Essential Power Massachusetts, LLC

15 Agawam Ave
West Springfield, MA 01089
413-730-4721

January 11, 2017

VIA E-File

John Spain, P.E.
Regional Engineer
Federal Energy Regulatory Commission
Division of Dam Safety and Inspections
New York Regional Office
19th West 34th Street – Suite 400
New York, NY 10001

FERC Project No. 10675, 10676, 10677, 10678, and 2334
Release of Minimum Flows

Dear Mr. Spain:

Essential Power Massachusetts, LLC (EPMA) owns and operates the Dwight Project (FERC No. 10675), the Red Bridge Project (FERC No. 10676), the Putts Bridge Project (FERC No. 10677) and the Indian Orchard Project (FERC No. 10678) located on the Chicopee River in western Massachusetts. EPMA also owns and operates the Gardners Falls Project (FERC No. 2334) located on the Deerfield River in western Massachusetts. Passage of minimum flows in the river bypass reach is required at each project. On behalf of EPMA I am providing the annual report on minimum flow releases at the projects during 2016.

For the twelve months of the year 2016, EPMA met or exceeded the required flows at each project. Documentation of the release is available for review during the next operation and safety inspection. If you have any questions or require additional information regarding the release of minimum flows, please contact Kim Marsili at (413) 730-4721, email: kim.marsili@cogentrix.com

Sincerely,

Kim Marsili
General Manager,
Dwight Project
Red Bridge Project
Putts Bridge Project
Indian Orchard Project
Gardner Falls Project

cc: Tony Halcomb (Cogentrix)
John Collins (Cogentrix)

ENVIRONMENTAL INSPECTION REPORT
(ELECTRONICALLY SUBMITTED)
FEDERAL ENERGY REGULATORY COMMISSION
New York Regional Office

	Date of Inspection:	August 4, 2016	
Name	Gardners Falls	**Project No.**	2334
Licensee	Essential Power Massachusetts, LLC	**License Type**	Major
License Issued	April 4, 1997	**License Expires**	March 31, 2037
Location	Deerfield River **(Waterway)**		n/a **(Reservation)**
	Franklin **(County)**		Massachusetts **(State)**
Inspector	Ken Hodge/Nick Funk		

Licensee Representatives	Nicholas Hollister, Kim Marsili, and Alan Douglass (Essential Power Massachusetts, LLC)
Other Participants	N/A

Summary of Findings

This report covers conditions observed on the day of the inspection and the availability of recreational facilities, public safety signage and devices, and compliance with the environmental requirements for the Gardners Falls Hydroelectric Project.

Flow Information:

- Inflow – natural river flow
- Outflow (over dam) – natural river flow

Elevation Information:

- Project Impoundment – 332.5 feet mean sea level (msl)

Generation: Project shut down at time of inspection due to structural issues

A follow-up letter was issued on August 22, 2016 indicating that there were no

follow-up items requiring corrective action or noncompliance matters identified during the inspection.

Submitted August 18, 2016

Kenneth Hodge
Senior Civil Engineer
The Louis Berger Group

A. PROJECT PROFILE

The Gardners Falls Project was originally constructed in 1904 and included two units (Units 1 and 2). The project was expanded on the north side of the Unit 1 and 2 powerhouse in 1914 with the installation of Units 3 and 4. The final unit (Unit 5) was added on the south side of Units 1 and 2 in 1925. The project is located at river mile 15.8 between the Deerfield No. 3 (upstream) and Deerfield No. 2 (downstream) developments (FERC Project No. 2323), which are owned and operated by TransCanada Hydro Northeast, Inc. The project is located in western Massachusetts, just south of the town of Shelburne Falls. The shoreline of the project is mostly comprised of steep slopes and rocky terrain with timber and brush. The shoreline is free of development. The project occupies no federal land.

Project works consist of: (1) the 337-foot-long, 30-foot-high Gardners Falls dam; (2) a 3,200-foot-long project impoundment with a surface area of 21 acres, 190 acre-feet of gross storage, and 37.2 acre-feet of usable storage; (3) a brick and concrete powerhouse equipped with four turbine-generator units (Units 2, 3, 4, and 5) with a total capacity of 3.58 MW[1]; (4) a 1,300-foot-long, 31-feet-wide, 15-feet-deep power canal ; (5) a double circuit 13 kV transmission line; and (6) appurtenant facilities.

Essential Power Massachusetts, LLC operates the Gardners Falls Project in a limited pond-and-release mode, where flows to the project are regulated by releases from the upstream Deerfield No. 3 development.

The most recent project inspection was a dam safety inspection conducted in December 2014. The most recent environmental inspection was conducted on May 5, 2004. According to the May 2004 environmental inspection, the licensee was in compliance with all license requirements during that inspection.

[1] A fifth unit (Unit 1) is retired in place.

B. INSPECTION FINDINGS

Requirements	Date of Requirement	Follow-up Needed	Photo Nos.
FISH AND WILDLIFE RESOURCES			
Article 401: The licensee shall release from Gardners Falls Dams a minimum flow of 150 cfs, or inflow to the project reservoir, whichever is less, for the protection and enhancement of fish resources in the bypassed reach of the Deerfield River. During those periods when inflows to the project reservoir are less than 150 cfs, the licensee shall release available water from the project reservoir's daily storage capacity, not to exceed the 37.2 acre-feet available from a 1.8 – foot drawdown, as necessary to maintain a flow of 150 cfs into the bypassed reach. The minimum flow shall be comprised of the total flows over the dam and flows through the downstream fish passage facility. Flow may be temporarily modified if required by operating emergencies, and for short periods upon agreement between the licensee and the Massachusetts Division of Fish and Wildlife (MassDFW). Request of Rehearing filed 05/08/1997 Order on Rehearing issued 07/05/1997	**O:** 04-04-97	No	13
Article 402: Within 180 days from the date of issuance of the Commission's order on rehearing of this license, file a plan to augment minimum flows from project reservoir storage and to monitor the flows required in article 401. The monitoring plan shall include, but not be limited to: (1) a schedule for installing the monitoring equipment; (2) the proposed location, design, and calibration of the monitoring equipment; (3) the method of flow data collection; (4) methods of maintaining flow records; (5) a schedule for consulting with the appropriate federal and state agencies concerning the results of the monitoring; and (6) filing of the results of agency comments, and the licensee's response to agency comments, with the Commission Annual Report filed 04/10/2012	**O:** 04-04-97 **F:** 04-03-98 **AP:** 05-06-98	No	--

Requirements	Date of Requirement	Follow-up Needed	Photo Nos.
Article 403: Within 120 days of license, file detailed design drawings of the proposed downstream fish passage facilities together with a plan and schedule to construct and install the facilities. The plan shall include quantification of flows required to operate the proposed facility, an operation and maintenance schedule, measures to control erosion and sedimentation during project construction, and a construction schedule for installation of the fish passage facilities, with a target date that the facilities be operational within two years. The licensee shall operate the downstream fish passage facilities from April 1 – June 15; September 15 – November 15 each year. Licensee must consult with US Fish and Wildlife Service (FWS) and Mass DFW. Facility Design Drawings filed 08/24/1998 Plunge Pool Drawings filed 12/04/1998 As-Built Drawings filed 08/15/2002 Request to Suspend License Article filed 03/30/2016	**O:** 04-04-97 **F:** 08-08-97 **R:** 09-09-97 **AP:** 11-13-97 **R:** 04-03-98 **AP:** 05-06-98 **AP:** 01-22-99 **AP:** 11-01-02 **AP:** 05-16-16	No	--
Article 404: Within 1 year of license, file a plan to monitor the effectiveness of the permanent downstream fish passage facilities required by article 403 and associated operational flows at the facility to safely and efficiently pass Atlantic salmon smolts down the Deerfield River past the Gardners Falls Project. Plan shall include provisions for: (1) facility oversight and personnel commitments; and (2) back-up equipment and supplies that would be maintained to ensure efficient and consistent operation of the facilities. Licensee must consult with FWS and Mass DFW. Study Results and Request for 1 year Extension of Study filed 12/20/1999 Final Study Results filed 04/04/2001 Request to Suspend License Article filed 03/30/2016	**O:** 04-04-97 **F:** 04-10-98 **AP:** 05-06-98 **AP:** 03-06-00 **AP:** 06-15-01 **AP:** 05-16-16	No	--
Standard Article 8 requires the licensee to install and thereafter maintain gages and stream gaging stations for the purpose of determining the stage and flow of the stream or streams on which the project is located.	**O:** 04-04-97	No	--
Standard Article 11 requires the licensee to install fish passage and other wildlife facilities when requested by state and federal resource agencies.	**O:** 04-04-97	No	--

Requirements	Date of Requirement	Follow-up Needed	Photo Nos.
RECREATION RESOURCES			
Article 406: Within 1 year of license, file a recreation plan describing existing recreation facilities, evaluating whether the existing facilities are meeting public recreation needs, and proposing specific recreation improvements to address the need for new public recreation facilities and improvements at the project. The licensee shall prepare the recreation plan in consultation with National Park Service (NPS), FWS, Mass Dept of Environmental Management/Conservation and Recreation (DCR), and Mass DFW. Recreation plan filed pursuant to this article shall provide for implementing the recreational facilities and improvements described in the Gardners Falls Project recreation plan, filed 12-23-91, and supplemented on 12-11-92, including: (1) providing an impoundment boat launch; (2) improving the picnic area, the nature trail, and powerhouse access area; (3) improving the Wilcox Hollow Access Area by paving the access road entrance, improving the access road, expanding parking; and providing directional signs, trash barrels, restroom facilities, and a carry-in boat launch. Form 80 filed 03/24/2016	**O:** 04-04-97 **F:** 04-07-98 **AP:** 04-19-01 **R:** 06-05-01 **AP:** 10-19-01	No	5, 6, 8, 9, 12, 15, 16, 18, 19, 21, 22, 23
Article 407: Within 180 days of license issuance, file a recreational use erosion and sediment control plan. The plan shall include: (1) designing and implementing appropriate erosion and sediment control measures and measures for revegetation for land-clearance and ground-disturbances associated with improvement and construction of any new recreational facilities; and (2) regularly-scheduled monitoring and maintenance for all recreational use areas at the project. The licensee shall prepare the recreation plan in consultation with NPS, FWS, Mass DCR.	**O:** 04-04-97 **F:** 04-07-98 **AP:** 08-04-98	No	--
Standard Article 13 requires the licensee to allow public free access to project waters and adjacent lands.	**O:** 04-04-97	No	--
CULTURAL RESOURCES			
Article 408: The licensee shall implement the Programmatic Agreement (PA) among the Commission, the Advisory Council on Historic Preservation, and the Mass SHPO, for managing historic properties that may be affected by the continued operation of the Project. In the event that the PA is terminated, the licensee shall implement the provisions of its approved cultural resources management plan. Annual Report filed 02/29/2012 Letter Requesting Amendment to CRMP filed: 06/04/2012	**O:** 04-04-97 **F:** 06-04-98 **AP:** 11-18-98 **AP:** 01-07-13	No	17

Requirements	Date of Requirement	Follow-up Needed	Photo Nos.
PUBLIC SAFETY			
Facilities and measures to ensure public safety (18 CFR, Part 12). Public Safety Plan	**O:** 04-04-97 **F:** 03-10-03	No	1, 2, 4, 10, 11, 14, 20, 24, 25
OTHER ENVIRONMENTAL RESOURCES			
Standard Article 19 requires the licensee to take reasonable measures to control sedimentation and other pollution at the project.	**O:** 04-04-97	No	24, 25
Standard Article 20 requires the licensee to clear and keep clear to an adequate width lands along open conduits and shall dispose of all temporary structures, unused timber, brush, refuse, or other material unnecessary for the purposes of the project which results from the clearing of lands or from the maintenance or alteration of the project works.	**O:** 04-04-97	No	--

O: Ordered; **18 CFR:** Title 18 Code of Federal Regulations; **AP:** Approved; **F:** Filed; **R:** Revised

*Form L-3 Terms and Conditions of License for Constructed Major Project Affecting Navigable Waters of the United States, October 1975.

C. COMMENTS AND FOLLOW-UP ACTION

Based on file reviews, discussions, and field observations made during the inspection, no follow-up or noncompliance matters were identified. The following comments and observations are included:

(1) Fish and Wildlife Resources: Article 401 requires the licensee to release a minimum flow of 150 cfs, or inflow to the project reservoir, whichever is less, from Gardners Falls Dam for the protection and enhancement of fish resources in the bypassed reach of the Deerfield River. During those periods when inflows to the project reservoir are less than 150 cfs, the licensee is required to release available water from the project reservoir's daily storage capacity, not to exceed the 37.2 acre-feet available from a 1.8-foot drawdown, as necessary to maintain a flow of 150 cfs, or inflow, if less, into the bypassed reach. The minimum flow is comprised of the total flow over the dam and flows through the downstream fish passage facility. During the inspection, the project was shut down due to structural issues related to the powerhouse intakes and foundation. The licensee noted that the minimum flow gate was wide open to pass all flow downstream. Any leakage into the power canal from the canal intake structure was returning through the canal drain gate located approximately halfway down the canal. Since the project was shut down, project flow data was not available. A visual inspection confirmed that, with the exception of some leakage into the power canal through the canal intake structure, all of the inflow to the project was being passed through the gate structure and over the dam crest at the time of the inspection. The licensee appears to be

in compliance with all requirements of this Article.

Article 402 required the licensee to file a plan to augment minimum flows from the project reservoir storage and to monitor the flows required by Article 401. The monitoring plan included a requirement for installing monitoring equipment and consultation with appropriate federal and state agencies. Due to project shut down at the time of inspection, flow data was not available, but essentially all inflow was being passed to the bypass reach. The licensee noted that this data is available when the project is in normal operation. The licensee appears to be in compliance with all requirements of this article.

Article 403 required the licensee to file detailed design drawings of the proposed downstream fish passage facilities together with a plan and schedule to construct and install the facilities. The licensee was required to operate the downstream fish passage facilities from April 1 – June 15 and September 15 – November 15 each year. On March 30, 2016, the licensee filed a request to suspend the license Article. On May 16, 2016, the Commission issued an order approving the suspension of Article 403. The order requires the facilities to be retained in case fisheries management objectives change in the future.

Article 404 required the licensee to file a plan to monitor the effectiveness of the permanent downstream fish passage facilities required by Article 403 and associated operational flows at the facility to safely and efficiently pass Atlantic salmon smolts down the Deerfield River past the project dam. On March 30, 2016, the licensee filed a request to suspend the license article. On May 16, 2016, the Commission issued an order approving the suspension of Article 404.

(2) Recreation Resources: Article 406 required the licensee to file a recreation plan describing existing facilities and evaluating whether the existing facilities are meeting public recreation needs. The licensee was ordered to prepare the recreation plan in coordination with NPS, FWS, Mass DEM, and Mass DFW. The plan was required to incorporate recreational facility items from a project recreation plan filed on December 23, 1991. This December 1991 plan included provisions for: (1) an impoundment boat launch; (2) improving the picnic area, nature trail, and powerhouse access area near the powerhouse along Gardners Falls Road; and (3) improving the Wilcox Hollow Access Area, located along Route 2 east of the project, by paving the access road entrance, improving the access road, expanding parking, and providing a carry-in boat launch area.

During the inspection, walking tours were conducted of all recreational sites. The nature trail was well-maintained with improvements to the trail and footbridges evident. Signage boards along the nature trail were empty of recreational information. The licensee noted that when information was posted, it was usually defaced. The picnic area near the Shelburne Waste Water Treatment Plant was well maintained. The licensee noted that the grill at the site had been stolen. Shoreline access below the picnic area was accessed by a staircase and footbridge. Both were well-maintained. The licensee noted that the impoundment boat launch receives little use. The Wilcox Hollow Access Area, including the access road, parking area, carry-in boat launch area, and all required signage was in good condition and well-maintained. The boat launch area and associated access road were free of roadside vegetation. During the inspection, two kayakers had just returned from boating on the river and had loaded their kayaks at the carry-in area. The licensee noted that local residents are the primary users of the recreational facilities. The licensee appears to be in compliance with all requirements of this Article.

(3) Cultural Resources: Article 408 requires the licensee to implement the "Programmatic Agreement Among the Federal Energy Regulatory Commission, the Advisory Council on Historic Preservation and the Massachusetts State Historic Preservation Officer" executed on September 4, 1996. The Programmatic Agreement required the licensee to develop and implement a Cultural Resources Management Plan (CRMP) for the project. The CRMP was filed on June 4, 1998, and was accepted by the Commission on November 18, 1998. The CRMP originally required the licensee to file an annual report of activities conducted under the CRMP. The most recent report was filed on February 29, 2012.

The original CRMP noted two potentially eligible archaeological sites located on the Gardners Falls impoundment, potential historic stone foundation and a potential prehistoric rock shelter (cave). On August 28, 2011, a historic flood caused by Tropical Storm Irene devastated the area near the rock shelter. On February 10, 2012, the licensee conducted the annual visual site inspection of the two cultural sites. The stone foundation was found intact, but due to the historic flooding, the licensee was unable to find any sign of the rock shelter.

On June 4, 2012 the licensee filed a letter requesting that the CRMP be revised to no longer include an annual inspection of the rock shelter. On January 7, 2013 the Commission issued an order amending the approved CRMP to remove the requirements to monitor and report on the rock shelter.

During the inspection, the stone foundation was found to be intact and in a stable condition. It is not clear if the licensee is required to continue to monitor the stone foundation. No project operation or maintenance activities have been conducted in the

area of the foundation and the site was not affected by the recent flooding. The licensee appears to be in compliance with all requirements of this article.

(4) Public Safety: The licensee filed a revised public safety plan on March 10, 2003. Based on the site visit, appropriate fencing is maintained around the project. The boat barrier upstream of the dam was in place. All of the signage noted in the Public Safety Plan was in place and well-maintained.

(5) Other Environmental Resources: The interior of the powerhouse had proper spill prevention and containment materials on site and in place for oil and other liquid waste spills and disposal. No spills or oil sheens were observed in the powerhouse or in project waters.

D. EXHIBITS AND PHOTOGRAPHS

The following are provided to show the location of the project and to illustrate project features: project location map, photo location maps, and 25 photographs.

Project location map for the Gardners Falls Hydroelectric Project (FERC No. 2334).

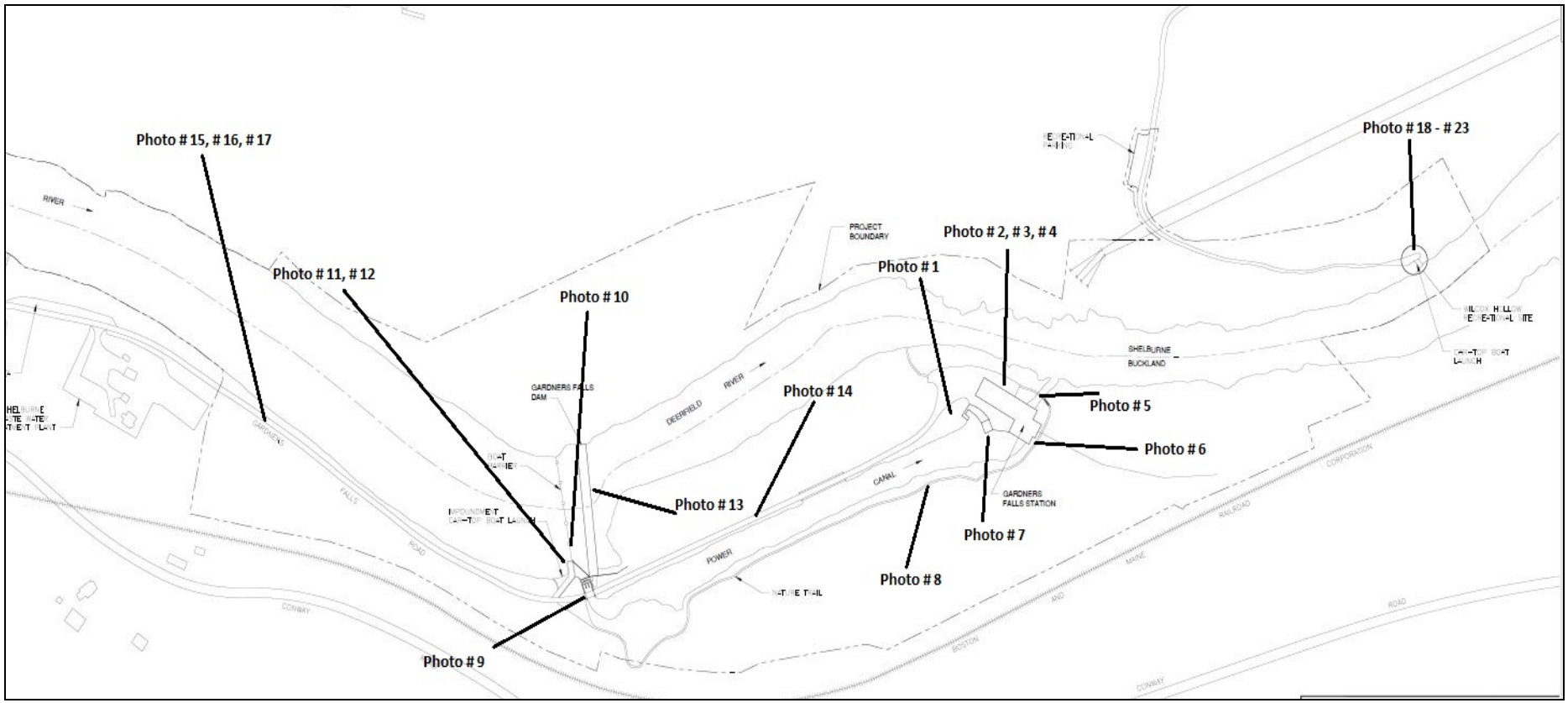

Photo location map for the Gardners Falls Hydroelectric Project (FERC No. 2334).

Photo 1: Public safety signage at Gardners Falls Project (signs located throughout project area).

Photo 2: Project switchyard with warning signs and fencing (project was shut down at time of inspection). Note: most of the equipment shown is no longer in service as it has been replaced by equipment now located inside the powerhouse, and will likely be

removed in the future. The interconnection with the electric grid is located on the structure at the right in the photo. Once the unneeded equipment is removed, the licensee plans to reduce the amount of area within the fencing as appropriate to provide public safety for any remaining electrical equipment and electrical interconnections.

Photo 3: Deerfield River downstream of the powerhouse (photo taken from switchyard).

Photo 4: Public safety signage on outside of switchyard fencing.

Photo 5: Public access footbridge crossing the Unit 3 and 4 tailrace structures downstream of the powerhouse (photo taken from recreational nature trail).

Photo 6: Project nature trail with required fencing.

Photo 7: View of powerhouse looking toward downstream end of power canal (dewatered in the foreground) (photo taken from nature trail).

Photo 8: Nature trail public signage (located along nature trail).

Photo 9: Entrance to wooded part of nature trail (photo taken at the upstream end of the power canal).

Photo 10: Boat barrier in place in project impoundment.

Photo 11: Warning signage at north dam abutment (photo taken adjacent to impoundment boat launch area).

Photo 12: Boat launch area at project impoundment.

Photo 13: River flow over dam and through existing fish passage facilities (photo taken looking upstream from Gardners Falls Road).

Photo 14: Public safety guardrail along power canal (dewatered on right) on Gardners Falls Road (photo taken looking towards powerhouse).

Photo 15: Project public picnic area near the Shelburne Falls Waste Water Treatment Plant (2nd picnic table not shown).

Photo 16: Public picnic area river access stairs (photo taken looking down stairs towards footbridge).

Photo 17: Potentially historic stone foundation.

Photo 18: Wilcox Hollow Recreational Area lead-in sign.

Photo 19: Required public (part 8) signage at the Wilcox Hollow Recreational Area parking area.

Photo 20: Public safety signage at the Hollow Recreational Area parking area along the access road.

Photo 21: Parking area along the access road at the Wilcox Hollow Recreational Area.

Photo 22: Turn-around and parking area at the Wilcox Hollow Recreational Area carry-in boat launch area.

Photo 23: Carry-in boat launch area at Wilcox Hollow Recreational Area (looking downstream).

Photo 24: Oil spill response kit located inside of powerhouse (numerous kits located throughout powerhouse building).

Photo 25: Secondary containment measures inside project powerhouse.

Commonwealth of Massachusetts
Executive Office of Energy & Environmental Affairs

Department of Environmental Protection

Central Regional Office • 8 New Bond Street, Worcester MA 01606 • 508-792-7650

Charles D. Baker
Governor

Karyn E. Polito
Lieutenant Governor

Matthew A. Beaton
Secretary

Martin Suuberg
Commissioner

William P. Short III
P.O. Box 237173
New York, New York 10023-7173

April 25, 2017

Subject: LIHI Request regarding Gardner Falls Project FERC #2334

Dear Mr. Short,

In response to your inquiry about the water quality of the Deerfield River in the vicinity of the Gardners Falls Project, the MA Department of Environmental Protection provides the following assessment.

1. The Upper Impoundment, Bypass Reach and River Below Tailrace at the Gardners Falls Project are not part of a Water Quality Limited area.
2. The Gardners Falls Project does not contribute to a limitation of designated uses of the Deerfield River in the Upper Impoundment, Bypass Reach and River Below Tailrace.
3. The Water Quality Certificate issued for the Gardners Falls Project December 14, 1994 is still in effect and appropriate for the Upper Impoundment, Bypass Reach and River Below Tailrace.

If I can be of further assistance, please contact me at 508-767-2854 or robert.kubit@state.ma.us.

Sincerely,

Robert Kubit, P.E.

Massachusetts Year 2014 Integrated List of Waters

Final Listing of the Condition of Massachusetts' Waters Pursuant to Sections 305(b), 314 and 303(d) of the Clean Water Act

CN 450.1

Commonwealth of Massachusetts
Executive Office of Energy and Environmental Affairs
Matthew A. Beaton, Secretary
Massachusetts Department of Environmental Protection
Martin Suuberg, Commissioner
Bureau of Water Resources
Douglas E. Fine, Assistant Commissioner

NOTICE OF AVAILABILITY

This report is available via the Massachusetts Department of Environmental Protection's (MassDEP) website: http://www.mass.gov/eea/agencies/massdep/water/watersheds/total-maximum-daily-loads-tmdls.html

DISCLAIMER

References to trade names, commercial products, manufacturers, or distributors in this report constituted neither endorsement nor recommendations by the Division of Watershed Management for use.

Cover photo: West Branch Westfield River, Middlefield, MA by Matt Reardon

Massachusetts Year 2014 Integrated List of Waters

Final Listing of the Condition of Massachusetts' Waters Pursuant to Sections 305(b), 314 and 303(d) of the Clean Water Act

Prepared by:

Massachusetts Division of Watershed Management
Watershed Planning Program

CN: 450.1

December, 2015

Massachusetts Department of Environmental Protection
Division of Watershed Management
Watershed Planning Program
8 New Bond Street
Worcester, Massachusetts 01606

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EXECUTIVE SUMMARY

The *Final Massachusetts Year 2014 Integrated List of Waters* (Integrated List) is submitted to the U.S. Environmental Protection Agency (EPA) in fulfillment of reporting requirements of sections 305(b), 303(d) and 314 of the Clean Water Act (CWA). Section 305(b) of the CWA codifies the process whereby waters are evaluated with respect to their attainment of designated uses such as habitat for fish, other aquatic life and wildlife, fish and shellfish consumption, and primary (e.g., swimming) and secondary (e.g., boating) contact-recreation. Under Section 314 states are requested to report on the trophic status of their lakes and ponds. Finally, Section 303(d) of the CWA requires states to identify those waterbodies that are not expected to meet surface water quality standards after the implementation of technology-based controls and to prioritize and schedule them for the derivation of total maximum daily loads (TMDLs).

In 2012 the Massachusetts Department of Environmental Protection (MassDEP) published the *Massachusetts Consolidated Assessment and Listing Methodology (CALM) Guidance Manual.* This manual contains a brief summary of the Massachusetts Surface Water Quality Standards (SWQS) that define the goals for water quality in the Commonwealth (MassDEP 2006), the requirements for assessing the quality of data to be used for CWA reporting, and the methods of reviewing water quality data and information used by the MassDEP's Division of Watershed Management (DWM) to make use assessment decisions for reporting in accordance with the CWA. The CALM manual, as well as the individual watershed assessment reports that formed the basis for the listing decisions in this report, can be found at http://www.mass.gov/eea/agencies/massdep/water/watersheds/water-quality-assessments.html.

MassDEP stores its assessment and listing decisions in the "Assessment Database" (ADB), the EPA's preferred database application for tracking water quality assessment data, including use attainment, and causes and sources of impairment. The ADB was designed to improve the quality and consistency of water quality reporting, improve water quality data analysis, and reduce the burden of preparing reports under sections 305(b), 303(d), 314 and 319 of the Clean Water Act. MassDEP's conversion to the ADB from its predecessor, the Waterbody System (WBS), began with the development of its Year 2008 Integrated List and the ADB became fully operational for the Year 2010 listing cycle.

The Final *Massachusetts Year 2012 Integrated List of Waters* was submitted to the EPA on March 27, 2013 and the 303(d) List was approved on May 2, 2013. New information included in the 2014 Integrated List was limited to new TMDL approvals by the EPA, recent Department of Public Health (DPH) fish consumption advisories, and the comments received during the public review period. Efforts are ongoing to improve the process by which watershed assessments are carried out and to make substantial revisions to the CALM manual for the 2016 listing cycle and beyond.

The 2014 Integrated List assigns each of 2,182 assessment units (AU's) to one of the following five categories depending upon their status with respect to the support of their designated uses:

1) Unimpaired and not threatened for all designated uses;
2) Unimpaired for some uses and not assessed for others;
3) Insufficient information to make assessments for any uses;
4) Impaired or threatened for one or more uses, but not requiring the calculation of a Total Maximum Daily Load (TMDL); or
5) Impaired or threatened for one or more uses and requiring a TMDL.

The following table summarizes, by waterbody type, the number and total sizes of AU's appearing in each category of the 2014 Integrated List.

Integrated List Category	Rivers		Lakes		Coastal Waters		Total AU's
	AU's	Size (miles)	AU's	Size (acres)	AU's	Size (sq. mi.)	
1	0	0.00	0	0.00	0	0.00	0
2	232	1,018.17	46	2,167.85	16	28.89	294
3	117	337.95	535	32,088.99	2	0.30	654
4a	41	146.39	150	47,812.59	125	56.63	316
4b	0	0.00	0	0.00	0	0.00	0
4c	25	101.08	198	15,217.27	0	0.00	223
5	318	1,551.57	244	21,110.31	133	157.48	695
Totals	*733*	*3,155.16*	*1,173*	*118,397.01*	*276*	*243.30*	*2,182*

The EPA's approval of bacteria TMDLs for waters in the Neponset and North Coastal watersheds led to the ***removal*** of 47 individual bacterial causes (i.e., "Fecal Coliform" or "*Escherichia coli*") and 31 entire waterbody segments (i.e., AU's) from the 303(d) List (i.e., Category 5) when the 2014 Integrated List was prepared. This accounts for all of the "delistings" that occurred for the 2014 listing cycle. Six (6) AU's and 14 individual pollutants were ***added*** to the 2014 303(d) List based on new health advisories pertaining to fish edibility released by the Massachusetts Department of Public Health (DPH) and comments received as part of the public review process.

The *Proposed Massachusetts Year 2014 Integrated List of Waters* was placed on the MassDEP web site at http://www.mass.gov/dep/water/resources/tmdls.htm. Notice of its availability for public review and comment appeared in the June 25, 2014 edition of the Massachusetts Environmental Monitor and was provided directly to over one hundred different watershed associations and other interested parties. Paper copies of the document were also available from the DWM's Watershed Planning Program Office in Worcester. The public comment period ended on August 1, 2014. Seven (7) comment letters were received, including one from the EPA Region 1. A list of the parties that commented is presented below. Responses to the comments are presented in *Massachusetts Year 2014 Integrated List of Waters Responses to Public Comments Pertaining to the Proposed Listing of the Condition of Massachusetts' Waters Pursuant to Sections 305(b), 314 and 303(d) of the Clean Water Act* published under separate cover.

List of organizations that provided comments on the *Proposed Massachusetts Year 2014 Integrated List of Waters*
Back River Watershed Association
Neponset River Watershed Association
Jones River Watershed Association
Buzzards Bay Coalition
Charles River Watershed Association
Center for Biological Diversity
U. S. Environmental Protection Agency Region 1

INTRODUCTION

The Federal Water Pollution Control Act of 1972 (FWPCA) and subsequent Amendments in 1977, 1981 and 1987 are collectively known as the Clean Water Act (CWA). The objective of this statute is to restore and maintain the chemical, physical, and biological integrity of the Nation's waters. As one step toward meeting this goal each state must administer a program to monitor and assess the quality of its surface and groundwater and provide periodic status reports to the U.S. Environmental Protection Agency (EPA), the U.S. Congress, and the public. Section 305(b) of the CWA codifies the process whereby waters are evaluated with respect to their capacity to support designated uses as defined in each of the states' surface water quality standards (SWQS). These uses include aquatic life support, fish and shellfish consumption, drinking water supply, and primary (e.g., swimming) and secondary (e.g., boating) contact-recreation. The 305(b) process entails assessing each of these uses for rivers, lakes and coastal waters. Where possible, causes and sources of impairment are also identified.

Section 303(d) of the CWA and the implementing regulations at 40 CFR 130.7 require states to identify those waterbodies that are not expected to meet SWQS after the implementation of technology-based controls and to prioritize and schedule them for the development of total maximum daily loads (TMDLs). A TMDL establishes the maximum amount of a pollutant that may be introduced into a waterbody and still ensure attainment and maintenance of water quality standards. Furthermore, a TMDL must also allocate that acceptable pollutant load among all potential sources. The formulation of the 303(d) List includes a more rigorous public review and comment process than does reporting under Section 305(b), and the final version of the list must be formally approved by the EPA.

Prior to 2002 states prepared and submitted to the EPA both a biennial *Summary of Water Quality Report* in accordance with the requirements of Section 305(b) as well as a separate Section 303(d) *List of Impaired Waters*. On November 19, 2001 the EPA released guidance for the preparation of an optional *Integrated List of Waters* that would combine reporting elements of both sections 305(b) and 303(d) of the CWA. This Integrated Report (IR) format allows states to provide the status of all their assessed waters in a single, multi-part list.

States choosing this option can list each Assessment Unit (AU) (i.e., waterbody or segment thereof) in one of the following five categories:

1) Unimpaired and not threatened for all designated uses;
2) Unimpaired for some uses and not assessed for others;
3) Insufficient information to make assessments for any uses;
4) Impaired or threatened for one or more uses, but not requiring the calculation of a TMDL; or
5) Impaired or threatened for one or more uses and requiring a TMDL.

Thus, waters listed in Category 5 constitute the 303(d) List and, as such, are to be reviewed and approved by the EPA. The remaining four categories are submitted in fulfillment of the requirements under Section 305(b), essentially replacing the old 305(b) Report format. Massachusetts formulated integrated lists in accordance with EPA guidance every other year from 2002 through 2012. The EPA subsequently approved each of these. The Final approved version of the *Massachusetts 2012 Integrated List of Waters* (2012 List) and related information, such as the associated public comment document and EPA approval letter, can be found at http://www.mass.gov/eea/agencies/massdep/water/watersheds/total-maximum-daily-loads-tmdls.html.

A memorandum entitled "Information Concerning 2014 Clean Water Act Sections 303(d), 305(b) and 314 Integrated Reporting and Listing Decisions" (September 3, 2013) from Denise Keehner, Director of the EPA's Office of Wetlands, Oceans and Watersheds, to that agency's regional Water Division Directors recommends that states prepare their 2014 Integrated Reports (IRs) consistent with previous EPA IR guidance including EPA's 2006 IR Guidance, which is supplemented by EPA's 2008, 2010 and 2012 IR memoranda. The 2014 IR guidance, along with all of EPA's clarifying guidance pertaining to Section 303(d) reporting can be accessed at http://water.epa.gov/lawsregs/lawsguidance/cwa/tmdl/guidance.cfm.

This report presents the individual categories of Massachusetts' waters for the 2014 CWA listing cycle along with pertinent supporting documentation. Since the completion of the 2012 reporting cycle, MassDEP has not completed any additional waterbody assessments. Instead, MassDEP has focused on improving the process by which watershed assessments are carried out and making significant revisions to its Consolidated Assessment and Listing Methodology (CALM) for the 2016 listing cycle and beyond. The 2016 CALM will specify how new kinds of data and information, such as long-term dissolved oxygen and temperature data, will be used to make assessments in the future. Other enhancements will include clarification on the use of response indicators when assessing impairments associated with nutrients. A brief description of the water resources of Massachusetts and MassDEP's water quality management programs are presented in the introductory sections. The section *Prioritizing Waters for TMDL Development* was revised to reflect the most recent schedule negotiated between MassDEP and the EPA, as part of their Performance Partnership Agreement (PPA).

WATER RESOURCES OF MASSACHUSETTS

The Commonwealth of Massachusetts ranks 45th out of the 50 states in surface area (approx. 8,300 sq mi of dry land and inland water combined), yet its estimated 6,497,967 inhabitants place it 15th in population (US Census Bureau, 2010). More than 75 percent of the population resides in the eastern one-third of the state.

Massachusetts encompasses two geological provinces: the Coastal Plain and the New England Upland. Cape Cod and the Islands form the coastal plain and consist of low hills and plains covering unconsolidated sediments that form the most productive aquifers in the State. The New England Upland province consists of till and stratified drift above metamorphic and igneous rocks, and provides small productive aquifers. Groundwater is used for water supply in small communities and almost exclusively on Cape Cod and the Islands. Surface water is the major source of water supply for all the major urban areas in the state, since no other source is capable of meeting these demands. Surface water in the state is relatively plentiful and of high quality, but it is not distributed in proportion to the distribution of the population. Two thirds of Massachusetts' residents depend upon surface water for their needs. The Massachusetts Water Resources Authority supplies communities in the Greater Boston area (about half the state usage of surface water) from Quabbin and Wachusett reservoirs in the central uplands.

Annual precipitation averages about 45 inches and is fairly evenly distributed throughout the state. Average annual evaporation of free water surfaces ranges from about 26 inches in Western Massachusetts to about 28 inches in the eastern half of the State. Yearly runoff ranges from about 20 inches in Cape Cod to about 32 inches in the northwestern corner of the State. The lowest runoff generally occurs during July, August and September. Runoff is highest in March in the eastern sections of the state and April in the western sections and at higher elevations.

Massachusetts incorporates all or a portion of nine major drainage systems – Hudson, Housatonic, Connecticut, Thames, Narragansett Bay, Mount Hope Bay, Boston Harbor, Merrimack and Coastal – that, in turn, are made up of a total of 32 smaller watersheds or drainage areas. These have been regrouped slightly to create the 27 watersheds, or drainage areas, that serve as the fundamental planning units of the Massachusetts' surface water monitoring, assessment and management programs described throughout this report. A summary of some general surface water resource statistics for Massachusetts is provided in the following table.

Surface Water Atlas for Massachusetts	
Rivers[1]	
Number of Major Drainage Systems	9
Number of Watersheds or Drainage Areas	32
Number of Interstate Watersheds	12
Perennial River Miles[2]	9,962
Lakes	
Number of Lakes and Ponds[6]	3,191
Area of Lakes and Ponds (acres)[3]	151,173
Coastal Waters[4]	
Area of Harbors and Estuaries (square miles)	223
Total Coastal Miles	1,519
Wetlands[5]	
Marine and Estuarine Wetlands (acres)	125,710
Freshwater Wetlands (acres)	472,368
Total Area of Wetlands (acres)	598,078
Information Sources (see Bibliography):	
[1] Halliwell, et al., 1982	
[2] National Hydrography Dataset (NHD) 1:24,000	
[3] Ackerman, 1989	
[4] Gil, 1985 and Maietta, 1984	
[5] Costello, 2010	
[6] Mass GIS 1:100,000 (DLG) by USGS	

COSTS AND BENEFITS OF CLEAN WATER

The benefits to society of clean water can hardly be over-stated. Adequate supplies of clean water are essential to the survival and propagation of fish, shellfish and other aquatic life, as well as terrestrial vegetation and wildlife and the humans that rely on these organisms for food. Furthermore, humanity's dependence on clean water for domestic, industrial and recreational purposes is placing ever-increasing demands on limited water supplies. While the value to society of maintaining clean water is intuitive and fairly easily understood in a qualitative sense, a comprehensive economic analysis of the benefits of clean water can be far-reaching and complex. Sometimes it is useful to turn the question around: "What is the cost to society, in terms of public health, economics or other factors, of NOT achieving sound water quality conditions?" For example, drinking water contaminated with pathogens is estimated to sicken 20 million Americans each year (Reynolds *et al.* 2008). The Centers for Disease Control estimates that the costs of hospitalization for waterborne diseases could exceed $500 million annually (CDC 2010), and in 2005, U.S.

consumers paid over $50 million for bottled water in response to drinking water contamination (Zivin, *et al.* 2011).

Property values for single-family homes have been shown to decrease by up to 10% due to their proximity to polluted water ways (Braden *et al.* 2006). In 2007, the State of New Hampshire reported that a decrease in water clarity or purity would result in a loss of $51 million in sales, $18 million in income, and 810 jobs due to decreased recreation (Nordstrom 2007). Finally, Dodds *et al.* (2009) evaluated the economic impacts of human-induced eutrophication on US freshwaters and estimated that $2.2 billion are lost annually in recreational usage, waterfront property values, water treatment costs and spending on the recovery of threatened and endangered species.

An analysis such as this typically involves comparing the costs of maintaining or restoring water quality with the socioeconomic benefits realized when the desired water quality condition is achieved. In a strict sense, this "cost-benefit analysis" has an underlying premise that a threshold exists beyond which the cost to attain the use may exceed the benefit gained, but this most certainly has implications for resources such as air and water that are essential to life on this planet. And, whereas it is possible to assign monetary costs to the construction and operation of water and wastewater treatment facilities or other activities aimed at restoring water quality, it is often more difficult to predict the value of the benefit gained from achieving water quality goals. Typically, these gains are measured by indicators such as increases in the number of fishing licenses sold, decreases in the number of shellfish bed or beach closures, or increases in property values associated with good quality waters. The aesthetic value placed on clean water, on the other hand, is more difficult to measure economically and may vary considerably from one person to the next. Another significant factor limiting the utility of this kind of analysis is the lack of data and information pertaining to the impacts of water pollution on public health and the economy. For example, the incidence of water-borne illnesses associated with swimming in contaminated waters goes largely unreported, making the resultant savings in health costs associated with the cleanup of those waters, to say nothing of the human suffering, difficult to estimate.

A complete assessment of the socioeconomic costs and benefits associated with restoring and maintaining the integrity of Massachusetts' waters is beyond the scope of this report. Nonetheless, a few examples of the financial commitments made to the protection and restoration of water resources, and the value of selected enterprises relying on those resources, can serve to illustrate the magnitude of the socioeconomic affects of clean water. The most significant financial commitment to the protection and restoration of water resources is the funding, by the Massachusetts Clean Water Trust (the Trust) of both wastewater collection and treatment infrastructure and drinking water treatment and distribution systems. In 2014 the Trust provided approximately $175 million and $119 million in funding for wastewater and drinking water infrastructure, respectively (MassDEP 2014). This program, and its predecessor Construction Grants Program, represent the single largest financial commitment to clean water in Massachusetts and is estimated to be over $8 billion from 1968 to the present.

The construction grant and loan programs are by no means the only sources of capital used to ensure clean water. Private industries and institutions pay for the installation and operation of wastewater treatment and pre-treatment facilities. Furthermore, water and wastewater infrastructure will not do the job alone. For example, the management of nonpoint sources (NPS) of pollution is best accomplished through the implementation of best management practices (BMPs) and responsible land use, so resources are needed to increase public awareness and stewardship. NPS pollution reductions through the application of BMPs are a cost-effective alternative to mechanical water treatment. Practicing water conservation instead of building and operating a water filtration plant can treat drinking water at one fifth of the cost. Planting, or improving, forest buffers instead of building and operating a wastewater treatment plant can reduce nitrogen inputs for less than half the cost. Constructed wetlands can treat wastewater at one sixth the cost of conventional treatment methods. Wetlands in the Boston area have been shown to provide $42,000 worth of flood protection per acre (USEPA 2012). The CWA Section 319 addresses the identification and management of nonpoint sources of pollution and provides grant monies for the implementation of BMPs and public education programs. Many other agencies, as well as non-governmental organizations (NGOs), such as private institutions, watershed associations and citizen environmental advocacy groups, commit

time and financial support to educating the public and promoting behaviors that will lead to cleaner waters in Massachusetts. It is difficult, however, to put a price tag on all of this good work.

As stated earlier, it is even more challenging to estimate the magnitude of the economic benefit associated with clean water than it is the costs of achieving clean water. Economic benefits from clean water in Massachusetts are reflected in data and information on sport and commercial fisheries, recreation in and on the water, tourism, and property values. The following statistics may help to illustrate the extent of these benefits, but they are by no means comprehensive or complete. The US Fish and Wildlife Service and US Census Bureau report that 497,000 recreational anglers fished a total of 7.8 million days in Massachusetts in 2006. Associated expenditures were $770 million dollars. This includes food, lodging, transportation, fishing gear and associated equipment, licenses and fees, etc.

More recent information pertaining to revenues generated through the sale of fishing licenses and shellfishing permits in Massachusetts is summarized in the 2009 annual reports of the Massachusetts Division of Fisheries and Wildlife (MADFW) and Division of Marine Fisheries (MADMF), respectively. Sales of freshwater fishing licenses exceeded $3.2 million in FY2009, while DMF collected over $2.1 million in permit fees from commercial fishermen, fish and shellfish dealers and other permittees.

The marine finfish and shellfish harvests for 2013 grossed in excess of $500 million (MADFG 2013). Because most finfish and shellfish species that comprise this commercial catch rely on near-shore waters and river estuaries for all or a portion of their lifecycles, the quality of freshwaters and their watersheds has a direct effect on the health of the offshore fishery. Reductions in ground stocks of commercially valuable fishes have been documented in the waters off New England for several years now, and this serious problem is likely attributed to a combination of environmental degradation, over-fishing and other factors that are difficult to quantify. Therefore, it is difficult to predict with certainty the direct monetary benefits to the commercial fishery from various steps taken to achieve clean water in Massachusetts' watersheds and coastal waters. Nonetheless, it stands to reason that a recovery in Massachusetts' marine fisheries cannot be accomplished if clean water is not restored and maintained in those near-shore waters. The Massachusetts Estuaries Project is currently addressing several water quality issues as they pertain to near-shore waters (see http://www.oceanscience.net/estuaries/).

The Massachusetts tourism industry brought in $14.4 billion in direct spending in 2009 that generated $915 million in state and local taxes. It is assumed that two-thirds of this travel was for leisure and that a substantial number of tourists were involved with water-related activities such as swimming, boating, fishing and viewing wildlife. Recreational whitewater releases can serve as a local economic engine. Over 100 recreational water releases were mandated in the relicensing of hydroelectric generating facilities on the Deerfield River. These releases allowed three rafting companies to be established. It is estimated that more than 85,000 people raft or boat on the Deerfield every year (FERC 1996). Furthermore, much of Massachusetts' cultural history centers on its waterways that provided food and transportation to its' endemic people and early settlers and hydropower and navigation during the industrial revolution. The aesthetic value of these waters and associated sites of interest is enhanced immeasurably by clean water. Again, although not quantified here, it is evident that the Massachusetts travel industry benefits directly from clean water and that ongoing pollution abatement will result in further economic gains for tourism. Finally, several studies have concluded that clean water has a positive effect on adjacent property values. For example, a study in Maine (Michael et al. 1996) demonstrated that lakefront properties were up to $200 higher per frontage foot when water quality was good. Similarly, others have shown that water clarity is essential to the enjoyment of lakes and ponds and that people are willing to pay to ensure that clean water is maintained. See, for example, Krysel et al. 2003.

In summary, a detailed analysis of the socioeconomic benefit of clean water to Massachusetts' residents would be complex and time-consuming and would be better undertaken as a separate study. Nonetheless, from the examples presented, it should be evident that the restoration and maintenance of clean water, while not inexpensive, result in enormous benefit to the economy and quality of life in Massachusetts.

AN OVERVIEW OF THE MASSACHUSETTS WATER QUALITY MANAGEMENT PROGRAM

Watershed-based Water Quality Assessments

Watershed protection is the dominant theme of many state water quality management programs, and the EPA has endorsed this approach by providing financial and technical support for watershed-based water quality management activities. Details pertaining to the watershed approach to managing Massachusetts' water resources can be found at http://www.mass.gov/eea/agencies/massdep/water/watersheds/the-watershed-management-approach.html. In 1993 the 27 major watersheds and coastal drainage areas in Massachusetts were placed on a rotating five-year schedule to synchronize several components of its water management program. Today, MassDEP continues to utilize the watershed as the fundamental planning unit for monitoring and other water management program elements. However, a change in the original watershed groupings for the five-year watershed management cycle was adopted specifically for monitoring in 2010 and thereafter. Described in more detail at http://www.mass.gov/eea/agencies/massdep/water/watersheds/adjustments-to-surface-water-monitoring-program.html, the watersheds were regrouped on a regional basis to take advantage of potential benefits to monitoring survey logistics of more closely aligned watersheds, and to more equitably distribute Massachusetts' total river miles among the five groups. The new watershed alignment also facilitated the implementation of a new statistically-based monitoring program component.

An overview of Massachusetts' existing surface water monitoring program can be found at http://www.mass.gov/eea/agencies/massdep/water/watersheds/water-quality-monitoring-program.html. A strategic goal of the MassDEP is to implement a comprehensive monitoring program that serves all water quality management needs and addresses streams, rivers, lakes, reservoirs, estuaries, coastal areas, wetlands and groundwater. To accomplish this goal and to address a wide variety of water quality-related objectives the agency has developed a multifaceted monitoring strategy that includes monitoring elements, data analysis, reporting, and use of the data for management decisions. Major components of the monitoring program fulfill requirements of the CWA. This proposed monitoring program, developed in accordance with guidance from the EPA (EPA 2003), is described in *A Water Quality Monitoring Strategy for the Commonwealth of Massachusetts* (MassDEP 2005) which is available at the website cited above.

Results of the MassDEP's monitoring efforts, combined with all other credible data and information, constitute the basis for making water quality assessments in accordance with the requirements set forth in Section 305(b) of the CWA. Like monitoring, watershed assessments are carried out sequentially as part of the watershed management cycle. Use-attainment determinations are made for each waterbody segment for which adequate data and information are available. However, many waters are not assessed for one or more uses in any given assessment cycle, and many small and unnamed streams and ponds have never been monitored and assessed. In the past, individual use assessment decisions, along with supporting water quality data and information, were documented in individual watershed assessment reports. These are listed in the Bibliography and are available for all of Massachusetts' watersheds and coastal drainage areas at http://www.mass.gov/eea/agencies/massdep/water/watersheds/water-quality-assessments.html. The future of reporting on the assessment status of Massachusetts' waters rests with the application of EPA's Assessment Database (ADB), a process that became fully operational for the 2010 listing cycle. The ADB is a relational database for tracking water quality assessment data, including use attainment decisions, and causes and sources of impairment. The ADB is designed to make the reporting of assessment and listing decisions accurate, straightforward and user-friendly for states, tribes and other water quality reporting agencies.

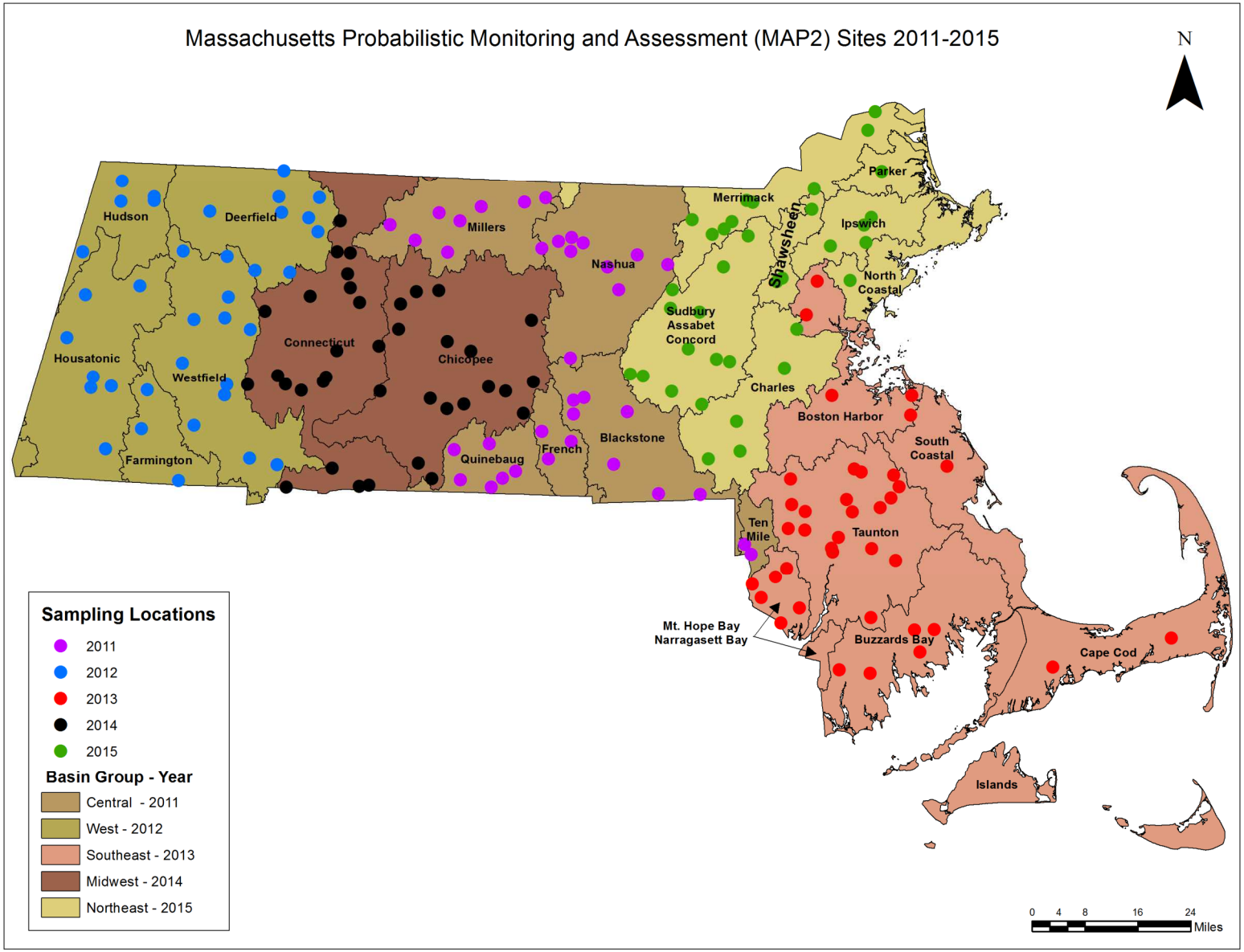
Probabilistic Monitoring and Assessment Program

The EPA guidelines for the development of state monitoring programs call for the development of sampling networks that will provide comprehensive assessments of all waters and water body types (e.g., shallow streams, large rivers, lakes, wetlands, etc.) over time. To provide complete coverage, both spatially and temporally, states are encouraged to adopt networks of randomly selected sampling sites that will allow for statistically unbiased assessments that can be applied at larger scales. Because

statistically-valid inferences can be drawn for an entire population of water bodies by monitoring a set of sites randomly selected from that population, a probabilistic design can achieve the goal of reporting in Section 305(b) reports the status of all waters without actually having to monitor them all. The actual number of sites chosen for monitoring will affect the overall confidence that can be placed in extrapolating up to a scale beyond the individual sites or waters sampled. These probabilistic monitoring designs are in contrast with deterministic or targeted designs that utilize non-random site selection based on previous knowledge of conditions at the sites.

In 2010 the MassDEP's surface water monitoring program initiated the implementation of a new, statistically-valid sampling design for Massachusetts' shallow streams. While making up the vast majority of river miles in the Commonwealth, many of these headwater streams and small tributaries to main stem rivers had not been monitored in the past, and a probabilistic design was chosen to provide an estimate of the condition of those water body types. The goals of the Probabilistic Monitoring and Assessment Program (MAP2) were to provide an unbiased assessment (Support/Impaired) of the aquatic life, recreational and aesthetic uses in wadeable (i.e., 1^{st} – 4^{th} Strahler Order), non-tidal perennial streams of Massachusetts, and, over time, to provide an analysis of trends in the use assessments of those streams. The random sampling design allows for the determination, with a known statistical confidence, the percentage of wadeable stream miles supporting and not supporting their designated uses.

To implement the MAP2 survey, Massachusetts' 1^{st} – 4^{th} order streams were apportioned into five separate groups or strata, one of which – the "Northeast" – was chosen to be monitored in 2010. Likewise, the "Central", "Western", "Southeastern" and "Midwestern" watersheds were monitored in 2011, 2012, 2013 and 2014, respectively. However, because changes were made to the survey design after the first monitoring season (2010), a decision was made to repeat the monitoring in the "Northeast" watersheds in 2015 in accordance with the new sampling framework. Following the 2015 survey season, water quality and biomonitoring data will be available from approximately 180 randomly selected wadeable stream sites, state-wide (see map), allowing for an assessment of the aquatic life, recreational and aesthetic use-support status of all wadeable streams in Massachusetts. Furthermore, the MAP2 study was designed such that sufficient data would be collected from each of the monitoring sites in the network to allow them to be assessed individually for these same designated uses. It is anticipated that the complete wadeable stream assessment will be available for the 2018 integrated reporting cycle.


Massachusetts Probabilistic Monitoring and Assessment (MAP2) Sites 2011-2015
N
Hudson
Deerfield
Millers
Nashua
Merrimack
Shawsheen
Parker
Ipswich
North Coastal
Sudbury Assabet Concord
Connecticut
Chicopee
Housatonic
Westfield
Farmington
Quinebaug
French
Blackstone
Charles
Boston Harbor
South Coastal
Ten Mile
Taunton
Mt. Hope Bay Narragasett Bay
Buzzards Bay
Cape Cod
Islands
Sampling Locations
2011
2012
2013
2014
2015
Basin Group - Year
Central - 2011
West - 2012
Southeast - 2013
Midwest - 2014
Northeast - 2015
0 4 8 16 24
Miles

TMDL Program

Section 303(d) of the Clean Water Act and the EPA's Water Quality Planning and Management Regulations (40 CFR Part 130) require states to develop TMDLs for waterbodies that are not meeting designated uses under technology-based controls. The TMDL process establishes the maximum allowable loading of pollutants that a waterbody can receive and still meet the SWQS established for protecting public health and maintaining the designated beneficial uses of those waters. Through this process states implement water quality-based controls to reduce pollutant loadings from both point and nonpoint sources and restore and maintain the quality of their water resources. TMDL implementation is accomplished through adherence to prevailing regulations and program requirements such as those governing the National Pollutant Discharge Elimination System (NPDES) permits for point source control and the stormwater management performance standards maintained by conservation commissions under the Wetlands Protection Act. Furthermore, funding priority for CWA Section 319 grants and State Revolving Funds (SRF) is given to watershed clean-up projects that are consistent with TMDL Program requirements. Visit http://www.mass.gov/eea/agencies/massdep/water/watersheds/total-maximum-daily-loads-tmdls.html for more information pertaining to Massachusetts' TMDL Program.

A specific time frame for developing TMDLs is not set forth in either the statute or regulation governing the TMDL program. Nonetheless, in 2001 Massachusetts convened a TMDL Steering Committee to evaluate the TMDL Program and make recommendations for its improvement. This committee helped to set goals for prioritizing waters for TMDL development. Because TMDLs can take several years to develop, ongoing commitments to complete specific TMDLs are now included in each State-EPA PPA and the most recent PPA and the MassDEP Work Plan reflect the current priorities for TMDL development (see *Prioritizing Waters for TMDL Development* later in this report).

Wastewater Discharge Permitting and Stormwater Programs

Information pertaining to the Wastewater Discharge Permitting Program can be accessed at: http://www.mass.gov/eea/agencies/massdep/water/wastewater/surface-water-discharge-permitting-npdes.html. Wastewater discharges to surface waters in Massachusetts are governed by permits issued in accordance with both the SWQS and guidelines set forth as part of the federal NPDES permit program. This system establishes levels of effluent quality that must be achieved at municipal, institutional and industrial treatment facilities to ensure that water quality standards are met in the receiving waters. Massachusetts has not been delegated the authority to issue NPDES permits by the EPA. Therefore, the EPA retains the responsibility for the administrative aspects of the program, including drafting the discharge permits, conducting public hearings and issuing the final permit. The MassDEP must provide state certification of the final draft permit prior to issuance in accordance with Section 401 of the CWA. The MassDEP also is a signatory to the final permit, making it a joint permit. This process results in a final discharge permit that is valid under both federal and state law, so each permitting agency has the independent right to enforce its terms and conditions. The federal CWA requires that discharges satisfy both minimum technology and water quality requirements.

The EPA's Stormwater Management Program began in the late 1990s with the regulation of medium (100,000 populace served) and large (250,000 served) municipal separate stormwater sewer systems (MS4), a wide range of industrial activities (controlled through the EPA's multi-sector general permits) and construction activities involving the disturbance of land area greater than 5 acres. Rather than limiting the concentration of individual constituents in stormwater, permit conditions emphasized the use of best management practices (BMPs) to manage stormwater. Facilities and construction sites were required to develop and implement stormwater management plans to control runoff, limit transport of pollutants off-site and to mitigate erosion and other habitat alterations associated with stormwater runoff.

The scope of the stormwater program was expanded in 2003 to include small municipalities (i.e., 237 cities and towns in Massachusetts), and public entities that operate MS4 systems, such as highways,

parks, colleges and correctional facilities. The program requirements, established in 1999 by the EPA Storm Water Phase II regulations, are being implemented in over two-thirds of the municipalities in Massachusetts and several dozen other public MS4 systems through the use of general permits. Additional information pertaining to the management of stormwater in Massachusetts can be found at http://www.mass.gov/eea/agencies/massdep/water/wastewater/stormwater.html.

Sustainable Water Management and the Water Management Act

Maintaining sufficient streamflow and reservoir levels to support fish, other aquatic life and wildlife, while responding to increased anthropogenic demands for water, is a major challenge facing Massachusetts' environmental officials and its citizenry. Massachusetts receives 44 inches of precipitation in an average year, which is plentiful compared to other parts of the country, and most of the time provides us with enough water to meet the needs of people and the environment. However, because this rainfall is not always used in the most optimal way and due to the natural climatic cycle, we cannot always meet the wide variety of human and ecological needs. This disparity can be most severe during the summer and fall months, when evaporation and human demands are highest and streamflows are naturally lowest. In extreme cases this has resulted in streams drying up seasonally resulting in a loss of fish and other aquatic species dependent on those habitats.

The MassDEP is primarily addressing streamflow alteration through the implementation of the Water Management Act (WMA). Enacted in 1985, the WMA regulates all withdrawals from ground and surface water sources that exceed an average annual volume of 100,000 gallons per day (gpd). The WMA allowed all withdrawals of this magnitude that existed between 1981 and 1985 to be registered if the applicant applied by January 4, 1988. The MassDEP allows registrants to continue these historic withdrawals provided that they meter or otherwise verify their actual water use and that they report their usage annually. New withdrawal points or increased withdrawal volumes from registered points exceeding the WMA threshold of 100,000 gpd sought after 1985 are required to obtain a withdrawal permit.

The Commonwealth launched The Sustainable Water Management Initiative (SWMI) in 2010 to develop a water policy that balances our ecological needs along with our need to support long term economic growth and development. SWMI was initiated by the Executive Office of Energy and Environmental Affairs (EEA) in partnership with the MassDEP, the Department of Conservation and Recreation (DCR), and the Department of Fish and Game (DFG). SWMI included input from a wide range of stakeholders, its purpose was to reevaluate the way the Commonwealth manages water so that there is enough for the many and sometimes competing long-term water needs of our communities and aquatic ecosystems. A SWMI Framework, based on extensive scientific analyses and an active stakeholder process, was released in November of 2012. In November 2014, MassDEP promulgated new WMA regulations that incorporate key components of SWMI.

The WMA permit application review process considers other withdrawals within the same watershed. This process includes an analysis of the potential local impacts that may result from the proposed withdrawal. Included in this local impact analysis is the identification of resources affected by water level fluctuations and a determination of acceptable groundwater levels for those resources. The impact of water withdrawals on surface water quantity and quality, as well as the effects of induced infiltration on the quality of the withdrawal water, are considered as a part of the review. Water conservation measures are included in WMA permits that reflect the State Water Conservation Standards. Water conservation standards that are included as permit conditions include: meeting an annual value of 65 residential gallons per person per day, maintaining 10 percent or less unaccounted-for water loss, and requiring seasonal reductions in nonessential outdoor uses under some environmental conditions for public water systems. Some permittees are also required to mitigate, commensurate with impact, any impacts of their water withdrawals. For more information on the WMA and water withdrawals in Massachusetts see http://www.mass.gov/eea/agencies/massdep/water/drinking/the-massachusetts-water-management-act-program.html.

Nonpoint Source Program

The website http://www.mass.gov/eea/agencies/massdep/water/watersheds/nonpoint-source-pollution.html presents a definition of nonpoint source pollution and describes the measures and programs currently aimed at its control. In the past the EPA and the states have focused water pollution abatement programs on the control of point sources through waste load allocation and NPDES permitting. Nonpoint source pollution is not as easily assessed nor controlled, for it is intricately linked with the use of the land and land-use decisions are made at the local level. For this reason federal and state efforts are aimed at educating local officials and the public-at-large with respect to the importance of land-use planning and zoning, the use of BMPs to control stormwater, and other measures for preventing nonpoint pollution. Critical to the success of this approach is the establishment of partnerships between all of the parties that have an interest in the process. By bringing these parties together problems are identified and prioritized and innovative solutions are developed. Moreover, the watershed represents a logical planning unit on which to focus this effort.

A Nonpoint Source Management Plan was originally developed by the MassDEP in 1988 pursuant to Section 319 of the CWA. The 2014 – 2019 Massachusetts Nonpoint Source Management Plan was finalized on September 30, 2014. This plan sets forth an integrated strategy for the prevention, control, and reduction of pollution from nonpoint sources in an effort to protect and improve the quality of the waters of the Commonwealth and serves as a framework on which the changes to the SRF regulations are built. An update to the 6217 plan for coastal nonpoint source pollution is also incorporated into the 2014 – 2019 Plan. Each year Congress appropriates funds under Section 319 to assist the states with the implementation of their approved Nonpoint Source Management Plans. Implementation activities include: regulatory enforcement, technical assistance, education, training, technology transfer, watershed restoration and demonstration projects. Only those implementation strategies identified in the Management Plan are eligible for federal funding. Since 1990, and extending through 2015, the MassDEP has administered 270 Section 319 nonpoint source management projects, which total over $48 million. The Massachusetts Nonpoint Source Management Plan can be obtained from the Nonpoint Source Program's internet site presented above.

In addition to the updates to the Nonpoint Source Management Plan, the MassDEP is revising the 2003 Nonpoint Source Management Manual. Now referred to as the Clean Water Toolkit, the manual is a compilation of nonpoint source best management practices that was first developed in 1998. Since then our understanding of nonpoint source issues and best management practices has evolved, as have the options for presenting and distributing such material. In 2003, a Section 319 grant was used to revise and update the original hard copy Manual in electronic and web-based form. The current revisions will add interactive media, updated information and links and additional user-friendly tools and resources. New topics include municipal good housekeeping, low impact development, Phase II stormwater and related material. The Clean Water Toolkit can be accessed at the Nonpoint Source Program's internet site.

In April 2013, the EPA issued new Nonpoint Source Program and Grants Guidelines for States and Territories. The Guidelines continue to promote the use of Section 319 funding for developing and implementing Watershed-Based Plans to protect unimpaired waters and restore impaired waters. Watershed-Based Plans to restore impaired waters are required for all projects implemented with Section 319 incremental dollars, and are recommended for all watershed projects, whether they are designed to protect unimpaired waters, restore impaired waters, or both. The new Guidelines also required states to update their Nonpoint Source Management Plans (NPS Plans) by October 1, 2014, and encouraged close cooperation with the U.S. Department of Agriculture (USDA) and agricultural agencies to leverage funds available from the Farm Bill to address water quality issues from farming operations. The revised Massachusetts NPS Plan, approved by the EPA in September 2014, presents a strategy for preventing, controlling, and reducing pollution from nonpoint sources and reflects the current priorities of the Massachusetts Nonpoint Source, as well as the latest EPA program guidelines, funding levels, and staff resources for the five-year period 2014-2019. Finally, the new Guidelines encourage states to incorporate the protection of healthy watersheds into state nonpoint source programs, and allow the use of 319 funds for that purpose.

Clean Water SRF

Information pertaining to the Massachusetts' SRF for water pollution abatement projects and drinking water infrastructure can be accessed at http://www.mass.gov/eea/agencies/massdep/water/grants/state-revolving-fund.html. Administered jointly by the MassDEP's Division of Municipal Services (DMS) and the Massachusetts Clean Water Trust (the Trust), the SRF was established to provide a low-cost financing mechanism to assist municipalities and wastewater districts/authorities seeking to comply with federal and state water quality requirements. The SRF loan program receives funding from the EPA in the form of an annual grant, supplemented by state matching funds and funds paid back by previous borrowers. The Trust, in turn, leverages these funds through the sale of bonds, resulting in a much larger pool of money to loan to borrowers. In state fiscal year (FY) 2013 the Trust provided $186 million in financing for 46 loans to communities across the Commonwealth. Since its inception in 1989, the SRF loan program has provided approximately $6 billion in loans to over 300 borrowers to improve and maintain the quality of water in Massachusetts.

Each year the MassDEP solicits projects from Massachusetts municipalities and wastewater districts to be considered for subsidized loans, which are currently offered through a two percent interest rate loan. Certain nutrient removal projects may be eligible for zero percent interest rate loans. Financial assistance is available for planning and construction of infrastructure, including new water and wastewater treatment facilities and upgrades of existing facilities; infiltration/inflow correction; drinking water distribution and wastewater collection systems; control of combined sewer overflows (CSO); brownfields water resource infrastructure improvement; and nonpoint source pollution abatement projects, such as landfill capping, community programs for upgrading septic systems (Title 5) and stormwater remediation. In addition, non-structural projects are eligible for SRF funding; e.g., planning projects for nonpoint source problems that are consistent with the Massachusetts Nonpoint Source Management Plan and that identify pollution sources and suggest potential remediation strategies.

MASSACHUSETTS WETLANDS PROTECTION AND ASSESSMENT PROGRAMS

MassDEP administers both regulatory and non-regulatory programs aimed at the assessment and protection of the Commonwealth's valuable wetland resources. All of these programs are presented in detail at http://www.mass.gov/eea/agencies/massdep/water/watersheds/wetlands-protection.html#top. Three programs with applicability to the assessment of waters under the CWA are briefly summarized below.

Wetlands Regulatory Program

The MassDEP protects inland and coastal wetlands pursuant to the Massachusetts Wetland Protection Act (WPA) (M.G.L. Ch. 131 § 40), first enacted in 1972, and the WPA regulations at 310 CMR 10.00. The WPA regulations provide strong protection of bordering vegetated wetlands, allowing for no more than 5000 square feet of alteration and requiring full replacement in most cases, and only if the altered area is replaced in a manner that will function similarly to the lost area. In Massachusetts, implementation of the WPA is administered by local Conservation Commissions and approximately 8,500 applications ('Notices of Intent') are submitted each year. MassDEP is responsible for appeals, Water Quality Certifications (WQC) under Section 401 of the CWA and enforcement.

In 1996 the Massachusetts Legislature amended the WPA to provide additional protection to rivers. Known as the Massachusetts Rivers Protection Act, this amendment regulates activities within a newly established wetland resource area known as the Riverfront Area. The River Protection Act extends to rivers the protection originally offered only to wetlands, with the same overall goals and purposes: protection of private and public water supply, groundwater protection, flood control, prevention of storm damage, prevention of pollution and protection of wildlife habitat, shellfish beds and fisheries.

