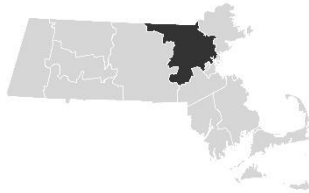


FLOOD INSURANCE STUDY

FEDERAL EMERGENCY MANAGEMENT AGENCY

VOLUME 8 OF 15



MIDDLESEX COUNTY, MASSACHUSETTS (ALL JURISDICTIONS)

COMMUNITY NAME	NUMBER	COMMUNITY NAME	NUMBER
ACTON, TOWN OF	250176	MARLBOROUGH, CITY OF	250203
ARLINGTON, TOWN OF	250177	MAYNARD, TOWN OF	250204
ASHBY, TOWN OF	250178	MEDFORD, CITY OF	250205
ASHLAND, TOWN OF	250179	MELROSE, CITY OF	250206
AYER, TOWN OF	250180	NATICK, TOWN OF	250207
BEDFORD, TOWN OF	255209	NEWTON, CITY OF	250208
BELMONT, TOWN OF	250182	NORTH READING, TOWN OF	250209
BILLERICA, TOWN OF	250183	PEPPERELL, TOWN OF	250210
BOXBOROUGH, TOWN OF	250184	READING, TOWN OF	250211
BURLINGTON, TOWN OF	250185	SHERBORN, TOWN OF	250212
CAMBRIDGE, CITY OF	250186	SHIRLEY, TOWN OF	250213
CARLISLE, TOWN OF	250187	SOMERVILLE, CITY OF	250214
CHELMSFORD, TOWN OF	250188	STONEHAM, TOWN OF	250215
CONCORD, TOWN OF	250189	STOW, TOWN OF	250216
DRACUT, TOWN OF	250190	SUDBURY, TOWN OF	250217
DUNSTABLE, TOWN OF	250191	TEWKSBURY, TOWN OF	250218
EVERETT, CITY OF	250192	TOWNSEND, TOWN OF	250219
FRAMINGHAM, CITY OF	250193	TYNGSBOROUGH, TOWN OF	250220
GROTON, TOWN OF	250194	WAKEFIELD, TOWN OF	250221
HOLLISTON, TOWN OF	250195	WALTHAM, CITY OF	250222
HOPKINTON, TOWN OF	250196	WATERTOWN, TOWN OF	250223
HUDSON, TOWN OF	250197	WAYLAND, TOWN OF	250224
LEXINGTON, TOWN OF	250198	WESTFORD, TOWN OF	250225
LINCOLN, TOWN OF	250199	WESTON, TOWN OF	250226
LITTLETON, TOWN OF	250200	WILMINGTON, TOWN OF	250227
LOWELL, CITY OF	250201	WINCHESTER, TOWN OF	250228
MALDEN, CITY OF	250202	WOBURN, CITY OF	250229

REVISED:

July 8, 2025

FLOOD INSURANCE STUDY NUMBER
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FEMA

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Published Separately

Flood Insurance Rate Map (FIRM)

