Town of
Leesville Pond	12/1/1977	Camp Dresser & McKee	H-3861	January 1977	Auburn, Town of; Worcester, City of
Lily Ponds	7/8/2025	USGS	HSFE01-17-IRWA-0001	November 2019	West Boylston, Town of
Linden Street swamp 1	7/8/2025	USGS	HSFE01-17-IRWA-0001	November 2019	Boylston, Town of
Linden Street swamp 2	7/8/2025	USGS	HSFE01-17-IRWA-0001	November 2019	Boylston, Town of
Little Mirror Lake	7/8/2025	USGS	HSFE01-17-IRWA-0001	November 2019	Harvard, Town of
Little Nugget Brook	1/19/1982	Schoenfeld Associates	H-4794	July 1980	Charlton, Town of
Little River	1/19/1982	Schoenfeld Associates	H-4794	July 1980	Charlton, Town of

**Table 28: Summary of Contracted Studies Included in this FIS Report**

Flooding Source	FIS Report Dated	Contractor	Number	Work Completed Date	Affected Communities
Lowes Brook	7/20/1981	Schoenfeld Associates	H-4794	March 1980	Oxford, Town of
Lynde Brook	1/5/1982	Schoenfeld Associates	H-4794	March 1980	Leicester, Town of
Mahoney Brook	1/2/1981	Anderson-Nichols & Co.	H-4019	May 1978	Gardner, City of
Malagasco Brook	7/8/2025	USGS	HSFE01-17-IRWA-0001	July 2019	Boylston, Town of
Malden Brook	7/8/2025	USGS	HSFE01-17-IRWA-0001	July 2019	West Boylston, Town of
McGovern Brook	7/8/2025	USGS	HSFE01-17-IRWA-0001	July 2019	Lancaster, Town of
McKinstry Brook	9/15/1981	Schoenfeld Associates	H-4794	August 1980	Southbridge, Town of
Meadow Brook	12/1/1979	Harris-Toups Associates	H-4024	March 1978	Shrewsbury, Town of
Middle River	2/15/1980	Camp Dresser & McKee	H-3861	January 1978	Worcester, City of
Mill Brook (Town of Bolton)	12/1/1979	Harris-Toups Associates	H-4024	April 1978	Bolton, Town of
Mill Brook (Town of Webster)	1/5/1982	Schoenfeld Associates	H-4794	February 1980	Webster, Town of
Mill Brook Conduit	1/16/2003	Hydraulic & Water Resources Engineers	EMB-96-CO-0406	February 2000	Worcester, City of
Mill River	9/1/1977	Camp Dresser & McKee	H-3861	July 1976	Blackstone, Town of; Hopedale, Town of; Mendon, Town of; Milford, Town of; Upton, Town of
Mirror Lake	7/8/2025	USGS	HSFE01-17-IRWA-0001	November 2019	Fitchburg, City of
Mirror Lake 2	7/8/2025	USGS	HSFE01-17-IRWA-0001	November 2019	Harvard, Town of
Miscoe Brook	9/30/1992	Rivers Engineering	EMW-89-C-2821	November 1989	Grafton, Town of

**Table 28: Summary of Contracted Studies Included in this FIS Report**

Flooding Source	FIS Report Dated	Contractor	Number	Work Completed Date	Affected Communities
Monoosnoc Brook	7/8/2025	USGS	HSFE01-17-IRWA-0001	July 2019	Fitchburg, City of; Leominster, City of
Monoosnoc Brook	7/8/2025	USGS	HSFE01-17-IRWA-0001	July 2019	Fitchburg, City of; Leominster, City of
Morse Reservoir	7/8/2025	USGS	HSFE01-17-IRWA-0001	November 2019	Leominster, City of
Moulton Pond Brook	1/16/1984	D. Baugh & Associates	H-4826	June 1980	Rutland, Town of
Mountain Laurel Lane swamp	7/8/2025	USGS	HSFE01-17-IRWA-0001	November 2019	Lancaster, Town of
Muddy Brook	1/19/1982	Vollmer Associates	H-4792	July 1980	Mendon, Town of
Muddy Pond	7/8/2025	USGS	HSFE01-17-IRWA-0001	November 2019	Westminster, Town of
Muddy Pond Road swamp	7/8/2025	USGS	HSFE01-17-IRWA-0001	November 2019	Sterling, Town of
Mulpus Brook	12/15/1981	Howard, Needles, Tammen and Bergendoff	H-4004	January 1978	Lunenburg, Town of
Mulpus Brook	7/8/2025	USGS	HSFE01-17-IRWA-0001	July 2019	Lunenburg, Town of
Mulpus Brook Tributary A	7/8/2025	USGS	HSFE01-17-IRWA-0001	July 2019	Lunenburg, Town of
Mulpus Brook Tributary B	7/8/2025	USGS	HSFE01-17-IRWA-0001	July 2019	Lunenburg, Town of
Mumford River	12/1/1981	Vollmer Associates	H-4792	November 1980	Douglas, Town of; Northbridge, Town of; Sutton, Town of; Uxbridge, Town of
Muschopauge Brook	7/8/2025	USGS	HSFE01-17-IRWA-0001	July 2019	Holden, Town of; Rutland, Town of
Nashua River	7/8/2025	USGS	HSFE01-17-IRWA-0001	July 2019	Bolton, Town of; Clinton, Town of; Harvard, Town of; Lancaster, Town of
Nashua River Tributary G	7/8/2025	USGS	HSFE01-17-IRWA-0001	July 2019	Bolton, Town of; Clinton, Town of; Lancaster, Town of

**Table 28: Summary of Contracted Studies Included in this FIS Report**

Flooding Source	FIS Report Dated	Contractor	Number	Work Completed Date	Affected Communities
Nashua River Tributary I	7/8/2025	USGS	HSFE01-17-IRWA-0001	July 2019	Lancaster, Town of
Newell Road pond	7/8/2025	USGS	HSFE01-17-IRWA-0001	November 2019	Holden, Town of
North Brook	12/1/1979	Harris-Toups Associates	H-4024	November 1977	Berlin, Town of
North Lancaster pond	7/8/2025	USGS	HSFE01-17-IRWA-0001	November 2019	Lancaster, Town of
North Nashua River	7/8/2025	USGS	HSFE01-17-IRWA-0001	July 2019	Fitchburg, Town of; Lancaster, Town of; Leominster, City of
North Nashua River	5/16/1983	Howard, Needles, Tammen and Bergendoff	H-4004	June 1980	Fitchburg, City of
North Nashua River Tributary A	7/8/2025	USGS	HSFE01-17-IRWA-0001	July 2019	Lancaster, Town of
North Nashua River Tributary A1	7/8/2025	USGS	HSFE01-17-IRWA-0001	July 2019	Lancaster, Town of
North Nashua River Tributary A2	7/8/2025	USGS	HSFE01-17-IRWA-0001	July 2019	Lancaster, Town of
North Nashua River Tributary B	7/8/2025	USGS	HSFE01-17-IRWA-0001	July 2019	Lancaster, Town of
North Nashua River Tributary C	7/8/2025	USGS	HSFE01-17-IRWA-0001	July 2019	Lancaster, Town of; Leominster, City of
North Nashua River Tributary D	7/8/2025	USGS	HSFE01-17-IRWA-0001	July 2019	Fitchburg, City of
O'Brien Brook	1/5/1984	Vollmer Associates	H-4792	July 1980	Milford, Town of
Oak Hill Pond	7/8/2025	USGS	HSFE01-17-IRWA-0001	November 2019	Lancaster, Town of
Otter River	1/2/1981	Anderson-Nichols & Co.	H-4019	May 1978	Gardner, City of

**Table 28: Summary of Contracted Studies Included in this FIS Report**

Flooding Source	FIS Report Dated	Contractor	Number	Work Completed Date	Affected Communities
Overlook Reservoir	7/8/2025	USGS	HSFE01-17-IRWA-0001	November 2019	Fitchburg, City of
Overlook Road swamp	7/8/2025	USGS	HSFE01-17-IRWA-0001	November 2019	Westminster, Town of
Paradise Pond	1/2/1981	Schoenfeld Associates	H-4794	July 1979	Princeton, Town of
Partridge Pond	1/19/1982	Howard, Needles, Tammen and Bergendoff	H-4004	January 1978	Westminster, Town of
Patton Road swamp	7/8/2025	USGS	HSFE01-17-IRWA-0001	November 2019	Harvard, Town of
Pearl Hill Brook	5/16/1983	Howard, Needles, Tammen and Bergendoff	H-4004	June 1980	Fitchburg, City of; Lunenburg, Town of
Pearl Hill Brook 2	7/8/2025	USGS	HSFE01-17-IRWA-0001	July 2019	Fitchburg, City of; Lunenburg, Town of
Pearl Hill Brook 2 Tributary B	7/8/2025	USGS	HSFE01-17-IRWA-0001	July 2019	Lunenburg, Town of
Perley Brook	1/2/1981	Anderson-Nichols & Co.	H-4019	May 1978	Gardner, City of
Phillips Brook	5/16/1983	Howard, Needles, Tammen and Bergendoff	H-4004	June 1980	Ashburnham, Town of; Fitchburg, City of; Westminster, Town of
Phillips Brook	7/8/2025	USGS	HSFE01-17-IRWA-0001	July 2019	Ashburnham, Town of
Phillips Brook Tributary A	7/8/2025	USGS	HSFE01-17-IRWA-0001	July 2019	Westminster, Town of
Phillips Brook Tributary B	7/8/2025	USGS	HSFE01-17-IRWA-0001	July 2019	Ashburnham, Town of
Phillips Brook Tributary C	7/8/2025	USGS	HSFE01-17-IRWA-0001	July 2019	Ashburnham, Town of
Phillips Brook Tributary D	7/8/2025	USGS	HSFE01-17-IRWA-0001	July 2019	Ashburnham, Town of
Piccadilly Brook	11/1/1979	Harris-Toups Associates	H-4024	March 1978	Westborough, Town of
Pikes Pond Tributary	1/19/1982	Schoenfeld Associates	H-4794	July 1980	Charlton, Town of