Wetlands Loss and the Wetland Information Resource (WIRe) Project

Until recently, MassDEP had no comprehensive strategy to monitor compliance with permits, or to identify illegal wetland fill. In 2001, MassDEP initiated a unique state-of-the art digital aerial surveillance program, using remote sensing data to identify wetland alterations from activities such as clearing, building or filling. Aerial imagery flown in 2001 was compared to imagery flown between 1990 and 2000 over approximately 70 percent of the state. This analysis determined that over 840 acres of wetlands at 3,244 sites were filled between 1990 and 2001. While this loss is a relatively small portion of the total wetland acreage in Massachusetts, it is far more than is acceptable. In 2005, a new flight covered the remainder of the state and identified wetlands loss that occurred between 2001 and 2005. This analysis indicated a loss of 482 acres at 1,473 sites. Depending on the region of the state, the rates of wetlands loss have remained the same, or been slightly reduced over the two periods of 1990-2001 and 2001-2005. Through this ongoing effort, MassDEP is developing reliable and verifiable data on freshwater wetland loss. MassDEP has also examined the areas of loss to see what types of activities account for the most change. The latest 2005 imagery analysis indicates that commercial and residential development continue to be large contributors to wetland loss, and that cranberry bog operations, other agricultural activities and sand and gravel operations account for a smaller, yet substantial, percentage of overall loss.

It is the goal of the MassDEP to reduce wetland loss in the future by targeting compliance, enforcement and outreach to those sectors contributing to the greatest losses. In 2005, utilizing grant funding from the EPA, the MassDEP launched a three-year project aimed at integrating wetland loss maps and other geographic information system (GIS) maps with MassDEP's permitting and enforcement records. The Wetland Information Resource (WIRe), accessed on-line at http://www.mass.gov/eea/agencies/massdep/water/watersheds/massdeps-wetland-information-resource-wire.html, allows the MassDEP to more easily track permitted impacts, determine responsibility for wetland loss, pursue enforcement and monitor compliance and mitigation success.

Wetlands Monitoring and Assessment Strategy

The website http://www.mass.gov/eea/agencies/massdep/water/watersheds/wetlands-protection.html#2 provides detailed information on the MassDEP's Wetland Monitoring and Assessment Program. The MassDEP's Wetlands Program has been working collaboratively with the University of Massachusetts-Amherst (UMass) and the Massachusetts Coastal Zone Management (CZM) Program since 2006 to develop a strategy to monitor and assess wetlands for purposes of reporting on the status and trends of all wetlands across the state and for developing criteria to monitor and assess the physical, chemical and biological integrity of wetlands for reporting under §305(b) of the CWA. The central feature of the Massachusetts strategy is the Conservation Assessment and Prioritization System (CAPS), a landscape-level assessment model that has been under development by UMass for 14 years (see http://www.umasscaps.org/about/index.html). CAPS combines land-cover mapping derived from GIS and aerial photography with 26 inland and coastal stressor or resiliency metrics, each representing a stressor on the environment, to calculate a value between 0 and 1 for each 30 square meter plot on the landscape. A complete list of metrics can be found at: http://www.umasscaps.org/about/metrics.html. The CAPS computer model can analyze individual metrics, or combine them to derive an Index of Ecological Integrity, or IEI. Wetland IEI values generated from the CAPS model define a continuous gradient that is inversely proportional to the magnitude of stressors acting on those wetlands (generalized stressor gradient). High IEI scores (approaching 1.0) are indicative of communities that are relatively free from stressors. The IEI is a *predictor* of the capacity of a wetland to sustain its ecological condition in the long term and to recover from stress.

Because CAPS does not use field-based information to assess ecological conditions on the ground, site-level assessment methodologies (SLAMs) are being developed that utilize actual measurements of biological integrity in the field to evaluate wetland condition and calibrate the CAPS model. Efforts are ongoing to identify dose-dependent relationships that may exist between the field data and the metrics

modeled in CAPS, and to develop Indices of Biological Integrity (IBIs) to incorporate into the SLAMs. IBIs are metrics used to quantify changes in biological communities in response to adverse human activity and can serve as indicators of particular stressors acting on a wetland or water body, as well as providing a composite score for biological condition. To date, SLAMs have been developed for forested wetlands and salt marshes and these have been used to sample 219 forested wetland sites and 175 salt marsh sites that were randomly selected along a gradient of IEI values. These data, along with data from 490 wadable streams collected by the MassDEP's Division of Watershed Management (DWM) have been used to test and validate the CAPS predictions and modify (as needed) the CAPS models; and to develop IBIs for use in assessing site-specific wetland condition.

In September 2013, the IBI development work was documented in a report entitled: *Empirically Derived Indices of Biotic Integrity for Forested Wetlands, Coastal Salt Marshes and Wadable Freshwater Streams in Massachusetts.* This report describes the effort to develop IBI's and the results. In summary, 60 of 164 separate IBI's created for single taxonomic groups (and sampling methods) across stressor metrics and ecological systems were deemed statistically and ecologically reliable. This report is available at http://www.mass.gov/eea/docs/dep/water/resources/a-thru-m/ibifin.pdf

When developing numeric criteria for the aquatic life use in water quality standards, the EPA has suggested that states consider designating tiers corresponding to various levels of biological condition based on the Biological Condition Gradient (BCG). Contrary to this Tiered Aquatic Life Use (TALU) design, however, the MassDEP Wetlands Program staff intends to establish criteria for aquatic life that avoid the undesirable effects of dividing a continuous environmental gradient into discrete tiers. To this end, a Continuous Aquatic Life Use or CALU is proposed whereby numeric criteria for the aquatic life use are derived by defining the acceptable range of variability around the relationship between predicted (IEI) and actual (IBI) wetland condition. Because both the IEI and the IBI yield scores that are continuous throughout their range, it is possible to create numeric criteria for biological condition based on each site's particular landscape context without creating separate tiers or classes. In addition to assessing the condition of a particular site (i.e., "meeting standards", "degraded", etc.), the CALU approach can also be used to identify sites of high-value that could be targeted for increased protection through the application of no-discharge provisions, increased buffer zone protection or other measures. Finally, the CALU analysis can support effective wetlands mitigation by establishing targets (e.g., IBI scores) for the aquatic life use and tracking progress toward meeting those targets.

In 2013 the MassDEP Wetland Program was awarded a Wetland Program Development Grant (WPDG) by the EPA to use the monitoring and assessment tools developed to date to sample 40 forested wetlands in the Chicopee River Watershed and use CAPS, IBI's and CALU to assess those sites. This work will be undertaken in 2014 to coincide with the MassDEP's five-year watershed monitoring and assessment cycle. The sampling will follow the approved Quality Assurance Project Plan (QAPP) for Forested Wetland Monitoring and Assessment: Chicopee Watershed (available at http://www.mass.gov/eea/agencies/massdep/water/watersheds/quality-assurance-project-plans-qapps.html). The CALU assessments for specific sites sampled, and the CAPs IEI values for all wetlands will be used to identify degraded and pristine areas. Individual CAPS metrics will be assessed to determine which stressors are contributing the most to site condition so that strategies for restoration or preservation (e.g., culvert improvements, impervious surface removal, removal of tidal restrictions) can be formulated. Working in collaboration with DWM's Watershed Planning Program, results of the wetland assessments will be presented in Massachusetts' biennial Integrated List of Waters report. Sampling of wetlands in the Northeast watersheds is planned for 2015.

THE MASSACHUSETTS SURFACE WATER QUALITY STANDARDS

The establishment of achievable goals for surface waters is fundamental to their restoration and protection. To this end, states adopt water quality standards that ascribe these goals in the form of beneficial uses that are assigned to specific defined waterbodies. For example waters may be designated for the support of aquatic life, recreational use, and fish and shellfish consumption. Water quality standards also specify

criteria that waterbodies must meet in order to support their assigned uses. Criteria may be expressed as numerical values that should not be exceeded in ambient water, such as the geometric mean of all *E. coli* samples shall not exceed 126 colonies per 100 mililiters (ml), or a minimum instream dissolved oxygen concentration of 5 miligrams per liter (mg/l). Alternatively, water quality standards may include narrative statements that waters shall be free from constituents in concentrations that would impair their intended uses.

The Massachusetts SWQS are found at 314 CMR 4.00 and are available on-line at http://www.mass.gov/eea/agencies/massdep/water/regulations/314-cmr-4-00-mass-surface-water-quality-standards.html. The SWQS assign all inland and coastal and marine waters to classes according to the intended beneficial uses of those waters. For example Class A waters are designated as the source of public water supplies and, where compatible with this use, should also be suitable for supporting aquatic life, recreational uses such as swimming and boating and fish consumption. Class B waters are not water supplies, but are designated for all of the other uses cited above for Class A. Finally, Class C waters should be suitable for aquatic life and recreational uses where contact with the water is incidental, such as boating and fishing, but may not be suitable for swimming, diving or water skiing. Inland waters are also subcategorized as to fishery type (cold water fishery, warm water fishery or aquatic life) based on the waterbody's natural capacity to support these resources. Massachusetts' coastal and marine waters are assigned to classes (i.e., SA, SB and SC) that distinguish shellfish harvesting and recreational uses while providing suitable habitat for wildlife, fish and other aquatic life. In any case, minimum criteria (e.g., dissolved oxygen, temperature, etc.) are specified for each class based on the most sensitive use designated to that class. Additional criteria that apply to all surface waters are also included in the SWQS.

Some waters are designated for special protection under the antidegradation provisions of the SWQS. These provisions restrict or prohibit the authorization of wastewater discharges to critical resource waters. Most notable is the Outstanding Resource Water (ORW) designation that applies to all Class A waters and certain Class B, Class SA and Class SB waters. These waters exhibit exceptional socio-economic, recreational, ecological and/or aesthetic qualities. Outstanding Resource Waters include, but are not limited to, Class A public water supplies and their bordering vegetated wetlands and vernal pools certified as such by the Massachusetts Division of Fish and Game. Other waters designated as ORWs may include those protected by special legislation, as well as selected waters found in National Parks, State Forest and Parks, or Areas of Critical Environmental Concern (ACECs).

The adoption of water quality standards is a public process and the CWA specifies that states hold public hearings at least once every three years to review and, where appropriate, revise their water quality standards. Following a public review process held in January-February 2006, the MassDEP adopted the most recent revisions to the SWQS on December 29, 2006. These were subsequently submitted to the EPA for review in January 2007, and on March 26, 2007 the EPA approved some revisions while indicating that the remaining revisions proposed by the MassDEP were still under review. In September 2007, the EPA approved an additional set of the revisions adopted in 2006.

From this brief overview it should be evident that the process of assessing surface waters (305b) and listing impairments (303d) is inextricably linked to the SWQS, as they define the uses that are to be evaluated for any given waterbody and the criteria for determining whether or not those uses are, in fact, supported. Furthermore, SWQS changes from one triennial review to the next can alter the methodology used to make assessment and listing decisions and resulting changes to that methodology would need to be documented in the program's *Consolidated Assessment and Listing Methodology*. Historically, since assessments were sequentially carried out as part of the MassDEP's rotating watershed management schedule, it is possible for more than one assessment methodology to be represented within a single integrated list reporting cycle.

GENERAL APPROACH TO ASSESSING MASSACHUSETTS' WATERS

Sources of Information

Reliable scientific data and technical information are essential for making water use assessments. It is the EPA's policy (EPA Order 5360.1 CHG 1) that any organization performing work for or on behalf of the EPA must establish a quality system to support the development, review, approval, implementation and assessment of data collection operations. To this end, the MassDEP describes its Quality System in an EPA-approved Quality Management Plan to ensure that environmental data are of known and documented quality and are suitable for their intended use. In preparing lists of impaired waters to meet Section 303(d) requirements states must consider all existing and readily available data and information. The MassDEP sequentially completes watershed assessments within the broader context of its five-year rotational watershed monitoring, assessment and management schedule. Accordingly, the MassDEP also solicits data and information from any and all potential external parties in adherence to that same rotating watershed schedule. Data and information from third parties are subject to the same documentation and validation procedures utilized for data generated by the MassDEP. In order to accept data from third parties to be used for Section 303(d) listing and other related regulatory purposes the MassDEP requires the following: 1) an appropriate QAPP including a laboratory Quality Assurance/Quality Control (QA/QC) plan; 2) use of a state certified lab (or as otherwise approved by DEP for a particular analysis); and 3) sample data, QA/QC and other pertinent sample handling information documented in a citable report.

Specific sources of information used for the assessments are cited in individual watershed assessment summary reports (see: http://www.mass.gov/eea/agencies/massdep/water/watersheds/water-quality-assessments.html). They include monitoring data reports from state and federal agencies and nongovernmental organizations (NGO), as well as reports on projects resulting from state or local grants or federally funded through CWA sections 314, 319, 104(b)3 or 604(b).

Section 314 of the CWA provided for cooperative agreements between federal, state and local entities to restore publicly owned freshwater lakes and ponds and protect them against degradation. During the late 1970s through the early 1990s diagnostic and feasibility (D&F) studies were completed for several lakes and ponds throughout Massachusetts and these were used in earlier 305(b) assessments and 303(d) listing decisions. Information from these studies continues to carry over into new assessment and listing cycles unless new monitoring information results in a change in their assessment and listing status. Likewise, information contained in the nonpoint source assessment report prepared in 1989 in accordance with the requirements of Section 319 is also reflected in 305(b) and 303(d) reporting elements unless more recent information has resulted in a modification of the original assessment.

The following generic list provides sources that are typically consulted when making watershed assessments. Note, however, that this list is not complete and individual watershed assessment documentation should be consulted for specific sources of data and related information.

State Agencies

Massachusetts Division of Marine Fisheries
Massachusetts Division of Fisheries and Wildlife
MassDEP, Drinking Water Program
MassDEP, Wetlands and Waterways Program
MassDEP, Watershed Planning Program
MassDEP, Wastewater Management Program
Massachusetts Office of Coastal Zone Management (CZM)
Massachusetts Department of Conservation and Recreation (DCR)
Massachusetts Department of Public Health (DPH)
Massachusetts Water Resources Authority (MWRA)

Federal Agencies

U.S. Geological Survey
U.S. Environmental Protection Agency
U.S. Fish and Wildlife Service
U.S. Army Corps of Engineers
National Oceanographic and Atmospheric Administration

Other Sources

Massachusetts Water Resources Research Center
Colleges, Universities and associated academic institutions
Watershed and lake associations
Citizen monitoring programs
Municipal Conservation Commissions (nonpoint source assessment)
NPDES Permit Monitoring Requirements
Municipal Facilities Plans
Environmental consultants

Consolidated Assessment and Listing Methodology (CALM)

In July, 2012, the MassDEP published the *Massachusetts Consolidated Assessment and Listing Methodology (CALM) Guidance Manual.* This manual contains a brief summary of the Massachusetts SWQS that define the goals for water quality in the state (MassDEP 2006), the requirements for assessing the quality of data to be used for CWA reporting, the methods of reviewing water quality data and information used by the analysts at the MassDEP DWM to make use assessment decisions, and the use of the EPA's ADB for consolidated reporting and the generation of the *2012 Massachusetts Integrated List of Waters.* Refer to http://www.mass.gov/eea/agencies/massdep/water/watersheds/water-quality-assessments.html to access the CALM document.

The CWA Section 305(b) water quality reporting process, embodied in the MassDEP watershed assessments and Integrated List of Waters, is an essential aspect of the Nation's water pollution control effort. It is the principal means by which the EPA, Congress, and the public evaluate existing water quality, assess progress made in maintaining and restoring water quality, and determine the extent of remaining problems. In so doing, the States report on water bodies within the context of supporting their designated uses. These uses include: aquatic life, fish consumption, drinking water, primary contact recreation, secondary contact recreation, shellfish harvesting and aesthetics. Two subclasses of aquatic life that are also designated in the standards are cold water fishery (capable of sustaining a year-round population of cold water stenothermal aquatic life, such as trout), and warm water fishery (waters that are not capable of sustaining a year-round population of cold water stenothermal aquatic life).

As explained earlier, the SWQS prescribe minimum water quality criteria to sustain the designated uses. Furthermore, these standards describe the hydrological conditions at which water quality criteria must be applied: *"For rivers and streams, the lowest flow condition at and above which aquatic life criteria must be applied is the lowest mean flow for seven consecutive days to be expected once in ten years (7Q10)…In waters where flows are regulated by dams or similar structures, the lowest flow condition at which aquatic life criteria must be applied is the flow equaled or exceeded 99% of the time on a yearly basis, or another equivalent flow agreed upon by the Department and the federal, state or private entity controlling the flow…In coastal and marine waters and for lakes and ponds, the Department will establish extreme hydrologic conditions at which aquatic life criteria must be applied on a case-by-case basis."* [314 CMR 4.03(3)].

The determination of whether or not a waterbody supports each of its designated uses is a function of the type(s), quality and quantity of available current information. While the water quality standards prescribe

minimum water quality criteria to sustain the designated uses, numerical criteria are not available for every indicator of pollution. Best available guidance in the literature may be applied in lieu of actual numerical criteria. Excursions from criteria due solely to "naturally occurring" conditions do not constitute violations of the SWQS and are not causes of use impairment.

If possible, each use, within a given segment, is individually assessed as **support** or **impaired**. When too little current data/information exist, or no reliable data are available, the use is **not assessed**. However, if there is some indication of water quality impairment, which is not "naturally-occurring", the use is identified with an "Alert Status." It is important to note that not all waters are assessed. Many small and/or unnamed rivers, lakes and estuarine areas have never been assessed; the status of their designated uses has never been reported to the EPA in the Commonwealth's Summary of Water Quality Report (305(b) Report) nor is information on these waters maintained in the ADB. These are considered **not assessed other waters**.

The MassDEP typically provides details pertaining to the assessment process and its application to specific waterbodies in individual watershed summary reports that are completed on a continuous rotating schedule and can be viewed at http://www.mass.gov/eea/agencies/massdep/water/watersheds/water-quality-assessments.html. Although the format of these reports continues to undergo revision, their purpose is to present, for each segment or AU in the watershed, a determination with regard to whether or not individual designated uses are supported. These assessment summaries are a useful means for conveying what is known about the status of the water resources in each watershed and to make the assessment and listing process more transparent to the EPA and the public. As such, the assessment documentation is also considered a fundamental element of Massachusetts' submittal to the EPA under Section 305(b) of the CWA. Irrespective of how states choose to report on the status of their waters, however, the EPA encourages states to also store assessment decisions in an electronic database designed for that purpose. For earlier listing cycles, up to and including 2002, the MassDEP stored assessments in EPA's Water Body System (WBS). For each segment in the WBS a use-support determination was made and, whenever possible, causes and sources of impairment were specified.

The EPA discontinued its support of the WBS after the 2002 listing cycle. Instead, the newly developed ADB was introduced as the preferred database application for tracking water quality assessment data, including use attainment, and causes and sources of impairment. The ADB was designed to improve the quality and consistency of water quality assessment reporting, improve water quality data analysis, and reduce the burden of preparing reports under sections 305(b), 303(d), 314 and 319 of the CWA. With the submittal to the EPA of the Final 2010 Integrated List, the MassDEP completed its transition from the use of the WBS to full implementation of the ADB.

It should be noted that the ADB and its precursor databases never contained a file for every surface water or segment thereof in Massachusetts. Rather, waters represented are only those for which assessments of one or more designated uses were actually completed at one time in the past. As assessments are carried out in new waters, these will be added to the ADB resulting in greater representation of Massachusetts' surface waters in future versions of the Integrated List. The MassDEP acknowledges that with the new multi-part listing format, all surface waters could be categorized whether or not they have ever been assessed. However, the time and resources are currently not available to add all of the surface waters in Massachusetts to the ADB. Therefore, it is acknowledged that many of Massachusetts' surface waters that have never been assessed are missing from the 2014 Integrated List. By definition, however, they are all Category 3 waters.

DEVELOPMENT OF THE 2014 INTEGRATED LIST

The EPA's guidance for the development of the 2014 Integrated List was outlined in a memorandum, dated September 3, 2013, from Denise Keehner, Director of the EPA's Office of Wetlands, Oceans and Watersheds to the EPA regional Water Division directors. This guidance recommends that states prepare their 2014 Integrated List submissions consistent with previous EPA guidance, such as that issued for

2006 through 2012. A summary of all EPA Section 303(d) program guidance can be found on-line at http://water.epa.gov/lawsregs/lawsguidance/cwa/tmdl/guidance.cfm.

The final version of the *Massachusetts Year 2012 Integrated List of Waters* was submitted to the EPA on March 27, 2013 and the 303(d) List was approved on May 2, 2013. The 2012 submittal, along with the EPA guidance described above, served as the basis for the development of the 2014 Integrated List. Since the EPA guidance continues to call for best efforts to provide on-time Integrated Report submittals, a decision was made to submit the 2014 Integrated List as close to the April 1, 2014 deadline as possible, even if there were relatively few changes from the 2012 List. Since the completion of the 2012 reporting cycle, the MassDEP has focused on improving the process by which watershed assessments are carried out and making significant revisions to its Consolidated Assessment and Listing Methodology (CALM) for the 2016 listing cycle and beyond. The 2016 CALM will specify how new kinds of data and information, such as long-term dissolved oxygen and temperature data, will be used to make assessments in the future. Other enhancements will include clarification on the use of response indicators when assessing impairments associated with nutrients. Meanwhile, TMDL approvals and new DPH fish consumption advisories issued since the completion of the 2012 Integrated List, as well as comments received during the public review period, comprise the new information supporting the 2014 listing decisions. A complete list of the MassDEP watershed assessment reports embodied in the 2014 categorization of waters can be found in the Bibliography.

List Categories 1 - 4

Integrated List categories 1-3 include those waters that are either unimpaired or not assessed with respect to their attainment of designated uses. Often insufficient data and information exist to assess all designated uses of any particular waterbody or segment. Furthermore, no Massachusetts waters are listed in Category 1 because a statewide DPH advisory pertaining to the consumption of fish precludes any waters from being in full support of the fish consumption use (see Fish Consumption Advisories later in this section). Waters listed in Category 2 were found to support the uses for which they were assessed, but other designated uses were not assessed. Furthermore, the Category 2 list does not contain every waterbody or segment (i.e., AU) for which one or more uses are supported. Many waters appearing in categories 4 and 5, while impaired for some uses (see below), are supporting other uses. Due to space constraints, however, supported uses are not presented for those impaired waters. Rather, individual watershed assessments should be consulted for a complete report on the support status of each designated use for every AU.

Category 3 contains those waters for which insufficient or no information was available to assess any uses. Waters for which assessments were determined to be insufficient for 303(d) listing were also included in Category 3.

Waters exhibiting impairment for one or more uses are placed in either Category 4 (impaired, but not requiring TMDLs) or Category 5 (impaired, and requiring one or more TMDLs) according to the EPA guidance. Category 4 is further divided into three sub-categories – 4a, 4b and 4c – depending upon the reason that TMDLs are not needed. Category 4a includes waters for which the required TMDL(s) have already been completed and approved by the EPA. However, since MassDEP chooses to list each segment in only one category, waters that have an approved TMDL for some pollutants, but not others, remain in Category 5 until TMDLs are approved for all of the pollutants impairing those waters. The EPA tracks the states' progress with completing TMDLs in its Assessment and Total Maximum Daily Load Tracking and Implementation System (ATTAINS) which can be accessed at http://www.epa.gov/waters/ir. This system assigns a unique identification number to each approved TMDL which is included for reference in categories 4a and 5 of the 2012 List. All of the TMDLs approved by the EPA for Massachusetts' waters through July 2013 are presented in the table below, and full citations are provided in the bibliography. The individual TMDL documents, themselves, can be accessed on-line at http://www.mass.gov/eea/agencies/massdep/water/watersheds/total-maximum-daily-loads-tmdls.html.

List of TMDLs Approved by the EPA for Massachusetts' Waters

EPA TMDL Number	TMDL Report Title	Approval Date
5, 6	Total Maximum Daily Loads of Phosphorus for Selected Connecticut Basin Lakes *(CN 112.0)*	April 12, 2002
175, 360, 361, 379	Total Maximum Daily Loads of Phosphorus for Selected Northern Blackstone Lakes *(CN 70.1)*	May 2, 2002
444	Total Maximum Daily Loads of Phosphorus for Lake Quinsigamond and Flint Pond *(CN 115.0)*	June 28, 2002
498, 550	Total Maximum Daily Loads of Phosphorus for Selected Northern Blackstone Lakes *(CN 70.1)*	May 2, 2002
644	Total Maximum Daily Loads of Phosphorus for Lake Quinsigamond and Flint Pond *(CN 115.0)*	June 28, 2002
651, 653	Total Maximum Daily Loads of Phosphorus for Selected Connecticut Basin Lakes *(CN 112.0)*	April 12, 2002
671	Total Maximum Daily Load of Phosphorus for Leesville Pond *(CN 117.0)*	June 28, 2002
675	Total Maximum Daily Loads of Phosphorus for Selected Connecticut Basin Lakes *(CN 112.0)*	April 12, 2002
722	Total Maximum Daily Loads of Phosphorus for Selected Chicopee Basin Lakes *(CN 118.0)*	April 12, 2002
726	Total Maximum Daily Loads of Phosphorus for Selected Connecticut Basin Lakes *(CN 112.0)*	April 12, 2002
804, 862, 938	Total Maximum Daily Loads of Phosphorus for Selected Northern Blackstone Lakes *(CN 70.1)*	May 2, 2002
1332	Total Maximum Daily Loads of Phosphorus for Selected Chicopee Basin Lakes *(CN 118.0)*	April 12, 2002
2319	Total Maximum Daily Loads of Phosphorus for Salisbury Pond *(CN 114.0)*	June 28, 2002
2323	Total Maximum Daily Loads of Phosphorus for Indian Lake *(CN 116.0)*	June 28, 2002
2353	Total Maximum Daily Loads of Phosphorus for Lake Boon *(CN 119.0)*	June 28, 2002
2354-2371, 2373-2375	Total Maximum Daily Loads of Phosphorus for Selected French Basin Lakes *(CN 110.0)*	July 12, 2002
2377, 2382, 2385, 2389-2392	Total Maximum Daily Loads of Phosphorus for Selected Northern Blackstone Lakes *(CN 70.1)*	May 2, 2002
2586	Total Maximum Daily Loads of Bacteria for Little Harbor *(CN 120.0)*	September 12, 2002
2587	Total Maximum Daily Loads of Bacteria for the Shawsheen River Basin *(CN 122.0)*	September 12, 2002
2592	Total Maximum Daily Loads of Bacteria for Neponset River Basin *(CN 121.0)*	June 21, 2002
2615	Bare Hill Pond, Harvard, MA. (MA81007) TMDL *(CN 14.0)*	November 2, 1999
3626, 3629-3631, 3633	Total Maximum Daily Loads of Phosphorus for Selected Chicopee Basin Lakes *(CN 118.0)*	April 12, 2002
4115, 4117, 4118, 4123-4125, 4127, 4128, 4133, 4134, 4136, 4137, 4140, 4141, 4144, 4145	Total Maximum Daily Loads of Phosphorus for Selected Millers Basin Lakes *(CN 123.2)*	February 5, 2003
22512	Bacteria TMDL for Muddy Creek, Chatham and Harwich, Massachusetts. *(CN 208.0)*	April 28, 2005
22513	Bacteria Total Maximum Daily Load for Frost Fish Creek, Chatham, Massachusetts. *(CN 207.0)*	April 28, 2005
30341	Pleasant Bay System Total Maximum Daily Loads for Total Nitrogen *(CN 244.0)*	October 24, 2007
30702	Bacteria TMDL for Kickamuit River. *(CN 285.0)*	September 29, 2006
32364-32366, 32370-32374, 32376, 32377, 32379-32383	Total Maximum Daily Loads for Pathogens within the Charles River Watershed *(CN 156.0)*	May 22, 2007
32532, 32534, 32535, 32537, 32638	Great, Green and Bournes Pond Embayment Systems Total Maximum Daily Loads for Total Nitrogen *(CN 181.0)*	July 18, 2007

33780, 33781, 33786-33799	Pleasant Bay System Total Maximum Daily Loads for Total Nitrogen *(CN 244.0)*	October 24, 2007
33811-33815	Nitrogen TMDL Report for the Quashnet River, Hamblin Pond, Little River, Jehu Pond, and Great River in the Waquoit Bay System *(CN 218.0)*	November 7, 2007
33826	Total Maximum Daily Load for Nutrients in the Lower Charles River Basin, Massachusetts *(CN 301.0)*	October 17, 2007
33846	Total Maximum Daily Loads of Total Phosphorus for Quaboag & Quacumquasit Ponds *(CN 216.1)*	November 28, 2007
33858	Centerville River – East Bay System Total Maximum Daily Loads for Total Nitrogen *(CN 248.0)*	December 18, 2007
33880	Northeast Regional Mercury Total Maximum Daily Load *(MassDEP CN 376.0)*	December 20, 2007
33965-33969	Popponesset Bay Total Maximum Daily Loads for Total Nitrogen *(CN 217.0)*	January 22, 2008
33988-33993	Three Bays System Total Maximum Daily Loads for Total Nitrogen *(CN 242.0)*	February 13, 2008
34009	Little Pond Embayment System Total Maximum Daily Loads for Total Nitrogen *(CN 246.0)*	March 3, 2008
34284, 34328, 34331, 34332	West Falmouth Harbor Embayment System Total Maximum Daily Loads for Total Nitrogen *(CN 243.0)*	May 5, 2008
34345	Oyster Pond Embayment System Total Maximum Daily Loads for Total Nitrogen *(CN 245.0)*	May 5, 2008
34917, 34918	West Falmouth Harbor Embayment System Total Maximum Daily Loads for Total Nitrogen *(CN 243.0)*	May 5, 2008
35069	Phinneys Harbor Embayment System Total Maximum Daily Loads for Total Nitrogen *(CN 247.0)*	February 5, 2008
35085-35088, 35096, 35097	Bacteria TMDL for the Palmer River Basin *(CN 182.0)*	September 22, 2004
35103-35109	Assabet River Total Maximum Daily Load for Total Phosphorus *(CN 201.0)*	September 23, 2004
36011, 36012	Nantucket Harbor Embayment System Total Maximum Daily Loads for Total Nitrogen *(CN 249.0)*	May 12, 2009
36170-36172	Pathogen Total Maximum Daily Load for the Buzzards Bay Watershed *(CN 251.1)*	May 15, 2009
36219-36222, 36228-36231	Stage Harbor/Oyster Pond, Sulphur Springs/Bucks Creek, Taylors Pond/Mill Creek Total Maximum Daily Load Re-evaluations for Total Nitrogen *(CN 206.1)*	June 22, 2009
36582-36585	Pathogen Total Maximum Daily Load for the Three Bays Watershed, Barnstable, MA *(CN 309.0)*	August 28, 2009
36771-36772	Pathogen Total Maximum Daily Load for the Cape Cod Watershed *(CN 252.0)*	August 28, 2009
38912, 38914	Final Total Maximum Daily Load for Phosphorus for White Island Pond, Plymouth/Wareham, MA. *(CN 330.2)*	July 20, 2010
38903-38909	Final Pathogen TMDL for the Narragansett/Mt. Hope Bay Watershed *(CN 351.0)*	July 21, 2010
40307-40310	Final Pathogen TMDL for the Taunton River Watershed *(CN 256.0)*	June 16, 2011
40317-40319	Total Maximum Daily Load for Nutrients in the Upper/Middle Charles River, Massachusetts. *(CN 272.0)*	June 10, 2011
42353-42369	Addendum: Final Pathogen TMDL for the Cape Cod Watershed. *(CN 252.5)*	August 28, 2012
42392-42411	Northeast Regional Mercury Total Maximum Daily Load Addendum for Massachusetts. *(CN 377.0)*	September 20, 2012
50120-50123	Final Pathogen TMDL for the North Coastal Watershed. *(CN 155.0)*	October 25, 2012
54840, 54842, 54860, 54861	Addendum: Final Total Maximum Daily Loads of Bacteria for Neponset River Basin. *(CN 121.5)*	July 3, 2013

Category 4b was proposed by the EPA to list waters for which pollution control measures other than TMDLs are expected to attain all designated uses. Massachusetts' attempt to use this category in 2004 to list lakes and ponds impaired solely by mercury deriving from atmospheric deposition was disapproved by the EPA (see Fish Consumption Advisories later in this section). Massachusetts is not including any waters in Category 4b for the 2014 listing cycle.

The CWA distinguishes between "pollutants" such as nutrients, metals, pesticides, solids and pathogens that all require TMDLs and "pollution" such as low flow, habitat alterations or non-native species infestations that do not require TMDLs. Non-pollutant stressors are marked with an asterisk in the Integrated List to distinguish them from pollutants requiring TMDLs. Waterbodies impaired solely by "pollution" were included in Category 4c unless there are also TMDLs approved for them, in which case they appear in Category 4a.

When developing TMDLs and pollution control strategies it is often more efficient to focus limited resources collectively on waters that exhibit the same types of impairments. For example, the Northeast Regional Mercury TMDL (see Waters Impaired by Mercury) establishes the mercury reduction goal and management strategy for multiple waterbodies throughout New England that are impaired by the atmospheric deposition of mercury. In addition, the MassDEP has worked collaboratively with the EPA to derive "bundled" TMDLs and cleanup plans at the watershed scale for waters impaired by bacteria. These area-wide TMDLs were designed such that additional waters, found to be similarly impaired subsequent to the approval of the TMDLs, could, if applicable, be proposed for coverage under those TMDLs.

List Category 5 – The 303(d) List of Impaired Waters

While the EPA guidance provides the overall framework for a five-part list of waters, the development, submittal and review of Category 5 remains subject to the prevailing regulation governing the implementation of Section 303(d) of the CWA. This regulation requires states to identify and list those waterbodies that are not expected to meet SWQS after the implementation of technology-based controls and, as such, require the development of TMDLs. States must include on the lists the specific cause(s) of the impairment (if known). Finally, guidance pertaining to Section 303(d) is clear with respect to the removal of waterbodies from the list. Waterbodies can be removed from Category 5 when TMDLs are approved by the EPA for all pollutants impairing that waterbody (note that these waters are now listed in Category 4a until it is determined that they are no longer impaired). In addition, there are some instances when a previously listed waterbody can be removed from the 303(d) list without calculating a TMDL. These are: 1) when a new assessment reveals that the waterbody is now meeting all applicable water quality standards or is expected to meet those standards in a reasonable timeframe as the result of implementation of required pollution controls; and 2) when, upon re-examination, the original basis for listing is determined to be flawed.

In preparing 303(d) lists states are required to assemble and evaluate all existing and readily available data, including but not limited to the most recent 305(b) report and 319 nonpoint source assessment report, dilution calculations or predictive simulation models and reports by government agencies, members of the public, or academic institutions. When conducting individual watershed assessments the MassDEP relies on these and additional information sources as described earlier in this document. The development of the 2014 Category 5 (i.e., 303d) list began with a review of Category 5 waters contained in the 2012 List. To these were added previously unlisted waterbodies that were determined to be impaired for one or more uses due to the presence of pollutants. Waters listed in Category 5 on the 2012 303(d) List, for which no new assessments were made, were retained in Category 5 of the 2014 Integrated List.

Waters were listed in Category 5 if they were identified as impaired (i.e., not supporting one or more intended use), the impairment was related to the presence of one or more pollutants, and the source of those pollutants was not considered to be natural. In most instances, finding an impaired waterbody during the watershed assessment process led directly to its assignment to Category 5. Nonetheless, some differences do exist between the 305(b) assessments and the 303(d) list. For example, segments for which incomplete or anecdotal information suggests the possibility of use impairment are assigned "alert status" during the watershed assessment process so that they may be targeted for monitoring and follow-up assessments during the next round of the watershed cycle. However, these segments are not listed as impaired on the 303(d) list because the MassDEP believes there is insufficient data to support listing decisions.

Waters Impaired by Nutrients

The Massachusetts SWQS do not include numeric criteria for nitrogen and phosphorus. Instead, narrative criteria specify that waters "shall be free from nutrients in concentrations that would cause or contribute to impairment of existing or designated uses." Nonetheless, the lack of numeric criteria does not preclude the identification of nutrient-related impairments and MassDEP analysts rely on a variety of indicators of nutrient enrichment when assessing water quality conditions. Biological "response" indicators of nutrient-related impacts include the presence of nuisance growths of algae or other aquatic plants, or even changes in benthic macroinvertebrate community structure. Excessive primary productivity may also be evidenced by diel fluctuations in physico-chemical analytes, such as pH and dissolved oxygen. When available, phosphorus and nitrogen data are screened against 1986 EPA recommended *Gold Book* criteria, but nutrient concentrations, alone, are not currently utilized to determine impairment due to nutrient enrichment. Elevated nutrient levels may serve to corroborate the presence of "response" indicators, and may help to identify potential sources (e.g., release of phosphorus from anoxic sediments). Nutrient enrichment is not considered to be problematic when "response" indicators, as described above, are absent even if nutrient concentrations exceed their recommended *Gold Book* criteria. However, when one or more "response" indicators suggest that nutrient enrichment is problematic and nutrient concentration data exceed the EPA criterion, that nutrient is also identified as a cause of impairment. The following information pertaining to how the MassDEP identifies nutrient impairments in rivers, lakes and estuaries is adapted from the 2012 CALM document which reflects the methodology employed for the assessments covered by the 2014 Integrated Report.

Rivers: The aquatic life use is supported if observable nuisance growths of algae (e.g., blooms, algal mats, etc.) or macrophytes (particularly non-rooted forms) are absent or limited during the summer index period. When excessive growths are observed changes in physico-chemical data, such as: dissolved oxygen (concentration and supersaturation), pH, and chlorophyll are also considered. If, taken together, these indicator data suggest high productivity/nutrient enrichment the aquatic life use is assessed as impaired.

Lakes: Indicators of nutrient enrichment in lakes typically include the occurrence of planktonic blooms (particularly cyanobacteria), extensive cover of non-rooted aquatic macrophytes, such as duckweed or watermeal, decreased Secchi disk transparency, oxygen depletion and/or supersaturation, elevated pH values and elevated chlorophyll concentrations. The frequent and persistent presence of one or more of these indicators typically results in a decision that the aquatic life use is impaired.

Estuaries: MassDEP analysts currently utilize the areal coverage of seagrasses or other submerged aquatic vegetation and, where applicable, the habitat health indicator analysis developed for the Massachusetts Estuaries Project (MEP), to identify nutrient impairments in estuaries and coastal embayments. Assessment decisions are based on whether or not the eelgrass beds within the waterbody segment area are stable or are diminishing. For embayments in southeastern Massachusetts the MEP has generated a significant amount of enrichment indicator data based on a weight-of-evidence approach that includes several "response" variables (e.g., eelgrass, infauna, macroalgae, chlorophyll, dissolved oxygen, Secchi disk and total nitrogen). Since this project is intended to develop site-specific nutrient (nitrogen) thresholds for these coastal systems, their overall assessments of habitat health are utilized to make aquatic life use attainment decisions.

Biological Assessments

When determining the extent to which waterbodies are supporting aquatic life, as designated in the Water Quality Standards, the MassDEP often relies on the results of biological surveys, with or without supplemental physico-chemical analyses. Macroinvertebrate, fish and periphyton (i.e., attached algae) communities, often in combination, are typically used for making this assessment. While these community assessments are invaluable for determining use impairment, they often do not provide insight pertaining to the cause or source of the apparent disturbance and, therefore, may not implicate "pollution" or "pollutants" as contributing factors. Nonetheless, the EPA guidance is clear with regard to the use of

biological assessments for listing in Category 5 and, in most instances, the MassDEP lists those waters that exhibit impaired aquatic communities.

The MassDEP prefers to make aquatic life use determinations based on an assessment of more than one community, and waters exhibiting impaired fish and invertebrate communities, for example, are strong candidates for listing in Category 5. Nonetheless, an assessment based on a single community may also result in a decision that the aquatic life use is not supported. This depends, in part, on whether the assessment relies on a screening level of effort or a more intensive analysis. For example, the EPA Rapid Biomonitoring Protocol (RBP) II is a screening-level investigation that relies on family-level macroinvertebrate community data to place a given site in one of three impairment categories. Determinations of "no impairment" or "severe impairment" with the RBP II are generally considered definitive and waters in the latter category are included on the 303(d) list. However, RBP II assessments of many waterbodies fall between these extremes into a "moderately impaired" category that encompasses a wide range in the degree of impairment exhibited by the macroinvertebrate community. In these instances, the MassDEP relies on the RBP III assessment to provide a finer level of resolution to the analysis. The RBP III entails taxonomic identification to the genus and species level and adds a fourth impairment category (i.e., "slightly impaired"). The MassDEP has established the RBP III analysis as a minimum requirement for purposes of listing waters in Category 5 unless the RBP II assessment is definitive as discussed above, or unless the review of information on the condition of additional communities, such as fish or benthic algae, results in a conclusive assessment.

Fish Consumption Advisories

The EPA provides guidance pertaining to the use of fish and shellfish consumption advisories when making 303(d) listing decisions. In short, the EPA considers a fish-consumption advisory as evidence that the fish consumption use is not supported when the advisory is based on actual fish tissue data and those data are collected from the specific waterbody in question. To date, the DPH has issued advisories pertaining to the presence of mercury, PCBs, PAHs, DDT and other contaminants in freshwater fish. A list of DPH site-specific fish consumption advisories can be found at http://www.mass.gov/eohhs/docs/dph/environmental/exposure/fish-consumption-advisory-list.pdf. Waters subject to site-specific advisories, based on actual fish tissue analyses from those waters, are included on the 303(d) list. In 1994, the DPH issued a statewide consumption advisory due to widespread mercury contamination found in freshwater fish. This advisory was revised in 2001. Because the statewide advisory encompasses all fresh waters, these waters cannot be considered as "fully supporting" the fish consumption use.

Waters Impaired by Mercury

Waters covered by the DPH statewide advisory, as well as site-specific mercury advisories, may be impaired by local sources of mercury or by atmospheric deposition from near- and far-field sources, or both. Massachusetts, along with other northeastern states, has taken a lead role in reducing mercury pollution despite the inherent complexity of the problem. For a comprehensive summary of Massachusetts' experience with assessing and managing mercury contamination within the context of similar efforts at regional, federal and international levels, see Harvey and Smith (2004).

In 2004 the MassDEP noticed for public review and comment a document entitled *A TMDL Alternative Regulatory Pathway Proposal for the Management of Selected Mercury-Impaired Waters (CN 176.0).* This proposal, prepared as a supplement to the *Massachusetts Year 2004 Integrated List of Waters*, asserted that a combination of federal, regional and state controls on mercury was the most effective means of remediating the mercury impairment to air-impacted waters and that Massachusetts was effectively implementing a comprehensive plan to address in-state mercury sources. Therefore, the establishment of waterbody-specific TMDLs using the traditional approach was not considered to be a wise use of resources, and would not effectively address the problem. Thus, 90 lakes and ponds impaired solely by the atmospheric deposition of mercury were removed from Category 5 (i.e., the 303d list) and placed in Category 4b (i.e., impaired, but not requiring a TMDL) of the *Massachusetts Year 2004*

Integrated List of Waters. In June, 2006 the EPA partially approved and partially disapproved the *Massachusetts 2004 303(d) List of Impaired Waters* (i.e., Category 5 of the Integrated List of Waters). Specifically, the EPA disapproved Massachusetts' decision not to list the lakes and ponds impaired by atmospheric deposition as outlined in the alternative pathway document. In their review document the EPA indicated their intent, following public review and comment, to add the 90 lakes and ponds to the Massachusetts 303(d) list as impaired by mercury. As a result, the use of Category 4b was discontinued and all waters for which site-specific mercury health advisories were in force appeared in Category 5 of the Massachusetts Year 2006 Integrated List of Waters.

With the return of the lakes and ponds impaired solely by the atmospheric deposition of mercury to the 303(d) list, the MassDEP embarked on a collaborative effort with the five other New England states, New York State and the New England Interstate Water Pollution Control Commission (NEIWPCC) to develop a regional TMDL for mercury. This effort resulted in a strategy for reducing mercury concentrations in fish from Northeast waterbodies so that water quality standards can be met. The strategy calls for mercury reductions at sources within the Northeast region, in states outside of the region and from outside of the United States. In the Northeast, the majority of mercury pollution derives from atmospheric deposition. Therefore, the regional TMDL is based primarily on reducing atmospheric mercury by lowering anthropogenic mercury emissions. The *Northeast Regional Mercury Total Maximum Daily Load* can be accessed at http://www.mass.gov/eea/agencies/massdep/water/watersheds/total-maximum-daily-loads-tmdls.html#multis. Following a public information meeting on April 11, 2007 and subsequent 60-day public review period, the regional mercury TMDL was submitted to the EPA on October 24, 2007. The EPA approved the TMDL on December 20, 2007, and the affected lakes and ponds were moved to Category 4a (i.e., "waterbody impaired, but requisite TMDL is completed and approved") of the 2008 and subsequent lists unless they exhibited additional impairments. Waters for which the DPH mercury advisories have been issued since the TMDL approval date are considered case-by-case for coverage under the Northeast Regional Mercury TMDL.

Predictive Models and Evaluated Information

The EPA guidelines specify the kinds of data and information that should be used when making decisions to list waters in Category 5, and this information is not restricted to direct observations (i.e., monitoring data). Rather, waters should be included in Category 5 if evaluations such as dilution calculations or predictive simulation models forecast non-attainment of water quality standards. During the 1970s and 1980s the MassDEP used steady-state, low-flow stream models to calculate waste load allocations (WLA) for point discharges. Aimed primarily at reducing instream biochemical oxygen demand (BOD) and ammonia loads, the WLA were adopted in 303(e) basin plans and incorporated in individual NPDES wastewater discharge permits. As a result, secondary or advanced waste treatment were implemented where necessary across Massachusetts, although occasional reviews are still needed to assess the adequacy of existing treatment in light of anticipated increases in wastewater flows. Because of the complex and site-specific nature of remaining water quality problems (e.g., nutrients, toxicants, etc.) predictive models have limited value in identifying impaired waters. In fact most modeling is now carried out for waters where impairments have already been confirmed by actual water quality or biomonitoring data. Nonetheless, predictive models continue to be utilized in combination with actual field data to fully assess water quality conditions and to derive acceptable pollutant loadings from point and nonpoint sources. Model results are considered in the 303(d) listing process in cases where those models forecast unconfirmed water quality problems. For example, when making assessment and listing decisions waters subjected to combined sewer overflows (CSO) are projected to violate standards even though confirmatory field data may be unavailable.

Shared Waters

The EPA encourages states with shared waterbodies to collaborate with one another in the development of their Integrated Lists in an attempt to make assessments for those waters as consistent as possible. Many factors can contribute to discrepancies in the use attainment determinations rendered by neighboring states for the same waters. States may vary with respect to the specific goals set forth for those waters in their respective SWQS. Furthermore, differing Assessment and Listing Methodologies, or even asynchronous

rotating watershed assessment schedules may lead to assessment and listing inconsistencies between states. Prior to making individual watershed assessments the MassDEP attempts to gather all existing and readily available data and information from as many sources as possible. This includes reviewing the most recent 305(b) reports and other applicable data and information from adjacent states. Nonetheless, discrepancies often do exist for the reasons cited above.

Prioritizing Waters for TMDL Development

A key component of the 303(d) listing process is establishing timelines for TMDL development. It is recommended in EPA guidance "that States develop a schedule for establishing TMDLs as expeditiously as practicable." More specifically, states must identify which TMDLs will be developed in each of the two years leading up to the next listing (i.e., 2016), and the approximate number of TMDLs to be derived for each year thereafter. Furthermore, "States need not specifically identify each TMDL as high, medium or low priority. Instead the schedule itself can reflect the State's priority ranking." The TMDL schedule is intended to communicate the State's priorities to the public and the EPA and to assist with the allocation of resources to the TMDL development effort. The schedule is not subject to approval by the EPA.

A review of recent 303(d) list submittals will reveal that the major causes of surface water impairment in Massachusetts are ***bacteria*** and ***excess nutrients***. For this reason the MassDEP continues to place a high priority on developing and implementing TMDLs for these pollutants, and this is implicit in the TMDL schedule. During FY2015 – FY2016 the MassDEP will focus on several TMDLs and related projects that have been assigned high priority. These projects are tabulated and summarized in the table below. Since many of these projects carry over from year to year, detailed schedules for beyond FY2016 cannot be developed at this time. It should be noted that the ability to finalize TMDL documents is highly dependent upon the availability of both internal and external resources, such as staffing and funding.

Total Maximum Daily Loads (TMDLs) scheduled by the MassDEP for development during FY2015 – FY2016

Project	TMDL Type[1]	TMDL Count[2]	Public Mtg?	Draft Tech Report[3]	Final Tech Report[3]	Draft TMDL	Projected EPA Approval of Final TMDL
Eastern Watersheds – Bacteria and Nutrient TMDLs							
South Coastal	B	21	yes	N/A	N/A	Completed	Approved by EPA[4]
Nashua River TMDL	TP	3	yes	N/A	N/A	Completed	TBD
Ten Mile River	B	5	no	N/A	N/A	To be completed	TBD
Boston Harbor	B	34	yes	N/A	N/A	Completed	FY-16
Islands	B	15	yes	N/A	N/A	Completed	TBD
Merrimack River	B	22	yes	N/A	N/A	Completed	TBD
Ipswich River	B	9	yes	N/A	N/A	Completed	TBD
Parker River	B	10	yes	N/A	N/A	Completed	TBD
Blackstone	B	10	yes	N/A	N/A	Completed	TBD
Nashua	B	12	yes	N/A	N/A	Completed	TBD
SuAsCo	B	13	yes	N/A	N/A	Completed	TBD
Total		154					

Massachusetts Estuaries Projects (MEP)							
Edgartown Great Pond, Edgartown	TN	1	yes	Completed	Completed	Completed	Approved by EPA[4]
Lewis Bay, Barnstable, Yarmouth	TN	10	yes	Completed	Completed	Completed	Approved by EPA[4]
Madaget and Long Ponds, Nantucket	TN	2	yes	Completed	Completed	Completed	FY-15
Sengekontacket Pond, Oak Bluffs	TN	2	yes	Completed	Completed	Completed	FY-15
Lagoon Pond, Oak Bluffs	TN	2	yes	Completed	Completed	Completed	FY-15
Farm Pond, Oak Bluffs	TN	1	yes	Completed	Completed	Completed	FY-15
Allens, Wynchmere, Saquatucket Harbors, Harwich	TN	6	no	Completed	Completed	Completed	FY-16
Herring River, Harwich	TN	5	no	Completed	Completed	Completed	FY-16
Bass River,Yarmouth, Dennis	TN	9	no	Completed	Completed	In progress	TBD
Slocums & Little Rivers, Dartmouth	TN	2	no	Completed	Completed	Completed	FY-16
Swan Pond, Dennis	TN	3	no	Completed	Completed	In progress	TBD
Westport Rivers, Westport	TN	5	no	Completed	Completed	In progress	FY-16
Fiddlers Cove/Rands Harbor, Falmouth	TN	2	no	Completed	Completed	In progress	FY-16
Parkers River, Yarmouth	TN	4	no	Completed	Completed	In progress	TBD
Waquoit Bay/Eel River, Falmouth, Mashpee	TN	5	no	Completed	Completed	In progress	TBD
Quisset Harbor, Falmouth	TN	2	no	Completed	Completed	In progress	FY-16
Total		61					
Western Watersheds – Bacteria TMDLs							
Connecticut	B	9	no	N/A	N/A	To be completed	TBD
Deerfield	B	3	no	N/A	N/A	To be completed	TBD
Hoosic	B	6	no	N/A	N/A	To be completed	TBD
Housatonic	B	6	no	N/A	N/A	To be completed	TBD
Westfield	B	3	no	N/A	N/A	To be completed	TBD
Chicopee	B	8	no	N/A	N/A	To be completed	TBD
F&Q	B	6	no	N/A	N/A	To be completed	TBD
Millers	B	9	no	N/A	N/A	To be completed	TBD
Total		50					

Note: footnotes appear on next page

[1] B = Bacteria TMDL
TP = Total Phosphorus TMDL
TN = Total Nitrogen TMDL

[2] Estimated counts – may be subject to change

[3] Applies to Massachusetts Estuaries Program (MEP) projects only

[4] The approval of these TMDLs will be reflected in changes to the Integrated List for the 2016 reporting cycle

Related activities:

Taunton Watershed – USGS study of *Nutrient and Sediment Concentrations, Yields, and Loads in Impaired Streams Rivers in the Taunton River Basin, Massachusetts, 1997–2008 By Jeffrey R. Barbaro and Jason R. Sorenson* http://pubs.usgs.gov/sir/2012/5277/

Merrimack Watershed – Lower Merrimack River Watershed Assessment Study, US Army Corps of Engineers, New England District, Phase I, http://www.nae.usace.army.mil/Missions/ProjectsTopics/LowerMerrimack.aspx. A Phase III of the Lower Merrimack was initiated in 2012.

Bacteria TMDLs

In 2006, MassDEP worked closely with the EPA Region 1 to develop "bundled" bacteria clean up plans for all 27 of Massachusetts' major watersheds. Although the goal was to complete half those TMDLs in each of 2006 and 2007, they were delayed because of a court decision in Washington, DC (on an unrelated project) that necessitated a major revision to the original approach. Since 2007, MassDEP has received the EPA's approval of watershed-wide bacteria TMDLs for the Charles and Taunton river watersheds and the Buzzards Bay, Cape Cod, Three Bays (Barnstable), Mount Hope/Narragansett Bay and North Shore coastal drainage systems. The plan for FY2014 through FY2016 is to continue to work, as resources allow, toward the completion of bacteria TMDLs for selected watersheds in the eastern half of Massachusetts. TMDLs are in various stages of development for 151 segments in the following watersheds:

Ten Mile	Boston Harbor	Islands	Merrimack
Ipswich	Parker	Blackstone	Nashua
SuAsCo			

Bacteria TMDLs for the watersheds in the western half of the state (approximately 50 segments) will be targeted for completion in future years.

The Massachusetts Estuaries Project (MEP)

The MassDEP continues to derive TMDLs for nutrient-impaired coastal embayments in southeastern Massachusetts through collaboration with the School of Marine Science and Technology (SMAST) at UMass-Dartmouth (UMD) and several municipalities that have been targeted for this project. This effort, referred to as the MEP, was initiated in 2001 to determine existing nutrient loads and to assist in the evaluation of future nutrient load scenarios for 89 estuaries located in 32 coastal communities. A TMDL for nitrogen was to be established for each waterbody, in accordance with MassDEP and EPA requirements. In 2009, the number of estuaries to be included in the MEP was reduced to 70 due to a lack of local matching funds and/or other project delays.

A linked-model is utilized to quantify nitrogen inputs to targeted bays and estuaries and to develop the TMDLs. The TMDLs, in turn, form the basis of sound wastewater and watershed management and are implemented through the formulation of Comprehensive Wastewater Management Plans (CWMP). Comprehensive wastewater management planning is a locally managed, community-wide process that evaluates current and future wastewater needs, compares alternative solutions, and selects a final plan

based on cost-effectiveness and environmental results. The CWMP is a key step toward implementation of TMDLs for nitrogen in southeastern Massachusetts estuaries and many towns are currently in various stages of this planning process.

To date, a total of 75 individual nitrogen TMDLs for waters in the Buzzards Bay and Cape Cod coastal drainage systems and representing 23 of the 70 targeted MEP estuaries have been approved by the EPA. Technical evaluations have been completed for another 36 embayment systems and approximately 80 additional nitrogen TMDLs are either drafted or in preparation. Subject to the availability of state funding and personnel resources, MassDEP will continue to assess nutrient-impaired coastal waters and develop nitrogen TMDLs for priority embayments in southeastern Massachusetts during FY2014 – FY2016.

Long Island Sound Nitrogen TMDL Implementation

Excessive nitrogen loadings to the tributaries to Long Island Sound (LIS) have been identified as a significant cause of the hypoxic conditions that occur during the late summer months in the bottom water of more than half of the LIS's 1,300 square mile area. In an effort to manage these nutrient loads and restore the water quality of the LIS, the Connecticut Department of Energy and Environmental Protection (CT DEEP) and New York State Department of Environmental Conservation (NYS DEC) developed a Total Maximum Daily Load (TMDL) for nitrogen which was approved by the EPA in 2001. As part of this process, the Spatially Referenced Regressions on Watershed Attributes (SPARROW) and Northeast ArcView Generalized Watershed Loading Function (AVGWLF) models were used to estimate the baseline nitrogen contribution to the LIS from each of the states in the upper portions of the tributary watersheds. The TMDL makes recommendations for reducing nitrogen loadings from point and nonpoint sources to be found in close proximity to the LIS in Connecticut and New York, as well as at a distance in Massachusetts, New Hampshire and Vermont.

The NEIWPCC, the EPA and all five states (New York, Conn., Mass., Vermont and N.H.) are working collaboratively to implement the LIS TMDL which encompasses all of the major watersheds that drain to the LIS. In Massachusetts this includes the watersheds tributary to the main stem Connecticut River (i.e., Deerfield, Millers, Westfield, Chicopee, and Farmington), as well as the Housatonic, French and Quinebaug drainage basins. Each state is assessing existing federal, state and local non-point source (NPS) control programs and related data that could be used to track NPS remediation measures that reduce nitrogen exports to the LIS. To this end, the MassDEP is attempting to quantify NPS load reductions that have occurred in Massachusetts during the last few years. The MassDEP believes that a detailed evaluation is necessary to properly determine where data gaps exist and, more importantly, to provide guidance with regard to the kinds of data and information that could be used by all of the states to determine if the NPS reduction goals of the TMDL are being achieved.

In September, 2013, the MassDEP prepared a report entitled *Enhanced Implementation Plan: Preliminary Evaluation of Current Stormwater and Nonpoint Source Control Efforts in Massachusetts*. This report identifies nitrogen loading reductions attributed to the application of BMPs to control stormwater runoff from agricultural and urban–suburban land uses in the watersheds draining to LIS. Using feedback from a BMP survey sent to 44 cities and towns with MS4 coverage and the application of a *Non-Point Source BMP and Efficiencies Scenario Builder Table* developed by the Chesapeake Bay Program (CBP), the MassDEP derived estimated total nitrogen loading reductions that have been realized to date through the application of BMPs throughout the Massachusetts portion of the LIS watershed. Based on this analysis, the MassDEP estimates that the NPS load reduction targets for Massachusetts, as set forth in the LIS TMDL, have already been achieved by threefold and that further reductions are anticipated with the continued implementation of BMPs.

Nashua River Phosphorus TMDL

The Nashua TMDL was originally derived in the early 2000's using a model developed and calibrated from water quality data collected in the late 1990's and again in 2003-4. The model predicted instream

water quality conditions under varying effluent limits and treatment scenarios for the wastewater treatment plants (WWTPs). The TMDL was presented to the public for review and comment at a meeting held in August, 2007. The original draft TMDL, which can be viewed at http://www.mass.gov/eea/docs/dep/water/resources/n-thru-y/nashua.pdf, recommended phosphorus limits for six WWTPs (Leominster, Fitchburg East, Fitchburg West, Ayer, MWRA-Clinton and Pepperell). The allowable phosphorus loads were established to correct impairments to the main stem of the Nashua River, particularly those slow-moving segments in and around the Pepperell Impoundment. The limits set by the TMDL were sufficient to address most problems in the main stem with the exception of the Pepperell Impoundment where additional actions would be needed to achieve designated uses. Thus, the TMDL also called for the development of a management plan to control vegetation in the impoundment itself. Following their preliminary review of the TMDL, the EPA requested that additional data be obtained to further calibrate and verify the model. This delayed the completion of the revised TMDL until January, 2014 when it was submitted to the EPA for review. Discussions regarding the TMDL are on-going with the EPA as a result of changing conditions in the watershed.

Assabet River Phosphorus TMDL Implementation

A Final Nutrient (Total Phosphorus) TMDL Report for the Assabet River was completed in 2004 that set nutrient targets for the restoration of water quality in the Assabet River (http://www.mass.gov/eea/docs/dep/water/resources/a-thru-m/anuttmdl.pdf). The goal of the TMDL was to decrease the instream concentration of total phosphorus to mitigate some of the ecological effects of eutrophication on the river; these effects were, for the most part, direct consequences of the excessive growth of aquatic macrophytes. In 2007, the U.S. Geological Survey (USGS), in cooperation with the MassDEP, initiated studies to evaluate conditions in the Assabet River prior to the upgrading of WWTPs to remove more phosphorus from their effluents. The USGS effort, completed in 2008, implemented a visual monitoring plan to estimate the areal extent and biomass of the floating macrophyte *Lemna minor* in five impoundments and evaluated the potential for phosphorus flux from sediments in impounded and free-flowing reaches of the river (http://pubs.usgs.gov/sir/2011/5179/). The MassDEP assumed responsibility for the visual assessments beginning in the summer of 2009 and continuing through 2013. In addition, the MassDEP extended funding to USGS for water quality monitoring through April 2014. Since improvements were completed at all of the municipal WWTPs by April 2012, these studies will provide a preliminary evaluation of the effectiveness of the TMDL implementation. The MassDEP hopes to continue with the macrophyte surveys in 2014 and beyond in order to more thoroughly document improvements to the condition of the Assabet River.

Monitoring and Related Activities for the Blackstone River

The MassDEP and the USGS have been working cooperatively since 2007 to collect water quality information pertaining to nutrient and trace metal loadings to the Blackstone River. The objectives of the study were to (1) quantify nutrient and trace metal loadings in several segments of the Blackstone River in Massachusetts and at the Massachusetts – Rhode Island state line; 2) assess and, if possible, quantify nitrogen attenuation throughout the river; and 3) evaluate and quantify, if possible, the re-suspension of both nutrients and metals in two impounded segments of the river (i.e., Riverdale Impoundment and Rice City Pond). Water samples were collected using an innovative automated sampling device designed and built by the USGS. Data generated by this study have been used in support of ongoing water quality predictive modeling efforts for the Blackstone River. This study has been published (Zimmerman, M.J., Waldron, M.C., and DeSimone, L.A. 2015. *Nutrient, trace element, and suspended sediment loads in the Blackstone River in Massachusetts and Rhode Island, 2007 to 2009*. U.S. Geological Survey Scientific Investigations Report 2015-5026.)

In August 2012, the USGS, in cooperation with the MassDEP, installed a continuous streamflow and water-quality monitoring station on the Blackstone River at a point approximately 0.9 miles upstream from the Massachusetts-Rhode Island state line at Millville. The goal was to document nutrient reductions resulting from WWTP upgrades. The station has been operating continuously since that time, recording river stage, water and air temperature, specific conductance, turbidity and chlorophyll concentrations.

Streamflow is monitored at a nearby site and the data are used to determine intervals for flow-proportional sampling for determination of total nitrogen, total phosphorus and dissolved trace-metal concentrations. MassDEP extended funding to USGS for water quality monitoring through September 2015. MassDEP staff continues to work with the Upper Blackstone Water Pollution Abatement District (UBWPAD) and their consultants in the calibration and validation of a computer model that was developed by UMass and CDM Smith (consultants for the UBWPAD). The *Hydrologic Simulation Program – FORTRAN* or *HSPF* model was developed to simulate and evaluate dynamic water quality conditions incorporating daily, monthly, seasonal and year-to-year variability to develop a year round understanding of water quality conditions. The model incorporates point source (e.g., wastewater treatment plants) and nonpoint source (e.g., stormwater runoff and naturally occurring pollutants) loads to the river. Future activities will likely focus on building partnerships with interested parties at all levels of government, as well as the private citizenry, to manage point and nonpoint sources of pollution throughout the Blackstone Watershed.

Mitigating Cranberry Farming Impacts – TMDL Development and Implementation

The MassDEP continues to work closely with several interested parties to implement the nutrient TMDL for White Island Pond (Plymouth/Wareham) and related activities aimed at restoring lakes in southeastern Massachusetts that have been impaired by excess total phosphorus emanating from commercial cranberry operations. Over the past decade these parties have collaborated on efforts to quantify existing phosphorus loadings from commercial bogs and develop fertilizer application rates and other BMPs to reduce those loads. The MassDEP supported these activities, in part, through the administration of a series of CWA Section 319 grants with the overall goal of improving water quality in White Island Pond while developing BMPs that could be applied to additional ponds affected by cranberry growing operations.

The first Section 319 grant, awarded in 2001 to the UMass Cranberry Experiment Station, funded an intensive multi-year field study of commercial cranberry bogs in the White Island Pond watershed. The study examined the effects on crop yields of such variables as low-phosphorus fertilizer applications and floodwater management, and quantified the nutrient inputs to the bogs and exports to the east basin of the pond. This nutrient budget, along with loading estimates from the lake sediments, septic systems and other adjacent land uses, formed the basis for a TMDL for phosphorus that was produced by the MassDEP and approved by the EPA on July 20, 2010 (see http://www.mass.gov/eea/docs/dep/water/resources/n-thru-y/whisland.pdf). In 2009, the Cape Cod Cranberry Growers Association (CCCGA) received a Section 319 grant to implement such BMPs as reducing phosphorus fertilizer applications, conducting tissue testing to determine plant nutritional requirements and managing harvest water to avoid anoxic conditions that can lead to the release of phosphorus from bog soils to the harvest flood water. A third Section 319 grant was awarded in 2012 to the UMass Cranberry Experiment Station to further evaluate fertilizer reductions and develop additional BMPs.

The application of the BMPs described above has led to improved water quality conditions in White Island Pond as evidenced by increased water transparency and decreased incidence of toxic algae blooms. In April, 2013 the pond was treated with alum to further reduce water column phosphorus concentrations, and a second treatment is planned for 2014. Water quality improvement is summarized on the EPA's webpage http://water.epa.gov/polwaste/nps/success319/ma_white.cfm. The MassDEP expects the pond to meet all designated uses by late 2015. Finally, the MassDEP will continue to carry out water monitoring at the nearby Monponsett ponds in an effort to inform future corrective actions.

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Category 1 Waters
"Waters attaining all designated uses"

Massachusetts is currently listing no waters in this category due to the issuance by the DPH of a state-wide health advisory pertaining to the consumption of finfish. This advisory precludes any waters from being in full support of the fish consumption use. More information pertaining to fish consumption advisories and the assessment of the fish consumption use can be found under "Development of the 2014 Integrated List" earlier in this report.