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

Flooding Source	FIS Report Dated	Contractor	Number	Work Completed Date	Affected Communities
Pratts Brook	6/7/2014	STARR	EMP-2003-CO-2606	October 2012	Acton, Town of; Maynard, Town of
Pumpkin Brook	7/8/2025	USGS	HSFE01-14-X-0075	November 2019	Groton, Town of
Putnam Brook	6/7/2014	STARR	EMP-2003-CO-2606	October 2012	Chelmsford, Town of
Quarter Mile Pond	7/8/2025	USGS	HSFE01-14-X-0075	April 2018	Medford, City of; Stoneham, Town of
Reedy Meadow Brook	7/8/2025	USGS	HSFE01-14-X-0075	November 2019	Groton, Town of; Pepperell, Town of
Reedy Meadow Brook Tributary A	7/8/2025	USGS	HSFE01-14-X-0075	November 2019	Groton, Town of
Reedy Meadow swamp 1	7/8/2025	USGS	HSFE01-14-X-0075	November 2019	Groton, Town of
Reedy Meadow swamp 2	7/8/2025	USGS	HSFE01-14-X-0075	November 2019	Groton, Town of
Reedy Meadow swamp 3	7/8/2025	USGS	HSFE01-14-X-0075	November 2019	Groton, Town of
Richardson Brook	N/A (LOMR)	N/A	15-01-0572P	September 2015	Dracut, Town of
River Meadow Brook (lower)	2/15/1984	USACE	H-2-73	February 1984	Lowell, City of
River Meadow Brook (upper)	1/16/2004	Roald Haestad	EMB-1999-CO-0564	October 2001	Chelmsford, Town of
River Street ponding	7/8/2025	USGS	HSFE01-14-X-0075	November 2019	Dunstable, Town of
Robinson Brook	7/8/2025	USGS	HSFE01-14-X-0075	November 2019	Pepperell, Town of
Roosevelt Park ponding	7/8/2025	USGS	HSFE01-14-X-0075	April 2018	Malden, City of
Run Brook	12/1/1981	Howard, Needles, Tammen, and Bergendoff	H-4004	November 1979	Sudbury, Town of
Salmon Brook	1/5/1982	Schoenfeld Associates	H-4794	February 1980	Dunstable, 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
Salmon Brook Tributary A	7/8/2025	USGS	HSFE01-14-X-0075	June 2019	Dunstable, Town of
Salmon Brook Tributary B	7/8/2025	USGS	HSFE01-14-X-0075	June 2019	Dunstable, Town of
Salmon Brook Tributary C	7/8/2025	USGS	HSFE01-14-X-0075	June 2019	Dunstable, Town of
Salmon Brook Tributary D	7/8/2025	USGS	HSFE01-14-X-0075	June 2019	Dunstable, Town of; Groton, Town of
Salmon Brook Tributary E	7/8/2025	USGS	HSFE01-14-X-0075	June 2019	Dunstable, Town of
Salmon Brook Tributary F	7/8/2025	USGS	HSFE01-14-X-0075	June 2019	Groton, Town of; Tyngsborough, Town of
Salmon Brook Tributary G	7/8/2025	USGS	HSFE01-14-X-0075	June 2019	Tyngsborough, Town of
Sandy Brook	1/5/1984	Schoenfeld Associates	H-4794	March 1981	Burlington, Town of
Saugus River	7/8/2025	USGS	HSFE01-14-X-0075	June 2017	Wakefield, Town of
Saugus River Diversion	7/8/2025	USGS	HSFE01-14-X-0075	November 2019	Wakefield, Town of
Saunders Brook	1/2/1981	Anderson-Nichols & Co.	H-3707	December 1978	Tewksbury, Town of
Sawmill Brook 1 (approximate) (lower)	7/8/2025	USGS	HSFE01-14-X-0075	April 2018	Wilmington, Town of
Sawmill Brook 1 (approximate) (upper)	7/8/2025	USGS	HSFE01-14-X-0075	April 2018	Burlington, Town of
Sawmill Brook 1 (detailed)	1/5/1984	Schoenfeld Associates	H-4794	March 1981	Burlington, Town of
Sawmill Brook 2	6/3/1988	Schoenfeld Associates	EMW-C-0280	February 1984	Concord, Town of
Sawmill Brook 3	7/8/2025	USGS	HSFE01-14-X-0075	April 2018	Newton, City of
Sawmill Brook 3 Tributary B	7/8/2025	USGS	HSFE01-14-X-0075	April 2018	Newton, 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
Scarlet Brook	7/8/2025	USGS	HSFE01-14-X-0075	June 2019	Dracut, Town of; Lowell, City of; Tyngsborough, Town of
Schneider Brook	6/4/2010	ENSR	EMB-2001-CO-0670	June 2005	Woburn, City of
Seaverns Brook	7/8/2025	USGS	HSFE01-14-X-0075	April 2018	Weston, Town of
Seaverns Brook Tributary A	7/8/2025	USGS	HSFE01-14-X-0075	April 2018	Weston, Town of
Sewall Brook	7/8/2025	USGS	HSFE01-14-X-0075	April 2018	Sherborn, Town of
Shakers Glen Brook (approximate)	7/8/2025	USGS	HSFE01-14-X-0075	April 2018	Woburn, City of
Shakers Glen Brook (detailed)	6/4/2010	ENSR	EMB-2001-CO-0670	June 2005	Woburn, City of
Shawsheen River	7/6/2016	URS, STARR	HSFEHQ-06-D-0162, HSFEHQ-09-D-0370	April 2015	Bedford, Town of; Billerica, Town of; Lexington, Town of; Tewksbury, Town of; Wilmington, Town of
Shawsheen River Tributary E	7/8/2025	USGS	HSFE01-14-X-0075	June 2019	Billerica, Town of
Shawsheen River Tributary F	7/8/2025	USGS	HSFE01-14-X-0075	June 2019	Billerica, Town of; Burlington, Town of
Shawsheen River Tributary F1	7/8/2025	USGS	HSFE01-14-X-0075	June 2019	Billerica, Town of; Burlington, Town of
Shawsheen River Tributary G	7/8/2025	USGS	HSFE01-14-X-0075	June 2019	Bedford, Town of
Sherman Lane pond	7/8/2025	USGS	HSFE01-14-X-0075	June 2019	Bedford, 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
Shipley Hills swamp	7/8/2025	USGS	HSFE01-14-X-0075	November 2019	Pepperell, Town of
Shirley Street ponding	7/8/2025	USGS	HSFE01-14-X-0075	November 2019	Pepperell, Town of
Shute Brook	7/8/2025	USGS	HSFE01-14-X-0075	April 2018	Melrose, City of
Silver Lake Outlet	7/8/2025	USGS	HSFE01-14-X-0075	April 2018	Wilmington, Town of
Skug River	4/3/1989	USACE	IAA-H-10-77	May 1979	North Reading, Town of
Skug River Tributary A	7/8/2025	USGS	HSFE01-14-X-0075	April 2018	North Reading, Town of; Wilmington, Town of
Skug River Tributary B	7/8/2025	USGS	HSFE01-14-X-0075	April 2018	North Reading, Town of
Skug River Tributary C	7/8/2025	USGS	HSFE01-14-X-0075	April 2018	North Reading, Town of
Skug River Tributary C1	7/8/2025	USGS	HSFE01-14-X-0075	April 2018	North Reading, Town of
Skug River Tributary C2	7/8/2025	USGS	HSFE01-14-X-0075	April 2018	North Reading, Town of
Skug River Tributary C3	7/8/2025	USGS	HSFE01-14-X-0075	April 2018	North Reading, Town of
Skug River Tributary D	7/8/2025	USGS	HSFE01-14-X-0075	April 2018	North Reading, Town of
Smelt Brook 1	7/8/2025	USGS	HSFE01-14-X-0075	April 2018	Medford, City of; Stoneham, Town of
Snake Brook	2/19/1986	Howard, Needles, Tammen, and Bergendoff	H-4004	November 1979	Natick, Town of; Wayland, Town of
Snake Meadow Brook	7/8/2025	USGS	HSFE01-14-X-0075	June 2019	Groton, Town of; Westford, Town of
Snake Meadow Brook Tributary A	7/8/2025	USGS	HSFE01-14-X-0075	June 2019	Groton, Town of; Westford, 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
South Branch Souhegan River	7/8/2025	USGS	HSFE01-14-X-0075	June 2019	Ashby, Town of
South Branch Souhegan River Tributary B	7/8/2025	USGS	HSFE01-14-X-0075	June 2019	Ashby, Town of
South Branch Souhegan River Tributary B1	7/8/2025	USGS	HSFE01-14-X-0075	June 2019	Ashby, Town of
South Branch Souhegan River Tributary B2	7/8/2025	USGS	HSFE01-14-X-0075	June 2019	Ashby, Town of
South Meadow Brook	6/4/1990	Dewberry & Davis	unknown	July 1988	Newton, City of
South Row Road swamp	7/8/2025	USGS	HSFE01-14-X-0075	November 2019	Townsend, Town of
Spaulding Brook	7/8/2025	USGS	HSFE01-14-X-0075	June 2019	Westford, Town of
Spaulding Brook Tributary A	7/8/2025	USGS	HSFE01-14-X-0075	June 2019	Westford, Town of
Spencer Brook (lower)	6/3/1988	Schoenfeld Associates	EMW-C-0280	February 1984	Concord, Town of
Spencer Brook (upper)	6/7/2014	STARR	EMP-2003-CO-2606	October 2012	Carlisle, Town of; Concord, Town of
Spot Pond Brook	7/8/2025	USGS	HSFE01-14-X-0075	April 2018	Melrose, City of; Stoneham, Town of
Spring Brook	7/4/1988	C.E. Maguire, Inc.	H-4523	April 1979	Bedford, Town of
Spring Brook pond	7/8/2025	USGS	HSFE01-14-X-0075	June 2019	Bedford, Town of; Billerica, Town of
Spruce Swamp Brook	7/8/2025	USGS	HSFE01-14-X-0075	November 2019	Shirley, Town of
Spruce Swamp Brook pond	7/8/2025	USGS	HSFE01-14-X-0075	November 2019	Shirley, 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
Squannacook River	1/5/1982	Howard, Needles, Tammen, and Bergendoff	H-4004	January 1978	Groton, Town of; Shirley, Town of; Townsend, Town of
Squannacook River Tributary B	7/8/2025	USGS	HSFE01-14-X-0075	November 2019	Pepperell, Town of; Townsend, Town of
Squannacook River Tributary B1	7/8/2025	USGS	HSFE01-14-X-0075	November 2019	Pepperell, Town of; Townsend, Town of
Squannacook River Tributary C	7/8/2025	USGS	HSFE01-14-X-0075	November 2019	Townsend, Town of
Squannacook River Tributary D	7/8/2025	USGS	HSFE01-14-X-0075	November 2019	Townsend, Town of
Star House Lane swamp 1	7/8/2025	USGS	HSFE01-14-X-0075	November 2019	Groton, Town of
Star House Lane swamp 2	7/8/2025	USGS	HSFE01-14-X-0075	November 2019	Groton, Town of
Star House Lane swamp 3	7/8/2025	USGS	HSFE01-14-X-0075	November 2019	Groton, Town of
Stewart Brook	7/8/2025	USGS	HSFE01-14-X-0075	November 2019	Pepperell, Town of
Stewart Brook lower swamp	7/8/2025	USGS	HSFE01-14-X-0075	November 2019	Townsend, Town of
Stewart Brook upper swamp	7/8/2025	USGS	HSFE01-14-X-0075	November 2019	Townsend, Town of
Stony Brook	6/7/2014	STARR	EMP-2003-CO-2606	October 2012	Framingham, City of
Stony Brook 1 (approximate)	7/8/2025	USGS	HSFE01-14-X-0075	April 2018	Lincoln, Town of; Weston, Town of
Stony Brook 1 (detailed) (lower)	1/1/1980	C.E. Maguire, Inc.	H-4523	May 1978	Waltham, City of; Weston, Town of
Stony Brook 1 (detailed) (upper)	6/17/1986	Schoenfeld Associates	EMW-C-0280	March 1983	Lincoln, 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
Stony Brook 1 Tributary A	7/8/2025	USGS	HSFE01-14-X-0075	April 2018	Weston, Town of
Stony Brook 1 Tributary B	7/8/2025	USGS	HSFE01-14-X-0075	April 2018	Weston, Town of
Stony Brook 1 Tributary B1	7/8/2025	USGS	HSFE01-14-X-0075	April 2018	Weston, Town of
Stony Brook 1 Tributary C	7/8/2025	USGS	HSFE01-14-X-0075	April 2018	Lincoln, Town of; Weston, Town of
Stony Brook 1 Tributary D	7/8/2025	USGS	HSFE01-14-X-0075	April 2018	Lincoln, Town of; Weston, Town of
Stony Brook 1 Tributary E	7/8/2025	USGS	HSFE01-14-X-0075	April 2018	Lincoln, Town of
Stony Brook 1 Tributary F	7/8/2025	USGS	HSFE01-14-X-0075	April 2018	Lincoln, Town of
Stony Brook 1 Tributary F1	7/8/2025	USGS	HSFE01-14-X-0075	April 2018	Lincoln, Town of
Stony Brook 2 (detailed)	12/15/1982	Cullinan Engineering	H-4797	January 1981	Chelmsford, Town of; Westford, Town of
Stony Brook 2 (approximate)	7/8/2025	USGS	HSFE01-14-X-0075	June 2019	Chelmsford, Town of; Westford, Town of
Stony Brook 2 Tributary A	7/8/2025	USGS	HSFE01-14-X-0075	June 2019	Chelmsford, Town of
Stony Brook 2 Tributary B	7/8/2025	USGS	HSFE01-14-X-0075	June 2019	Groton, Town of; Westford, Town of
Stony Brook Pond	7/8/2025	USGS	HSFE01-14-X-0075	April 2018	Lincoln, Town of
Strawberry Meadow	7/8/2025	USGS	HSFE01-14-X-0075	April 2018	North Reading, Town of
Strawberry Meadow Tributary A	7/8/2025	USGS	HSFE01-14-X-0075	April 2018	North Reading, Town of
Strawberry Meadow Tributary B	7/8/2025	USGS	HSFE01-14-X-0075	April 2018	North Reading, Town of
Strawberry Meadow Tributary B1	7/8/2025	USGS	HSFE01-14-X-0075	April 2018	North Reading, 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
Strong Water Brook	1/2/1981	Anderson-Nichols & Co.	H-3707	December 1978	Tewksbury, Town of
Sucker Brook 1 Tributary A	7/8/2025	USGS	HSFE01-14-X-0075	November 2019	Pepperell, Town of
Sucker Brook 2	7/8/2025	USGS	HSFE01-14-X-0075	November 2019	Pepperell, Town of
Sucker Brook 2 Tributary A	7/8/2025	USGS	HSFE01-14-X-0075	November 2019	Pepperell, Town of