**Table 28: Summary of Contracted Studies Included in this FIS Report**

Flooding Source	FIS Report Dated	Contractor	Number	Work Completed Date	Affected Communities
Pine Hill Reservoir Tributary A	7/8/2025	USGS	HSFE01-17-IRWA-0001	July 2019	Holden, Town of; Paxton, Town of
Pine Hill Reservoir Tributary B	7/8/2025	USGS	HSFE01-17-IRWA-0001	July 2019	Rutland, Town of
Pond Brook	1/2/1981	Anderson-Nichols & Co.	H-4019	May 1978	Gardner, City of
Pondville Pond	12/1/1977	Camp Dresser & McKee	H-3861	January 1977	Auburn, Town of
Poor Farm Brook 1	7/8/2025	USGS	HSFE01-17-IRWA-0001	July 2019	Holden, Town of
Quacumquasit Pond	1/19/1982	Schoenfeld Associates	H-4794	November 1980	Sturbridge, Town of
Quick Stream	9/1/1977	Camp Dresser & McKee	H-3861	July 1976	Blackstone, Town of
Quinapoxet River	7/8/2025	USGS	HSFE01-17-IRWA-0001	July 2019	Holden, Town of; West Boylston, Town of
Quinapoxet River	1/2/1981	Schoenfeld Associates	H-4794	June 1979	Holden, Town of
Quinapoxet River	7/8/2025	USGS	HSFE01-17-IRWA-0001	July 2019	Holden, Town of; Rutland, Town of
Quinapoxet River Tributary A	7/8/2025	USGS	HSFE01-17-IRWA-0001	July 2019	West Boylston, Town of
Quinapoxet River Tributary B	7/8/2025	USGS	HSFE01-17-IRWA-0001	July 2019	Holden, Town of
Quinapoxet River Tributary C	7/8/2025	USGS	HSFE01-17-IRWA-0001	July 2019	Holden, Town of
Quinapoxet River Tributary D	7/8/2025	USGS	HSFE01-17-IRWA-0001	July 2019	Holden, Town of
Quinebaug River	6/7/2023	Compass	HSFE60-15-D-0003	October 2019	Dudley, Town of; Southbridge, Town of; Sturbridge, Town of

**Table 28: Summary of Contracted Studies Included in this FIS Report**

Flooding Source	FIS Report Dated	Contractor	Number	Work Completed Date	Affected Communities
Quinebaug River	6/7/2023	Compass	HSFE60-15-D-0003	October 2019	Sturbridge, Town of
Quinsigamond River	9/30/1992	Rivers Engineering	EMW-89-C-2821	November 1989	Grafton, Town of
Ramshorn Brook (Town of Auburn)	12/1/1977	Camp Dresser & McKee	H-3861	January 1977	Auburn, Town of
Ramshorn Brook (Town of Millbury)	1/7/2000	Green International	EMW-93-C-4144	June 1996	Millbury, Town of
Rawson Hill Brook	12/1/1979	Harris-Toups Associates	H-4024	March 1978	Shrewsbury, Town of
Rice Meadow Pond	7/8/2025	USGS	HSFE01-17-IRWA-0001	November 2019	Westminster, Town of
Riverdale Mills Sluice Gates & Tail Race	2/2/2002	Green International	EMB-96-CO-0403	September 1999	Northbridge, Town of
Robbins Pond	7/8/2025	USGS	HSFE01-17-IRWA-0001	November 2019	Harvard, Town of
Rocky Brook 2	7/8/2025	USGS	HSFE01-17-IRWA-0001	July 2019	Sterling, Town of
Rocky Hill swamp	7/8/2025	USGS	HSFE01-17-IRWA-0001	November 2019	Sterling, Town of
Rocky Pond	7/8/2025	USGS	HSFE01-17-IRWA-0001	November 2019	Leominster, City of
Round Meadow Pond Brook	1/19/1982	Howard, Needles, Tammen and Bergendoff	H-4004	January 1978	Westminster, Town of
Rutters Brook	7/16/2014	STARR	EMP-2003-CO-2606	October 2012	Westborough, Town of
Rutters Brook Tributary 1	7/16/2014	STARR	EMP-2003-CO-2606	October 2012	Westborough, Town of
Rutters Brook Tributary 1.1	7/16/2014	STARR	EMP-2003-CO-2606	October 2012	Westborough, Town of
Salisbury Street pond	7/8/2025	USGS	HSFE01-17-IRWA-0001	November 2019	Holden, Town of
Scanlon Brook	7/8/2025	USGS	HSFE01-17-IRWA-0001	July 2019	Sterling, Town of

**Table 28: Summary of Contracted Studies Included in this FIS Report**

Flooding Source	FIS Report Dated	Contractor	Number	Work Completed Date	Affected Communities
Scott Reservoir	7/8/2025	USGS	HSFE01-17-IRWA-0001	July 2019	Fitchburg, City of
Sevenmile River	9/14/1990	SCS	unknown	October 1988	Spencer, Town of
Sewall Brook	7/3/1985	Dewberry & Davis	unknown	May 1984	Boylston, Town of
Shrewsbury Street swamp	7/8/2025	USGS	HSFE01-17-IRWA-0001	November 2019	West Boylston, Town of
Singletary Brook	1/1/1979	Camp Dresser & McKee	H-3861	January 1978	Millbury, Town of
Singletary Pond	1/1/1979	Camp Dresser & McKee	H-3861	January 1978	Millbury, Town of; Sutton, Town of
Smith Brook	1/19/1982	Howard, Needles, Tammen and Bergendoff	H-4004	January 1978	Westminster, Town of
Smith Brook	7/8/2025	USGS	HSFE01-17-IRWA-0001	July 2019	Westminster, Town of
Snow Pond	7/8/2025	USGS	HSFE01-17-IRWA-0001	November 2019	Princeton, Town of
South Branch Souhegan River	7/8/2025	USGS	HSFE01-17-IRWA-0001	July 2019	Ashburnham, Town of
South Branch Souhegan River Tributary C	7/8/2025	USGS	HSFE01-17-IRWA-0001	July 2019	Ashburnham, Town of
South Branch Souhegan River Tributary D	7/8/2025	USGS	HSFE01-17-IRWA-0001	July 2019	Ashburnham, Town of
South Branch Souhegan River Tributary E	7/8/2025	USGS	HSFE01-17-IRWA-0001	July 2019	Ashburnham, Town of
South Meadow Brook	7/8/2025	USGS	HSFE01-17-IRWA-0001	July 2019	Lancaster, Town of



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Flooding Source	FIS Report Dated	Contractor	Number	Work Completed Date	Affected Communities
South Wachusett Brook	7/8/2025	USGS	HSFE01-17-IRWA-0001	July 2019	Princeton, Town of
South Wachusett Brook Tributary A	7/8/2025	USGS	HSFE01-17-IRWA-0001	July 2019	Princeton, Town of
South Wachusett Brook Tributary B	7/8/2025	USGS	HSFE01-17-IRWA-0001	July 2019	Princeton, Town of
South Wachusett Brook Tributary C	7/8/2025	USGS	HSFE01-17-IRWA-0001	July 2019	Princeton, Town of
South Wachusett Brook Tributary D	7/8/2025	USGS	HSFE01-17-IRWA-0001	July 2019	Princeton, Town of
Southwick Brook	12/1/1981	Vollmer Associates	H-4792	November 1980	Douglas, Town of
Spectacle Brook	7/8/2025	USGS	HSFE01-17-IRWA-0001	July 2019	Lancaster, Town of
Spring Basin	7/8/2025	USGS	HSFE01-17-IRWA-0001	November 2019	Sterling, Town of
Springfield Terminal pond	7/8/2025	USGS	HSFE01-17-IRWA-0001	November 2019	Westminster, Town of
Stall Brook	1/5/1984	Vollmer Associates	H-4792	July 1980	Milford, Town of
Steam Mill Brook	7/8/2025	USGS	HSFE01-17-IRWA-0001	July 2019	Princeton, Town of; Sterling, Town of
Steam Mill Brook Tributary A	7/8/2025	USGS	HSFE01-17-IRWA-0001	July 2019	Princeton, Town of
Steam Mill Brook Tributary B	7/8/2025	USGS	HSFE01-17-IRWA-0001	July 2019	Princeton, Town of
Still River Tributary A	7/8/2025	USGS	HSFE01-17-IRWA-0001	July 2019	Bolton, Town of