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Massachusetts Category 2 Waters
"Attaining some uses; other uses not assessed"

NAME	SEGMENT ID	DESCRIPTION	SIZE	UNITS	USES ATTAINED*				
					Aesthetic	Fish, other Aquatic Life and Wildlife	Primary Contact Recreation	Secondary Contact Recreation	Shellfish Harvesting
Blackstone									
Center Brook	MA51-34	Outlet Mill Pond, Upton to confluence with West River, Upton.	2.8	MILES	X	X			
Emerson Brook	MA51-29	Headwaters, outlet Lee Pond, Uxbridge to confluence with the Blackstone River, Uxbridge.	1.9	MILES	X	X			
Greene Brook	MA51-30	Headwaters, north of Linden Street, Douglas to confluence with Chockalog River, Douglas.	1.6	MILES	X				
Kettle Brook	MA51-19	Outlet Kettle Brook Reservoir #4, Paxton, to inlet of Kettle Brook Reservoir #1, Leicester. (excluding Kettle Brook Reservoir #3 segment MA51081 and Kettle Brook Reservoir #2 segment MA51080)	1.9	MILES	X	X	X	X	
Laurel Brook	MA51-23	Headwaters, north of Yew Street, Douglas to confluence with Scadden Brook near the outlet of Sawmill Pond, Uxbridge (through Bazely Pond formerly segment MA51008).	3.3	MILES	X	X			
Miscoe Brook	MA51-21	Headwaters, south of Route 90, Grafton to inlet Silver Lake, Grafton (through Cider Millpond formerly segment MA51019).	1.9	MILES	X	X			
Miscoe Brook	MA51-37	Perennial portion from the Mendon/Upton/Northbridge corporate boundaries to the confluence with Taft Pond Brook, Northbridge/Upton	0.7	MILES	X	X			
Mumford River	MA51-13	Headwaters, outlet Tuckers Pond, Sutton to Douglas WWTP discharge, Douglas.	4.3	MILES	X	X	X	X	
Scadden Brook	MA51-24	Headwaters, north of Davis Street, Douglas to inlet Lee Pond, Uxbridge (through Lee Reservoir formerly segment MA51086).	2.4	MILES	X	X			
Spring Brook	MA51-25	Headwaters, north of Lovell Street, Mendon to confluence with Muddy Brook, Mendon.	1.9	MILES	X	X			
Taft Pond Brook	MA51-26	Headwaters, outlet Taft Pond, Upton to confluence with West River, Northbridge.	1.2	MILES	X				
Tinkerville Brook	MA51-22	Perennial portion only, north of Walnut Street, Douglas to state line Douglas, MA/Burrillville, RI.	2.3	MILES	X	X			
Boston Harbor: Neponset									
Mill Brook	MA73-12	Source northeast of Ledgewood Drive, Dover to inlet of Pettee Pond, Westwood.	2.9	MILES			X	X	

Massachusetts Category 2 Waters
"Attaining some uses; other uses not assessed"

NAME	SEGMENT ID	DESCRIPTION	SIZE	UNITS	USES ATTAINED*				
					Aesthetic	Fish, other Aquatic Life and Wildlife	Primary Contact Recreation	Secondary Contact Recreation	Shellfish Harvesting
Unnamed Tributary	MA73-34	Outlet Clark Pond, Walpole to confluence with Neponset River, Walpole (locally considered part of Spring Brook) (excluding the approximately 0.2 miles through Diamond Pond and the approximately 0.2 miles through Memorial Pond segment MA73012)	0.8	MILES			X	X	
Buzzards Bay									
Aucoot Cove	MA95-09	From the boundary of Division of Marine Fisheries designated shellfishing growing area BB31.1, north and southwest from Haskell Island, Marion to the mouth at Buzzards Bay demarcated by a line drawn between Converse Point, Marion and Joes Point, Mattapoisett.	0.461	SQUARE MILES			X	X	X
Barrett Pond	MA95004	Carver	11.303	ACRES			X	X	
Charge Pond	MA95025	Plymouth	16.431	ACRES			X	X	
College Pond	MA95030	Plymouth	46.758	ACRES			X	X	
Curlew Pond	MA95034	Plymouth	42.591	ACRES			X	X	
Fearing Pond	MA95054	Plymouth	22.509	ACRES			X	X	
Glen Charlie Pond	MA95061	Wareham	156.611	ACRES			X	X	
New Long Pond	MA95112	Plymouth	20.977	ACRES	X	X			
Queen Sewell Pond	MA95180	Bourne (previously reported with PALIS # 96253).	17.614	ACRES			X	X	
Vaughn Pond	MA95153	Carver	19.629	ACRES			X	X	
Weweantic River	MA95-04	Outlet of small, unnamed pond at the confluence of Rocky Meadow Brook and South Meadow Brook, Carver to the inlet of Horseshoe Pond, Wareham.	11.322	MILES	X				
Cape Cod									
Bassing Harbor	MA96-48	Excluding Crows Pond and Ryder Cove, Chatham.	0.13	SQUARE MILES			X	X	X
Centerville Harbor	MA96-03	From an imaginary line that extends from Dowses Beach, Barnstable to Hyannis Point including all waters north to the shore, Barnstable.	1.46	SQUARE MILES		X	X	X	X

Massachusetts Category 2 Waters
"Attaining some uses; other uses not assessed"

NAME	SEGMENT ID	DESCRIPTION	SIZE	UNITS	USES ATTAINED*				
					Aesthetic	Fish, other Aquatic Life and Wildlife	Primary Contact Recreation	Secondary Contact Recreation	Shellfish Harvesting
Chatham Harbor	MA96-10	Harbor, bounded on the east by the Cape Cod National Seashore (CCNS), with northern extent as an imaginary line drawn northeast from northern tip of Strong Island to a point on the inner CCNS and western extent as an imaginary line drawn from the southern tip of Strong Island south to Allen Point including waters south to an imaginary line along the northern edge of South Beach Bar extending from Chatham Lighthouse to inlet created by the 1987 storm, Chatham (area within CCSN designated as ORW).	2.85	SQUARE MILES		X	X	X	X
Crows Pond	MA96-47	To Bassing Harbor, Chatham.	0.19	SQUARE MILES		X	X	X	X
Falmouth Inner Harbor	MA96-17	Waters included north of Falmouth Inner Harbor Light, Falmouth.	0.05	SQUARE MILES					X
Hinckleys Pond	MA96140	Harwich	164	ACRES	X	X		X	
Mashpee River	MA96-89	Headwaters, outlet Mashpee Pond, Mashpee to Quinaquisset Avenue, Mashpee.	2.7	MILES		X			
Nauset Harbor	MA96-28	The waters south of an imaginary line drawn east from Woods Cove, Orleans around the southern point of Stony Island, around the southern end of the unnamed island in the harbor, to the Cape Cod National Seashore point, excluding Mill Pond, Orleans (area associated with Cape Cod National Seashore designated as ORW).	0.41	SQUARE MILES			X	X	X
Quashnet River	MA96-90	Headwaters, outlet Johns Pond, Mashpee to just south of Route 28, Falmouth.	4.1	MILES		X			
Red Brook	MA96-25	From dam at Red Brook Road, Falmouth/Mashpee to Hamblin Pond, Falmouth/Mashpee.	0.01	SQUARE MILES			X	X	X
Santuit River	MA96-91	Headwaters, outlet Santuit Pond, Mashpee to confluence with tidal portion south of Old Mill Road, Mashpee.	1.6	MILES		X			
Upper Mill Pond	MA96324	Brewster	249	ACRES	X	X		X	

Massachusetts Category 2 Waters
"Attaining some uses; other uses not assessed"

NAME	SEGMENT ID	DESCRIPTION	SIZE	UNITS	USES ATTAINED*				
					Aesthetic	Fish, other Aquatic Life and Wildlife	Primary Contact Recreation	Secondary Contact Recreation	Shellfish Harvesting
Wellfleet Harbor	MA96-34	The waters north of an imaginary line drawn east from the southern tip of Jeremy Point, Wellfleet to Sunken Meadow, Eastham excluding the estuaries of Herring River, Duck Creek, Blackfish Creek, and Fresh Brook, Wellfleet (area associated with Cape Cod National Seashore designated as ORW).	8.4	SQUARE MILES			X	X	X
Charles									
Chicken Brook	MA72-34	Source, outlet Waseeka Sanctuary Pond, Holliston to the confluence with the Charles River, Medway.	7.407	MILES	X	X	X	X	
Farm Pond	MA72039	Sherborn	125.03	ACRES	X				
Hammond Pond	MA72044	Newton	22.382	ACRES	X	X		X	
Hopping Brook	MA72-35	Source in Cedar Swamp, Holliston to the confluence with the Charles River, Bellingham/Medway.	4.863	MILES	X	X			
Jennings Pond	MA72053	Natick	7.428	ACRES	X				
Stony Brook	MA72-26	Headwaters, outlet Beaver Pond, Lincoln to inlet Stony Brook Reservoir, Waltham/Weston.	5.122	MILES	X	X	X	X	
Weld Pond	MA72131	Dedham	26.786	ACRES	X	X	X	X	
Chicopee									
Atherton Brook	MA36-30	Headwaters at confluence of Town Farm and Osgood Brooks, Shutesbury to mouth at Quabbin Reservoir, Pelham.	1.9	MILES	X	X			
Burnshirt River	MA36-37	Headwaters - Outlet Stone Bridge Pond, Templeton/Phillipston to confluence with Canesto Brook, Barre. (through Williamsville Pond formerly segment MA36167)	8.6	MILES	X				
Cadwell Creek	MA36-29	Headwaters east of Route 202 and northwest of Dodge Hill, Pelham to mouth at Quabbin Reservoir, Belchertown.	3.2	MILES	X	X			
Canesto Brook	MA36-36	Headwaters northwest of Hubbardston State Forest near Hubbardston/Templeton town line to confluence with Ware River, Barre.	7.3	MILES	X				

Massachusetts Category 2 Waters
"Attaining some uses; other uses not assessed"

NAME	SEGMENT ID	DESCRIPTION	SIZE	UNITS	USES ATTAINED*				
					Aesthetic	Fish, other Aquatic Life and Wildlife	Primary Contact Recreation	Secondary Contact Recreation	Shellfish Harvesting
Chicopee River	MA36-23	Red Bridge Impoundment Dam, Wilbraham/Ludlow to Wilbraham Pumping Station (old WWTP), Wilbraham/Ludlow.	3.8	MILES	X	X	X	X	
Conant Brook Reservoir	MA36038	Monson	4	ACRES	X				
Cooley Brook	MA36-38	From the outlet of Chicopee Reservoir, Chicopee to the confluence with the Chicopee River, Chicopee. (segment includes "braid" that confluences with the Chicopee River upstream of the mouth of Cooley Brook)	1.2	MILES	X	X	X	X	
Cranberry River	MA36-20	Source, outlet Cranberry Meadow Pond, Spencer to confluence with Sevenmile River, Spencer. (through Howe Pond formerly segment MA36073)	3.6	MILES	X	X	X	X	
Dunn Brook	MA36-19	From confluence with Forget-Me-Not Brook, East Brookfield/Brookfield to confluence with Quaboag River, Brookfield.	2.4	MILES	X		X	X	
East Branch Swift River	MA36-35	Headwaters at the confluence of Shattuck and Popple Camp Brooks, Phillipston to mouth at Pottapaug Pond, Petersham. (through Connor Pond formerly segment MA36039)	9.8	MILES	X	X			
Forget-Me-Not Brook	MA36-18	Headwaters, North Brookfield to North Brookfield WWTP discharge, North Brookfield.	1.7	MILES	X	X	X	X	
Higher Brook	MA36-42	Headwaters south of Route 21, Ludlow through Harris Pond (formely reported as segment MA36067) to the Ludlow/Chicopee corporate boundary where the stream name changes to Fuller Brook.	6.3	MILES	X	X	X	X	
Hop Brook	MA36-32	Headwaters upstream of West Street, New Salem to mouth at Quabbin Reservoir, New Salem.	3.7	MILES	X				
Middle Branch Swift River	MA36-33	Headwaters just north of Wendell and New Salem State Forests (south of the Swift River School), Wendell to mouth at Quabbin Reservoir, New Salem.	6.9	MILES	X				
Quaboag River	MA36-14	Outlet of Quaboag Pond, Brookfield to Route 67 bridge, West Brookfield.	6.1	MILES	X	X	X	X	

Massachusetts Category 2 Waters
"Attaining some uses; other uses not assessed"

NAME	SEGMENT ID	DESCRIPTION	SIZE	UNITS	USES ATTAINED*				
					Aesthetic	Fish, other Aquatic Life and Wildlife	Primary Contact Recreation	Secondary Contact Recreation	Shellfish Harvesting
Quaboag River	MA36-15	Route 67 bridge, West Brookfield to Warren WWTP discharge, Warren.	6.3	MILES	X	X	X	X	
Sevenmile River	MA36-11	Source, outlet Browning Pond, Spencer to confluence with Cranberry River, Spencer.	7.3	MILES	X	X	X	X	
Sevenmile River	MA36-12	Confluence with Cranberry River, Spencer to confluence with East Brookfield River, East Brookfield.	2.5	MILES	X	X	X	X	
Swift River	MA36-09	Winsor Dam, Belchertown to Upper Bondsville Mill Dam, Belchertown/Palmer.	5.6	MILES	X	X	X	X	
Swift River	MA36-10	Upper Bondsville Mill Dam, Belchertown/Palmer to confluence with Ware River, Palmer.	3.9	MILES	X	X	X	X	
Ware River	MA36-04	Dam at South Barre Reservoir, Barre to Wheelwright Dam, New Braintree/Hardwick.	4.9	MILES	X	X	X	X	
Ware River	MA36-07	Thorndike Dam, Palmer to confluence with Quaboag River, forming headwaters Chicopee River, Palmer.	2.5	MILES	X	X	X	X	
West Branch Fever Brook	MA36-34	Headwaters just north (upstream) of Route 122, Petersham to mouth at Quabbin Reservoir, Petersham.	3.4	MILES	X				
West Branch Swift River	MA36-31	Headwaters - Outlet of small unnamed impoundment east of Cooleyville Road in Wendell State Forest, Wendell to mouth at Quabbin Reservoir, Shutesbury/New Salem.	6.3	MILES	X				
West Branch Ware River	MA36-02	Outlet Brigham Pond, Hubbardston to confluence with the East Branch Ware River, Barre.	4.5	MILES	X				
Concord (SuAsCo)									
Assabet Brook	MA82B-17	Headwaters, outlet of Fletchers Pond, Stow to the confluence with the Assabet River, Stow.	1.982	MILES	X				
Cold Harbor Brook	MA82B-18	Headwaters, outlet of Rocky Pond, Boylston to confluence with Howard Brook, Northborough.	6.061	MILES	X	X			
Danforth Brook	MA82B-19	Headwaters at the confluence of Mill Brook and an unnamed tributary draining from Little Pond, Bolton to the inlet of Bruces Pond, Hudson.	2.366	MILES	X	X			
Fort Meadow Brook	MA82B-11	Outlet of Fort Meadow Reservoir, Marlborough/Hudson to confluence with Assabet River, Hudson.	2.718	MILES	X	X			

Massachusetts Category 2 Waters
"Attaining some uses; other uses not assessed"

NAME	SEGMENT ID	DESCRIPTION	SIZE	UNITS	USES ATTAINED*				
					Aesthetic	Fish, other Aquatic Life and Wildlife	Primary Contact Recreation	Secondary Contact Recreation	Shellfish Harvesting
Hop Brook	MA82B-20	From the outlet of Smith Pond, Northborough to the confluence with the Assabet River, Northborough.	1.259	MILES	X	X			
Indian Brook	MA82A-24	Outlet of Hopkinton Reservoir, Ashland to the confluence with the Sudbury River, Ashland (formerly part of segment MA82A-12).	1.702	MILES	X	X			
North Brook	MA82B-21	Headwaters, east of Ballville Road and north of Wataquadock Hill Road, Bolton to the confluence with the Assabet River, Berlin.	7.763	MILES	X	X			
Pine Brook	MA82A-14	From source south of Route 20, just east of the Weston/Wayland border to the confluence with the Sudbury River, Wayland.	2.485	MILES	X	X			
Taylor Brook	MA82B-08	From the outlet of Puffer Pond, Maynard to the confluence with the Assabet River, Maynard.	1.770802	MILES	X				
Unnamed Tributary	MA82A-21	From the outlet of Heart Pond, Chelmsford to the inlet of Russell Millpond, Chelmsford.	4.113	MILES	X				
Unnamed Tributary	MA82B-16	From the outlet of Angiers Pond, Concord to confluence with the Assabet River, Concord (this segment is locally known as part of Spencer Brook).	0.486	MILES	X	X			
West Pond	MA82115	Bolton	18.986	ACRES			X	X	
Willis Pond	MA82122	Sudbury	67.329	ACRES	X	X			
Connecticut									
Amethyst Brook	MA34-35	Headwaters, confluence of Buffum and Harris brooks, Pelham to the confluence with Adams River (forming the headwaters of Fort River), Amherst.	2.143	MILES	X	X			
Broad Brook	MA34-18	Headwaters, Holyoke to inlet Nashawannuck Pond, Easthampton.	9.285	MILES		X			
Cushman Brook	MA34-34	Headwaters, outlet Atkins Reservoir, Shutesbury to the inlet of Factory Hollow Pond, Amherst.	2.462	MILES	X	X			
East Branch Mill River	MA34-37	Headwaters, confluence of Bradford Brook, Williamsburg to confluence with the West Branch Mill River (forming the headwaters of the Mill River), Williamsburg.	2.753	MILES	X	X	X	X	

Massachusetts Category 2 Waters
"Attaining some uses; other uses not assessed"

NAME	SEGMENT ID	DESCRIPTION	SIZE	UNITS	USES ATTAINED*				
					Aesthetic	Fish, other Aquatic Life and Wildlife	Primary Contact Recreation	Secondary Contact Recreation	Shellfish Harvesting
Fall River	MA34-33	Vermont/Massachusetts border, Bernardston to the confluence with the Connecticut River, Greenfield/Gill	10.246	MILES	X	X			
Mill River	MA34-24	Headwaters east of Fisher Hill, Conway to confluence with the Connecticut River, Hatfield.	24.63	MILES	X	X	X	X	
Moose Brook	MA34-17	Headwaters, Southampton to confluence with Manhan River, Southampton.	2.627	MILES		X			
Sawmill River	MA34-41	Dudleyville Road, Leverett to confluence with Connecticut River, Montague (formerly part of MA34-26).	10.965	MILES	X	X	X	X	
Scantic River	MA34-30	Massachusetts/Connecticut border, Monson downstream to the Massachusetts/Connecticut border, Hampden.	9.599	MILES		X			
Temple Brook	MA34-08	Headwaters, outlet Bradley Pond, Monson to confluence with Scantic River, Hampden.	3.724	MILES		X			
Tripple Brook	MA34-16	Headwaters, Southampton to confluence with Manhan River, Southampton.	1.016	MILES		X			
Upper Highland Lake	MA34093	Goshen	51.244	ACRES	X				
West Branch Mill River	MA34-38	East Street, Goshen to the confluence of Meekin Brook, Williamsburg.	5.917	MILES	X	X	X	X	
West Branch Mill River	MA34-39	From the confluence of Meekin Brook, Williamsburg to the confluence with the East Branch Mill River (forming the headwaters of the Mill River), Williamsburg.	0.641	MILES	X	X	X	X	
Deerfield									
Bear River	MA33-17	Headwaters west of Barnes Road, Ashfield to confluence with Deerfield River, Conway.	6.926	MILES	X	X			
Clark Brook	MA33-16	Headwaters, near Moonshine Road (Howes Road)/East Buckland Road, Buckland to confluence with Clesson Brook, Buckland.	3.779086	MILES	X	X			
Clesson Brook	MA33-15	Outlet of unnamed pond south of Forget Road, Hawley through Cox Pond to confluence with Deerfield River, Buckland.	10.346	MILES	X	X	X	X	
Cold River	MA33-05	Source in Florida to confluence with Deerfield River, Charlemont.	13.719	MILES	X	X	X	X	

Massachusetts Category 2 Waters
"Attaining some uses; other uses not assessed"

NAME	SEGMENT ID	DESCRIPTION	SIZE	UNITS	USES ATTAINED*				
					Aesthetic	Fish, other Aquatic Life and Wildlife	Primary Contact Recreation	Secondary Contact Recreation	Shellfish Harvesting
Deerfield River	MA33-01	Outlet Sherman Reservoir Monroe/Rowe, to confluence with Cold River, Charlemont (through former segment, Lower Reservoir MA33028).	13.43029	MILES	X	X	X	X	
Deerfield River	MA33-02	Confluence with Cold River, Charlemont to confluence with North River, Charlemont/Shelburne	11.414	MILES	X	X	X	X	
Deerfield River	MA33-03	Confluence with North River, Charlemont/Shelburne to confluence with Green River, Greenfield.	16.945	MILES	X	X	X	X	
Deerfield River	MA33-04	Confluence with Green River, Greenfield to confluence with Connecticut River, Greenfield/Deerfield.	2.061	MILES	X	X	X	X	
Drakes Brook	MA33-23	Headwaters west of North Warger Road, Ashfield to confluence with Bear River, Conway.	2.016	MILES	X	X			
East Branch North River	MA33-19	Vermont line, Colrain to confluence with West Branch North River, Colrain.	7.58	MILES	X	X	X	X	
Foundry Brook	MA33-25	Headwaters north of Calvin Coombs Road, Colrain to confluence with East Branch North River, Colrain.	2.773	MILES	X				
Green River	MA33-28	Vermont line, Colrain to Greenfield water supply dam (north of Eunice Williams Road), Greenfield. (formerly part of MA33-09)	8.474	MILES	X	X			
Green River	MA33-29	From Greenfield water supply dam (north of Eunice Williams Road), Greenfield to the Greenfield swimming pool dam (northwest of Nashs Mill Road), Greenfield. (formerly part of MA33-09)	4.633	MILES	X	X	X	X	
Mill Brook	MA33-14	Headwaters, originating north of Rowe Road, Heath to confluence with the Deerfield River, Charlemont.	5.757	MILES	X	X			
North Pond	MA33014	Florida	19.115	ACRES			X	X	
North River	MA33-06	From confluence of East and West branches of the North River, Colrain to confluence with Deerfield River, Shelburne/Charlemont. (Segment changed 1997 - East Branch no longer included in length)	3.341	MILES	X	X	X	X	

Massachusetts Category 2 Waters
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NAME	SEGMENT ID	DESCRIPTION	SIZE	UNITS	USES ATTAINED*				
					Aesthetic	Fish, other Aquatic Life and Wildlife	Primary Contact Recreation	Secondary Contact Recreation	Shellfish Harvesting
Pelham Brook	MA33-12	Headwaters at outlet Pelham Lake, Rowe to confluence with Deerfield River, Charlemont.	4.861	MILES	X	X			
Pumpkin Hollow Brook	MA33-32	Headwaters north of Conway State Forest and south of Old Cricket Hill Road, Conway to confluence with South River, Conway.	2.297	MILES	X	X			
South Pond	MA33019	Savoy	28.675	ACRES			X	X	
South River	MA33-07	Headwaters at outlet Ashfield Pond to Emments Road, Ashfield.	2.263668	MILES		X	X	X	
Taylor Brook	MA33-31	From the confluence of Kinsman Brook and Davenport Brook, Heath to confluence with West Branch North River, Colrain.	2.635	MILES	X	X	X	X	
Tisdell Brook	MA33-24	Headwaters west of Christian Hill, Colrain to confluence with West Branch North River, Colrain.	1.698	MILES	X				
West Branch North River	MA33-27	Confluence of West Branch Brook and Burrington Brook, Heath to confluence with North River, forming the North River, Colrain.	7.127	MILES		X			
Farmington									
Benton Brook	MA31-11	Drainage from Hayden Swamp, Otis to the confluence with the West Branch Farmington River, Otis.	5.240824	MILES	X	X			
Buck River	MA31-12	Headwaters draining wetland just south of Morley Hill and Cronk Road, Sandisfield to confluence with the Clam River, Sandisfield.	6.398259	MILES	X	X			
Clam River	MA31-03	Outlet of Royal Pond, Otis to confluence with West Branch Farmington River, Sandisfield.	9.542	MILES	X	X			
Cone Brook	MA31-08	Drainage from Angerman Swamp in Beartown State Forest, Otis to Hayden Pond, Otis.	2.101	MILES	X	X			
Fall River	MA31-02	Outlet Larkum Pond, Otis to confluence with West Branch Farmington River, Otis.	0.761	MILES	X	X			
Hubbard Brook	MA31-16	Confluence Babcock Brook and Hall Pond Brook, Tolland to border of Granville, Massachusetts/Hartland, Connecticut.	4.0271	MILES	X	X			
Sandy Brook	MA31-14	Outlet York Lake, New Marlborough to border of Sandisfield, Massachusetts/Norfolk, Connecticut.	4.977348	MILES	X	X			

Massachusetts Category 2 Waters
"Attaining some uses; other uses not assessed"

NAME	SEGMENT ID	DESCRIPTION	SIZE	UNITS	USES ATTAINED*				
					Aesthetic	Fish, other Aquatic Life and Wildlife	Primary Contact Recreation	Secondary Contact Recreation	Shellfish Harvesting
Valley Brook	MA31-15	Source, northwest of Holden Hill, Granville to border of Granville, Massachusetts/Hartland, Connecticut.	5.894326	MILES	X	X			
French									
Mill Brook	MA42-10	Headwaters, outlet Webster Lake, Webster to confluence with French River, Webster.	1.2	MILES	X	X			
Mine Brook	MA42-16	Headwaters, Webster to inlet Club Pond, Webster.	1.4	MILES	X	X	X	X	
Robinson Pond	MA42047	Oxford	99	ACRES	X				
Unnamed Tributary	MA42-01	Unnamed tributary to Town Meadow Brook, outlet Sargent Pond, Leicester to inlet Dutton Pond, Leicester.	0.5	MILES		X			
Unnamed Tributary	MA42-19	Unnamed tributary to the French River on the 1982 USGS quad as 'Lowes Brook' , from the outlet of Lowes Pond, Oxford to the confluence with the French River, Oxford.	1.3	MILES	X	X	X	X	
Unnamed Tributary	MA42-20	Unnamed tributary to South Fork locally known as 'Potters Brook', from outlet of Old Mill Pond Dam (MA01833), Charlton to the confluence with South Fork, Charlton.	0.9	MILES	X	X	X	X	
Wellington Brook	MA42-11	Headwaters south of Cedar Street, Auburn to confluence with French River, Oxford.	3.4	MILES	X	X	X	X	
Housatonic									
Cady Brook	MA21-12	Source, Peru to the inlet of Windsor Reservoir, Hinsdale.	3.507	MILES	X	X			
Cleveland Brook	MA21-08	Headwaters, outlet of Cleveland Brook Reservoir, Hinsdale to confluence with East Branch Housatonic River, Dalton.	1.927	MILES	X	X			
Furnace Brook	MA21-21	Headwaters south of Route 295 (Canaan Road), Richmond to inlet Mud Ponds, West Stockbridge.	3.649	MILES		X			
Goose Pond Brook	MA21-07	Outlet of Goose Pond, Tyringham to confluence with the Housatonic River, Lee.	3.252	MILES	X	X	X	X	
Green River	MA21-23	Alford, Massachusetts/Hillsdale, New York border southwest of Route 71 to confluence with the Housatonic River, Great Barrington.	10.139	MILES	X	X	X	X	
Greenwater Brook	MA21-27	Headwaters, outlet of Greenwater Pond, Becket to the confluence with Goose Pond Brook, Lee	4.435	MILES	X	X	X	X	

Massachusetts Category 2 Waters
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NAME	SEGMENT ID	DESCRIPTION	SIZE	UNITS	USES ATTAINED*				
					Aesthetic	Fish, other Aquatic Life and Wildlife	Primary Contact Recreation	Secondary Contact Recreation	Shellfish Harvesting
Hop Brook	MA21-28	Headwaters, outlet of Curtin Pond, Otis to the confluence with the Housatonic River, Lee	11.948	MILES	X	X	X	X	
Larrywaug Brook	MA21-29	Headwaters, outlet Stockbridge Bowl, Stockbridge to confluence with Housatonic River, Stockbridge	2.863	MILES		X			
Williams River	MA21-06	Source, outlet Shaker Mill Pond, West Stockbridge to confluence with Housatonic River, Great Barrington.	11.006	MILES	X	X	X	X	
Hudson: Hoosic									
Dry Brook	MA11-13	Headwaters, west of Jackson Road (in Savoy Wildlife Management Area), Savoy to confluence with Hoosic River, Adams.	6.702	MILES	X	X	X	X	
East Branch Green River	MA11-21	Headwaters, northeast of Sugarloaf Mountain, New Ashford to confluence with Green River, New Ashford.	2.227	MILES	X	X			
Hemlock Brook	MA11-09	Headwaters, south of Route 2 in the Taconic Trail State Park to confluence with the Hoosic River, Wiliamstown.	7.083	MILES	X	X	X	X	
Kitchen Brook	MA11-24	From the outlet of the unnamed reservoir (Kitchen Brook Reservoir), Cheshire to the confluence with the Hoosic River, Cheshire.	1.445	MILES	X		X	X	
McDonald Brook	MA11-16	Source, southeast of Woodchuck Hill, Windsor to confluence with South Brook, Cheshire.	3	MILES		X			
North Branch Hoosic River	MA11-01	Vermont State line, Clarksburg to USGS Gage, North Adams.	4.281	MILES	X	X	X	X	
Pecks Brook	MA11-18	Headwaters west of West Mountatin Road to confluence with the Hoosic River, Adams.	2.703	MILES	X	X	X	X	
South Brook	MA11-15	Headwaters, west of Weston Mountain, Dalton to confluence with the Hoosic River, Cheshire.	4.138	MILES	X	X	X	X	
West Branch Green River	MA11-22	Headwaters, west of Route 43, Hancock (near New York border) to confluence with Green River, Williamstown.	7.896	MILES	X	X	X	X	
Ipswich									
Berry Pond	MA92003	North Andover	3.896	ACRES			X	X	
Boston Brook	MA92-13	Outlet of Towne Street Pond, North Andover to confluence with the Ipswich River, Middleton.	7.521	MILES	X	X			

Massachusetts Category 2 Waters
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					Aesthetic	Fish, other Aquatic Life and Wildlife	Primary Contact Recreation	Secondary Contact Recreation	Shellfish Harvesting
Fish Brook	MA92-14	Headwater, outlet Stiles Pond, Boxford to confluence with Ipswich River, Topsfield/Boxford.	8.246	MILES	X	X			
Gravelly Brook	MA92-18	Headwaters, Willowdale State Forest, Ipswich to confluence with Ipswich River, Ipswich.	1.518	MILES	X	X			
Lubbers Brook	MA92-05	Billerica/Burlington boundry to confluence with Maple Meadow Brook forming headwaters of Ipswich River, Wilmington.	6.329	MILES	X	X			
Stiles Pond	MA92063	Boxford	59.042	ACRES			X	X	
Islands									
Cape Poge Bay	MA97-08	From the outlet of The Lagoon at Toms Neck, Edgartown to the confluence with Edgartown Harbor at the Cape Poge Gut, (excluding Shear Pin Pond and Pease Pond) Edgartown, Martha's Vineyard.	2.296	SQUARE MILES			X	X	X
Coskata Pond	MA97-03	Pond north of Nantucket Harbor, Nantucket to confluence with Nantucket Harbor, Nantucket	0.082	SQUARE MILES			X	X	X
Great Point Pond	MA97-04	On Great Point, to confluence with Nantucket Sound, Nantucket	0.056	SQUARE MILES			X	X	X
Mattakeset Bay	MA97-14	Waters west of an imaginary line drawn southeasterly from Katama Point to Norton Point, Edgartown, Martha's Vineyard.	0.173	SQUARE MILES			X	X	X
Menemsha Pond	MA97-06	Waters between Nashaquitsa Pond and Menemsha Creek, Chilmark/Gay Head, Martha's Vineyard.	0.891	SQUARE MILES			X	X	X
Mill Brook	MA97-22	Outlet of Bliss Pond, Chilmark to inlet Chilmark Pond, Chilmark, Martha's Vineyard	2.392	MILES	X	X			
Mill Brook	MA97-24	Source in wetlands west of Roth Woodland Road, Chilmark to inlet Old Millpond, West Tisbury, Martha's Vineyard	3.416	MILES	X	X			
Paint Mill Brook	MA97-23	Source east of Tea Lane, Chilmark to inlet of Paint Mill Brook Pond, Chilmark, Martha's Vineyard	0.884	MILES	X	X			
Sengekontacket Pond	MA97-10	Between East Vineyard Haven Road and Beach Road, including Majors Cove, Edgartown/Oak Bluffs, Martha's Vineyard.	1.098	SQUARE MILES			X	X	X

Massachusetts Category 2 Waters
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NAME	SEGMENT ID	DESCRIPTION	SIZE	UNITS	USES ATTAINED*				
					Aesthetic	Fish, other Aquatic Life and Wildlife	Primary Contact Recreation	Secondary Contact Recreation	Shellfish Harvesting
Tiasquam River	MA97-25	Source in wetlands west of Tea Lane, Chilmark to inlet of Looks Pond, West Tisbury, Martha's Vineyard	2.83	MILES	X	X			
Merrimack									
Bridge Meadow Brook	MA84A-34	Headwaters, north of Chestnut Road, Tyngsborough to inlet Flint Pond, Tyngsborough.	4	MILES	X	X	X	X	
Joint Grass Brook	MA84A-32	Headwaters, between Hollis Street and Hawk Swamp, Dunstable to the confluence with Salmon Brook, Dunstable.	3.2	MILES	X		X	X	
Lawrence Brook	MA84A-20	Headwaters, Tyngsborough (excluding intermittent portion) to confluence with Merrimack River, Tyngsborough.	2	MILES	X	X	X	X	
Martins Pond Brook	MA84A-19	Outlet Martins Pond, Groton to inlet Lost Lake, Groton.	2.3	MILES	X	X	X	X	
Reed Brook	MA84B-08	Headwaters, south of the West Street/Cowdry Hill Road intersection, Westford to the confluence with Stony Brook, Westford.	0.6	MILES		X			
Salmon Brook	MA84A-33	Headwaters, outlet Lower Massapoag Pond, Dunstable to New Hampshire state line, Dunstable.	2.9	MILES	X		X	X	
South Branch Souhegan River	MA84A-31	Headwaters, outlet Watatic Pond, Ashburnham to New Hampshire state line, Ashby.	3	MILES	X	X			
Unnamed Tributary	MA84A-38	(Locally known as Argilla Brook) Unnamed tributary to Johnson Creek (excluding intermittent portion) from Center Street, Groveland to confluence with Johnson Creek, Groveland.	1.3	MILES	X	X	X	X	
Millers									
Dunn Pond	MA35021	Gardner	17.997	ACRES	X		X	X	
Lake Mattawa	MA35112	(PALIS ID Changed on 10/6/97 from 36092 to 35112 - Concurently changed WBID to reflect this change - See PALIS for details) Orange	111.982	ACRES	X		X	X	
Otter River	MA35-06	Source, Hubbardston (north of Pitcherville Road) to Gardner WWTP, Gardner/Templeton.	4.304796	MILES	X				
Priest Brook	MA35-10	Headwaters at the confluence of Towne and Scott Brooks, Royalston to the confluence with the Millers River, Winchendon. (According to SARIS includes lower portion of Scott Brook.)	6.826	MILES	X	X			

Massachusetts Category 2 Waters
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					Aesthetic	Fish, other Aquatic Life and Wildlife	Primary Contact Recreation	Secondary Contact Recreation	Shellfish Harvesting
Ruggles Pond	MA35072	Wendell	14.832	ACRES	X		X	X	
Nashua									
Ball Brook	MA81-45	Headwaters, north of Sterling Road, Holden to the confluence with the Stillwater River, Sterling.	1.6	MILES			X	X	
Catacoonamug Brook	MA81-16	Outlet Lake Shirley, Lunenburg to confluence with Nashua River, Shirley/Harvard.	3.2	MILES	X	X	X	X	
Chaffins Brook	MA81-33	Headwaters south of Malden Street/west of Wachusett Street, Holden to inlet of Unionville Pond, Holden.	0.9	MILES			X	X	
Connelly Brook	MA81-57	Headwaters, southwest of Rowley Hill Road, Sterling to the inlet of The Quag, Sterling.	2.9	MILES			X	X	
East Wachusett Brook	MA81-30	Headwaters northeast of Little Wachusett Mountain, Princeton to confluence with Stillwater River, Sterling.	4.6	MILES			X	X	
Fall Brook	MA81-39	From the outlet of Lake Samoset, Leominster to the confluence with the North Nashua River, Leominster (formerly part of segment MA81-14).	3	MILES		X			
Flag Brook	MA81-10	Outlet Crocker Pond, Westminster to confluence with North Nashua River, Fitchburg (excluding approximately 0.7 miles through Sawmill Pond segment MA81118).	2.2	MILES			X	X	
French Brook	MA81-48	Headwaters, west of Linden Street, Boylston to the inlet of Wachusett Reservoir (Andrews Harbor), Boylston.	1.4	MILES			X	X	
Houghton Brook	MA81-55	Headwaters, south of Merrill Road, Sterling to confluence with Stillwater River, Sterling.	1.5	MILES			X	X	
Justice Brook	MA81-41	Headwaters, outlet Stuart Pond, Sterling to confluence with Keyes Brook forming headwaters Stillwater River, Princeton/Sterling.	1	MILES			X	X	
Keyes Brook	MA81-40	Headwaters, outlet Paradise Pond, Princeton to confluence with Justice Brook forming headwaters Stillwater River, Princeton/Sterling.	3.2	MILES			X	X	
Malden Brook	MA81-27	Headwaters northeast of Lee Street, West Boylston to the inlet of Wachusett Reservoir (Thomas Basin), West Boylston.	1.9	MILES		X	X	X	

Massachusetts Category 2 Waters
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					Aesthetic	Fish, other Aquatic Life and Wildlife	Primary Contact Recreation	Secondary Contact Recreation	Shellfish Harvesting
Nashua River	MA81-08	("South Branch" Nashua River) Outlet Lancaster Millpond, Clinton to Clinton WWTP discharge, Clinton.	2.8	MILES	X	X	X	X	
Phillips Brook	MA81-12	Outlet Winnekeag Lake, Ashburnham to Westminster Street (Route 2A/31), Fitchburg.	8.4	MILES	X	X	X	X	
Poor Farm Brook	MA81-52	Headwaters east of Salisbury Street, Holden to inlet Chaffin Pond, Holden.	1.2	MILES			X	X	
Rocky Brook	MA81-42	Headwaters, outlet Hy-Crest Pond, Sterling to confluence with Stillwater River, Sterling.	3	MILES			X	X	
Scanlon Brook	MA81-44	Headwaters, west of Birch Drive, Sterling to the confluence with the Stillwater River, Sterling.	1.5	MILES			X	X	
Scarletts Brook	MA81-25	Headwaters west of West Boylston Street (Route 12), West Boylston to confluence with Gates Brook, West Boylston.	0.5	MILES			X	X	
Squannacook River	MA81-19	Hollingsworth and Vose Dam, Groton/Shirley to confluence with Nashua River, Shirley/Groton/Ayer.	3.7	MILES	X	X	X	X	
Stillwater River	MA81-31	Confluence of Justice and Keyes brooks, Princeton/Sterling to the inlet of Wachusett Reservoir (Stillwater Basin), Sterling.	6.7	MILES		X	X	X	
Sucker Brook	MA81-23	Outlet Coon Tree Pond, Pepperell to confluence with Nissitissit River, Pepperell.	4	MILES			X	X	
Trout Brook	MA81-26	Outlet Cournoyer Pond, Holden to confluence with Quinepoxet River, Holden.	1.9	MILES			X	X	
Unnamed Tributary	MA81-46	Unnamed tributary to Rocky Brook from headwaters south of Upper North Row Road, Sterling to the confluence with Rocky Brook, Sterling.	0.7	MILES			X	X	
Unnamed Tributary	MA81-49	Unnamed tributary to Wachusett Reservoir, from headwaters, outlet Carrolls Pond, West Boylston to inlet Wachusett Reservoir, West Boylston.	0.8	MILES			X	X	
Unnamed Tributary	MA81-50	Unnamed tributary to Wachusett Reservoir, from headwaters, east of Linden Street, Boylston to the inlet of Wachusett Reservoir (Hastings Cove), Boylston.	1.3	MILES			X	X	

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					Aesthetic	Fish, other Aquatic Life and Wildlife	Primary Contact Recreation	Secondary Contact Recreation	Shellfish Harvesting
Unnamed Tributary	MA81-51	Unnamed tributary to Quinapoxet River, from headwaters, south of Malden Street, Holden to the confluence with the Quinapoxet River, Holden.	1.5	MILES			X	X	
Unnamed Tributary	MA81-54	Unnamed tributary to Wachusett Reservoir, from headwaters, west of Route 140, West Boylston to inlet of Wachusett Reservoir (Stillwater Basin), West Boylston.	0.8	MILES				X	
Unnamed Tributary	MA81-58	Unnamed tributary to Quinapoxet Reservoir, from headwaters, west of Route 68, Rutland to the confluence with an unnamed tributary to the Quinapoxet Reservoir west of Bryant Road, Holden.	1.3	MILES			X	X	
Unnamed Tributary	MA81-59	Unnamed tributary to Quinapoxet River, from headwaters, southwest of Hog Hill, Sterling to the confluence with the Quinapoxet River, Sterling.	1.6	MILES			X	X	
Unnamed Tributary (Boylston Brook)	MA81-34	Unnamed tributary locally known as "Boylston Brook." Headwaters north of French Drive, Boylston to the confluence with Potash Brook, Boylston.	0.5	MILES			X	X	
Warren Tannery Brook	MA81-53	Headwaters, north of Route 122A, Holden to confluence with Asnebumskit Brook, Holden.	1.4	MILES			X	X	
Washacum Brook	MA81-47	Headwaters, outlet West Waushacum Pond, Sterling to inlet of Wachusett Reservoir (Stillwater Basin), West Boylston.	1.8	MILES			X	X	
Whitman River	MA81-11	Outlet Lake Wampanoag, Ashburnham to inlet Snows Millpond, Fitchburg (excluding the approximately 1.2 miles through Whitmanville Reservoir segment MA81109 and the approximately 0.8 miles through Crocker Pond segment MA81025).	6.3	MILES	X	X			
Wilder Brook	MA81-43	Headwaters west of Osgood Road, Sterling to confluence with Stillwater River, Sterling.	2.3	MILES			X	X	
North Coastal									
Beck Pond	MA93003	Hamilton	34.591	ACRES	X	X			
Coy Pond	MA93016	Wenham	23.167	ACRES	X				

Massachusetts Category 2 Waters
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					Aesthetic	Fish, other Aquatic Life and Wildlife	Primary Contact Recreation	Secondary Contact Recreation	Shellfish Harvesting
Crane River	MA93-38	Outlet Mill Pond, Danvers to outlet of the pump house sluiceway, Purchase Street, Danvers.	0.332	MILES	X	X	X	X	
Parker									
Penn Brook	MA91-16	Outlet Baldpate Pond, Boxford to confluence with Parker River, Georgetown.	3	MILES		X			
Quinebaug									
Browns Brook	MA41-20	From the state line Holland, MA/Union, CT to the inlet of Hamilton Reservoir, Holland.	0.8	MILES	X	X	X	X	
Hamant Brook	MA41-15	Headwaters, outlet unnamed pond, Sturbridge to the confluence with the Quinebaug River, Sturbridge.	3.1	MILES	X	X	X	X	
Hollow Brook	MA41-24	Headwaters, west of Hollow Road, Wales to confluence with Mill Brook, Brimfield.	2.7	MILES		X			
Leadmine Brook	MA41-21	Headwaters, outlet Leadmine Pond, Sturbridge to the state line, Sturbridge, MA/Union, CT.	2.5	MILES	X	X	X	X	
Lebanon Brook	MA41-11	From the state line, Southbridge, MA/Woodstock, CT, to the confluence with the Quinebaug River, Southbridge.	4.7	MILES	X	X	X	X	
Mountain Brook	MA41-18	Headwaters, east of Steerage Rock Road (excluding intermittent portion), Brimfield to the confluence with Mill Brook, Brimfield.	1.9	MILES	X	X	X	X	
Rocky Brook	MA41-22	Headwaters east of Chamberlain Pond (excluding intermittent portion), Douglas to the state line Douglas, MA/Thompson, CT.	1.9	MILES	X	X	X	X	
Stevens Brook	MA41-19	From the state line Wales, MA/Stafford, CT to the inlet of Hamilton Reservoir, Holland.	4.7	MILES	X	X	X	X	
Tufts Branch	MA41-10	Headwaters, north of Dudley-Southbridge Road, Dudley to the state line, Dudley, MA/Thompson, CT.	2.8	MILES	X	X	X	X	
Unnamed Tributary	MA41-23	Unnamed tributary to the Quinebaug River from headwaters at the outlet of an unnamed pond on the Southbridge/Charlton border to the confluence with the Quinebaug River, Southbridge.	1.9	MILES	X	X	X	X	
Unnamed Tributary	MA41-25	Unnamed tributary to Tufts Branch, headwaters, outlet Wielock Pond, Dudley to confluence with Tufts Branch, Dudley.	0.2	MILES		X			

Massachusetts Category 2 Waters
"Attaining some uses; other uses not assessed"

NAME	SEGMENT ID	DESCRIPTION	SIZE	UNITS	USES ATTAINED*				
					Aesthetic	Fish, other Aquatic Life and Wildlife	Primary Contact Recreation	Secondary Contact Recreation	Shellfish Harvesting
Unnamed Tributary	MA41-26	Unnamed tributary locally known as 'Freeman's Brook' from headwaters west of Cronin Road, Warren to an unnamed tributary to Long Pond, Sturbridge.	2.6	MILES		X			
Unnamed Tributary	MA41-27	Unnamed tributary to Mill Brook, headwaters south of East Hill Road, Brimfield to confluence with Mill Brook, Brimfield.	1.7	MILES		X			
West Brook	MA41-17	Headwaters, west of the Dix Hill Road/Route 19 intersection (excluding intermittent portion), Brimfield to the confluence with Mill Brook, Brimfield.	1.8	MILES	X	X	X	X	
Wielock Pond	MA41056	Dudley	6	ACRES	X			X	
Shawsheen									
Content Brook	MA83-09	Outlet Richardson Pond, Billerica, to confluence with Shawsheen River, Tewksbury.	2.369	MILES			X	X	
Meadow Brook	MA83-12	Outlet Ames Pond, Tewksbury, to confluence with Strong Water Brook, Tewksbury.	1.695	MILES			X	X	
Unnamed Tributary	MA83-16	Also known as "Fosters Brook" - Outlet Fosters Pond, Andover through River Street Pond to confluence with Shawsheen River at Lowell Junction Pond, Andover.	0.97257	MILES			X	X	
South Coastal									
Black Jimmy Pond	MA94008	Plymouth	8.612	ACRES			X	X	
Elbow Pond	MA94035	Plymouth	20.943	ACRES			X	X	
First Herring Brook	MA94-25	From the headwaters in South Swamp, Norwell (through Tack Factory Pond) to the inlet of Old Oaken Bucket Pond, Scituate.	3.945	MILES	X	X	X	X	
Forge Pond	MA94036	Plymouth	13.738	ACRES	X	X		X	
Fresh Pond	MA94040	Plymouth	59.775	ACRES	X		X	X	
Hedges Pond	MA94065	Plymouth	27.072	ACRES			X	X	
Hobomock Pond	MA94177	Pembroke	12.701	ACRES			X	X	
Little Pond	MA94182	Plymouth	40.474	ACRES			X	X	
Little Sandy Bottom Pond	MA94085	Pembroke	56.106	ACRES			X	X	

Massachusetts Category 2 Waters
"Attaining some uses; other uses not assessed"

NAME	SEGMENT ID	DESCRIPTION	SIZE	UNITS	USES ATTAINED*				
					Aesthetic	Fish, other Aquatic Life and Wildlife	Primary Contact Recreation	Secondary Contact Recreation	Shellfish Harvesting
Maquan Pond	MA94096	Hanson	45.034	ACRES			X	X	
Plymouth Bay	MA94-17	The waters southeast of a line drawn from Saquish Head to the tip of Plymouth Beach, Plymouth and west of a line from Gurnet Point, Plymouth to Rocky Point, Plymouth.	10.333	SQUARE MILES	X	X	X	X	X
Savery Pond	MA94136	Plymouth	28.872	ACRES			X	X	
Second Herring Brook	MA94-26	Outlet of Turner Pond, Norwell (through Torrey Pond) to the Second Herring Brook Pond Dam, Norwell.	1.744	MILES	X	X	X	X	
South River	MA94-08	Headwaters from the outlet of unnamed pond north of Congress Street, Duxbury to dam at Main Street (Route 3A), Marshfield.	4.863	MILES	X	X	X	X	
Tack Factory Pond	MA94152	Scituate	8.068	ACRES	X	X	X	X	
Taunton									
Assonet River	MA62-19	Outlet Forge Pond, Freetown to Tisdale Dam (north of Route 79/Elm Street intersection), Freetown.	0.877	MILES	X	X	X	X	
Canoe River	MA62-27	Headwaters in wetland east of Cow Hill, Sharon to inlet of Winnecunnet Pond, Norton.	14.297	MILES	X	X			
Cedar Swamp River	MA62-44	Headwaters south of Freetown Street, Lakeville to the inlet Forge Pond, Freetown (stream name changes to Assonet River at Lakeville/Freetown corporate boundary).	5.828	MILES	X	X	X	X	
Clear Pond	MA62041	Lakeville	17.866	ACRES			X	X	
Cooper Pond	MA62046	Carver	21.635	ACRES	X			X	
Johns Pond	MA62096	Carver	21.27	ACRES			X	X	
Lovett Brook	MA62-46	Headwaters north of Oak Street, Brockton to inlet Elis Brett Pond, Brockton.	1.541	MILES	X				
Nemasket River	MA62-25	From the outlet of Assawompset Pond, Lakeville/Middleborough to Middleborough WWTP discharge, Middleborough.	6.093	MILES	X	X			
Nemasket River	MA62-26	From the Middleborough WWTP discharge, Middleborough to the confluence with the Taunton River, Middleborough.	5.365	MILES	X				

Massachusetts Category 2 Waters
"Attaining some uses; other uses not assessed"

NAME	SEGMENT ID	DESCRIPTION	SIZE	UNITS	USES ATTAINED*				
					Aesthetic	Fish, other Aquatic Life and Wildlife	Primary Contact Recreation	Secondary Contact Recreation	Shellfish Harvesting
Rattlesnake Brook	MA62-45	Headwaters east of Riggenbach Road, Fall River to confluence with Assonet River, Freetown.	3.184	MILES	X	X			
Rumford River	MA62-40	Outlet Norton Reservoir, Norton to confluence with Wading and Threemile rivers, Norton (formerly part of segment MA62-15).	4.532	MILES	X				
Satucket River	MA62-10	From the outlet of Robbins Pond, East Bridgewater to the confluence with the Matfield River, East Bridgewater.	5.597	MILES	X	X	X	X	
Taunton River	MA62-01	Confluence of Town and Matfield rivers, Bridgewater to Route 24 bridge, Taunton/Raynham.	20.396	MILES		X			
Tispaquin Pond	MA62195	Middleborough	194.595	ACRES			X	X	
Winnetuxet River	MA62-24	From the outlet of a small unnamed pond near Cole Mill, Carver to the confluence with the Taunton River, Halifax.	11.816	MILES	X				
Ten Mile									
Sevenmile River	MA52-07	Headwaters, outlet Hoppin Hill Reservoir, North Attleborough to inlet Orrs Pond, Attleboro (thru Luther Reservoir formerly segment MA52025).	3.2	MILES	X	X	X	X	
Westfield									
Bedlam Brook	MA32-33	Source, north of Blandford Road to confluence with Peebles Brook, Blandford.	3.208729	MILES	X	X			
Bradley Brook	MA32-21	From the confluence of Black and Stage brooks, Russell to the confluence with the Westfield River, Russell.	0.722654	MILES	X	X	X	X	
Cook Brook	MA32-38	Headwaters, outlet small unnamed pond west of the intersection of Gorge and Granville roads, Westfield to the confluence with Little River, Westfield.	2	MILES			X	X	
Depot Brook	MA32-17	Source in Washington (north of Beach Road) to confluence with Yokum Brook, Becket.	6.040331	MILES		X			
Dickinson Brook	MA32-34	Source, confluence of Trumble Brook and Seymour Brook to confluence with Munn Brook, Granville.	3.424544	MILES	X	X			
Great Brook	MA32-25	Source at outlet of Congamond Lakes, Southwick to confluence with Westfield River, Westfield.	10.69273	MILES		X	X	X	

Massachusetts Category 2 Waters
"Attaining some uses; other uses not assessed"

NAME	SEGMENT ID	DESCRIPTION	SIZE	UNITS	USES ATTAINED*				
					Aesthetic	Fish, other Aquatic Life and Wildlife	Primary Contact Recreation	Secondary Contact Recreation	Shellfish Harvesting
Kinne Brook	MA32-32	Source, west of West Street, Worthington to confluence with Middle Branch Westfield River, Chester.	5.583392	MILES	X				
Little River	MA32-16	Confluence of Watts and Wards streams in Worthington (Ringville) to confluence with Westfield River, Huntington.	5.677	MILES	X	X			
Little River	MA32-35	Source at the outlet of Cobble Mountain Reservoir dam, Russell to dam northwest of Gorge Road, Russell. (formerly part of segment MA32-26)	2.633	MILES	X	X			
Middle Branch Westfield River	MA32-02	Source in Peru State Wildlife Management Area, Peru to inlet of Littleville Lake just upstream from boat ramp (south of Kinne Brook Road), Chester.	14.743	MILES		X			
Miller Brook	MA32-27	Outlet from small unnamed pond in Robinson State Park, north of North Street, Agawam to confluence with Westfield River, Agawam.	0.628635	MILES		X			
Pond Brook	MA32-24	Outlet of Chapin Pond, Westfield to confluence with Powdermill Brook, Westfield.	3.89069	MILES			X	X	
Roaring Brook	MA32-30	Source north of Horse Hill in Huntington State Forest, Huntington to confluence with Westfield River, Montgomery.	4.336	MILES	X	X			
Russell Pond	MA32061	Russell	82.18	ACRES			X	X	
Sanderson Brook	MA32-31	Source north of Chester Road in the Chester/Blandford State Forest, Blandford to confluence with West Branch Westfield River, Chester.	3.460416	MILES	X	X			
Shaker Mill Brook	MA32-18	Source in October Mountain State Forest, Washington to confluence with Depot Brook, Becket.	4.175987	MILES		X			
Swift River	MA32-12	Source, southwest of Hawley center to confluence with Westfield River at village of Swift River, Cummington.	11.50344	MILES		X			
Walker Brook	MA32-20	Headwaters at outlet of Center Pond (north of YMCA Road), Becket to confluence of the West Branch Westfield River, Chester.	7.124	MILES		X			

Massachusetts Category 2 Waters
"Attaining some uses; other uses not assessed"

NAME	SEGMENT ID	DESCRIPTION	SIZE	UNITS	USES ATTAINED*				
					Aesthetic	Fish, other Aquatic Life and Wildlife	Primary Contact Recreation	Secondary Contact Recreation	Shellfish Harvesting
Wards Stream	MA32-15	Source southeast of Knowles Hill, Worthington to confluence with Watts Stream at Ringville, Worthington.	5.213408	MILES		X			
Watts Stream	MA32-14	Source near West Hill, Worthington to confluence with Wards Stream at Ringville, Worthington.	5.17417	MILES		X			
West Branch Westfield River	MA32-01	Source formed by confluence of Depot Brook and Yokum Brook in Becket to confluence with Westfield River, Huntington.	18.105	MILES		X			
Westfield River	MA32-04	Confluence of Drowned Land Brook and Center Brook in Savoy to confluence with Middle Branch Westfield River, Huntington.	33.156	MILES	X	X	X	X	
Westfield River	MA32-07	Westfield/West Springfield/Agawam city line to confluence with Connecticut River, Agawam.	8.47687	MILES	X			X	
White Brook	MA32-28	Source just north of Route 147, Agawam to confluence with Westfield River, Agawam.	0.929925	MILES		X			
Yokum Brook	MA32-19	Source at outlet of Buckley-Duton Lake (east of Walling Mountain), Becket to confluence with Depot Brook, Becket.	4.006738	MILES	X	X			

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Massachusetts Category 3 Waters
"No uses assessed"

NAME	SEGMENT ID	DESCRIPTION	SIZE	UNITS
Blackstone				
Bell Pond	MA51009	Worcester	10	ACRES
Brooklawn Parkway Pond	MA51195	Shrewsbury	2	ACRES
Carpenter Reservoir	MA51015	Northbridge	78	ACRES
Chase Pond	MA51017	Douglas	11	ACRES
Chockalog Pond	MA51018	Uxbridge	11	ACRES
Clark Reservoir	MA51022	Sutton	29	ACRES
Crane Pond	MA51030	Blackstone	1	ACRES
Crystal Lake	MA51031	Douglas	96	ACRES
Dark Brook Pond	MA51034	Sutton	18	ACRES
Doctors Pond	MA51194	Uxbridge	1	ACRES
Dudley Pond	MA51041	Douglas	8	ACRES
Hales Pond	MA51057	Wrentham	4	ACRES
Hathaway Pond	MA51059	Millbury/Sutton	8	ACRES
Holden Reservoir 1	MA51063	Holden	124	ACRES
Holden Reservoir 2	MA51064	Holden	52	ACRES
Houghton Pond	MA51067	Uxbridge	2	ACRES
Howe Pond	MA51069	Millbury	4	ACRES
Hunt Pond	MA51072	Douglas	2	ACRES
Joels Pond	MA51076	Uxbridge	11	ACRES
Joes Rock Pond	MA51077	Wrentham	12	ACRES
Kettle Brook Reservoir No. 1	MA51079	Leicester	11	ACRES
Kettle Brook Reservoir No. 2	MA51080	Leicester	29	ACRES
Kettle Brook Reservoir No. 3	MA51081	Paxton/Leicester	36	ACRES
Kettle Brook Reservoir No. 4	MA51082	Paxton	113	ACRES
Lake Hiawatha	MA51062	Bellingham/Blackstone	58	ACRES
Lynde Brook Reservoir	MA51090	Leicester	130	ACRES
Martin Street Pond	MA51095	Douglas	3	ACRES
Merrill Pond No. 3	MA51098	Sutton	13	ACRES
Merrill Pond No. 4	MA51099	Sutton	20	ACRES
Nipmuck Pond	MA51111	Mendon	85	ACRES
Number 2 Pond	MA51115	Sutton/Oxford	9	ACRES
Peabody Pond	MA51119	Uxbridge	6	ACRES
Pout Pond	MA51121	Uxbridge	9	ACRES
Pout Pond	MA51122	Boylston	14	ACRES

Massachusetts Category 3 Waters
"No uses assessed"

NAME	SEGMENT ID	DESCRIPTION	SIZE	UNITS
Pratts Pond	MA51124	Grafton	4	ACRES
Ramshorn Pond	MA51126	Sutton/Millbury	131	ACRES
Reservoir No. 4	MA51128	Sutton	10	ACRES
Schoolhouse Pond	MA51144	Sutton	7	ACRES
Sewall Pond	MA51191	Boylston	13	ACRES
Silver Hill Pond	MA51149	Milford	6	ACRES
Slaughterhouse Pond	MA51153	Millbury/Sutton	10	ACRES
Stoneville Reservoir	MA51161	Auburn	60	ACRES
Stump Pond	MA51162	Oxford	20	ACRES
Town Farm Pond	MA51168	Sutton	6	ACRES
Wallum Lake	MA51172	Douglas (size indicates portion in Massachusetts)	138	ACRES
Whitin Reservoir	MA51179	Douglas	342	ACRES
Windle Pond	MA51184	Grafton/Shrewsbury	4	ACRES
Boston Harbor: Mystic				
Bellevue Pond	MA71004	Medford	2	ACRES
Cummings Brook	MA71-10	Headwaters east of Wright Street, Woburn to confluence with Fowle Brook, Woburn.	2.1	MILES
Sales Creek	MA71-12	Headwaters near Route 145, Revere to tidegate/confluence with Belle Isle Inlet, Boston/Revere.	0.008	SQUARE MILES
Shaker Glen Brook	MA71-11	Headwaters, west of Dix Road Extention, Woburn to confluence with Fowle Brook, Woburn (portion culverted underground).	1.5	MILES
Spot Pond	MA71039	Stoneham/Medford	290	ACRES
Boston Harbor: Neponset				
Blue Hills Reservoir	MA73004	Quincy	12	ACRES
Bubbling Brook	MA73-11	Headwaters (perennial portion), near North Street, Walpole to inlet Pettee Pond, Walpole/Westwood border.	0.9	MILES
Buckmaster Pond	MA73006	Westwood	34	ACRES
Flynns Pond	MA73019	Medfield	7	ACRES
Hammer Shop Pond	MA73023	Sharon	2	ACRES
Lymans Pond	MA73021	Westwood	25	ACRES
Sprague Pond	MA73053	Boston/Dedham	7	ACRES
Steep Hill Brook	MA73-18	Outlet of Pinewood Pond, Stoughton, to the inlet of Bolivar Pond, Canton.	0.9	MILES
Tubwreck Brook	MA73-07	Headwaters - small unnamed pond southeast of Powissett Street, Dover to confluence with Mill Brook just southwest of Dover/Medfield border.	1.6	MILES
Unnamed Tributary	MA73-10	Outlet Turner Pond, Walpole to confluence with Neponset River, Walpole.	0.4	MILES
Unnamed Tributary	MA73-14	Outlet Willet Pond, Walpole/Norwood, to inlet Ellis Pond, Norwood.	0.4	MILES
Boston Harbor: Weymouth & Weir				
Accord Pond	MA74030	Hingham/Norwell/Rockland (formerly reported as MA94002)	103	ACRES

Massachusetts Category 3 Waters
"No uses assessed"

NAME	SEGMENT ID	DESCRIPTION	SIZE	UNITS
Farm River	MA74-07	From Randolph/Braintree border (where name changes from Blue Hill River), to confluence with Cochato River (forming headwaters of Monatiquot River), Braintree.	3.1	MILES
Hoosicwhisick Pond	MA74015	Milton	23	ACRES
Old Quincy Reservoir	MA74017	Braintree	27	ACRES
Trout Brook	MA74-12	Headwaters southwest of South Street, Holbrook to inlet Lake Holbrook, Holbrook.	1.2	MILES
Buzzards Bay				
Abner Pond	MA95001	Plymouth	8.853	ACRES
Agawam River	MA95-28	Outlet Mill Pond, Wareham to Wareham WWTP, Wareham.	0.609	MILES
Bates Pond	MA95007	Carver	19.045	ACRES
Big Rocky Pond	MA95119	(Rocky Pond) Plymouth	18.111	ACRES
Big Sandy Pond	MA95011	Plymouth	133.21	ACRES
Blackmore Reservoir	MA95015	Wareham	42.821	ACRES
Buttonwood Park Pond	MA95020	New Bedford	11.543	ACRES
Cedar Dell Lake	MA95021	Dartmouth	22.894	ACRES
Cedar Lake	MA95-96344	Falmouth (formerly reported as segment MA96344)	20	ACRES
Deer Pond	MA95036	Plymouth	8.697	ACRES
Dicks Pond	MA95038	Wareham	41.848	ACRES
Dunham Pond	MA95044	Carver	42.796	ACRES
East Head Pond	MA95177	Carver/Plymouth	91.504	ACRES
Ezekiel Pond	MA95051	Plymouth	35.611	ACRES
Fawn Pond	MA95053	Plymouth	43.743	ACRES
Five Mile Pond	MA95056	Plymouth	21.786	ACRES
Flax Pond	MA95-96087	Bourne (formerly reported as segment MA96087)	20	ACRES
Gallows Pond	MA95059	Plymouth	49.086	ACRES
Halfway Pond	MA95178	(On 9 October 1997, PALIS ID was changed from 94057 to 95178; therefor, this pond historically reported in South Coastal "94") Plymouth	214.592	ACRES
Horseshoe Pond	MA95075	Wareham	59.147	ACRES
Kings Pond	MA95078	Plymouth	22.235	ACRES
Leonards Pond	MA95080	Rochester	49.397	ACRES
Little Long Pond	MA95088	Plymouth	47.692	ACRES
Little Long Pond	MA95089	Wareham/Plymouth	12.411	ACRES
Little Rocky Pond	MA95091	Plymouth	9.453	ACRES
Little Sandy Pond	MA95092	Plymouth	28.91	ACRES
Little West Pond	MA95093	Plymouth	24.546	ACRES
Long Duck Pond	MA95095	Plymouth	21.79	ACRES
Long Pond	MA95096	Plymouth	208.287	ACRES

Massachusetts Category 3 Waters
"No uses assessed"

NAME	SEGMENT ID	DESCRIPTION	SIZE	UNITS
Mare Pond	MA95172	Plymouth	12.543	ACRES
Marys Pond	MA95100	Rochester	81.191	ACRES
Mattapoisett River	MA95-36	Outlet Snipatuit Pond, Rochester to River Road bridge, Mattapoisett.	10.117	MILES
Micajah Pond	MA95102	Plymouth	20.215	ACRES
Paskamanset River	MA95-11	Outlet Turners Pond Dartmouth/New Bedford to confluence with Slocums River, Dartmouth.	10.543	MILES
Rocky Meadow Brook Pond	MA95118	Carver	10.997	ACRES
Rocky Pond	MA95179	Plymouth	20.43	ACRES
Round Pond	MA95123	Plymouth	20.167	ACRES
Sand Pond	MA95127	Wareham	14.446	ACRES
Sandy Pond	MA95128	Wareham	15.292	ACRES
Shingle Island River	MA95-12	Outlet of small unnamed pond northeast of Flag Swamp Road, Dartmouth to inlet Noquochoke Lake (north basin), Dartmouth.	4.995	MILES
South Meadow Brook Pond	MA95139	Carver	24.842	ACRES
South Meadow Pond	MA95140	Carver	22.196	ACRES
Southwest Atwood Bog Pond	MA95141	Carver	11.597	ACRES
Spectacle Pond	MA95142	Wareham	41.48	ACRES
Three Cornered Pond	MA95145	Plymouth	12.268	ACRES
Tinkham Pond	MA95148	Mattapoisett/Acushnet	16.619	ACRES
Union Pond	MA95152	Wareham	17.007	ACRES
Unnamed Tributary	MA95-57	Outlet Cornell Pond, Dartmouth to confluence with Shingle Island River, Dartmouth.	1.009	MILES
Wankinco River	MA95-30	Outlet East Head Pond, Carver/Plymouth (follows border through cranberry bogs) to Elm Street bridge, Wareham.	6.526	MILES
Whites Pond	MA95168	Plymouth	33.713	ACRES
Cape Cod				
Clapps Pond	MA96035	Provincetown (area associated with Cape Cod National Seashore designated as ORW).	40	ACRES
Cliff Pond	MA96039	Brewster	191	ACRES
Coonamessett River	MA96-69	Headwaters, outlet of Coonamessett Pond, Falmouth to the inlet of Great Pond, Falmouth.	3.4	MILES
Depot Pond	MA96061	Eastham	26	ACRES
Flax Pond	MA96090	Dennis	15	ACRES
Goose Pond	MA96106	Chatham	35	ACRES
Gull Pond	MA96123	Wellfleet	103	ACRES
Herring Pond	MA96133	Eastham	42	ACRES
Herring Pond	MA96134	Wellfleet	18	ACRES
Hoxie Pond	MA96146	Sandwich	8	ACRES
Kinnacum Pond	MA96163	Wellfleet	2	ACRES
Lake Elizabeth	MA96080	Barnstable	6	ACRES

Massachusetts Category 3 Waters
"No uses assessed"

NAME	SEGMENT ID	DESCRIPTION	SIZE	UNITS
Long Pond	MA96180	Yarmouth	54	ACRES
Miss Thachers Pond	MA96258	Yarmouth	6	ACRES
Nye Pond	MA96228	Sandwich	6	ACRES
Pilgrim Lake	MA96246	Orleans	38	ACRES
Rushy Marsh Pond	MA96266	Barnstable	14	ACRES
Scargo Lake	MA96279	Dennis	54	ACRES
Schoolhouse Pond	MA96281	Chatham	20	ACRES
Shallow Pond	MA96285	Barnstable	76	ACRES
Shubael Pond	MA96293	Barnstable	55	ACRES
Village Pond	MA96329	Truro	2	ACRES
Charles				
Brookline Reservoir	MA72010	Brookline	21.111	ACRES
Cambridge Reservoir	MA72014	Waltham/Lincoln/Lexington	532.011	ACRES
Chestnut Hill Reservoir	MA72023	Boston	82.253	ACRES
Crystal Lake	MA72030	Newton	27.273	ACRES
Halls Pond	MA72043	Brookline	0.57	ACRES
Little Farm Pond	MA72064	Sherborn	23.801	ACRES
Louisa Lake	MA72068	Milford	7.772	ACRES
Norumbega Reservoir	MA72086	[North Basin] Weston	13.643	ACRES
Norumbega Reservoir	MA72087	[South Basin] Weston	38.41	ACRES
Sandy Pond	MA72105	Lincoln	157.108	ACRES
South End Pond	MA72109	Millis	29.525	ACRES
Stony Brook	MA72-37	Outlet Turtle Pond, Boston to culvert entrance, Boston.	1.62	MILES
Stony Brook Reservoir	MA72114	Waltham/Weston	63.58	ACRES
Todd Pond	MA72117	Lincoln	9.257	ACRES
Walker Pond	MA72126	Millis	9.008	ACRES
Waseeka Sanctuary Pond	MA72155	Holliston	17.053	ACRES
Weston Reservoir	MA72134	Weston	58.655	ACRES
Weston Station Pond	MA72135	Weston	37.666	ACRES
Chicopee				
Adams Pond	MA36001	Oakham	30	ACRES
Asnacomet Pond	MA36005	Hubbardston	126	ACRES
Bemis Road Pond	MA36012	Hubbardston	16	ACRES
Bennett Street Pond	MA36014	Palmer	6	ACRES
Bickford Pond	MA36015	Hubbardston/Princeton	163	ACRES

Massachusetts Category 3 Waters
"No uses assessed"

NAME	SEGMENT ID	DESCRIPTION	SIZE	UNITS
Brigham Pond	MA36020	Hubbardston	45	ACRES
Brooks Pond	MA36022	Petersham	86	ACRES
Calkins Brook	MA36-26	Headwaters, southeast of Baptist Hill, Palmer to confluence with Twelvemile Brook, Wilbraham.	2.7	MILES
Carter Pond	MA36029	Petersham	44	ACRES
Chicopee Brook	MA36-21	Headwaters, east of Peaked Mountain, Monson (through Chicopee Brook Pond, formerly segment MA36031) to confluence with Quaboag River, Monson.	9.9	MILES
Chicopee Reservoir	MA36033	Chicopee	22	ACRES
Cloverdale Street Pond	MA36036	Rutland	19	ACRES
Comins Pond	MA36037	Warren	26	ACRES
Cranberry Meadow Pond	MA36040	Spencer/Charlton	69	ACRES
Crystal Lake	MA36043	Palmer	16	ACRES
Cunningham Pond	MA36044	Hubbardston	27	ACRES
Cusky Pond	MA36045	New Braintree	28	ACRES
Demond Pond	MA36051	Rutland	120	ACRES
Dimmock Pond	MA36053	Springfield	9	ACRES
Edson Pond	MA36180	Rutland	36	ACRES
Fivemile Pond	MA36061	Springfield	36	ACRES
Fivemile Pond South	MA36182	Springfield	4	ACRES
Gaston Pond	MA36065	Barre	15	ACRES
Haviland Pond	MA36069	Ludlow	25	ACRES
Horse Pond	MA36072	North Brookfield	63	ACRES
Knights Pond	MA36077	Belchertown	36	ACRES
Lovewell Pond	MA36085	Hubbardston	82	ACRES
Mare Meadow Reservoir	MA36090	Westminster/Hubbardston	240	ACRES
Mare Meadow Reservoir North	MA36178	Westminster	38	ACRES
Moose Hill Reservoir	MA36179	Spencer/Leicester	52	ACRES
Moulton Pond	MA36098	Rutland	65	ACRES
Muddy Pond	MA36102	Oakham/Rutland	23	ACRES
Murphy Pond	MA36103	Ludlow	6	ACRES
Palmer Reservoir	MA36115	Palmer	8	ACRES
Paradise Lake	MA36116	Monson	17	ACRES
Pattaquattic Pond	MA36117	Palmer	18	ACRES
Peppers Mill Pond	MA36121	Ware	11	ACRES
Perry Hill Pond	MA36122	Hubbardston	23	ACRES
Prince River	MA36-08	Source, outlet Hemingway Pond, Barre to confluence with Ware River, Barre (excluding approximately 0.6 miles through Old Reservoir, segment MA36114).	7.1	MILES

Massachusetts Category 3 Waters
"No uses assessed"

NAME	SEGMENT ID	DESCRIPTION	SIZE	UNITS
Queen Lake	MA36132	Phillipston	139	ACRES
Shaw Pond	MA36138	Leicester	64	ACRES
Springfield Reservoir	MA36145	Ludlow	393	ACRES
Stone Bridge Pond	MA36148	Templeton	32	ACRES
Thayer Pond	MA36181	Rutland	46	ACRES
Thompson Lake	MA36154	Palmer	34	ACRES
Thompsons Pond	MA36155	Spencer	116	ACRES
Town Barn Beaver Pond	MA36156	Petersham	20	ACRES
Waite Pond	MA36161	Hubbardston	34	ACRES
Concord (SuAsCo)				
Cedar Swamp Pond	MA82016	Westborough	16.579	ACRES
Clamshell Pond	MA82018	Clinton	24.326	ACRES
Denny Brook	MA82A-27	From outlet of unnamed pond west of South Street, Westborough to confluence with Jackstraw Brook, Westborough	0.642	MILES
Elm Street Pond	MA82032	Chelmsford/Carlisle	65.646	ACRES
Farrar Pond	MA82036	Lincoln	83.012	ACRES
Fiske Street Pond	MA82037	Carlisle/Chelmsford	37.732	ACRES
Fort Pond	MA82043	Littleton	101.823	ACRES
Fort Pond Brook	MA82B-13	From source in a wetland just west of Fort Pond, Littleton to the inlet of Warners Pond, Concord.	10.239	MILES
Gates Pond	MA82047	Berlin	72.666	ACRES
Gates Pond Brook	MA82B-10	From the outlet of Gates Pond, Berlin to the confluence with the Assabet River, Berlin.	1.042	MILES
Gleasons Pond	MA82048	Framingham	10.504	ACRES
Ice House Pond	MA82066	Acton	11.219	ACRES
Indian Brook	MA82A-23	Headwaters, outlet of Icehouse Pond, Hopkinton to the inlet of Hopkinton Reservoir, Hopkinton (formerly part of segment MA82A-12).	2.33	MILES
Jackstraw Brook	MA82A-28	From headwaters west of Upton Road, Westborough to inlet of Cedar Swamp Pond, Westborough	1.919	MILES
Learned Pond	MA82069	Framingham	33.857	ACRES
Milham Reservoir	MA82077	Marlborough	66.594	ACRES
Nagog Pond	MA82082	Littleton/Acton	277.719	ACRES
Piccadilly Brook	MA82A-30	From headwaters, outlet of Westboro Reservoir, Westborough to inlet to Cedar Swamp Pond, Westborough	2.032	MILES
Rutters Brook	MA82A-29	From headwaters near Robin Road, Westborough to confluence with Jackstraw Brook, Westborough	1.968	MILES
Second Division Brook	MA82B-09	From the headwaters at the outlet of small unnamed pond north of Waltham Street, Maynard to the confluence with the Assabet River, Concord.	2.909	MILES
Smith Pond	MA82099	Northborough	15.553	ACRES
Solomon Pond	MA82100	Northborough	21.242	ACRES

Massachusetts Category 3 Waters
"No uses assessed"

NAME	SEGMENT ID	DESCRIPTION	SIZE	UNITS
Spencer Brook	MA82B-15	From the outlet of an unnamed pond north of Bellows Hill, Carlisle to the inlet of Angiers Pond, Concord.	3.794	MILES
Sudbury River	MA82A-01	From the source at the outlet of Cedar Swamp Pond, Westborough to the Fruit Street Bridge, Hopkinton/Westborough.	1.895	MILES
Tripp Pond	MA82107	Hudson	3.501	ACRES
Westborough Reservoir	MA82114	Westborough	41.007	ACRES
White Pond	MA82118	Concord	36.112	ACRES
White Pond	MA82119	Hudson/Stow	48.837	ACRES
Whitehall Brook	MA82A-11	From the outlet of Whitehall Reservoir, Hopkinton to confluence with the Sudbury River, Westborough.	3.485	MILES
Williams Lake	MA82121	Marlborough	69.316	ACRES
Connecticut				
Atkins Reservoir	MA34006	Shutesbury	46.468	ACRES
Brickyard Brook	MA34-13	Headwaters, Westfield to confluence with Manhan River, Westfield.	1.616	MILES
Cooley Brook	MA34-20	Headwaters, Longmeadow to confluence with Connecticut River, Longmeadow.	1.44	MILES
Danks Pond	MA34019	Northampton/Easthampton	2.796	ACRES
Factory Hollow Pond	MA34021	Amherst	11.89	ACRES
Green Pond	MA34028	Montague	14.727	ACRES
Lake Pleasant	MA34070	Montague	54.006	ACRES
Long Plain Brook	MA34-09	Headwaters, Leveret/Sunderland town line (in Mt. Toby State Forest) to confluence with Russellville Brook at Route 116, Sunderland.	5.012	MILES
Longmeadow Brook	MA34-21	Headwaters, outlet Turner Park Pond, Longmeadow to confluence with Connecticut River, Longmeadow.	4.454	MILES
Lower Highland Lake	MA34047	Goshen	90.731	ACRES
Manhan River	MA34-10	Headwaters, northeast of Norwich Pond, Huntington to inlet Tighe Carmody Reservoir, Southampton (thru White Reservoir formely segment MA34100).	6.551	MILES
Mill River Diversion	MA34-32	Headwaters, outlet Paradise Pond to confluence with Oxbow (east of Old Springfield Road), Northampton (thru Hulberts Pond formely segment MA34036).	2.538	MILES
Mountain Street Reservoir	MA34056	Williamsburg/Hatfield/Whately	66.673	ACRES
Nine Mile Pond	MA34127	Wilbraham (PALIS/Segment changed from 36107 to 34127, TRD 6/21/02)	32.531	ACRES
Northampton Reservoir	MA34059	Whately	80.365	ACRES
Northfield Mountain Reservoir	MA34061	Erving	237.269	ACRES
Pine Island Lake	MA34069	Westhampton	55.096	ACRES
Plympton Brook Pond	MA34071	Wendell	4.894	ACRES
Potash Brook	MA34-12	Headwaters to confluence with Manhan River, Southampton.	0.96	MILES
Raspberry Brook	MA34-22	From Massachusetts/Connecticut border to confluence with Connecticut River, Longmeadow.	1.794	MILES
Roberts Meadow Reservoir	MA34076	Northampton	22.421	ACRES
Sawmill River	MA34-40	Headwaters, outlet Lake Wyola, Shutesbury to Dudleyville Road, Leverett (formerly part of MA34-26).	2.032	MILES