Sudbury River	6/7/2014	STARR	EMP-2003-CO-2606	October 2012	Ashland, Town of; Concord, Town of; Framingham, City of; Lincoln, Town of; Sudbury, Town of; Wayland, Town of
Sutton Brook (detailed)	1/2/1981	Anderson-Nichols & Co.	H-3707	December 1978	Tewksbury, Town of
Sutton Brook (approximate)	7/8/2025	USGS	HSFE01-14-X-0075	June 2019	Wilmington, Town of
Sutton Brook Tributary A	7/8/2025	USGS	HSFE01-14-X-0075	June 2019	Wilmington, Town of
Swains Pond	7/8/2025	USGS	HSFE01-14-X-0075	April 2018	Melrose, City of
Sweetwater Brook (approximate)	7/8/2025	USGS	HSFE01-14-X-0075	April 2018	Stoneham, Town of
Sweetwater Brook (detailed)	6/4/2010	ENSR	EMB-2001-CO-0670	June 2005	Stoneham, Town of; Woburn, City of
Tadmuck Brook (detailed)	12/15/1982	Cullinan Engineering	H-4797	January 1981	Westford, Town of
Tadmuck Brook (approximate)	7/8/2025	USGS	HSFE01-14-X-0075	June 2019	Westford, Town of
Tadmuck Swamp Brook	12/15/1982	Cullinan Engineering	H-4797	January 1981	Westford, Town of
Taylor Brook	12/1/1978	Harris-Toups Associates	H-4024	July 1977	Maynard, Town of
Trap Swamp Brook pond	7/8/2025	USGS	HSFE01-14-X-0075	November 2019	Shirley, 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
Trapfall Brook	7/8/2025	USGS	HSFE01-14-X-0075	November 2019	Ashby, Town of
Trapfall Brook Tributary A	7/8/2025	USGS	HSFE01-14-X-0075	November 2019	Ashby, Town of
Trapfall Brook Tributary B	7/8/2025	USGS	HSFE01-14-X-0075	November 2019	Ashby, Town of
Trapfall Brook Tributary C	7/8/2025	USGS	HSFE01-14-X-0075	November 2019	Ashby, Town of
Trapfall Brook Tributary D	7/8/2025	USGS	HSFE01-14-X-0075	November 2019	Ashby, Town of
Trapfall Brook Tributary E	7/8/2025	USGS	HSFE01-14-X-0075	November 2019	Ashby, Town of
Trapfall Brook Tributary F	7/8/2025	USGS	HSFE01-14-X-0075	November 2019	Ashby, Town of
Tributary 1 to Coles Brook	1/6/1988	Camp Dresser & McKee	EMW-84-C-1601	December 1976	Acton, Town of
Tributary 1 to Sudbury River	6/3/1988	Schoenfeld Associates	EMW-C-0280	February 1984	Concord, Town of
Tributary 2 to Assabet River	6/3/1988	Schoenfeld Associates	EMW-C-0280	February 1984	Concord, Town of
Tributary 2 to Tributary 1 to Coles Brook	1/6/1988	Camp Dresser & McKee	EMW-84-C-1601	December 1976	Acton, Town of
Tributary 3 to Bogle Brook 2 (approximate)	7/8/2025	USGS	HSFE01-14-X-0075	April 2018	Weston, Town of
Tributary 3 to Bogle Brook 2 (detailed)	1/1/1980	C.E. Maguire, Inc.	H-4523	May 1978	Weston, Town of
Tributary 4 to Bogle Brook 2	1/1/1980	C.E. Maguire, Inc.	H-4523	May 1978	Weston, Town of
Tributary A to Cold Brook	11/20/1998	Green International	EMW-94-C-4406	February 1996	Sudbury, Town of
Tributary A to Course Brook	6/7/2014	STARR	EMP-2003-CO-2606	October 2012	Sherborn, Town of
Tributary A to Dudley Brook	11/20/1998	Green International	EMW-94-C-4406	February 1996	Sudbury, 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
Tributary A to Hop Brook	11/20/1998	Green International	EMW-94-C-4406	February 1996	Sudbury, Town of
Tributary A to Ipswich River	7/8/2025	USGS	HSFE01-14-X-0075	April 2018	North Reading, Town of
Tributary A to Pantry Brook	11/20/1998	Green International	EMW-94-C-4406	February 1996	Sudbury, Town of
Tributary A to Squannacook River (detailed)	2/2/1982	Howard, Needles, Tammen, and Bergendoff	H-4004	January 1978	Townsend, Town of
Tributary A to Squannacook River (approximate)	7/8/2025	USGS	HSFE01-14-X-0075	November 2019	Townsend, Town of
Tributary A1 to Squannacook River	7/8/2025	USGS	HSFE01-14-X-0075	November 2019	Townsend, Town of
Tributary A1A to Squannacook River	7/8/2025	USGS	HSFE01-14-X-0075	November 2019	Townsend, Town of
Tributary A2 to Squannacook River	7/8/2025	USGS	HSFE01-14-X-0075	November 2019	Townsend, Town of
Tributary B to Hop Brook	11/20/1998	Green International	EMW-94-C-4406	February 1996	Sudbury, Town of
Tributary B to Squannacook River	2/2/1982	Howard, Needles, Tammen, and Bergendoff	H-4004	January 1978	Townsend, Town of
Tributary B to Vine Brook	1/5/1984	Schoenfeld Associates	H-4794	March 1981	Burlington, Town of
Tributary C to Vine Brook	1/5/1984	Schoenfeld Associates	H-4794	March 1981	Burlington, Town of
Tributary to Beaver Brook 3 (detailed)	6/5/1989	USACE	EMW-E-0941	July 1986	Dracut, 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
Tributary to Beaver Brook 3 (approximate)	7/8/2025	USGS	HSFE01-14-X-0075	June 2019	Dracut, Town of
Tributary to Cold Spring Brook	1/16/1981	Howard, Needles, Tammen, and Bergendoff	H-4004	November 1979	Ashland, Town of
Tributary to Indian Brook	6/7/2014	STARR	EMP-2003-CO-2606	October 2012	Hopkinton, Town of
Tributary to Martins Brook	1/18/1989	Dewberry & Davis	unknown	November 1986	Wilmington, Town of
Tributary to Mill Brook	7/4/1988	C.E. Maguire, Inc.	H-4523	April 1979	Bedford, Town of
Tributary to Nonacoicus Brook 1	1/19/1982	Howard, Needles, Tammen, and Bergendoff	H-4004	January 1978	Ayer, Town of
Tributary to Waushakum Pond	1/16/1981	Howard, Needles, Tammen, and Bergendoff	H-4004	November 1979	Ashland, Town of
Trout Brook	11/20/1998	Green International	EMW-94-C-4406	February 1996	Sudbury, Town of
Trout Brook 1	6/5/1989	USACE	EMW-E-0941	July 1986	Dracut, Town of
Trout Brook 1 Tributary A	7/8/2025	USGS	HSFE01-14-X-0075	June 2019	Dracut, Town of
Trout Brook 2	1/5/1983	Howard, Needles, Tammen, and Bergendoff	H-4004	January 1978	Shirley, Town of
Trull Brook (detailed)	1/2/1981	Anderson-Nichols & Co.	H-3707	December 1978	Tewksbury, Town of
Trull Brook (approximate)	7/8/2025	USGS	HSFE01-14-X-0075	June 2019	Tewksbury, 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
Trull Brook Tributary	2/15/1984	USACE	H-2-73	February 1984	Lowell, City of; Tewksbury, Town of
Trull Brook Tributary B	7/8/2025	USGS	HSFE01-14-X-0075	June 2019	Tewksbury, Town of
Tyler Road swamp	7/8/2025	USGS	HSFE01-14-X-0075	November 2019	Townsend, Town of
Unkety Brook (approximate) (lower)	7/8/2025	USGS	HSFE01-14-X-0075	November 2019	Dunstable, Town of; Pepperell, Town of
Unkety Brook (approximate) (upper)	7/8/2025	USGS	HSFE01-14-X-0075	November 2019	Groton, Town of
Unkety Brook (detailed)	1/5/1982	Howard, Needles, Tammen, and Bergendoff	H-4004	January 1978	Groton, Town of
Unkety Brook Tributary A	7/8/2025	USGS	HSFE01-14-X-0075	November 2019	Dunstable, Town of
Unkety Brook Tributary B	7/8/2025	USGS	HSFE01-14-X-0075	November 2019	Dunstable, Town of
Unkety Brook Tributary C	7/8/2025	USGS	HSFE01-14-X-0075	November 2019	Pepperell, Town of
Unkety Brook Tributary C1	7/8/2025	USGS	HSFE01-14-X-0075	November 2019	Pepperell, Town of
Unkety Brook Tributary D	7/8/2025	USGS	HSFE01-14-X-0075	November 2019	Dunstable, Town of; Groton, Town of
Unkety Brook Tributary E	7/8/2025	USGS	HSFE01-14-X-0075	November 2019	Dunstable, Town of; Groton, Town of
Unkety ponding	7/8/2025	USGS	HSFE01-14-X-0075	November 2019	Dunstable, Town of
Unnamed Tributary to Mill Brook 2	N/A (LOMR)	N/A	15-01-0902P	August 2015	Concord, Town of
Valley Pond	6/17/1986	Harris-Toups Associates	H-4024	May 1977	Lincoln, Town of
Varnum Brook	6/2/1993	Green International	EMW-89-C-2820	December 1989	Pepperell, 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
Vine Brook (detailed)	7/8/2025	USGS	HSFE01-14-X-0075	June 2019	Bedford, Town of; Burlington, Town of; Lexington, Town of
Vine Brook (approximate)	7/8/2025	USGS	HSFE01-14-X-0075	June 2019	Lexington, Town of
Vine Brook Tributary D	7/8/2025	USGS	HSFE01-14-X-0075	June 2019	Burlington, Town of
Vine Brook Tributary E	7/8/2025	USGS	HSFE01-14-X-0075	June 2019	Burlington, Town of; Lexington, Town of
Vine Brook Tributary F	7/8/2025	USGS	HSFE01-14-X-0075	June 2019	Lexington, Town of
Vine Brook Tributary G	7/8/2025	USGS	HSFE01-14-X-0075	June 2019	Lexington, Town of
Vinton Pond	7/8/2025	USGS	HSFE01-14-X-0075	November 2019	Townsend, Town of
Walker Brook 1	1/5/1983	Howard, Needles, Tammen, and Bergendoff	H-4004	January 1978	Shirley, Town of
Walker Brook 2	2/2/1982	Howard, Needles, Tammen, and Bergendoff	H-4004	January 1978	Townsend, Town of
Walker Brook 3	7/6/1981	Howard, Needles, Tammen, and Bergendoff	H-4004	November 1979	Marlborough, City of
Walkers Brook	1/2/1981	Anderson-Nichols & Co.	H-4524	August 1978	Reading, Town of
Warner Road swamp	7/8/2025	USGS	HSFE01-14-X-0075	November 2019	Townsend, Town of
Warren Road pond	7/8/2025	USGS	HSFE01-14-X-0075	November 2019	Townsend, Town of
Washington Street ponding	7/8/2025	USGS	HSFE01-14-X-0075	April 2018	Sherborn, 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
Wellington Brook	6/4/2010	ENSR	EMB-2001-CO-0670	June 2005	Belmont, Town of; Cambridge, City of
West Chester Brook	7/5/1984	C.E. Maguire, Inc.	H-4523	August 1983	Waltham, City of
Western Canal	7/8/2025	USGS	HSFE01-14-X-0075	June 2019	Lowell, City of
Whitehall Brook	1/5/1982	Howard, Needles, Tammen, and Bergendoff	H-4004	November 1979	Hopkinton, Town of
Whitney Road swamp 1	7/8/2025	USGS	HSFE01-14-X-0075	November 2019	Shirley, Town of
Whitney Road swamp 2	7/8/2025	USGS	HSFE01-14-X-0075	November 2019	Shirley, Town of
Whittemore Pond	7/8/2025	USGS	HSFE01-14-X-0075	April 2018	Woburn, City of
Willard Brook (detailed)	2/2/1982	Howard, Needles, Tammen, and Bergendoff	H-4004	January 1978	Townsend, Town of
Willard Brook (approximate)	7/8/2025	USGS	HSFE01-14-X-0075	November 2019	Ashby, Town of; Townsend, Town of
Willard Brook Tributary A	7/8/2025	USGS	HSFE01-14-X-0075	November 2019	Ashby, Town of
Willard Brook Tributary B	7/8/2025	USGS	HSFE01-14-X-0075	November 2019	Ashby, Town of
Willard Brook Tributary B1	7/8/2025	USGS	HSFE01-14-X-0075	November 2019	Ashby, Town of
Willard Brook Tributary C	7/8/2025	USGS	HSFE01-14-X-0075	November 2019	Ashby, Town of
Willard Brook Tributary C1	7/8/2025	USGS	HSFE01-14-X-0075	November 2019	Ashby, Town of
Willard Brook Tributary D	7/8/2025	USGS	HSFE01-14-X-0075	November 2019	Ashby, Town of
Willard Brook Tributary E	7/8/2025	USGS	HSFE01-14-X-0075	November 2019	Ashby, 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
Winter Pond	7/8/2025	USGS	HSFE01-14-X-0075	April 2018	Winchester, Town of
Winthrop Canal	N/A (LOMR)	N/A	13-01-2122P	September 2014	Holliston, Town of
Witch Brook (detailed)	2/2/1982	Howard, Needles, Tammen, and Bergendoff	H-4004	January 1978	Townsend, Town of
Witch Brook (approximate)	7/8/2025	USGS	HSFE01-14-X-0075	November 2019	Townsend, Town of
Witch Brook Tributary A	7/8/2025	USGS	HSFE01-14-X-0075	November 2019	Townsend, Town of
Wolf Brook	7/8/2025	USGS	HSFE01-14-X-0075	November 2019	Townsend, Town of
Wrangling Brook	7/8/2025	USGS	HSFE01-14-X-0075	November 2019	Groton, Town of
Wrights Pond	7/8/2025	USGS	HSFE01-14-X-0075	April 2018	Medford, City 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 . 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
Acton, Town of	07/07/2014	01/13/2011	Initial CCO	FEMA, state officials, community officials, and the study contractor
Arlington, Town of	07/08/2025	10/05/2021	Final CCO	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