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Flooding Source	FIS Report Dated	Contractor	Number	Work Completed Date	Affected Communities
Stillwater River	7/8/2025	USGS	HSFE01-17-IRWA-0001	July 2019	Sterling, Town of; West Boylston, Town of
Stillwater River	12/15/1981	Howard, Needles, Tammen and Bergendoff	H-4004	January 1978	Princeton, Town of; Sterling, Town of
Stillwater River	7/8/2025	USGS	HSFE01-17-IRWA-0001	July 2019	Princeton, Town of; Sterling, Town of
Stone Brook	12/1/1977	Camp Dresser & McKee	H-3861	January 1977	Auburn, Town of
Stoneville Pond	12/1/1977	Camp Dresser & McKee	H-3861	January 1977	Auburn, Town of
Stony Brook	7/16/2014	STARR	EMP-2003-CO-2606	October 2012	Southborough, Town of
Stony Brook Tributary 2	4/15/1981	Howard, Needles, Tammen and Bergendoff	H-4004	November 1979	Southborough, Town of
Sudbury River	7/16/2014	STARR	EMP-2003-CO-2606	October 2012	Southborough, Town of; Westborough, Town of
Sudbury River Split 1	7/16/2014	STARR	EMP-2003-CO-2606	October 2012	Southborough, Town of
Sudbury River Tributary 12	4/15/1981	Howard, Needles, Tammen and Bergendoff	H-4004	November 1979	Southborough, Town of
Sullivan Brook	7/16/2014	STARR	EMP-2003-CO-2606	October 2012	Westborough, Town of
Tatnuck Brook	2/15/1980	Camp Dresser & McKee	H-3861	January 1978	Worcester, City of
Thompson Road swamp	7/8/2025	USGS	HSFE01-17-IRWA-0001	November 2019	Princeton, Town of
Town Meadow Brook	1/5/1982	Schoenfeld Associates	H-4794	March 1980	Leicester, Town of
Tributary 1	12/15/1981	Schoenfeld Associates	H-4794	February 1980	Dudley, Town of

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Flooding Source	FIS Report Dated	Contractor	Number	Work Completed Date	Affected Communities
Tributary A Dam Pond	unknown	Howard, Needles, Tammen and Bergendoff	H-4004	May 1980	Leominster, City of
Tributary A to Fall Brook	unknown	Howard, Needles, Tammen and Bergendoff	H-4004	May 1980	Leominster, City of
Tributary B to Fall Brook	unknown	Howard, Needles, Tammen and Bergendoff	H-4004	May 1980	Leominster, City of
Tributary C to Fall Brook	unknown	Howard, Needles, Tammen and Bergendoff	H-4004	May 1980	Leominster, City of
Tributary to Catacoonamug Brook	12/15/1981	Howard, Needles, Tammen and Bergendoff	H-4004	January 1978	Lunenburg, Town of
Tributary to Catacoonamug Brook	7/8/2025	USGS	HSFE01-17-IRWA-0001	July 2019	Lunenburg, Town of
Tributary to Elizabeth Brook	12/15/1982	Howard, Needles, Tammen and Bergendoff	H-4004	January 1978	Harvard, Town of
Tributary to Monoosnoc Brook	unknown	Howard, Needles, Tammen and Bergendoff	H-4004	May 1980	Leominster, City of
Tributary to Monoosnoc Brook	7/8/2025	USGS	HSFE01-17-IRWA-0001	July 2019	Leominster, City of
Tributary to Pearl Hill Brook	12/15/1981	Howard, Needles, Tammen and Bergendoff	H-4004	January 1978	Lunenburg, Town of
Tributary to Round Meadow Pond	1/19/1982	Howard, Needles, Tammen and Bergendoff	H-4004	January 1978	Westminster, Town of

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Flooding Source	FIS Report Dated	Contractor	Number	Work Completed Date	Affected Communities
Tributary to Round Meadow Pond Tributary A	7/8/2025	USGS	HSFE01-17-IRWA-0001	July 2019	Westminster, Town of
Tributary to Waushacum Brook	8/2/1990	USACE	EMW-84-3-1506	May 1988	West Boylston, Town of
Tributary to Wyman Pond	1/19/1982	Howard, Needles, Tammen and Bergendoff	H-4004	January 1978	Westminster, Town of
Tributary to Wyman Pond	7/8/2025	USGS	HSFE01-17-IRWA-0001	July 2019	Westminster, Town of
Trout Brook	7/8/2025	USGS	HSFE01-17-IRWA-0001	July 2019	Holden, Town of
Turkey Brook	7/8/2025	USGS	HSFE01-17-IRWA-0001	July 2019	Paxton, Town of; Rutland, Town of
Turkey Hill Pond	7/8/2025	USGS	HSFE01-17-IRWA-0001	November 2019	Lunenburg, Town of
Turner Pond	7/8/2025	USGS	HSFE01-17-IRWA-0001	November 2019	Lancaster, Town of; Lunenburg, Town of
Unnamed Tributary	12/1/1977	Camp Dresser & McKee	H-3861	January 1977	Auburn, Town of
Unnamed Tributary to Mayo Pond	1/1/1979	Camp Dresser & McKee	H-3861	January 1978	Millbury, Town of
Upper Crocker Pond	1/19/1982	Howard, Needles, Tammen and Bergendoff	H-4004	January 1978	Westminster, Town of
Wachusett Reservoir	7/8/2025	USGS	HSFE01-17-IRWA-0001	July 2019	Boylston, Town of; Clinton, Town of; Sterling, Town of; West Boylston, Town of
Walker Pond	1/19/1982	Schoenfeld Associates	H-4794	November 1980	Sturbridge, Town of
Warren Tannery Brook	7/8/2025	USGS	HSFE01-17-IRWA-0001	July 2019	Holden, Town of

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Flooding Source	FIS Report Dated	Contractor	Number	Work Completed Date	Affected Communities
Wauashacum Brook	8/2/1990	USACE	EMW-84-3-1506	May 1988	West Boylston, Town of
Wauashacum Brook	7/8/2025	USGS	HSFE01-17-IRWA-0001	July 2019	Sterling, Town of
Weasel Brook	2/15/1980	Camp Dresser & McKee	H-3861	January 1978	Worcester, City of
Wekepeke Brook	7/8/2025	USGS	HSFE01-17-IRWA-0001	July 2019	Lancaster, Town of; Sterling, Town of
Wekepeke Brook	12/15/1981	Howard, Needles, Tammen and Bergendoff	H-4004	January 1978	Sterling, Town of
Wekepeke Brook	7/8/2025	USGS	HSFE01-17-IRWA-0001	July 2019	Sterling, Town of
Wekepeke Brook Tributary A	7/8/2025	USGS	HSFE01-17-IRWA-0001	July 2019	Lancaster, Town of
Wekepeke Brook Tributary A1	7/8/2025	USGS	HSFE01-17-IRWA-0001	July 2019	Lancaster, Town of
Wekepeke Brook Tributary B	7/8/2025	USGS	HSFE01-17-IRWA-0001	July 2019	Lancaster, Town of; Leominster, City of; Sterling, Town of
Wekepeke Brook Tributary C	7/8/2025	USGS	HSFE01-17-IRWA-0001	July 2019	Lancaster, Town of; Sterling, Town of
Wekepeke Brook Tributary D	7/8/2025	USGS	HSFE01-17-IRWA-0001	July 2019	Sterling, Town of
Wekepeke Brook Tributary D1	7/8/2025	USGS	HSFE01-17-IRWA-0001	July 2019	Sterling, Town of
Wekepeke Brook Tributary D2	7/8/2025	USGS	HSFE01-17-IRWA-0001	July 2019	Sterling, Town of
Wekepeke Brook Tributary D3	7/8/2025	USGS	HSFE01-17-IRWA-0001	July 2019	Sterling, Town of
West Boylston Road ponding	7/8/2025	USGS	HSFE01-17-IRWA-0001	November 2019	Clinton, Town of

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Flooding Source	FIS Report Dated	Contractor	Number	Work Completed Date	Affected Communities
West Brook	12/1/1979	Harris-Toups Associates	H-4024	March 1978	Shrewsbury, Town of
West Princeton Road swamp	7/8/2025	USGS	HSFE01-17-IRWA-0001	November 2019	Westminster, Town of
West River (Town of Uxbridge)	12/1/1982	Vollmer Associates	H-4792	August 1980	Uxbridge, Town of
West River	2/2/1982	Vollmer Associates	H-4792	August 1980	Grafton, Town of; Upton, Town of
Whitins Pond	12/1/1981	Vollmer Associates	H-4792	November 1980	Northbridge, Town of; Sutton, Town of
Whitman River (Lower Reach)	5/16/1983	Howard, Needles, Tammen and Bergendoff	H-4004	June 1980	Fitchburg, City of
Whitman River (Middle)	7/8/2025	USGS	HSFE01-17-IRWA-0001	July 2019	Westminster, Town of
Whitman River (Upper Reach)	12/15/1983	D. Baugh & Associates	H-4826	June 1980	Ashburnham, Town of
Whitman River	7/8/2025	USGS	HSFE01-17-IRWA-0001	July 2019	Ashburnham, Town of; Gardner, City of
Whitman River Tributary A	7/8/2025	USGS	HSFE01-17-IRWA-0001	July 2019	Westminster, Town of
Whitman River Tributary B	7/8/2025	USGS	HSFE01-17-IRWA-0001	July 2019	Gardner, City of; Westminster, Town of
Whitman River Tributary B1	7/8/2025	USGS	HSFE01-17-IRWA-0001	July 2019	Westminster, Town of
Whitman River Tributary C	7/8/2025	USGS	HSFE01-17-IRWA-0001	July 2019	Ashburnham, Town of
Whitman River Tributary C1	7/8/2025	USGS	HSFE01-17-IRWA-0001	July 2019	Ashburnham, Town of
Whitman River Tributary C2	7/8/2025	USGS	HSFE01-17-IRWA-0001	July 2019	Ashburnham, Town of
Whitman River Tributary C3	7/8/2025	USGS	HSFE01-17-IRWA-0001	July 2019	Ashburnham, Town of
Whitman River Tributary C4	7/8/2025	USGS	HSFE01-17-IRWA-0001	July 2019	Ashburnham, Town of
Whitman River Tributary D	7/8/2025	USGS	HSFE01-17-IRWA-0001	July 2019	Ashburnham, Town of; Gardner, City of