Massachusetts Category 3 Waters
"No uses assessed"

NAME	SEGMENT ID	DESCRIPTION	SIZE	UNITS
Sawyer Ponds	MA34078	[North Basin] Northfield	9.263	ACRES
Sawyer Ponds	MA34079	[South Basin] Northfield	12.41	ACRES
Silver Lake	MA34084	Agawam	8.696	ACRES
Tighe Carmody Reservoir	MA34089	Southampton	353.401	ACRES
Unnamed Tributary	MA34-31	Headwater, outlet Lake Warner to confluence with Connecticut River, Hadley.	0.531	MILES
White Brook	MA34-14	Headwaters, Easthampton to inlet Nashawannuck Pond, Easthampton.	1.807	MILES
Deerfield				
Bog Pond	MA33003	Savoy	34.994	ACRES
Bozrah Brook	MA33-13	Headwaters, located west of East Hawley Road, Hawley (drains wetland) to confluence with Deerfield River, Charlemont.	2.996	MILES
Burnett Pond	MA33005	Savoy	17.717	ACRES
Dragon Brook	MA33-20	Headwaters north of Patten Road, Shelburne to confluence with the Deerfield River, Shelburne	4.352	MILES
Fox Brook Upper Reservoir	MA33006	Colrain	2.954	ACRES
Goodnow Road Pond	MA33007	Buckland	10.918	ACRES
Hallockville Pond	MA33009	Plainfield/Hawley	18.555	ACRES
Highland Pond	MA33032	Greenfield	2.104	ACRES
Hinsdale Brook	MA33-21	Headwaters east of Fiske Mill Road, Shelburne to confluence with Punch Brook, Greenfield	2.831	MILES
Maynard Pond	MA33011	Greenfield	3.249	ACRES
McLeod Pond	MA33012	Colrain	41.336	ACRES
Mt. Brook Reservoir	MA33024	Colrain	1.471	ACRES
Newell Pond	MA33013	Greenfield	0.928	ACRES
Papoose Lake	MA33023	Heath	14.088	ACRES
Phelps Brook Reservoir	MA33030	Monroe	0.052	ACRES
Shingle Brook	MA33-22	Headwaters north of Guy Manners Road, Shelburne to confluence with the Deerfield River, Deerfield.	2.764	MILES
Smith Brook	MA33-26	Headwaters, outlet Upper Reservoir, Ashfield to confluence with Clesson Brook, Buckland.	2.664	MILES
Upper Greenfield Reservoir	MA33021	Leyden	5.748	ACRES
Upper Highland Springs Reservoir	MA33025	Ashfield	2.483	ACRES
Upper Reservoir Bear Swamp	MA33026	Rowe	108.283	ACRES
Farmington				
Cranberry Pond	MA31008	Tolland	75.489	ACRES
Creek Pond	MA31009	(Watson Pond) Otis	51.734	ACRES
Dimmock Brook	MA31-10	Outlet of Dimmock Brook Pond, Otis to confluence with West Branch Farmington River, Otis.	1.006	MILES
Dimmock Brook Pond	MA31010	Otis	15.166	ACRES
Hayden Pond	MA31016	Otis	27.999	ACRES
Long Bow Lake	MA31019	Becket	25.585	ACRES

Massachusetts Category 3 Waters
"No uses assessed"

NAME	SEGMENT ID	DESCRIPTION	SIZE	UNITS
Lower Spectacle Pond	MA31020	Sandisfield	69.815	ACRES
Royal Pond	MA31034	Otis/Monterey	7.419	ACRES
Shales Brook	MA31-04	Source north of Tyringham Road, Becket to inlet Shaw Pond, Becket.	1.238268	MILES
Silver Brook	MA31-13	Confluence of North Branch and South Branch Silver Brook, Sandisfield to confluence with Clam River, Sandisfield.	0.957688	MILES
Silver Shield Pond	MA31054	Becket	9.792	ACRES
Thomas Brook	MA31-06	Outlet Thomas Pond, Becket to confluence with unnamed tributary, Otis.	0.823572	MILES
Unnamed Tributary	MA31-05	Source in wetlands southwest of Route 90 and east of Route 20, Becket to inlet Shaw Pond, Becket.	1.333735	MILES
Unnamed Tributary	MA31-07	Outlet Shaw Pond, Becket/Otis to inlet Hayden Pond, Otis.	0.889249	MILES
Unnamed Tributary	MA31-09	Source north of Route 23 and east of Harrington Road, Otis to confluence with West Branch Farmington River, Otis.	1.997087	MILES
Ward Pond	MA31047	Becket	27.153	ACRES
West Lake	MA31050	Sandisfield	60.286	ACRES
White Lily Pond	MA31051	Otis	62.146	ACRES
French				
Bartons Brook	MA42-08	Headwaters, outlet Stiles Reservoir, Leicester to inlet Greenville Pond West, Leicester.	1.1	MILES
Burncoat Pond	MA42007	Leicester/Spencer	115	ACRES
Carbuncle Pond	MA42008	Oxford	11	ACRES
Easterbrook Pond	MA42017	Dudley	5	ACRES
Greenville Pond West	MA42022	Leicester	6	ACRES
Hayden Pond	MA42024	Dudley	44	ACRES
Henshaw Pond	MA42025	Leicester	37	ACRES
Hultered Pond	MA42072	Charlton	4	ACRES
Little Nugget Lake	MA42032	Charlton	13	ACRES
Little River	MA42-14	Outlet Buffum Pond, Oxford to confluence with French River, Oxford (formerly part of segment MA42-09).	1.3	MILES
Merino Pond	MA42036	Dudley	75	ACRES
Nipmuck Pond	MA42039	Webster	20	ACRES
Putnam Pond	MA42046	Charlton	20	ACRES
Slaters Pond	MA42053	Oxford	105	ACRES
Snow Pond	MA42054	Charlton	1	ACRES
Stiles Reservoir	MA42055	Spencer/Leicester	309	ACRES
Town Meadow Brook	MA42-02	Headwaters, outlet Dutton Pond, Leicester to inlet Greenville Pond, Leicester.	1.9	MILES
Unnamed Tributary	MA42-12	Unnamed tributary to Wellington Brook, perennial portion from Depot Road, Oxford to confluence with Wellington Brook, Oxford.	0.2	MILES
Watson Millpond	MA42063	Spencer	2	ACRES
Wee Laddie Pond	MA42065	Charlton	6	ACRES

Massachusetts Category 3 Waters
"No uses assessed"

NAME	SEGMENT ID	DESCRIPTION	SIZE	UNITS
Housatonic				
Anthony Brook	MA21-10	Headwaters, outlet of Anthony Pond, Dalton to the confluence with Wahconah Falls Brook, Dalton.	2.568	MILES
Ashley Lake	MA21003	Washington	93.644	ACRES
Benedict Pond	MA21011	Great Barrington/Monterey	37.034	ACRES
Card Pond	MA21015	West Stockbridge	11.424	ACRES
Cleveland Brook Reservoir	MA21019	Hinsdale	155.627	ACRES
Cookson Pond	MA21021	New Marlborough	67.096	ACRES
Crane Lake	MA21025	West Stockbridge	27.474	ACRES
East Indies Pond	MA21029	New Marlborough	72.217	ACRES
Farnham Reservoir	MA21033	Washington	40.87	ACRES
Hayes Pond	MA21051	Otis	46.264	ACRES
Mill Pond	MA21069	Egremont	10.403	ACRES
Seekonk Brook	MA21-22	Outlet of small impoundment east of West Road, Alford to confluence with the Green River, Great Barrington.	4.787	MILES
Unnamed Tributary	MA21-24	Headwaters, outlet of Mill Pond, Egremont to confluence with Hubbard Brook, Egremont.	1.481	MILES
Upper Sackett Reservoir	MA21113	Hinsdale	19.454	ACRES
Windsor Reservoir	MA21119	Hinsdale/Windsor	74.354	ACRES
Hudson: Hoosic				
Bassett Brook	MA11-17	Headwaters southeast slope of Saddle Ball Mountain, Adams to inlet Bassett Reservoir, Cheshire.	1.939	MILES
Broad Brook	MA11-23	From Vermont state line, Williamstown to the confluence with the Hoosic River, Williamstown.	2.184	MILES
Mt. Williams Reservoir	MA11010	North Adams	45.842	ACRES
Notch Reservoir	MA11011	North Adams	12.287	ACRES
Thunder Brook	MA11-10	Headwaters, Cheshire to confluence with Kitchen Brook, Cheshire.	1.545	MILES
Windsor Lake	MA11016	North Adams	23.993	ACRES
Ipswich				
Bear Meadow Brook	MA92-07	Headwaters in Cedar Swamp, Reading to confluence with Ipswich River, Reading/North Reading.	2.842773	MILES
Beaver Pond	MA92002	Beverly	18.534	ACRES
Black Brook	MA92-19	Outlet Cutler Pond, Hamilton to confluence with Ipswich River, Hamilton.	3.62	MILES
Bradford Pond	MA92005	North Reading	14.169	ACRES
Creighton Pond	MA92011	Middleton	18.66	ACRES
Eisenhaures Pond	MA92016	North Reading	11.977	ACRES
Elginwood Pond	MA92017	Peabody	8.502	ACRES
Emerson Brook Reservoir (Forest Street Pond)	MA92021	Middleton	195.429	ACRES
Farnum Street Pond	MA92018	North Andover	8.609	ACRES
Fourmile Pond	MA92022	Boxford	28.683	ACRES

Massachusetts Category 3 Waters
"No uses assessed"

NAME	SEGMENT ID	DESCRIPTION	SIZE	UNITS
Howes Pond	MA92026	Boxford	6.615	ACRES
Idlewild Brook	MA92-24	Outlet of Pleasant Pond, Hamilton to confluence with Ipswich River, Hamilton.	0.809	MILES
Kimballs Pond	MA92027	Boxford	7.468	ACRES
Long Causeway Brook	MA92-20	Headwaters near Boston & Maine Railroad, south of Pigeon Hill, Hamilton to confluence with Miles River, Hamilton/Ipswich.	1.896231	MILES
Longham Reservoir	MA92030	Wenham	34.152	ACRES
Middleton Pond	MA92039	Middleton	128.95	ACRES
Mile Brook	MA92-16	Headwaters, east of North Street, Topsfield to confluence with Ipswich River, Topsfield.	2.54	MILES
Nichols Brook	MA92-25	Headwaters (near Rowley Hill Street and Route 95 and Newburyport Turnpike) in Danvers, to confluence with the Ipswich River, Middleton.	2.475	MILES
Pierces Pond	MA92048	Peabody	2.609	ACRES
Putnamville Reservoir	MA92052	Danvers	282.517	ACRES
Salem Street Pond	MA92076	North Andover	10.601	ACRES
Spofford Pond	MA92060	Boxford	28.102	ACRES
Stearns Pond	MA92061	North Andover	42.929	ACRES
Sudden Pond	MA92064	North Andover	5.204	ACRES
Suntaug Lake	MA92065	Lynnfield/Peabody	150.1	ACRES
Swan Pond	MA92066	North Reading	42.036	ACRES
Towne Pond	MA92068	Boxford/North Andover	23.362	ACRES
Unnamed Tributary	MA92-09	Outlet of Eisenhaures Pond, North Reading to confluence with Ipswich River, North Reading.	1.387	MILES
Upper Boston Brook Pond	MA92070	Middleton	7.054	ACRES
Winona Pond	MA92077	Peabody	91.393	ACRES
Islands				
Oyster Pond	MA97-13	Including Ripley Cove, Edgartown, Martha's Vineyard.	0.293	SQUARE MILES
Merrimack				
Bailey Pond	MA84003	Amesbury	13	ACRES
Beaver Brook	MA84B-05	Headwaters, outlet of "Wolf Swamp", Boxborough to inlet of Mill Pond, Littleton.	5.5	MILES
Mill Pond	MA84039	West Newbury	18	ACRES
Uptons Pond	MA84075	Tyngsborough	6	ACRES
Millers				
Bassett Pond	MA35002	New Salem	26.012	ACRES
Beaver Flowage Pond	MA35005	(Beaver Pond) Royalston	38.034	ACRES
Bents Pond	MA35006	Hubbardston	28.747	ACRES
Bowens Pond	MA35009	Wendell	16.774	ACRES
Cowee Pond	MA35013	Gardner	18.263	ACRES
Crystal Lake	MA35014	Gardner	142.259	ACRES

Massachusetts Category 3 Waters
"No uses assessed"

NAME	SEGMENT ID	DESCRIPTION	SIZE	UNITS
Davenport Pond	MA35015	Petersham/Athol	30.42	ACRES
East Templeton Pond	MA35022	Templeton	8.891	ACRES
Greenwood Pond	MA35025	Westminster	26.984	ACRES
Hastings Pond	MA35028	Warwick	18.311	ACRES
Kendall Pond	MA35034	Gardner	21.907	ACRES
Lake Watatic	MA35095	Ashburnham	133.102	ACRES
Little Pond	MA35037	Royalston	9.977	ACRES
Lower Naukeag Lake	MA35041	Ashburnham	295.481	ACRES
Millers River	MA35-20	Outlet of Sunset Lake, Ashburnham to inlet of Whitney Pond, Winchendon.	6.362	MILES
Minott Pond	MA35046	Westminster	8.439	ACRES
Minott Pond South	MA35045	Westminster	27.319	ACRES
North Spectacle Pond	MA35052	New Salem	42.893	ACRES
Packard Pond	MA35053	Orange	43.116	ACRES
Partridgeville Pond	MA35057	Templeton	37.685	ACRES
Perley Brook Reservoir	MA35059	Gardner	54.682	ACRES
Phillipston Reservoir	MA35060	Philipston/Athol	19.931	ACRES
Reservoir No. 2	MA35064	Phillipston/Athol (Secret Lake)	48.32	ACRES
Riceville Pond	MA35065	Athol/Petersham	61.372	ACRES
Richards Reservoir	MA35067	Warwick	21.202	ACRES
Royalston Road Pond	MA35071	Orange	5.306	ACRES
Sheomet Lake	MA35074	Warwick	30.583	ACRES
South Spectacle Pond	MA35081	New Salem	37.892	ACRES
Sportsmans Pond	MA35082	Athol	92.724	ACRES
Sunset Lake	MA35086	Ashburnham/Winchendon	274.257	ACRES
Tully Lake	MA35111	Royalston/Athol	213.679	ACRES
Tully Pond	MA35089	Orange	70.152	ACRES
Wallace Pond	MA35092	Ashburnham	46.086	ACRES
Ward Pond	MA35093	Athol	5.899	ACRES
Wheelers Pond	MA35097	Warwick	28.286	ACRES
Wickett Pond	MA35102	Wendell	29.931	ACRES
Wrights Reservoir	MA35104	Gardner/Westminster	130.848	ACRES
Mount Hope Bay (Shore)				
Cook Pond	MA61001	Fall River, MA/Tiverton, RI	157	ACRES
South Watuppa Pond	MA61006	Fall River/Westport	1473	ACRES

Massachusetts Category 3 Waters
"No uses assessed"

NAME	SEGMENT ID	DESCRIPTION	SIZE	UNITS
Narragansett Bay (Shore)				
Bad Luck Brook	MA53-11	Headwaters, outlet Warren Upper Reservoir, Rehoboth to confluence with East Branch Palmer River, Rehoboth	1.7	MILES
Beaverdam Brook	MA53-10	Headwaters, southeast of Chestnut Street, Rehoboth to confluence with Palmer River, Rehoboth	2.9	MILES
East Branch Palmer River	MA53-08	Headwaters, near Stevens Corner Cemetery, Rehoboth to confluence with West Branch Palmer River (forming Palmer River), Rehoboth	7.2	MILES
Fullers Brook	MA53-12	Headwaters in wetland north of Jacobs Street, Seekonk to confluence with Palmer River, Rehoboth	1.7	MILES
Oak Swamp Brook	MA53-15	Headwaters in Oak Swamp east of School Street, Rehoboth to confluence with Rocky Run, Rehoboth	3	MILES
Rumney Marsh Brook	MA53-09	Headwaters, east of Locust Avenue, Rehoboth to confluence with Beaverdam Brook, Rehoboth	1.3	MILES
Torrey Creek	MA53-14	Headwaters in wetland east of Benson Avenue, Seekonk to Barney Avenue, Rehoboth (includes culverted section near Seekonk Speedway, Seekonk)	2.1	MILES
West Branch Palmer River	MA53-07	From confluence of Bliss Brook, Rehoboth to confluence with East Branch Palmer River (forming Palmer River), Rehoboth	3.8	MILES
Nashua				
Ashby Reservoir	MA81001	Ashby	36	ACRES
Asnebumskit Pond	MA81002	Paxton	43	ACRES
Baker Brook	MA81-62	From headwaters at confluence of Pearl Hill and Falulah brooks, Fitchburg to confluence with North Nashua River, Fitchburg	2.5	MILES
Barrett Pond	MA81162	Leominster	7	ACRES
Bartlett Pond	MA81009	Leominster	23	ACRES
Bixby Reservoir	MA81010	Townsend	21	ACRES
Coachlace Pond	MA81019	Clinton	31	ACRES
Coon Tree Pond	MA81168	Pepperell	29	ACRES
Crocker Pond	MA81025	Westminster	101	ACRES
East Waushacum Pond	MA81035	Sterling	182	ACRES
Fall Brook	MA81-38	From the outlet of Fall Brook Reservoir, Leominster to the inlet of Lake Samoset, Leominster (formerly part of segment MA81-14).	1.3	MILES
Fall Brook Reservoir	MA81038	Leominster	88	ACRES
FALULAH BROOK	MA81-63	Headwaters near Ringe Road, Ashby to confluence with Pearl Hill Brook, forming headwaters Baker Brook, Fitchburg (excluding approximately 0.6 miles through Lovell Reservoir segment MA81074)	6	MILES
Fitchburg Reservoir	MA81043	Ashby	150	ACRES
Haynes Reservoir	MA81055	Leominster	56	ACRES
Heald Pond	MA81056	Pepperell	28	ACRES
Hy-Crest Pond	MA81060	Sterling	104	ACRES
Kendall Reservoir	MA81062	Holden	179	ACRES
Lancaster Millpond	MA81065	Clinton	21	ACRES
Lincoln Pond	MA81070	Ashburnham	31	ACRES
Long Pond	MA81073	Ayer/Groton	46	ACRES

Massachusetts Category 3 Waters
"No uses assessed"

NAME	SEGMENT ID	DESCRIPTION	SIZE	UNITS
Lovell Reservoir	MA81074	Fitchburg	35	ACRES
Lower Crow Hill Pond	MA81026	Princeton/Westminster	14	ACRES
Maple Spring Pond	MA81077	Holden	39	ACRES
Massapoag Pond	MA81080	Lunenburg	64	ACRES
Meetinghouse Pond	MA81083	Westminster	151	ACRES
Mirror Lake	MA81084	Fitchburg	6	ACRES
Morse Reservoir	MA81086	Leominster	15	ACRES
Mulpus Brook	MA81-36	Headwaters, north of Howard Street, Lunenburg to the inlet of Hickory Hills Lake, Lunenburg (formerly part of segment MA81-22).	3.8	MILES
Muschopauge Pond	MA81089	Rutland	61	ACRES
Notown Reservoir	MA81092	Leominster	240	ACRES
Pine Hill Reservoir	MA81102	Paxton/Holden/Rutland	336	ACRES
Quinapoxet Reservoir	MA81108	Holden/Princeton	266	ACRES
Round Meadow Pond	MA81114	Westminster	54	ACRES
Sandy Pond	MA81117	Ayer	69	ACRES
Scott Reservoir	MA81119	Fitchburg	33	ACRES
Snows Millpond	MA81127	Fitchburg/Westminster	38	ACRES
South Meadow Pond	MA81129	[East Basin] Clinton	37	ACRES
South Meadow Pond	MA81165	[West Basin] Clinton/Lancaster	34	ACRES
Spectacle Pond	MA81132	Lancaster	61	ACRES
Still River	MA81-15	From Route 117, Bolton to confluence with Nashua River, Harvard/Lancaster.	2.7	MILES
Streeter Pond	MA81136	Paxton/Holden	18	ACRES
The Quag	MA81170	Sterling	32	ACRES
Upper Crow Hill Pond	MA81169	Westminster	5	ACRES
Vinton Pond	MA81145	Townsend	16	ACRES
Wachusett Lake	MA81146	Westminster/Princeton	129	ACRES
West Waushacum Pond	MA81153	Sterling	111	ACRES
Whitmanville Reservoir	MA81109	Westminster/Ashburnham	107	ACRES
Winnekeag Lake	MA81157	Ashburnham	112	ACRES
Wright Pond	MA81159	[West Basin] Ashby	21	ACRES
North Coastal				
Alewife Brook	MA93-26	Headwaters just north of B&M Railroad, Rockport to inlet Babson Reservoir, Gloucester.	0.972	MILES
Babson Reservoir	MA93001	Gloucester	39.661	ACRES
Birch Pond	MA93004	Saugus/Lynn	80.386	ACRES
Breeds Pond	MA93006	Lynn	195.228	ACRES
Browns Pond	MA93008	Peabody	24.491	ACRES

Massachusetts Category 3 Waters
"No uses assessed"

NAME	SEGMENT ID	DESCRIPTION	SIZE	UNITS
Buswell Pond	MA93009	Gloucester	4.413	ACRES
Crystal Lake	MA93018	Wakefield/Stoneham	81.966	ACRES
Fernwood Lake	MA93022	Gloucester	25.379	ACRES
Goose Cove Reservoir	MA93093	Gloucester	57.664	ACRES
Gravelly Pond	MA93028	Hamilton	49.738	ACRES
Haskell Pond	MA93031	Gloucester	58.332	ACRES
Lower Pond	MA93044	Saugus	21.166	ACRES
Mill Pond	MA93050	Gloucester	17.602	ACRES
Niles Pond	MA93052	Gloucester	34.415	ACRES
Quarry Reservoir	MA93053	Rockport	7.44	ACRES
Round Pond	MA93063	Hamilton	37.51	ACRES
Rum Rock Lake	MA93064	Rockport	9.62	ACRES
Spring Pond	MA93073	[South Basin] Peabody/Lynn/Salem	66.216	ACRES
Spring Pond	MA93074	[North Basin] Peabody	16.586	ACRES
Unnamed Tributary	MA93-27	Outlet Babson Reservoir, Gloucester to inlet Mill Pond, Gloucester.	0.745	MILES
Upper Pond	MA93083	Saugus	12.707	ACRES
Walden Pond	MA93084	Lynn/Saugus/Lynnfield	223.113	ACRES
Wallace Pond	MA93085	Gloucester	21.725	ACRES
Parker				
Bull Brook	MA91-04	Headwaters, Ipswich to inlet Bull Brook Reservoir, Ipswich.	1.4	MILES
Bull Brook Reservoir	MA91002	Ipswich	7	ACRES
Central Street Pond	MA91003	Rowley	3	ACRES
Crane Pond	MA91004	Groveland	22	ACRES
Dow Brook Reservoir	MA91005	Ipswich	16	ACRES
Egypt River	MA91-13	Outlet Bull Brook Reservoir, Ipswich to east of Jewett Hill (Latitude 42:42:23.40, Longitude 70:51:47.58 DMS), Ipswich.	1.1	MILES
Jackman Brook	MA91-07	Northeast of intersection of Jewett and Tenney streets, Georgetown to confluence with Wheeler Brook, Georgetown.	0.8	MILES
Little Crane Pond	MA91007	West Newbury	4	ACRES
Ox Pasture Brook	MA91-10	Headwaters - Outlet of small unnamed impoundment east of Bradford Street, Rowley to the outlet of a small unnamed impoundment west of Ox Pasture Hill, Rowley.	2.5	MILES
Quills Pond	MA91011	Newbury	2	ACRES
Sperrys Pond	MA91013	Boxford	26	ACRES
Wilson Pond	MA91017	Rowley	5	ACRES
Quinebaug				
Lake George	MA41016	Wales	93	ACRES
Leadmine Pond	MA41027	Sturbridge	52	ACRES

Massachusetts Category 3 Waters
"No uses assessed"

NAME	SEGMENT ID	DESCRIPTION	SIZE	UNITS
Little Alum Pond	MA41029	Brimfield	73	ACRES
McIntyre Pond	MA41031	Charlton	11	ACRES
Monson Road Pond	MA41059	Wales	4	ACRES
New Boston Road Pond	MA41035	Sturbridge	13	ACRES
No. 3 Reservoir	MA41038	Southbridge	24	ACRES
No. 4 Reservoir	MA41039	Southbridge	69	ACRES
No. 5 Reservoir	MA41040	Southbridge	30	ACRES
Prindle Lake	MA41043	Charlton	75	ACRES
Wales Brook	MA41-08	Headwaters, outlet Lake George, Wales to confluence with Mill Brook, Brimfield.	5.2	MILES
Shawsheen				
Bakers Meadow Pond	MA83002	Andover	21.188	ACRES
Fawn Lake	MA83004	Bedford	11.825	ACRES
Hussey Brook Pond	MA83008	Andover	0.539	ACRES
Pond Street Pond	MA83021	Billerica (unnamed pond west of Pond Street)	3.56	ACRES
Richardson Pond North	MA83020	Billerica/Tewksbury (Richardson Pond North)	45.78	ACRES
Round Pond	MA83018	Tewksbury	24.92	ACRES
Unnamed Tributary	MA83-21	Unnamed intermittent tributary to the Shawsheen River locally known as 'Sutton Brook', from headwaters north of Research Drive, Wilmington to confluence with the Shawsheen River, Tewksbury	3	MILES
South Coastal				
Arnold School Pond	MA94004	Pembroke	11.635	ACRES
Bartlett Pond	MA94005	Plymouth	33.268	ACRES
Bloody Pond	MA94015	Plymouth	100.726	ACRES
Boot Pond	MA94016	Plymouth	68.836	ACRES
Bound Brook Pond	MA94017	Norwell	20.861	ACRES
Governor Winslow House Pond	MA94047	Marshfield	22.939	ACRES
Great Sandy Bottom Pond	MA94053	Pembroke	103.094	ACRES
Gunners Exchange Pond	MA94055	Plymouth	26.118	ACRES
Harrobs Corner Bog Pond	MA94061	Plympton	20.054	ACRES
Hoyts Pond	MA94070	Plymouth	19.505	ACRES
Indian Head Pond	MA94071	Hanson	119.478	ACRES
Indian Pond	MA94072	Kingston/Plympton	63.795	ACRES
Island Pond	MA94074	[west of the locality of Cedarville] Plymouth	51.804	ACRES
Island Pond	MA94076	[south of locality of South Pond] Plymouth	12.12	ACRES
Keene Pond	MA94079	Duxbury	10.664	ACRES
Little Herring Pond	MA94082	Plymouth	81.243	ACRES

Massachusetts Category 3 Waters
"No uses assessed"

NAME	SEGMENT ID	DESCRIPTION	SIZE	UNITS
Little South Pond	MA94087	Plymouth	62.815	ACRES
Lout Pond	MA94090	Plymouth	17.8	ACRES
Mill Pond	MA94101	Duxbury	7.022	ACRES
Morey Hole	MA94102	Plymouth	22.456	ACRES
North Hill Marsh Pond	MA94109	Duxbury	42.959	ACRES
North Triangle Pond	MA94110	Plymouth	21.773	ACRES
Pine Lake	MA94120	Duxbury	22.125	ACRES
Pine Street Pond	MA94121	Duxbury	13.845	ACRES
Round Pond	MA94131	Duxbury	6.789	ACRES
Russell Pond	MA94133	Kingston	10.723	ACRES
Shallow Pond	MA94140	Plymouth	18.861	ACRES
Ship Pond	MA94142	Plymouth	10.802	ACRES
South River Pond	MA94148	Duxbury	3.253	ACRES
South Triangle Pond	MA94149	Plymouth	16.968	ACRES
Triangle Pond	MA94160	Plymouth	14.192	ACRES
Unnamed Tributary	MA94-35	unnamed tributary to the Eel River from outlet of cranberry bog south of Valley Road, Plymouth through Forge Pond, to confluence with Eel River, Plymouth.	2.365	MILES
West Chandler Pond	MA94170	Pembroke	9.752	ACRES
Winslow Cemetary Pond	MA94172	Marshfield	6.462	ACRES
Wright Pond	MA94174	Duxbury	30.384	ACRES
Taunton				
Assawompset Pond	MA62003	Lakeville/Middleborough	2033.577	ACRES
Barrowsville Pond	MA62007	Norton	46.658	ACRES
Beaumont Pond	MA62009	Foxborough	24.266	ACRES
Beaver Brook	MA62-30	Source just west of Bay Road, Easton to the inlet Old Pond, Easton.	1.441	MILES
Blakes Pond	MA62221	Mansfield	5.974	ACRES
Briggs Pond	MA62021	Sharon	18.631	ACRES
Carpenter Pond	MA62032	Foxborough	29.392	ACRES
Chaffin Reservoir	MA62035	Pembroke	12.729	ACRES
Chartley Pond	MA62038	Norton/Attleboro	67.578	ACRES
Cobb Brook	MA62-43	Headwaters south of Dunbar Street (in Crapo Bog), Taunton to confluence with the Taunton River, Taunton.	3.521	MILES
Cocasset Lake	MA62043	Foxborough	32.116	ACRES
Cotley River	MA62-41	Headwaters near cranberry bog south off Seekell Street, Taunton (thru Barstows Pond) to the confluence with the Taunton River, Taunton.	5.867	MILES
Coweeset Brook	MA62-22	Source, southwest of Route24/Belmont Street interchange, Brockton to confluence with the Hockomock River, West Bridgewater.	3.898	MILES

Massachusetts Category 3 Waters
"No uses assessed"

NAME	SEGMENT ID	DESCRIPTION	SIZE	UNITS
Cross Pond	MA62052	Brockton	1.679	ACRES
Cross Street Pond	MA62053	Bridgewater	26.686	ACRES
Elm Street Pond	MA62066	Halifax/Hanson	19.146	ACRES
Forge Pond	MA62072	Freetown	55.756	ACRES
Forge River	MA62-37	Outlet of Kings Pond, Raynham to confluence with Taunton River, Raynham.	2.542	MILES
Furnace Lake	MA62076	Foxborough	14.916	ACRES
Great Quittacas Pond	MA62083	Lakeville/Middleborough/Rochester	1124.265	ACRES
Hewitt Pond	MA62088	Raynham	13.642	ACRES
Hockomock River	MA62-35	Source, west of Route 24 and north of the Old Railroad Grade, West Bridgewater to confluence with the Town River, Bridgewater.	5.06	MILES
Kings Pond	MA62101	Raynham	13.043	ACRES
Leach Pond	MA62103	Easton/Sharon	110.709	ACRES
Little Cedar Swamp	MA62106	Easton	90.898	ACRES
Little Quittacas Pond	MA62107	Lakeville/Rochester	294.78	ACRES
Meadow Brook Pond	MA62113	Norton	13.322	ACRES
Mill River	MA62-29	Outlet Whittenton Impoundment, Taunton to the confluence with Taunton River, Taunton.	3.386	MILES
Muddy Cove Brook	MA62-52	Source south of Hart Street, Dighton through Muddy Cove Brook Pond to the outlet of small impoundment behind 333 Main Street (Zeneca Inc.), Dighton (formerly part of segment MA62-23).	1.969	MILES
Muddy Pond	MA62126	Halifax	12.999	ACRES
Muddy Pond	MA62233	Kingston (formerly reported as MA94104).	41.422	ACRES
Mulberry Meadow Brook	MA62-31	Outlet New Pond, Easton to inlet of Winnecunnet Pond, Norton.	4.536	MILES
Mullein Hill Chapel Pond	MA62127	Lakeville	23.07	ACRES
North Center Street Pond	MA62132	Carver	11.812	ACRES
Oakland Pond	MA62136	Taunton	37.618	ACRES
Plymouth Street Pond	MA62141	Halifax/E. Bridgewater	165.015	ACRES
Pocksha Pond	MA62145	Lakeville/Middleborough	592.317	ACRES
Poor Meadow Brook	MA62-34	From a wetland near County Street, Hanson to the confluence with the Satucket River, East Bridgewater.	6.903	MILES
Poquoy Pond	MA62147	Lakeville	9.899	ACRES
Prospect Hill Pond	MA62149	Taunton	41.89	ACRES
Puds Pond	MA62151	Sharon/Easton	22.642	ACRES
Queset Brook	MA62-21	From the outlet of Ames Long Pond, Easton to the confluence with Coweeset Brook, West Bridgewater.	5.113	MILES
Reservoir	MA62157	Hanson	13.195	ACRES
Reservoir	MA62158	Easton	26.913	ACRES
Robbins Pond	MA62162	East Bridgewater	123.732	ACRES
Robinson Pond	MA62163	Mansfield	8.855	ACRES

Massachusetts Category 3 Waters
"No uses assessed"

NAME	SEGMENT ID	DESCRIPTION	SIZE	UNITS
Route One Pond, West	MA62165	Wrentham	9.876	ACRES
Sawmill Brook	MA62-36	Outlet of Ice Pond, Bridgewater to confluence with Taunton River, Bridgewater.	1.905	MILES
Segreganset River Ponds	MA62169	Taunton	13.729	ACRES
Snake River	MA62-28	Outlet of Winnecunnet Pond, Norton to inlet of Lake Sabbatia, Taunton.	3.271	MILES
Sunset Lake	MA62184	Foxborough	13.526	ACRES
The Reservoir	MA62189	Lakeville	22.952	ACRES
Thurston Street Pond	MA62192	Wrentham	6.592	ACRES
Town River	MA62-11	Outlet of Lake Nippenicket, Bridgewater to Route 28 bridge, West Bridgewater.	4.474	MILES
Town River	MA62-12	Route 28 bridge, West Bridgewater to Bridgewater WWTP discharge, Bridgewater.	3.842	MILES
Town River	MA62-13	Bridgewater WWTP discharge, Bridgewater to confluence with Matfield River forming the Taunton River, Bridgewater.	2.356	MILES
Upper Leach Pond	MA62123	(Mountain Street Pond) Sharon	27.881	ACRES
Ward Pond	MA62203	Easton	5.565	ACRES
Whiteville Pond	MA62211	Mansfield	14.418	ACRES
Wolomolopoag Pond	MA62216	Sharon	12.517	ACRES
Ten Mile				
Greenwood Lake	MA52017	Mansfield/N. Attleborough	96.64	ACRES
Hoppin Hill Reservoir	MA52021	North Attleborough	22.446	ACRES
Manchester Pond Reservoir	MA52026	Attleboro	237.347	ACRES
Westfield				
Ashley Cutoff	MA32001	Holyoke	30.738	ACRES
Ashley Pond	MA32002	Holyoke	132.604	ACRES
Borden Brook Reservoir	MA32011	Granville/Blandford	210.832	ACRES
Clear Pond	MA32077	Holyoke	9.772	ACRES
Cobble Mountain Reservoir	MA32018	Blandford/Granville/Russell	1033.76	ACRES
Connor Reservoir	MA32024	Holyoke	17.05	ACRES
Cooley Lake	MA32026	Granville	66.304	ACRES
Crooked Pond	MA32028	Plainfield	33.696	ACRES
Damon Pond	MA32029	Chesterfield/Goshen	77.573	ACRES
Garnet Lake	MA32037	Peru	17.484	ACRES
Glendale Brook	MA32-10	From headwaters in a wetland in Peru State Forest, Peru to confluence with Middle Branch Westfield River, Middlefield.	6.048302	MILES
Granville Reservoir	MA32038	Granville	73.81	ACRES
Hammond Pond	MA32040	Goshen	37.951	ACRES
Littleville Lake	MA32046	Chester/Huntington	251.557	ACRES
Mclean Reservoir	MA32050	Holyoke	55.154	ACRES

Massachusetts Category 3 Waters
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NAME	SEGMENT ID	DESCRIPTION	SIZE	UNITS
Meadow Brook	MA32-11	Outlet of unnamed pond in Plainfield, south of Route 116, to confluence with Westfield River, Cummington.	4.567083	MILES
Middle Branch Westfield River	MA32-03	Littleville Dam, Chester/Huntington to confluence with Westfield River, Huntington.	1.091059	MILES
North Railroad Pond	MA32053	Holyoke	9.125	ACRES
Norwich Pond	MA32054	Huntington	116.015	ACRES
Paucatuck Brook	MA32-29	From outlet of Bearhole Reservoir, West Springfield to confluence with Westfield River, West Springfield.	1.475756	MILES
Robin Hood Lake	MA32057	Becket	63.634	ACRES
Rudd Pond	MA32060	Becket	71.857	ACRES
Scout Pond	MA32063	Chesterfield	36.779	ACRES
West Falls Branch	MA32-13	Headwaters at confluence of Bronson Brook and an unnamed tributary near the intersection of Dingle Road and Route 143, Worthington to confluence with Westfield River near the village of West Chesterfield, Chesterfield. (formerly identified by the Massachusetts Stream Classification Program as West Branch)	2.791	MILES
Westfield Reservoir	MA32074	Montgomery	40.049	ACRES
Westfield River	MA32-06	Route 20 bridge, Westfield to Westfield city boundary with West Springfield and Agawam.	1.911025	MILES
Wright Pond	MA32078	Holyoke	28.124	ACRES
Yokum Pond	MA32079	Becket	97.745	ACRES

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Massachusetts Category 4a Waters
"TMDL is completed"

NAME	SEGMENT ID	DESCRIPTION	SIZE	UNITS	POLLUTANTS ADDRESSED BY TMDL	EPA TMDL NUMBER
Blackstone						
Brierly Pond	MA51010	Millbury	18	ACRES	(Non-Native Aquatic Plants*)	
					Aquatic Plants (Macrophytes)	175
Dorothy Pond	MA51039	Millbury	133	ACRES	(Eurasian Water Milfoil, Myriophyllum spicatum*)	
					(Non-Native Aquatic Plants*)	
					Turbidity	379
Eddy Pond	MA51043	Auburn	99	ACRES	(Non-Native Aquatic Plants*)	
					Aquatic Plants (Macrophytes)	2382
Flint Pond	MA51050	[North Basin] Shrewsbury	92	ACRES	(Eurasian Water Milfoil, Myriophyllum spicatum*)	
					(Non-Native Aquatic Plants*)	
					Aquatic Plants (Macrophytes)	444
					Turbidity	444
Flint Pond	MA51188	[South Basin] Shrewsbury/Grafton/Worcester	173	ACRES	(Eurasian Water Milfoil, Myriophyllum spicatum*)	
					(Non-Native Aquatic Plants*)	
					Aquatic Plants (Macrophytes)	444
Green Hill Pond	MA51056	Worcester	29	ACRES	Turbidity	498
Howe Reservoirs	MA51071	[West Basin] Millbury	7	ACRES	Aquatic Plants (Macrophytes)	550
Indian Lake	MA51073	Worcester	186	ACRES	(Eurasian Water Milfoil, Myriophyllum spicatum*)	
					Aquatic Plants (Macrophytes)	2323
					Oxygen, Dissolved	2323
Jordan Pond	MA51078	Shrewsbury	18	ACRES	Turbidity	2385
Lake Quinsigamond	MA51125	Shrewsbury/Worcester	471	ACRES	(Eurasian Water Milfoil, Myriophyllum spicatum*)	
					(Non-Native Aquatic Plants*)	
					Excess Algal Growth	644
					Oxygen, Dissolved	644
Leesville Pond	MA51087	Auburn/Worcester	34	ACRES	(Non-Native Aquatic Plants*)	
					Oxygen, Dissolved	671
					Phosphorus (Total)	671
Mill Pond	MA51105	Shrewsbury	12	ACRES	Turbidity	804
Newton Pond	MA51110	Shrewsbury/Boylston	54	ACRES	(Non-Native Aquatic Plants*)	
					Aquatic Plants (Macrophytes)	862

Massachusetts Category 4a Waters
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NAME	SEGMENT ID	DESCRIPTION	SIZE	UNITS	POLLUTANTS ADDRESSED BY TMDL	EPA TMDL NUMBER
Pondville Pond	MA51120	Auburn/Millbury	36	ACRES	(Non-Native Aquatic Plants*)	
					Excess Algal Growth	938
Shirley Street Pond	MA51196	Shrewsbury	19	ACRES	Aquatic Plants (Macrophytes)	2392
Southwick Pond	MA51157	Leicester/Paxton	42	ACRES	Aquatic Plants (Macrophytes)	2390
Waite Pond	MA51170	Leicester	48	ACRES	Mercury in Fish Tissue	33880
Boston Harbor: Neponset						
Massapoag Lake	MA73030	Sharon	389	ACRES	(Non-Native Aquatic Plants*)	
					Mercury in Fish Tissue	33880
Pecunit Brook	MA73-25	Headwaters east of Carey Circle and west of Pecunit Street, Canton to the confluence with Neponset River, Canton.	1.8	MILES	Escherichia coli	54842
Pettee Pond	MA73036	Walpole/Westwood	10	ACRES	Mercury in Fish Tissue	42408
Ponkapoag Pond	MA73043	Canton/Randolph	214	ACRES	(Eurasian Water Milfoil, Myriophyllum spicatum*)	
					(Non-Native Aquatic Plants*)	
					Mercury in Fish Tissue	42409
Ponkapog Brook	MA73-27	Outlet of Ponkapoag Pond, Canton to confluence with Neponset River, Canton.	3.1	MILES	Escherichia coli	2592
					Fecal Coliform	2592
Purgatory Brook	MA73-24	Headwaters east of Farm Lane, Westwood to confluence with Neponset River, Norwood.	5.1	MILES	Escherichia coli	2592
					Fecal Coliform	2592
Reservoir Pond	MA73048	Canton	251	ACRES	(Non-Native Aquatic Plants*)	
					Mercury in Fish Tissue	42400
School Meadow Brook	MA73-06	Outlet of Ganawatte Farm Pond, Walpole to confluence with Neponset River, Walpole.	1.9	MILES	Fecal Coliform	2592
Traphole Brook	MA73-17	Headwaters west of Everett Street, Sharon, to confluence with Neponset River, Sharon.	3.9	MILES	Fecal Coliform	2592
Unnamed Tributary	MA73-31	Outlet of Massapoag Lake, Sharon to inlet of Hammer Shop Pond, Sharon.	0.3	MILES	Fecal Coliform	2592
Willet Pond	MA73062	Walpole/Westwood/Norwood (includes unnamed tributary formerly reported as segment MA73-13)	205	ACRES	Mercury in Fish Tissue	33880
Buzzards Bay						
Back River	MA95-47	Outlet of small unnamed pond downstream from Mill Pond, Bourne to confluence with Phinneys Harbor (excluding Eel Pond), Bourne.	0.083903	SQUARE MILES	Fecal Coliform	36172
Bread and Cheese Brook	MA95-58	Headwaters north of Old Bedford Road, Westport to confluence with East Branch Westport River, Westport.	4.945	MILES	Fecal Coliform	36170

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NAME	SEGMENT ID	DESCRIPTION	SIZE	UNITS	POLLUTANTS ADDRESSED BY TMDL	EPA TMDL NUMBER
Broad Marsh River	MA95-49	Headwaters in salt marsh south of Marion Road and Bourne Terrace, Wareham to confluence with the Wareham River, Wareham.	0.16223	SQUARE MILES	Fecal Coliform	36172
Buttonwood Brook	MA95-13	Headwaters, at Oakdale Street, New Bedford to mouth at Apponagansett Bay, Dartmouth.	3.783	MILES	Fecal Coliform	36170
Cape Cod Canal	MA95-14	Waterway between Buzzards Bay and Cape Cod Bay, Bourne/Sandwich	1.134	SQUARE MILES	Fecal Coliform	36171
Cedar Island Creek	MA95-52	Headwaters near the intersection of Parker Drive and Camardo Drive, Wareham to the mouth at Marks Cove, Wareham.	0.010713	SQUARE MILES	Fecal Coliform	36172
Crooked River	MA95-51	Outlet of cranberry bog east of Indian Neck Road, Wareham to the confluence with the Wareham River, Wareham.	0.043267	SQUARE MILES	Fecal Coliform	36172
East Branch Westport River	MA95-40	Outlet Noquochoke Lake, Dartmouth to Old County Road bridge, Westport.	2.862	MILES	Fecal Coliform	36170
Eel Pond	MA95-48	Salt water pond that discharges to the Back River, Bourne.	0.032	SQUARE MILES	Fecal Coliform	36172
Great Sippewisset Creek	MA95-23	From the outlet of Beach Pond in Great Sippewisset Marsh, Falmouth to the mouth at Buzzards Bay, Falmouth (including the unnamed tributary from the outlet of Fresh Pond and Quahog Pond).	0.030751	SQUARE MILES	Fecal Coliform	36172
Harbor Head	MA95-46	The semi-enclosed body of water south of the confluence with West Falmouth Harbor, south of Chappaquoit Road, Falmouth.	0.022	SQUARE MILES	Estuarine Bioassessments	34284
					Fecal Coliform	36172
Hiller Cove	MA95-10	The water landward of a line drawn between Joes Point, Mattapoisett and the second boat dock northeast of Hiller Cove Lane, Mattapoisett	0.039	SQUARE MILES	Fecal Coliform	36172
Little Bay	MA95-64	From the confluence with the Nasketucket River, Fairhaven south to the confluence with Nasketucket Bay at a line from the southernmost tip of Mirey Neck, Fairhaven (~latitude 41.625702, ~longitide 70.854045) to a point of land near Shore Drive (~latitude41.621994, ~longitude 70.855415), Fairhaven	0.361	SQUARE MILES	Fecal Coliform	36172
Little Sippewisset Marsh	MA95-24	From headwater north of Sippewisset Road and west of Maker Lane, Falmouth to the mouth at Buzzards Bay southwest of end of Saconesset Road, Falmouth	0.021	SQUARE MILES	Fecal Coliform	36172
Long Pond	MA95097	Rochester	32.363	ACRES	Mercury in Fish Tissue	33880
Mattapoisett River	MA95-60	From the River Road bridge, Mattapoisett to the mouth at Mattapoisett Harbor, Mattapoisett.	0.048	SQUARE MILES	Fecal Coliform	36172
Nasketucket Bay	MA95-65	From the confluence with Little Bay, Fairhaven to Buzzards Bay along Causeway Road, Fairhaven (on the south) and along a line from the southern tip of Brant Island, Mattapoisett to the eastern tip of West Island, Fairhaven	3.686	SQUARE MILES	Fecal Coliform	36172

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"TMDL is completed"

NAME	SEGMENT ID	DESCRIPTION	SIZE	UNITS	POLLUTANTS ADDRESSED BY TMDL	EPA TMDL NUMBER
Oyster Pond	MA95927	west of Route 28A, Falmouth.	0.01	SQUARE MILES	Estuarine Bioassessments	34331
					Oxygen, Dissolved	34331
Phinneys Harbor	MA95-15	From the confluence with the Back River, to the mouth at Buzzards Bay (demarcated by a line from the southeastern point of Mashnee Island to the northwestern point of Toby Island), Bourne.	0.726	SQUARE MILES	Fecal Coliform	36172
					Nitrogen (Total)	35069
Pocasset River	MA95-16	From the outlet of Mill Pond, Bourne to the mouth at Buzzards Bay, Bourne.	0.052145	SQUARE MILES	Fecal Coliform	36172
Quissett Harbor	MA95-25	The semi-enclosed body of water landward of a line drawn between The Knob and Gansett Point, Falmouth.	0.171	SQUARE MILES	Fecal Coliform	36172
Sippican Harbor	MA95-69	The waters between a line demarcating the mouth of the harbor (from Converse Point to Butler Point, Marion) and a line from Allens Point, Marion around the southeastern tip of Ram Island, then westerly from the southern tip of Ram Island, to the point ofland south of Nyes Wharf, Marion excluding Blanketship Cove and Planting Island Cove (formerly reported as a portion of segment MA95-08).	1.943	SQUARE MILES	Fecal Coliform	36172
Sippican River	MA95-07	County Road, Marion/Webster to confluence with Weweantic River, Marion/Wareham.	0.081378	SQUARE MILES	Fecal Coliform	36172
Snell Creek	MA95-44	Headwaters west of Main Street, Westport to Drift Road, Westport.	1.487208	MILES	Fecal Coliform	36170
Snell Creek	MA95-45	Drift Road, Westport to 'Marcus' Bridge', Westport	0.362	MILES	Fecal Coliform	36170
Snell Creek	MA95-59	'Marcus' Bridge', Westport to confluence with East Branch Westport River, Westport.	0.008	SQUARE MILES	Fecal Coliform	36172
Snipatuit Pond	MA95137	Rochester	644.187	ACRES	Mercury in Fish Tissue	33880
Turner Pond	MA95151	New Bedford/Dartmouth	86.005	ACRES	Mercury in Fish Tissue	33880
Wankinco River	MA95-50	From Elm Street, Wareham to the confluence with the Agawam River (at a line between a point south of Mayflower Ridge Drive and a point north of the railroad tracks near Sandwich Road), Wareham.	0.049024	SQUARE MILES	Fecal Coliform	36172
West Falmouth Harbor	MA95-22	From the confluence with Harbor Head at Chappaquoit Road, Falmouth to the mouth at Buzzards Bay at a line connecting the ends of the seawalls from Little Island and Chappaquoit Point, Falmouth (including Inner West Falmouth Harbor, Outer West FalmouthHarbor, Snug Harbor, and Mashapaquit Creek).	0.29	SQUARE MILES	Estuarine Bioassessments	34328
					Estuarine Bioassessments	34332
					Fecal Coliform	36172
					Nitrogen (Total)	34328
					Nitrogen (Total)	34332
					Nitrogen (Total)	34917
					Nitrogen (Total)	34918

Massachusetts Category 4a Waters
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NAME	SEGMENT ID	DESCRIPTION	SIZE	UNITS	POLLUTANTS ADDRESSED BY TMDL	EPA TMDL NUMBER
White Island Pond	MA95166	(East Basin) Plymouth/Wareham	164.803	ACRES	(Non-Native Aquatic Plants*)	
					Chlorophyll-a	38912
					Excess Algal Growth	38912
					Oxygen, Dissolved	38912
					Phosphorus (Total)	38912
					Secchi disk transparency	38912
White Island Pond	MA95173	(West Basin) Plymouth/Wareham	122.074	ACRES	(Non-Native Aquatic Plants*)	
					Excess Algal Growth	38914
					Oxygen, Dissolved	38914
					Phosphorus (Total)	38914
Wild Harbor	MA95-20	Falmouth.	0.145	SQUARE MILES	Fecal Coliform	36172
Cape Cod						
Areys Pond	MA96-70	Orleans	0.02	SQUARE MILES	Estuarine Bioassessments	33786
					Nitrogen (Total)	33786
Baker Pond	MA96008	Orleans/Brewster	26	ACRES	Mercury in Fish Tissue	33880
Bearse Pond	MA96012	Barnstable	64	ACRES	(Non-Native Aquatic Plants*)	
					Mercury in Fish Tissue	42393
Bournes Pond	MA96-57	west of Central Avenue, Falmouth to Vineyard Sound, including Israels Cove, Falmouth.	0.24	SQUARE MILES	Estuarine Bioassessments	32535
					Estuarine Bioassessments	32638
					Fecal Coliform	36772
					Nitrogen (Total)	32535
					Nitrogen (Total)	32638
Bucks Creek	MA96-44	Outlet from Harding Beach Pond (locally known as Sulfur Springs), Chatham to confluence with Cockle Cove, Nantucket Sound, Chatham.	0.02	SQUARE MILES	Enterococcus	36772
					Fecal Coliform	36772
					Nitrogen (Total)	36230
Bumps River	MA96-02	From outlet of pond at Bumps River Road, Barnstable through Scudder Bay to South Main Street bridge (confluence with Centerville River), Barnstable.	0.07	SQUARE MILES	Fecal Coliform	36771
Centerville River	MA96-04	Approximately 300 feet west of Elliot Road, Barnstable to confluence with Centerville Harbor, including East Bay, Barnstable.	0.24	SQUARE MILES	Estuarine Bioassessments	33858
					Fecal Coliform	36771
					Nitrogen (Total)	33858
Chase Garden Creek	MA96-35	New Boston Road, Dennis to mouth at Cape Cod Bay, Dennis/Yarmouth.	0.13	SQUARE MILES	Fecal Coliform	36771
Cockle Cove Creek	MA96-79	Northeast of the bend in Cockle Drive, Chatham to confluence with Bucks Creek, Chatham (2005 orthophotos used to delineate segment).	0.007	SQUARE MILES	Enterococcus	42353
					Fecal Coliform	42353

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NAME	SEGMENT ID	DESCRIPTION	SIZE	UNITS	POLLUTANTS ADDRESSED BY TMDL	EPA TMDL NUMBER
Cotuit Bay	MA96-63	From North Bay at Point Isabella, Barnstable oceanward to a line extended along Oyster Harbors Beach, Barnstable.	0.85	SQUARE MILES	Fecal Coliform	36582
					Nitrogen (Total)	33988
Dock Creek	MA96-86	From railroad crossing northeast of Route 6A, Sandwich to confluence with Old Harbor Creek, Sandwich.	0.02	SQUARE MILES	Fecal Coliform	42354
Duck Creek	MA96-32	Source west of Route 6, Wellfleet to Wellfleet Harbor (at a line from Shirttail Point to Taylor Road), Wellfleet.	0.15	SQUARE MILES	Fecal Coliform	36772
Duck Pond	MA96068	Wellfleet	11	ACRES	Mercury in Fish Tissue	33880
Dyer Pond	MA96070	Wellfleet	10	ACRES	Mercury in Fish Tissue	33880
East Harbor (Pilgrim Lake)	MA96-83	Truro/Provincetown	0.5	SQUARE MILES	Fecal Coliform	42355
Frost Fish Creek	MA96-49	Outlet from cranberry bog northwest of Stony Hill Road, Chatham to confluence with Ryder Cove, Chatham.	0.01	SQUARE MILES	Fecal Coliform	22513
					Nitrogen (Total)	33781
Great Harbor	MA96-18	The waters north of an imaginary line drawn east from Penzance Point to Devils Foot Island and southeast from Devils Foot Island to Juniper Point (excludes Eel Pond), Falmouth.	0.31	SQUARE MILES	Fecal Coliform	36772
Great Pond	MA96114	Truro	17	ACRES	Mercury in Fish Tissue	33880
Great Pond	MA96117	Wellfleet	41	ACRES	Mercury in Fish Tissue	33880
Great Pond	MA96-54	From inlet of Coonamessett River, Falmouth to Vineyard Sound (excluding Perch Pond), Falmouth.	0.4	SQUARE MILES	Estuarine Bioassessments	32532
					Nitrogen (Total)	32532
Great River	MA96-60	From inlet of Abigails Brook, Mashpee to Waquoit Bay (excluding Jehu Pond), Mashpee.	0.16	SQUARE MILES	Estuarine Bioassessments	33815
					Nitrogen (Total)	33815
Green Pond	MA96-55	east of Acapesket Road, Falmouth outlet to Vineyard Sound, Falmouth.	0.21	SQUARE MILES	Estuarine Bioassessments	32534
					Fecal Coliform	36772
					Nitrogen (Total)	32534
Halls Creek	MA96-93	Estuarine portion, from Craigville Beach Road, Barnstable to mouth at Centerville Harbor, Barnstable.	0.07	SQUARE MILES	Fecal Coliform	42356
Hamblin Pond	MA96-58	From inlet of Red Brook, Falmouth/Mashpee to outlet of Little River, Mashpee and inlet/outlet of Waquoit Bay west of Meadow Neck Road, Falmouth/Mashpee.	0.19	SQUARE MILES	Estuarine Bioassessments	33812
					Fecal Coliform	36771
					Nitrogen (Total)	33812
Harding Beach Pond	MA96-43	locally known as Sulfur Springs (northeast of Bucks Creek), Chatham.	0.07	SQUARE MILES	Fecal Coliform	36772
					Nitrogen (Total)	36229
Herring River	MA96-22	Outlet of Herring River Reservoir (at North Harwich Reservoir Dam) west of Bells Neck Road, Harwich to mouth at Nantucket Sound, Harwich.	0.07	SQUARE MILES	Fecal Coliform	36772
Horseleach Pond	MA96144	Truro	23	ACRES	Mercury in Fish Tissue	42401

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NAME	SEGMENT ID	DESCRIPTION	SIZE	UNITS	POLLUTANTS ADDRESSED BY TMDL	EPA TMDL NUMBER
Hyannis Harbor	MA96-05	The waters from the shoreline to an imaginary line drawn from the light at the end of Hyannis breakwater, Barnstable to the point west of Dunbar Point, Barnstable.	0.68	SQUARE MILES	Fecal Coliform	36771
Jehu Pond	MA96-59	Mashpee.	0.09	SQUARE MILES	Estuarine Bioassessments	33814
					Nitrogen (Total)	33814
Johns Pond	MA96157	Mashpee	316	ACRES	Mercury in Fish Tissue	33880
Lawrence Pond	MA96165	Sandwich	138	ACRES	Mercury in Fish Tissue	42402
Little Harbor	MA96-19	The waters north of an imaginary line drawn from Juniper Point, Falmouth east to Nobska Beach, Falmouth.	0.07	SQUARE MILES	Fecal Coliform	36772
Little Namskaket Creek	MA96-26	Source to mouth at Cape Cod Bay, Orleans.	0.01	SQUARE MILES	Fecal Coliform	36772
Little Pleasant Bay	MA96-78	Waters north and east of imaginary lines drawn from the northeasterly edge of Orleans (near The Horseshoe), southeasterly to the northeastern tip of Sipson Island, then continuing to and around the northeastern border of Sipson Meadow, Orleans then southto the northern tip of Strong Island, Chatham then east to a point on the inner Cape Cod National Seashore (excluding the delineated segments; The River, Pochet Neck, and Paw Wah Pond).	3.3	SQUARE MILES	Fecal Coliform	42358
					Nitrogen (Total)	33794
Little Pond	MA96-56	west of Vista Boulevard, Falmouth outlet to Vineyard Sound, Falmouth.	0.07	SQUARE MILES	Estuarine Bioassessments	34009
					Fecal Coliform	42364
Little River	MA96-61	From outlet of Hamblin Pond, Mashpee to the Great River, Mashpee.	0.02	SQUARE MILES	Estuarine Bioassessments	33813
					Nitrogen (Total)	33813
Long Pond	MA96179	Wellfleet	35	ACRES	Mercury in Fish Tissue	33880
Maraspin Creek	MA96-06	From Commerce Road, Barnstable to confluence with Barnstable Harbor at Blish Point, Barnstable.	0.03	SQUARE MILES	Fecal Coliform	36771
Mashpee Pond	MA96194	Mashpee/Sandwich	377	ACRES	Mercury in Fish Tissue	33880
Mashpee River	MA96-24	Quinaquisset Avenue, Mashpee to mouth at Shoestring Bay (formerly to mouth at Popponesset Bay), Mashpee.	0.08	SQUARE MILES	Estuarine Bioassessments	33965
					Fecal Coliform	36771
Mill Creek	MA96-37	From Keveney Lane/Mill Lane, Barnstable/Yarmouth north to confluence with Cape Cod Bay, Barnstable/Yarmouth.	0.03	SQUARE MILES	Fecal Coliform	36771
Mill Creek	MA96-41	Outlet of Taylors Pond, Chatham to confluence with Cockle Cove, Chatham.	0.03	SQUARE MILES	Fecal Coliform	36772
Mill Creek	MA96-85	Headwaters, outlet Shawme Lake Lower, Sandwich to confluence with Old Harbor Creek, Sandwich.	0.02	SQUARE MILES	Fecal Coliform	42366
Mill Pond	MA96-52	including Little Mill Pond (PALIS # 96174), Chatham.	0.06	SQUARE MILES	Estuarine Bioassessments	36222
					Nitrogen (Total)	36222

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NAME	SEGMENT ID	DESCRIPTION	SIZE	UNITS	POLLUTANTS ADDRESSED BY TMDL	EPA TMDL NUMBER
Muddy Creek	MA96-51	Source south of Countryside Drive and north-northeast of Old Queen Anne Road, Chatham to mouth at Pleasant Bay, Harwich/Chatham, including Upper and Lower reaches.	0.05	SQUARE MILES	Fecal Coliform	22512
					Nitrogen (Total)	33797
					Nitrogen (Total)	33798
Namequoit River	MA96-71	Headwaters, outlet Areys Pond, Orleans to confluence with The River, Orleans.	0.06	SQUARE MILES	Estuarine Bioassessments	33791
					Nitrogen (Total)	33791
Namskaket Creek	MA96-27	Source west of Route 6, Orleans to mouth at Cape Cod Bay, Brewster/Orleans.	0.03	SQUARE MILES	Fecal Coliform	36772
North Bay	MA96-66	From Fox Island to just south of Bridge Street and separated from Cotuit Bay at a line from Point Isabella, Barnstable southward to the opposite shore (including Dam Pond), Barnstable.	0.47	SQUARE MILES	Estuarine Bioassessments	33990
					Fecal Coliform	36584
Old Harbor Creek	MA96-84	From Foster Road, Sandwich to Sandwich Harbor, Sandwich.	0.06	SQUARE MILES	Fecal Coliform	42367
Oyster Pond	MA96-45	Including Stetson Cove, Chatham.	0.21	SQUARE MILES	Estuarine Bioassessments	36219
					Fecal Coliform	36772
					Nitrogen (Total)	36219
Oyster Pond	MA96-62	east of Fells Road, Falmouth.	0.1	SQUARE MILES	Estuarine Bioassessments	34345
					Fecal Coliform	36772
					Oxygen, Dissolved	34345
Oyster Pond River	MA96-46	Outlet of Oyster Pond, Chatham to confluence with Stage Harbor, Chatham.	0.14	SQUARE MILES	Estuarine Bioassessments	36220
					Fecal Coliform	36772
					Nitrogen (Total)	36220
Pamet River	MA96-31	Tidegate at Route 6A, Truro to mouth at Cape Cod Bay (including Pamet Harbor), Truro.	0.14	SQUARE MILES	Fecal Coliform	36772
Parkers River	MA96-38	Outlet Seine Pond, Yarmouth to mouth at Nantucket Sound, Yarmouth.	0.04	SQUARE MILES	Fecal Coliform	36771
Paw Wah Pond	MA96-72	Orleans	0.008	SQUARE MILES	Estuarine Bioassessments	33792
					Fecal Coliform	42368
					Nitrogen (Total)	33792
Perch Pond	MA96-53	Connects to northwest end of Great Pond, west of Keechipam Way, Falmouth.	0.03	SQUARE MILES	Nitrogen (Total)	32537
Peters Pond	MA96244	Sandwich	123	ACRES	Mercury in Fish Tissue	33880

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NAME	SEGMENT ID	DESCRIPTION	SIZE	UNITS	POLLUTANTS ADDRESSED BY TMDL	EPA TMDL NUMBER
Pleasant Bay	MA96-77	The waters between the mouth of Muddy Creek, Harwich and imaginary lines drawn from the northeastern edge of Orleans (near The Horseshoe), southeasterly to the northeastern tip of Sipson Island, then continuing to and around the northeastern border ofSipson Meadow, Orleans then south to the northern tip of Strong Island, Chatham and from the southeastern tip of Strong Island to Allen Point, Chatham (excluding the delineated segments; Bassing Harbor, Round Cove and Quanset Pond).	2.88	SQUARE MILES	Nitrogen (Total)	33799
Pochet Neck	MA96-73	to confluence with Little Pleasant Bay, Orleans.	0.24	SQUARE MILES	Estuarine Bioassessments	33793
					Fecal Coliform	42369
					Nitrogen (Total)	33793
Popponesset Bay	MA96-40	From line connecting Ryefield Point, Barnstable and Punkhorn Point, Mashpee to inlet of Nantucket Sound (including Ockway Bay and Pinquickset Cove), Mashpee/Barnstable.	0.68	SQUARE MILES	Estuarine Bioassessments	33967
					Estuarine Bioassessments	33968
					Estuarine Bioassessments	33969
Prince Cove	MA96-07	Includes areas east of Prince Cove which are locally known as "Warren Cove" and "Prince Cove Channel", Barnstable.	0.14	SQUARE MILES	Estuarine Bioassessments	33991
					Estuarine Bioassessments	33992
					Estuarine Bioassessments	33993
					Fecal Coliform	36585
Provincetown Harbor	MA96-29	The waters northwest of an imaginary line drawn northeasterly from the tip of Long Point, Provincetown to Beach Point Beach, Truro (area associated with Cape Cod National Seashore designated as ORW).	4.33	SQUARE MILES	Fecal Coliform	36772
Quanset Pond	MA96-74	Orleans.	0.02	SQUARE MILES	Nitrogen (Total)	33791
					Nitrogen (Total)	33795
Quashnet River	MA96-20	Just south of Route 28, Falmouth to mouth at Waquoit Bay, Falmouth. Also known as Moonakis River.	0.07	SQUARE MILES	Fecal Coliform	36772
					Nitrogen (Total)	33811
					Oxygen, Dissolved	33811
Quivett Creek	MA96-09	Outlet of unnamed pond just south of Route 6A, Brewster/Dennis to the mouth at Cape Cod Bay, Brewster/Dennis.	0.04	SQUARE MILES	Fecal Coliform	36771
Rock Harbor Creek	MA96-16	Outlet Cedar Pond, Orleans to mouth at Cape Cod Bay, Eastham/Orleans.	0.03	SQUARE MILES	Fecal Coliform	36772
Round Cove	MA96-75	Harwich.	0.02	SQUARE MILES	Nitrogen (Total)	33796
Round Pond (East)	MA96260	Truro	6	ACRES	Mercury in Fish Tissue	42403
Round Pond (West)	MA96261	Truro	2	ACRES	Mercury in Fish Tissue	42404

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NAME	SEGMENT ID	DESCRIPTION	SIZE	UNITS	POLLUTANTS ADDRESSED BY TMDL	EPA TMDL NUMBER
Ryder Cove	MA96-50	Chatham	0.19	SQUARE MILES	Estuarine Bioassessments	33780
					Fecal Coliform	36772
					Nitrogen (Total)	33780
Santuit River	MA96-92	From confluence with fresh water portion south of Old Mill Road, Mashpee to mouth at Shoestring Bay, Mashpee/Barnstable.	0.008	SQUARE MILES	Fecal Coliform	42360
Saquatucket Harbor	MA96-23	South of Route 28, Harwich to confluence with Nantucket Sound, Harwich.	0.02	SQUARE MILES	Fecal Coliform	36772
Scorton Creek	MA96-30	Jones Lane, Sandwich to mouth at Cape Cod Bay, Sandwich.	0.03	SQUARE MILES	Fecal Coliform	36771
Seapuit River	MA96-64	south of Osterville Grand Island, Barnstable to Cotuit Bay and West Bay, Barnstable.	0.06	SQUARE MILES	Fecal Coliform	36583
Sesuit Creek	MA96-13	Approximately 625 feet east of Route 6A, Dennis to mouth at Sesuit Harbor, Cape Cod Bay, Dennis.	0.01	SQUARE MILES	Fecal Coliform	36771
Sheep Pond	MA96289	Brewster	138	ACRES	Mercury in Fish Tissue	33880
Shoestring Bay	MA96-08	Quinaquisset Avenue, Mashpee/Barnstable to Popponesset Bay (line from Ryefield Point, Barnstable to Punkhorn Point, Mashpee, including Gooseberry Island), Barnstable/Mashpee.	0.31	SQUARE MILES	Estuarine Bioassessments	33966
					Fecal Coliform	36771
Slough Pond	MA96298	Truro	29	ACRES	Mercury in Fish Tissue	33880
Snake Pond	MA96302	Sandwich	81	ACRES	Mercury in Fish Tissue	33880
Snow Pond	MA96303	Truro	7	ACRES	Mercury in Fish Tissue	33880
Snows Creek	MA96-81	East of Old Colony Road, Barnstable to mouth at Lewis Bay, Barnstable.	0.02	SQUARE MILES	Fecal Coliform	42361
Spectacle Pond	MA96306	Wellfleet	2	ACRES	Mercury in Fish Tissue	42405
Spectacle Pond	MA96307	Sandwich	93	ACRES	Mercury in Fish Tissue	42406
Springhill Creek	MA96-87	From railroad crossing northeast of Route 6A, Sandwich to confluence with Old Harbor Creek, Sandwich.	0.01	SQUARE MILES	Fecal Coliform	42362
Stage Harbor	MA96-11	From the outlet of Mill Pond, Chatham (including Mitchell River) to the confluence with Nantucket Sound at a line from the southernmost point of Harding Beach southeast to the Harding Beach Point , Chatham.	0.56	SQUARE MILES	Fecal Coliform	36772
Stewarts Creek	MA96-94	Estuarine portion west of Stetson Street, Barnstable to mouth at Hyannis Harbor, Barnstable.	0.01	SQUARE MILES	Fecal Coliform	42363
Taylors Pond	MA96-42	Chatham	0.02	SQUARE MILES	Fecal Coliform	36772
					Nitrogen (Total)	36231

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NAME	SEGMENT ID	DESCRIPTION	SIZE	UNITS	POLLUTANTS ADDRESSED BY TMDL	EPA TMDL NUMBER
The River	MA96-76	The water landward of an imaginary line drawn between Old Field Point and Namequoit Point including Meetinghouse Pond, and Kescayo Gansett Pond locally known as "Lonnies Pond", Orleans (excluding the delineated segments; Namequoit River and Areys Pond).	0.42	SQUARE MILES	Estuarine Bioassessments	33787
					Estuarine Bioassessments	33788
					Estuarine Bioassessments	33789
					Estuarine Bioassessments	33790
					Fecal Coliform	42359
					Nitrogen (Total)	33787
					Nitrogen (Total)	33788
					Nitrogen (Total)	33789
					Nitrogen (Total)	33790
Wakeby Pond	MA96346	Mashpee/Sandwich	353	ACRES	Mercury in Fish Tissue	33880
Wequaquet Lake	MA96333	Barnstable	576	ACRES	(Non-Native Aquatic Plants*)	
					Mercury in Fish Tissue	33880
West Bay	MA96-65	South of the Bridge Street bridge, Barnstable to Nantucket Sound including Eel River, Barnstable.	0.52	SQUARE MILES	Estuarine Bioassessments	33989
Charles						
Beaver Pond	MA72004	Bellingham/Milford	86.679	ACRES	Mercury in Fish Tissue	42394
Bogastow Brook	MA72-16	Headwaters, outlet Factory Pond, Holliston to inlet South End Pond, Millis.	9.492	MILES	Fecal Coliform	32373
Cedar Swamp Pond	MA72016	locally known as "Milford Pond", Milford	98.978	ACRES	(Non-Native Aquatic Plants*)	
					Mercury in Fish Tissue	42395
					Oxygen, Dissolved	40319
Charles River	MA72-01	Headwaters, outlet Echo Lake, Hopkinton to Dilla Street (just upstream of Cedar Swamp Pond), Milford.	2.482	MILES	(Low flow alterations*)	
					(Other flow regime alterations*)	
					Oxygen, Dissolved	40318
Charles River	MA72-33	Outlet Cedar Swamp Pond, Milford to the Milford WWTF discharge, Hopedale (formerly part of segment MA72-02).	2.037	MILES	(Physical substrate habitat alterations*)	
					Escherichia coli	32364
					Nutrient/Eutrophication Biological Indicators	40317
Cheese Cake Brook	MA72-29	Emerges south of Route 16, Newton to confluence with the Charles River, Newton.	1.416	MILES	(Alteration in stream-side or littoral vegetative covers*)	
					(Other anthropogenic substrate alterations*)	
					Dissolved oxygen saturation	40317
					Escherichia coli	32380
					Excess Algal Growth	40317
					Phosphorus (Total)	40317
Echo Lake	MA72035	Milford/Hopkinton	72.335	ACRES	Mercury in Fish Tissue	33880