		04/14/2015	Discovery	FEMA, Massachusetts Department of Conservation and Recreation, this community, and the study contractor
Ashby, Town of	06/04/2010	11/05/2007	Initial CCO	FEMA, Massachusetts Department of Conservation and Recreation, this community, ENSR International, Dewberry, and Green International
		11/01/2001	Final CCO	FEMA, Massachusetts Department of Conservation and Recreation, this community, ENSR International, and Dewberry
Ashland, Town of	07/08/2025	10/05/2021	Final CCO	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
		04/14/2015	Discovery	FEMA, Massachusetts Department of Conservation and Recreation, this community, and the study contractor
Ayer, Town of	07/08/2025	10/05/2021	Final CCO	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
		04/14/2015	Discovery	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
Bedford, Town of	07/08/2025	10/05/2021	Final CCO	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
		04/14/2015	Discovery	FEMA, Massachusetts Department of Conservation and Recreation, this community, and the study contractor
Belmont, Town of	07/08/2025	10/05/2021	Final CCO	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
		04/14/2015	Discovery	FEMA, Massachusetts Department of Conservation and Recreation, this community, and the study contractor
Billerica, Town of	07/08/2025	10/05/2021	Final CCO	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
		04/14/2015	Discovery	FEMA, Massachusetts Department of Conservation and Recreation, this community, and the study contractor
Boxborough, Town of	07/08/2025	10/05/2021	Final CCO	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
		04/14/2015	Discovery	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
Burlington, Town of	07/08/2025	10/05/2021	Final CCO	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
		04/14/2015	Discovery	FEMA, Massachusetts Department of Conservation and Recreation, this community, and the study contractor
Cambridge, City of	07/08/2025	10/05/2021	Final CCO	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
		04/14/2015	Discovery	FEMA, Massachusetts Department of Conservation and Recreation, this community, and the study contractor
Carlisle, Town of	07/07/2014	01/13/2011	Initial CCO	FEMA, state officials, community officials, and the study contractor
Chelmsford, Town of	07/08/2025	10/05/2021	Final CCO	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
		04/14/2015	Discovery	FEMA, Massachusetts Department of Conservation and Recreation, this community, and the study contractor
Concord, Town of	07/08/2025	10/05/2021	Final CCO	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
		04/14/2015	Discovery	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
Dracut, Town of	07/08/2025	10/05/2021	Final CCO	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
		04/14/2015	Discovery	FEMA, Massachusetts Department of Conservation and Recreation, this community, and the study contractor
Dunstable, Town of	07/08/2025	10/05/2021	Final CCO	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
		04/14/2015	Discovery	FEMA, Massachusetts Department of Conservation and Recreation, this community, and the study contractor
Everett, City of	07/08/2025	10/05/2021	Final CCO	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
		04/14/2015	Discovery	FEMA, Massachusetts Department of Conservation and Recreation, this community, and the study contractor
Framingham, City of	07/07/2014	01/13/2011	Initial CCO	FEMA, state officials, community officials, and the study contractor
Groton, Town of	07/08/2025	10/05/2021	Final CCO	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
		04/14/2015	Discovery	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
Holliston, Town of	07/08/2025	10/05/2021	Final CCO	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
		04/14/2015	Discovery	FEMA, Massachusetts Department of Conservation and Recreation, this community, and the study contractor
Hopkinton, Town of	07/08/2025	10/05/2021	Final CCO	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
		04/14/2015	Discovery	FEMA, Massachusetts Department of Conservation and Recreation, this community, and the study contractor
Hudson, Town of	07/07/2014	01/13/2011	Initial CCO	FEMA, state officials, community officials, and the study contractor
Lexington, Town of	07/08/2025	10/05/2021	Final CCO	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
		04/14/2015	Discovery	FEMA, Massachusetts Department of Conservation and Recreation, this community, and the study contractor
Lincoln, Town of	07/08/2025	10/05/2021	Final CCO	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
		04/14/2015	Discovery	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
Littleton, Town of	07/08/2025	10/05/2021	Final CCO	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
		04/14/2015	Discovery	FEMA, Massachusetts Department of Conservation and Recreation, this community, and the study contractor
Lowell, City of	07/08/2025	10/05/2021	Final CCO	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
		04/14/2015	Discovery	FEMA, Massachusetts Department of Conservation and Recreation, this community, and the study contractor
Malden, City of	07/08/2025	10/05/2021	Final CCO	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
		04/14/2015	Discovery	FEMA, Massachusetts Department of Conservation and Recreation, this community, and the study contractor
Marlborough, City of	07/07/2014	01/13/2011	Initial CCO	FEMA, state officials, community officials, and the study contractor
Maynard, Town of	07/07/2014	01/13/2011	Initial CCO	FEMA, state officials, community officials, and the study contractor
Medford, City of	07/08/2025	10/05/2021	Final CCO	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
		04/14/2015	Discovery	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
Melrose, City of	07/08/2025	10/05/2021	Final CCO	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
		04/14/2015	Discovery	FEMA, Massachusetts Department of Conservation and Recreation, this community, and the study contractor
Natick, Town of	07/08/2025	10/05/2021	Final CCO	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
		04/14/2015	Discovery	FEMA, Massachusetts Department of Conservation and Recreation, this community, and the study contractor
Newton, City of	07/08/2025	10/05/2021	Final CCO	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
		04/14/2015	Discovery	FEMA, Massachusetts Department of Conservation and Recreation, this community, and the study contractor
North Reading, Town of	07/08/2025	10/05/2021	Final CCO	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
		04/14/2015	Discovery	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
Pepperell, Town of	07/08/2025	10/05/2021	Final CCO	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
		04/14/2015	Discovery	FEMA, Massachusetts Department of Conservation and Recreation, this community, and the study contractor
Reading, Town of	07/08/2025	10/05/2021	Final CCO	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
		04/14/2015	Discovery	FEMA, Massachusetts Department of Conservation and Recreation, this community, and the study contractor
Sherborn, Town of	07/08/2025	10/05/2021	Final CCO	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
		04/14/2015	Discovery	FEMA, Massachusetts Department of Conservation and Recreation, this community, and the study contractor
Shirley, Town of	07/08/2025	10/05/2021	Final CCO	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
		04/14/2015	Discovery	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
Somerville, City of	07/08/2025	10/05/2021	Final CCO	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
		04/14/2015	Discovery	FEMA, Massachusetts Department of Conservation and Recreation, this community, and the study contractor
Stoneham, Town of	07/08/2025	10/05/2021	Final CCO	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
		04/14/2015	Discovery	FEMA, Massachusetts Department of Conservation and Recreation, this community, and the study contractor
Stow, Town of	07/07/2014	01/13/2011	Initial CCO	FEMA, state officials, community officials, and the study contractor
Sudbury, Town of	07/07/2014	01/13/2011	Initial CCO	FEMA, state officials, community officials, and the study contractor
Tewksbury, Town of	07/08/2025	10/05/2021	Final CCO	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
		04/14/2015	Discovery	FEMA, Massachusetts Department of Conservation and Recreation, this community, and the study contractor
Townsend, Town of	07/08/2025	10/05/2021	Final CCO	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
		04/14/2015	Discovery	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
Tyngsborough, Town of	07/08/2025	10/05/2021	Final CCO	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
		04/14/2015	Discovery	FEMA, Massachusetts Department of Conservation and Recreation, this community, and the study contractor
Wakefield, Town of	07/08/2025	10/05/2021	Final CCO	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
		04/14/2015	Discovery	FEMA, Massachusetts Department of Conservation and Recreation, this community, and the study contractor
Waltham, City of	07/08/2025	10/05/2021	Final CCO	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
		04/14/2015	Discovery	FEMA, Massachusetts Department of Conservation and Recreation, this community, and the study contractor
Watertown, Town of	07/08/2025	10/05/2021	Final CCO	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
		04/14/2015	Discovery	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
Wayland, Town of	07/08/2025	10/05/2021	Final CCO	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
		04/14/2015	Discovery	FEMA, Massachusetts Department of Conservation and Recreation, this community, and the study contractor
Westford, Town of	07/08/2025	10/05/2021	Final CCO	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
		04/14/2015	Discovery	FEMA, Massachusetts Department of Conservation and Recreation, this community, and the study contractor
Weston, Town of	07/08/2025	10/05/2021	Final CCO	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
		04/14/2015	Discovery	FEMA, Massachusetts Department of Conservation and Recreation, this community, and the study contractor
Wilmington, Town of	07/08/2025	10/05/2021	Final CCO	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
		04/14/2015	Discovery	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
Winchester, Town of	07/08/2025	10/05/2021	Final CCO	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
		04/14/2015	Discovery	FEMA, Massachusetts Department of Conservation and Recreation, this community, and the study contractor
Woburn, City of	07/08/2025	10/05/2021	Final CCO	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
		04/14/2015	Discovery	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.