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Flooding Source	FIS Report Dated	Contractor	Number	Work Completed Date	Affected Communities
Wilder Brook	1/2/1981	Anderson-Nichols & Co.	H-4019	May 1978	Gardner, City of
Willard Brook Tributary E	7/8/2025	USGS	HSFE01-17-IRWA-0001	July 2019	Ashburnham, Town of
Willow Brook Road pond	7/8/2025	USGS	HSFE01-17-IRWA-0001	November 2019	Holden, Town of
Winnekeag Lake	5/16/1983	Howard, Needles, Tammen and Bergendoff	H-4004	June 1980	Ashburnham, Town of
Worcester Brook	7/8/2025	USGS	HSFE01-17-IRWA-0001	July 2019	Holden, Town of
Worcester Brook Diversion	7/8/2025	USGS	HSFE01-17-IRWA-0001	July 2019	Holden, Town of
Wrack Meadow Brook	12/1/1979	Harris-Toups Associates	H-4024	November 1977	Berlin, Town of
Wyman Pond	5/16/1983	Howard, Needles, Tammen and Bergendoff	H-4004	June 1980	Princeton, Town of; Westminster, Town of
Wyman Pond Brook	5/16/1983	Howard, Needles, Tammen and Bergendoff	H-4004	June 1980	Fitchburg, City of; Westminster, Town of
Wyman Pond Brook	7/8/2025	USGS	HSFE01-17-IRWA-0001	July 2019	Princeton, Town of; Westminster, Town of
Zone A flooding sources (Concord River HUC8 Watershed)	7/16/2014	STARR	EMP-2003-CO-2606	October 2012	Berlin, Town of; Bolton, Town of; Boylston, Town of; Clinton, Town of; Harvard, Town of; Northborough, Town of; Shrewsbury, Town of; Southborough, Town of; Westborough, Town of

**Table 28: Summary of Contracted Studies Included in this FIS Report**

Flooding Source	FIS Report Dated	Contractor	Number	Work Completed Date	Affected Communities
Zone A flooding sources (miscellaneous streams and ponds)	Varies	Varies	Varies	1977-2003	Ashburnham, Town of; Auburn, Town of; Blackstone, Town of; Boylston, Town of; Douglas, Town of; Gardner, City of; Grafton, Town of; Hubbardston, Town of; Leicester, Town of; Mendon, Town of; Milford, Town of; Millbury, Town of; Northbridge, Town of; Paxton, Town of; Princeton, Town of; Rutland, Town of; Shrewsbury, Town of; Spencer, Town of; Sutton, Town of; Upton, Town of; Uxbridge, Town of; Westminster, Town of; Worcester, City of
Zone A flooding sources (French River, Mill Brook, Quinebaug River)	6/7/2023	Compass	HSFE60-15-D-0003	October 2019	Oxford, Town of; Southbridge, Town of; Sturbridge, Town of; Webster, Town of
Zone A flooding sources (Quinebaug River HUC8 Watershed)	6/7/2023	Compass	HSFE60-15-D-0003	October 2019	Auburn, Town of; Charlton, Town of; Douglas, Town of; Dudley, Town of; Leicester, Town of; Oxford, Town of; Southbridge, Town of; Spencer, Town of; Sturbridge, Town of; Webster, Town of



## **7.2 Community Meetings**

The dates of the community meetings held for this Flood Risk Project and previous Flood Risk Projects are shown in Table 29. These meetings may have previously been referred to by a variety of names (Community Coordination Officer (CCO), Scoping, Discovery, etc.), but all meetings represent opportunities for FEMA, community officials, study contractors, and other invited guests to discuss the planning for and results of the project.

**Table 29: Community Meetings**

Community	FIS Report Dated	Date of Meeting	Meeting Type	Attended By
Ashburnham, Town of	07/08/2025	04/27/2016	Discovery	FEMA, Massachusetts Department of Conservation and Recreation, this community, and the study contractor
		11/21/2019	Work map	FEMA, Massachusetts Department of Conservation and Recreation, this community, and the study contractor
		10/05/2021	Final CCO	FEMA, Massachusetts Department of Conservation and Recreation, this community, and the study contractor
Auburn, Town of	07/08/2025	04/27/2016	Discovery	FEMA, Massachusetts Department of Conservation and Recreation, this community, and the study contractor
		11/21/2019	Work map	FEMA, Massachusetts Department of Conservation and Recreation, this community, and the study contractor
		10/05/2021	Final CCO	FEMA, Massachusetts Department of Conservation and Recreation, this community, and the study contractor
Berlin, Town of	07/08/2025	04/27/2016	Discovery	FEMA, Massachusetts Department of Conservation and Recreation, this community, and the study contractor
		11/21/2019	Work map	FEMA, Massachusetts Department of Conservation and Recreation, this community, and the study contractor
		10/05/2021	Final CCO	FEMA, Massachusetts Department of Conservation and Recreation, this community, and the study contractor
Blackstone, Town of	07/08/2025	04/14/2015	Discovery	FEMA, Massachusetts Department of Conservation and Recreation, this community, and the study contractor
		07/10/2018	Work map	FEMA, Massachusetts Department of Conservation and Recreation, this community, and the study contractor
		10/05/2021	Final CCO	FEMA, Massachusetts Department of Conservation and Recreation, this community, and the study contractor

**Table 29: Community Meetings**

Community	FIS Report Dated	Date of Meeting	Meeting Type	Attended By
Bolton, Town of	07/08/2025	04/27/2016	Discovery	FEMA, Massachusetts Department of Conservation and Recreation, this community, and the study contractor
		11/21/2019	Work map	FEMA, Massachusetts Department of Conservation and Recreation, this community, and the study contractor
		10/05/2021	Final CCO	FEMA, Massachusetts Department of Conservation and Recreation, this community, and the study contractor
Boylston, Town of	07/08/2025	04/27/2016	Discovery	FEMA, Massachusetts Department of Conservation and Recreation, this community, and the study contractor
		11/21/2019	Work map	FEMA, Massachusetts Department of Conservation and Recreation, this community, and the study contractor
		10/05/2021	Final CCO	FEMA, Massachusetts Department of Conservation and Recreation, this community, and the study contractor
Charlton, Town of	06/07/2023	12/01/2015	Discovery	FEMA, MADCR, and the community
		09/26/2019	Work map	FEMA, the community, and Compass
		09/28/2020	Final CCO	FEMA, MADCR, and Compass
Clinton, Town of	07/08/2025	04/27/2016	Discovery	FEMA, Massachusetts Department of Conservation and Recreation, this community, and the study contractor
		11/21/2019	Work map	FEMA, Massachusetts Department of Conservation and Recreation, this community, and the study contractor
		10/05/2021	Final CCO	FEMA, Massachusetts Department of Conservation and Recreation, this community, and the study contractor

**Table 29: Community Meetings**

Community	FIS Report Dated	Date of Meeting	Meeting Type	Attended By
Douglas, Town of	07/08/2025	04/27/2016	Discovery	FEMA, Massachusetts Department of Conservation and Recreation, this community, and the study contractor
		11/21/2019	Work map	FEMA, Massachusetts Department of Conservation and Recreation, this community, and the study contractor
		10/05/2021	Final CCO	FEMA, Massachusetts Department of Conservation and Recreation, this community, and the study contractor
Dudley, Town of	06/07/2023	12/01/2015	Discovery	FEMA, MADCR, and the community
		09/26/2019	Work map	FEMA, the community, and Compass
		09/28/2020	Final CCO	FEMA, MADCR, and Compass
Fitchburg, City of	07/08/2025	04/27/2016	Discovery	FEMA, Massachusetts Department of Conservation and Recreation, this community, and the study contractor
		11/21/2019	Work map	FEMA, Massachusetts Department of Conservation and Recreation, this community, and the study contractor
		10/05/2021	Final CCO	FEMA, Massachusetts Department of Conservation and Recreation, this community, and the study contractor
Gardner, City of	07/08/2025	04/27/2016	Discovery	FEMA, Massachusetts Department of Conservation and Recreation, this community, and the study contractor
		11/21/2019	Work map	FEMA, Massachusetts Department of Conservation and Recreation, this community, and the study contractor
		10/05/2021	Final CCO	FEMA, Massachusetts Department of Conservation and Recreation, this community, and the study contractor