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NAME	SEGMENT ID	DESCRIPTION	SIZE	UNITS	POLLUTANTS ADDRESSED BY TMDL	EPA TMDL NUMBER
Factory Pond	MA72037	Holliston	9.699	ACRES	(Non-Native Aquatic Plants*)	
					Aquatic Plants (Macrophytes)	40319
Franklin Reservoir Northeast	MA72095	Franklin	21.03	ACRES	Aquatic Plants (Macrophytes)	40319
					Turbidity	40319
Franklin Reservoir Southwest	MA72032	Franklin	13.12	ACRES	Aquatic Plants (Macrophytes)	40319
					Turbidity	40319
Hardys Pond	MA72045	Waltham	42.769	ACRES	(Non-Native Aquatic Plants*)	
					Excess Algal Growth	40319
					Phosphorus (Total)	40319
					Turbidity	40319
Houghton Pond	MA72050	Holliston	17.521	ACRES	(Non-Native Aquatic Plants*)	
					Excess Algal Growth	40319
					Turbidity	40319
Lake Pearl	MA72092	Wrentham	236.692	ACRES	(Eurasian Water Milfoil, Myriophyllum spicatum*)	
					(Non-Native Aquatic Plants*)	
					Oxygen, Dissolved	40319
Linden Pond	MA72063	Holliston	1.399	ACRES	Aquatic Plants (Macrophytes)	40319
					Turbidity	40319
Lymans Pond	MA72070	Dover	4.395	ACRES	Aquatic Plants (Macrophytes)	40319
					Turbidity	40319
Mirror Lake	MA72078	Wrentham/Norfolk	61.55	ACRES	(Non-Native Aquatic Plants*)	
					Nutrient/Eutrophication Biological Indicators	40319
					Phosphorus (Total)	40319
					Secchi disk transparency	40319
Rosemary Brook	MA72-25	Headwaters, outlet Rosemary Lake, Needham to confluence with the Charles River, Wellesley.	3.266	MILES	Oxygen, Dissolved	40317
					Phosphorus (Total)	40317
South Meadow Brook	MA72-24	From emergence west of Parker Street, Newton to confluence with the Charles River, Newton (sections culverted).	1.706	MILES	(Bottom Deposits*)	
					(Debris/Floatables/Trash*)	
					(Physical substrate habitat alterations*)	
					Escherichia coli	32377
					Oxygen, Dissolved	40317
					Phosphorus (Total)	40317
					Turbidity	40317

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NAME	SEGMENT ID	DESCRIPTION	SIZE	UNITS	POLLUTANTS ADDRESSED BY TMDL	EPA TMDL NUMBER
Uncas Pond	MA72122	Franklin	17.3	ACRES	(Non-Native Aquatic Plants*)	
					Oxygen, Dissolved	40319
Unnamed Tributary	MA72-32	Locally known as Sawins Brook - emerges east of Elm Street, Watertown to confluence with the Charles River, Watertown (sections culverted).	0.539	MILES	Escherichia coli	32382
Chicopee						
Lake Lashaway	MA36079	North Brookfield/East Brookfield	274	ACRES	(Non-Native Aquatic Plants*)	
					Mercury in Fish Tissue	33880
Long Pond	MA36083	Springfield	14	ACRES	Nutrient/Eutrophication Biological Indicators	722
Minechoag Pond	MA36093	Ludlow	21	ACRES	Nutrient/Eutrophication Biological Indicators	3629
Mona Lake	MA36094	Springfield	11	ACRES	Nutrient/Eutrophication Biological Indicators	3630
Pottapaug Pond	MA36125	Petersham/Hardwick	568	ACRES	(Non-Native Aquatic Plants*)	
					Mercury in Fish Tissue	33880
Quabbin Reservoir	MA36129	Petersham/Pelham/Ware/Hardwick/Shutesbury/Belchertown/New Salem	24012	ACRES	(Non-Native Aquatic Plants*)	
					Mercury in Fish Tissue	33880
Quacumquasit Pond	MA36131	Brookfield/East Brookfield/Sturbridge	223	ACRES	(Eurasian Water Milfoil, Myriophyllum spicatum*)	
					(Non-Native Aquatic Plants*)	
					Mercury in Fish Tissue	33880
Spectacle Pond	MA36142	Wilbraham	9	ACRES	Nutrient/Eutrophication Biological Indicators	3631
Sugden Reservoir	MA36150	Spencer	85	ACRES	Nutrient/Eutrophication Biological Indicators	3633
Wickaboag Pond	MA36166	West Brookfield	315	ACRES	Aquatic Plants (Macrophytes)	1332
					Turbidity	1332
Concord (SuAsCo)						
Ashland Reservoir	MA82003	Ashland	167.961	ACRES	(Non-Native Aquatic Plants*)	
					Mercury in Fish Tissue	42396
Boons Pond	MA82011	Stow/Hudson	173.442	ACRES	(Non-Native Aquatic Plants*)	
					Excess Algal Growth	2353
					Mercury in Fish Tissue	33880
Nutting Lake	MA82124	[West Basin] Billerica	51.408	ACRES	Mercury in Fish Tissue	33880
Sudbury Reservoir	MA82106	Southborough/Marlborough	1177.986	ACRES	Mercury in Fish Tissue	33880
Walden Pond	MA82109	Concord	62.946	ACRES	Mercury in Fish Tissue	33880

Massachusetts Category 4a Waters
"TMDL is completed"

NAME	SEGMENT ID	DESCRIPTION	SIZE	UNITS	POLLUTANTS ADDRESSED BY TMDL	EPA TMDL NUMBER
Warners Pond	MA82110	Concord	59.338	ACRES	(Non-Native Aquatic Plants*)	
					Mercury in Fish Tissue	33880
Connecticut						
Bachelor Brook	MA34-07	Outlet Forge Pond, Granby to confluence with Connecticut River, South Hadley (through former segments Aldrich Lake [East Basin] MA34002 and Aldrich Lake [West Basin] MA34106).	11.606	MILES	Nutrient/Eutrophication Biological Indicators	5
					Nutrient/Eutrophication Biological Indicators	6
Lake Warner	MA34098	Hadley	65.132	ACRES	(Non-Native Aquatic Plants*)	
					Excess Algal Growth	651
					Oxygen, Dissolved	651
					Phosphorus (Total)	651
					Turbidity	651
Lake Wyola	MA34103	Shutesbury	126.119	ACRES	Nutrient/Eutrophication Biological Indicators	653
					Phosphorus (Total)	653
Leverett Pond	MA34042	Leverett	90.709	ACRES	(Eurasian Water Milfoil, Myriophyllum spicatum*)	
					(Non-Native Aquatic Plants*)	
					Nutrient/Eutrophication Biological Indicators	675
Loon Pond	MA34045	Springfield	25.104	ACRES	Nutrient/Eutrophication Biological Indicators	726
Deerfield						
Ashfield Pond	MA33001	Ashfield	38.041	ACRES	Mercury in Fish Tissue	42397
Plainfield Pond	MA33017	Plainfield	59.616	ACRES	Mercury in Fish Tissue	33880
Farmington						
Otis Reservoir	MA31027	Otis/Tolland/Blandford	988.88	ACRES	Mercury in Fish Tissue	33880
French						
Buffumville Lake	MA42005	Charlton/Oxford	199	ACRES	(Non-Native Aquatic Plants*)	
					Excess Algal Growth	2358
					Mercury in Fish Tissue	33880
Cedar Meadow Pond	MA42009	Leicester	140	ACRES	(Non-Native Aquatic Plants*)	
					Aquatic Plants (Macrophytes)	2359
Dresser Hill Pond	MA42014	Charlton	8	ACRES	Turbidity	2360
Dutton Pond	MA42015	Leicester	6	ACRES	Nutrient/Eutrophication Biological Indicators	2354
					Phosphorus (Total)	2354

Massachusetts Category 4a Waters
"TMDL is completed"

NAME	SEGMENT ID	DESCRIPTION	SIZE	UNITS	POLLUTANTS ADDRESSED BY TMDL	EPA TMDL NUMBER
Gore Pond	MA42018	Dudley/Charlton	169	ACRES	(Non-Native Aquatic Plants*)	
					Excess Algal Growth	2361
					Oxygen, Dissolved	2361
					Turbidity	2361
Granite Reservoir	MA42019	Charlton	207	ACRES	(Non-Native Aquatic Plants*)	
					Aquatic Plants (Macrophytes)	2362
Greenville Pond	MA42023	Leicester	31	ACRES	Turbidity	2355
Hudson Pond	MA42029	Oxford/Sutton	15	ACRES	Aquatic Plants (Macrophytes)	2363
Jones Pond	MA42030	Charlton/Spencer	30	ACRES	Aquatic Plants (Macrophytes)	2364
Larner Pond	MA42068	Dudley	27	ACRES	(Non-Native Aquatic Plants*)	
					Aquatic Plants (Macrophytes)	2365
Lowes Pond	MA42034	Oxford	33	ACRES	Aquatic Plants (Macrophytes)	2366
McKinstry Pond	MA42035	Oxford	16	ACRES	Aquatic Plants (Macrophytes)	2367
Mosquito Pond	MA42060	Dudley	11	ACRES	Aquatic Plants (Macrophytes)	2374
New Pond	MA42037	Dudley	33	ACRES	Aquatic Plants (Macrophytes)	2368
Peter Pond	MA42042	Dudley	42	ACRES	Oxygen, Dissolved	2369
					Phosphorus (Total)	2369
Pierpoint Meadow Pond	MA42043	Dudley/Charlton	95	ACRES	(Non-Native Aquatic Plants*)	
					Aquatic Plants (Macrophytes)	2370
Pikes Pond	MA42044	Charlton	28	ACRES	Turbidity	2371
Rochdale Pond	MA42048	Leicester	43	ACRES	Nutrient/Eutrophication Biological Indicators	2356
Shepherd Pond	MA42051	Dudley	16	ACRES	Aquatic Plants (Macrophytes)	2373
Wallis Pond	MA42062	Dudley	24	ACRES	Aquatic Plants (Macrophytes)	2375
					Oxygen, Dissolved	2375
Housatonic						
Stockbridge Bowl	MA21105	Stockbridge	383.495	ACRES	(Eurasian Water Milfoil, Myriophyllum spicatum*)	
					Mercury in Fish Tissue	33880
Ipswich						
Hood Pond	MA92025	Ipswich/Topsfield	67.446	ACRES	Mercury in Fish Tissue	33880
Mill Pond	MA92041	Burlington	59.084	ACRES	Mercury in Fish Tissue	33880
Islands						

Massachusetts Category 4a Waters
"TMDL is completed"

NAME	SEGMENT ID	DESCRIPTION	SIZE	UNITS	POLLUTANTS ADDRESSED BY TMDL	EPA TMDL NUMBER
Gibbs Pond	MA97028	Nantucket	34.048	ACRES	Mercury in Fish Tissue	33880
Miacomet Pond	MA97055	Nantucket	34.227	ACRES	Mercury in Fish Tissue	33880
Tom Nevers Pond	MA97097	Nantucket	11.221	ACRES	Mercury in Fish Tissue	33880
Merrimack						
Forge Pond	MA84015	Westford/Littleton	203	ACRES	(Non-Native Aquatic Plants*)	
					Mercury in Fish Tissue	33880
Knops Pond/Lost Lake	MA84084	Groton	187	ACRES	(Eurasian Water Milfoil, Myriophyllum spicatum*)	
					(Non-Native Aquatic Plants*)	
					Mercury in Fish Tissue	33880
Locust Pond	MA84031	Tyngsborough	16	ACRES	Mercury in Fish Tissue	33880
Nabnasset Pond	MA84044	Westford	134	ACRES	(Non-Native Aquatic Plants*)	
					Mercury in Fish Tissue	33880
Millers						
Bents Pond	MA35007	Gardner	6.158	ACRES	Excess Algal Growth	4115
					Turbidity	4115
Bourn-Hadley Pond	MA35008	Templeton	25.788	ACRES	Aquatic Plants (Macrophytes)	4117
Brazell Pond	MA35010	Templeton	14.669	ACRES	Aquatic Plants (Macrophytes)	4118
Depot Pond	MA35018	(Railroad Pond) Templeton	15.208	ACRES	Aquatic Plants (Macrophytes)	4124
Ellis Pond	MA35023	Athol	87.539	ACRES	(Eurasian Water Milfoil, Myriophyllum spicatum*)	
					(Non-Native Aquatic Plants*)	
					Aquatic Plants (Macrophytes)	4125
Greenwood Pond	MA35026	Templeton	12.451	ACRES	Aquatic Plants (Macrophytes)	4127
Hilchey Pond	MA35029	Gardner	7.61	ACRES	Turbidity	4128
Lake Denison	MA35017	Winchendon	83.492	ACRES	Mercury in Fish Tissue	33880
					Oxygen, Dissolved	4123
Lake Rohunta	MA35106	(North Basin) Athol/Orange	34.359	ACRES	(Non-Native Aquatic Plants*)	
					Mercury in Fish Tissue	33880
Moores Pond	MA35048	Warwick	39.114	ACRES	Mercury in Fish Tissue	42398
Parker Pond	MA35056	Gardner	32.188	ACRES	(Non-Native Aquatic Plants*)	
					Aquatic Plants (Macrophytes)	4134
Ramsdall Pond	MA35062	Gardner	2.145	ACRES	Aquatic Plants (Macrophytes)	4136

Massachusetts Category 4a Waters
"TMDL is completed"

NAME	SEGMENT ID	DESCRIPTION	SIZE	UNITS	POLLUTANTS ADDRESSED BY TMDL	EPA TMDL NUMBER
Reservoir No. 1	MA35063	Athol	7.684	ACRES	Aquatic Plants (Macrophytes)	4137
South Athol Pond	MA35078	Athol	82.785	ACRES	(Non-Native Aquatic Plants*)	
					Aquatic Plants (Macrophytes)	4140
Stoddard Pond	MA35083	Winchendon	51.848	ACRES	Aquatic Plants (Macrophytes)	4141
Upper Naukeag Lake	MA35090	Ashburnham	305.262	ACRES	Mercury in Fish Tissue	33880
Upper Reservoir	MA35091	Westminster	41.563	ACRES	Mercury in Fish Tissue	33880
Mount Hope Bay (Shore)						
Kickamuit River	MA61-08	Outlet Warren Resevoir, Swansea, to state line, Swansea, MA/Warren, RI	2.8	MILES	Fecal Coliform	30702
Lewin Brook Pond	MA61011	Swansea	11	ACRES	Mercury in Fish Tissue	33880
North Watuppa Pond	MA61004	Fall River/Westport	1730	ACRES	Mercury in Fish Tissue	33880
Sawdy Pond	MA61005	Westport/Fall River	368	ACRES	Mercury in Fish Tissue	42407
Narragansett Bay (Shore)						
Clear Run Brook	MA53-13	Headwaters, outlet unnamed pond northwest of Miller Street, Seekonk to confluence with Palmer River, Rehoboth	1.6	MILES	Fecal Coliform	35097
Palmer River	MA53-03	From Route 6 bridge, Rehoboth to state line, Swansea, MA/Barrington, RI	0.11	SQUARE MILES	Fecal Coliform	35085
Palmer River	MA53-05	From the Shad Factory Pond dam, Rehoboth to the Route 6 bridge, Rehoboth	0.09	SQUARE MILES	Fecal Coliform	35087
Rocky Run	MA53-16	Headwaters in wetland east of Simmons Street, Rehoboth to approximately 0.1 mile east of Mason Street, Rehoboth	8.6	MILES	Fecal Coliform	35096
Rocky Run	MA53-18	approximately 0.1 mile east of Mason Street, Rehoboth to confluence with Palmer River, Rehoboth	0.002	SQUARE MILES	Fecal Coliform	35096
Torrey Creek	MA53-17	From Barney Avenue, Rehoboth to confluence with Palmer River, Rehoboth	0.004	SQUARE MILES	Fecal Coliform	35088
Warren River Pond	MA53-06	Salt pond in Swansea on MA/RI border (portion in MA only)	0.06	SQUARE MILES	Fecal Coliform	38904
Nashua						
Bare Hill Pond	MA81007	Harvard	311	ACRES	(Non-Native Aquatic Plants*)	
					Mercury in Fish Tissue	33880
					Nutrient/Eutrophication Biological Indicators	2615
Hickory Hills Lake	MA81031	Lunenburg	310	ACRES	Mercury in Fish Tissue	33880

Massachusetts Category 4a Waters
"TMDL is completed"

NAME	SEGMENT ID	DESCRIPTION	SIZE	UNITS	POLLUTANTS ADDRESSED BY TMDL	EPA TMDL NUMBER
Lake Wampanoag	MA81151	Ashburnham/Gardner	224	ACRES	Mercury in Fish Tissue	33880
Wachusett Reservoir	MA81147	Boylston/West Boylston/Clinton/Sterling	3967	ACRES	(Eurasian Water Milfoil, Myriophyllum spicatum*)	
					(Non-Native Aquatic Plants*)	
					Mercury in Fish Tissue	33880
North Coastal						
Alewife Brook	MA93-45	Headwaters, outlet Chebacco Lake, Essex to Landing Road, Essex.	1.404	MILES	Fecal Coliform	50120
Alewife Brook	MA93-46	Landing Road, Essex to confluence with Essex River, Essex.	0.01	SQUARE MILES	Fecal Coliform	50121
Annisquam River	MA93-12	The waters from the Gloucester Harbor side of the Route 127 bridge, Gloucester to Ipswich Bay at an imaginary line drawn from Bald Rocks to Wigwam Point, Gloucester.	0.82	SQUARE MILES	Fecal Coliform	50121
Bass River	MA93-08	Outlet of "Lower Shoe Pond" north of Route 62, Beverly to confluence with Danvers River, Beverley.	0.121	SQUARE MILES	Fecal Coliform	50121
Bennetts Pond Brook	MA93-48	Headwaters east of Lynn Fells Parkway (in Bellevue Golf Course), Melrose to confluence with Saugus River, Saugus.	2.41	MILES	Fecal Coliform	50120
Beverly Harbor	MA93-20	From the mouth of the Danvers River, Salem/Beverly to an imaginary line from Juniper Point, Salem to Hospital Point, Beverly.	1.02	SQUARE MILES	Fecal Coliform	50122
Causeway Brook	MA93-47	Headwaters, outlet Dexter Pond, Manchester to confluence with Cat Brook, Manchester.	1.077	MILES	Fecal Coliform	50120
Chebacco Lake	MA93014	Hamilton/Essex	204.374	ACRES	(Non-Native Aquatic Plants*)	
					Mercury in Fish Tissue	33880
Crane Brook	MA93-02	Headwaters east of Route 95, Danvers to inlet Mill Pond, Danvers.	1.808	MILES	Fecal Coliform	50120
Crane River	MA93-41	Outlet pump house sluiceway, Purchase Street, Danvers to confluence with Danvers River, Danvers.	0.07	SQUARE MILES	Fecal Coliform	50121
Danvers River	MA93-09	Confluence of Porter, Crane and Waters rivers, Danvers to mouth at Beverly Harbor, Beverly/Salem.	0.53	SQUARE MILES	Fecal Coliform	50121
Essex Bay	MA93-16	The waters landward of Ipswich Bay contained within an imagiany line drawn from the northwestern tip of Gloucester near Coffins Beach to the southern tip of Castle Neck, Ipswich to the eastern most point of Dilly Island, Essex (mouth of Castle NeckRiver) and then from Cross Island, Essex to Conomo Point, Essex (mouth of Essex River) excluding Walker, Lanes, and Farm creeks.	0.97	SQUARE MILES	Fecal Coliform	50121
Essex River	MA93-11	Source east of Southern Avenue, Essex to mouth at Essex Bay, Essex.	0.501	SQUARE MILES	Fecal Coliform	50121
Frost Fish Brook	MA93-36	Cabot Road, Danvers to Porter River confluence at Route 62, Danvers.	1.028	MILES	Fecal Coliform	50120

Massachusetts Category 4a Waters
"TMDL is completed"

NAME	SEGMENT ID	DESCRIPTION	SIZE	UNITS	POLLUTANTS ADDRESSED BY TMDL	EPA TMDL NUMBER
Hawkes Brook	MA93-32	Headwaters near the Lynn/Lynnfield border to the inlet of Hawkes Pond, Lynnfield.	2.608	MILES	Fecal Coliform	50120
Hawkes Brook	MA93-33	Outlet of Hawkes Pond, Saugus to confluence with Saugus River, Saugus.	1.087	MILES	Fecal Coliform	50120
Lynn Harbor	MA93-52	The "inner" portion of Lynn Harbor; the waters landward of an imaginary line drawn from Black Rock Point, Nahant to the eastern edge of Point of Pines, Revere excluding the Saugus River (formerly part of segment 93-23).	1.623	SQUARE MILES	Fecal Coliform	50122
Lynn Harbor	MA93-53	The "outer" portion of Lynn Harbor; the waters landward of an imaginary line drawn from Baileys Hill, Nahant to the eastern point of Winthrop Highlands, Winthrop to the seaward edge of the "inner" portion of Lynn Harbor (at an imaginary line drawn fromBlack Rock Point, Nahant to the eastern edge of Point of Pines, Revere) (formerly part of segment 93-23).	6.557	SQUARE MILES	Fecal Coliform	50122
Manchester Harbor	MA93-19	The waters landward of an imaginary line drawn between Gales Point and Chubb Point, Manchester excluding Cat Brook.	0.333	SQUARE MILES	Fecal Coliform	50122
Marblehead Harbor	MA93-22	The waters landward of an imaginary line drawn northwesterly from the northern tip of Marblehead Neck to Fort Sewall, Marblehead.	0.561	SQUARE MILES	Fecal Coliform	50121
Mill River	MA93-28	Headwaters, outlet Mill Pond, Gloucester to confluence with Annisquam River, Gloucester.	0.097	SQUARE MILES	Fecal Coliform	50121
Nahant Bay	MA93-24	The waters landward of an imaginary line drawn between Galloupes Point, Swampscott and East Point, Nahant.	5.117	SQUARE MILES	Fecal Coliform	50121
Pines River	MA93-15	Headwaters east of Route 1, Revere/Saugus to confluence with the Saugus River, Saugus/Revere.	0.577	SQUARE MILES	Fecal Coliform	50122
Porter River	MA93-04	Confluence with Frost Fish Brook at Route 62, Danvers to confluence with Danvers River, Danvers.	0.134	SQUARE MILES	Fecal Coliform	50121
Rockport Harbor	MA93-57	Waters landward of an imaginary line from Gully Point, Rockport to Granite Pier, Rockport (including Back Harbor and a portion of Sandy Bay) (includes area formerly reported as segment MA93-17)	0.35	SQUARE MILES	Fecal Coliform	50122
Salem Sound	MA93-55	Northern portion of Salem Sound, waters landward of and within imaginary lines from Chubb Point, Manchester to Gales Point, Manchester to the northwest point of Bakers Island, Salem to Hospital Point, Beverly (formerly reported as a portion of segmentMA93-25)	3.46	SQUARE MILES	Fecal Coliform	50121
Salem Sound	MA93-56	Southern portion of Salem Sound, waters landward of and within imaginary lines from Fort Sewall, Marblehead to the Marblehead Lighthouse on Marblehead Neck, Marblehead to the northwest point of Bakers Island, Salem to Naugus Head, Marblehead (formerlyreported as a portion of segment MA93-25)	2.55	SQUARE MILES	Fecal Coliform	50121

Massachusetts Category 4a Waters
"TMDL is completed"

NAME	SEGMENT ID	DESCRIPTION	SIZE	UNITS	POLLUTANTS ADDRESSED BY TMDL	EPA TMDL NUMBER
Saugus River	MA93-35	From the Lynn Water & Sewer Commission diversion canal, Wakefield/Lynnfield to Saugus Iron Works, Bridge Street, Saugus (formerly part of segment MA93-13).	5.367	MILES	(Alteration in stream-side or littoral vegetative covers*)	
					(Low flow alterations*)	
					Fecal Coliform	50120
Shute Brook	MA93-49	Approximately 350 feet downstream from Central Street, Saugus to the confluence with the Saugus River, Saugus.	0.007	SQUARE MILES	Fecal Coliform	50121
Shute Brook	MA93-50	From the confluence of Fiske Brook, Saugus to approximately 350 feet downstream from Central Street, Saugus.	0.892	MILES	Fecal Coliform	50120
Waters River	MA93-01	Headwaters west of Route 128, Peabody/Danvers, to confluence with Danvers River, Danvers.	0.09	SQUARE MILES	Fecal Coliform	50121
Quinebaug						
East Brimfield Reservoir	MA41014	Brimfield/Sturbridge	313	ACRES	(Non-Native Aquatic Plants*)	
					Mercury in Fish Tissue	33880
Holland Pond	MA41022	Holland	66	ACRES	Mercury in Fish Tissue	33880
Shawsheen						
Kiln Brook	MA83-10	Outlet unnamed pond (in Pine Meadows Country Club), Lexington, to confluence with Shawsheen River, Bedford.	1.54	MILES	Fecal Coliform	2587
Long Meadow Brook	MA83-11	Wetland east of Lexington Street and north of Independence Drive, Burlington, to confluence with Vine Brook, Burlington.	1.284976	MILES	Fecal Coliform	2587
Sandy Brook	MA83-13	Headwaters north of Bedford Street and east of Fairfax Street to confluence with Vine Brook, Burlington.	1.155097	MILES	Fecal Coliform	2587
Spring Brook	MA83-14	Wetland northeast of Route 3 Billerica, to confluence with Shawsheen River, Bedford.	2.548839	MILES	Fecal Coliform	2587
Strong Water Brook	MA83-07	Headwaters northeast of Long Pond, Tewksbury to confluence with Shawsheen River, Tewksbury.	4.942	MILES	Fecal Coliform	2587
Vine Brook	MA83-06	Headwaters (southeast of Granny Hill) near Grant Street, Lexington to confluence with Shawsheen River, Bedford.	6.846	MILES	Fecal Coliform	2587
South Coastal						
Aaron River Reservoir	MA94178	Cohasset/Hingham/Scituate	136.13	ACRES	(Fish-Passage Barrier*)	
					Mercury in Fish Tissue	33880
Great Herring Pond	MA94050	Bourne/Plymouth	414.699	ACRES	Mercury in Fish Tissue	33880
Great South Pond	MA94054	Plymouth	284.299	ACRES	Mercury in Fish Tissue	33880
Little Harbor	MA94-20	Cove south of Nichols Road, west of Atlantic Avenue, and north of Cohasset center, Cohasset	0.24	SQUARE MILES	Fecal Coliform	2586
Taunton						
Assonet River	MA62-20	From Tisdale Dam (north of Route 79/Elm Street intersection), Freetown to the confluence with the Taunton River, Freetown.	0.815	SQUARE MILES	Fecal Coliform	40309

Massachusetts Category 4a Waters
"TMDL is completed"

NAME	SEGMENT ID	DESCRIPTION	SIZE	UNITS	POLLUTANTS ADDRESSED BY TMDL	EPA TMDL NUMBER
Beaver Brook	MA62-09	Outlet Cleveland Pond, Abingtion to the confluence with the Salisbury Plain River (forming Matfield River), East Bridgewater.	6.817	MILES	Fecal Coliform	40308
Broad Cove	MA62-50	Dighton/Somerset (formerly reported as lake segment MA62022).	0.126	SQUARE MILES	Fecal Coliform	40309
Lake Nippenicket	MA62131	Bridgewater/Raynham	375.001	ACRES	(Non-Native Aquatic Plants*)	
					Mercury in Fish Tissue	33880
Meadow Brook	MA62-38	Headwaters north of Pine Street, Whitman (through Forge Pond, East Bridgewater) to the confluence with the Matfield River, East Bridgewater.	6.009	MILES	Fecal Coliform	40308
Monponsett Pond	MA62218	[East Basin] Halifax	244.567	ACRES	(Non-Native Aquatic Plants*)	
					Mercury in Fish Tissue	33880
Muddy Cove Brook	MA62-51	From the outlet of the small impoundment behind 333 Main Street (Zeneca Inc.), Dighton to confluence with Taunton River, Dighton (formerly part of MA62-23).	0.008	SQUARE MILES	Fecal Coliform	40309
Segreganset River	MA62-55	From approximately 250 feet north of Brook Street, Dighton to confluence with the Taunton River, Dighton (formerly part of segment MA62-18).	0.02	SQUARE MILES	Fecal Coliform	40309
Somerset Reservoir	MA62174	Somerset	164.334	ACRES	Mercury in Fish Tissue	33880
Taunton River	MA62-02	Route 24 bridge, Taunton/Raynham to Berkley Bridge, Dighton/Berkley.	0.287	SQUARE MILES	Fecal Coliform	40310
Three Mile River	MA62-56	Confluence of Wading and Rumford rivers, Norton to impoundment spillway behind 66 South Street (Harodite Finishing Co.), Taunton (formerly part of segment MA62-16).	12.812	MILES	Fecal Coliform	40308
Three Mile River	MA62-57	Impoundment spillway behind 66 South Street (Harodite Finishing Co.), Taunton to confluence with Taunton River, Taunton/Dighton (formerly part of segment MA62-16).	0.022	SQUARE MILES	Fecal Coliform	40310
Wading River	MA62-49	Balcolm Street, Mansfield to confluence with Threemile River, Norton (formerly part of segment MA62-17).	9.668	MILES	Fecal Coliform	40308
Ten Mile						
Whiting Pond	MA52042	North Attleborough/Plainville	23.582	ACRES	Mercury in Fish Tissue	33880
Westfield						
Buckley-Dunton Lake	MA32013	Becket	153.635	ACRES	Mercury in Fish Tissue	42411

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Massachusetts Category 4b Waters
"Impairment controlled by alternative pollution control requirements"

According to the EPA guidance, Category 4b lists waters impaired by one or more pollutants; however, pollution control measures other than TMDLs are expected to attain all designated uses. Massachusetts is not including any waters in Category 4b for the 2014 listing cycle.

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Massachusetts Category 4c Waters
"Impairment not caused by a pollutant – TMDL not required"

NAME	SEGMENT ID	DESCRIPTION	SIZE	UNITS	IMPAIRMENT CAUSE
Blackstone					
Coes Reservoir	MA51024	Worcester	87	ACRES	(Eurasian Water Milfoil, Myriophyllum spicatum*)
Dark Brook Reservoir	MA51035	[South Basin] Auburn	58	ACRES	(Eurasian Water Milfoil, Myriophyllum spicatum*)
					(Non-Native Aquatic Plants*)
Dark Brook Reservoir	MA51036	[North Basin] Auburn	171	ACRES	(Eurasian Water Milfoil, Myriophyllum spicatum*)
Girard Pond	MA51053	Sutton	2	ACRES	(Non-Native Aquatic Plants*)
Howe Reservoirs	MA51070	[East Basin] Millbury	2	ACRES	(Low flow alterations*)
					(Non-Native Aquatic Plants*)
Ironstone Reservoir	MA51074	Uxbridge	28	ACRES	(Non-Native Aquatic Plants*)
Jenks Reservoir	MA51075	Bellingham	26	ACRES	(Non-Native Aquatic Plants*)
Mill Pond	MA51104	Upton	10	ACRES	(Non-Native Aquatic Plants*)
Miscoe Lake	MA51106	Wrentham (size indicates portion in Massachusetts)	5	ACRES	(Non-Native Aquatic Plants*)
North Pond	MA51112	Hopkinton/Milford	213	ACRES	(Non-Native Aquatic Plants*)
Pratt Pond	MA51123	Upton	39	ACRES	(Non-Native Aquatic Plants*)
Quinsigamond River	MA51-09	Outlet Flint Pond, Grafton to confluence with Blackstone River, Grafton (excluding Lake Ripple segment MA51135) (segment includes all of Hovey Pond formerly segment MA51068 and a portion of Fisherville Pond formerly segment MA51048).	5.2	MILES	(Non-Native Aquatic Plants*)
					(Eurasian Water Milfoil, Myriophyllum spicatum*)
Riverlin Street Pond	MA51137	Millbury	2	ACRES	(Non-Native Aquatic Plants*)
Rivulet Pond	MA51138	Uxbridge	4	ACRES	(Non-Native Aquatic Plants*)
Sibley Reservoir	MA51148	Sutton	25	ACRES	(Low flow alterations*)
Silver Lake	MA51150	Bellingham	42	ACRES	(Non-Native Aquatic Plants*)
Silver Lake	MA51151	Grafton	25	ACRES	(Low flow alterations*)
Singletary Pond	MA51152	Sutton/Millbury	342	ACRES	(Eurasian Water Milfoil, Myriophyllum spicatum*)
					(Non-Native Aquatic Plants*)
Stevens Pond	MA51159	Sutton	85	ACRES	(Non-Native Aquatic Plants*)
Swans Pond	MA51164	Sutton/Northbridge	32	ACRES	(Non-Native Aquatic Plants*)
Taft Pond	MA51165	Upton	11	ACRES	(Non-Native Aquatic Plants*)
Tinker Hill Pond	MA51167	Auburn	37	ACRES	(Non-Native Aquatic Plants*)
Tuckers Pond	MA51169	Sutton	26	ACRES	(Non-Native Aquatic Plants*)
Whitins Pond	MA51180	Northbridge/Sutton	162	ACRES	(Non-Native Aquatic Plants*)

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NAME	SEGMENT ID	DESCRIPTION	SIZE	UNITS	IMPAIRMENT CAUSE
Boston Harbor: Mystic					
Hills Pond	MA71018	Arlington	2	ACRES	(Eurasian Water Milfoil, Myriophyllum spicatum*)
Boston Harbor: Neponset					
Billings Street/East Street Pond	MA73065	Sharon	2	ACRES	(Non-Native Aquatic Plants*)
Clark Pond	MA73008	Walpole	7	ACRES	(Non-Native Aquatic Plants*)
Ellis Pond	MA73018	Norwood	17	ACRES	(Non-Native Aquatic Plants*)
Farrington Pond	MA73040	Stoughton	3	ACRES	(Non-Native Aquatic Plants*)
Glen Echo Pond	MA73022	Canton/Stoughton	16	ACRES	(Non-Native Aquatic Plants*)
Jewells Pond	MA73026	Medfield	4	ACRES	(Non-Native Aquatic Plants*)
Pinewood Pond	MA73039	Stoughton	25	ACRES	(Non-Native Aquatic Plants*)
Plantingfield Brook	MA73-23	Headwaters east of Thatcher Street, Westwood, to the confluence with Purgatory Brook, Norwood.	1.8	MILES	(Low flow alterations*)
Town Pond	MA73056	Stoughton	8	ACRES	(Non-Native Aquatic Plants*)
Turner Pond	MA73058	Walpole	18	ACRES	(Non-Native Aquatic Plants*)
Woods Pond	MA73055	Stoughton	14	ACRES	(Non-Native Aquatic Plants*)
Boston Harbor: Weymouth & Weir					
Accord Brook	MA74-17	From water supply intake (4131000-02S Accord Brook) south of South Pleasant Street, Hingham to inlet Triphammer Pond, Hingham.	1.8	MILES	(Low flow alterations*)
Sunset Lake	MA74020	Braintree	58	ACRES	(Eurasian Water Milfoil, Myriophyllum spicatum*)
Buzzards Bay					
Federal Pond	MA95055	Carver/Plymouth	125.041	ACRES	(Non-Native Aquatic Plants*)
Fresh Meadow Pond	MA95174	Carver/Plymouth	59.381	ACRES	(Non-Native Aquatic Plants*)
Mill Pond	MA95105	Wareham	148.573	ACRES	(Non-Native Aquatic Plants*)
Tremont Mill Pond	MA95150	Wareham	30.664	ACRES	(Non-Native Aquatic Plants*)
Cape Cod					
Long Pond	MA96184	Barnstable	48	ACRES	(Non-Native Aquatic Plants*)
Charles					
Beaver Pond	MA72006	Franklin	31.789	ACRES	(Non-Native Aquatic Plants*)
Dug Pond	MA72034	Natick	50.191	ACRES	(Non-Native Aquatic Plants*)
Kingsbury Pond	MA72056	Norfolk	15.36	ACRES	(Low flow alterations*)
Lake Archer	MA72002	Wrentham	77.118	ACRES	(Non-Native Aquatic Plants*)
Lake Waban	MA72125	Wellesley	108.997	ACRES	(Eurasian Water Milfoil, Myriophyllum spicatum*) (Non-Native Aquatic Plants*)

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NAME	SEGMENT ID	DESCRIPTION	SIZE	UNITS	IMPAIRMENT CAUSE
Morses Pond	MA72079	Wellesley/Natick	111.817	ACRES	(Eurasian Water Milfoil, Myriophyllum spicatum*)
					(Non-Native Aquatic Plants*)
Noannet Pond	MA72084	Westwood/Dover	49.71	ACRES	(Non-Native Aquatic Plants*)
Nonesuch Pond	MA72085	Natick/Weston	38.78	ACRES	(Non-Native Aquatic Plants*)
Scarboro Golf Course Pond	MA72107	Boston	6.107	ACRES	(Non-Native Aquatic Plants*)
Unnamed Tributary	MA72-27	Headwaters, outlet Stony Brook Reservoir, Waltham/Weston to confluence with the Charles River, Waltham/Weston.	0.191	MILES	(Low flow alterations*)
					(Other flow regime alterations*)
Chicopee					
Beaver Lake	MA36010	Ware	150	ACRES	(Non-Native Aquatic Plants*)
					(Eurasian Water Milfoil, Myriophyllum spicatum*)
Brooks Pond	MA36023	N.Brookfield/New Braintree/Spencer/Oakham	179	ACRES	(Non-Native Aquatic Plants*)
Dean Pond	MA36049	Brimfield/Monson	10	ACRES	(Non-Native Aquatic Plants*)
Forest Lake	MA36063	Palmer	45	ACRES	(Eurasian Water Milfoil, Myriophyllum spicatum*)
Hardwick Pond	MA36066	Hardwick	67	ACRES	(Non-Native Aquatic Plants*)
Lake Lorraine	MA36084	Springfield	28	ACRES	(Non-Native Aquatic Plants*)
Long Pond	MA36082	Rutland	167	ACRES	(Non-Native Aquatic Plants*)
Moosehorn Pond	MA36097	Hubbardston	67	ACRES	(Non-Native Aquatic Plants*)
Old Reservoir	MA36114	Barre	37	ACRES	(Other flow regime alterations*)
Turkey Hill Pond	MA36157	Rutland/Paxton	90	ACRES	(Non-Native Aquatic Plants*)
Concord (SuAsCo)					
Bartlett Pond	MA82007	Northborough	51.815	ACRES	(Eurasian Water Milfoil, Myriophyllum spicatum*)
					(Non-Native Aquatic Plants*)
Batemans Pond	MA82008	Concord	25.69	ACRES	(Non-Native Aquatic Plants*)
Chauncy Lake	MA82017	Westborough	173.313	ACRES	(Eurasian Water Milfoil, Myriophyllum spicatum*)
Fisk Pond	MA82038	Natick	61.757	ACRES	(Non-Native Aquatic Plants*)
Framingham Reservoir #3	MA82046	Framingham	221.244	ACRES	(Eurasian Water Milfoil, Myriophyllum spicatum*)
Great Meadows Pond #3	MA82053	Concord	53	ACRES	(Non-Native Aquatic Plants*)
Little Chauncy Pond	MA82070	Northborough	43.338	ACRES	(Non-Native Aquatic Plants*)
Meadow Pond	MA82129	Carlisle	12.354	ACRES	(Non-Native Aquatic Plants*)
Mill Brook	MA82A-20	From the outlet of Crosby Pond, Concord to the confluence with the Concord River, Concord.	2.694	MILES	(Habitat Assessment (Streams)*)

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NAME	SEGMENT ID	DESCRIPTION	SIZE	UNITS	IMPAIRMENT CAUSE
North Great Meadows	MA82084	Concord	73.479	ACRES	(Non-Native Aquatic Plants*)
Rocky Pond	MA82095	Boylston	61.83	ACRES	(Non-Native Aquatic Plants*)
Russell Millpond	MA82096	Chelmsford	32.9	ACRES	(Other flow regime alterations*)
					(Non-Native Aquatic Plants*)
Winning Pond	MA82123	Billerica	22.216	ACRES	(Eurasian Water Milfoil, Myriophyllum spicatum*)
Connecticut					
Cranberry Pond	MA34018	Sunderland	28.146	ACRES	(Eurasian Water Milfoil, Myriophyllum spicatum*)
Ingraham Brook Pond	MA34037	Granby	4.623	ACRES	(Non-Native Aquatic Plants*)
Lake Bray	MA34013	Holyoke	10.301	ACRES	(Non-Native Aquatic Plants*)
Lake Holland	MA34035	Belchertown	10.552	ACRES	(Non-Native Aquatic Plants*)
Lower Mill Pond	MA34048	Easthampton	29.641	ACRES	(Non-Native Aquatic Plants*)
Lower Van Horn Park Pond	MA34129	Springfield	11.13	ACRES	(Non-Native Aquatic Plants*)
Oxbow Cutoff	MA34067	The waterbody north of Island Road and south of Oxbow Road (between Routes 91and 5), Northampton.	48.805	ACRES	(Non-Native Aquatic Plants*)
Whiting Street Reservoir	MA34101	Holyoke	102.438	ACRES	(Eurasian Water Milfoil, Myriophyllum spicatum*)
Deerfield					
Tannery Pond	MA33020	Savoy	0.523	ACRES	(Low flow alterations*)
Farmington					
Benton Pond	MA31003	Otis	61.428	ACRES	(Eurasian Water Milfoil, Myriophyllum spicatum*)
Noyes Pond	MA31026	Tolland	166.019	ACRES	(Non-Native Aquatic Plants*)
French					
Bouchard Pond	MA42003	Leicester	2	ACRES	(Non-Native Aquatic Plants*)
Buffum Pond	MA42004	Charlton/Oxford	23	ACRES	(Non-Native Aquatic Plants*)
Low Pond	MA42033	Dudley	4	ACRES	(Non-Native Aquatic Plants*)
Packard Pond	MA42040	Dudley	6	ACRES	(Non-Native Aquatic Plants*)
Sargent Pond	MA42049	Leicester	65	ACRES	(Non-Native Aquatic Plants*)
Webster Lake	MA42064	Webster	1275	ACRES	(Eurasian Water Milfoil, Myriophyllum spicatum*)
					(Non-Native Aquatic Plants*)
Housatonic					
Ashmere Lake	MA21005	Hinsdale/Peru	293.502	ACRES	(Eurasian Water Milfoil, Myriophyllum spicatum*)

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NAME	SEGMENT ID	DESCRIPTION	SIZE	UNITS	IMPAIRMENT CAUSE
Goose Pond	MA21043	Lee/Tyringham	237.942	ACRES	(Eurasian Water Milfoil, Myriophyllum spicatum*)
					(Non-Native Aquatic Plants*)
Greenwater Pond	MA21044	Becket	88.73	ACRES	(Eurasian Water Milfoil, Myriophyllum spicatum*)
Hubbard Brook	MA21-15	Source, northwest of Townhouse Hill Road, Egremont to confluence with the Housatonic River, Sheffield (thru Mill Pond formerly reported as segment MA21068).	9.375	MILES	(Non-Native Aquatic Plants*)
					(Eurasian Water Milfoil, Myriophyllum spicatum*)
Karner Brook	MA21-16	Headwaters east of East Street, Mount Washington to the inlet of Mill Pond, Egremont.	4.664	MILES	(Low flow alterations*)
Lake Averic	MA21006	Stockbridge	41.962	ACRES	(Eurasian Water Milfoil, Myriophyllum spicatum*)
Long Pond	MA21062	Great Barrington	114.398	ACRES	(Eurasian Water Milfoil, Myriophyllum spicatum*)
Long Pond Brook	MA21-14	Outlet of Long Pond, Great Barrington to the confluence with Seekonk Brook, Great Barrington.	2.047	MILES	(Low flow alterations*)
Mansfield Pond	MA21065	Great Barrington	27.783	ACRES	(Non-Native Aquatic Plants*)
					(Eurasian Water Milfoil, Myriophyllum spicatum*)
Onota Lake	MA21078	Pittsfield	662.202	ACRES	(Eurasian Water Milfoil, Myriophyllum spicatum*)
					(Non-Native Aquatic Plants*)
Plunkett Reservoir	MA21082	Hinsdale	71.567	ACRES	(Eurasian Water Milfoil, Myriophyllum spicatum*)
					(Non-Native Aquatic Plants*)
Prospect Lake	MA21084	Egremont	58.619	ACRES	(Non-Native Aquatic Plants*)
Richmond Pond	MA21088	Richmond/Pittsfield	227.905	ACRES	(Eurasian Water Milfoil, Myriophyllum spicatum*)
					(Non-Native Aquatic Plants*)
Shaker Mill Pond	MA21094	West Stockbridge	27	ACRES	(Non-Native Aquatic Plants*)
					(Eurasian Water Milfoil, Myriophyllum spicatum*)
Stevens Pond	MA21104	Monterey	38.771	ACRES	(Eurasian Water Milfoil, Myriophyllum spicatum*)
					(Non-Native Aquatic Plants*)
Thousand Acre Pond	MA21106	New Marlborough	144.801	ACRES	(Eurasian Water Milfoil, Myriophyllum spicatum*)
Unnamed Tributary	MA21-31	Unnamed tributary to the Housatonic River, locally known as "Laurel Brook", from the outlet of Laurel Lake, Lee to the confluence with the Housatonic River, Lee.	0.8	MILES	(Zebra mussel, Dreissena polymorph*)
Upper Goose Pond	MA21110	Lee/Tyringham	55.337	ACRES	(Eurasian Water Milfoil, Myriophyllum spicatum*)

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NAME	SEGMENT ID	DESCRIPTION	SIZE	UNITS	IMPAIRMENT CAUSE
Willard Brook	MA21-30	Headwaters north of Salisbury Road, Sheffield to the confluence with Hubbard Brook, Sheffield	4.022	MILES	(Eurasian Water Milfoil, Myriophyllum spicatum*)
Windsor Brook	MA21-09	Source, southeast of Fobes Hill (west of Savory Road/Route 8A), Windsor to the Windsor Reservoir, Windsor.	6.11	MILES	(Low flow alterations*)
Hudson: Hoosic					
Berkshire Pond	MA11001	Lanesborough	21.426	ACRES	(Eurasian Water Milfoil, Myriophyllum spicatum*)
Tophet Brook	MA11-19	Source west of Burnett Road, Savoy (in the Savoy Mountain State Forest) to the confluence with the Hoosic River, Adams.	6.151	MILES	(Alteration in stream-side or littoral vegetative covers*)
					(Other flow regime alterations*)
Ipswich					
Field Pond	MA92019	Andover	56.706	ACRES	(Non-Native Aquatic Plants*)
Lower Boston Brook Pond	MA92031	Middleton	9.333	ACRES	(Non-Native Aquatic Plants*)
Lower Four Mile Pond	MA92032	Boxford	18.426	ACRES	(Non-Native Aquatic Plants*)
Lubber Pond East	MA92035	Wilmington	6.237	ACRES	(Non-Native Aquatic Plants*)
					(Sedimentation/Siltation*)
Lubber Pond West	MA92036	Wilmington	9.561	ACRES	(Non-Native Aquatic Plants*)
					(Sedimentation/Siltation*)
Maple Meadow Brook	MA92-04	Outlet of Mill Pond, Burlington to confluence wtih Lubbers Brook, Wilmington.	4.197642	MILES	(Low flow alterations*)
Stevens Pond	MA92062	Boxford	11.054	ACRES	(Non-Native Aquatic Plants*)
Merrimack					
Cobbler Brook	MA84A-22	Headwaters, Merrimac to confluence with Merrimack River, Merrimac.	4.4	MILES	(Debris/Floatables/Trash*)
Lake Mascuppic	MA84037	Tyngsborough/Dracut	210	ACRES	(Non-Native Aquatic Plants*)
Millers					
White Pond	MA35098	Athol	62.629	ACRES	(Non-Native Aquatic Plants*)
Mount Hope Bay (Shore)					
Cole River	MA61-03	Wood Street, Swansea to Route 6, Swansea	1.6	MILES	(Fish-Passage Barrier*)
Quequechan River	MA61-05	Outlet South Watuppa Pond, Fall River to confluence with the Taunton River/Mount Hope Bay (at Braga Bridge), Fall River	2.4	MILES	(Habitat Assessment (Streams)*)
Nashua					
Chaffin Pond	MA81017	Holden	90	ACRES	(Non-Native Aquatic Plants*)
Dawson Pond	MA81028	Holden	22	ACRES	(Non-Native Aquatic Plants*)
Eagle Lake	MA81034	Holden	56	ACRES	(Non-Native Aquatic Plants*)
Flannagan Pond	MA81044	Ayer	80	ACRES	(Non-Native Aquatic Plants*)
Lake Samoset	MA81116	Leominster	35	ACRES	(Non-Native Aquatic Plants*)

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Lake Whalom	MA81154	Lunenburg/Leominster	96	ACRES	(Eurasian Water Milfoil, Myriophyllum spicatum*)
					(Non-Native Aquatic Plants*)
Paradise Pond	MA81097	Princeton	61	ACRES	(Non-Native Aquatic Plants*)
Quinapoxet River	MA81-32	Outlet Quinapoxet Reservoir, Holden to inlet of Wachusett Reservoir (Thomas Basin), West Boylston.	7.9	MILES	(Low flow alterations*)
Robbins Pond	MA81111	Harvard	11	ACRES	(Non-Native Aquatic Plants*)
Sawmill Pond	MA81118	Fitchburg/Westminster	65	ACRES	(Non-Native Aquatic Plants*)
Stuart Pond	MA81137	Sterling	42	ACRES	(Non-Native Aquatic Plants*)
Stump Pond	MA81171	Holden	27	ACRES	(Non-Native Aquatic Plants*)
Unionville Pond	MA81143	Holden	19	ACRES	(Eurasian Water Milfoil, Myriophyllum spicatum*)
White Pond	MA81155	Lancaster/Leominster	47	ACRES	(Non-Native Aquatic Plants*)
Wyman Pond	MA81161	Westminster	198	ACRES	(Non-Native Aquatic Plants*)
North Coastal					
Cedar Pond	MA93013	Peabody	34.029	ACRES	(Non-Native Aquatic Plants*)
Days Pond	MA93092	Gloucester	0.516	ACRES	(Non-Native Aquatic Plants*)
Edgewater Office Park Pond	MA93094	Wakefield	14.563	ACRES	(Non-Native Aquatic Plants*)
First Pond	MA93081	Saugus (also known as Upper Griswold Pond).	4.214	ACRES	(Non-Native Aquatic Plants*)
Griswold Pond	MA93029	Saugus	12.972	ACRES	(Non-Native Aquatic Plants*)
Sluice Pond	MA93071	Lynn	41.514	ACRES	(Eurasian Water Milfoil, Myriophyllum spicatum*)
Spring Pond	MA93072	Saugus	8.183	ACRES	(Non-Native Aquatic Plants*)
Swains Pond	MA93095	Melrose	2.978	ACRES	(Non-Native Aquatic Plants*)
Parker					
Parker River	MA91-01	Source north of Silver Mine Road, Boxford to Central Street, Newbury (excluding Sperry Pond segment MA91013, Rock Pond segment MA91012, Pentucket Pond segment MA91010, and Crane Pond segment MA91004).	12.3	MILES	(Low flow alterations*)
State Street Pond	MA91014	Newburyport	4	ACRES	(Non-Native Aquatic Plants*)
Quinebaug					
Cedar Pond	MA41008	Sturbridge	149	ACRES	(Non-Native Aquatic Plants*)
Hamilton Reservoir	MA41019	Holland (size indicates portion in Massachusetts)	386	ACRES	(Non-Native Aquatic Plants*)
Mill Brook	MA41-07	From inlet of Mill Road Pond (formerly pond segment MA41032), Brimfield to confluence with Quinebaug River, Brimfield.	4.7	MILES	(Non-Native Aquatic Plants*)
Railroad Pond	MA41058	Charlton	7	ACRES	(Non-Native Aquatic Plants*)
Sherman Pond	MA41046	Brimfield	76	ACRES	(Non-Native Aquatic Plants*)
Sylvestri Pond	MA41049	Dudley	30	ACRES	(Non-Native Aquatic Plants*)

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Walker Pond	MA41052	Sturbridge	104	ACRES	(Non-Native Aquatic Plants*)
Shawsheen					
Gravel Pit Pond	MA83007	Andover (Hussey Brook Pond East)	4.585	ACRES	(Non-Native Aquatic Plants*)
South Coastal					
Beaver Dam Pond	MA94006	Plymouth	29.204	ACRES	(Non-Native Aquatic Plants*)
Black Mountain Pond	MA94009	Marshfield	16.606	ACRES	(Non-Native Aquatic Plants*)
Briggs Reservoir	MA94019	Plymouth	23.901	ACRES	(Non-Native Aquatic Plants*)
Briggs Reservoir	MA94020	Plymouth	16.325	ACRES	(Non-Native Aquatic Plants*)
Cooks Pond	MA94027	Plymouth	21.237	ACRES	(Non-Native Aquatic Plants*)
Eel River	MA94-23	Outlet cranberry bog east of Long Pond Road, Plymouth through Russell Millpond to mouth at Plymouth Harbor, Plymouth.	3.931	MILES	(Fish-Passage Barrier*) (Non-Native Aquatic Plants*)
Herring Brook	MA94-29	Outlet Lily Pond, Cohasset to confluence Aaron River, Cohasset.	0.3	MILES	(Fish-Passage Barrier*) (Non-Native Aquatic Plants*)
Island Creek Pond	MA94073	Duxbury	39.716	ACRES	(Non-Native Aquatic Plants*)
Island Pond	MA94075	[locally known as Great Island Pond] Plymouth	79.418	ACRES	(Non-Native Aquatic Plants*)
Jacobs Pond	MA94077	Norwell	60.801	ACRES	(Non-Native Aquatic Plants*)
Long Island Pond	MA94088	Plymouth	33.137	ACRES	(Non-Native Aquatic Plants*)
Lorings Bogs Pond	MA94089	Duxbury	32.999	ACRES	(Non-Native Aquatic Plants*)
Lower Chandler Pond	MA94091	Duxbury/Pembroke	37.388	ACRES	(Non-Native Aquatic Plants*)
Oldham Pond	MA94114	Pembroke/Hanson	231.859	ACRES	(Non-Native Aquatic Plants*)
Pembroke Street South Pond	MA94117	Kingston	6.246	ACRES	(Non-Native Aquatic Plants*)
Reeds Millpond	MA94126	Kingston	6.248	ACRES	(Non-Native Aquatic Plants*)
Reservoir	MA94127	Pembroke	16.194	ACRES	(Other flow regime alterations*)
Silver Lake	MA94143	Pembroke/Plympton/Kingston	616.668	ACRES	(Other flow regime alterations*)
Smelt Pond	MA94184	Kingston	44.797	ACRES	(Non-Native Aquatic Plants*)
Torrey Pond	MA94157	Norwell	18.684	ACRES	(Non-Native Aquatic Plants*)
Upper Chandler Pond	MA94165	Duxbury/Pembroke	7.695	ACRES	(Non-Native Aquatic Plants*)
Taunton					
Brockton Reservoir	MA62023	Avon	89.399	ACRES	(Non-Native Aquatic Plants*)
Carver Pond	MA62033	Bridgewater	29.309	ACRES	(Non-Native Aquatic Plants*)
Cleveland Pond	MA62042	Abington	96.423	ACRES	(Non-Native Aquatic Plants*)
Crocker Pond	MA62051	Wrentham	17.138	ACRES	(Non-Native Aquatic Plants*)
Cushing Pond	MA62056	Abington	5.727	ACRES	(Non-Native Aquatic Plants*)
East Freetown Pond	MA62063	Freetown	11.051	ACRES	(Non-Native Aquatic Plants*)
Fuller Street Pond	MA62234	Middleborough/Carver (formerly reported as MA95058)	20.273	ACRES	(Non-Native Aquatic Plants*)

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Gavins Pond	MA62077	Sharon/Foxborough	17.607	ACRES	(Non-Native Aquatic Plants*)
Gushee Pond	MA62084	Raynham	26.775	ACRES	(Non-Native Aquatic Plants*)
Johnson Pond	MA62097	Raynham	13.536	ACRES	(Non-Native Aquatic Plants*)
Lake Mirimichi	MA62118	Plainville/Foxborough	174.996	ACRES	(Non-Native Aquatic Plants*)
Lake Rico	MA62148	Taunton	187.981	ACRES	(Non-Native Aquatic Plants*)
Long Pond	MA62108	Lakeville/Freetown	1741.496	ACRES	(Non-Native Aquatic Plants*)
Longwater Pond	MA62109	Easton	8.188	ACRES	(Non-Native Aquatic Plants*)
Lower Porter Pond	MA62111	Brockton	7.861	ACRES	(Non-Native Aquatic Plants*)
Middle Pond	MA62115	Taunton	25.864	ACRES	(Non-Native Aquatic Plants*)
Mount Hope Mill Pond	MA62122	Taunton/Dighton (includes Three Mile River Impoundment formerly reported as MA62231).	45.174	ACRES	(Non-Native Aquatic Plants*)
Muddy Pond	MA62125	Carver	61.058	ACRES	(Non-Native Aquatic Plants*)
New Pond	MA62130	Easton	17.727	ACRES	(Non-Native Aquatic Plants*)
Richmond Pond	MA62159	Taunton	5.773	ACRES	(Non-Native Aquatic Plants*)
Savery Pond	MA62167	Middleborough	23.619	ACRES	(Non-Native Aquatic Plants*)
Segreganset River	MA62-53	Source in wetland north of Glebe Street, Taunton through the Segregansett River Ponds to the Segreganset River Dam, Dighton (formerly part of segment MA62-18).	7.854	MILES	(Low flow alterations*)
Segreganset River	MA62-54	From Segreganset River Dam, Dighton to approximately 250 feet north of Brook Street, Dighton (formerly part of segment MA62-18).	0.351	MILES	(Low flow alterations*)
Shovelshop Pond	MA62172	Easton	7.018	ACRES	(Non-Native Aquatic Plants*)
Sweets Pond	MA62185	Mansfield	13.484	ACRES	(Non-Native Aquatic Plants*)
Thirtyacre Pond	MA62190	Brockton	26.277	ACRES	(Non-Native Aquatic Plants*)
Turnpike Lake	MA62198	Plainville	99.029	ACRES	(Non-Native Aquatic Plants*)
Upper Porter Pond	MA62200	Brockton	11.395	ACRES	(Non-Native Aquatic Plants*)
Vandys Pond	MA62112	(Mcavoy Pond) Foxborough	8.58	ACRES	(Non-Native Aquatic Plants*)
Waldo Lake	MA62201	Avon/Brockton	72.384	ACRES	(Non-Native Aquatic Plants*)
West Meadow Pond	MA62208	West Bridgewater	103.81	ACRES	(Non-Native Aquatic Plants*)
Whittenton Impoundment	MA62228	Taunton	20.05	ACRES	(Non-Native Aquatic Plants*)
Winnecunnet Pond	MA62213	Norton	152.274	ACRES	(Non-Native Aquatic Plants*)
Ten Mile					
Coles Brook	MA52-11	Headwaters, Grassie Swamp west of Allens Lane, Rehoboth to inlet Central Pond, Seekonk.	4.181	MILES	(Low flow alterations*)
Falls Pond, South Basin	MA52014	North Attleborough	49.367	ACRES	(Non-Native Aquatic Plants*)
Orrs Pond	MA52029	Attleboro	57.864	ACRES	(Eurasian Water Milfoil, Myriophyllum spicatum*)

Massachusetts Category 4c Waters
"Impairment not caused by a pollutant – TMDL not required"

NAME	SEGMENT ID	DESCRIPTION	SIZE	UNITS	IMPAIRMENT CAUSE
Scotts Brook	MA52-09	Headwaters, north of High Street, North Attleborough to confluence with Ten Mile River, North Attleborough.	2.11	MILES	(Low flow alterations*)
Westfield					
Blair Pond	MA32009	Blandford	69.182	ACRES	(Non-Native Aquatic Plants*)
Buck Pond	MA32012	Westfield	22.754	ACRES	(Non-Native Aquatic Plants*)
Center Pond	MA32015	Becket	113.857	ACRES	(Eurasian Water Milfoil, Myriophyllum spicatum*)
Congamond Lakes	MA32023	[South Basin] Southwick	144.049	ACRES	(Eurasian Water Milfoil, Myriophyllum spicatum*)
Horse Pond	MA32043	Westfield	24.284	ACRES	(Non-Native Aquatic Plants*)
					(Eurasian Water Milfoil, Myriophyllum spicatum*)

Massachusetts Category 5 Waters
"Waters requiring a TMDL"

NAME	SEGMENT ID	DESCRIPTION	SIZE	UNITS	IMPAIRMENT CAUSE	EPA TMDL NO.
Blackstone						
Aldrich Pond	MA51002	Sutton	2	ACRES	(Non-Native Aquatic Plants*)	
					Aquatic Plants (Macrophytes)	
Arcade Pond	MA51003	Northbridge	20	ACRES	(Non-Native Aquatic Plants*)	
					Excess Algal Growth	
Arnolds Brook	MA51-32	Perennial portion only, from outlet of unnamed pond at Whitehall Way, Bellingham to confluence with Peters River, Bellingham.	1.7	MILES	Escherichia coli	
Beaver Brook	MA51-07	Outlet of small unnamed impoundment north of Beth Israel School and Flag Street School, Worcester to confluence with Middle River, Worcester. (Includes underground portion)	2.9	MILES	(Debris/Floatables/Trash*)	
					(Fish Kills*)	
					(Physical substrate habitat alterations*)	
					Bottom Deposits	
					Escherichia coli	
					Taste and Odor	
Blackstone River	MA51-03	Confluence of Middle River and Mill Brook (downstream of the railroad spur bridge west of Tobias Boland Boulevard), Worcester to Fisherville Dam, Grafton. (through a portion of Fisherville Pond formerly segment MA51048)	10.4	MILES	(Debris/Floatables/Trash*)	
					(Other flow regime alterations*)	
					(Physical substrate habitat alterations*)	
					Ambient Bioassays -- Chronic Aquatic Toxicity	
					Aquatic Macroinvertebrate Bioassessments	
					Escherichia coli	
					Excess Algal Growth	
					Fishes Bioassessments	
					Foam/Flocs/Scum/Oil Slicks	
					Lead	
					Nutrient/Eutrophication Biological Indicators	
					Other	
					Oxygen, Dissolved	
					Phosphorus (Total)	
					Sedimentation/Siltation	
					Taste and Odor	
					Turbidity	

Massachusetts Category 5 Waters
"Waters requiring a TMDL"

NAME	SEGMENT ID	DESCRIPTION	SIZE	UNITS	IMPAIRMENT CAUSE	EPA TMDL NO.
Blackstone River	MA51-04	Fisherville Dam, Grafton to outlet Rice City Pond, Uxbridge. (through Riverdale Impoundment formerly segment MA51136 and Rice City Pond formerly segment MA51131)	8.8	MILES	(Other flow regime alterations*)	
					(Physical substrate habitat alterations*)	
					Aquatic Macroinvertebrate Bioassessments	
					Cadmium	
					Copper	
					DDT	
					Escherichia coli	
					Excess Algal Growth	
					Fishes Bioassessments	
					Lead	
					Nutrient/Eutrophication Biological Indicators	
					PCB in Fish Tissue	
					Phosphorus (Total)	
					Sedimentation/Siltation	
					Taste and Odor	
					Turbidity	
Blackstone River	MA51-05	Outlet Rice City Pond, Uxbridge to the old Water Quality Monitor (at the Conrail Railroad trestle due north of Collins Drive), Millville.	9.1	MILES	(Other flow regime alterations*)	
					Aquatic Macroinvertebrate Bioassessments	
					Cadmium	
					Copper	
					Escherichia coli	
					Excess Algal Growth	
					Lead	
					Nutrient/Eutrophication Biological Indicators	
					Phosphorus (Total)	
					Polychlorinated biphenyls	
					Taste and Odor	
					Total Suspended Solids (TSS)	
					Turbidity	

Massachusetts Category 5 Waters
"Waters requiring a TMDL"

NAME	SEGMENT ID	DESCRIPTION	SIZE	UNITS	IMPAIRMENT CAUSE	EPA TMDL NO.
Blackstone River	MA51-06	From the Water Quality Monitor, Millville to the Rhode Island border west of Route 122 (Main St.), Blackstone, MA/(Harris Avenue) North Smithfield RI.	3.8	MILES	(Other flow regime alterations*)	
					Cadmium	
					Copper	
					DDT	
					Lead	
					PCB in Fish Tissue	
					Phosphorus (Total)	
					Total Suspended Solids (TSS)	
Burncoat Park Pond	MA51012	Worcester	6	ACRES	Aquatic Plants (Macrophytes)	
					Turbidity	
Cedar Swamp Brook	MA51-33	Headwaters, outlet Cedar Swamp, Uxbridge to confluence with Chockalog River, Douglas.	0.8	MILES	Fishes Bioassessments	
Coal Mine Brook	MA51-27	Perennial portion, from unnamed road approximately 0.2 miles upstream from Plantation Street, Worcester to inlet of Lake Quinsigamond, Worcester.	0.4	MILES	(Fish Kills*)	
					Fishes Bioassessments	
					Sedimentation/Siltation	
					Temperature, water	
Cook Allen Brook	MA51-28	Headwaters, outlet Reservoir No. 5, Sutton to inlet Whitins Pond, Northbridge. (excluding Reservoir No. 4, segment MA51128)	2	MILES	Fishes Bioassessments	
Dark Brook	MA51-16	Outlet Eddy Pond, Auburn to confluence with Kettle Brook, Auburn. (through Auburn Pond formerly segment MA51004)	2.8	MILES	(Non-Native Aquatic Plants*)	
					Aquatic Macroinvertebrate Bioassessments	
					Aquatic Plants (Macrophytes)	2377
					Chloride	
					Escherichia coli	
Fish Pond	MA51047	Northbridge	8	ACRES	(Non-Native Aquatic Plants*)	
					Aquatic Plants (Macrophytes)	
Hayes Pond	MA51060	Grafton	5	ACRES	(Non-Native Aquatic Plants*)	
					Aquatic Plants (Macrophytes)	
Kettle Brook	MA51-01	Outlet Kettle Brook Reservoir #1 to the inlet of Leesville Pond, Auburn (excluding the approximately 0.4 miles through Waite Pond segment MA51170) (through former segments: City Pond MA51021, Smiths Pond MA51156, and Stoneville Pond MA51160)	7	MILES	(Debris/Floatables/Trash*)	
					(Low flow alterations*)	
					(Non-Native Aquatic Plants*)	
					Aquatic Macroinvertebrate Bioassessments	
					Aquatic Plants (Macrophytes)	2391
					Fecal Coliform	
					Nutrient/Eutrophication Biological Indicators	
					Turbidity	2389

Massachusetts Category 5 Waters
"Waters requiring a TMDL"

NAME	SEGMENT ID	DESCRIPTION	SIZE	UNITS	IMPAIRMENT CAUSE	EPA TMDL NO.
Lake Ripple	MA51135	Grafton	47	ACRES	(Non-Native Aquatic Plants*)	
					Aquatic Plants (Macrophytes)	
Manchaug Pond	MA51091	Douglas/Sutton	365	ACRES	(Non-Native Aquatic Plants*)	
					Mercury in Fish Tissue	42392
					Oxygen, Dissolved	
Marble Pond	MA51093	Sutton	8	ACRES	(Non-Native Aquatic Plants*)	
					Aquatic Plants (Macrophytes)	
Middle River	MA51-02	Outlet Coes Pond, Worcester to confluence with the unnamed tributary locally known as "Mill Brook" (downstream of the railroad spur bridge west of Tobias Boland Boulevard), Worcester.	3.4	MILES	(Debris/Floatables/Trash*)	
					(Physical substrate habitat alterations*)	
					Aquatic Macroinvertebrate Bioassessments	
					Escherichia coli	
					Nutrient/Eutrophication Biological Indicators	
					Other	
					Turbidity	
Mill River	MA51-35	Outlet North Pond, Milford/Upton to Mendon/Blackstone corporate boundary (through former segments Fiske Millpond MA51049, Mill Pond MA51102, Hopedale Pond MA51065 and Spindleville Pond MA51158) (formerly part of segment MA51-10)	11.8	MILES	(Non-Native Aquatic Plants*)	
					Aquatic Plants (Macrophytes)	
					Other	
					PCB in Fish Tissue	
Mill River	MA51-36	From Mendon/Blackstone corporate boundary to MA/RI border in Blackstone, MA (through former segment Harris Pond MA51058) (formerly part of segment MA51-10)	4.4	MILES	(Non-Native Aquatic Plants*)	
					Aquatic Plants (Macrophytes)	
					Escherichia coli	
					Other	
Mumford River	MA51-14	Douglas WWTP discharge, Douglas to confluence with Blackstone River, Uxbridge. (through former segments: Gilboa Pond MA51052, Lackey Pond MA51083, Meadow Pond MA51193, Linwood Pond MA51088, Whitin Pond MA51178, and Caprons Pond MA51014)	9.6	MILES	(Low flow alterations*)	
					(Non-Native Aquatic Plants*)	
					Aquatic Plants (Macrophytes)	
					Copper	
					Lead	
Number 1 Pond	MA51114	Sutton	9	ACRES	Aquatic Plants (Macrophytes)	
					Turbidity	
Peters River	MA51-18	Outlet Silver Lake, Bellingham to Rhode Island state line, Bellingham.	4	MILES	Copper	
					Escherichia coli	
					Lead	

Massachusetts Category 5 Waters
"Waters requiring a TMDL"

NAME	SEGMENT ID	DESCRIPTION	SIZE	UNITS	IMPAIRMENT CAUSE	EPA TMDL NO.
Poor Farm Brook	MA51-17	Headwaters, West Boylston to the inlet of Shirley Street Pond, Shrewsbury (through City Farm Pond formerly segment MA51020).	3.6	MILES	(Low flow alterations*)	
					Aquatic Plants (Macrophytes)	
					Sedimentation/Siltation	
Riley Pond	MA51134	Northbridge	7	ACRES	Turbidity	
Singletary Brook	MA51-31	Headwaters, outlet Singletary Pond, Millbury to confluence with the Blackstone River, Millbury (excluding the approximately 0.4 miles through Brierly Pond segment MA51010).	1.5	MILES	(Non-Native Aquatic Plants*)	
					Aquatic Plants (Macrophytes)	
Sutton Falls	MA51163	Sutton	10	ACRES	Turbidity	
Tatnuck Brook	MA51-15	Outlet Holden Reservoir #2, Holden to inlet of Coes Reservoir, Worcester (through Cook Pond formerly segment MA51027 and Patch Reservoir formerly segment MA51118).	3.3	MILES	(Debris/Floatables/Trash*)	
					(Non-Native Aquatic Plants*)	
					(Other flow regime alterations*)	
					Aquatic Macroinvertebrate Bioassessments	
					Sedimentation/Siltation	
					Turbidity	
Unnamed Tributary	MA51-08	(Also known as "Mill Brook") Outlet Indian Lake, Worcester to confluence with Middle River (downstream of the railroad spur bridge west of Tobias Boland Boulevard), Worcester (through Salisbury Pond formerly segment MA51142).	5.6	MILES	(Debris/Floatables/Trash*)	
					(Physical substrate habitat alterations*)	
					Ammonia (Un-ionized)	
					Aquatic Plants (Macrophytes)	2319
					Fecal Coliform	
					Foam/Flocs/Scum/Oil Slicks	
					Nutrient/Eutrophication Biological Indicators	
					Other	
					Sedimentation/Siltation	
					Taste and Odor	
					Turbidity	2319
Unnamed Tributary	MA51-20	From the outlet of Leesville Pond, Worcester to the confluence with the Middle River, Worcester (through Curtis ponds formerly reported as segments MA51033 and MA51032).	1.4	MILES	(Debris/Floatables/Trash*)	
					(Low flow alterations*)	
					(Non-Native Aquatic Plants*)	
					Aquatic Plants (Macrophytes)	360
					Aquatic Plants (Macrophytes)	361
					Fecal Coliform	
					Nutrient/Eutrophication Biological Indicators	
					Sedimentation/Siltation	

Massachusetts Category 5 Waters
"Waters requiring a TMDL"