Table is a list of the locations where FIRMs for Middlesex 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
Acton, Town of	Town Hall, 472 Main Street	Acton	MA	01720
Arlington, Town of	Town Hall, 730 Massachusetts Avenue	Arlington	MA	02476
Ashby, Town of	Town Hall, 895 Main Street	Ashby	MA	01431
Ashland, Town of	Town Hall, 101 Main Street	Ashland	MA	01721
Ayer, Town of	Town Hall, 1 Main Street	Ayer	MA	01432
Bedford, Town of	Town Hall, 10 Mudge Way	Bedford	MA	01730
Belmont, Town of	Town Hall, 455 Concord Avenue	Belmont	MA	02478
Billerica, Town of	Town Hall, 365 Boston Road	Billerica	MA	01821
Boxborough, Town of	Town Hall, 29 Middle Road	Boxborough	MA	01719
Burlington, Town of	Town Hall, 29 Center Street	Burlington	MA	01803
Cambridge, City of	City Hall, 795 Massachusetts Avenue	Cambridge	MA	02139
Carlisle, Town of	Town Hall, 66 Westford Street	Carlisle	MA	01741
Chelmsford, Town of	Town Hall, 50 Billerica Road	Chelmsford	MA	01824
Concord, Town of	Town House, 22 Monument Square	Concord	MA	01742
Dracut, Town of	Town Hall, 62 Arlington Street	Dracut	MA	01826
Dunstable, Town of	Town Hall, 511 Main Street	Dunstable	MA	01827
Everett, City of	City Hall, 484 Broadway	Everett	MA	02149
Framingham, City of	City Hall, 150 Concord Street	Framingham	MA	01702