**Table 29: Community Meetings**

Community	FIS Report Dated	Date of Meeting	Meeting Type	Attended By
Grafton, Town of	07/08/2025	04/27/2016	Discovery	FEMA, Massachusetts Department of Conservation and Recreation, this community, and the study contractor
		11/21/2019	Work map	FEMA, Massachusetts Department of Conservation and Recreation, this community, and the study contractor
		10/05/2021	Final CCO	FEMA, Massachusetts Department of Conservation and Recreation, this community, and the study contractor
Harvard, Town of	07/08/2025	04/27/2016	Discovery	FEMA, Massachusetts Department of Conservation and Recreation, this community, and the study contractor
		11/21/2019	Work map	FEMA, Massachusetts Department of Conservation and Recreation, this community, and the study contractor
		10/05/2021	Final CCO	FEMA, Massachusetts Department of Conservation and Recreation, this community, and the study contractor
Holden, Town of	07/08/2025	04/27/2016	Discovery	FEMA, Massachusetts Department of Conservation and Recreation, this community, and the study contractor
		11/21/2019	Work map	FEMA, Massachusetts Department of Conservation and Recreation, this community, and the study contractor
		10/05/2021	Final CCO	FEMA, Massachusetts Department of Conservation and Recreation, this community, and the study contractor
Hopedale, Town of	07/08/2025	04/14/2015	Discovery	FEMA, Massachusetts Department of Conservation and Recreation, this community, and the study contractor
		07/10/2018	Work map	FEMA, Massachusetts Department of Conservation and Recreation, this community, and the study contractor
		10/05/2021	Final CCO	FEMA, Massachusetts Department of Conservation and Recreation, this community, and the study contractor

**Table 29: Community Meetings**

Community	FIS Report Dated	Date of Meeting	Meeting Type	Attended By
Hubbardston, Town of	07/08/2025	04/27/2016	Discovery	FEMA, Massachusetts Department of Conservation and Recreation, this community, and the study contractor
		11/21/2019	Work map	FEMA, Massachusetts Department of Conservation and Recreation, this community, and the study contractor
		10/05/2021	Final CCO	FEMA, Massachusetts Department of Conservation and Recreation, this community, and the study contractor
Lancaster, Town of	07/08/2025	04/27/2016	Discovery	FEMA, Massachusetts Department of Conservation and Recreation, this community, and the study contractor
		11/21/2019	Work map	FEMA, Massachusetts Department of Conservation and Recreation, this community, and the study contractor
		10/05/2021	Final CCO	FEMA, Massachusetts Department of Conservation and Recreation, this community, and the study contractor
Leicester, Town of	07/08/2025	04/27/2016	Discovery	FEMA, Massachusetts Department of Conservation and Recreation, this community, and the study contractor
		11/21/2019	Work map	FEMA, Massachusetts Department of Conservation and Recreation, this community, and the study contractor
		10/05/2021	Final CCO	FEMA, Massachusetts Department of Conservation and Recreation, this community, and the study contractor
Leominster, City of	07/08/2025	04/27/2016	Discovery	FEMA, Massachusetts Department of Conservation and Recreation, this community, and the study contractor
		11/21/2019	Work map	FEMA, Massachusetts Department of Conservation and Recreation, this community, and the study contractor
		10/05/2021	Final CCO	FEMA, Massachusetts Department of Conservation and Recreation, this community, and the study contractor

**Table 29: Community Meetings**

Community	FIS Report Dated	Date of Meeting	Meeting Type	Attended By
Lunenburg, Town of	07/08/2025	04/27/2016	Discovery	FEMA, Massachusetts Department of Conservation and Recreation, this community, and the study contractor
		11/21/2019	Work map	FEMA, Massachusetts Department of Conservation and Recreation, this community, and the study contractor
		10/05/2021	Final CCO	FEMA, Massachusetts Department of Conservation and Recreation, this community, and the study contractor
Mendon, Town of	07/08/2025	04/14/2015	Discovery	FEMA, Massachusetts Department of Conservation and Recreation, this community, and the study contractor
		07/10/2018	Work map	FEMA, Massachusetts Department of Conservation and Recreation, this community, and the study contractor
		10/05/2021	Final CCO	FEMA, Massachusetts Department of Conservation and Recreation, this community, and the study contractor
Milford, Town of	07/08/2025	04/14/2015	Discovery	FEMA, Massachusetts Department of Conservation and Recreation, this community, and the study contractor
		07/10/2018	Work map	FEMA, Massachusetts Department of Conservation and Recreation, this community, and the study contractor
		10/05/2021	Final CCO	FEMA, Massachusetts Department of Conservation and Recreation, this community, and the study contractor
Millbury, Town of	07/08/2025	04/14/2015	Discovery	FEMA, Massachusetts Department of Conservation and Recreation, this community, and the study contractor
		07/10/2018	Work map	FEMA, Massachusetts Department of Conservation and Recreation, this community, and the study contractor
		10/05/2021	Final CCO	FEMA, Massachusetts Department of Conservation and Recreation, this community, and the study contractor

**Table 29: Community Meetings**

Community	FIS Report Dated	Date of Meeting	Meeting Type	Attended By
Millville, Town of	07/08/2025	04/14/2015	Discovery	FEMA, Massachusetts Department of Conservation and Recreation, this community, and the study contractor
		07/10/2018	Work map	FEMA, Massachusetts Department of Conservation and Recreation, this community, and the study contractor
		10/05/2021	Final CCO	FEMA, Massachusetts Department of Conservation and Recreation, this community, and the study contractor
Northborough, Town of	07/16/2014	02/07/2011	Initial CCO	FEMA, state officials, this community, and the study contractor
Northbridge, Town of	07/08/2025	04/14/2015	Discovery	FEMA, Massachusetts Department of Conservation and Recreation, this community, and the study contractor
		07/10/2018	Work map	FEMA, Massachusetts Department of Conservation and Recreation, this community, and the study contractor
		10/05/2021	Final CCO	FEMA, Massachusetts Department of Conservation and Recreation, this community, and the study contractor
Oxford, Town of	07/08/2025	04/14/2015	Discovery	FEMA, Massachusetts Department of Conservation and Recreation, this community, and the study contractor
		07/10/2018	Work map	FEMA, Massachusetts Department of Conservation and Recreation, this community, and the study contractor
		10/05/2021	Final CCO	FEMA, Massachusetts Department of Conservation and Recreation, this community, and the study contractor
Paxton, Town of	07/08/2025	04/27/2016	Discovery	FEMA, Massachusetts Department of Conservation and Recreation, this community, and the study contractor
		11/21/2019	Work map	FEMA, Massachusetts Department of Conservation and Recreation, this community, and the study contractor
		10/05/2021	Final CCO	FEMA, Massachusetts Department of Conservation and Recreation, this community, and the study contractor



**Table 29: Community Meetings**

Community	FIS Report Dated	Date of Meeting	Meeting Type	Attended By
Princeton, Town of	07/08/2025	04/27/2016	Discovery	FEMA, Massachusetts Department of Conservation and Recreation, this community, and the study contractor
		11/21/2019	Work map	FEMA, Massachusetts Department of Conservation and Recreation, this community, and the study contractor
		10/05/2021	Final CCO	FEMA, Massachusetts Department of Conservation and Recreation, this community, and the study contractor
Rutland, Town of	07/08/2025	04/27/2016	Discovery	FEMA, Massachusetts Department of Conservation and Recreation, this community, and the study contractor
		11/21/2019	Work map	FEMA, Massachusetts Department of Conservation and Recreation, this community, and the study contractor
		10/05/2021	Final CCO	FEMA, Massachusetts Department of Conservation and Recreation, this community, and the study contractor
Shrewsbury, Town of	07/08/2025	04/27/2016	Discovery	FEMA, Massachusetts Department of Conservation and Recreation, this community, and the study contractor
		11/21/2019	Work map	FEMA, Massachusetts Department of Conservation and Recreation, this community, and the study contractor
		10/05/2021	Final CCO	FEMA, Massachusetts Department of Conservation and Recreation, this community, and the study contractor
Southborough, Town of	07/16/2014	02/07/2011	Initial CCO	FEMA, state officials, this community, and the study contractor
Southbridge, Town of	06/07/2023	12/01/2015	Discovery	FEMA, MADCR, and the community
		09/26/2019	Work map	FEMA, the community, and Compass
		09/28/2020	Final CCO	FEMA, MADCR, and Compass

**Table 29: Community Meetings**

Community	FIS Report Dated	Date of Meeting	Meeting Type	Attended By
Spencer, Town of	06/07/2023	12/01/2015	Discovery	FEMA, MADCR, and the community
		09/26/2019	Work map	FEMA, the community, and Compass
		09/28/2020	Final CCO	FEMA, MADCR, and Compass
Sterling, Town of	07/08/2025	04/27/2016	Discovery	FEMA, Massachusetts Department of Conservation and Recreation, this community, and the study contractor
		11/21/2019	Work map	FEMA, Massachusetts Department of Conservation and Recreation, this community, and the study contractor
		10/05/2021	Final CCO	FEMA, Massachusetts Department of Conservation and Recreation, this community, and the study contractor
Sturbridge, Town of	06/07/2023	12/01/2015	Discovery	FEMA, MADCR, and the community
		09/26/2019	Work map	FEMA, the community, and Compass
		09/28/2020	Final CCO	FEMA, MADCR, and Compass
Sutton, Town of	07/08/2025	04/27/2016	Discovery	FEMA, Massachusetts Department of Conservation and Recreation, this community, and the study contractor
		11/21/2019	Work map	FEMA, Massachusetts Department of Conservation and Recreation, this community, and the study contractor
		10/05/2021	Final CCO	FEMA, Massachusetts Department of Conservation and Recreation, this community, and the study contractor
Upton, Town of	07/08/2025	04/14/2015	Discovery	FEMA, Massachusetts Department of Conservation and Recreation, this community, and the study contractor
		07/10/2018	Work map	FEMA, Massachusetts Department of Conservation and Recreation, this community, and the study contractor
		10/05/2021	Final CCO	FEMA, Massachusetts Department of Conservation and Recreation, this community, and the study contractor