NAME	SEGMENT ID	DESCRIPTION	SIZE	UNITS	IMPAIRMENT CAUSE	EPA TMDL NO.
Unnamed Tributary	MA51-38	Unnamed tributary to Dark Brook, from perennial portion near the Route 90, 290EB, 395SB, 12NB interchange, Auburn to the confluence with Dark Brook, south of Water Street, Auburn (sections culverted).	0.8	MILES	Chloride	
Welsh Pond	MA51176	Sutton	8	ACRES	(Non-Native Aquatic Plants*)	
					Aquatic Plants (Macrophytes)	
West River	MA51-11	Outlet Silver Lake, Grafton to Upton WWTP discharge, Upton (through Lake Wildwood formerly segment MA51181).	3.8	MILES	(Non-Native Aquatic Plants*)	
					pH, Low	
West River	MA51-12	Upton WWTP discharge, Upton to confluence with Blackstone River, Uxbridge (through former segments Harrington Pool MA51197, and West River Pond MA51177).	9.3	MILES	(Non-Native Aquatic Plants*)	
					Aquatic Plants (Macrophytes)	
					Cadmium	
					Chloride	
					Copper	
					Lead	
					Nutrient/Eutrophication Biological Indicators	
					pH, Low	
Woodbury Pond	MA51185	Sutton	5	ACRES	(Non-Native Aquatic Plants*)	
					Aquatic Plants (Macrophytes)	
Woolshop Pond	MA51186	Millbury	5	ACRES	(Non-Native Aquatic Plants*)	
					Aquatic Plants (Macrophytes)	
					Turbidity	
Boston Harbor (Proper)						
Boston Harbor	MA70-01	The area defined by a line from the southerly tip of Deer Island to Boston Lighthouse on Little Brewster Island, then south to Point Allerton; across Hull and West guts; across the mouths of Quincy and Dorchester bays, Boston Inner Harbor and WinthropBay (including President Roads and Nantasket Roads).	18.59	SQUARE MILES	Fecal Coliform	
					Other	
					PCB in Fish Tissue	
Boston Inner Harbor	MA70-02	From the Mystic and Chelsea rivers, Chelsea/Boston, to the line between Governors Island and Fort Independence, Boston (East Boston) (including Fort Point, Reserved and Little Mystic channels).	2.56	SQUARE MILES	Enterococcus	
					Fecal Coliform	
					Other	
					Oxygen, Dissolved	
					PCB in Fish Tissue	

Massachusetts Category 5 Waters
"Waters requiring a TMDL"

NAME	SEGMENT ID	DESCRIPTION	SIZE	UNITS	IMPAIRMENT CAUSE	EPA TMDL NO.
Dorchester Bay	MA70-03	From the mouth of the Neponset River, Boston/Quincy to the line between Head Island and the north side of Thompson Island and the line between the south point of Thompson Island, Boston and Chapel Rocks, Quincy.	3.46	SQUARE MILES	Enterococcus	
					Fecal Coliform	
					Other	
					PCB in Fish Tissue	
					Total Suspended Solids (TSS)	
					Turbidity	
Hingham Bay	MA70-06	The area north of the mouth of the Weymouth Fore River extending on the west along the line between Nut Island and the south point of West Head, and on the east side along a line from Prince Head just east of Pig Rock to the mouth of the Weymouth ForeRiver (midway between Lower Neck and Manot Beach), Quincy.	0.96	SQUARE MILES	Fecal Coliform	
					Other	
					PCB in Fish Tissue	
Hingham Bay	MA70-07	The area defined between Peddocks Island and Windmill Point; from Windmill Point southeast to Bumkin Island; from Bumkin Island southeast to Sunset Point; from Sunset Point across the mouth of the Weir River to Worlds End; from Worlds End across themouth of Hingham Harbor to Crow Point; from Beach Lane, Hingham across the mouth of the Weymouth Back River to Lower Neck; and from Lower Neck midway across the mouth of the Weymouth Fore River.	4.8	SQUARE MILES	Fecal Coliform	
					PCB in Fish Tissue	
					Other	
Hull Bay	MA70-09	The area defined east of a line from Windmill Point, Hull to Bumkin Island, Hingham and from Bumkin Island to Sunset Point, Hull.	2.48	SQUARE MILES	Fecal Coliform	
					Other	
					PCB in Fish Tissue	
Pleasure Bay	MA70-11	A semi-enclosed bay, the flow restricted through two channels between Castle and Head islands, Boston	0.22	SQUARE MILES	Fecal Coliform	
					Other	
					PCB in Fish Tissue	
Quincy Bay	MA70-04	From Bromfield Street near the Wollaston Yacht Club, northeast to N42 17.3 W71 00.1, then southeast to Houghs Neck near Sea Street and Peterson Road (formerly referred to as the "Willows"), Quincy.	1.52	SQUARE MILES	Enterococcus	
					Fecal Coliform	
					Other	
					PCB in Fish Tissue	
Quincy Bay	MA70-05	Quincy Bay, north of the class SA waters (segment MA70-04), Quincy to the line between Moon Head and Nut Island, Quincy.	4.41	SQUARE MILES	Enterococcus	
					Fecal Coliform	
					Other	
					PCB in Fish Tissue	

Massachusetts Category 5 Waters
"Waters requiring a TMDL"

NAME	SEGMENT ID	DESCRIPTION	SIZE	UNITS	IMPAIRMENT CAUSE	EPA TMDL NO.
Winthrop Bay	MA70-10	From the tidal flats at Coleridge Street, Boston (East Boston) to a line between Logan International Airport and Point Shirley, Boston/Winthrop.	1.65	SQUARE MILES	Enterococcus	
					Fecal Coliform	
					Other	
					PCB in Fish Tissue	
Boston Harbor: Mystic						
Aberjona River	MA71-01	Source just south of Birch Meadow Drive, Reading to inlet Upper Mystic Lake at Mystic Valley Parkway, Winchester (portion culverted underground). (through former pond segments Judkins Pond MA71021 and Mill Pond MA71031).	9.1	MILES	(Physical substrate habitat alterations*)	
					Ammonia (Un-ionized)	
					Aquatic Macroinvertebrate Bioassessments	
					Arsenic	
					Escherichia coli	
					Oxygen, Dissolved	
					Phosphorus (Total)	
					Sediment Bioassays -- Chronic Toxicity Freshwater	
					Turbidity	
Alewife Brook	MA71-04	Outlet of Little Pond, Belmont to confluence with Mystic River, Arlington/Somerville (portion in Belmont and Cambridge identified as Little River with name changing to Alewife Brook at Arlington corporate boundary).	2.3	MILES	(Debris/Floatables/Trash*)	
					Copper	
					Escherichia coli	
					Foam/Flocs/Scum/Oil Slicks	
					Lead	
					Oxygen, Dissolved	
					PCB in Fish Tissue	
					Phosphorus (Total)	
					Secchi disk transparency	
					Sediment Bioassays -- Chronic Toxicity Freshwater	
					Taste and Odor	
Belle Isle Inlet	MA71-14	From tidegate at Bennington Street, Boston/Revere to confluence with Winthrop Bay, Boston/Winthrop.	0.12	SQUARE MILES	Fecal Coliform	
					Other	
					PCB in Fish Tissue	
Blacks Nook	MA71005	Cambridge	2	ACRES	(Non-Native Aquatic Plants*)	
					Nutrient/Eutrophication Biological Indicators	
					Secchi disk transparency	

Massachusetts Category 5 Waters
"Waters requiring a TMDL"

NAME	SEGMENT ID	DESCRIPTION	SIZE	UNITS	IMPAIRMENT CAUSE	EPA TMDL NO.
Chelsea River	MA71-06	From confluence with Mill Creek, Chelsea/Revere to confluence with Boston Inner Harbor, Chelsea/East Boston/Charlestown.	0.38	SQUARE MILES	(Debris/Floatables/Trash*)	
					Ammonia (Un-ionized)	
					Fecal Coliform	
					Other	
					Oxygen, Dissolved	
					PCB in Fish Tissue	
					Petroleum Hydrocarbons	
					Sediment Screening Value (Exceedence)	
					Taste and Odor	
					Turbidity	
Clay Pit Pond	MA71011	Belmont	12	ACRES	Chlordane	
Ell Pond	MA71014	Melrose	23	ACRES	Chlorophyll-a	
					Fecal Coliform	
					Phosphorus (Total)	
					Secchi disk transparency	
					Total Suspended Solids (TSS)	
Horn Pond	MA71019	Woburn	108	ACRES	(Non-Native Aquatic Plants*)	
					DDT in Fish Tissue	
					Excess Algal Growth	
					Oxygen, Dissolved	
					Phosphorus (Total)	
Lower Mystic Lake	MA71027	Arlington/Medford	93	ACRES	DDT	
					Oxygen, Dissolved	
					PCB in Fish Tissue	
					Salinity	
					Sediment Bioassays -- Chronic Toxicity Freshwater	
					Sulfide-Hydrogen Sulfide	

Massachusetts Category 5 Waters
"Waters requiring a TMDL"

NAME	SEGMENT ID	DESCRIPTION	SIZE	UNITS	IMPAIRMENT CAUSE	EPA TMDL NO.
Malden River	MA71-05	Headwaters south of Exchange Street, Malden to confluence with Mystic River, Everett/Medford.	2.3	MILES	(Debris/Floatables/Trash*)	
					Chlordane	
					DDT	
					Dissolved oxygen saturation	
					Escherichia coli	
					Fecal Coliform	
					Foam/Flocs/Scum/Oil Slicks	
					Oxygen, Dissolved	
					PCB in Fish Tissue	
					pH, High	
					Phosphorus (Total)	
					Secchi disk transparency	
					Sediment Bioassays -- Chronic Toxicity Freshwater	
					Taste and Odor	
					Total Suspended Solids (TSS)	
Mill Brook	MA71-07	Headwaters south of Massachusetts Avenue, Lexington to inlet of Lower Mystic Lake, Arlington (portions culverted underground).	3.9	MILES	(Physical substrate habitat alterations*)	
					Escherichia coli	
Mill Creek	MA71-08	From Route 1, Chelsea/Revere to confluence with Chelsea River, Chelsea/Revere.	0.02	SQUARE MILES	Fecal Coliform	
					Other	
					PCB in Fish Tissue	
Mystic River	MA71-02	Outlet Lower Mystic Lake, Arlington/Medford to Amelia Earhart Dam, Somerville/Everett.	4.9	MILES	(Fish-Passage Barrier*)	
					Arsenic	
					Chlordane	
					Chlorophyll-a	
					DDT	
					Dissolved oxygen saturation	
					Escherichia coli	
					PCB in Fish Tissue	
					Phosphorus (Total)	
					Secchi disk transparency	
					Sediment Bioassays -- Chronic Toxicity Freshwater	

Massachusetts Category 5 Waters
"Waters requiring a TMDL"

NAME	SEGMENT ID	DESCRIPTION	SIZE	UNITS	IMPAIRMENT CAUSE	EPA TMDL NO.
Mystic River	MA71-03	Amelia Earhart Dam, Somerville/Everett to confluence with Boston Inner Harbor, Chelsea/Charlestown (Includes Island End River).	0.49	SQUARE MILES	Ammonia (Un-ionized)	
					Fecal Coliform	
					Foam/Flocs/Scum/Oil Slicks	
					Other	
					Oxygen, Dissolved	
					PCB in Fish Tissue	
					Petroleum Hydrocarbons	
					Sediment Screening Value (Exceedence)	
					Taste and Odor	
Spy Pond	MA71040	Arlington	98	ACRES	(Eurasian Water Milfoil, Myriophyllum spicatum*)	
					Chlordane	
					DDT	
					Excess Algal Growth	
					Oxygen, Dissolved	
					Phosphorus (Total)	
Unnamed Tributary	MA71-13	Unnamed tributary locally known as 'Meetinghouse Brook', from emergence south of Route 16/east of Winthrop Street, Medford to confluence with the Mystic River, Medford. (brook not apparent on 1985 Boston North USGS quad - 2005 orthophotos used todelineate stream)	0.1	MILES	Escherichia coli	
Upper Mystic Lake	MA71043	Winchester/Arlington/Medford	176	ACRES	(Non-Native Aquatic Plants*)	
					Dissolved oxygen saturation	
					Oxygen, Dissolved	
Wedge Pond	MA71045	Winchester	23	ACRES	Oxygen, Dissolved	
					Phosphorus (Total)	
Winn Brook	MA71-09	Headwaters near Juniper Road and the Belmont Hill School, Belmont to confluence with Little Pond, Belmont (portions culverted underground).	1.4	MILES	(Physical substrate habitat alterations*)	
					Escherichia coli	
Winter Pond	MA71047	Winchester	18	ACRES	(Non-Native Aquatic Plants*)	
					Nutrient/Eutrophication Biological Indicators	
Boston Harbor: Neponset						
Beaver Brook	MA73-19	Headwaters near Moose Hill Street, Sharon through Sawmill Pond to confluence with Massapoag Brook, Sharon.	3.5	MILES	Aquatic Macroinvertebrate Bioassessments	
					Oxygen, Dissolved	
Beaver Meadow Brook	MA73-20	Outlet of Glenn Echo Pond, Stoughton, to the inlet of Bolivar Pond, Canton.	3.3	MILES	Oxygen, Dissolved	

Massachusetts Category 5 Waters
"Waters requiring a TMDL"

NAME	SEGMENT ID	DESCRIPTION	SIZE	UNITS	IMPAIRMENT CAUSE	EPA TMDL NO.
Bolivar Pond	MA73005	Canton	20	ACRES	(Non-Native Aquatic Plants*)	
					Turbidity	
Cobbs Pond	MA73009	Walpole	14	ACRES	(Non-Native Aquatic Plants*)	
					Nutrient/Eutrophication Biological Indicators	
					Oxygen, Dissolved	
					Secchi disk transparency	
East Branch	MA73-05	East Branch Neponset River - Outlet of Forge Pond, Canton through East Branch Pond to confluence with Neponset River, Canton. (locally known as Canton River)	2.6	MILES	(Low flow alterations*)	
					Aquatic Macroinvertebrate Bioassessments	
					DDT	
					Escherichia coli	2592
					Fecal Coliform	2592
					Other	
					Oxygen, Dissolved	
					PCB in Fish Tissue	
					Temperature, water	
Forge Pond	MA73020	Canton	19	ACRES	Turbidity	
Ganawatte Farm Pond	MA73037	Walpole/Sharon/Foxborough	29	ACRES	Aquatic Plants (Macrophytes)	
					Oxygen, Dissolved	
					Secchi disk transparency	
Germany Brook	MA73-15	Headwaters, east of Winter Street, Norwood to inlet of Ellis Pond, Norwood.	2	MILES	(Debris/Floatables/Trash*)	
					Color	
					Escherichia coli	2592
					Fecal Coliform	2592
					pH, High	
					Phosphorus (Total)	
Gulliver Creek	MA73-30	From confluence Unquity Brook, Milton to confluence Neponset River, Milton. (Note: Unquity Brook culverted, confluence not visible on quad)	0.02	SQUARE MILES	Fecal Coliform	2592
					Other	
					PCB in Fish Tissue	
Hawes Brook	MA73-16	Outlet of Ellis Pond, Norwood to confluence with Neponset River, Norwood.	1.1	MILES	(Debris/Floatables/Trash*)	
					Escherichia coli	2592
					Fecal Coliform	2592
					Taste and Odor	

Massachusetts Category 5 Waters
"Waters requiring a TMDL"

NAME	SEGMENT ID	DESCRIPTION	SIZE	UNITS	IMPAIRMENT CAUSE	EPA TMDL NO.
Massapoag Brook	MA73-21	Outlet Hammer Shop Pond, Sharon, through Manns Pond (formerly segment MA73028), Trowel Shop Pond, and Shephard Pond to the inlet of Forge Pond, Canton.	4.2	MILES	(Non-Native Aquatic Plants*)	
					Aquatic Macroinvertebrate Bioassessments	
					Phosphorus (Total)	
					Turbidity	
Memorial Pond	MA73012	Walpole	8	ACRES	Aquatic Plants (Macrophytes)	
					Turbidity	
Mill Brook	MA73-08	From headwaters (perennial portion) north of Hartford Street, Medfield to inlet of Jewells Pond, Medfield.	2.3	MILES	(Low flow alterations*)	
					Aquatic Macroinvertebrate Bioassessments	
					Oxygen, Dissolved	
Mine Brook	MA73-09	Outlet of Jewells Pond, Medfield, to the inlet of Turner Pond, Walpole.	3	MILES	Fecal Coliform	2592
					Oxygen, Dissolved	
Mother Brook	MA73-28	Headwaters at the Charles River Diversion control structure, Dedham to confluence with Neponset River, Boston. [Reported as MA72-13 until May 3, 2000]	3.7	MILES	(Low flow alterations*)	
					Color	
					DDT	
					Escherichia coli	2592
					Fecal Coliform	2592
					Mercury in Fish Tissue	
					Oxygen, Dissolved	
					PCB in Fish Tissue	
					Phosphorus (Total)	
					Taste and Odor	
Neponset Reservoir	MA73034	Foxborough	312	ACRES	(Non-Native Aquatic Plants*)	
					Excess Algal Growth	
					Turbidity	
Neponset River	MA73-01	Outlet of Neponset Reservoir, Foxborough to confluence with East Branch, Canton. (through former pond segments Crackrock Pond MA73010 and Bird Pond MA73002)	13.2	MILES	DDT	
					Escherichia coli	54840
					Excess Algal Growth	
					Other	
					Oxygen, Dissolved	
					PCB in Fish Tissue	
					Phosphorus (Total)	
					Sedimentation/Siltation	
					Total Suspended Solids (TSS)	
					Turbidity	

Massachusetts Category 5 Waters
"Waters requiring a TMDL"

NAME	SEGMENT ID	DESCRIPTION	SIZE	UNITS	IMPAIRMENT CAUSE	EPA TMDL NO.
Neponset River	MA73-02	Confluence with East Branch, Canton to confluence with Mother Brook, Boston.	7.7	MILES	(Debris/Floatables/Trash*)	
					DDT	
					Escherichia coli	2592
					Fecal Coliform	2592
					Foam/Flocs/Scum/Oil Slicks	
					Other	
					Oxygen, Dissolved	
					PCB in Fish Tissue	
					Turbidity	
Neponset River	MA73-03	Confluence with Mother Brook, Boston to Milton Lower Falls Dam, Milton/Boston.	3.6	MILES	(Debris/Floatables/Trash*)	
					DDT	
					Enterococcus	2592
					Escherichia coli	2592
					Fecal Coliform	2592
					Foam/Flocs/Scum/Oil Slicks	
					Other	
					Oxygen, Dissolved	
					PCB in Fish Tissue	
					Polychlorinated biphenyls	
Neponset River	MA73-04	Milton Lower Falls Dam, Milton/Boston to mouth at Dorchester Bay, Boston/Quincy.	0.67	SQUARE MILES	(Debris/Floatables/Trash*)	
					Enterococcus	2592
					Fecal Coliform	2592
					Other	
					Oxygen, Dissolved	
					PCB in Fish Tissue	
					Turbidity	
Pequid Brook	MA73-22	Headwaters east of York Street, Canton to the inlet of Forge Pond, Canton (excluding the approximately 1.3 miles through Reservoir Pond, segment MA73048).	2.8	MILES	Oxygen, Dissolved	
Pine Tree Brook	MA73-29	Outlet of Hillside Pond, Milton through Pope's Pond (formerly segment MA73044) to confluence Neponset River, Milton.	4.6	MILES	(Physical substrate habitat alterations*)	
					Aquatic Plants (Macrophytes)	
					Escherichia coli	2592
					Fecal Coliform	2592
					Oxygen, Dissolved	
					Turbidity	

Massachusetts Category 5 Waters
"Waters requiring a TMDL"

NAME	SEGMENT ID	DESCRIPTION	SIZE	UNITS	IMPAIRMENT CAUSE	EPA TMDL NO.
Russell Pond	MA73003	Milton	9	ACRES	(Non-Native Aquatic Plants*)	
					Turbidity	
Turners Pond	MA73059	Milton	10	ACRES	Nutrient/Eutrophication Biological Indicators	
					Oxygen, Dissolved	
					Turbidity	
Unnamed Tributary	MA73-32	From the outlet of Town Pond, Stoughton to the confluence with Steep Hill Brook, Stoughton.	1	MILES	Aquatic Macroinvertebrate Bioassessments	
					Escherichia coli	54860
					pH, Low	
					Phosphorus (Total)	
Unnamed Tributary	MA73-33	Locally known as "Meadow Brook" - From where the underground/culverted stream emerges east of Pleasant Street, Norwood to confluence with Neponset River, Norwood.	0.6	MILES	Color	
					Escherichia coli	54861
					Phosphorus (Total)	
					Taste and Odor	
Unquity Brook	MA73-26	Isolated (urban): Headwaters (perennial portion) near Randolph Avenue, Milton to confluence with Gulliver Creek, Milton (Note: Confluence not visible on quad, brook culverted underground east of Otis Street/west of Govenor Belcher Lane, Milton)	1.5	MILES	(Debris/Floatables/Trash*)	
					(Low flow alterations*)	
					(Physical substrate habitat alterations*)	
					Escherichia coli	2592
					Fecal Coliform	2592
					Oxygen, Dissolved	
					pH, Low	
					Phosphorus (Total)	
					Sedimentation/Siltation	
Boston Harbor: Weymouth & Weir						
Accord Brook	MA74-16	Headwaters, outlet Accord Pond, Hingham to water supply intake (4131000-02S Accord Brook) south of South Pleasant Street, Hingham.	3.2	MILES	Aquatic Macroinvertebrate Bioassessments	
Cochato River	MA74-06	Outlet Lake Holbrook, Holbrook to confluence with Farm and Monatiquot rivers, Braintree (through former pond segment Ice House Pond MA74028). (SARIS note: the upper portion of this segment is comprised of three surface waters: unnamed tributary fromthe outlet of Lake Holbrook, portion of Mary Lee Brook, portion of Glovers Brook).	4.1	MILES	Chlordane	
					DDT	
					Fecal Coliform	
					Oxygen, Dissolved	
Crooked Meadow River	MA74-01	Outlet Cushing Pond, Hingham to confluence with Weir River, Hingham.	1	MILES	Nutrient/Eutrophication Biological Indicators	

Massachusetts Category 5 Waters
"Waters requiring a TMDL"

NAME	SEGMENT ID	DESCRIPTION	SIZE	UNITS	IMPAIRMENT CAUSE	EPA TMDL NO.
Furnace Brook	MA74-10	From headwaters north of Blue Hills Reservoir, Quincy to confluence with Blacks Creek, Quincy (portions culverted underground).	4.2	MILES	Oxygen, Dissolved	
Hingham Harbor	MA74-18	Hingham Harbor inside a line from Crows Point to Worlds End, Hingham (formerly reported as MA70-08).	1.12	SQUARE MILES	Fecal Coliform	
					Other	
					PCB in Fish Tissue	
Lake Holbrook	MA74013	Holbrook	31	ACRES	Nutrient/Eutrophication Biological Indicators	
Mill River	MA74-04	Headwaters, west of Route 18 and south of Randolph Street, Weymouth to inlet Whitmans Pond, Weymouth (portions culverted underground).	3.4	MILES	Fecal Coliform	
					Nutrient/Eutrophication Biological Indicators	
Monatiquot River	MA74-08	Headwaters at confluence of Cochato and Farm rivers, Braintree to confluence with Weymouth Fore River at Commercial Street, Braintree.	4.4	MILES	(Physical substrate habitat alterations*)	
					Aquatic Macroinvertebrate Bioassessments	
					Fecal Coliform	
					Oxygen, Dissolved	
Old Swamp River	MA74-03	Headwaters just west of Pleasant Street and north of Liberty Street, Rockland to inlet Whitmans Pond, Weymouth.	5.2	MILES	Fecal Coliform	
Sylvan Lake	MA74021	Holbrook	6	ACRES	Chlordane	
					DDT	
Town Brook	MA74-09	Outlet Old Quincy Reservoir, Braintree to confluence with Town River Bay north of Route 3A, Quincy (includes "The Canal"/Town River) (portions culverted underground).	3.5	MILES	(Other flow regime alterations*)	
					(Physical substrate habitat alterations*)	
					Aquatic Macroinvertebrate Bioassessments	
					Fecal Coliform	
Town River Bay	MA74-15	From the headwaters at the Route 3A bridge, Quincy to the mouth at Weymouth Fore River between Shipyard and Germantown Points, Quincy.	0.46	SQUARE MILES	Fecal Coliform	
					Other	
					Oxygen, Dissolved	
					PCB in Fish Tissue	
Weir River	MA74-02	Headwaters at confluence of Crooked Meadow River and Fulling Mill Brook, Hingham to Foundry Pond outlet, Hingham (through former pond segment Foundry Pond MA74011).	2.7	MILES	(Low flow alterations*)	
					Fecal Coliform	
					Nutrient/Eutrophication Biological Indicators	
					Sedimentation/Siltation	
Weir River	MA74-11	From Foundry Pond outlet, Hingham to mouth at Worlds End, Hingham and Nantasket Road near Beech Avenue, Hull (including unnamed tributary from outlet Straits Pond, Hingham/Hull).	0.83	SQUARE MILES	Fecal Coliform	
					Other	
					PCB in Fish Tissue	
Weymouth Back River	MA74-05	Outlet Elias Pond, Weymouth to the base of the fish ladder north of Commercial Street,Weymouth.	0.4	MILES	Fecal Coliform	
					Oxygen, Dissolved	

Massachusetts Category 5 Waters
"Waters requiring a TMDL"

NAME	SEGMENT ID	DESCRIPTION	SIZE	UNITS	IMPAIRMENT CAUSE	EPA TMDL NO.
Weymouth Back River	MA74-13	From the base of the fish ladder north of Commercial Street, Weymouth to mouth between Lower Neck, Weymouth (to the west) and Wompatuck Road, Hingham.	0.86	SQUARE MILES	Fecal Coliform	
					Other	
					PCB in Fish Tissue	
Weymouth Fore River	MA74-14	Commercial Street, Braintree to mouth (eastern point at Lower Neck, Weymouth and western point at Wall Street on Houghs Neck, Quincy).	2.29	SQUARE MILES	Fecal Coliform	
					Other	
					PCB in Fish Tissue	
Whitmans Pond	MA74025	Weymouth	147	ACRES	(Non-Native Aquatic Plants*)	
					DDT	
Buzzards Bay						
"Inner" Sippican Harbor	MA95-70	The waters landward of a line from Allen Point, Marion around the southeastern tip of Ram Island, then westerly from the southern tip of Ram Island to the point of land south of Nyes Wharf, Marion excluding Hammett Cove (formerly reported as a portion ofsegment MA95-08).	0.57	SQUARE MILES	Fecal Coliform	36172
					Nitrogen (Total)	
					Nutrient/Eutrophication Biological Indicators	
Acushnet River	MA95-31	Outlet New Bedford Reservoir, Acushnet to Hamlin Street culvert, Acushnet.	3.071	MILES	Fecal Coliform	36170
					Other	
					Oxygen, Dissolved	
					Sedimentation/Siltation	
Acushnet River	MA95-32	Hamlin Street culvert, Acushnet to culvert at Main Street, Acushnet.	1.117	MILES	Fecal Coliform	36170
					Other	
					Oxygen, Dissolved	
Acushnet River	MA95-33	Outlet Main Street culvert, Acushnet to Coggeshall Street bridge, New Bedford/Fairhaven.	0.312	SQUARE MILES	(Debris/Floatables/Trash*)	
					Color	
					Fecal Coliform	36171
					Nitrogen (Total)	
					Oil and Grease	
					Other	
					Oxygen, Dissolved	
					Polychlorinated biphenyls	
					Taste and Odor	

Massachusetts Category 5 Waters
"Waters requiring a TMDL"

NAME	SEGMENT ID	DESCRIPTION	SIZE	UNITS	IMPAIRMENT CAUSE	EPA TMDL NO.
Agawam River	MA95-29	Wareham WWTP, Wareham to confluence with Wankinco River at Route 6 bridge, Wareham.	0.165	SQUARE MILES	Ammonia (Un-ionized)	
					Excess Algal Growth	
					Fecal Coliform	36171
					Nitrogen (Total)	
					Whole Effluent Toxicity (WET)	
Apponagansett Bay	MA95-39	From the mouth of Buttonwood Brook, Dartmouth to a line drawn from Ricketsons Point, Dartmouth to Samoset Street near North Avenue, Dartmouth.	1.067	SQUARE MILES	Fecal Coliform	36172
					Nitrogen (Total)	
					PCB in Fish Tissue	
Aucoot Cove	MA95-71	From the confluence with Aucoot Creek, Marion to the boundary of Division of Marine Fisheries designated shellfishing growing area BB31.1, north and southwest from Haskell Island, Marion (formerly part of segment 95-09).	0.029	SQUARE MILES	Fecal Coliform	36172
					Nitrogen (Total)	
					Nutrient/Eutrophication Biological Indicators	
					Oxygen, Dissolved	
Aucoot Creek	MA95-72	Estuarine portion east of Holly Pond Road, Marion to confluence with Aucoot Cove, Marion.	0.016	SQUARE MILES	Fecal Coliform	36172
					Nitrogen (Total)	
					Nutrient/Eutrophication Biological Indicators	
					Oxygen, Dissolved	
Beaverdam Creek	MA95-53	Outlet from cranberry bog southeast of Route 6, Wareham to confluence with Wewantic River, Wareham.	0.037735	SQUARE MILES	Estuarine Bioassessments	
					Fecal Coliform	36172
					Nitrogen (Total)	
Butler Cove	MA95-77	just south of Buttermilk Bay, Wareham	0.05	SQUARE MILES	Estuarine Bioassessments	
Buttermilk Bay	MA95-01	Bourne/Wareham	0.666	SQUARE MILES	Estuarine Bioassessments	
					Fecal Coliform	36172
					Nutrient/Eutrophication Biological Indicators	
Buzzards Bay	MA95-62	Open water area encompassed within a line drawn from Wilber Point, Fairhaven to Clarks Point, New Bedford to Ricketson Point, Dartmouth to vacinity of Samoset Street, Dartmouth down to Round Hill Point, Dartmouth and back to Wilber Point, Fairhaven.	8.02	SQUARE MILES	Fecal Coliform	36172
					PCB in Fish Tissue	
Clarks Cove	MA95-38	The semi-enclosed waterbody landward of a line drawn between Clarks Point, New Bedford and Ricketsons Point, Dartmouth.	1.9	SQUARE MILES	Fecal Coliform	36172
					PCB in Fish Tissue	
Copicut Reservoir	MA95175	Dartmouth/Fall River	596	ACRES	Mercury in Fish Tissue	
Copicut River	MA95-43	Outlet of Copicut Reservoir, Fall River to the inlet of Cornell Pond, Dartmouth.	1.348	MILES	Mercury in Fish Tissue	
					PCB in Fish Tissue	

Massachusetts Category 5 Waters
"Waters requiring a TMDL"

NAME	SEGMENT ID	DESCRIPTION	SIZE	UNITS	IMPAIRMENT CAUSE	EPA TMDL NO.
Cornell Pond	MA95031	Dartmouth	12.366	ACRES	Mercury in Fish Tissue	33880
					PCB in Fish Tissue	
Crane Brook Bog Pond	MA95033	Carver	37.303	ACRES	(Non-Native Aquatic Plants*)	
					Excess Algal Growth	
					Phosphorus (Total)	
East Branch Westport River	MA95-41	Old County Road bridge, Westport to the mouth at Westport Harbor, Westport (excluding Horseneck Channel).	2.648	SQUARE MILES	Estuarine Bioassessments	
					Fecal Coliform	36171
					Nitrogen (Total)	
Eel Pond	MA95-61	Coastal pond at the head of Mattapoisett Harbor, Mattapoisett.	0.04	SQUARE MILES	Fecal Coliform	36172
					Nutrient/Eutrophication Biological Indicators	
Fiddlers Cove	MA95-79	cove south off Megansett Harbor, Falmouth	0.01	SQUARE MILES	Nutrient/Eutrophication Biological Indicators	
Hammett Cove	MA95-56	Borders Sippican Harbor (along a line from the southwestern most point of Little Neck to the end of the seawall on the opposite point), Marion.	0.073	SQUARE MILES	Estuarine Bioassessments	
					Fecal Coliform	36172
					Nitrogen (Total)	
Herring Brook	MA95-21	Headwaters northeast of Dale Drive and west of Route 28A, Falmouth to the mouth at Buzzards Bay, Falmouth	0.012263	SQUARE MILES	Chlorophyll-a	
					Fecal Coliform	36172
					Nitrogen (Total)	
Little Buttermilk Bay	MA95-76	off of Buttermilk Bay, Bourne	0.16	SQUARE MILES	Estuarine Bioassessments	
					Nutrient/Eutrophication Biological Indicators	
Little River	MA95-66	Dartmouth	0.18	SQUARE MILES	Nitrogen (Total)	
Mattapoisett Harbor	MA95-35	From the mouth of the Mattapoisett River, Mattapoissett to a line drawn from Ned Point to a point of land between Bayview Avenue and Grandview Avenue, Mattapoisett	1.118	SQUARE MILES	Estuarine Bioassessments	
					Fecal Coliform	36172
					Nutrient/Eutrophication Biological Indicators	
Megansett Harbor	MA95-19	From the outlet of Squeteague Harbor, Falmouth to Buzzards Bay at a line from the western tip of Scraggy Neck, Bourne south to the tip of Nyes Neck, Falmouth.	1.461	SQUARE MILES	Estuarine Bioassessments	
					Nutrient/Eutrophication Biological Indicators	
Nasketucket River	MA95-67	From outlet of unnamed pond north of Meadow Lane, Fairhaven to confluence with Little Bay, Fairhaven	0.889	MILES	Nitrogen (Total)	

Massachusetts Category 5 Waters
"Waters requiring a TMDL"

NAME	SEGMENT ID	DESCRIPTION	SIZE	UNITS	IMPAIRMENT CAUSE	EPA TMDL NO.
New Bedford Inner Harbor	MA95-42	Coggeshall Street Bridge to hurricane barrier, Fairhaven/New Bedford.	1.251	SQUARE MILES	(Debris/Floatables/Trash*)	
					Fecal Coliform	36171
					Nitrogen (Total)	
					Oil and Grease	
					Other	
					Oxygen, Dissolved	
					PCB in Fish Tissue	
					Polychlorinated biphenyls	
					Taste and Odor	
New Bedford Reservoir	MA95110	Acushnet	211.384	ACRES	(Non-Native Aquatic Plants*)	
					DDT	
					Mercury in Fish Tissue	
					Oxygen, Dissolved	
					Phosphorus (Total)	
Noquochoke Lake	MA95113	(Main Basin) Dartmouth	87.945	ACRES	(Non-Native Aquatic Plants*)	
					Aquatic Plants (Macrophytes)	
					Enterococcus	
					Mercury in Fish Tissue	33880
					PCB in Fish Tissue	
					Turbidity	
Noquochoke Lake	MA95170	(South Basin) Dartmouth	12.814	ACRES	(Non-Native Aquatic Plants*)	
					Aquatic Plants (Macrophytes)	
					Mercury in Fish Tissue	33880
					PCB in Fish Tissue	
					Turbidity	
Noquochoke Lake	MA95171	(North Basin) Dartmouth	16.711	ACRES	(Non-Native Aquatic Plants*)	
					Aquatic Plants (Macrophytes)	
					Mercury in Fish Tissue	33880
					PCB in Fish Tissue	
					Turbidity	
Onset Bay	MA95-02	Wareham	0.779	SQUARE MILES	Estuarine Bioassessments	
					Fecal Coliform	36172

Massachusetts Category 5 Waters
"Waters requiring a TMDL"

NAME	SEGMENT ID	DESCRIPTION	SIZE	UNITS	IMPAIRMENT CAUSE	EPA TMDL NO.
Outer New Bedford Harbor	MA95-63	From the hurricane barrier, Fairhaven/New Bedford to a line drawn from Wilbur Point, Fairhaven to Clarks Point, New Bedford (segment changed 6/4/03, formerly reported as MA95-27).	5.789	SQUARE MILES	Estuarine Bioassessments	
					Fecal Coliform	36172
					Nitrogen (Total)	
					Other	
					Oxygen, Dissolved	
					PCB in Fish Tissue	
Parker Mills Pond	MA95115	Wareham	73.172	ACRES	(Non-Native Aquatic Plants*)	
					Phosphorus (Total)	
Pocasset Harbor	MA95-17	From the confluence with Red Brook Harbor near the northern portion of Bassetts Island and Patuisset, Bourne to the mouth at Buzzards Bay between the western portion of Bassetts Island and Wings Neck, Bourne	0.332	SQUARE MILES	Estuarine Bioassessments	
					Fecal Coliform	36172
Rands Harbor	MA95-78	harbor south off Megansett Harbor, Falmouth	0.02	SQUARE MILES	Nutrient/Eutrophication Biological Indicators	
Red Brook Harbor	MA95-18	From the confluence with Pocasset Harbor between the northern portion of Bassetts Island and Patuisset, Bourne to the mouth at Buzzards Bay between the southern portion of Bassetts Island and Scraggy Neck, Bourne (including Hen Cove).	0.92	SQUARE MILES	Estuarine Bioassessments	
					Fecal Coliform	36172
					Nutrient/Eutrophication Biological Indicators	
Sampson Pond	MA95125	Carver	295.975	ACRES	(Non-Native Aquatic Plants*)	
					DDT	
					Mercury in Fish Tissue	
Sippican River	MA95-06	Outlet Leonards Pond, Rochester to County Road, Marion/Wareham.	2.941	MILES	(Fish-Passage Barrier*)	
					Chlorophyll-a	
					Oxygen, Dissolved	
Slocums River	MA95-34	Rock O'Dundee Road (confluence with Paskemanset River), Dartmouth to mouth at Buzzards Bay, Dartmouth.	0.672	SQUARE MILES	Estuarine Bioassessments	
					Fecal Coliform	36172
					Nitrogen (Total)	
Squeteague Harbor	MA95-55	Waters landward of the confluence with Megansett Harbor, Bourne/Falmouth.	0.146	SQUARE MILES	Nutrient/Eutrophication Biological Indicators	
Tihonet Pond	MA95146	Wareham	86.615	ACRES	Oxygen, Dissolved	
Wareham River	MA95-03	From confluence of Wankinko and Agawam Rivers at Route 6 bridge, Wareham to Buzzards Bay (at an imaginary line from Cromeset Point to curved point east/southeast of Long Beach Point), Wareham. Including Marks Cove, Wareham	1.178	SQUARE MILES	Estuarine Bioassessments	
					Fecal Coliform	36172
					Nitrogen (Total)	

Massachusetts Category 5 Waters
"Waters requiring a TMDL"

NAME	SEGMENT ID	DESCRIPTION	SIZE	UNITS	IMPAIRMENT CAUSE	EPA TMDL NO.
West Branch Westport River	MA95-37	Outlet Grays Mill Pond, Adamsville, Rhode Island to mouth at Westport Harbor, Westport.	1.285255	SQUARE MILES	Estuarine Bioassessments	
					Fecal Coliform	36172
					Nitrogen (Total)	
Westport River	MA95-54	From the confluences of the East Branch Westport River and the West Branch Westport River to Rhode Island Sound (at a line from the southwestern tip of Horseneck Point to the easternmost point near Westport Light), Westport.	0.74	SQUARE MILES	Estuarine Bioassessments	
					Fecal Coliform	36172
					Nitrogen (Total)	
Weweantic River	MA95-05	Outlet Horseshoe Pond, Wareham to mouth at Buzzards Bay, Marion/Wareham.	0.617	SQUARE MILES	Estuarine Bioassessments	
					Fecal Coliform	36172
					Nitrogen (Total)	
Wild Harbor River	MA95-68	Headwaters, Falmouth to mouth at Wild Harbor, Falmouth.	0.029	SQUARE MILES	Fecal Coliform	36172
					Nutrient/Eutrophication Biological Indicators	
Cape Cod						
Ashumet Pond	MA96004	Mashpee/Falmouth	203	ACRES	Abnormal Fish deformities, erosions, lesions, tumors (DELTS)	
					Abnormal Fish Histology (Lesions)	
					Mercury in Fish Tissue	33880
					Oxygen, Dissolved	
					Phosphorus (Total)	
Barnstable Harbor	MA96-01	From the mouths of Scorton and Spring creeks, Barnstable east to an imaginary line drawn from Beach Point to the western edge of the Mill Creek estuary, Barnstable.	3.2	SQUARE MILES	Estuarine Bioassessments	
					Fecal Coliform	36771
Bass River	MA96-12	Route 6, Dennis/Yarmouth to mouth at Nantucket Sound, Dennis/Yarmouth (excluding Grand Cove, Dennis).	0.69	SQUARE MILES	Estuarine Bioassessments	
					Fecal Coliform	36771
Boat Meadow River	MA96-15	Headwaters east of old railway grade, Eastham to mouth at Cape Cod Bay, Eastham.	0.05	SQUARE MILES	Estuarine Bioassessments	
					Fecal Coliform	36772
Cedar Pond	MA96-88	Orleans (in Inner Cape Cod Bay ACEC)	0.03	SQUARE MILES	Chlorophyll-a	
					Dissolved oxygen saturation	
					Oxygen, Dissolved	
Crystal Lake	MA96050	Orleans	33	ACRES	Oxygen, Dissolved	
Great Pond	MA96115	Eastham	109	ACRES	Chlorophyll-a	
					Oxygen, Dissolved	
					Phosphorus (Total)	

Massachusetts Category 5 Waters
"Waters requiring a TMDL"

NAME	SEGMENT ID	DESCRIPTION	SIZE	UNITS	IMPAIRMENT CAUSE	EPA TMDL NO.
Hamblin Pond	MA96126	Barnstable	114	ACRES	Mercury in Fish Tissue	33880
					Oxygen, Dissolved	
Herring River	MA96-33	South of High Toss Road, Wellfleet to Wellfleet Harbor (at an imaginary line drawn due north from the eastern tip of Great Island to the opposite shore), Wellfleet.	0.4	SQUARE MILES	(Fish-Passage Barrier*)	
					(Other flow regime alterations*)	
					Aluminum	
					Estuarine Bioassessments	
					Fecal Coliform	36772
					pH, Low	
Herring River	MA96-67	From outlet of Herring Pond, Wellfleet to south of High Toss Road, Wellfleet.	3.6	MILES	(Fish Kills*)	
					(Fish-Passage Barrier*)	
					(Other flow regime alterations*)	
					Aluminum	
					pH, Low	
Hyannis Inner Harbor	MA96-82	Waters landward of an imaginary line drawn from Harbor Bluff, Barnstable to Hyannis Park, Yarmouth.	0.13	SQUARE MILES	Fecal Coliform	42357
					Nitrogen (Total)	
Lewis Bay	MA96-36	Includes portion of Pine Island Creek and Uncle Roberts Cove to confluence with Nantucket Sound, Barnstable/Yarmouth (excluding Hyannis Inner Harbor, Barnstable/Yarmouth and Mill Creek, Yarmouth).	1.79	SQUARE MILES	Estuarine Bioassessments	
					Fecal Coliform	36771
Long Pond	MA96183	Brewster/Harwich	715	ACRES	Oxygen, Dissolved	
Lovells Pond	MA96185	Barnstable	54	ACRES	Chlorophyll-a	
					Excess Algal Growth	
					Oxygen, Dissolved	
					Phosphorus (Total)	
					Secchi disk transparency	
Lovers Lake	MA96186	Chatham	37	ACRES	Secchi disk transparency	
Lower Mill Pond	MA96188	Brewster	44	ACRES	Chlorophyll-a	
					Excess Algal Growth	
					Phosphorus (Total)	
					Secchi disk transparency	
					Turbidity	
Middle Pond	MA96198	Barnstable	104	ACRES	Oxygen, Dissolved	
Mill Creek	MA96-80	Headwaters, outlet Mill Pond, Yarmouth to confluence with Lewis Bay, Yarmouth.	0.07	SQUARE MILES	Fecal Coliform	42365
					Nitrogen (Total)	

Massachusetts Category 5 Waters
"Waters requiring a TMDL"

NAME	SEGMENT ID	DESCRIPTION	SIZE	UNITS	IMPAIRMENT CAUSE	EPA TMDL NO.
Mystic Lake	MA96218	Barnstable	146	ACRES	(Non-Native Aquatic Plants*)	
					Oxygen, Dissolved	
Popponesset Creek	MA96-39	All waters west of Popponesset Island (from Popponesset Island Road bridge at the north to a line extended from the southeastern most point of the island southerly to Popponesset Beach), Mashpee.	0.05	SQUARE MILES	Estuarine Bioassessments	
Red Lily Pond	MA96257	Barnstable	4	ACRES	Fecal Coliform	
					Nutrient/Eutrophication Biological Indicators	
Ryder Pond	MA96268	Truro	18	ACRES	Mercury in Fish Tissue	33880
					Oxygen, Dissolved	
					Phosphorus (Total)	
Santuit Pond	MA96277	Mashpee	164	ACRES	Abnormal Fish deformities, erosions, lesions, tumors (DELTS)	
					Abnormal Fish Histology (Lesions)	
					Chlorophyll-a	
					Excess Algal Growth	
					Nutrient/Eutrophication Biological Indicators	
					pH, High	
					Phosphorus (Total)	
					Secchi disk transparency	
Shawme Lake Lower	MA96288	Sandwich	25	ACRES	Nutrient/Eutrophication Biological Indicators	
Stillwater Pond	MA96309	Chatham	18	ACRES	Secchi disk transparency	
Swan Pond River	MA96-14	Headwaters, outlet Swan Pond, Dennis to confluence with Nantucket Sound, Dennis.	0.04	SQUARE MILES	Estuarine Bioassessments	
					Fecal Coliform	36771
Town Cove	MA96-68	Entire cove to Nauset Harbor, including Rachael Cove and Woods Cove, Orleans/Eastham (area associated with Cape Cod National Seashore designated as ORW).	0.79	SQUARE MILES	Estuarine Bioassessments	
					Fecal Coliform	36772
Upper Shawme Lake	MA96326	Sandwich	21	ACRES	Nutrient/Eutrophication Biological Indicators	
Walkers Pond	MA96331	Brewster	100	ACRES	Excess Algal Growth	
					Phosphorus (Total)	
					Secchi disk transparency	
					Turbidity	
Waquoit Bay	MA96-21	From mouths of Seapit River, Quashnet River (also known as Moonakis River), Falmouth and Great River, Mashpee to confluence with Vineyard Sound, Falmouth/Mashpee.	1.42	SQUARE MILES	Estuarine Bioassessments	
					Oxygen, Dissolved	

Massachusetts Category 5 Waters
"Waters requiring a TMDL"

NAME	SEGMENT ID	DESCRIPTION	SIZE	UNITS	IMPAIRMENT CAUSE	EPA TMDL NO.
Charles						
Alder Brook	MA72-22	Headwaters northwest of the Route 135 and South Street intersection, Needham to the confluence with the Charles River, Needham.	0.282	MILES	Aquatic Macroinvertebrate Bioassessments	
					Nutrient/Eutrophication Biological Indicators	40317
Beaver Brook	MA72-12	Headwaters, outlet Beaver Pond, Bellingham to the confluence with the Charles River, Bellingham.	1.413	MILES	Escherichia coli	
Beaver Brook	MA72-28	Headwaters, north of Route 2, Lexington through culverting to Charles River, Waltham.	5.535	MILES	(Non-Native Aquatic Plants*)	
					(Other anthropogenic substrate alterations*)	
					(Other flow regime alterations*)	
					Escherichia coli	32379
					Excess Algal Growth	40317
					Organic Enrichment (Sewage) Biological Indicators	40317
					Oxygen, Dissolved	40317
					Phosphorus (Total)	40317
					Sedimentation/Siltation	
					Taste and Odor	
					Turbidity	40317
Bulloughs Pond	MA72011	Newton	6.887	ACRES	Excess Algal Growth	
					Nutrient/Eutrophication Biological Indicators	
Cambridge Reservoir, Upper Basin	MA72156	Lincoln/Lexington	43.998	ACRES	Aquatic Plants (Macrophytes)	
					Turbidity	
Chandler Pond	MA72017	Boston	11.394	ACRES	Excess Algal Growth	
					Nutrient/Eutrophication Biological Indicators	
					Phosphorus (Total)	
					Secchi disk transparency	
Charles River	MA72-03	Milford WWTF discharge, Hopedale to outlet Box Pond (formerly segment MA72008), Bellingham.	3.374	MILES	DDT	
					Dissolved oxygen saturation	40317
					Escherichia coli	32365
					Excess Algal Growth	40317
					Organic Enrichment (Sewage) Biological Indicators	40317
					Phosphorus (Total)	40317

Massachusetts Category 5 Waters
"Waters requiring a TMDL"

NAME	SEGMENT ID	DESCRIPTION	SIZE	UNITS	IMPAIRMENT CAUSE	EPA TMDL NO.
Charles River	MA72-04	Outlet Box Pond, Bellingham to inlet Populatic Pond, Norfolk/Medway.	11.457	MILES	(Other flow regime alterations*)	
					Chlordane	
					DDT	
					Escherichia coli	32366
					Fishes Bioassessments	
					Mercury in Fish Tissue	
Charles River	MA72-05	Outlet Populatic Pond, Norfolk/Medway to South Natick Dam, Natick.	18.078	MILES	(Non-Native Aquatic Plants*)	
					Aquatic Macroinvertebrate Bioassessments	
					Chlordane	
					DDT	
					Dissolved oxygen saturation	40317
					Excess Algal Growth	40317
					Mercury in Fish Tissue	
					Nutrient/Eutrophication Biological Indicators	40317
					Oxygen, Dissolved	40317
					Phosphorus (Total)	40317
					Turbidity	40317
Charles River	MA72-06	South Natick Dam, Natick to Chestnut Street, Needham/Dover.	8.356	MILES	(Eurasian Water Milfoil, Myriophyllum spicatum*)	
					(Non-Native Aquatic Plants*)	
					(Other flow regime alterations*)	
					DDT	
					Excess Algal Growth	40317
					Fishes Bioassessments	
					Nutrient/Eutrophication Biological Indicators	40317
					Other	
					PCB in Fish Tissue	
					Phosphorus (Total)	40317

Massachusetts Category 5 Waters
"Waters requiring a TMDL"

NAME	SEGMENT ID	DESCRIPTION	SIZE	UNITS	IMPAIRMENT CAUSE	EPA TMDL NO.
Charles River	MA72-07	Chestnut Street, Needham to Watertown Dam, Watertown.	24.774	MILES	(Eurasian Water Milfoil, Myriophyllum spicatum*)	
					(Fish-Passage Barrier*)	
					(Non-Native Aquatic Plants*)	
					(Other flow regime alterations*)	
					DDT	
					Escherichia coli	32370
					Fishes Bioassessments	
					Nutrient/Eutrophication Biological Indicators	40317
					PCB in Fish Tissue	
					Phosphorus (Total)	40317
Charles River	MA72-36	Watertown Dam, Watertown to the Boston University Bridge, Boston/Cambridge (formerly part of segment MA72-08).	6.052	MILES	(Fish-Passage Barrier*)	
					(Non-Native Aquatic Plants*)	
					(Other flow regime alterations*)	
					Chlorophyll-a	33826
					DDT	
					Escherichia coli	32371
					Fishes Bioassessments	
					Nutrient/Eutrophication Biological Indicators	33826
					Oil and Grease	
					Other	
					Oxygen, Dissolved	
					PCB in Fish Tissue	
					pH, High	
					Phosphorus (Total)	33826
					Secchi disk transparency	33826
					Sediment Bioassays -- Acute Toxicity Freshwater	

Massachusetts Category 5 Waters
"Waters requiring a TMDL"

NAME	SEGMENT ID	DESCRIPTION	SIZE	UNITS	IMPAIRMENT CAUSE	EPA TMDL NO.
Charles River	MA72-38	Boston University Bridge, Boston/Cambridge to the New Charles River Dam, Boston (formerly part of segment MA72-08).	3.092	MILES	(Other flow regime alterations*)	
					Chlorophyll-a	33826
					Combined Biota/Habitat Bioassessments	
					DDT	
					Dissolved oxygen saturation	
					Escherichia coli	
					Excess Algal Growth	33826
					Nutrient/Eutrophication Biological Indicators	33826
					Oil and Grease	
					Oxygen, Dissolved	
					PCB in Fish Tissue	
					Phosphorus (Total)	33826
					Salinity	
					Secchi disk transparency	33826
					Sediment Screening Value (Exceedence)	
					Taste and Odor	33826
					Temperature, water	
Fuller Brook	MA72-18	Headwater south of Route 135, Needham to confluence with Waban Brook, Wellesley.	4.282	MILES	(Physical substrate habitat alterations*)	
					Escherichia coli	32374
					Nutrient/Eutrophication Biological Indicators	40317
					Sedimentation/Siltation	
Jamaica Pond	MA72052	Boston	66.734	ACRES	Oxygen, Dissolved	
					Phosphorus (Total)	
Kendrick Street Pond	MA72055	Needham	39.264	ACRES	Turbidity	
Lake Winthrop	MA72140	Holliston	131.341	ACRES	(Non-Native Aquatic Plants*)	
					2,3,7,8-Tetrachlorodibenzo-p-dioxin (only)	
					Aquatic Plants (Macrophytes)	40319
Mill River	MA72-15	Headwaters, outlet Bush Pond, Norfolk to confluence with the Charles River, Norfolk.	3.47	MILES	Temperature, water	
Mine Brook	MA72-14	Headwaters in Franklin State Forest, Franklin to the confluence with the Charles River, Franklin (through Mine Brook Pond, formerly segment MA72077).	8.942	MILES	(Habitat Assessment (Streams)*)	
					Temperature, water	

Massachusetts Category 5 Waters
"Waters requiring a TMDL"

NAME	SEGMENT ID	DESCRIPTION	SIZE	UNITS	IMPAIRMENT CAUSE	EPA TMDL NO.
Muddy River	MA72-11	Headwaters, outlet Ward Pond in Olmstead Park, Boston through Leverett Pond, Boston/Brookline to confluence with Charles River, Boston.	3.6	MILES	(Bottom Deposits*)	
					(Non-Native Aquatic Plants*)	
					(Other flow regime alterations*)	
					(Physical substrate habitat alterations*)	
					DDT	
					Escherichia coli	32383
					Oil and Grease	
					Other	
					Oxygen, Dissolved	
					PCB in Fish Tissue	
					Phosphorus (Total)	
					Taste and Odor	
					Turbidity	
Populatic Pond	MA72096	Norfolk	41.911	ACRES	Chlordane	
					DDT	
					Dissolved oxygen saturation	40319
					Excess Algal Growth	40319
					Mercury in Fish Tissue	33880
					Nutrient/Eutrophication Biological Indicators	40319
					Oxygen, Dissolved	40319
Powissett Brook	MA72-20	Headwaters, outlet Noannet Pond, Westwood to confluence with Charles River, Dover.	1.849	MILES	Combined Biota/Habitat Bioassessments	
Rock Meadow Brook	MA72-21	Headwaters in Fisher Meadow, Westwood through Stevens Pond and Lee Pond, Westwood to confluence with Charles River, Dedham.	3.771	MILES	Aquatic Macroinvertebrate Bioassessments	
					Aquatic Plants (Macrophytes)	40317
					Excess Algal Growth	40317
					Nutrient/Eutrophication Biological Indicators	40317
					Oxygen, Dissolved	40317
					Phosphorus (Total)	40317
Sawmill Brook	MA72-23	Headwaters, Newton to confluence with Charles River, Boston.	2.397	MILES	Chloride	
					Escherichia coli	32376
					Organic Enrichment (Sewage) Biological Indicators	40317
					Oxygen, Dissolved	40317
					Phosphorus (Total)	40317

Massachusetts Category 5 Waters
"Waters requiring a TMDL"

NAME	SEGMENT ID	DESCRIPTION	SIZE	UNITS	IMPAIRMENT CAUSE	EPA TMDL NO.
Stop River	MA72-09	Headwaters near Dedham Street (Route 1A), Wrentham to Norfolk-Walpole MCI discharge, Norfolk (through Highland Lake formerly segment MA72047).	5.566	MILES	Ambient Bioassays -- Chronic Aquatic Toxicity	
					Oxygen, Dissolved	40317
					Phosphorus (Total)	40317
Stop River	MA72-10	Norfolk-Walpole MCI discharge, Norfolk to confluence with Charles River, Medfield.	4.168	MILES	Escherichia coli	32372
					Organic Enrichment (Sewage) Biological Indicators	40317
					Phosphorus (Total)	40317
					Temperature, water	
Trout Brook	MA72-19	Headwaters, outlet Channings Pond, Dover to confluence with Charles River, Dover.	2.772	MILES	Nutrient/Eutrophication Biological Indicators	40317
					Temperature, water	
Unnamed Tributary	MA72-30	Locally known as Laundry Brook - emerges north of California Street, Watertown to the confluence with the Charles River, Watertown.	0.023	MILES	(Physical substrate habitat alterations*)	
					Enterococcus	32381
					Escherichia coli	32381
					Phosphorus (Total)	
					Taste and Odor	
					Total Suspended Solids (TSS)	
					Turbidity	
Unnamed Tributary	MA72-31	Locally known as "Millers River" - from emergence near Route 93, Cambridge/Boston to the confluence with the Charles River, Cambridge.	0.207	MILES	(Bottom Deposits*)	
					(Habitat Assessment (Streams)*)	
					Foam/Flocs/Scum/Oil Slicks	
					Other	
					Petroleum Hydrocarbons	
					Polychlorinated biphenyls	
					Polycyclic Aromatic Hydrocarbons (PAHs) (Aquatic Ecosystems)	
					Sedimentation/Siltation	
					Taste and Odor	
Waban Brook	MA72-17	Headwaters, outlet Lake Waban, Wellesley to confluence with the Charles River, Wellesley.	0.717	MILES	Temperature, water	
Chicopee						
Abbey Brook	MA36-40	Headwaters west of Saint James Avenue, Springfield through Bemis Pond (formely reported as segment MA36011) to the confluence with the Chicopee River, Chicopee.	1.5	MILES	Total Suspended Solids (TSS)	
Alden Pond	MA36003	Ludlow	4	ACRES	Nutrient/Eutrophication Biological Indicators	
Brookhaven Lake	MA36021	West Brookfield	34	ACRES	Turbidity	

Massachusetts Category 5 Waters
"Waters requiring a TMDL"

NAME	SEGMENT ID	DESCRIPTION	SIZE	UNITS	IMPAIRMENT CAUSE	EPA TMDL NO.
Browning Pond	MA36025	Oakham/Spencer	106	ACRES	(Non-Native Aquatic Plants*)	
					Mercury in Fish Tissue	
					Nutrient/Eutrophication Biological Indicators	3626
Chicopee River	MA36-22	Source, confluence of Ware River and Quaboag River, Palmer (through Red Bridge Impoundment formerly segment MA36171) to Red Bridge Impoundment Dam, Wilbraham/Ludlow.	2.8	MILES	Escherichia coli	
					Mercury in Fish Tissue	
Chicopee River	MA36-24	Wilbraham Pumping Station (old WWTP), Wilbraham/Ludlow to Chicopee Falls Dam, Chicopee.	9.1	MILES	Fecal Coliform	
Chicopee River	MA36-25	Chicopee Falls Dam, Chicopee to confluence with Connecticut River, Chicopee.	3	MILES	Escherichia coli	
Dean Pond	MA36050	Oakham	64	ACRES	Excess Algal Growth	
					Turbidity	
Doane Pond	MA36054	North Brookfield	28	ACRES	Aquatic Plants (Macrophytes)	
Eames Pond	MA36056	Paxton	58	ACRES	Oxygen, Dissolved	
East Branch Ware River	MA36-01	Outlet Bickford Pond, Hubbardston to confluence with the West Branch Ware River, Barre.	12.4	MILES	Oxygen, Dissolved	
East Brookfield River	MA36-13	Outlet Lake Lashaway, East Brookfield to Quaboag Pond, East Brookfield.	2.4	MILES	(Non-Native Aquatic Plants*)	
					Oxygen, Dissolved	
Forget-Me-Not Brook	MA36-28	North Brookfield WWTP discharge, North Brookfield to confluence with Dunn Brook, East Brookfield/Brookfield.	1.3	MILES	Aquatic Macroinvertebrate Bioassessments	
					Escherichia coli	
					Taste and Odor	
					Whole Effluent Toxicity (WET)	
Fuller Brook	MA36-41	From the Ludlow/Chicopee corporate boundary where the stream name changes from Higher Brook, to the confluence with the Chicopee River, Chicopee.	1.9	MILES	Escherichia coli	
Lake Whittemore	MA36165	Spencer	52	ACRES	Turbidity	
Quaboag Pond	MA36130	Brookfield/East Brookfield	544	ACRES	(Eurasian Water Milfoil, Myriophyllum spicatum*)	
					(Non-Native Aquatic Plants*)	
					Excess Algal Growth	33846
					Mercury in Fish Tissue	
					Phosphorus (Total)	33846
Quaboag River	MA36-16	Warren WWTP discharge, Warren to Route 32 bridge, Palmer/Monson.	8.7	MILES	Fecal Coliform	

Massachusetts Category 5 Waters
"Waters requiring a TMDL"

NAME	SEGMENT ID	DESCRIPTION	SIZE	UNITS	IMPAIRMENT CAUSE	EPA TMDL NO.
Quaboag River	MA36-17	Route 32 bridge, Palmer/Monson to confluence with Ware River forming headwaters of Chicopee River, Palmer.	5.3	MILES	Escherichia coli	
Unnamed Tributary	MA36-39	Unnamed tributary to the Chicopee River locally known as "Poor Brook" from headwaters near the Conrail tracks, Springfield to the confluence with the Chicopee River, Chicopee.	2.2	MILES	Escherichia coli	
Ware River	MA36-03	MDC intake, Barre to dam at South Barre Reservoir, Barre. (through former segments Powder Mill Pond MA36126 and South Barre Reservoir MA36141)	2.1	MILES	Mercury in Fish Tissue	
Ware River	MA36-05	Wheelwright Dam, New Braintree/Hardwick to Ware Dam, Ware.	11.5	MILES	Escherichia coli	
Ware River	MA36-06	Ware Dam, Ware to Thorndike Dam, Palmer.	10.1	MILES	Fecal Coliform	
Ware River	MA36-27	Confluence of East Branch Ware and West Branch Ware rivers, Barre to MDC intake, Barre.	4.9	MILES	Oxygen, Dissolved	
					Temperature, water	
Concord (SuAsCo)						
Assabet River	MA82B-01	Outlet of the Assabet River Reservoir, Westborough to the Westborough WWTP discharge, Westborough.	1.249	MILES	(Low flow alterations*)	
					Aquatic Macroinvertebrate Bioassessments	
					Fecal Coliform	
					Phosphorus (Total)	35103
Assabet River	MA82B-02	From the Westborough WWTP discharge, Westborough to the Route 20 Dam, Northborough.	3.802	MILES	Aquatic Macroinvertebrate Bioassessments	
					Fecal Coliform	
					Nutrient/Eutrophication Biological Indicators	35104
					Oxygen, Dissolved	35104
					Phosphorus (Total)	35104
Assabet River	MA82B-03	From the Route 20 Dam, Northborough to the Marlborough West WWTP discharge, Marlborough.	2.439	MILES	(Debris/Floatables/Trash*)	
					(Non-Native Aquatic Plants*)	
					Excess Algal Growth	35105
					Fecal Coliform	
					Phosphorus (Total)	35105
					Taste and Odor	

Massachusetts Category 5 Waters
"Waters requiring a TMDL"

NAME	SEGMENT ID	DESCRIPTION	SIZE	UNITS	IMPAIRMENT CAUSE	EPA TMDL NO.
Assabet River	MA82B-04	From the Marlborough West WWTP discharge, Marlborough to the Hudson WWTP discharge, Hudson.	8.017	MILES	Aquatic Macroinvertebrate Bioassessments	
					Aquatic Plants (Macrophytes)	35106
					Excess Algal Growth	35106
					Fecal Coliform	
					Fishes Bioassessments	
					Oxygen, Dissolved	35106
					Phosphorus (Total)	35106
Assabet River	MA82B-05	From the Hudson WWTP discharge, Hudson to the USGS gage at Routes 27/62, Maynard.	8.197	MILES	(Debris/Floatables/Trash*)	
					(Non-Native Aquatic Plants*)	
					Aquatic Plants (Macrophytes)	35107
					Excess Algal Growth	35107
					Fecal Coliform	
					Nutrient/Eutrophication Biological Indicators	35107
					Oxygen, Dissolved	35107
					Phosphorus (Total)	35107
					Taste and Odor	
Assabet River	MA82B-06	From the USGS gage at Routes 27/62, Maynard to the Powdermill Dam, Acton.	1.22	MILES	(Debris/Floatables/Trash*)	
					(Non-Native Aquatic Plants*)	
					Aquatic Plants (Macrophytes)	35108
					Excess Algal Growth	35108
					Other	
					Oxygen, Dissolved	35108
					Phosphorus (Total)	35108
					Taste and Odor	
					Temperature, water	
Assabet River	MA82B-07	From the Powdermill Dam, Acton to the confluence with the Sudbury River, Concord.	6.402	MILES	Fecal Coliform	
					Phosphorus (Total)	35109
Assabet River Reservoir	MA82004	Westborough	338.14	ACRES	(Eurasian Water Milfoil, Myriophyllum spicatum*)	
					Dissolved oxygen saturation	35103
					Excess Algal Growth	
					Mercury in Fish Tissue	33880
					Oxygen, Dissolved	35103
					Turbidity	

Massachusetts Category 5 Waters
"Waters requiring a TMDL"

NAME	SEGMENT ID	DESCRIPTION	SIZE	UNITS	IMPAIRMENT CAUSE	EPA TMDL NO.
Carding Mill Pond	MA82015	Sudbury	40.466	ACRES	(Non-Native Aquatic Plants*)	
					Aquatic Plants (Macrophytes)	
					Dissolved oxygen saturation	
					Excess Algal Growth	
					Phosphorus (Total)	
Concord River	MA82A-07	From the confluence of the Assabet and Sudbury rivers, Concord to the Billerica Water Supply intake, Billerica.	10.394	MILES	(Eurasian Water Milfoil, Myriophyllum spicatum*)	
					(Non-Native Aquatic Plants*)	
					Fecal Coliform	
					Mercury in Fish Tissue	
					Phosphorus (Total)	
Concord River	MA82A-08	From the Billerica Water Supply intake, Billerica to Rogers Street bridge, Lowell.	5.073	MILES	(Eurasian Water Milfoil, Myriophyllum spicatum*)	
					(Non-Native Aquatic Plants*)	
					Mercury in Fish Tissue	
					Phosphorus (Total)	
Concord River	MA82A-09	From the Rogers Street bridge, Lowell to the confluence with the Merrimack River, Lowell.	0.899	MILES	(Debris/Floatables/Trash*)	
					Excess Algal Growth	
					Fecal Coliform	
					Mercury in Fish Tissue	
					Phosphorus (Total)	
Dudley Pond	MA82029	Wayland	83.173	ACRES	(Eurasian Water Milfoil, Myriophyllum spicatum*)	
					(Non-Native Aquatic Plants*)	
					Oxygen, Dissolved	
					Turbidity	
Eames Brook	MA82A-13	From the outlet of Farm Pond, Framingham to the confluence with the Sudbury River, Framingham.	0.566	MILES	(Debris/Floatables/Trash*)	
					(Non-Native Aquatic Plants*)	
					Aquatic Macroinvertebrate Bioassessments	
					Excess Algal Growth	
					Taste and Odor	
Elizabeth Brook	MA82B-12	From the outlet of an unnamed pond (Delaney Project on Stow/Harvard border) west of Harvard Road, Stow to the inlet of Fletchers Pond, Stow.	3.71	MILES	Aquatic Macroinvertebrate Bioassessments	

Massachusetts Category 5 Waters
"Waters requiring a TMDL"

NAME	SEGMENT ID	DESCRIPTION	SIZE	UNITS	IMPAIRMENT CAUSE	EPA TMDL NO.
Farm Pond	MA82035	Framingham	139.682	ACRES	(Eurasian Water Milfoil, Myriophyllum spicatum*)	
					(Non-Native Aquatic Plants*)	
					Excess Algal Growth	
					Turbidity	
Fort Meadow Reservoir	MA82042	Marlborough/Hudson	254	ACRES	(Eurasian Water Milfoil, Myriophyllum spicatum*)	
					Chlordane	
					Phosphorus (Total)	
Framingham Reservoir #1	MA82044	Framingham	117.597	ACRES	(Eurasian Water Milfoil, Myriophyllum spicatum*)	
					(Non-Native Aquatic Plants*)	
					Mercury in Fish Tissue	
Framingham Reservoir #2	MA82045	Framingham/Ashland	114.357	ACRES	Mercury in Fish Tissue	
					Turbidity	
Grist Mill Pond	MA82055	Sudbury/Marlborough	16.731	ACRES	(Non-Native Aquatic Plants*)	
					Aquatic Plants (Macrophytes)	
					Dissolved oxygen saturation	
					Excess Algal Growth	
					Fecal Coliform	
					Phosphorus (Total)	
Hager Pond	MA82056	Marlborough	29.917	ACRES	(Non-Native Aquatic Plants*)	
					Aquatic Plants (Macrophytes)	
					Dissolved oxygen saturation	
					Excess Algal Growth	
					Fecal Coliform	
					Phosphorus (Total)	
					Turbidity	
Heard Pond	MA82058	Wayland	75.632	ACRES	(Non-Native Aquatic Plants*)	
					Excess Algal Growth	
					Mercury in Fish Tissue	
					Secchi disk transparency	
Heart Pond	MA82059	Chelmsford/Westford	93.862	ACRES	Escherichia coli	
Hocomonco Pond	MA82060	Westborough	26.938	ACRES	Polycyclic Aromatic Hydrocarbons (PAHs) (Aquatic Ecosystems)	

Massachusetts Category 5 Waters
"Waters requiring a TMDL"

NAME	SEGMENT ID	DESCRIPTION	SIZE	UNITS	IMPAIRMENT CAUSE	EPA TMDL NO.
Hop Brook	MA82A-05	Outlet of Carding Mill Pond, Sudbury to confluence with Allowance Brook, Sudbury (Allowance Brook was identified as Landham Brook on USGS quads prior to 1987).	6.717	MILES	Dissolved oxygen saturation	
					Excess Algal Growth	
					Oxygen, Dissolved	
					Phosphorus (Total)	
Hop Brook	MA82A-06	From the confluence of Allowance Brook, Sudbury to the confluence with the Sudbury River, Wayland (this segment was formerly identified as Wash Brook, Hop Brook appeared as Wash Brook and Allowance Brook was previously identified as Landham Brook on USGSquads prior to 1987).	2.971	MILES	Excess Algal Growth	
					Fecal Coliform	
					Oxygen, Dissolved	
					Phosphorus (Total)	
Hopkinton Reservoir	MA82061	Hopkinton/Ashland	161.09	ACRES	(Non-Native Aquatic Plants*)	
					Oxygen, Dissolved	
Lake Cochituate	MA82020	[North Basin] Natick/Framingham/Wayland	195.59	ACRES	(Eurasian Water Milfoil, Myriophyllum spicatum*)	
					Oxygen, Dissolved	
					PCB in Fish Tissue	
Lake Cochituate	MA82125	[Middle Basin] Natick/Wayland	134.528	ACRES	(Eurasian Water Milfoil, Myriophyllum spicatum*)	
					(Non-Native Aquatic Plants*)	
					Enterococcus	
					Oxygen, Dissolved	
					PCB in Fish Tissue	
Lake Cochituate	MA82126	[Carling Basin] Natick	14.318	ACRES	(Eurasian Water Milfoil, Myriophyllum spicatum*)	
					(Non-Native Aquatic Plants*)	
					PCB in Fish Tissue	
Lake Cochituate	MA82127	[South Basin] Natick	239.605	ACRES	(Eurasian Water Milfoil, Myriophyllum spicatum*)	
					(Non-Native Aquatic Plants*)	
					Oxygen, Dissolved	
					PCB in Fish Tissue	
Long Pond	MA82072	Littleton	101.744	ACRES	Excess Algal Growth	
					Oxygen, Dissolved	
					Phosphorus (Total)	
Nashoba Brook	MA82B-14	From source just south of Route 110 in Westford to confluence with Fort Pond Brook, Concord.	9.411	MILES	(Low flow alterations*)	
					Fishes Bioassessments	

Massachusetts Category 5 Waters
"Waters requiring a TMDL"