Table 30: Map Repositories

Community	Address	City	State	Zip Code
Groton, Town of	Town Hall, 173 Main Street	Groton	MA	01450
Holliston, Town of	Town Hall, 703 Washington Street	Holliston	MA	01746
Hopkinton, Town of	Town Hall, 18 Main Street	Hopkinton	MA	01748
Hudson, Town of	Town Hall, 78 Main Street	Hudson	MA	01749
Lexington, Town of	Town Offices, 1625 Massachusetts Avenue	Lexington	MA	02420
Lincoln, Town of	Town Hall, 16 Lincoln Road	Lincoln	MA	01773
Littleton, Town of	Town Offices, 37 Shattuck Street	Littleton	MA	01460
Lowell, City of	City Hall, 375 Merrimack Street	Lowell	MA	01852
Malden, City of	City Hall, 200 Pleasant Street	Malden	MA	02148
Marlborough, City of	City Hall, 140 Main Street	Marlborough	MA	01752
Maynard, Town of	Town Hall, 195 Main Street	Maynard	MA	01754
Medford, City of	City Hall, 85 George P. Hassett Drive	Medford	MA	02155
Melrose, City of	City Hall, 562 Main Street	Melrose	MA	02176
Natick, Town of	Town Hall, 13 East Central Street	Natick	MA	01760
Newton, City of	City Hall, 1000 Commonwealth Avenue	Newton	MA	02459
North Reading, Town of	Town Hall, 235 North Street	North Reading	MA	01864
Pepperell, Town of	Town Hall, 1 Main Street	Pepperell	MA	01463
Reading, Town of	Town Hall, 16 Lowell Street	Reading	MA	01867
Sherborn, Town of	Town Hall, 19 Washington Street	Sherborn	MA	01770
Shirley, Town of	Town Hall, 7 Keady Way	Shirley	MA	01464
Somerville, City of	City Hall, 93 Highland Avenue	Somerville	MA	02143
Stoneham, Town of	Town Hall, 35 Central Street	Stoneham	MA	02180
Stow, Town of	Town Hall, 380 Great Road	Stow	MA	01775

Table 30: Map Repositories

Community	Address	City	State	Zip Code
Sudbury, Town of	Town Hall, 322 Concord Road	Sudbury	MA	01776
Tewksbury, Town of	Town Hall, 1009 Main Street	Tewksbury	MA	01876
Townsend, Town of	Town Hall, 272 Main Street	Townsend	MA	01469
Tyngsborough, Town of	Town Hall, 25 Bryant Lane	Tyngsborough	MA	01879
Wakefield, Town of	Town Hall, 1 Lafayette Street	Wakefield	MA	01880
Waltham, City of	City Hall, 610 Main Street	Waltham	MA	02452
Watertown, Town of	Town Hall, 149 Main Street	Watertown	MA	02472
Wayland, Town of	Town Hall, 41 Cochituate Road	Wayland	MA	01778
Westford, Town of	Town Hall, 55 Main Street	Westford	MA	01886
Weston, Town of	Town Hall, 11 Town House Road	Weston	MA	02493
Wilmington, Town of	Town Hall, 121 Glen Road	Wilmington	MA	01887
Winchester, Town of	Town Hall, 71 Mt. Vernon Street	Winchester	MA	01890
Woburn, City of	City Hall, 10 Common Street	Woburn	MA	01801

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 .

Table 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	www.fema.gov/national-flood-insurance-program-flood-hazard-mapping/engineering-library
NFIP website	www.fema.gov/national-flood-insurance-program

Table 31: Additional Information

NFHL Dataset	msc.fema.gov
Other Federal Agencies	
USGS website	www.usgs.gov
Hydraulic Engineering Center website	www.hec.usace.army.mil
State Agencies and Organizations	
State NFIP Coordinator	Joy Duperault Department of Conservation and Recreation 251 Causeway Street, 8 th floor Boston, Massachusetts 02114 (617) 626-1406 joy.duperault@state.ma.us
State GIS Coordinator	Neil MacGaffey MassGIS Director 1 Ashburton Place, Room 819 Boston, Massachusetts 02108 (617) 626-4400 massgismail@mass.gov