**Table 29: Community Meetings**

Community	FIS Report Dated	Date of Meeting	Meeting Type	Attended By
Uxbridge, Town of	07/08/2025	04/14/2015	Discovery	FEMA, Massachusetts Department of Conservation and Recreation, this community, and the study contractor
		07/10/2018	Work map	FEMA, Massachusetts Department of Conservation and Recreation, this community, and the study contractor
		10/05/2021	Final CCO	FEMA, Massachusetts Department of Conservation and Recreation, this community, and the study contractor
Webster, Town of	07/08/2025	04/14/2015	Discovery	FEMA, Massachusetts Department of Conservation and Recreation, this community, and the study contractor
		07/10/2018	Work map	FEMA, Massachusetts Department of Conservation and Recreation, this community, and the study contractor
		10/05/2021	Final CCO	FEMA, Massachusetts Department of Conservation and Recreation, this community, and the study contractor
West Boylston, Town of	07/08/2025	04/27/2016	Discovery	FEMA, Massachusetts Department of Conservation and Recreation, this community, and the study contractor
		11/21/2019	Work map	FEMA, Massachusetts Department of Conservation and Recreation, this community, and the study contractor
		10/05/2021	Final CCO	FEMA, Massachusetts Department of Conservation and Recreation, this community, and the study contractor
Westborough, Town of	07/08/2025	04/27/2016	Discovery	FEMA, Massachusetts Department of Conservation and Recreation, this community, and the study contractor
		11/21/2019	Work map	FEMA, Massachusetts Department of Conservation and Recreation, this community, and the study contractor
		10/05/2021	Final CCO	FEMA, Massachusetts Department of Conservation and Recreation, this community, and the study contractor

**Table 29: Community Meetings**

Community	FIS Report Dated	Date of Meeting	Meeting Type	Attended By
Westminster, Town of	07/08/2025	04/27/2016	Discovery	FEMA, Massachusetts Department of Conservation and Recreation, this community, and the study contractor
		11/21/2019	Work map	FEMA, Massachusetts Department of Conservation and Recreation, this community, and the study contractor
		10/05/2021	Final CCO	FEMA, Massachusetts Department of Conservation and Recreation, this community, and the study contractor
Worcester, City of	07/08/2025	04/27/2016	Discovery	FEMA, Massachusetts Department of Conservation and Recreation, this community, and the study contractor
		11/21/2019	Work map	FEMA, Massachusetts Department of Conservation and Recreation, this community, and the study contractor
		10/05/2021	Final CCO	FEMA, Massachusetts Department of Conservation and Recreation, this community, and the study contractor

## SECTION 8.0 – ADDITIONAL INFORMATION

Information concerning the pertinent data used in the preparation of this FIS Report can be obtained by submitting an order with any required payment to the FEMA Engineering Library. For more information on this process, see [www.fema.gov](http://www.fema.gov).

Table 30 is a list of the locations where FIRMs for Worcester County can be viewed. Please note that the maps at these locations are for reference only and are not for distribution. Also, please note that only the maps for the community listed in the table are available at that particular repository. A user may need to visit another repository to view maps from an adjacent community.

**Table 30: Map Repositories**

Community	Address	City	State	Zip Code
Ashburnham, Town of	Town Hall, 32 Main Street	Ashburnham	MA	01430
Auburn, Town of	Town Hall, 102 Central Street	Auburn	MA	01501
Berlin, Town of	Town Offices, 23 Linden Street	Berlin	MA	01503
Blackstone, Town of	Town Hall, 15 Saint Paul Street	Blackstone	MA	01504
Bolton, Town of	Town Hall, 663 Main Street	Bolton	MA	01740
Boylston, Town of	Town Hall, 221 Main Street	Boylston	MA	01505
Charlton, Town of	Town Hall, 37 Main Street	Charlton	MA	01507
Clinton, Town of	Town Hall, 242 Church Street	Clinton	MA	01510
Douglas, Town of	Municipal Center, 29 Depot Street	Douglas	MA	01516
Dudley, Town of	Town Hall, 71 West Main Street	Dudley	MA	01571
Fitchburg, City of	City Hall, 718 Main Street	Fitchburg	MA	01420
Gardner, City of	City Hall, 95 Pleasant Street	Gardner	MA	01440
Grafton, Town of	Memorial Municipal Center, 30 Providence Road	Grafton	MA	01519
Harvard, Town of	Town Hall, 13 Ayer Road	Harvard	MA	01451
Holden, Town of	Starbard Building, 1204 Main Street	Holden	MA	01520
Hopedale, Town of	Town Office, 78 Hopedale Street	Hopedale	MA	01747
Hubbardston, Town of	Town Hall, 7 Main Street	Hubbardston	MA	01452

**Table 30: Map Repositories**

Community	Address	City	State	Zip Code
Lancaster, Town of	Prescott Building, 701 Main Street	Lancaster	MA	01523
Leicester, Town of	Town Hall, 3 Washburn Square	Leicester	MA	01524
Leominster, City of	City Hall, 25 West Street	Leominster	MA	01453
Lunenburg, Town of	Town Hall, 17 Main Street	Lunenburg	MA	01462
Mendon, Town of	Town Hall, 20 Main Street	Mendon	MA	01756
Milford, Town of	Town Hall, 52 Main Street	Milford	MA	01757
Millbury, Town of	Town Hall, 127 Elm Street	Millbury	MA	01527
Millville, Town of	Town Hall, 8 Central Street	Millville	MA	01529
Northborough, Town of	Town Offices, 63 Main Street	Northborough	MA	01532
Northbridge, Town of	Town Hall, 7 Main Street	Whitinsville	MA	01588
Oxford, Town of	Town Hall, 325 Main Street	Oxford	MA	01540
Paxton, Town of	Town Hall, 697 Pleasant Street	Paxton	MA	01612
Princeton, Town of	Town Hall, 6 Town Hall Drive	Princeton	MA	01541
Rutland, Town of	Town Hall, 250 Main Street	Rutland	MA	01543
Shrewsbury, Town of	Town Hall, 100 Maple Avenue	Shrewsbury	MA	01545
Southborough, Town of	Town House, 17 Common Street	Southborough	MA	01772
Southbridge, Town of	Town Hall, 41 Elm Street	Southbridge	MA	01550
Spencer, Town of	Town Hall, 157 Main Street	Spencer	MA	01562
Sterling, Town of	Butterick Municipal Building, 1 Park Street	Sterling	MA	01564
Sturbridge, Town of	Planning Department, 301 Main Street	Sturbridge	MA	01566
Sutton, Town of	Town Hall, 4 Uxbridge Road	Sutton	MA	01590
Upton, Town of	Town Hall, 1 Main Street	Upton	MA	01568
Uxbridge, Town of	Town Hall, 21 South Main Street	Uxbridge	MA	01569
Webster, Town of	Town Hall, 350 Main Street	Webster	MA	01570
West Boylston, Town of	Town Hall, 140 Worcester Street	West Boylston	MA	01583

**Table 30: Map Repositories**

Community	Address	City	State	Zip Code
Westborough, Town of	Town Hall, 34 West Main Street	Westborough	MA	01581
Westminster, Town of	Town Hall, 11 South Street	Westminster	MA	01473
Worcester, City of	City Hall, 455 Main Street	Worcester	MA	01608

The National Flood Hazard Layer (NFHL) dataset is a compilation of effective FIRM databases and LOMCs. Together they create a GIS data layer for a State or Territory. The NFHL is updated as studies become effective and extracts are made available to the public monthly. NFHL data can be viewed or ordered from the website shown in Table 31.

Table 31 contains useful contact information regarding the FIS Report, the FIRM, and other relevant flood hazard and GIS data. In addition, information about the State NFIP Coordinator and GIS Coordinator is shown in this table. At the request of FEMA, each Governor has designated an agency of State or territorial government to coordinate that State's or territory's NFIP activities. These agencies often assist communities in developing and adopting necessary floodplain management measures. State GIS Coordinators are knowledgeable about the availability and location of State and local GIS data in their state.

**Table 31: Additional Information**

FEMA and the NFIP	
FEMA and FEMA Engineering Library website	<a href="http://www.fema.gov/national-flood-insurance-program-flood-hazard-mapping/engineering-library">www.fema.gov/national-flood-insurance-program-flood-hazard-mapping/engineering-library</a>
NFIP website	<a href="http://www.fema.gov/national-flood-insurance-program">www.fema.gov/national-flood-insurance-program</a>
NFHL Dataset	<a href="http://msc.fema.gov">msc.fema.gov</a>
Other Federal Agencies	
USGS website	<a href="http://www.usgs.gov">www.usgs.gov</a>
Hydraulic Engineering Center website	<a href="http://www.hec.usace.army.mil">www.hec.usace.army.mil</a>
State Agencies and Organizations	
State NFIP Coordinator	Joy Duperault Department of Conservation and Recreation 251 Causeway Street, 8 <sup>th</sup> floor Boston, Massachusetts 02114 (617) 626-1406 <a href="mailto:joy.duperault@state.ma.us">joy.duperault@state.ma.us</a>
State GIS Coordinator	Neil MacGaffey MassGIS Director 1 Ashburton Place, Room 819 Boston, Massachusetts 02108 (617) 626-4400 <a href="mailto:massgismail@mass.gov">massgismail@mass.gov</a>

## **SECTION 9.0 – BIBLIOGRAPHY AND REFERENCES**

Table 32 includes sources used in the preparation of and cited in this FIS Report as well as additional studies that have been conducted in the study area.