NAME	SEGMENT ID	DESCRIPTION	SIZE	UNITS	IMPAIRMENT CAUSE	EPA TMDL NO.
Nutting Lake	MA82088	[East Basin] Billerica	30.481	ACRES	(Non-Native Aquatic Plants*)	
					Escherichia coli	
					Mercury in Fish Tissue	33880
Pantry Brook	MA82A-19	From source west of Haynes Road, Sudbury to the confluence with the Sudbury River, Sudbury.	3.226	MILES	Fecal Coliform	
Puffers Pond	MA82092	Maynard/Sudbury	28.441	ACRES	Mercury in Fish Tissue	
River Meadow Brook	MA82A-10	From the outlet of Russell Mill Pond, Chelmsford to the confluence with the Concord River, Lowell.	6.415	MILES	(Debris/Floatables/Trash*)	
					(Non-Native Aquatic Plants*)	
					Fecal Coliform	
Saxonville Pond	MA82097	Framingham	58.818	ACRES	(Non-Native Aquatic Plants*)	
					Aquatic Plants (Macrophytes)	
					Mercury in Fish Tissue	
Stearns Mill Pond	MA82104	Sudbury	19.079	ACRES	(Non-Native Aquatic Plants*)	
					Aquatic Plants (Macrophytes)	
					Dissolved oxygen saturation	
					Excess Algal Growth	
					Phosphorus (Total)	
					Turbidity	
Sudbury River	MA82A-03	Outlet Saxonville Pond, Framingham to confluence with Hop Brook (the lower portion of Hop Brook was identified as Wash Brook on USGS quads prior to 1987), Wayland.	5.547	MILES	Mercury in Fish Tissue	
Sudbury River	MA82A-04	Confluence with Hop Brook (the lower portion of Hop Brook was identified as Wash Brook on USGS quads prior to 1987), Wayland to confluence with Assabet River, Concord.	11.693	MILES	(Non-Native Aquatic Plants*)	
					Mercury in Fish Tissue	
Sudbury River	MA82A-25	From the Fruit Street bridge Hopkinton/Westborough to the inlet of Framingham Reservoir #2, Ashland (formerly part of segment MA82A-02).	6.295	MILES	Mercury in Fish Tissue	
Sudbury River	MA82A-26	From the outlet of Framingham Reservoir #1, Framingham to the inlet of Saxonville Pond, Framingham (formerly part of segment MA82A-02).	2.764	MILES	Aquatic Macroinvertebrate Bioassessments	
					Mercury in Fish Tissue	
Unnamed Tributary	MA82A-15	From the source northeast of Indian Head Hill (near Route 20), Marlborough to the inlet of Hager Pond, Marlborough.	1.056231	MILES	Excess Algal Growth	
					Oxygen, Dissolved	
					Phosphorus (Total)	
					Total Suspended Solids (TSS)	

Massachusetts Category 5 Waters
"Waters requiring a TMDL"

NAME	SEGMENT ID	DESCRIPTION	SIZE	UNITS	IMPAIRMENT CAUSE	EPA TMDL NO.
Unnamed Tributary	MA82A-16	From the outlet of Hager Pond, Marlborough to the inlet of Grist Mill Pond, Marlborough.	0.165	MILES	Dissolved oxygen saturation	
					Excess Algal Growth	
					Oxygen, Dissolved	
					pH, High	
					Phosphorus (Total)	
					Total Suspended Solids (TSS)	
Unnamed Tributary	MA82A-17	From the outlet of Grist Mill Pond, Sudbury to the inlet of Carding Mill Pond, Sudbury.	0.519	MILES	Dissolved oxygen saturation	
					Excess Algal Growth	
					Oxygen, Dissolved	
					Phosphorus (Total)	
					Total Suspended Solids (TSS)	
Unnamed Tributary	MA82A-22	Unnamed tributary to the Sudbury River locally known as Cochituate Brook, from the outlet of the north basin of Lake Cochituate, Framingham to confluence with Sudbury River, Framingham.	1.352	MILES	Aquatic Macroinvertebrate Bioassessments	
					Nutrient/Eutrophication Biological Indicators	
Waushakum Pond	MA82112	Framingham/Ashland	87.195	ACRES	(Non-Native Aquatic Plants*)	
					Aquatic Plants (Macrophytes)	
					Oxygen, Dissolved	
					Phosphorus (Total)	
					Turbidity	
Whitehall Reservoir	MA82120	Hopkinton	559.601	ACRES	(Non-Native Aquatic Plants*)	
					Mercury in Fish Tissue	33880
					Oxygen, Dissolved	
					Phosphorus (Total)	
Connecticut						
Arcadia Lake	MA34005	Belchertown	32.314	ACRES	(Non-Native Aquatic Plants*)	
					Nutrient/Eutrophication Biological Indicators	
Barton Cove	MA34122	(CT River) Gill	159.684	ACRES	(Eurasian Water Milfoil, Myriophyllum spicatum*)	
					(Non-Native Aquatic Plants*)	
					Escherichia coli	
					PCB in Fish Tissue	
Bloody Brook	MA34-36	From the railroad tracks north of North Main Street, Deerfield to the confluence with Mill River, Whately.	3.679	MILES	Escherichia coli	
					Oxygen, Dissolved	
					Phosphorus (Total)	
					Turbidity	

Massachusetts Category 5 Waters
"Waters requiring a TMDL"

NAME	SEGMENT ID	DESCRIPTION	SIZE	UNITS	IMPAIRMENT CAUSE	EPA TMDL NO.
Buttery Brook	MA34-42	Headwaters (perennial portion), west of Haig Avenue, South Hadley to the confluence with the Connecticut River, South Hadley (interrupted urban, portions culverted).	1.6	MILES	Escherichia coli	
Connecticut River	MA34-01	New Hampshire/Vermont/Massachusetts state line to Route 10 bridge, Northfield.	3.48	MILES	(Alteration in stream-side or littoral vegetative covers*)	
					(Other flow regime alterations*)	
					PCB in Fish Tissue	
Connecticut River	MA34-02	Route 10 bridge, Northfield to Turners Falls Dam, Gill/Montague.	11.213	MILES	(Alteration in stream-side or littoral vegetative covers*)	
					(Other flow regime alterations*)	
					PCB in Fish Tissue	
Connecticut River	MA34-03	Turners Falls Dam, Gil/Montague to confluence with Deerfield River, Greenfield/Montague/Deerfield.	3.604	MILES	(Low flow alterations*)	
					(Other flow regime alterations*)	
					PCB in Fish Tissue	
					Total Suspended Solids (TSS)	
Connecticut River	MA34-04	Confluence with Deerfield River, Greenfield/Montague/Deerfield to Holyoke Dam, Holyoke/South Hadley.	34.372	MILES	Escherichia coli	
					PCB in Fish Tissue	
Connecticut River	MA34-05	Holyoke Dam, Holyoke/South Hadley to Massachusetts/Connecticut border.	15.853	MILES	Escherichia coli	
					PCB in Fish Tissue	
					Total Suspended Solids (TSS)	
Forge Pond	MA34024	Granby	72.034	ACRES	(Non-Native Aquatic Plants*)	
					Nutrient/Eutrophication Biological Indicators	
Fort River	MA34-27	Headwaters (confluence of Adams and Amethyst brooks, Amherst), to confluence Connecticut River, Hadley.	12.812	MILES	Escherichia coli	
Lake Lookout	MA34044	Springfield	6.644	ACRES	Nutrient/Eutrophication Biological Indicators	
Lampson Brook	MA34-06	Belchertown WWTP discharge, Belchertown to confluence with Weston Brook, Belchertown.	1.158	MILES	Oxygen, Dissolved	
					Phosphorus (Total)	
Leaping Well Reservoir	MA34040	South Hadley	8.806	ACRES	(Non-Native Aquatic Plants*)	
					Excess Algal Growth	
Log Pond Cove	MA34124	Holyoke	19.205	ACRES	(Non-Native Aquatic Plants*)	
					PCB in Fish Tissue	
Manhan River	MA34-11	Outlet Tighe Carmody Reservoir, Southampton to confluence with Connecticut River, Easthampton.	19.168	MILES	Escherichia coli	
Metacomet Lake	MA34051	Belchertown	50.525	ACRES	(Non-Native Aquatic Plants*)	
					Oxygen, Dissolved	

Massachusetts Category 5 Waters
"Waters requiring a TMDL"

NAME	SEGMENT ID	DESCRIPTION	SIZE	UNITS	IMPAIRMENT CAUSE	EPA TMDL NO.
Mill Pond	MA34052	Springfield	13.241	ACRES	Nutrient/Eutrophication Biological Indicators	
					Taste and Odor	
Mill River	MA34-25	Headwaters, outlet Factory Hollow Pond, Amherst to inlet Lake Warner, Hadley.	5.228	MILES	Escherichia coli	
Mill River	MA34-28	Headwaters (confluence of East and West Branch Mill River, Williamsburg), to outlet Paradise Pond, Northampton.	9.979	MILES	Escherichia coli	
Mill River	MA34-29	Headwaters, outlet Watershops Pond, Springfield to confluence with Connecticut River, Springfield. (Interrupted stream)	1.294	MILES	Escherichia coli	
Nashawannuck Pond	MA34057	Easthampton	30.068	ACRES	(Non-Native Aquatic Plants*)	
					Nutrient/Eutrophication Biological Indicators	
					Phosphorus (Total)	
Noonan Cove	MA34058	Springfield	2.712	ACRES	Aquatic Plants (Macrophytes)	
					Turbidity	
Oxbow	MA34066	The waterbody west of Route 91 (bounded on the northeast by Route 91, the southeast by the Manhan River, and the west by Old Springfield Road), Northampton/Easthampton (excluding the delineated segment; Danks Pond MA34019).	148.057	ACRES	(Non-Native Aquatic Plants*)	
					Turbidity	
Porter Lake	MA34073	Springfield	27.931	ACRES	(Non-Native Aquatic Plants*)	
					Aquatic Plants (Macrophytes)	
					Excess Algal Growth	
Porter Lake West	MA34072	Springfield	5.036	ACRES	(Non-Native Aquatic Plants*)	
					Aquatic Plants (Macrophytes)	
					Excess Algal Growth	
Stony Brook	MA34-19	Headwaters, Granby to confluence with Connecticut River, South Hadley (thru Upper Pond formerly segment MA34095 and Lower Pond formerly segment MA34049).	13.334	MILES	(Non-Native Aquatic Plants*)	
					Escherichia coli	
					Turbidity	
Upper Van Horn Park Pond	MA34128	Springfield (Changed from MA36158 to 34128 on 6/21/02, TRD)	8.261	ACRES	Nutrient/Eutrophication Biological Indicators	
					Phosphorus (Total)	
Venture Pond	MA34096	Springfield	6.516	ACRES	Nutrient/Eutrophication Biological Indicators	
					Oxygen, Dissolved	
					Phosphorus (Total)	
Watershops Pond	MA34099	Springfield	161.531	ACRES	Nutrient/Eutrophication Biological Indicators	
Weston Brook	MA34-23	Headwaters, Belchertown to inlet Forge Pond, Granby.	2.702	MILES	Phosphorus (Total)	

Massachusetts Category 5 Waters
"Waters requiring a TMDL"

NAME	SEGMENT ID	DESCRIPTION	SIZE	UNITS	IMPAIRMENT CAUSE	EPA TMDL NO.
Wilton Brook	MA34-15	Headwaters, Easthampton to outlet RubberThread Pond (formerly segment MA34105) , Easthampton.	1.132	MILES	(Non-Native Aquatic Plants*)	
					Aquatic Plants (Macrophytes)	
Deerfield						
Chickley River	MA33-11	Headwaters Savoy Mountain State Forest, Savoy to confluence with Deerfield River, Charlemont.	11.084	MILES	Fecal Coliform	
Davis Mine Brook	MA33-18	Headwaters, just south of Dell Road, Rowe to confluence with Mill Brook, Charlemont.	3.301077	MILES	pH, Low	
Green River	MA33-30	From Greenfield swimming pool dam (northwest of Nashs Mill Road), Greenfield to confluence with the Deerfield River, Greenfield . (formerly segment MA33-10 and part of segment MA33-09)	3.735	MILES	Fecal Coliform	
Pelham Lake	MA33016	Rowe	79.545	ACRES	Mercury in Fish Tissue	
Sherman Reservoir	MA33018	Massachusetts portion only. Rowe/Monroe/Whitingham, Vt.	72.437	ACRES	Mercury in Fish Tissue	
South River	MA33-08	Emments Road Ashfield to confluence with Deerfield River, Conway (through South River Impoundment formerly segment MA33022).	12.957	MILES	(Physical substrate habitat alterations*)	
					Fecal Coliform	
Farmington						
Big Pond	MA31004	Otis	325.203	ACRES	Mercury in Fish Tissue	33880
					Oxygen, Dissolved	
Shaw Pond	MA31036	Becket/Otis	80.431	ACRES	(Eurasian Water Milfoil, Myriophyllum spicatum*)	
					Oxygen, Dissolved	
Upper Spectacle Pond	MA31044	Sandisfield/Otis	52.655	ACRES	Oxygen, Dissolved	
West Branch Farmington River	MA31-01	Outlet of Hayden Pond, Otis to Sandisfield/Tolland, Massachusetts and Colebrook, Connecticut in the Colebrook Reservoir.	16.134	MILES	Lack of a coldwater assemblage	
York Lake	MA31052	New Marlborough	28.763	ACRES	Oxygen, Dissolved	
French						
Burncoat Brook	MA42-07	Headwaters, outlet Bouchard Pond, Leicester to confluence with Town Meadow Brook, Leicester (through former pond segment Ballard Hill Pond MA42069).	1	MILES	Aquatic Macroinvertebrate Bioassessments	
					Escherichia coli	

Massachusetts Category 5 Waters
"Waters requiring a TMDL"

NAME	SEGMENT ID	DESCRIPTION	SIZE	UNITS	IMPAIRMENT CAUSE	EPA TMDL NO.
French River	MA42-03	Headwaters, outlet Greenville Pond, Leicester to the outlet of Thayer Pond, Oxford (excluding approximately 0.6 miles through Rochdale Pond segment MA42048) (through former pond segments Texas Pond MA42058 and Thayers Pond MA42059).	3.8	MILES	Aquatic Plants (Macrophytes)	2357
					Mercury in Fish Tissue	
					Phosphorus (Total)	
					Turbidity	
French River	MA42-04	From dam just upstream of Clara Barton Road, Oxford, to dam at North Village, Webster/Dudley.	9.6	MILES	Mercury in Fish Tissue	
French River	MA42-05	Dam at North Village, Webster/Dudley to Webster WWTP outfall, Webster/Dudley.	2.4	MILES	(Debris/Floatables/Trash*)	
					(Other flow regime alterations*)	
					Aquatic Macroinvertebrate Bioassessments	
					Fecal Coliform	
French River	MA42-06	Webster WWTP outfall, Webster/Dudley to state line, Dudley, MA/Thompson,CT.	1	MILES	(Debris/Floatables/Trash*)	
					Aquatic Macroinvertebrate Bioassessments	
					Fecal Coliform	
					Other	
					Sediment Screening Value (Exceedence)	
					Taste and Odor	
					Turbidity	
Grindstone Brook	MA42-18	Headwaters outlet Henshaw Pond, Leicester to inlet Rochdale Pond, Leicester.	2.3	MILES	Escherichia coli	
Little River	MA42-13	Headwaters, outlet Pikes Pond, Charlton to inlet Buffumville Lake, Charlton (formerly part of segment MA42-09).	3.5	MILES	Aquatic Macroinvertebrate Bioassessments	
					Oxygen, Dissolved	
Sucker Brook	MA42-15	Headwaters, outlet Nipmuck Pond, Webster to inlet Club Pond, Webster	1.7	MILES	Aquatic Macroinvertebrate Bioassessments	
					Escherichia coli	
Housatonic						
East Branch Housatonic River	MA21-01	Outlet of Muddy Pond, Washington to the outlet of Center Pond, Dalton.	11.251	MILES	Fecal Coliform	
					PCB in Fish Tissue	
East Branch Housatonic River	MA21-02	Outlet of Center Pond, Dalton to confluence with the Housatonic River, Pittsfield.	8.019	MILES	Fecal Coliform	
					PCB in Fish Tissue	
Goodrich Pond	MA21042	Pittsfield	15.355	ACRES	PCB in Fish Tissue	
Housatonic River	MA21-04	Confluence of Southwest Branch Housatonic River and West Branch Housatonic River, Pittsfield to outlet of Woods Pond, Lee/Lenox (pond was formerly segment MA21120).	12.322	MILES	(Non-Native Aquatic Plants*)	
					Fecal Coliform	
					PCB in Fish Tissue	
					Polychlorinated biphenyls	

Massachusetts Category 5 Waters
"Waters requiring a TMDL"

NAME	SEGMENT ID	DESCRIPTION	SIZE	UNITS	IMPAIRMENT CAUSE	EPA TMDL NO.
Housatonic River	MA21-19	Outlet of Woods Pond, Lee/Lenox to the Risingdale Impoundment dam, Great Barrington (impoundment formerly segment MA21121).	19.88	MILES	(Zebra mussel, Dreissena polymorph*)	
					Excess Algal Growth	
					PCB in Fish Tissue	
					Phosphorus (Total)	
					Polychlorinated biphenyls	
Housatonic River	MA21-20	Outlet of Risingdale Impoundment, Great Barrington to the state line in Sheffield, MA/Canaan, CT.	23.036	MILES	PCB in Fish Tissue	
Konkapot River	MA21-25	Outlet of Brewer Lake, Monterey to the state line in New Marlborough, MA/Canaan, CT.	16.467	MILES	Mercury in Fish Tissue	
Konkapot River	MA21-26	From the state line in Sheffield, MA/Canaan, CT, to the confluence with the Housatonic River, Sheffield.	2.866	MILES	Mercury in Fish Tissue	
Lake Buel	MA21014	Monterey/New Marlborough	194.396	ACRES	(Eurasian Water Milfoil, Myriophyllum spicatum*)	
					(Non-Native Aquatic Plants*)	
					Dissolved oxygen saturation	
					Oxygen, Dissolved	
					Phosphorus (Total)	
Lake Garfield	MA21040	Monterey	256.898	ACRES	(Eurasian Water Milfoil, Myriophyllum spicatum*)	
					(Non-Native Aquatic Plants*)	
					Mercury in Fish Tissue	
					Oxygen, Dissolved	
					Phosphorus (Total)	
Laurel Lake	MA21057	Lee/Lenox	173.51	ACRES	(Eurasian Water Milfoil, Myriophyllum spicatum*)	
					(Non-Native Aquatic Plants*)	
					(Zebra mussel, Dreissena polymorph*)	
					Dissolved oxygen saturation	
					Oxygen, Dissolved	
					Phosphorus (Total)	
Morewood Lake	MA21071	Pittsfield	19.519	ACRES	PCB in Fish Tissue	
Pontoosuc Lake	MA21083	Lanesborough/Pittsfield	500.316	ACRES	(Eurasian Water Milfoil, Myriophyllum spicatum*)	
					(Non-Native Aquatic Plants*)	
					DDT	
					Mercury in Fish Tissue	33880

Massachusetts Category 5 Waters
"Waters requiring a TMDL"

NAME	SEGMENT ID	DESCRIPTION	SIZE	UNITS	IMPAIRMENT CAUSE	EPA TMDL NO.
Southwest Branch Housatonic River	MA21-17	Headwaters, outlet Richmond Pond, Pittsfield to confluence with West Branch Housatonic River, Pittsfield.	5.835	MILES	Fecal Coliform	
					Sedimentation/Siltation	
Wahconah Falls Brook	MA21-11	Headwaters, outlet of Windsor Reservoir, Windsor to confluence with East Branch Housatonic River, Dalton.	3.381	MILES	Fecal Coliform	
West Branch Housatonic River	MA21-18	Headwaters, outlet of Pontoosuc Lake, Pittsfield to confluence with Southwest Branch Housatonic River (forming the headwaters of the Housatonic River), Pittsfield.	4.088	MILES	(Debris/Floatables/Trash*)	
					Combined Biota/Habitat Bioassessments	
					Fecal Coliform	
					Polychlorinated biphenyls	
					Taste and Odor	
Hudson: Hoosic						
Cheshire Reservoir, Middle Basin	MA11018	[Middle Basin] Cheshire/Lanesborough	186.35	ACRES	(Eurasian Water Milfoil, Myriophyllum spicatum*)	
					(Non-Native Aquatic Plants*)	
					Aquatic Plants (Macrophytes)	
Cheshire Reservoir, North Basin	MA11002	[North Basin] Cheshire	284.024	ACRES	(Eurasian Water Milfoil, Myriophyllum spicatum*)	
					(Non-Native Aquatic Plants*)	
					Aquatic Plants (Macrophytes)	
					Nutrient/Eutrophication Biological Indicators	
					Turbidity	
Cheshire Reservoir, South Basin	MA11019	[South Basin] Cheshire/Lanesborough	91.718	ACRES	(Eurasian Water Milfoil, Myriophyllum spicatum*)	
					(Non-Native Aquatic Plants*)	
					Excess Algal Growth	
Green River	MA11-06	Headwaters southwest of Sugarloaf Mountain (west of Ingraham Road), New Ashford to confluence with Hoosic River, Williamstown.	12.498	MILES	Fecal Coliform	
Hoosic River	MA11-03	Headwaters, outlet Cheshire Reservoir, Cheshire to Adams WWTP discharge, Adams.	8.841	MILES	(Alteration in stream-side or littoral vegetative covers*)	
					(Other flow regime alterations*)	
					(Physical substrate habitat alterations*)	
					Ambient Bioassays -- Chronic Aquatic Toxicity	
					Fecal Coliform	
					Temperature, water	

Massachusetts Category 5 Waters
"Waters requiring a TMDL"

NAME	SEGMENT ID	DESCRIPTION	SIZE	UNITS	IMPAIRMENT CAUSE	EPA TMDL NO.
Hoosic River	MA11-04	Adams WWTP discharge, Adams to confluence with North Branch Hoosic River, North Adams.	5.387	MILES	(Alteration in stream-side or littoral vegetative covers*)	
					(Other flow regime alterations*)	
					Fecal Coliform	
Hoosic River	MA11-05	Confluence with North Branch Hoosic River, North Adams to the Vermont State line, Williamstown.	8.225	MILES	(Alteration in stream-side or littoral vegetative covers*)	
					(Other flow regime alterations*)	
					Aquatic Macroinvertebrate Bioassessments	
					Fecal Coliform	
					PCB in Fish Tissue	
Mauserts Pond	MA11009	Clarksburg	50.896	ACRES	Enterococcus	
North Branch Hoosic River	MA11-02	From USGS Gage, North Adams to confluence with Hoosic River, North Adams.	1.537	MILES	(Alteration in stream-side or littoral vegetative covers*)	
					(Other flow regime alterations*)	
					Fecal Coliform	
					Polychlorinated biphenyls	
Paull Brook	MA11-20	Headwaters, outlet of Mt. Williams Reservoir, North Adams to confluence with unnamed tributary, Williamstown.	2.089	MILES	Fecal Coliform	
Hudson: Kinderhook						
Kinderhook Creek	MA12-01	Headwaters, northwest of Sheeps Heaven Mountain and east of Route 43, Hancock to New York/Massachusetts border, Hancock.	5.495	MILES	Aquatic Macroinvertebrate Bioassessments	
Ipswich						
Brackett Pond	MA92004	Andover	15.671	ACRES	Turbidity	
Collins Pond	MA92010	Andover	2.089	ACRES	Excess Algal Growth	
					Turbidity	
Crystal Pond	MA92013	Peabody	8.173	ACRES	Chlorophyll-a	
					Excess Algal Growth	
					Phosphorus (Total)	
					Secchi disk transparency	
Devils Dishfull Pond	MA92015	Peabody	14.328	ACRES	(Eurasian Water Milfoil, Myriophyllum spicatum*)	
					Chlorophyll-a	
					Oxygen, Dissolved	
					Phosphorus (Total)	
					Turbidity	
Frye Pond	MA92023	Andover	7.287	ACRES	Excess Algal Growth	

Massachusetts Category 5 Waters
"Waters requiring a TMDL"

NAME	SEGMENT ID	DESCRIPTION	SIZE	UNITS	IMPAIRMENT CAUSE	EPA TMDL NO.
Howlett Brook	MA92-17	Headwaters north of Great Hill, Topsfield to confluence with Ipswich River, Topsfield.	2.796	MILES	Fecal Coliform	
					Fishes Bioassessments	
Ipswich River	MA92-02	Ipswich Dam (formerly known as Sylvania Dam), Ipswich to mouth at Ipswich Bay, Ipswich.	0.411	SQUARE MILES	Fecal Coliform	
Ipswich River	MA92-06	Source at confluence of Maple Meadow Brook and Lubbers Brook, Wilmington, to Salem Beverly Waterway Canal, Topsfield.	20.415	MILES	(Low flow alterations*)	
					Mercury in Fish Tissue	
					Oxygen, Dissolved	
Ipswich River	MA92-15	Salem Beverly Waterway Canal, Topsfield to Ipswich Dam (formerly known as Sylvania Dam), Ipswich.	10.977	MILES	(Low flow alterations*)	
					Fishes Bioassessments	
					Mercury in Fish Tissue	
					Oxygen, Dissolved	
Kimball Brook	MA92-21	Headwaters, west of Scott Hill, Ipswich to confluence with Ipswich River, Ipswich.	2.241	MILES	Fecal Coliform	
					Oxygen, Dissolved	
Labor In Vain Creek	MA92-22	South of Argilla Road, Ipswich to confluence with Ipswich River Estuary, Ipswich.	0.03	SQUARE MILES	Fecal Coliform	
					Oxygen, Dissolved	
Lowe Pond	MA92034	Boxford	35.761	ACRES	(Non-Native Aquatic Plants*)	
					Mercury in Fish Tissue	
Martins Brook	MA92-08	Outlet of Martins Pond, North Reading to the confluence with the Ipswich River, North Reading.	4.561	MILES	Aquatic Macroinvertebrate Bioassessments	
					Fecal Coliform	
					Fishes Bioassessments	
					Oxygen, Dissolved	
Martins Pond	MA92038	North Reading	89.012	ACRES	(Non-Native Aquatic Plants*)	
					Excess Algal Growth	
					Mercury in Fish Tissue	33880
					Turbidity	
Miles River	MA92-03	Outlet Longham Reservoir, Beverly to confluence with Ipswich River, Ipswich.	8.892	MILES	Aquatic Macroinvertebrate Bioassessments	
					Fecal Coliform	
					Oxygen, Dissolved	
Norris Brook	MA92-11	Outlet of Elginwood Pond, Peabody to confluence with Ipswich River, Danvers (Danvers/Middleton town line).	1.541	MILES	Oxygen, Dissolved	
					Total Suspended Solids (TSS)	
					Turbidity	
Pleasant Pond	MA92049	(Idlewood Lake) Wenham/Hamilton	26.551	ACRES	Mercury in Fish Tissue	
Salem Pond	MA92057	North Andover/Andover	14.681	ACRES	Turbidity	
Silver Lake	MA92059	Wilmington	29.874	ACRES	DDT	
					Mercury in Fish Tissue	33880

Massachusetts Category 5 Waters
"Waters requiring a TMDL"

NAME	SEGMENT ID	DESCRIPTION	SIZE	UNITS	IMPAIRMENT CAUSE	EPA TMDL NO.
Unnamed Tributary	MA92-12	Outlet of Middleton Pond, Middleton to confluence with Ipswich River, Middleton.	1.387	MILES	Fecal Coliform	
Unnamed Tributary	MA92-23	Headwaters, east of Jeffreys Neck Road, north of Newmarch Street to confluence with Ipswich River Estuary, Ipswich. (locally known as Greenwood Creek)	0.03	SQUARE MILES	Fecal Coliform	
Unnamed Tributary	MA92-26	Unnamed intermittent tributary to Martins Brook, from source in wetland west of the Route 93/Route 125 intersection, Wilmington to confluence with Martins Brook, Wilmington.	1.3	MILES	Chloride	
Wenham Lake	MA92073	Beverly/Wenham	242.571	ACRES	DDT	
					Mercury in Fish Tissue	33880
Wills Brook	MA92-10	Headwater, (just north of Lowell Street) Lynnfield to confluence with Ipswich River, Lynnfield.	1.701	MILES	Fecal Coliform	
					Oxygen, Dissolved	
Islands						
Chilmark Pond	MA97-05	South of South Road including Wades Cove and Gilberts Cove, Chilmark, Martha's Vineyard.	0.313379	SQUARE MILES	Fecal Coliform	
Cuttyhunk Pond	MA97-21	Waters west of the channel connecting Cuttyhunk Pond to Cuttyhunk Harbor, Gosnold, Elizabeth Islands. (Changed from MA95-26 to MA97-21 on 10/7/97)	0.154	SQUARE MILES	Fecal Coliform	
Edgartown Great Pond	MA97-17	excluding Jacobs Pond (PALIS# 97038) Edgartown, Martha's Vineyard.	1.355	SQUARE MILES	Fecal Coliform	
Edgartown Harbor	MA97-15	Waters west of Cape Poge Gut bounded by an imaginary line drawn from Chappaquiddick Point to Dock Street and northeasterly from the end of Plantingfield Way to Cape Poge Elbow (excluding Eel Pond), Edgartown, Martha's Vineyard.	3.086	SQUARE MILES	Fecal Coliform	
Hither Creek	MA97-28	From the outlet of Madaket Ditch to Madaket Harbor at an imaginary line drawn easterly from Jackson Point to Little Neck, Nantucket	0.067	SQUARE MILES	Nitrogen (Total)	
					Oxygen, Dissolved	
Katama Bay	MA97-16	Waters south of an imaginary line from Chappaquiddick Point to Dock Street excluding Caleb Pond and Mattakeset Bay, Edgartown, Martha's Vineyard.	2.044	SQUARE MILES	Fecal Coliform	
Lagoon Pond	MA97-11	From Head of the Pond Road to confluence with Vineyard Haven Harbor at Beach Road, Tisbury/Oak Bluffs, Martha's Vineyard.	0.819	SQUARE MILES	Estuarine Bioassessments	
					Fecal Coliform	
Lake Tashmoo	MA97-12	Waters including Drew Cove and Rhoda Pond to confluence with Vineyard Sound at channel south of Herring Creek Road, Tisbury, Martha's Vineyard.	0.414	SQUARE MILES	Estuarine Bioassessments	

Massachusetts Category 5 Waters
"Waters requiring a TMDL"

NAME	SEGMENT ID	DESCRIPTION	SIZE	UNITS	IMPAIRMENT CAUSE	EPA TMDL NO.
Long Pond	MA97-29	South of Madaket Road, including White Goose Cove, Nantucket	0.121	SQUARE MILES	Dissolved oxygen saturation	
					Fecal Coliform	
					Nitrogen (Total)	
					Oxygen, Dissolved	
					Secchi disk transparency	
Madaket Harbor	MA97-27	Waters encompassed within imaginary lines from Eel Point to the northern tip of Esther Island, from the southern tip of Esther Island southeasterly to the opposite shore and from Jackson Point easterly to Little Neck, Nantucket	1.437	SQUARE MILES	Fecal Coliform	
Nantucket Harbor	MA97-01	Waters south and east of an imaginary line drawn from Jetties Beach to Coatue Point (excluding Polpis Harbor and Coskata Pond), Nantucket.	7.16	SQUARE MILES	Fecal Coliform	
					Nutrient/Eutrophication Biological Indicators	36011
Oak Bluffs Harbor	MA97-07	North of Lake Avenue to confluence with Nantucket Sound, Oak Bluffs, Martha's Vineyard.	0.047	SQUARE MILES	Fecal Coliform	
Polpis Harbor	MA97-26	Polpis Harbor and all adjacent coves, to an imaginary line drawn from Quaise Point to the opposite shore, Nantucket.	0.302	SQUARE MILES	Estuarine Bioassessments	36012
					Fecal Coliform	
Sesachacha Pond	MA97-02	South of Quidnet Road and north of Polpis Road, Nantucket.	0.423	SQUARE MILES	Fecal Coliform	
Seths Pond	MA97085	West Tisbury	10.82	ACRES	Excess Algal Growth	
					Secchi disk transparency	
Tisbury Great Pond	MA97-18	Including Town Cove, Muddy Cove, Pear Tree Cove, Short Cove, Tiah Cove, Tississa Pond, Deep Bottom Cove, and Thumb Cove, Chilmark/West Tisbury, Martha's Vineyard.	1.103	SQUARE MILES	Fecal Coliform	
Vineyard Haven Harbor	MA97-09	The waters south and west of an imaginary line drawn from the tip of West Chop, Tisbury and the tip of East Chop, Oak Bluffs to the confluence of Lagoon Pond at Beach Road, Tisbury/Oak Bluffs, Martha's Vineyard.	1.545	SQUARE MILES	Fecal Coliform	
Westend Pond	MA97-20	Cuttyhunk Island, Gosnold, Elizabeth Islands.	0.058	SQUARE MILES	Fecal Coliform	
Merrimack						
Back River	MA84A-16	New Hampshire state line, Amesbury to inlet Clarks Pond, Amesbury.	2.7	MILES	Escherichia coli	
					Sedimentation/Siltation	
					Turbidity	
Bare Meadow Brook	MA84A-18	Headwaters, Methuen to confluence with Merrimack River, Methuen.	3	MILES	Escherichia coli	
					Sedimentation/Siltation	
					Turbidity	

Massachusetts Category 5 Waters
"Waters requiring a TMDL"

NAME	SEGMENT ID	DESCRIPTION	SIZE	UNITS	IMPAIRMENT CAUSE	EPA TMDL NO.
Bartlett Brook	MA84A-36	New Hampshire state line, Dracut to inlet Mill Pond, Methuen.	3.7	MILES	Escherichia coli	
Beaver Brook	MA84A-11	New Hampshire state line, Dracut to confluence with Merrimack River, Lowell.	4.8	MILES	(Debris/Floatables/Trash*)	
					(Physical substrate habitat alterations*)	
					Aquatic Macroinvertebrate Bioassessments	
					Escherichia coli	
					Taste and Odor	
					Turbidity	
Beaver Brook	MA84B-02	Outlet Mill Pond, Littleton to inlet Forge Pond, Westford.	4.9	MILES	Fecal Coliform	
					Oxygen, Dissolved	
					pH, Low	
					Total Suspended Solids (TSS)	
Bennetts Brook	MA84B-06	Headwaters, north of Route 2, Harvard to the inlet of Spectacle Pond, Ayer/Littleton.	4.3	MILES	Escherichia coli	
Black Brook	MA84A-17	Headwaters, Chelmsford to confluence with Merrimack River, Lowell.	2.3	MILES	(Debris/Floatables/Trash*)	
					(Physical substrate habitat alterations*)	
					Aquatic Macroinvertebrate Bioassessments	
					Escherichia coli	
					Fishes Bioassessments	
					Sedimentation/Siltation	
					Turbidity	
Chadwicks Pond	MA84006	Haverhill/Boxford	173	ACRES	Mercury in Fish Tissue	
Creek Brook	MA84A-37	Headwaters, outlet Crystal Lake, Haverhill to confluence with Merrimack River, Haverhill.	2.3	MILES	Escherichia coli	
Crystal Lake	MA84010	Haverhill	161	ACRES	Mercury in Fish Tissue	
Deep Brook	MA84A-21	Headwaters east of Everett Turnpike, Tyngsborough to confluence with Merrimack River, Chelmsford.	2.9	MILES	(Habitat Assessment (Streams)*)	
					Aquatic Macroinvertebrate Bioassessments	
					Escherichia coli	
					Fishes Bioassessments	
					Sedimentation/Siltation	
East Meadow River	MA84A-39	Headwaters, outlet Neal Pond, Haverhill to inlet Millvale Reservoir, Haverhill.	3	MILES	Escherichia coli	
Fish Brook	MA84A-40	Headwaters, east of Greenwood Road, Andover to confluence with Merrimack River at Fish Brook Dam, Andover.	4.1	MILES	Chloride	
					Escherichia coli	

Massachusetts Category 5 Waters
"Waters requiring a TMDL"

NAME	SEGMENT ID	DESCRIPTION	SIZE	UNITS	IMPAIRMENT CAUSE	EPA TMDL NO.
Flint Pond	MA84012	Tyngsborough	72	ACRES	(Non-Native Aquatic Plants*)	
					Aquatic Plants (Macrophytes)	
					Mercury in Fish Tissue	33880
Forest Lake	MA84014	Methuen	48	ACRES	Aquatic Plants (Macrophytes)	
					Mercury in Fish Tissue	
Haggets Pond	MA84022	Andover	211	ACRES	Mercury in Fish Tissue	
Hoveys Pond	MA84025	Boxford	36	ACRES	Mercury in Fish Tissue	
Johnson Creek	MA84A-15	Headwaters, Groveland (excluding intermittent portion) to confluence with Merrimack River, Groveland/Haverhill.	1.1	MILES	Escherichia coli	
Johnsons Pond	MA84027	Groveland/Boxford	194	ACRES	Mercury in Fish Tissue	
					Oxygen, Dissolved	
Kenoza Lake	MA84028	Haverhill	240	ACRES	Mercury in Fish Tissue	
Lake Attitash	MA84002	Amesbury/Merrimac	369	ACRES	Mercury in Fish Tissue	
Lake Cochichewick	MA84008	North Andover	575	ACRES	Mercury in Fish Tissue	
Lake Pentucket	MA84051	Haverhill	38	ACRES	Mercury in Fish Tissue	
Lake Saltonstall	MA84059	Haverhill	44	ACRES	Mercury in Fish Tissue	
Little River	MA84A-09	New Hampshire state line, Haverhill to confluence with Merrimack River, Haverhill.	4.6	MILES	(Debris/Floatables/Trash*)	
					(Habitat Assessment (Streams)*)	
					Escherichia coli	
Long Pond	MA84032	Dracut/Tyngsborough (size indicates portion in Massachusetts)	137	ACRES	(Non-Native Aquatic Plants*)	
					Aquatic Plants (Macrophytes)	
					Mercury in Fish Tissue	33880
Lowell Canals	MA84A-29	Canal system near Pawtucket Falls, Lowell.	4.9	MILES	DDT	
					Lead	
					Mercury in Fish Tissue	
					PCB in Fish Tissue	
Massapoag Pond	MA84087	Dunstable/Groton/Tyngsborough	111	ACRES	(Non-Native Aquatic Plants*)	
					Aquatic Plants (Macrophytes)	
					Mercury in Fish Tissue	33880
					Oxygen, Dissolved	
Merrimack River	MA84A-01	State line at Hudson, NH/Tyngsborough, MA to Pawtucket Dam, Lowell.	9	MILES	Fecal Coliform	
					Mercury in Fish Tissue	

Massachusetts Category 5 Waters
"Waters requiring a TMDL"

NAME	SEGMENT ID	DESCRIPTION	SIZE	UNITS	IMPAIRMENT CAUSE	EPA TMDL NO.
Merrimack River	MA84A-02	Pawtucket Dam, Lowell to Lowell Regional Wastewater Utilities outfall at Duck Island, Lowell.	3.2	MILES	(Low flow alterations*)	
					Escherichia coli	
					Mercury in Fish Tissue	
					Phosphorus (Total)	
Merrimack River	MA84A-03	Lowell Regional Wastewater Utilities outfall at Duck Island, Lowell to Essex Dam, Lawrence.	8.8	MILES	Escherichia coli	
					Mercury in Fish Tissue	
					PCB in Fish Tissue	
					Phosphorus (Total)	
Merrimack River	MA84A-04	Essex Dam, Lawrence to confluence with Little River, Haverhill.	10	MILES	Escherichia coli	
					PCB in Fish Tissue	
					Phosphorus (Total)	
Merrimack River	MA84A-05	Confluence Little River, Haverhill to confluence Indian River, West Newbury/Amesbury.	1.83	SQUARE MILES	Enterococcus	
					PCB in Fish Tissue	
Merrimack River	MA84A-06	Confluence Indian River, West Newbury/Amesbury to mouth at Atlantic Ocean, Newburyport/Salisbury (includes Back River, Salisbury).	4.46	SQUARE MILES	Enterococcus	
					Fecal Coliform	
					PCB in Fish Tissue	
Merrimack River	MA84A-26	The Basin in the Merrimack River Estuary, Newbury/Newburyport.	0.17	SQUARE MILES	Fecal Coliform	
Mill Pond	MA84038	[North Basin] Littleton	30	ACRES	Aquatic Plants (Macrophytes)	
Mill Pond	MA84081	[South Basin] Littleton	12	ACRES	Aquatic Plants (Macrophytes)	
Millvale Reservoir	MA84041	Haverhill	44	ACRES	Mercury in Fish Tissue	
Newfield Pond	MA84046	Chelmsford	77	ACRES	(Eurasian Water Milfoil, Myriophyllum spicatum*)	
					(Non-Native Aquatic Plants*)	
					Mercury in Fish Tissue	33880
					Oxygen, Dissolved	
Peppermint Brook	MA84A-35	Headwaters, outlet of unnamed pond east of Route 38, Dracut to confluence with Beaver Brook, Dracut.	2.7	MILES	(Debris/Floatables/Trash*)	
					Escherichia coli	
Plum Island River	MA84A-27	From Chaces Island, Merimack River Estuary, to the "high sandy" sand bar just north of the confluence with Pine Island Creek, Newbury (formerly encompassed in MA84A-23).	0.13	SQUARE MILES	Fecal Coliform	
Powwow River	MA84A-08	Tidal portion, just downstream of Main Street, Amesbury to confluence with Merrimack River, Amesbury.	0.06	SQUARE MILES	Escherichia coli	

Massachusetts Category 5 Waters
"Waters requiring a TMDL"

NAME	SEGMENT ID	DESCRIPTION	SIZE	UNITS	IMPAIRMENT CAUSE	EPA TMDL NO.
Powwow River	MA84A-25	Outlet of Lake Gardner, Amesbury to tidal portion, just downstream of Main Street, Amesbury.	0.6	MILES	Escherichia coli	
Powwow River	MA84A-28	Headwaters, outlet Tuxbury Pond, Amesbury to New Hampshire state line, Amesbury.	2.9	MILES	Fecal Coliform	
					Total Suspended Solids (TSS)	
					Turbidity	
Richardson Brook	MA84A-12	Headwaters, Dracut (excluding intermittent portion) to confluence with Merrimack River, Dracut.	1.9	MILES	Escherichia coli	
Spectacle Pond	MA84089	Littleton/Ayer	79	ACRES	(Non-Native Aquatic Plants*)	
					Oxygen, Dissolved	
Spicket River	MA84A-10	New Hampshire state line, Methuen to confluence with Merrimack River, Lawrence.	5.8	MILES	(Debris/Floatables/Trash*)	
					(Physical substrate habitat alterations*)	
					Aquatic Macroinvertebrate Bioassessments	
					Copper	
					Escherichia coli	
					Mercury in Water Column	
					Other	
Stevens Pond	MA84064	North Andover	23	ACRES	Mercury in Fish Tissue	
Stony Brook	MA84B-03	Outlet Forge Pond, Westford to Brookside Road, Westford.	6.5	MILES	Aquatic Macroinvertebrate Bioassessments	
					Fecal Coliform	
					Turbidity	
Stony Brook	MA84B-04	Brookside Road, Westford to confluence with Merrimack River, Chelmsford.	3.4	MILES	Aquatic Macroinvertebrate Bioassessments	
					Escherichia coli	
Tadmuck Brook	MA84B-07	Headwaters south of Main Street, Westford to confluence with Stony Brook, Westford.	1.4	MILES	Escherichia coli	
Trout Brook	MA84A-13	Headwaters, Dracut to confluence with Richardson Brook, Dracut.	2.6	MILES	Escherichia coli	
Trull Brook	MA84A-14	Source, Tewksbury (excluding intermittent portion) to confluence with Merrimack River, Tewksbury.	2.1	MILES	Escherichia coli	
Unnamed Tributary	MA84A-30	Unnamed tributary to Powwow River locally considered portion of Back River from outlet of Clarks Pond, Amesbury to confluence with Powwow River, Amesbury (formerly portion of segment MA84A-16).	0.003	SQUARE MILES	Escherichia coli	
Unnamed Tributary	MA84B-01	(Locally known as Reedy Meadow Brook) Headwaters, outlet of small unnamed impoundment upstream of Bruce Street, Littleton to inlet Mill Pond, Littleton.	1.5	MILES	Fecal Coliform	

Massachusetts Category 5 Waters
"Waters requiring a TMDL"

NAME	SEGMENT ID	DESCRIPTION	SIZE	UNITS	IMPAIRMENT CAUSE	EPA TMDL NO.
Ward Pond	MA84096	PALIS id changed from 35094 to 84096 on October 10, 1997. (WBID from MA35094 to MA84096) Ashburnham	54	ACRES	Oxygen, Dissolved	
Millers						
Beaver Brook	MA35-09	Fernald School discharge, Templeton to confluence with Millers River, Royalston.	3.426302	MILES	Fecal Coliform	
					PCB in Fish Tissue	
Boyce Brook	MA35-17	NH State Line, Royalston to confluence with East Branch Tully River, Royalston.	3.227	MILES	PCB in Fish Tissue	
East Branch Tully River	MA35-12	Confluence of Tully Brook and Falls Brook in Royalston State Forest, Royalston through Long Pond and Tully Lake to confluence with the West Branch Tully River forming headwaters Tully River, Orange/Athol.	10.013	MILES	PCB in Fish Tissue	
Gales Pond	MA35024	Warwick	11.732	ACRES	Mercury in Fish Tissue	33880
					Turbidity	
Keyup Brook	MA35-16	Headwaters Great Swamp Northfield State Forest, Northfield, to confluence with Millers River, Erving.	4.968	MILES	PCB in Fish Tissue	
Lake Monomonac	MA35047	Massachusetts portion only. Winchendon/Rindge,N.H.	185.507	ACRES	(Non-Native Aquatic Plants*)	
					Aquatic Plants (Macrophytes)	4133
					Mercury in Fish Tissue	
Lake Rohunta	MA35070	(Middle Basin) Athol/Orange/New Salem	208.954	ACRES	(Non-Native Aquatic Plants*)	
					Aquatic Plants (Macrophytes)	
					Mercury in Fish Tissue	33880
Lake Rohunta	MA35107	(South Basin) New Salem	41.63	ACRES	(Non-Native Aquatic Plants*)	
					Aquatic Plants (Macrophytes)	
					Mercury in Fish Tissue	33880
Laurel Lake	MA35035	Erving/Warwick	44.426	ACRES	Oxygen, Dissolved	
Lawrence Brook	MA35-13	New Hampshire state line, Royalston through Doane Falls to confluence with East Branch Tully River, Royalston.	7.124	MILES	PCB in Fish Tissue	
Lyons Brook	MA35-19	Outlet of Ruggles Pond, Wendell to confluence with Millers River, Montague/Wendell	2.119	MILES	PCB in Fish Tissue	
Millers River	MA35-01	Outlet of Whitney Pond, Winchendon to Winchendon WWTP, Winchendon.	3.303	MILES	Ambient Bioassays -- Chronic Aquatic Toxicity	
					Fecal Coliform	
					PCB in Fish Tissue	
					Phosphorus (Total)	
Millers River	MA35-02	Winchendon WWTP, Winchendon to confluence with Otter River, Winchendon.	5.609	MILES	PCB in Fish Tissue	

Massachusetts Category 5 Waters
"Waters requiring a TMDL"

NAME	SEGMENT ID	DESCRIPTION	SIZE	UNITS	IMPAIRMENT CAUSE	EPA TMDL NO.
Millers River	MA35-03	Confluence with Otter River, Winchendon to South Royalston USGS Gage, Royalston.	3.516031	MILES	PCB in Fish Tissue	
					Phosphorus (Total)	
Millers River	MA35-04	South Royalston USGS Gage, Royalston to Erving Center WWTP (formerly known as Erving Paper Company), Erving.	18.462	MILES	Fecal Coliform	
					PCB in Fish Tissue	
					Phosphorus (Total)	
Millers River	MA35-05	Erving Center WWTP (formerly known as Erving Paper Company), Erving to confluence with Connecticut River, Erving.	9.21	MILES	PCB in Fish Tissue	
Mormon Hollow Brook	MA35-15	Headwaters just north of Montague Road, Wendell to confluence with Millers River, Wendell.	3.825	MILES	PCB in Fish Tissue	
North Branch Millers River	MA35-21	Outlet of Lake Mononomac, Winchendon to inlet of Whitney Pond, Winchendon	2.006	MILES	Mercury in Fish Tissue	
Otter River	MA35-07	Gardner WWTP, Gardner/Templeton to Seaman Paper Dam, Templeton.	4.379	MILES	Aquatic Macroinvertebrate Bioassessments	
					Fishes Bioassessments	
					Nutrient/Eutrophication Biological Indicators	
					Turbidity	
Otter River	MA35-08	Seaman Paper Dam, Templeton to confluence with Millers River, Winchendon.	5.548	MILES	(Total Dissolved Solids*)	
					Aquatic Macroinvertebrate Bioassessments	
					Fecal Coliform	
					Fishes Bioassessments	
					Nutrient/Eutrophication Biological Indicators	
					PCB in Fish Tissue	
					Taste and Odor	
					Turbidity	
Tully River	MA35-14	Confluence East and West Branches Tully River, Orange/Athol to confluence with Millers River, Athol.	1.585	MILES	PCB in Fish Tissue	
West Branch Tully River	MA35-11	Outlet Sheomet Lake, Warwick to confluence with East Branch Tully River forming headwaters Tully River, Orange/Athol.	6.619	MILES	PCB in Fish Tissue	
Whetstone Brook	MA35-18	Headwaters northeast of Orcutt Hill near New Salem Rd, Wendell to confluence with Millers River, Wendell.	4.885	MILES	PCB in Fish Tissue	
Whites Mill Pond	MA35099	Winchendon	42.426	ACRES	Aquatic Plants (Macrophytes)	4144
					Mercury in Fish Tissue	
Whitney Pond	MA35101	Winchendon	96.839	ACRES	Aquatic Plants (Macrophytes)	4145
					Mercury in Fish Tissue	
					Turbidity	4145

Massachusetts Category 5 Waters
"Waters requiring a TMDL"

NAME	SEGMENT ID	DESCRIPTION	SIZE	UNITS	IMPAIRMENT CAUSE	EPA TMDL NO.
Mount Hope Bay (Shore)						
Cole River	MA61-04	Route 6, Swansea to the mouth at Mount Hope Bay at old railway grade, Swansea	0.31	SQUARE MILES	Chlorophyll-a	
					Fecal Coliform	38907
					Nitrogen (Total)	
					Oxygen, Dissolved	
Lee River	MA61-01	From confluence with Lewin Brook, Swansea to Route 6, Swansea/Somerset	0.02	SQUARE MILES	Fecal Coliform	38905
					Nutrient/Eutrophication Biological Indicators	
Lee River	MA61-02	Route 6, Swansea/Somerset to mouth at Mount Hope Bay, Swansea/Somerset	0.51	SQUARE MILES	(Debris/Floatables/Trash*)	
					Chlorophyll-a	
					Fecal Coliform	38906
					Nitrogen (Total)	
					Oxygen, Dissolved	
					Taste and Odor	
Mount Hope Bay	MA61-06	the Massachusetts portion from the Braga Bridge, Fall River/Somerset to the state border Fall River, MA/Tiverton, RI to the line from Braton Point Somerset to MA/RI border approximately 3/4 of a mile due east of Spar Island, RI	2.29	SQUARE MILES	Chlorophyll-a	
					Fecal Coliform	38908
					Fishes Bioassessments	
					Nitrogen (Total)	
					Temperature, water	
Mount Hope Bay	MA61-07	the Massachusetts portion from mouth of Cole River (at old railway grade), Swansea to state border Swansea, MA/Warren, RI to the line from Brayton Point, Somerset to MA/RI border approximately 3/4 of a mile due east of Spar Island, RI to the line betweenBay Point, Swansea and Brayton Point, Somerset (the mouth of the Lee River)	1.84	SQUARE MILES	Chlorophyll-a	
					Fecal Coliform	38909
					Fishes Bioassessments	
					Nitrogen (Total)	
					Oxygen, Dissolved	
					Temperature, water	
Narragansett Bay (Shore)						
Palmer River	MA53-04	From confluence of East and West Branches of the Palmer River, Rehoboth to the Shad Factory Pond dam, Rehoboth	5.6	MILES	(Low flow alterations*)	
					Fecal Coliform	35086
					Nutrient/Eutrophication Biological Indicators	
Runnins River	MA53-01	Route 44, Seekonk to Mobile Dam, Seekonk, MA/East Providence, RI (through Burrs Pond formerly segment MA53001)	3.7	MILES	(Debris/Floatables/Trash*)	
					Aquatic Macroinvertebrate Bioassessments	
					Fecal Coliform	38903
					Mercury in Fish Tissue	33880
					Nutrient/Eutrophication Biological Indicators	
					Oil and Grease	
					Oxygen, Dissolved	

Massachusetts Category 5 Waters
"Waters requiring a TMDL"

NAME	SEGMENT ID	DESCRIPTION	SIZE	UNITS	IMPAIRMENT CAUSE	EPA TMDL NO.
Nashua						
Asnebumskit Brook	MA81-56	From outlet Eagle Lake, Holden to the confluence with the Quinapoxet River, Holden.	2.9	MILES	Ambient Bioassays -- Chronic Aquatic Toxicity	
Bartlett Pond	MA81008	Lancaster	5	ACRES	Escherichia coli	
Fort Pond	MA81046	Lancaster	76	ACRES	Oxygen, Dissolved	
Gates Brook	MA81-24	Headwaters west of Prospect Street, West Boylston to inlet Wachusett Reservoir (Gates Cove), West Boylston.	3.4	MILES	Fecal Coliform	
Grove Pond	MA81053	Ayer	67	ACRES	(Non-Native Aquatic Plants*)	
					Aquatic Plants (Macrophytes)	
					Arsenic	
					DEHP (Di-sec-octyl phthalate)	
					Mercury in Fish Tissue	
					Polycyclic Aromatic Hydrocarbons (PAHs) (Aquatic Ecosystems)	
					Sediment Bioassays -- Chronic Toxicity Freshwater	
James Brook	MA81-20	Headwaters, Groton to confluence with Nashua River, Ayer/Groton.	3.9	MILES	Escherichia coli	
Lake Shirley	MA81122	Lunenburg	360	ACRES	(Eurasian Water Milfoil, Myriophyllum spicatum*)	
					(Non-Native Aquatic Plants*)	
					Excess Algal Growth	
					Mercury in Fish Tissue	42399
					Oxygen, Dissolved	
					Turbidity	
Malagasco Brook	MA81-29	Headwaters southwest of Apron Hill, Boylston through Pine Swamp to the inlet of Wachusett Reservoir (South Bay), Boylston.	2.4	MILES	Aquatic Macroinvertebrate Bioassessments	
					Nutrient/Eutrophication Biological Indicators	
Mirror Lake	MA81085	Harvard	28	ACRES	Mercury in Fish Tissue	
Monoosnuc Brook	MA81-13	Outlet of Simonds Pond, Leominster to confluence with North Nashua River, Leominster (through former pond segments Pierce Pond MA 81101 and Rockwell Pond MA81112).	6.1	MILES	Escherichia coli	
Muddy Brook	MA81-28	Headwaters west of Shrewsbury Street, West Boylston to inlet of Wachusett Reservoir (South Bay), West Boylston.	0.8	MILES	Aquatic Macroinvertebrate Bioassessments	
Mulpus Brook	MA81-37	From the outlet of Hickory Hills Lake, Lunenburg to the confluence with the Nashua River, Shirley (formerly part of segment MA81-22).	6.3	MILES	Lack of a coldwater assemblage	

Massachusetts Category 5 Waters
"Waters requiring a TMDL"

NAME	SEGMENT ID	DESCRIPTION	SIZE	UNITS	IMPAIRMENT CAUSE	EPA TMDL NO.
Nashua River	MA81-05	Confluence with North Nashua River, Lancaster to confluence with Squannacook River, Shirley/Groton/Ayer.	14.2	MILES	Aquatic Macroinvertebrate Bioassessments	
					Escherichia coli	
					Phosphorus (Total)	
					Sediment Bioassays -- Acute Toxicity Freshwater	
Nashua River	MA81-06	Confluence with Squannacook River, Shirley/Groton/Ayer to Pepperell Dam, Pepperell. (through Pepperell Pond formerly segment MA81167)	9.1	MILES	(Non-Native Aquatic Plants*)	
					Aquatic Macroinvertebrate Bioassessments	
					Mercury in Fish Tissue	
					Nutrient/Eutrophication Biological Indicators	
Nashua River	MA81-07	Pepperell Dam, Pepperell to New Hampshire state line, Pepperell/Dunstable.	3.7	MILES	Aquatic Macroinvertebrate Bioassessments	
					Phosphorus (Total)	
Nashua River	MA81-09	("South Branch" Nashua River) Clinton WWTP discharge, Clinton to confluence with North Nashua River, Lancaster.	1.8	MILES	Escherichia coli	
					Phosphorus (Total)	
Nissitissit River	MA81-21	New Hampshire state line, Pepperell to confluence with Nashua River, Pepperell.	4.6	MILES	Lack of a coldwater assemblage	
Nonacoicus Brook	MA81-17	Outlet Plow Shop Pond, Ayer to confluence with Nashua River, Ayer/Shirley.	1.4	MILES	Oxygen, Dissolved	
North Nashua River	MA81-01	Outlet Snows Millpond, Fitchburg to Fitchburg Paper Company Dam #1, Fitchburg.	1.7	MILES	Escherichia coli	
North Nashua River	MA81-02	Fitchburg Paper Company Dam #1, Fitchburg to Fitchburg East WWTP outfall, Leominster.	6.9	MILES	Ambient Bioassays -- Chronic Aquatic Toxicity	
					Aquatic Macroinvertebrate Bioassessments	
					Escherichia coli	
North Nashua River	MA81-03	Fitchburg East WWTP outfall, Leominster to Leominster WWTP outfall, Leominster.	1.6	MILES	Escherichia coli	
North Nashua River	MA81-04	Leominster WWTP outfall, Leominster to confluence with Nashua River, Lancaster.	10.4	MILES	Escherichia coli	
					Taste and Odor	
Partridge Pond	MA81098	Westminster	25	ACRES	(Non-Native Aquatic Plants*)	
					Aquatic Plants (Macrophytes)	
					Turbidity	

Massachusetts Category 5 Waters
"Waters requiring a TMDL"

NAME	SEGMENT ID	DESCRIPTION	SIZE	UNITS	IMPAIRMENT CAUSE	EPA TMDL NO.
Plow Shop Pond	MA81103	Ayer	29	ACRES	(Non-Native Aquatic Plants*)	
					Aquatic Plants (Macrophytes)	
					Arsenic	
					Chromium (total)	
					Mercury in Fish Tissue	
					Polycyclic Aromatic Hydrocarbons (PAHs) (Aquatic Ecosystems)	
					Sediment Bioassays -- Chronic Toxicity Freshwater	
Squannacook River	MA81-18	Confluence Mason and Willard brooks, Townsend to Hollingsworth and Vose Dam, Groton/Shirley. (through Harbor Pond formerly segment MA81054)	12.6	MILES	Escherichia coli	
					Lack of a coldwater assemblage	
					pH, Low	
					Temperature, water	
Still River	MA81-60	Headwaters, Lancaster to Route 117, Bolton (formerly the upper portion of MA81-15).	0.6	MILES	Escherichia coli	
Unnamed Tributary	MA81-35	AKA-"Lower Chaffin Brook" - Outlet Unionville Pond, Holden to confluence with Quinepoxet River, Holden.	0.5	MILES	Aquatic Macroinvertebrate Bioassessments	
					Oxygen, Dissolved	
Unnamed Tributary	MA81-61	Unnamed tributary to the North Nashua River, locally considered a portion of Wekepeke Brook, from the outlet of Bartlett Pond to the confluence with the North Nashua River, Lancaster.	0.3	MILES	Escherichia coli	
North Coastal						
Bass River	MA93-07	Headwaters west of Wenham Lake, Beverly to the outlet of "Lower Shoe Pond" north of Route 62, Beverly.	2.107	MILES	(Fish-Passage Barrier*)	
					Turbidity	
Beaver Brook	MA93-37	Headwaters west of Route 95, Danvers to inlet Mill Pond, Danvers.	2.687	MILES	Oxygen, Dissolved	
Beaverdam Brook	MA93-30	Headwaters west of Main Street, Lynnfield to confluence with Saugus River (Reedy Meadow), Lynnfield.	1.461	MILES	Fecal Coliform	50120
					Oxygen, Dissolved	
Cape Pond	MA93011	Rockport	42.45	ACRES	Turbidity	
Cat Brook	MA93-29	Headwaters east of Route 128, Manchester to confluence with Manchester Harbor (Route 127), Manchester.	1.679	MILES	Fecal Coliform	50120
					pH, Low	
Flax Pond	MA93023	Lynn	55.449	ACRES	(Non-Native Aquatic Plants*)	
					Chlordane	
					DDT	
					Excess Algal Growth	
					Turbidity	

Massachusetts Category 5 Waters
"Waters requiring a TMDL"

NAME	SEGMENT ID	DESCRIPTION	SIZE	UNITS	IMPAIRMENT CAUSE	EPA TMDL NO.
Floating Bridge Pond	MA93024	Lynn	11.905	ACRES	Excess Algal Growth	
					Phosphorus (Total)	
					Turbidity	
Forest River	MA93-10	Approximately 0.4 miles upstream of Loring Avenue, Salem to Salem Harbor, Salem.	0.026	SQUARE MILES	Dissolved oxygen saturation	
Foster Pond	MA93026	Swampscott	4.619	ACRES	DDT	
Gloucester Harbor	MA93-18	The waters landward of an imaginary line drawn between Mussel Point and the tip of the Dog Bar Breakwater, Gloucester excluding the Annisquam River.	2.325	SQUARE MILES	Combined Biota/Habitat Bioassessments	
					Fecal Coliform	50122
					Oxygen, Dissolved	
Goldthwait Brook	MA93-05	Outlet Cedar Pond, Peabody to confluence with Proctor Brook, Peabody.	3.291	MILES	(Alteration in stream-side or littoral vegetative covers*)	
					(Debris/Floatables/Trash*)	
					(Low flow alterations*)	
					Fecal Coliform	50120
					Foam/Flocs/Scum/Oil Slicks	
					Oxygen, Dissolved	
					Phosphorus (Total)	
Hawkes Pond	MA93032	Lynnfield/Saugus	65.172	ACRES	Turbidity	
Lake Quannapowitt	MA93060	Wakefield	246.002	ACRES	(Non-Native Aquatic Plants*)	
					DDT	
					Excess Algal Growth	
					Turbidity	
Lily Pond	MA93039	Gloucester	23.744	ACRES	Excess Algal Growth	
					Nutrient/Eutrophication Biological Indicators	
					Turbidity	
Mill River	MA93-31	From headwaters in wetlands north of Salem Street, Wakefield to confluence with Saugus River, Wakefield.	1.993	MILES	Fecal Coliform	50120
					Oxygen, Dissolved	
					Total Suspended Solids (TSS)	
					Turbidity	
North River	MA93-42	Downstream of Route 114 bridge (Proctor Brook becomes North River at this bridge), Salem to confluence with Danvers River, Salem (formerly part of MA93-06).	0.145	SQUARE MILES	Ammonia (Un-ionized)	
					Dissolved oxygen saturation	
					Fecal Coliform	50121

Massachusetts Category 5 Waters
"Waters requiring a TMDL"

NAME	SEGMENT ID	DESCRIPTION	SIZE	UNITS	IMPAIRMENT CAUSE	EPA TMDL NO.
Pillings Pond	MA93056	Lynnfield	90.314	ACRES	Chlorophyll-a	
					Dissolved oxygen saturation	
					Excess Algal Growth	
					Oxygen, Dissolved	
					Phosphorus (Total)	
					Secchi disk transparency	
Proctor Brook	MA93-39	Outlet of small pond in wetland north of Downing Road, Peabody to Grove/Goodhue Street bridge, Salem (formerly part of MA93-06).	2.948	MILES	(Debris/Floatables/Trash*)	
					Aquatic Macroinvertebrate Bioassessments	
					Fecal Coliform	50120
					Foam/Flocs/Scum/Oil Slicks	
					Nitrogen (Total)	
					Phosphorus (Total)	
					Sedimentation/Siltation	
					Taste and Odor	
Proctor Brook	MA93-40	Grove/Goodhue Street bridge, Salem to Route 114 culvert, Salem (formerly part of MA93-06).	0.005	SQUARE MILES	(Debris/Floatables/Trash*)	
					Fecal Coliform	50123
					Foam/Flocs/Scum/Oil Slicks	
					Taste and Odor	
Salem Harbor	MA93-54	Waters landward of an imaginary line from Naugus Head, Marblehead to the northwest point of Bakers Island, Salem to Hospital Point, Beverly to Juniper Point, Salem (excluding Forest River) (formerly segment MA93-21 Salem Harbor and a portion of segmentMA93-25 Salem Sound [waterbody code 93907])	4.91	SQUARE MILES	Estuarine Bioassessments	
					Fecal Coliform	50122
Saugus River	MA93-34	Headwaters, outlet of Lake Quannapowitt, Wakefield (thru Reedy Meadow) to Lynn Water & Sewer Commission diversion canal, Wakefield/Lynnfield (canal diverts to Hawks Pond) (formerly part of segment MA93-13).	3.083	MILES	(Fish-Passage Barrier*)	
					(Physical substrate habitat alterations*)	
					Aquatic Plants (Macrophytes)	
					Excess Algal Growth	
					Fecal Coliform	50120
					Nitrogen (Total)	
					Phosphorus (Total)	
					Turbidity	

Massachusetts Category 5 Waters
"Waters requiring a TMDL"

NAME	SEGMENT ID	DESCRIPTION	SIZE	UNITS	IMPAIRMENT CAUSE	EPA TMDL NO.
Saugus River	MA93-43	Saugus Iron Works, Bridge Street, Saugus to Lincoln Avenue/Boston Street, Saugus/Lynn (formerly part of segment 93-14).	0.038	SQUARE MILES	(Other flow regime alterations*)	
					Fecal Coliform	50122
					Oil and Grease	
					Temperature, water	
Saugus River	MA93-44	Lincoln Avenue/Boston Street, Saugus/Lynn to mouth (east of Route 1A) at Lynn Harbor, Lynn/Revere (formerly part of segment 93-14).	0.363	SQUARE MILES	(Other flow regime alterations*)	
					Fecal Coliform	50122
					Oil and Grease	
					Temperature, water	
Strangman Pond	MA93076	Gloucester	3.341	ACRES	Aquatic Plants (Macrophytes)	
					Excess Algal Growth	
					Turbidity	
Unnamed Tributary	MA93-51	Unnamed tributary locally known as "Town Line Brook", from Route 99, Malden to the confluence with the Pines River, Revere.	0.017	SQUARE MILES	(Alteration in stream-side or littoral vegetative covers*)	
					(Debris/Floatables/Trash*)	
					(Other flow regime alterations*)	
					(Physical substrate habitat alterations*)	
					Fecal Coliform	50123
					Taste and Odor	
Upper Banjo Pond	MA93080	Gloucester	10.531	ACRES	Aquatic Plants (Macrophytes)	
					Turbidity	
West Pond	MA93089	Gloucester	7.142	ACRES	Chlorophyll-a	
					Excess Algal Growth	
					Phosphorus (Total)	
					Secchi disk transparency	
Parker						
Baldpate Pond	MA91001	Boxford	60	ACRES	(Non-Native Aquatic Plants*)	
					Mercury in Fish Tissue	
					Oxygen, Dissolved	
Eagle Hill River	MA91-06	Headwaters near Town Farm Road, Ipswich to the mouth at Plum Island Sound, Ipswich.	0.35	SQUARE MILES	Fecal Coliform	
Egypt River	MA91-14	East of Jewett Hill (Latitude 42:42:23.40, Longitude 70:51:47.58 DMS), Ipswich to confluence with Muddy Run and Rowley River, Rowley/Ipswich.	0.01	SQUARE MILES	Fecal Coliform	
Little River	MA91-11	Scotland Road/Parker Street, Newbury/Newburyport to confluence with Parker River, Newbury.	0.09	SQUARE MILES	Fecal Coliform	

Massachusetts Category 5 Waters
"Waters requiring a TMDL"

NAME	SEGMENT ID	DESCRIPTION	SIZE	UNITS	IMPAIRMENT CAUSE	EPA TMDL NO.
Mill River	MA91-08	Headwaters - Outlet of small unnamed pond between Route 95 and Rowley Road, Boxford to Route 1, Rowley/Newbury (through Upper Mill Pond formerly segment MA91015 and Lower Mill Pond formerly segment MA91008).	6.9	MILES	(Non-Native Aquatic Plants*)	
					Aquatic Macroinvertebrate Bioassessments	
					Aquatic Plants (Macrophytes)	
					Excess Algal Growth	
Mill River	MA91-09	Route 1, Rowley/Newbury to confluence with Parker River, Newbury.	0.09	SQUARE MILES	Fecal Coliform	
Paine Creek	MA91-03	Headwaters to confluence with Eagle Hill River, Ipswich.	0.06	SQUARE MILES	Fecal Coliform	
Parker River	MA91-02	Central Street, Newbury to mouth at Plum Island Sound, Newbury.	0.6	SQUARE MILES	Fecal Coliform	
Pentucket Pond	MA91010	Georgetown	92	ACRES	(Non-Native Aquatic Plants*)	
					Fecal Coliform	
					Mercury in Fish Tissue	
Plum Island River	MA91-15	From "high sandy" sandbar just north of the confluence with Pine Island Creek, Newbury to confluence with Plum Island Sound, Newbury.	0.39	SQUARE MILES	Fecal Coliform	
Plum Island Sound	MA91-12	From the mouth of both the Parker River and Plum Island River, Newbury to the Atlantic Ocean, Ipswich (Includes Ipswich Bay).	4.44	SQUARE MILES	Fecal Coliform	
Rock Pond	MA91012	Georgetown	49	ACRES	Mercury in Fish Tissue	
Rowley River	MA91-05	Confluence with Egypt River and Muddy Run, Rowley/Ipswich to mouth at Plum Island Sound, Rowley/Ipswich.	0.27	SQUARE MILES	Fecal Coliform	
Quinebaug						
Alum Pond	MA41001	Sturbridge	198	ACRES	Oxygen, Dissolved	
Cady Brook	MA41-05	Headwaters, outlet of Glen Echo Lake, Charlton to Charlton City WWTP outfall, Charlton.	1.5	MILES	(Low flow alterations*)	
					Ambient Bioassays -- Chronic Aquatic Toxicity	
					Fecal Coliform	
Cady Brook	MA41-06	Charlton City WWTP outfall, Charlton to confluence with Quinebaug River, Southbridge.	5.1	MILES	(Low flow alterations*)	
					Nutrient/Eutrophication Biological Indicators	
Cohasse Brook	MA41-12	From the outlet of Cohasse Brook Reservoir, Southbridge through Wells Pond (formerly pond segment MA41053) to the confluence with the Quinebaug River, Southbridge.	2.7	MILES	Aquatic Macroinvertebrate Bioassessments	
					Escherichia coli	
					Sedimentation/Siltation	
Glen Echo Lake	MA41017	Charlton	115	ACRES	Oxygen, Dissolved	
Hatchet Brook	MA41-14	From the outlet of No. 3 Reservoir, Southbridge to the confluence with the Quinebaug River, Southbridge.	1.3	MILES	Escherichia coli	

Massachusetts Category 5 Waters
"Waters requiring a TMDL"

NAME	SEGMENT ID	DESCRIPTION	SIZE	UNITS	IMPAIRMENT CAUSE	EPA TMDL NO.
McKinstry Brook	MA41-13	Headwaters, east of Brookfield Road, Charlton (excluding intermittent portion) to the confluence with the Quinebaug River, Southbridge.	7.3	MILES	(Debris/Floatables/Trash*)	
					Escherichia coli	
Morse Pond	MA41033	Southbridge	41	ACRES	Aquatic Plants (Macrophytes)	
					Oxygen, Dissolved	
Pistol Pond	MA41057	Sturbridge	5	ACRES	Aquatic Plants (Macrophytes)	
					Oxygen, Dissolved	
					Secchi disk transparency	
Quinebaug River	MA41-01	Outlet Hamilton Reservoir, Holland, to Sturbridge WWTP outfall, Sturbridge (excluding Holland Pond segment MA41022 and East Brimfield Reservoir segment MA41014).	8.2	MILES	Ambient Bioassays -- Chronic Aquatic Toxicity	
					Fecal Coliform	
					Fishes Bioassessments	
					Lack of a coldwater assemblage	
					Mercury in Fish Tissue	
Quinebaug River	MA41-02	Sturbridge WWTP outfall, Sturbridge to confluence with Cady Brook, Southbridge.	6.5	MILES	(Debris/Floatables/Trash*)	
					Excess Algal Growth	
					Turbidity	
Quinebaug River	MA41-03	Southbridge WWTP outfall, Southbridge to dam just upstream of West Dudley Road, Dudley.	2.2	MILES	(Debris/Floatables/Trash*)	
					(Physical substrate habitat alterations*)	
					Fecal Coliform	
					Other	
					Oxygen, Dissolved	
					Taste and Odor	
Quinebaug River	MA41-04	From dam just upstream of West Dudley Road, Dudley to Connecticut state line, Dudley.	2.2	MILES	Fecal Coliform	
Quinebaug River	MA41-09	From confluence with Cady Brook, Southbridge to Southbridge WWTP outfall, Southbridge.	1.3	MILES	(Debris/Floatables/Trash*)	
					Ambient Bioassays -- Chronic Aquatic Toxicity	
					Aquatic Macroinvertebrate Bioassessments	
					Turbidity	
Sibley Pond	MA41047	North Basin, Charlton	22	ACRES	Aquatic Plants (Macrophytes)	
					Oxygen, Dissolved	
					Turbidity	
Sibley Pond	MA41048	South Basin, Charlton	19	ACRES	Aquatic Plants (Macrophytes)	
					Oxygen, Dissolved	
					Turbidity	