SECTION 9.0 – BIBLIOGRAPHY AND REFERENCES

Table 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
Arcement and Schneider 1989	U.S. Geological Survey	<i>Water-Supply Paper 2339: Guide for Selecting Manning's Roughness Coefficients for Natural Channels and Flood Plains</i>	G.J. Arcement, V.R. Schneider	Reston, VA	1989	
ASS 1970	U.S. Department of Agriculture, Agriculture Stabilization Service	<i>American Society of Civil Engineers Aerial Photography (scale 1:24,000)</i>			1970	
Avis 1977	Avis Air Map, Inc.	<i>Aerial Photography and Topographic Mapping (scale 1:2,400, contour 2 ft): Natick, Massachusetts</i>			December 1977	
Avis 1980	Avis Air Map, Inc.	<i>Topographic Maps (scale 1:4,800, contour 5 ft): Carlisle, Massachusetts</i>		Braintree, MA	December 1980	
Barnes 1967	U.S. Geological Survey	<i>Water-Supply Paper 1849: Roughness Characteristics of Natural Channels</i>	H.H. Barnes, Jr.	Washington, D.C.	1967	
Benson 1962	U.S. Geological Survey	<i>Water-Supply Paper 1580-B: Factors influencing the occurrence of floods in a humid region of diverse terrain</i>	M.A. Benson	Washington, D.C.	1962	
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	http://pubs.usgs.gov/misc_reports/FISC_1947-2006/pdf/1st-7thFISCs-CD/8thFISC/Poster_Bent_AbstractOnly.pdf

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
Berger 1977	Berger Associates	<i>Topographic Maps (scale 1:1,000, contour 2 ft): Newton, Massachusetts</i>		Columbus, OH	December 1977	
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	
CDM 1980	Camp Dresser & McKee	<i>MITCAT User's Manual</i>		Boston, MA	March 1980	
CDM 1981	Camp Dresser & McKee	<i>The Mystic River Comprehensive Hydrology Study, Final Report to the Metropolitan District Commission</i>		Boston, MA	September 1981	
CDM 1983	Camp Dresser & McKee	<i>FLOW2D User's Manual</i>		Boston, MA	March 1983	
CDM undated	Camp Dresser & McKee	<i>Topographic Maps, Town of Dracut, Massachusetts, Sewerage Works Improvements (scale 1:2,400, contour 5 ft)</i>			undated	
Chow 1959	McGraw-Hill	<i>Open-Channel Hydraulics</i>	Ven Te Chow	New York	1959	
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	

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
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	
Col-East 1976	Col-East, Inc.	<i>Aerial Photography (scale 1:7,992): Burlington, Massachusetts</i>		North Adams, MA	March 1976	
EFB 1976	Emmons, Fleming & Bienvenu Inc.	<i>Topographic Map of Chelmsford, Massachusetts (scale 1:1,200, contour 2 ft)</i>			April 14, 1976	
EPA 1971	U.S. Environmental Protection Agency	<i>Storm Water Management Model, Volume 1, Final Report</i>		Washington, D.C.	July 1971	
Fair and Geyer 1954	John Wiley & Sons Inc.	<i>Water Supply and Wastewater Disposal</i>	F.M. Fair, J.C. Geyer	New York	1954	
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	http://www.mass.gov/anf/research-and-tech/it-serv-and-support/application-serv/office-of-geographic-information-massgis/datalayers/lidar.html
Green 1971	Green Engineering Affiliates, Inc.	<i>Topographic Maps (scale 1:1,200, contour 2 ft)</i>			1971	

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
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	
Guimaraes and Bohman 1992	U.S. Geological Survey	<i>Water-Resources Investigation Report 91-4157: Techniques for estimating magnitude and frequency of floods in South Carolina, 1988</i>	W.B. Guimaraes, L.R. Bohman		1992	https://doi.org/10.3133/wri914157
Herschfield 1961	U.S. Department of Commerce, Weather Bureau	<i>TP-40: Rainfall Frequency Atlas of the United States</i>	D.M. Herschfield		1961	
Horton 1906	U.S. Geological Survey	<i>U.S. Geological Survey Report 150: Weir experiments, coefficients, and formulas</i>	R. Horton		1906	
IACWD 1982	Interagency Advisory Committee on Water Data	<i>Bulletin 17B of the Hydrology Subcommittee: Guidelines for determining flood-flow frequency</i>			March 1982	http://water.usgs.gov/osw/bulletin17b/dl_flow.pdf

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
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	https://doi.org/10.3133/tm4B5
Jennings et al. 1994	U.S. Geological Survey	<i>Water-Resources Investigations Report 94-4002: Nationwide Summary of U.S. Geological Survey Regional Regression Equations for Estimating Magnitude and Frequency of Floods for Ungaged Sites, 1993</i>	M.E. Jennings, W.O. Thomas Jr., H.C. Riggs	Reston, VA	1994	
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	
Johnstone and Cross 1949	Ronald Press Co.	<i>Elements of Applied Hydrology</i>	Don Johnstone and W.P. Cross	New York	1949	
L&C 1936	Proprietors of the Locks & Canals	<i>Contour Plan of Merrimack River from Pawtucket Dam to below Moody Street Bridge</i>		Lowell, MA	September 1936	

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
LIHI 2017	Low Impact Hydropower Institute	<i>LIHI Certificate #142: Lowell Project, Massachusetts (and attached files)</i>			2017	
Linsley and Franzini 1972	McGraw-Hill	<i>Water Resources Engineering</i>	R.K. Linsley, J.B. Franzini	New York	1972	
Lowell undated	City of Lowell	<i>Topographic and Sounding Information prepared for Sewer Interceptors (scale 1:480, contour 1 ft)</i>			undated	
MADNR 1973	Commonwealth of Massachusetts, Department of Natural Resources	<i>Topographic Maps (scale 1:2,400, contour 2 ft): Nashua River, Squannacook River</i>			1973	
MADNR 1976	Commonwealth of Massachusetts, Department of Natural Resources	<i>Topographic Maps (scale 1:2,400, contour 2 ft): Ayer, Massachusetts</i>			1976	
MADPW 1965	Commonwealth of Massachusetts, Department of Public Works	<i>Topographic Maps (scale 1:2,400, contour 5 ft): Groton, Massachusetts; Hopkinton, Massachusetts; Townsend, Massachusetts</i>			1965	
MAGS 1939	Commonwealth of Massachusetts, Geodetic Survey	<i>High-water data floods of March 1936 and September 1938</i>		Boston, MA	1939	

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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
Malone 1975	National Park Service	<i>Historic American Engineering Record No. MA-1: Lowell Canal System</i>	Patrick M. Malone	Washington, D.C.	1975	https://tile.loc.gov/storage-services/master/pnp/habshaer/ma/ma0500/ma0543/data/ma0543data.pdf
Marlborough undated	City of Marlborough, Public Works Department	<i>Aerial Photogrammetry of the City of Marlborough, Middlesex County, Massachusetts</i>		Marlborough, MA	undated	
MassGIS 2005	Massachusetts Bureau of Geographic Information	<i>Orthoimagery</i>		Boston, MA	2005	
MassGIS 2015	Massachusetts Bureau of Geographic Information	<i>Trains</i>		Boston, MA	2015	https://docs.digital.mass.gov/dataset/massgis-data-trains
MassGIS 2017	Massachusetts Bureau of Geographic Information	<i>Community Boundaries from Survey Points</i>		Boston, MA	2017	https://docs.digital.mass.gov/dataset/massgis-data-community-boundaries-towns-survey-points
Metcalf and Eddy 1978	Metcalf and Eddy, Inc.	<i>Report to the Town of Burlington, Massachusetts, on Stormwater Management, Phase 1</i>		Boston, MA	September 1978	
NE Air 1977	Northeast Air Photographers & Associates	<i>Aerial Photographs (scale 1:1,200, contour 2 ft): Weston, Massachusetts</i>			April 1977	

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NOAA 2015	U.S. Department of Commerce, National Oceanographic and Atmospheric Administration	<i>Atlas 14, Volume 10, Version 2.0: Precipitation-Frequency Atlas of the United States</i>		Silver Spring, MD	2015	http://hdsc.nws.noaa.gov/hdsc/pfds/pfds_map_content.html?bkmrk=ma (accessed March 2017)
NRCC undated	Northeast Regional Climate Center	<i>Extreme Precipitation in New York & New England</i>		Ithaca, NY	undated	http://precip.eas.cornell.edu
NRCS 2004	U.S. Department of Agriculture, Natural Resources Conservation Service	<i>National Engineering Handbook, Part 630, Hydrology, Chapter 10: Estimation of direct runoff from storm rainfall</i>		Washington, D.C.	2004	
NRCS 2010	U.S. Department of Agriculture, Natural Resources Conservation Service	<i>National Engineering Handbook, Part 630, Hydrology, Chapter 15: Time of concentration</i>		Washington, D.C.	2010	
Olson 2009	U.S. Geological Survey	<i>Scientific Investigations Report 2008-5206: Estimation of flood discharges at selected recurrence intervals for streams in New Hampshire</i>	S.A. Olson	Reston, VA	2009	
P&P 1952	unknown	<i>Plan and Profile of Merrimack River at Hunts Falls</i>			August 23, 1952	
PS 2010	Photo Science Geospatial Solutions	<i>Concord River Watershed LiDAR</i>			December 2010	