**Table 32: Bibliography and References**

Citation in this FIS	Publisher/ Issuer	Publication Title, "Article," Volume, Number, etc.	Author/Editor	Place of Publication	Publication Date/ Date of Issuance	Link
Bent 2006	Interagency Sedimentation Conference	<i>Equations for estimating bankfull channel geometry and discharge for streams in the northeastern United States</i>	G.C. Bent	Reno, NV	April 2-6, 2006	<a href="http://pubs.usgs.gov/misc_reports/FISC_1947-2006/pdf/1st-7thFISCs-CD/8thFISC/Poster_Bent_AbstractOnly.pdf">http://pubs.usgs.gov/misc_reports/FISC_1947-2006/pdf/1st-7thFISCs-CD/8thFISC/Poster_Bent_AbstractOnly.pdf</a>
Berger 1973	Berger Associates, Inc.	<i>Topographic Maps (scale 1:2,400, contour 5 ft)</i>		Columbus, OH	1973	
Bogart 1960	U.S. Geological Survey	<i>Water-Supply Paper 1420: Floods of August-October 1955, New England to North Carolina</i>	D.B. Bogart	Washington, D.C.	1960	
Chicago Aerial 1967	Chicago Aerial Survey	<i>Aerial Photography</i>		Des Plaines, IL	April 1967	
Chow 1967	McGraw-Hill	<i>Handbook of Applied Hydrology</i>	V.T. Chow	New York, NY	1967	
Cohn 1997	Water Resources Research	<i>An algorithm for computing moments-based flood quantile estimates when historical flood information is available</i>	T.A. Cohn, W.M. Lane, W.G. Baier		1997	
Cohn 2001	Water Resources Research	<i>Confidence intervals for expected moments algorithm flood quantile estimates</i>	T.A. Cohn, W.M. Lane, J.R. Stedinger		2001	
Cranston 1987	Cranston Print Works	<i>Lake and Waterway Record Sheet</i>	Cranston Print Works		1987	
Duszlak 1989	Department of Public Works	<i>Webster Lake High Water, 1953-1989</i>	S. Duszlak	Town of Webster	March 29, 1989	

**Table 32: Bibliography and References**

Citation in this FIS	Publisher/Issuer	Publication Title, "Article," Volume, Number, etc.	Author/Editor	Place of Publication	Publication Date/Date of Issuance	Link
FEMA 2011	Federal Emergency Management Agency	<i>2011 Federal Emergency Management Agency (FEMA) Topographic Lidar: Massachusetts and Rhode Island</i>		Washington, D.C.	September 2013	<a href="http://www.mass.gov/anf/research-and-tech/it-serv-and-support/application-serv/office-of-geographic-information-massgis/datalayers/lidar.html">http://www.mass.gov/anf/research-and-tech/it-serv-and-support/application-serv/office-of-geographic-information-massgis/datalayers/lidar.html</a>
FEMA 2014	Federal Emergency Management Agency	<i>Flood Insurance Study, Worcester County, Massachusetts</i>		Washington, D.C.	July 2014	<a href="https://msc.fema.gov">https://msc.fema.gov</a>
Griffis 2004	Water Resources Research	<i>Log Pearson Type 3 quantile estimators with regional skew information and low outlier adjustments</i>	V.W. Griffis, J.R. Stedinger, T.A. Cohn		2004	
IACWD 1982	U.S. Interagency Advisory Committee on Water Data	<i>Guidelines for determining flood-flow frequency: Bulletin 17B of the Hydrology Subcommittee, Office of Water Data Coordination</i>			1982	<a href="http://water.usgs.gov/osw/bulletin17b/dl_flow.pdf">http://water.usgs.gov/osw/bulletin17b/dl_flow.pdf</a>
IACWD 2018	U.S. Interagency Advisory Committee on Water Data	<i>Guidelines for determining flood-flow frequency: Bulletin 17C</i>	J.F. England, Jr., T.A. Cohn, B.A. Faber, J.R. Stedinger, W.O. Thomas, Jr., A.G. Veilleux, J.E. Kiang, R.R. Mason, Jr.	Reston, VA	2018	<a href="https://doi.org/10.3133/tm4B5">https://doi.org/10.3133/tm4B5</a>

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Johnson and Tasker 1974	U.S. Geological Survey	<i>Flood magnitude and frequency of Massachusetts streams</i>	Carl D. Johnson, Gary D. Tasker	Washington, D.C.	March 1974	
Krejmas and Wandle 1982	U.S. Geological Survey	<i>Drainage Divides, Massachusetts; Blackstone and Thames River Basins</i>	B.E. Krejmas and S.W. Wandle		1982	
Lockwood 1979	Lockwood Mapping, Inc.	<i>Topographic Maps (scale 1:4,800, contour 5 ft): Athol, Massachusetts; Hardwick, Massachusetts; Templeton, Massachusetts; Winchendon, Massachusetts</i>		Rochester, NY	1979	
MADEQ 1980	Commonwealth of Massachusetts, Department of Environmental Quality	<i>Engineering Analysis for Rehabilitation of Lake Ripple</i>		Auburn, MA	1980	
MADPW 1952	Commonwealth of Massachusetts, Department of Public Works	<i>Topographic Maps (scale 1:2,400, contour 5 ft)</i>			1952	
MADPW 1968	Commonwealth of Massachusetts, Department of Public Works	<i>Topographic Maps (scale 1:2,400, contour 5 ft): Fitchburg, Massachusetts; Leominster, Massachusetts; Lunenburg, Massachusetts; Sterling, Massachusetts; Westminster, Massachusetts</i>		Boston, MA	1968	

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MADPW 1972	Commonwealth of Massachusetts, Department of Public Works	<i>Improving Conditions in Counterpane Brook in Clinton, Massachusetts</i>			August 1972	
MAGS 1939	Commonwealth of Massachusetts, Geodetic Survey	<i>High-water data floods of March 1936 and September 1938</i>		Boston, MA	1939	
MassGIS 2008	Massachusetts Bureau of Geographic Information	<i>Orthoimagery</i>		Boston, MA	2008	
MassGIS 2014a	Massachusetts Bureau of Geographic Information	<i>Sandy LiDAR DEM 2014</i>		Boston, MA	February 19, 2015	<a href="https://www.mass.gov/orgs/massgis-bureau-of-geographic-information">https://www.mass.gov/orgs/massgis-bureau-of-geographic-information</a>
MassGIS 2015	Massachusetts Bureau of Geographic Information	<i>Trains</i>		Boston, MA	2015	<a href="https://docs.digital.mass.gov/dataset/massgis-data-trains">https://docs.digital.mass.gov/dataset/massgis-data-trains</a>
MassGIS 2017	Massachusetts Bureau of Geographic Information	<i>Community Boundaries from Survey Points</i>		Boston, MA	2017	<a href="https://docs.digital.mass.gov/dataset/massgis-data-community-boundaries-towns-survey-points">https://docs.digital.mass.gov/dataset/massgis-data-community-boundaries-towns-survey-points</a>
MassGIS undated	Massachusetts Bureau of Geographic Information	<i>Transportation features</i>		Boston, MA		

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Citation in this FIS	Publisher/Issuer	Publication Title, "Article," Volume, Number, etc.	Author/Editor	Place of Publication	Publication Date/Date of Issuance	Link
Moore 1975	Moore Survey and Mapping Corporation	<i>Topographic Maps (scale 1:1,200, contour 2 ft): Worcester, Massachusetts</i>		Shrewsbury, MA	1975	
Moore 1980	Moore Survey and Mapping Corporation	<i>Topographic Maps (scale 1:4,800, contour 5 ft): Ashburnham, Massachusetts; Hubbardston, Massachusetts; Phillipston, Massachusetts; Royalston, Massachusetts; Rutland, Massachusetts</i>		Shrewsbury, MA	1980	
PS 2010	Photo Science Geospatial Solutions	<i>Concord River Watershed LiDAR</i>			December 2010	
Quinn 1978a	Quinn and Associates, Inc.	<i>Aerial Photography</i>		Horsham, PA	November 1978	
Quinn 1978b	Quinn and Associates, Inc.	<i>Topographic Maps (scale 1:1,200, contour 5 ft)</i>		Horsham, PA	1978	
Quinn 1979	Quinn and Associates, Inc.	<i>Topographic Maps (scale 1:2,400, contour 5 ft)</i>		Horsham, PA	1979	
Sauer 1974	U.S. Geological Survey	<i>Water-Resources Investigations Report 77-39: An Approach to Estimating Flood Frequency for Urban Areas in Oklahoma</i>	V.B. Sauer	Washington, D.C.	July 1974	

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Citation in this FIS	Publisher/ Issuer	Publication Title, "Article," Volume, Number, etc.	Author/Editor	Place of Publication	Publication Date/ Date of Issuance	Link
Sauer et al. 1983	U.S. Geological Survey	<i>Water-Supply Paper 2207: Flood Characteristics of Urban Watersheds in the United States</i>	V.B. Sauer, W.O. Thomas, Jr., V.A. Stricker, and K.V. Wilson	Washington, D.C.	1983	
SCS 1965	U.S. Department of Agriculture, Soil Conservation Service	<i>TR-20: Computer Program, Project Formulation, Hydrology</i>		Washington, D.C.	1965	
SCS 1971	U.S. Department of Agriculture, Soil Conservation Service	<i>Soil Survey, Worcester County, Massachusetts</i>			September 1971	
SCS 1972	U.S. Department of Agriculture, Soil Conservation Service	<i>National Engineering Handbook, Section 4, Hydrology</i>		Washington, D.C.	August 1972	
SCS 1973	U.S. Department of Agriculture, Soil Conservation Service	<i>Flood Hazard Analyses, Upper Sudbury River, Massachusetts</i>		Amherst, MA	June 1973	
SCS 1975a	U.S. Department of Agriculture, Soil Conservation Service	<i>Flood Hazard Analyses, Upper Assabet River Tributaries, Massachusetts</i>		Amherst, MA	June 1975	
SCS 1975b	U.S. Department of Agriculture, Soil Conservation Service	<i>SWAMP Computer Program</i>		Amherst, MA	September 1975	

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SCS 1976	U.S. Department of Agriculture, Soil Conservation Service	<i>Technical Release 61: A Water Surface Profile Computer Program for Determining Flood Elevations and Flood Areas for Certain Flow Rates</i>		Washington, D.C.	1976	
SCS 1978	U.S. Department of Agriculture, Soil Conservation Service	<i>Flood Hazard Analyses, Upper Quaboag River, Worcester County, Massachusetts</i>		Amherst, MA	August 1978	
Sewall 1969	James W. Sewall Co.	<i>Aerial Photography</i>		Old Town, ME	December 1969	
Sewall 1985	James W. Sewall Co.	<i>Aerial Photography: Town of West Boylston, Massachusetts</i>		Old Town, ME	April 9, 1985	
Teledyne 1976	Teledyne Geotronics	<i>Aerial Photography and Topographic Mapping (scale 1:2,400, contour 4 ft): Berlin, Massachusetts; Bolton, Massachusetts; Shrewsbury, Massachusetts</i>			December 1976	
Teledyne 1977	Teledyne Geotronics	<i>Topographic Maps (scale 1:2,400, contour 4 ft)</i>			1977	
Thomson et al. 1964	U.S. Geological Survey	<i>Water-Supply Paper 1770-M: Historical Floods in New England</i>	M.T. Thomson, W.B. Gannon, M.P. Thomas, G.S. Hayes	Washington, D.C.	1964	

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Citation in this FIS	Publisher/Issuer	Publication Title, "Article," Volume, Number, etc.	Author/Editor	Place of Publication	Publication Date/Date of Issuance	Link
USACE 1964	U.S. Army Corps of Engineers	<i>Connecticut River Basin, Master Manual Water Control</i>		Waltham, MA	June 1964	
USACE 1966	U.S. Army Corps of Engineers	<i>Flood Plain Information, Assabet River</i>		Waltham, MA	June 1966	
USACE 1967	U.S. Army Corps of Engineers	<i>Thames River Basin, Connecticut, Massachusetts, Rhode Island, Master Manual of Reservoir Regulations</i>		Waltham, MA	June 1967	
USACE 1970	U.S. Army Corps of Engineers	<i>Connecticut River Basin, Comprehensive Water and Related Land Resources Investigation</i>		Waltham, MA	June 1970	
USACE 1972	U.S. Army Corps of Engineers	<i>Flood Plain Information, Quinebaug River, Cady Brook, Town of Southbridge, Massachusetts</i>		Waltham, MA	1972	
USACE 1973a	U.S. Army Corps of Engineers	<i>HEC-2 Water-Surface Profiles Computer Program</i>		Davis, CA	1973	
USACE 1973b	U.S. Army Corps of Engineers	<i>HEC-1 Flood Hydrograph Package, Users Manual</i>			January 1973	
USACE 1976a	U.S. Army Corps of Engineers	<i>Flood Plain Information, North Nashua River, Fitchburg and Leominster, Massachusetts</i>		Waltham, MA	April 1976	



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USACE 1976b	U.S. Army Corps of Engineers	<i>Merrimack River Basin, North Nashua River, Fitchburg and Leominster, Massachusetts, Hydrologic Analysis for Monoosnoc Brook Flood Control</i>		Waltham, MA	October 1976	
USACE 1976c	U.S. Army Corps of Engineers	<i>Charles River Watershed Natural Valley Storage Project, Design Memorandum Number 1</i>		Waltham, MA	May 1976	
USACE 2016	U.S. Army Corps of Engineers	<i>River Analysis System HEC-RAS User's Manual</i>		Davis, CA	2016	<a href="http://www.hec.usace.army.mil/software/hec-ras">http://www.hec.usace.army.mil/software/hec-ras</a>
USCB 2016	U.S. Census Bureau	<i>TIGER/Line Shapefile</i>		Washington, D.C.	2016	<a href="http://www2.census.gov/geo/tiger">http://www2.census.gov/geo/tiger</a>
USCB 2019	U.S. Census Bureau	<i>TIGER/Line Shapefile</i>		Washington, D.C.	2019	<a href="http://www2.census.gov/geo/tiger">http://www2.census.gov/geo/tiger</a>
USGS 1937	U.S. Geological Survey	<i>Water-Supply Paper 798: The Floods of March 1936, Part 1, New England Rivers</i>		Washington, D.C.	1937	
USGS 1955	U.S. Geological Survey	<i>Hydrologic Investigations Atlas HA 7: Average Annual Runoff and Precipitation in the New England-New York Area</i>	C.E. Knox, T.J. Nordenson	Washington, D.C.	1955	
USGS 1970	U.S. Geological Survey	<i>Flood of March 1968 on the Sudbury, Assabet, and Concord Rivers, Massachusetts</i>			1970	

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USGS 1979	U.S. Geological Survey	<i>Water Resources Data for Massachusetts and Rhode Island, Water Year 1978</i>		Boston, MA	1979	
USGS 2014a	U.S. Geological Survey	<i>Office of Surface Water Informational and Technical Note 2014.43: Weighting estimates of peak-flow-frequency statistics using the Expected Moments Algorithm for at-site flood-frequency estimation</i>			2014	
USGS 2014b	U.S. Geological Survey	<i>2013-2014 U.S. Geological Survey CMGP LiDAR: Post Sandy (MA, NH, RI)</i>		Reston, VA	June 15, 2015	<a href="http://www.mass.gov/anf/research-and-tech/it-serv-and-support/application-serv/office-of-geographic-information-massgis/datalayers/lidar.html">http://www.mass.gov/anf/research-and-tech/it-serv-and-support/application-serv/office-of-geographic-information-massgis/datalayers/lidar.html</a>
USGS 2018	U.S. Geological Survey	<i>NAIP 2018 MA</i>		Sioux Falls, SD	November 7, 2018	<a href="https://nracs.app.box.com/v/naip">https://nracs.app.box.com/v/naip</a>
USGS 2019	U.S. Geological Survey	<i>USGS Massachusetts Orthoimagery</i>		Reston, VA	October 8, 2019	
USGS various	U.S. Geological Survey	<i>7.5-Minute Series Topographic Quadrangle Maps (various scales, various contours)</i>			various	
USWB 1961	U.S. Department of Commerce, Weather Bureau	<i>Technical Paper No. 40: Rainfall Frequency Atlas of the United States</i>		Washington, D.C.	1961	

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Citation in this FIS	Publisher/ Issuer	Publication Title, "Article," Volume, Number, etc.	Author/Editor	Place of Publication	Publication Date/ Date of Issuance	Link
USWB 1964	U.S. Department of Commerce, Weather Bureau	<i>Technical Paper No. 49: 2- to 10-Day Precipitation for Return Periods of 2- to 100-Years in the Contiguous United States</i>		Washington, D.C.	1964	
Viessman et al. 1972	Intext Education Publishers	<i>Introduction to Hydrology</i>	W. Viessman, Jr., T.E. Harbaugh, J.W. Knapp	New York, NY	1972	
Wandle 1977	U.S. Geological Survey	<i>Water Resources Investigations 77-39: Estimating the Magnitude and Frequency of Floods on Natural Flow Streams in Massachusetts</i>	S. W. Wandle, Jr		1977	
Wandle 1983	U.S. Geological Survey	<i>Water Supply Paper 2214: Estimating Peak Discharges of Small, Rural Streams in Massachusetts</i>	S. W. Wandle, Jr	Washington, D.C.	1983	
Wood et al. 1970	U.S. Geological Survey	<i>Flood of March 1968 in Eastern Massachusetts and Rhode Island</i>	G.K. Wood, L.H. Swallow, C.G. Johnson, G.H. Searles	Washington, D.C.	1970	
Worcester 1996	City of Worcester Office of Planning and Community Development	<i>Topographic Maps (scale 1:6,000, contour 2 ft)</i>		Worcester, MA	December 30, 1996	

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Worcester Telegram 1968	Worcester Telegram			Worcester, MA	March 19, 1968	
WRC 1976	Water Resources Council	<i>Bulletin 17: Guidelines for Determining Flood Flow Frequency</i>		Washington, D.C.	March 1976	
WRC 1977	Water Resources Council	<i>Bulletin 17A: Guidelines for Determining Flood Flow Frequency</i>		Washington, D.C.	June 1977	
Zarriello 2017	U.S. Geological Survey	<i>Magnitude of flood flows for selected annual exceedance probabilities for streams in Massachusetts</i>	Phillip J. Zarriello	Reston, VA	2017	<a href="https://doi.org/10.3133/sir20165156">https://doi.org/10.3133/sir20165156</a>