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Quinn 1978a	Quinn and Associates, Inc.	<i>Maps Developed from Aerial Photography (scale 1:14,400, contour 5 ft): Littleton, Massachusetts</i>		Horsham, PA	December 1978	
Quinn 1978b	Quinn and Associates, Inc.	<i>Aerial photographs (scale 1:2,400, contour 5 ft): Dunstable, Massachusetts</i>		Horsham, PA	December 1978	
RMS 1978	Resource Mapping Systems, Inc.	<i>Topographic Maps (scale 1:4,800, contour 2 ft): Malden, Massachusetts</i>		Wayland, MA	1978	
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 1972a	U.S. Department of Agriculture, Soil Conservation Service	<i>National Engineering Handbook, Section 4, Hydrology</i>		Washington, D.C.	August 1972	
SCS 1972b	U.S. Department of Agriculture, Soil Conservation Service	<i>Massachusetts Water Resources Study, Charles Study Area</i>		Amherst, MA	May 1972	

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SCS 1973a	U.S. Department of Agriculture, Soil Conservation Service	<i>TP 149: A method for estimating volume and rate of runoff in small watersheds</i>		Washington, D.C.	April 1973	
SCS 1973b	U.S. Department of Agriculture, Soil Conservation Service	<i>Flood Hazard Analyses, Upper Sudbury River, Massachusetts</i>		Amherst, MA	June 1973	
SCS 1974	U.S. Department of Agriculture, Soil Conservation Service	<i>Estimating Runoff, the Modified Soil Cover Complex Method</i>		Amherst, MA	1974	
SCS 1975	U.S. Department of Agriculture, Soil Conservation Service	<i>Flood Hazard Analyses, Elizabeth Brook, Stow, Massachusetts</i>		Amherst, MA	June 1975	
SCS 1976	U.S. Department of Agriculture, Soil Conservation Service	<i>TR-61: WSP-2 Computer Program</i>		Washington, D.C.	May 1976	
SCS 1986	U.S. Department of Agriculture, Soil Conservation Service	<i>TR-55: Urban Hydrology for Small Watersheds</i>		Washington, D.C.	1986	
Sewall 1972	James W. Sewall Co.	<i>Topographic Maps (scale 1:2,400, contour 2 ft): Lexington, Massachusetts</i>			1972	

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Sewall 1974	James W. Sewall Co.	<i>Topographic Maps of Reading (scale 1:4,800, contour 2 ft)</i>			1974	
Sewall 1976	James W. Sewall Co.	<i>Topographic Maps (scale 1:1,200, contour 2 ft): Bedford, Massachusetts; Concord, Massachusetts</i>		Old Town, ME	1976	
Sewall 1984a	James W. Sewall Co.	<i>Aerial Photographs (scale 1:12,000): Acton, Massachusetts</i>		Old Town, ME	April 1984	
Sewall 1984b	James W. Sewall Co.	<i>Topographic Maps (scale 1:4,800, contour 4 ft): Malden, Massachusetts</i>		Old Town, ME	1984	
Stamey and Hess 1993	U.S. Geological Survey	<i>Water-Resources Investigation Report 93-4016: Techniques for estimating magnitude and frequency of floods in rural basins of Georgia</i>	T.C. Stamey, G.W. Hess		1993	https://pubs.usgs.gov/wri/1993/4016/report.pdf
Teledyne 1976	Teledyne Geotronics	<i>Aerial Photography and Topographic Mapping (scale 1:2,400, contour 4 ft): Maynard, Massachusetts; Stow, Massachusetts</i>		Long Beach, CA	December 1976	

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Teledyne 1977	Teledyne Geotronics	<i>Topographic Maps (scale 1:2,400, contour 4 ft): Ayer, Massachusetts; Ashland, Massachusetts; Carlisle, Massachusetts; Framingham, Massachusetts; Groton, Massachusetts; Hopkinton, Massachusetts; Shirley, Massachusetts; Sudbury, Massachusetts; Townsend, Massachusetts; Wayland, Massachusetts</i>		Long Beach, CA	1977	
Teledyne 1979	Teledyne Geotronics	<i>Topographic Base Maps (scale 1:4,800, contour 5 ft)</i>		Long Beach, CA	April 1979	
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	
Townsend 1972	Town of Townsend	<i>Squannacook River, Flood of March 19, 1936, Plan and Profile</i>		Townsend, MA	1972	
URS 2007	URS Group, Inc.	<i>Final LIDAR Report, Shawsheen River, Middlesex/Essex Counties</i>			2007	
USACE 1937	U.S. Army Corps of Engineers	<i>File No. M54-12: Merrimack River Channel Improvements</i>			February 1937	

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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 1972	U.S. Army Corps of Engineers	<i>Southeastern New England Study of Water and Related Land Resources</i>		Waltham, MA	September 1972	
USACE 1975	U.S. Army Corps of Engineers	<i>Floodplain Information, Beaver Brook, Littleton, Massachusetts</i>		Waltham, MA	March 1975	
USACE 1981	U.S. Army Corps of Engineers	<i>HEC-1 Flood Hydrograph Package</i>		Davis, CA	September 1981	
USACE 1984	U.S. Army Corps of Engineers	<i>HEC-2 Water Surface Profiles, Generalized Computer Program</i>		Davis, CA	April 1984	
USACE 2002	U.S. Army Corps of Engineers	<i>HEC-RAS User's Manual (version 3.1)</i>		Davis, CA	November 2002	
USACE 2016	U.S. Army Corps of Engineers	<i>River Analysis System HEC-RAS User's Manual</i>		Davis, CA	2016	http://www.hec.usace.army.mil/software/hec-ras
USACE undated	U.S. Army Corps of Engineers	<i>Topographic Maps (scale 1:4,800, contour 5 ft): Dracut, Massachusetts; Lowell, Massachusetts</i>			undated	
USBR 1977	U.S. Bureau of Reclamation	<i>Design of Small Dams</i>		Washington, D.C.	1977	
USCB 2016	U.S. Census Bureau	<i>TIGER/Line Shapefile</i>			2016	
USCB 2019	U.S. Census Bureau	<i>TIGER/Line Shapefile</i>			2019	

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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 2011	U.S. Geological Survey	<i>2011 U.S. Geological Survey Topographic LiDAR: LiDAR for the North East</i>			August 2013	http://www.mass.gov/anf/research-and-tech/it-serv-and-support/application-serv/office-of-geographic-information-massgis/datalayers/lidar.html
USGS 2013	U.S. Geological Survey	<i>USGS High Resolution Orthoimagery for Boston, Massachusetts</i>		Sioux Falls, SD	2013	http://nationalmap.gov/viewer.html
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	6/15/2015	http://www.mass.gov/anf/research-and-tech/it-serv-and-support/application-serv/office-of-geographic-information-massgis/datalayers/lidar.html

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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 contour intervals)</i>			various	
USWB 1963	U.S. Department of Commerce, Weather Bureau	<i>Technical Release No. 40: Rainfall Frequency Atlas of the United States</i>			January 1963	
Viessman 1972	Intext International Publishers	<i>Introduction to Hydrology</i>	W. Viessman, Jr.	New York	1972	
Waltham 1976	City of Waltham	<i>Ward and Precinct Map of Waltham</i>	Edward F. Delaney (City Engineer)	Waltham, MA	1976	
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	

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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	
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	https://doi.org/10.3133/sir20165156