Massachusetts Category 5 Waters
"Waters requiring a TMDL"

NAME	SEGMENT ID	DESCRIPTION	SIZE	UNITS	IMPAIRMENT CAUSE	EPA TMDL NO.
Unnamed Tributary	MA41-16	Unnamed tributary to Mill Brook, headwaters, outlet Sherman Pond, Brimfield to confluence with Mill Brook, Brimfield.	1.2	MILES	Aquatic Macroinvertebrate Bioassessments	
					Escherichia coli	
					Oxygen, Dissolved	
					Sedimentation/Siltation	
Shawsheen						
Ames Pond	MA83001	Tewksbury	76.47	ACRES	Mercury in Fish Tissue	
Ballardvale Impoundment	MA83011	Andover (Lowell Junction Pond)	35.292	ACRES	(Non-Native Aquatic Plants*)	
					Aquatic Plants (Macrophytes)	
					Mercury in Fish Tissue	
Butterfield Pond	MA83003	Burlington/Lexington	2.968	ACRES	Aquatic Plants (Macrophytes)	
					Turbidity	
Elm Brook	MA83-05	Headwaters, Lincoln to confluence with Shawsheen River, Bedford.	5.043986	MILES	(Physical substrate habitat alterations*)	
					Fecal Coliform	2587
					Turbidity	
Fosters Pond	MA83005	Andover/Wilmington	109.412	ACRES	(Non-Native Aquatic Plants*)	
					Mercury in Fish Tissue	
					Oxygen, Dissolved	
Hussey Pond	MA83009	Andover	1.383	ACRES	Excess Algal Growth	
Long Pond	MA83010	Tewksbury	42.483	ACRES	Chlorophyll-a	
					Excess Algal Growth	
					Oxygen, Dissolved	
					Phosphorus (Total)	
					Secchi disk transparency	
Pomps Pond	MA83014	Andover	24.635	ACRES	(Non-Native Aquatic Plants*)	
					Mercury in Fish Tissue	
Rabbit Pond	MA83015	Andover	1.857	ACRES	Turbidity	
Rogers Brook	MA83-04	From outlet of unnamed impoundment upstream of Morton Street, Andover (Prior to 1997 cycle listed as "Headwaters Billerica...") to confluence with Shawsheen River, Andover.	1.299	MILES	(Physical substrate habitat alterations*)	
					Fecal Coliform	2587
					Turbidity	
Shawsheen River	MA83-01	Summer Street (historcally listed as Maguire Road) to confluence with Spring Brook, Bedford.	1.625	MILES	(Physical substrate habitat alterations*)	
					Fecal Coliform	2587
					Oxygen, Dissolved	
					Sedimentation/Siltation	
Shawsheen River	MA83-08	Headwater, north of Folly Pond and North Great Road, Lincoln to Summer Street, Bedford.	2.091	MILES	Fecal Coliform	2587
					Physical substrate habitat alterations	

Massachusetts Category 5 Waters
"Waters requiring a TMDL"

NAME	SEGMENT ID	DESCRIPTION	SIZE	UNITS	IMPAIRMENT CAUSE	EPA TMDL NO.
Shawsheen River	MA83-17	Confluence with Spring Brook, Bedford to the Burlington Water Department's surface water intake, Billerica. (Formerly part of segment MA83-02, changed for 2004 cycle)	5.679	MILES	Fecal Coliform	2587
					Oxygen, Dissolved	
Shawsheen River	MA83-18	Burlington Water Department's surface water intake, Billerica to the Ballardvale Impoundment dam, Andover. (Formerly part of segment MA83-02, changed for 2004 cycle)	10.093	MILES	Fecal Coliform	2587
					Mercury in Fish Tissue	
					Oxygen, Dissolved	
Shawsheen River	MA83-19	Outlet of Ballardvale Impoundment, Andover to the confluence with the Merrimack River, Lawrence. (Formerly part of segment MA83-02 and all of MA83-03, changed for 2004 cycle)	8.436	MILES	Fecal Coliform	2587
					Oxygen, Dissolved	
Unnamed Tributary	MA83-15	Unnamed tributary to Meadow Brook, also known as "Pinnacle Brook" - from small wetland east of Route 93, Andover, to confluence with Meadow Brook, Tewksbury (includes intermittent portion).	2.1	MILES	Chloride	
					Fecal Coliform	2587
Unnamed Tributary	MA83-20	Unnamed intermittent tributary to the Shawsheen River, from Dascomb Road, Andover to confluence with Shawsheen River, Tewksbury.	0.9	MILES	Chloride	
South Coastal						
Aaron River	MA94-28	Outlet Aaron River Reservoir, Cohasset to flow control structure near Beechwood Street, Cohasset.	1.004	MILES	(Fish-Passage Barrier*)	
					(Non-Native Aquatic Plants*)	
					Excess Algal Growth	
Billington Sea	MA94007	Plymouth	262.722	ACRES	Excess Algal Growth	
					Turbidity	
Bluefish River	MA94-30	Saltmarsh north of Harrison Street, Duxbury to mouth at Duxbury Bay, Duxbury.	0.065	SQUARE MILES	Fecal Coliform	
Bound Brook	MA94-18	Flow control structure near Beechwood Street, Cohasset to outlet Hunters Pond, Scituate.	2.227	MILES	(Fish-Passage Barrier*)	
					Turbidity	
Cohasset Cove	MA94-32	The waters south of a line drawn from the Bassing Beach jetty, Scituate westerly to the opposite shore, Cohasset excluding Baileys Creek and The Gulf.	0.087	SQUARE MILES	Fecal Coliform	
Cohasset Harbor	MA94-01	The waters south of a line drawn from the northwestern point of Scituate Neck, Scituate to just north of Quarry Point, Cohasset not including Cohasset Cove, Cohasset/Scituate.	0.695	SQUARE MILES	Fecal Coliform	
Crossman Pond	MA94032	Kingston	12.706	ACRES	Aquatic Plants (Macrophytes)	

Massachusetts Category 5 Waters
"Waters requiring a TMDL"

NAME	SEGMENT ID	DESCRIPTION	SIZE	UNITS	IMPAIRMENT CAUSE	EPA TMDL NO.
Drinkwater River	MA94-21	From Whiting Street, Hanover through Forge Pond to the inlet of Factory Pond, Hanover.	3.493	MILES	Excess Algal Growth	
					Fecal Coliform	
					Mercury in Fish Tissue	
					Oxygen, Dissolved	
					Phosphorus (Total)	
					Secchi disk transparency	
Duxbury Bay	MA94-15	The waters north and west of a line from Saquish Head to the tip of Plymouth Beach and from there to High Cliff, Plymouth excluding Back River and Bluefish River, Duxbury and Jones River, Kingston.	12.694	SQUARE MILES	Fecal Coliform	
Ellisville Harbor	MA94-34	Plymouth	0.012	SQUARE MILES	Fecal Coliform	
Factory Pond	MA94175	Hanson/Hanover	51.395	ACRES	Mercury in Fish Tissue	
Forge Pond	MA94037	Hanover	15.907	ACRES	(Debris/Floatables/Trash*)	
					(Non-Native Aquatic Plants*)	
					Chlorophyll-a	
					Dissolved oxygen saturation	
					Excess Algal Growth	
					Fecal Coliform	
					Phosphorus (Total)	
					Secchi disk transparency	
Foundry Pond	MA94038	Kingston	7.235	ACRES	Turbidity	
French Stream	MA94-03	From the headwaters on the southeast side of the South Weymouth Naval Air Station, Rockland through Studleys Pond to the confluence with Drinkwater River, Hanover.	6.124887	MILES	Fecal Coliform	
					Fishes Bioassessments	
					Oxygen, Dissolved	
					Phosphorus (Total)	
					Whole Effluent Toxicity (WET)	
Furnace Pond	MA94043	Pembroke	102.653	ACRES	Oxygen, Dissolved	
Green Harbor	MA94-11	From the tidegates at Route 139, Marshfield to the mouth of the harbor at Massachusetts Bay/Cape Cod Bay, Marshfield.	0.078	SQUARE MILES	Fecal Coliform	
Green Harbor River	MA94-10	Outlet Black Mountain Pond, Marshfield to the tidegate at Route 139, Marshfield.	5.648	MILES	(Fish-Passage Barrier*)	
					(Other flow regime alterations*)	
					Excess Algal Growth	
					Turbidity	

Massachusetts Category 5 Waters
"Waters requiring a TMDL"

NAME	SEGMENT ID	DESCRIPTION	SIZE	UNITS	IMPAIRMENT CAUSE	EPA TMDL NO.
Herring River	MA94-07	Outlet Old Oaken Bucket Pond, Scituate to confluence with North River, Scituate.	0.077	SQUARE MILES	Fecal Coliform	
Indian Head River	MA94-04	Outlet of Factory Pond, Hanover/Hanson to Curtis Crossing Dam (also called Ludhams Ford Dam) west of Elm Street, Hanover/Pembroke.	2.914	MILES	Mercury in Fish Tissue	
					Oxygen, Dissolved	
					Phosphorus (Total)	
Indian Head River	MA94-22	From Curtis Crossing Dam (also called Ludhams Ford Dam) west of Elm Street, Hanover/Pembroke to confluence with Herring Brook, (forming headwaters of North River) Hanover/Pembroke.	0.883	MILES	Mercury in Fish Tissue	
Iron Mine Brook	MA94-24	Headwaters north of Route 139, Hanover to the confluence with Indian Head River, Hanover.	1.393	MILES	Fecal Coliform	
Jones River	MA94-12	Headwaters outlet Silver Lake, Kingston to dam near Wapping Road, Kingston.	4.057	MILES	(Fish-Passage Barrier*)	
					(Low flow alterations*)	
					Aquatic Plants (Macrophytes)	
					Excess Algal Growth	
					Oxygen, Dissolved	
					Turbidity	
Jones River	MA94-13	From dam near Wapping Road, Kingston to dam at Elm Street, Kingston.	0.93	MILES	(Low flow alterations*)	
					Aquatic Plants (Macrophytes)	
					Excess Algal Growth	
					Oxygen, Dissolved	
					Turbidity	
Jones River	MA94-14	From dam at Elm Street, Kingston to mouth at Duxbury Bay, Kingston.	0.089	SQUARE MILES	Fecal Coliform	
Lily Pond	MA94179	Cohasset	50.503	ACRES	(Fish-Passage Barrier*)	
					(Non-Native Aquatic Plants*)	
					Secchi disk transparency	
Musquashcut Pond	MA94-33	Scituate (formerly reported as MA94105)	0.109	SQUARE MILES	(Other flow regime alterations*)	
					Chlorophyll-a	
					Dissolved oxygen saturation	
					Excess Algal Growth	
					Fecal Coliform	
					Phosphorus (Total)	
North River	MA94-05	Confluence of Indian Head River and Herring Brook, Hanover/Pembroke to Route 3A (Main Street), Marshfield/Scituate.	0.302	SQUARE MILES	Fecal Coliform	
					Mercury in Fish Tissue	

Massachusetts Category 5 Waters
"Waters requiring a TMDL"

NAME	SEGMENT ID	DESCRIPTION	SIZE	UNITS	IMPAIRMENT CAUSE	EPA TMDL NO.
North River	MA94-06	Route 3A (Main Street), Marshfield/Scituate to confluence with South River/Massachusetts Bay, Scituate.	0.555	SQUARE MILES	Fecal Coliform	
Old Oaken Bucket Pond	MA94113	Scituate	8.354	ACRES	(Non-Native Aquatic Plants*)	
					Phosphorus (Total)	
Plymouth Harbor	MA94-16	The waters south of a line drawn from the tip of Plymouth Beach to High Cliff, Plymouth.	2.53	SQUARE MILES	Fecal Coliform	
					Nutrient/Eutrophication Biological Indicators	
Russell Millpond	MA94132	Plymouth	41.776	ACRES	(Fish-Passage Barrier*)	
					Excess Algal Growth	
Scituate Harbor	MA94-02	The waters west of a line across the mouth of Scituate Harbor, from the elbow of the jetty southeast off Lighthouse Point to the jetty northeast of the U.S. Coast Guard Station, Scituate.	0.322	SQUARE MILES	Fecal Coliform	
Second Herring Brook	MA94-31	From the Second Herring Brook Pond Dam, Norwell to the confluence with the North River, Norwell.	0.003	SQUARE MILES	Fecal Coliform	
South River	MA94-09	From dam at Main Street, Marshfield to confluence with North River/Massachusetts Bay, Marshfield/Scituate.	0.625	SQUARE MILES	Fecal Coliform	
Studleys Pond	MA94151	Rockland	25.471	ACRES	Fecal Coliform	
The Gulf	MA94-19	Headwaters, outlet Hunters Pond, Scituate to confluence with Cohasset Cove just north of Border Street, Cohasset.	0.126	SQUARE MILES	Fecal Coliform	
Third Herring Brook	MA94-27	Headwaters, outlet of Jacobs Pond, Norwell/Hanover to confluence with North River, Norwell/Hanover.	5.318	MILES	Fecal Coliform	
Wampatuck Pond	MA94168	Hanson	62.879	ACRES	(Non-Native Aquatic Plants*)	
					Chlorophyll-a	
					Dissolved oxygen saturation	
					Excess Algal Growth	
					Phosphorus (Total)	
					Secchi disk transparency	
Taunton						
Ames Long Pond	MA62001	Stoughton/Easton	87.694	ACRES	(Non-Native Aquatic Plants*)	
					Aquatic Plants (Macrophytes)	
					Turbidity	
Big Bearhole Pond	MA62011	Taunton	37.68	ACRES	(Non-Native Aquatic Plants*)	
					Oxygen, Dissolved	

Massachusetts Category 5 Waters
"Waters requiring a TMDL"

NAME	SEGMENT ID	DESCRIPTION	SIZE	UNITS	IMPAIRMENT CAUSE	EPA TMDL NO.
Cabot Pond	MA62029	Mansfield	8.65	ACRES	Dioxin (including 2,3,7,8-TCDD)	
					Pentachlorophenol (PCP)	
Cain Pond	MA62030	Taunton	2.766	ACRES	Oxygen, Dissolved	
					Turbidity	
Fulton Pond	MA62075	Mansfield	9.328	ACRES	Dioxin (including 2,3,7,8-TCDD)	
					Pentachlorophenol (PCP)	
Hobart Pond	MA62090	Whitman	9.05	ACRES	(Non-Native Aquatic Plants*)	
					Turbidity	
Hodges Pond	MA62091	(Kingman Pond) Mansfield	6.972	ACRES	Dioxin (including 2,3,7,8-TCDD)	
					Pentachlorophenol (PCP)	
Island Grove Pond	MA62094	Abington	30.804	ACRES	(Non-Native Aquatic Plants*)	
					Excess Algal Growth	
					Turbidity	
Lake Sabbatia	MA62166	Taunton	265.419	ACRES	(Non-Native Aquatic Plants*)	
					Oxygen, Dissolved	
Matfield River	MA62-32	Confluence of Beaver Brook and the Salisbury Plain River, East Bridgewater to the confluence with the Town River and the Taunton River, Bridgewater.	6.662	MILES	Aquatic Macroinvertebrate Bioassessments	
					Excess Algal Growth	
					Fecal Coliform	40308
					Oxygen, Dissolved	
					Phosphorus (Total)	
					Taste and Odor	
Monponsett Pond	MA62119	[West Basin] Halifax/Hanson	282.79	ACRES	(Non-Native Aquatic Plants*)	
					Excess Algal Growth	
					Phosphorus (Total)	
					Secchi disk transparency	
Muddy Cove Brook Pond	MA62124	Dighton	23.243	ACRES	Excess Algal Growth	
					Turbidity	
Norton Reservoir	MA62134	Norton/Mansfield	556.491	ACRES	(Non-Native Aquatic Plants*)	
					Dioxin (including 2,3,7,8-TCDD)	
					Excess Algal Growth	
					Pentachlorophenol (PCP)	
					Phosphorus (Total)	
					Turbidity	
Robinson Brook	MA62-14	Outlet Hersey Pond, Foxborough to confluence with Rumford River, Mansfield.	1.855	MILES	(Physical substrate habitat alterations*)	
					Aquatic Macroinvertebrate Bioassessments	

Massachusetts Category 5 Waters
"Waters requiring a TMDL"

NAME	SEGMENT ID	DESCRIPTION	SIZE	UNITS	IMPAIRMENT CAUSE	EPA TMDL NO.
Rumford River	MA62-39	Outlet Gavins Pond, Sharon to inlet Norton Reservoir, Mansfield (formerly part of segment MA62-15).	8.01	MILES	(Physical substrate habitat alterations*)	
					Aquatic Macroinvertebrate Bioassessments	
					Dioxin (including 2,3,7,8-TCDD)	
					Fecal Coliform	40308
					Fishes Bioassessments	
					Pentachlorophenol (PCP)	
					Sedimentation/Siltation	
Salisbury Brook	MA62-08	From the outlet of Cross Pond, Brockton to the confluence with Trout Brook forming the Salibury Plain River, Brockton.	2.542	MILES	(Physical substrate habitat alterations*)	
					Fecal Coliform	40308
					Sedimentation/Siltation	
Salisbury Plain River	MA62-05	From the confluence of Trout and Salisbury brooks, Brockton to the Brockton Advanced Water Reclamation Facility (AWRF) discharge, Brockton.	2.437	MILES	(Physical substrate habitat alterations*)	
					Fecal Coliform	40308
					Oxygen, Dissolved	
					Sedimentation/Siltation	
Salisbury Plain River	MA62-06	From the Brockton Advanced Water Reclamation Facility (AWRF) discharge, Brockton to the confluence with Beaver Brook forming the Matfield River, East Bridgewater.	2.262	MILES	(Debris/Floatables/Trash*)	
					Aquatic Macroinvertebrate Bioassessments	
					Excess Algal Growth	
					Fecal Coliform	40308
					Oxygen, Dissolved	
					Phosphorus (Total)	
					Taste and Odor	
					Turbidity	
Sassaquin Pond	MA62232	New Bedford (formerly reported as MA95129).	35.757	ACRES	Excess Algal Growth	
					Fecal Coliform	
					Taste and Odor	
Shumatuscacant River	MA62-33	From a wetland just west of Vineyard Road, Abington to the confluence with Poor Meadow Brook, Hanson.	8.504	MILES	(Physical substrate habitat alterations*)	
					Fecal Coliform	40308
					Oxygen, Dissolved	
					Sedimentation/Siltation	
Stetson Pond	MA62182	Pembroke	88.209	ACRES	(Non-Native Aquatic Plants*)	
					Oxygen, Dissolved	
					Phosphorus (Total)	
Taunton River	MA62-03	Berkley Bridge, Dighton/Berkley to confluence with Assonet River at a line from Sandy Point, Somerset northeasterly to the southwestern tip of Assonet Neck, Berkley.	0.924	SQUARE MILES	Fecal Coliform	40310
					Oxygen, Dissolved	

Massachusetts Category 5 Waters
"Waters requiring a TMDL"

NAME	SEGMENT ID	DESCRIPTION	SIZE	UNITS	IMPAIRMENT CAUSE	EPA TMDL NO.
Taunton River	MA62-04	Confluence with Assonet River at a line from Sandy Point, Somerset northeasterly to the southwestern tip of Assonet Neck, Berkley to mouth at Braga Bridge, Somerset/Fall River.	2.654	SQUARE MILES	Fecal Coliform	40310
					Fishes Bioassessments	
					Oxygen, Dissolved	
Trout Brook	MA62-07	Source northeast of Argyle Avenue and west of Conrail Line, Avon to the confluence with the Salisbury Brook forming the Salisbury Plain River, Brockton.	3.408	MILES	Fecal Coliform	40308
					Oxygen, Dissolved	
					Total Suspended Solids (TSS)	
					Turbidity	
Unnamed Tributary	MA62-42	Headwaters, south off Slab Bridge Road (in Cedar Swamp portion of Freetown-Fall River State Forest), Freetown to confluence with the Cedar Swamp River, Lakeville.	4.012	MILES	Aquatic Macroinvertebrate Bioassessments	
					Fishes Bioassessments	
Unnamed Tributary	MA62-48	Channel from Taunton Municipal Lighting Plant, Taunton to confluence with Taunton River, Taunton.	0.002	SQUARE MILES	(Other flow regime alterations*)	
					(Physical substrate habitat alterations*)	
					Aquatic Macroinvertebrate Bioassessments	
					Fishes Bioassessments	
					Temperature, water	
Wading River	MA62-47	Source in wetland north of West Street, Foxborough to Balcolm Street, Mansfield (due to error on 1987 Wrentham quad it appears segment includes part of Cocasset River, Foxborough) (formerly part of segment MA62-17)	4.158	MILES	Fecal Coliform	40307
					Oxygen, Dissolved	
Watson Pond	MA62205	Taunton	77.523	ACRES	(Non-Native Aquatic Plants*)	
					Excess Algal Growth	
					Oxygen, Dissolved	
					Phosphorus (Total)	
					Secchi disk transparency	
Woods Pond	MA62220	Middleborough	51.081	ACRES	(Non-Native Aquatic Plants*)	
					Turbidity	
Ten Mile						
Bungay River	MA52-06	Headwaters, outlet Greenwood Lake, North Attleborough to confluence with Ten Mile River, Attleboro.	5.083	MILES	Fecal Coliform	
Cargill Pond	MA52004	Plainville	1.563	ACRES	Turbidity	

Massachusetts Category 5 Waters
"Waters requiring a TMDL"

NAME	SEGMENT ID	DESCRIPTION	SIZE	UNITS	IMPAIRMENT CAUSE	EPA TMDL NO.
Central Pond	MA52006	Seekonk,MA/Pawtucket,RI/Providence,RI (size indicates portion in Massachusetts)	5.816	ACRES	Aquatic Plants (Macrophytes)	
					Dissolved oxygen saturation	
					Excess Algal Growth	
					Organic Enrichment (Sewage) Biological Indicators	
					Oxygen, Dissolved	
					Phosphorus (Total)	
Falls Pond, North Basin	MA52013	North Attleborough	54.093	ACRES	Excess Algal Growth	
					Nutrient/Eutrophication Biological Indicators	
					Oxygen, Dissolved	
					Phosphorus (Total)	
Fourmile Brook	MA52-10	Headwaters, outlet Manchester Pond Reservoir, Attleboro to inlet Orrs Pond, Attleboro.	0.992	MILES	Sedimentation/Siltation	
James V. Turner Reservoir	MA52022	Seekonk,MA/E. Providence,RI (size indicates portion in Massachusetts)	28.436	ACRES	Aquatic Plants (Macrophytes)	
					Dissolved oxygen saturation	
					Excess Algal Growth	
					Organic Enrichment (Sewage) Biological Indicators	
					Phosphorus (Total)	
Lake Como	MA52010	Attleboro/N. Attleborough	4.807	ACRES	(Non-Native Aquatic Plants*)	
					Excess Algal Growth	
					Turbidity	
Plain Street Pond	MA52032	Mansfield	12.231	ACRES	(Non-Native Aquatic Plants*)	
					Excess Algal Growth	
Sevenmile River	MA52-08	Outlet Orrs Pond, Attleboro to confluence with Ten Mile River, Pawtucket, Rhode Island.	3.402	MILES	Fecal Coliform	
Speedway Brook	MA52-05	(locally known as Thacher Brook) Headwaters, Attleboro to inlet of Dodgeville Pond (a Ten Mile River impoundment), Attleboro.	0.9	MILES	(Alteration in stream-side or littoral vegetative covers*)	
					(Habitat Assessment (Streams)*)	
					Aquatic Macroinvertebrate Bioassessments	
					Fecal Coliform	
					Other	
					Oxygen, Dissolved	
					Sedimentation/Siltation	
Ten Mile River	MA52-01	Headwaters, outlet Cargill Pond, Plainville to West Bacon Street, Plainville (through Fuller Pond formerly segment MA52016).	1.538	MILES	Other	

Massachusetts Category 5 Waters
"Waters requiring a TMDL"

NAME	SEGMENT ID	DESCRIPTION	SIZE	UNITS	IMPAIRMENT CAUSE	EPA TMDL NO.
Ten Mile River	MA52-02	West Bacon Street, Plainville to North Attleborough WWTP discharge, Attleboro (excluding 0.9 miles thru Falls Pond segment MA52013, but including thru Wetherells Pond formerly segment MA52041).	4.087	MILES	Excess Algal Growth	
					Fecal Coliform	
					Other	
					Phosphorus (Total)	
					Turbidity	
Ten Mile River	MA52-03	North Attleborough WWTP discharge, Attleboro to the MA/RI border near Central Avenue, Seekonk, MA/Pawtucket, RI (thru former segments; Farmers Pond MA52015, Mechanics Pond MA52027, Dodgeville Pond MA52011, and Hebronville Pond MA52020).	9.084	MILES	Aquatic Plants (Macrophytes)	
					Chlordane	
					Dissolved oxygen saturation	
					Excess Algal Growth	
					Fecal Coliform	
					Organic Enrichment (Sewage) Biological Indicators	
					Other	
					Oxygen, Dissolved	
					Phosphorus (Total)	
Westfield						
Ashley Brook	MA32-37	Headwaters (perennial portion), south of Hillside Road, Westfield to confluence with Jacks Brook, Westfield.	0.5	MILES	Escherichia coli	
Congamond Lakes	MA32021	[Middle Basin] Southwick	278.774	ACRES	(Eurasian Water Milfoil, Myriophyllum spicatum*)	
					Oxygen, Dissolved	
Congamond Lakes	MA32022	[North Basin] Southwick	46.052	ACRES	(Eurasian Water Milfoil, Myriophyllum spicatum*)	
					Oxygen, Dissolved	
Jacks Brook	MA32-39	Headwaters, east of Fowler Road, Westfield to inlet of Crane Pond/Little River, Westfield.	2.4	MILES	Escherichia coli	
Little River	MA32-08	Horton's Bridge, Westfield to confluence with Westfield River, Westfield.	5.386436	MILES	Escherichia coli	
					Fecal Coliform	
Little River	MA32-36	From the dam northwest of Gorge Road, Russell to Horton's Bridge, Westfield. (formerly part of segment MA32-26)	5.809	MILES	Combined Biota/Habitat Bioassessments	
					Escherichia coli	
Moose Meadow Brook	MA32-23	Source in wetland west of Bungy Mountain, Montgomery to confluence with Westfield River, Westfield.	8.175	MILES	Fecal Coliform	
					Turbidity	

Massachusetts Category 5 Waters
"Waters requiring a TMDL"

NAME	SEGMENT ID	DESCRIPTION	SIZE	UNITS	IMPAIRMENT CAUSE	EPA TMDL NO.
Pequot Pond	MA32055	Westfield/Southampton	155.002	ACRES	(Eurasian Water Milfoil, Myriophyllum spicatum*)	
					(Non-Native Aquatic Plants*)	
					Oxygen, Dissolved	
					Phosphorus (Total)	
Potash Brook	MA32-22	Source at outlet of Dunlap Pond in Blandford to confluence with Westfield River at village of Woronoco, Russell.	5.163059	MILES	Escherichia coli	
Powdermill Brook	MA32-09	Source, east of Pitcher Road, Montgomery to confluence with Westfield River, Westfield.	9.542397	MILES	Excess Algal Growth	
					Sedimentation/Siltation	
					Turbidity	
Westfield River	MA32-05	Confluence with Middle Branch Westfield River, Huntington to Route 20 bridge, Westfield.	17.837	MILES	Aquatic Macroinvertebrate Bioassessments	
					Excess Algal Growth	
					Taste and Odor	
					Turbidity	
Windsor Pond	MA32076	Windsor	46.598	ACRES	(Eurasian Water Milfoil, Myriophyllum spicatum*)	
					Mercury in Fish Tissue	42410
					Oxygen, Dissolved	

Appendix 1
Assessment Units and Integrated List Categories by Major Watershed

NAME	SEGMENT ID	DESCRIPTION	SIZE	UNITS	CATEGORY
Blackstone					
Aldrich Pond	MA51002	Sutton	2	ACRES	5
Arcade Pond	MA51003	Northbridge	20	ACRES	5
Arnolds Brook	MA51-32	Perennial portion only, from outlet of unnamed pond at Whitehall Way, Bellingham to confluence with Peters River, Bellingham.	1.7	MILES	5
Beaver Brook	MA51-07	Outlet of small unnamed impoundment north of Beth Israel School and Flag Street School, Worcester to confluence with Middle River, Worcester. (Includes underground portion)	2.9	MILES	5
Bell Pond	MA51009	Worcester	10	ACRES	3
Blackstone River	MA51-03	Confluence of Middle River and Mill Brook (downstream of the railroad spur bridge west of Tobias Boland Boulevard), Worcester to Fisherville Dam, Grafton. (through a portion of Fisherville Pond formerly segment MA51048)	10.4	MILES	5
Blackstone River	MA51-04	Fisherville Dam, Grafton to outlet Rice City Pond, Uxbridge. (through Riverdale Impoundment formerly segment MA51136 and Rice City Pond formerly segment MA51131)	8.8	MILES	5
Blackstone River	MA51-05	Outlet Rice City Pond, Uxbridge to the old Water Quality Monitor (at the Conrail Railroad trestle due north of Collins Drive), Millville.	9.1	MILES	5
Blackstone River	MA51-06	From the Water Quality Monitor, Millville to the Rhode Island border west of Route 122 (Main St.), Blackstone, MA/(Harris Avenue) North Smithfield RI.	3.8	MILES	5
Brierly Pond	MA51010	Millbury	18	ACRES	4A
Brooklawn Parkway Pond	MA51195	Shrewsbury	2	ACRES	3
Burncoat Park Pond	MA51012	Worcester	6	ACRES	5
Carpenter Reservoir	MA51015	Northbridge	78	ACRES	3
Cedar Swamp Brook	MA51-33	Headwaters, outlet Cedar Swamp, Uxbridge to confluence with Chockalog River, Douglas.	0.8	MILES	5
Center Brook	MA51-34	Outlet Mill Pond, Upton to confluence with West River, Upton.	2.8	MILES	2
Chase Pond	MA51017	Douglas	11	ACRES	3
Chockalog Pond	MA51018	Uxbridge	11	ACRES	3
Clark Reservoir	MA51022	Sutton	29	ACRES	3
Coal Mine Brook	MA51-27	Perennial portion, from unnamed road approximately 0.2 miles upstream from Plantation Street, Worcester to inlet of Lake Quinsigamond, Worcester.	0.4	MILES	5
Coes Reservoir	MA51024	Worcester	87	ACRES	4C
Cook Allen Brook	MA51-28	Headwaters, outlet Reservoir No. 5, Sutton to inlet Whitins Pond, Northbridge. (excluding Reservoir No. 4, segment MA51128)	2	MILES	5
Crane Pond	MA51030	Blackstone	1	ACRES	3
Crystal Lake	MA51031	Douglas	96	ACRES	3
Dark Brook	MA51-16	Outlet Eddy Pond, Auburn to confluence with Kettle Brook, Auburn. (through Auburn Pond formerly segment MA51004)	2.8	MILES	5
Dark Brook Pond	MA51034	Sutton	18	ACRES	3
Dark Brook Reservoir	MA51035	[South Basin] Auburn	58	ACRES	4C

Appendix 1
Assessment Units and Integrated List Categories by Major Watershed

NAME	SEGMENT ID	DESCRIPTION	SIZE	UNITS	CATEGORY
Dark Brook Reservoir	MA51036	[North Basin] Auburn	171	ACRES	4C
Doctors Pond	MA51194	Uxbridge	1	ACRES	3
Dorothy Pond	MA51039	Millbury	133	ACRES	4A
Dudley Pond	MA51041	Douglas	8	ACRES	3
Eddy Pond	MA51043	Auburn	99	ACRES	4A
Emerson Brook	MA51-29	Headwaters, outlet Lee Pond, Uxbridge to confluence with the Blackstone River, Uxbridge.	1.9	MILES	2
Fish Pond	MA51047	Northbridge	8	ACRES	5
Flint Pond	MA51050	[North Basin] Shrewsbury	92	ACRES	4A
Flint Pond	MA51188	[South Basin] Shrewsbury/Grafton/Worcester	173	ACRES	4A
Girard Pond	MA51053	Sutton	2	ACRES	4C
Green Hill Pond	MA51056	Worcester	29	ACRES	4A
Greene Brook	MA51-30	Headwaters, north of Linden Street, Douglas to confluence with Chockalog River, Douglas.	1.6	MILES	2
Hales Pond	MA51057	Wrentham	4	ACRES	3
Hathaway Pond	MA51059	Millbury/Sutton	8	ACRES	3
Hayes Pond	MA51060	Grafton	5	ACRES	5
Holden Reservoir 1	MA51063	Holden	124	ACRES	3
Holden Reservoir 2	MA51064	Holden	52	ACRES	3
Houghton Pond	MA51067	Uxbridge	2	ACRES	3
Howe Pond	MA51069	Millbury	4	ACRES	3
Howe Reservoirs	MA51070	[East Basin] Millbury	2	ACRES	4C
Howe Reservoirs	MA51071	[West Basin] Millbury	7	ACRES	4A
Hunt Pond	MA51072	Douglas	2	ACRES	3
Indian Lake	MA51073	Worcester	186	ACRES	4A
Ironstone Reservoir	MA51074	Uxbridge	28	ACRES	4C
Jenks Reservoir	MA51075	Bellingham	26	ACRES	4C
Joels Pond	MA51076	Uxbridge	11	ACRES	3
Joes Rock Pond	MA51077	Wrentham	12	ACRES	3
Jordan Pond	MA51078	Shrewsbury	18	ACRES	4A
Kettle Brook	MA51-01	Outlet Kettle Brook Reservoir #1 to the inlet of Leesville Pond, Auburn (excluding the approximately 0.4 miles through Waite Pond segment MA51170) (through former segments: City Pond MA51021, Smiths Pond MA51156, and Stoneville Pond MA51160)	7	MILES	5
Kettle Brook	MA51-19	Outlet Kettle Brook Reservoir #4, Paxton, to inlet of Kettle Brook Reservoir #1, Leicester. (excluding Kettle Brook Reservoir #3 segment MA51081 and Kettle Brook Reservoir #2 segment MA51080)	1.9	MILES	2
Kettle Brook Reservoir No. 1	MA51079	Leicester	11	ACRES	3

Appendix 1
Assessment Units and Integrated List Categories by Major Watershed

NAME	SEGMENT ID	DESCRIPTION	SIZE	UNITS	CATEGORY
Kettle Brook Reservoir No. 2	MA51080	Leicester	29	ACRES	3
Kettle Brook Reservoir No. 3	MA51081	Paxton/Leicester	36	ACRES	3
Kettle Brook Reservoir No. 4	MA51082	Paxton	113	ACRES	3
Lake Hiawatha	MA51062	Bellingham/Blackstone	58	ACRES	3
Lake Quinsigamond	MA51125	Shrewsbury/Worcester	471	ACRES	4A
Lake Ripple	MA51135	Grafton	47	ACRES	5
Laurel Brook	MA51-23	Headwaters, north of Yew Street, Douglas to confluence with Scadden Brook near the outlet of Sawmill Pond, Uxbridge (through Bazely Pond formerly segment MA51008).	3.3	MILES	2
Leesville Pond	MA51087	Auburn/Worcester	34	ACRES	4A
Lynde Brook Reservoir	MA51090	Leicester	130	ACRES	3
Manchaug Pond	MA51091	Douglas/Sutton	365	ACRES	5
Marble Pond	MA51093	Sutton	8	ACRES	5
Martin Street Pond	MA51095	Douglas	3	ACRES	3
Merrill Pond No. 3	MA51098	Sutton	13	ACRES	3
Merrill Pond No. 4	MA51099	Sutton	20	ACRES	3
Middle River	MA51-02	Outlet Coes Pond, Worcester to confluence with the unnamed tributary locally known as "Mill Brook" (downstream of the railroad spur bridge west of Tobias Boland Boulevard), Worcester.	3.4	MILES	5
Mill Pond	MA51104	Upton	10	ACRES	4C
Mill Pond	MA51105	Shrewsbury	12	ACRES	4A
Mill River	MA51-35	Outlet North Pond, Milford/Upton to Mendon/Blackstone corporate boundary (through former segments Fiske Millpond MA51049, Mill Pond MA51102, Hopedale Pond MA51065 and Spindleville Pond MA51158) (formerly part of segment MA51-10)	11.8	MILES	5
Mill River	MA51-36	From Mendon/Blackstone corporate boundary to MA/RI border in Blackstone, MA (through former segment Harris Pond MA51058) (formerly part of segment MA51-10)	4.4	MILES	5
Miscoe Brook	MA51-21	Headwaters, south of Route 90, Grafton to inlet Silver Lake, Grafton (through Cider Millpond formerly segment MA51019).	1.9	MILES	2
Miscoe Brook	MA51-37	Perennial portion from the Mendon/Upton/Northbridge corporate boundaries to the confluence with Taft Pond Brook, Northbridge/Upton	0.7	MILES	2
Miscoe Lake	MA51106	Wrentham (size indicates portion in Massachusetts)	5	ACRES	4C
Mumford River	MA51-13	Headwaters, outlet Tuckers Pond, Sutton to Douglas WWTP discharge, Douglas.	4.3	MILES	2
Mumford River	MA51-14	Douglas WWTP discharge, Douglas to confluence with Blackstone River, Uxbridge. (through former segments: Gilboa Pond MA51052, Lackey Pond MA51083, Meadow Pond MA51193, Linwood Pond MA51088, Whitin Pond MA51178, and Caprons Pond MA51014)	9.6	MILES	5
Newton Pond	MA51110	Shrewsbury/Boylston	54	ACRES	4A
Nipmuck Pond	MA51111	Mendon	85	ACRES	3
North Pond	MA51112	Hopkinton/Milford	213	ACRES	4C
Number 1 Pond	MA51114	Sutton	9	ACRES	5

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NAME	SEGMENT ID	DESCRIPTION	SIZE	UNITS	CATEGORY
Number 2 Pond	MA51115	Sutton/Oxford	9	ACRES	3
Peabody Pond	MA51119	Uxbridge	6	ACRES	3
Peters River	MA51-18	Outlet Silver Lake, Bellingham to Rhode Island state line, Bellingham.	4	MILES	5
Pondville Pond	MA51120	Auburn/Millbury	36	ACRES	4A
Poor Farm Brook	MA51-17	Headwaters, West Boylston to the inlet of Shirley Street Pond, Shrewsbury (through City Farm Pond formerly segment MA51020).	3.6	MILES	5
Pout Pond	MA51121	Uxbridge	9	ACRES	3
Pout Pond	MA51122	Boylston	14	ACRES	3
Pratt Pond	MA51123	Upton	39	ACRES	4C
Pratts Pond	MA51124	Grafton	4	ACRES	3
Quinsigamond River	MA51-09	Outlet Flint Pond, Grafton to confluence with Blackstone River, Grafton (excluding Lake Ripple segment MA51135) (segment includes all of Hovey Pond formerly segment MA51068 and a portion of Fisherville Pond formerly segment MA51048).	5.2	MILES	4C
Ramshorn Pond	MA51126	Sutton/Millbury	131	ACRES	3
Reservoir No. 4	MA51128	Sutton	10	ACRES	3
Riley Pond	MA51134	Northbridge	7	ACRES	5
Riverlin Street Pond	MA51137	Millbury	2	ACRES	4C
Rivulet Pond	MA51138	Uxbridge	4	ACRES	4C
Scadden Brook	MA51-24	Headwaters, north of Davis Street, Douglas to inlet Lee Pond, Uxbridge (through Lee Reservoir formerly segment MA51086).	2.4	MILES	2
Schoolhouse Pond	MA51144	Sutton	7	ACRES	3
Sewall Pond	MA51191	Boylston	13	ACRES	3
Shirley Street Pond	MA51196	Shrewsbury	19	ACRES	4A
Sibley Reservoir	MA51148	Sutton	25	ACRES	4C
Silver Hill Pond	MA51149	Milford	6	ACRES	3
Silver Lake	MA51150	Bellingham	42	ACRES	4C
Silver Lake	MA51151	Grafton	25	ACRES	4C
Singletary Brook	MA51-31	Headwaters, outlet Singletary Pond, Millbury to confluence with the Blackstone River, Millbury (excluding the approximately 0.4 miles through Brierly Pond segment MA51010).	1.5	MILES	5
Singletary Pond	MA51152	Sutton/Millbury	342	ACRES	4C
Slaughterhouse Pond	MA51153	Millbury/Sutton	10	ACRES	3
Southwick Pond	MA51157	Leicester/Paxton	42	ACRES	4A
Spring Brook	MA51-25	Headwaters, north of Lovell Street, Mendon to confluence with Muddy Brook, Mendon.	1.9	MILES	2
Stevens Pond	MA51159	Sutton	85	ACRES	4C
Stoneville Reservoir	MA51161	Auburn	60	ACRES	3
Stump Pond	MA51162	Oxford	20	ACRES	3

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NAME	SEGMENT ID	DESCRIPTION	SIZE	UNITS	CATEGORY
Sutton Falls	MA51163	Sutton	10	ACRES	5
Swans Pond	MA51164	Sutton/Northbridge	32	ACRES	4C
Taft Pond	MA51165	Upton	11	ACRES	4C
Taft Pond Brook	MA51-26	Headwaters, outlet Taft Pond, Upton to confluence with West River, Northbridge.	1.2	MILES	2
Tatnuck Brook	MA51-15	Outlet Holden Reservoir #2, Holden to inlet of Coes Reservoir, Worcester (through Cook Pond formerly segment MA51027 and Patch Reservoir formerly segment MA51118).	3.3	MILES	5
Tinker Hill Pond	MA51167	Auburn	37	ACRES	4C
Tinkerville Brook	MA51-22	Perennial portion only, north of Walnut Street, Douglas to state line Douglas, MA/Burrillville, RI.	2.3	MILES	2
Town Farm Pond	MA51168	Sutton	6	ACRES	3
Tuckers Pond	MA51169	Sutton	26	ACRES	4C
Unnamed Tributary	MA51-08	(Also known as "Mill Brook") Outlet Indian Lake, Worcester to confluence with Middle River (downstream of the railroad spur bridge west of Tobias Boland Boulevard), Worcester (through Salisbury Pond formerly segment MA51142).	5.6	MILES	5
Unnamed Tributary	MA51-20	From the outlet of Leesville Pond, Worcester to the confluence with the Middle River, Worcester (through Curtis ponds formerly reported as segments MA51033 and MA51032).	1.4	MILES	5
Unnamed Tributary	MA51-38	Unnamed tributary to Dark Brook, from perennial portion near the Route 90, 290EB, 395SB, 12NB interchange, Auburn to the confluence with Dark Brook, south of Water Street, Auburn (sections culverted).	0.8	MILES	5
Waite Pond	MA51170	Leicester	48	ACRES	4A
Wallum Lake	MA51172	Douglas (size indicates portion in Massachusetts)	138	ACRES	3
Welsh Pond	MA51176	Sutton	8	ACRES	5
West River	MA51-11	Outlet Silver Lake, Grafton to Upton WWTP discharge, Upton (through Lake Wildwood formerly segment MA51181).	3.8	MILES	5
West River	MA51-12	Upton WWTP discharge, Upton to confluence with Blackstone River, Uxbridge (through former segments Harrington Pool MA51197, and West River Pond MA51177).	9.3	MILES	5
Whitin Reservoir	MA51179	Douglas	342	ACRES	3
Whitins Pond	MA51180	Northbridge/Sutton	162	ACRES	4C
Windle Pond	MA51184	Grafton/Shrewsbury	4	ACRES	3
Woodbury Pond	MA51185	Sutton	5	ACRES	5
Woolshop Pond	MA51186	Millbury	5	ACRES	5
Boston Harbor (Proper)					
Boston Harbor	MA70-01	The area defined by a line from the southerly tip of Deer Island to Boston Lighthouse on Little Brewster Island, then south to Point Allerton; across Hull and West guts; across the mouths of Quincy and Dorchester bays, Boston Inner Harbor and WinthropBay (including President Roads and Nantasket Roads).	18.59	SQUARE MILES	5

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NAME	SEGMENT ID	DESCRIPTION	SIZE	UNITS	CATEGORY
Boston Inner Harbor	MA70-02	From the Mystic and Chelsea rivers, Chelsea/Boston, to the line between Governors Island and Fort Independence, Boston (East Boston) (including Fort Point, Reserved and Little Mystic channels).	2.56	SQUARE MILES	5
Dorchester Bay	MA70-03	From the mouth of the Neponset River, Boston/Quincy to the line between Head Island and the north side of Thompson Island and the line between the south point of Thompson Island, Boston and Chapel Rocks, Quincy.	3.46	SQUARE MILES	5
Hingham Bay	MA70-06	The area north of the mouth of the Weymouth Fore River extending on the west along the line between Nut Island and the south point of West Head, and on the east side along a line from Prince Head just east of Pig Rock to the mouth of the Weymouth ForeRiver (midway between Lower Neck and Manot Beach), Quincy.	0.96	SQUARE MILES	5
Hingham Bay	MA70-07	The area defined between Peddocks Island and Windmill Point; from Windmill Point southeast to Bumkin Island; from Bumkin Island southeast to Sunset Point; from Sunset Point across the mouth of the Weir River to Worlds End; from Worlds End across themouth of Hingham Harbor to Crow Point; from Beach Lane, Hingham across the mouth of the Weymouth Back River to Lower Neck; and from Lower Neck midway across the mouth of the Weymouth Fore River.	4.8	SQUARE MILES	5
Hull Bay	MA70-09	The area defined east of a line from Windmill Point, Hull to Bumkin Island, Hingham and from Bumkin Island to Sunset Point, Hull.	2.48	SQUARE MILES	5
Pleasure Bay	MA70-11	A semi-enclosed bay, the flow restricted through two channels between Castle and Head islands, Boston	0.22	SQUARE MILES	5
Quincy Bay	MA70-04	From Bromfield Street near the Wollaston Yacht Club, northeast to N42 17.3 W71 00.1, then southeast to Houghs Neck near Sea Street and Peterson Road (formerly referred to as the "Willows"), Quincy.	1.52	SQUARE MILES	5
Quincy Bay	MA70-05	Quincy Bay, north of the class SA waters (segment MA70-04), Quincy to the line between Moon Head and Nut Island, Quincy.	4.41	SQUARE MILES	5
Winthrop Bay	MA70-10	From the tidal flats at Coleridge Street, Boston (East Boston) to a line between Logan International Airport and Point Shirley, Boston/Winthrop.	1.65	SQUARE MILES	5
Boston Harbor: Mystic					
Aberjona River	MA71-01	Source just south of Birch Meadow Drive, Reading to inlet Upper Mystic Lake at Mystic Valley Parkway, Winchester (portion culverted underground). (through former pond segments Judkins Pond MA71021 and Mill Pond MA71031).	9.1	MILES	5
Alewife Brook	MA71-04	Outlet of Little Pond, Belmont to confluence with Mystic River, Arlington/Somerville (portion in Belmont and Cambridge identified as Little River with name changing to Alewife Brook at Arlington corporate boundary).	2.3	MILES	5
Belle Isle Inlet	MA71-14	From tidegate at Bennington Street, Boston/Revere to confluence with Winthrop Bay, Boston/Winthrop.	0.12	SQUARE MILES	5
Bellevue Pond	MA71004	Medford	2	ACRES	3
Blacks Nook	MA71005	Cambridge	2	ACRES	5
Chelsea River	MA71-06	From confluence with Mill Creek, Chelsea/Revere to confluence with Boston Inner Harbor, Chelsea/East Boston/Charlestown.	0.38	SQUARE MILES	5
Clay Pit Pond	MA71011	Belmont	12	ACRES	5
Cummings Brook	MA71-10	Headwaters east of Wright Street, Woburn to confluence with Fowle Brook, Woburn.	2.1	MILES	3
Ell Pond	MA71014	Melrose	23	ACRES	5
Hills Pond	MA71018	Arlington	2	ACRES	4C

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NAME	SEGMENT ID	DESCRIPTION	SIZE	UNITS	CATEGORY
Horn Pond	MA71019	Woburn	108	ACRES	5
Lower Mystic Lake	MA71027	Arlington/Medford	93	ACRES	5
Malden River	MA71-05	Headwaters south of Exchange Street, Malden to confluence with Mystic River, Everett/Medford.	2.3	MILES	5
Mill Brook	MA71-07	Headwaters south of Massachusetts Avenue, Lexington to inlet of Lower Mystic Lake, Arlington (portions culverted underground).	3.9	MILES	5
Mill Creek	MA71-08	From Route 1, Chelsea/Revere to confluence with Chelsea River, Chelsea/Revere.	0.02	SQUARE MILES	5
Mystic River	MA71-02	Outlet Lower Mystic Lake, Arlington/Medford to Amelia Earhart Dam, Somerville/Everett.	4.9	MILES	5
Mystic River	MA71-03	Amelia Earhart Dam, Somerville/Everett to confluence with Boston Inner Harbor, Chelsea/Charlestown (Includes Island End River).	0.49	SQUARE MILES	5
Sales Creek	MA71-12	Headwaters near Route 145, Revere to tidegate/confluence with Belle Isle Inlet, Boston/Revere.	0.008	SQUARE MILES	3
Shaker Glen Brook	MA71-11	Headwaters, west of Dix Road Extention, Woburn to confluence with Fowle Brook, Woburn (portion culverted underground).	1.5	MILES	3
Spot Pond	MA71039	Stoneham/Medford	290	ACRES	3
Spy Pond	MA71040	Arlington	98	ACRES	5
Unnamed Tributary	MA71-13	Unnamed tributary locally known as 'Meetinghouse Brook', from emergence south of Route 16/east of Winthrop Street, Medford to confluence with the Mystic River, Medford. (brook not apparent on 1985 Boston North USGS quad - 2005 orthophotos used todelineate stream)	0.1	MILES	5
Upper Mystic Lake	MA71043	Winchester/Arlington/Medford	176	ACRES	5
Wedge Pond	MA71045	Winchester	23	ACRES	5
Winn Brook	MA71-09	Headwaters near Juniper Road and the Belmont Hill School, Belmont to confluence with Little Pond, Belmont (portions culverted underground).	1.4	MILES	5
Winter Pond	MA71047	Winchester	18	ACRES	5
Boston Harbor: Neponset					
Beaver Brook	MA73-19	Headwaters near Moose Hill Street, Sharon through Sawmill Pond to confluence with Massapoag Brook, Sharon.	3.5	MILES	5
Beaver Meadow Brook	MA73-20	Outlet of Glenn Echo Pond, Stoughton, to the inlet of Bolivar Pond, Canton.	3.3	MILES	5
Billings Street/East Street Pond	MA73065	Sharon	2	ACRES	4C
Blue Hills Reservoir	MA73004	Quincy	12	ACRES	3
Bolivar Pond	MA73005	Canton	20	ACRES	5
Bubbling Brook	MA73-11	Headwaters (perennial portion), near North Street, Walpole to inlet Pettee Pond, Walpole/Westwood border.	0.9	MILES	3
Buckmaster Pond	MA73006	Westwood	34	ACRES	3
Clark Pond	MA73008	Walpole	7	ACRES	4C
Cobbs Pond	MA73009	Walpole	14	ACRES	5

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NAME	SEGMENT ID	DESCRIPTION	SIZE	UNITS	CATEGORY
East Branch	MA73-05	East Branch Neponset River - Outlet of Forge Pond, Canton through East Branch Pond to confluence with Neponset River, Canton. (locally known as Canton River)	2.6	MILES	5
Ellis Pond	MA73018	Norwood	17	ACRES	4C
Farrington Pond	MA73040	Stoughton	3	ACRES	4C
Flynns Pond	MA73019	Medfield	7	ACRES	3
Forge Pond	MA73020	Canton	19	ACRES	5
Ganawatte Farm Pond	MA73037	Walpole/Sharon/Foxborough	29	ACRES	5
Germany Brook	MA73-15	Headwaters, east of Winter Street, Norwood to inlet of Ellis Pond, Norwood.	2	MILES	5
Glen Echo Pond	MA73022	Canton/Stoughton	16	ACRES	4C
Gulliver Creek	MA73-30	From confluence Unquity Brook, Milton to confluence Neponset River, Milton. (Note: Unquity Brook culverted, confluence not visible on quad)	0.02	SQUARE MILES	5
Hammer Shop Pond	MA73023	Sharon	2	ACRES	3
Hawes Brook	MA73-16	Outlet of Ellis Pond, Norwood to confluence with Neponset River, Norwood.	1.1	MILES	5
Jewells Pond	MA73026	Medfield	4	ACRES	4C
Lymans Pond	MA73021	Westwood	25	ACRES	3
Massapoag Brook	MA73-21	Outlet Hammer Shop Pond, Sharon, through Manns Pond (formerly segment MA73028), Trowel Shop Pond, and Shephard Pond to the inlet of Forge Pond, Canton.	4.2	MILES	5
Massapoag Lake	MA73030	Sharon	389	ACRES	4A
Memorial Pond	MA73012	Walpole	8	ACRES	5
Mill Brook	MA73-08	From headwaters (perennial portion) north of Hartford Street, Medfield to inlet of Jewells Pond, Medfield.	2.3	MILES	5
Mill Brook	MA73-12	Source northeast of Ledgewood Drive, Dover to inlet of Pettee Pond, Westwood.	2.9	MILES	2
Mine Brook	MA73-09	Outlet of Jewells Pond, Medfield, to the inlet of Turner Pond, Walpole.	3	MILES	5
Mother Brook	MA73-28	Headwaters at the Charles River Diversion control structure, Dedham to confluence with Neponset River, Boston. [Reported as MA72-13 until May 3, 2000]	3.7	MILES	5
Neponset Reservoir	MA73034	Foxborough	312	ACRES	5
Neponset River	MA73-01	Outlet of Neponset Reservoir, Foxborough to confluence with East Branch, Canton. (through former pond segments Crackrock Pond MA73010 and Bird Pond MA73002)	13.2	MILES	5
Neponset River	MA73-02	Confluence with East Branch, Canton to confluence with Mother Brook, Boston.	7.7	MILES	5
Neponset River	MA73-03	Confluence with Mother Brook, Boston to Milton Lower Falls Dam, Milton/Boston.	3.6	MILES	5
Neponset River	MA73-04	Milton Lower Falls Dam, Milton/Boston to mouth at Dorchester Bay, Boston/Quincy.	0.67	SQUARE MILES	5
Pecunit Brook	MA73-25	Headwaters east of Carey Circle and west of Pecunit Street, Canton to the confluence with Neponset River, Canton.	1.8	MILES	4A
Pequid Brook	MA73-22	Headwaters east of York Street, Canton to the inlet of Forge Pond, Canton (excluding the approximately 1.3 miles through Reservoir Pond, segment MA73048).	2.8	MILES	5
Pettee Pond	MA73036	Walpole/Westwood	10	ACRES	4A
Pine Tree Brook	MA73-29	Outlet of Hillside Pond, Milton through Pope's Pond (formerly segment MA73044) to confluence Neponset River, Milton.	4.6	MILES	5

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Pinewood Pond	MA73039	Stoughton	25	ACRES	4C
Plantingfield Brook	MA73-23	Headwaters east of Thatcher Street, Westwood, to the confluence with Purgatory Brook, Norwood.	1.8	MILES	4C
Ponkapoag Pond	MA73043	Canton/Randolph	214	ACRES	4A
Ponkapog Brook	MA73-27	Outlet of Ponkapoag Pond, Canton to confluence with Neponset River, Canton.	3.1	MILES	4A
Purgatory Brook	MA73-24	Headwaters east of Farm Lane, Westwood to confluence with Neponset River, Norwood.	5.1	MILES	4A
Reservoir Pond	MA73048	Canton	251	ACRES	4A
Russell Pond	MA73003	Milton	9	ACRES	5
School Meadow Brook	MA73-06	Outlet of Ganawatte Farm Pond, Walpole to confluence with Neponset River, Walpole.	1.9	MILES	4A
Sprague Pond	MA73053	Boston/Dedham	7	ACRES	3
Steep Hill Brook	MA73-18	Outlet of Pinewood Pond, Stoughton, to the inlet of Bolivar Pond, Canton.	0.9	MILES	3
Town Pond	MA73056	Stoughton	8	ACRES	4C
Traphole Brook	MA73-17	Headwaters west of Everett Street, Sharon, to confluence with Neponset River, Sharon.	3.9	MILES	4A
Tubwreck Brook	MA73-07	Headwaters - small unnamed pond southeast of Powissett Street, Dover to confluence with Mill Brook just southwest of Dover/Medfield border.	1.6	MILES	3
Turner Pond	MA73058	Walpole	18	ACRES	4C
Turners Pond	MA73059	Milton	10	ACRES	5
Unnamed Tributary	MA73-10	Outlet Turner Pond, Walpole to confluence with Neponset River, Walpole.	0.4	MILES	3
Unnamed Tributary	MA73-14	Outlet Willet Pond, Walpole/Norwood, to inlet Ellis Pond, Norwood.	0.4	MILES	3
Unnamed Tributary	MA73-31	Outlet of Massapoag Lake, Sharon to inlet of Hammer Shop Pond, Sharon.	0.3	MILES	4A
Unnamed Tributary	MA73-32	From the outlet of Town Pond, Stoughton to the confluence with Steep Hill Brook, Stoughton.	1	MILES	5
Unnamed Tributary	MA73-33	Locally known as "Meadow Brook" - From where the underground/culverted stream emerges east of Pleasant Street, Norwood to confluence with Neponset River, Norwood.	0.6	MILES	5
Unnamed Tributary	MA73-34	Outlet Clark Pond, Walpole to confluence with Neponset River, Walpole (locally considered part of Spring Brook) (excluding the approximately 0.2 miles through Diamond Pond and the approximately 0.2 miles through Memorial Pond segment MA73012)	0.8	MILES	2
Unquity Brook	MA73-26	Isolated (urban): Headwaters (perennial portion) near Randolph Avenue, Milton to confluence with Gulliver Creek, Milton (Note: Confluence not visible on quad, brook culverted underground east of Otis Street/west of Govenor Belcher Lane, Milton)	1.5	MILES	5
Willet Pond	MA73062	Walpole/Westwood/Norwood (includes unnamed tributary formerly reported as segment MA73-13)	205	ACRES	4A
Woods Pond	MA73055	Stoughton	14	ACRES	4C
Boston Harbor: Weymouth & Weir					
Accord Brook	MA74-16	Headwaters, outlet Accord Pond, Hingham to water supply intake (4131000-02S Accord Brook) south of South Pleasant Street, Hingham.	3.2	MILES	5

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Accord Brook	MA74-17	From water supply intake (4131000-02S Accord Brook) south of South Pleasant Street, Hingham to inlet Triphammer Pond, Hingham.	1.8	MILES	4C
Accord Pond	MA74030	Hingham/Norwell/Rockland (formerly reported as MA94002)	103	ACRES	3
Cochato River	MA74-06	Outlet Lake Holbrook, Holbrook to confluence with Farm and Monatiquot rivers, Braintree (through former pond segment Ice House Pond MA74028). (SARIS note: the upper portion of this segment is comprised of three surface waters: unnamed tributary fromthe outlet of Lake Holbrook, portion of Mary Lee Brook, portion of Glovers Brook).	4.1	MILES	5
Crooked Meadow River	MA74-01	Outlet Cushing Pond, Hingham to confluence with Weir River, Hingham.	1	MILES	5
Farm River	MA74-07	From Randolph/Braintree border (where name changes from Blue Hill River), to confluence with Cochato River (forming headwaters of Monatiquot River), Braintree.	3.1	MILES	3
Furnace Brook	MA74-10	From headwaters north of Blue Hills Reservoir, Quincy to confluence with Blacks Creek, Quincy (portions culverted underground).	4.2	MILES	5
Hingham Harbor	MA74-18	Hingham Harbor inside a line from Crows Point to Worlds End, Hingham (formerly reported as MA70-08).	1.12	SQUARE MILES	5
Hoosicwhisick Pond	MA74015	Milton	23	ACRES	3
Lake Holbrook	MA74013	Holbrook	31	ACRES	5
Mill River	MA74-04	Headwaters, west of Route 18 and south of Randolph Street, Weymouth to inlet Whitmans Pond, Weymouth (portions culverted underground).	3.4	MILES	5
Monatiquot River	MA74-08	Headwaters at confluence of Cochato and Farm rivers, Braintree to confluence with Weymouth Fore River at Commercial Street, Braintree.	4.4	MILES	5
Old Quincy Reservoir	MA74017	Braintree	27	ACRES	3
Old Swamp River	MA74-03	Headwaters just west of Pleasant Street and north of Liberty Street, Rockland to inlet Whitmans Pond, Weymouth.	5.2	MILES	5
Sunset Lake	MA74020	Braintree	58	ACRES	4C
Sylvan Lake	MA74021	Holbrook	6	ACRES	5
Town Brook	MA74-09	Outlet Old Quincy Reservoir, Braintree to confluence with Town River Bay north of Route 3A, Quincy (includes "The Canal"/Town River) (portions culverted underground).	3.5	MILES	5
Town River Bay	MA74-15	From the headwaters at the Route 3A bridge, Quincy to the mouth at Weymouth Fore River between Shipyard and Germantown Points, Quincy.	0.46	SQUARE MILES	5
Trout Brook	MA74-12	Headwaters southwest of South Street, Holbrook to inlet Lake Holbrook, Holbrook.	1.2	MILES	3
Weir River	MA74-02	Headwaters at confluence of Crooked Meadow River and Fulling Mill Brook, Hingham to Foundry Pond outlet, Hingham (through former pond segment Foundry Pond MA74011).	2.7	MILES	5
Weir River	MA74-11	From Foundry Pond outlet, Hingham to mouth at Worlds End, Hingham and Nantasket Road near Beech Avenue, Hull (including unnamed tributary from outlet Straits Pond, Hingham/Hull).	0.83	SQUARE MILES	5
Weymouth Back River	MA74-05	Outlet Elias Pond, Weymouth to the base of the fish ladder north of Commercial Street,Weymouth.	0.4	MILES	5
Weymouth Back River	MA74-13	From the base of the fish ladder north of Commercial Street, Weymouth to mouth between Lower Neck, Weymouth (to the west) and Wompatuck Road, Hingham.	0.86	SQUARE MILES	5

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Weymouth Fore River	MA74-14	Commercial Street, Braintree to mouth (eastern point at Lower Neck, Weymouth and western point at Wall Street on Houghs Neck, Quincy).	2.29	SQUARE MILES	5
Whitmans Pond	MA74025	Weymouth	147	ACRES	5
Buzzards Bay					
"Inner" Sippican Harbor	MA95-70	The waters landward of a line from Allen Point, Marion around the southeastern tip of Ram Island, then westerly from the southern tip of Ram Island to the point of land south of Nyes Wharf, Marion excluding Hammett Cove (formerly reported as a portion ofsegment MA95-08).	0.57	SQUARE MILES	5
Abner Pond	MA95001	Plymouth	8.853	ACRES	3
Acushnet River	MA95-31	Outlet New Bedford Reservoir, Acushnet to Hamlin Street culvert, Acushnet.	3.071	MILES	5
Acushnet River	MA95-32	Hamlin Street culvert, Acushnet to culvert at Main Street, Acushnet.	1.117	MILES	5
Acushnet River	MA95-33	Outlet Main Street culvert, Acushnet to Coggeshall Street bridge, New Bedford/Fairhaven.	0.312	SQUARE MILES	5
Agawam River	MA95-28	Outlet Mill Pond, Wareham to Wareham WWTP, Wareham.	0.609	MILES	3
Agawam River	MA95-29	Wareham WWTP, Wareham to confluence with Wankinco River at Route 6 bridge, Wareham.	0.165	SQUARE MILES	5
Apponagansett Bay	MA95-39	From the mouth of Buttonwood Brook, Dartmouth to a line drawn from Ricketsons Point, Dartmouth to Samoset Street near North Avenue, Dartmouth.	1.067	SQUARE MILES	5
Aucoot Cove	MA95-09	From the boundary of Division of Marine Fisheries designated shellfishing growing area BB31.1, north and southwest from Haskell Island, Marion to the mouth at Buzzards Bay demarcated by a line drawn between Converse Point, Marion and Joes Point,Mattapoisett.	0.461	SQUARE MILES	2
Aucoot Cove	MA95-71	From the confluence with Aucoot Creek, Marion to the boundary of Division of Marine Fisheries designated shellfishing growing area BB31.1, north and southwest from Haskell Island, Marion (formerly part of segment 95-09).	0.029	SQUARE MILES	5
Aucoot Creek	MA95-72	Estuarine portion east of Holly Pond Road, Marion to confluence with Aucoot Cove, Marion.	0.016	SQUARE MILES	5
Back River	MA95-47	Outlet of small unnamed pond downstream from Mill Pond, Bourne to confluence with Phinneys Harbor (excluding Eel Pond), Bourne.	0.083903	SQUARE MILES	4A
Barrett Pond	MA95004	Carver	11.303	ACRES	2
Bates Pond	MA95007	Carver	19.045	ACRES	3
Beaverdam Creek	MA95-53	Outlet from cranberry bog southeast of Route 6, Wareham to confluence with Wewantic River, Wareham.	0.037735	SQUARE MILES	5
Big Rocky Pond	MA95119	(Rocky Pond) Plymouth	18.111	ACRES	3
Big Sandy Pond	MA95011	Plymouth	133.21	ACRES	3
Blackmore Reservoir	MA95015	Wareham	42.821	ACRES	3
Bread and Cheese Brook	MA95-58	Headwaters north of Old Bedford Road, Westport to confluence with East Branch Westport River, Westport.	4.945	MILES	4A
Broad Marsh River	MA95-49	Headwaters in salt marsh south of Marion Road and Bourne Terrace, Wareham to confluence with the Wareham River, Wareham.	0.16223	SQUARE MILES	4A
Butler Cove	MA95-77	just south of Buttermilk Bay, Wareham	0.05	SQUARE MILES	5

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NAME	SEGMENT ID	DESCRIPTION	SIZE	UNITS	CATEGORY
Buttermilk Bay	MA95-01	Bourne/Wareham	0.666	SQUARE MILES	5
Buttonwood Brook	MA95-13	Headwaters, at Oakdale Street, New Bedford to mouth at Apponagansett Bay, Dartmouth.	3.783	MILES	4A
Buttonwood Park Pond	MA95020	New Bedford	11.543	ACRES	3
Buzzards Bay	MA95-62	Open water area encompassed within a line drawn from Wilber Point, Fairhaven to Clarks Point, New Bedford to Ricketson Point, Dartmouth to vacinity of Samoset Street, Dartmouth down to Round Hill Point, Dartmouth and back to Wilber Point, Fairhaven.	8.02	SQUARE MILES	5
Cape Cod Canal	MA95-14	Waterway between Buzzards Bay and Cape Cod Bay, Bourne/Sandwich	1.134	SQUARE MILES	4A
Cedar Dell Lake	MA95021	Dartmouth	22.894	ACRES	3
Cedar Island Creek	MA95-52	Headwaters near the intersection of Parker Drive and Camardo Drive, Wareham to the mouth at Marks Cove, Wareham.	0.010713	SQUARE MILES	4A
Cedar Lake	MA95-96344	Falmouth (formerly reported as segment MA96344)	20	ACRES	3
Charge Pond	MA95025	Plymouth	16.431	ACRES	2
Clarks Cove	MA95-38	The semi-enclosed waterbody landward of a line drawn between Clarks Point, New Bedford and Ricketsons Point, Dartmouth.	1.9	SQUARE MILES	5
College Pond	MA95030	Plymouth	46.758	ACRES	2
Copicut Reservoir	MA95175	Dartmouth/Fall River	596	ACRES	5
Copicut River	MA95-43	Outlet of Copicut Reservoir, Fall River to the inlet of Cornell Pond, Dartmouth.	1.348	MILES	5
Cornell Pond	MA95031	Dartmouth	12.366	ACRES	5
Crane Brook Bog Pond	MA95033	Carver	37.303	ACRES	5
Crooked River	MA95-51	Outlet of cranberry bog east of Indian Neck Road, Wareham to the confluence with the Wareham River, Wareham.	0.043267	SQUARE MILES	4A
Curlew Pond	MA95034	Plymouth	42.591	ACRES	2
Deer Pond	MA95036	Plymouth	8.697	ACRES	3
Dicks Pond	MA95038	Wareham	41.848	ACRES	3
Dunham Pond	MA95044	Carver	42.796	ACRES	3
East Branch Westport River	MA95-40	Outlet Noquochoke Lake, Dartmouth to Old County Road bridge, Westport.	2.862	MILES	4A
East Branch Westport River	MA95-41	Old County Road bridge, Westport to the mouth at Westport Harbor, Westport (excluding Horseneck Channel).	2.648	SQUARE MILES	5
East Head Pond	MA95177	Carver/Plymouth	91.504	ACRES	3
Eel Pond	MA95-48	Salt water pond that discharges to the Back River, Bourne.	0.032	SQUARE MILES	4A
Eel Pond	MA95-61	Coastal pond at the head of Mattapoisett Harbor, Mattapoisett.	0.04	SQUARE MILES	5
Ezekiel Pond	MA95051	Plymouth	35.611	ACRES	3
Fawn Pond	MA95053	Plymouth	43.743	ACRES	3
Fearing Pond	MA95054	Plymouth	22.509	ACRES	2

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NAME	SEGMENT ID	DESCRIPTION	SIZE	UNITS	CATEGORY
Federal Pond	MA95055	Carver/Plymouth	125.041	ACRES	4C
Fiddlers Cove	MA95-79	cove south off Megansett Harbor, Falmouth	0.01	SQUARE MILES	5
Five Mile Pond	MA95056	Plymouth	21.786	ACRES	3
Flax Pond	MA95-96087	Bourne (formerly reported as segment MA96087)	20	ACRES	3
Fresh Meadow Pond	MA95174	Carver/Plymouth	59.381	ACRES	4C
Gallows Pond	MA95059	Plymouth	49.086	ACRES	3
Glen Charlie Pond	MA95061	Wareham	156.611	ACRES	2
Great Sippewisset Creek	MA95-23	From the outlet of Beach Pond in Great Sippewisset Marsh, Falmouth to the mouth at Buzzards Bay, Falmouth (including the unnamed tributary from the outlet of Fresh Pond and Quahog Pond).	0.030751	SQUARE MILES	4A
Halfway Pond	MA95178	(On 9 October 1997, PALIS ID was changed from 94057 to 95178; therefor, this pond historically reported in South Coastal "94") Plymouth	214.592	ACRES	3
Hammett Cove	MA95-56	Borders Sippican Harbor (along a line from the southwestern most point of Little Neck to the end of the seawall on the opposite point), Marion.	0.073	SQUARE MILES	5
Harbor Head	MA95-46	The semi-enclosed body of water south of the confluence with West Falmouth Harbor, south of Chappaquoit Road, Falmouth.	0.022	SQUARE MILES	4A
Herring Brook	MA95-21	Headwaters northeast of Dale Drive and west of Route 28A, Falmouth to the mouth at Buzzards Bay, Falmouth	0.012263	SQUARE MILES	5
Hiller Cove	MA95-10	The water landward of a line drawn between Joes Point, Mattapoisett and the second boat dock northeast of Hiller Cove Lane, Mattapoisett	0.039	SQUARE MILES	4A
Horseshoe Pond	MA95075	Wareham	59.147	ACRES	3
Kings Pond	MA95078	Plymouth	22.235	ACRES	3
Leonards Pond	MA95080	Rochester	49.397	ACRES	3
Little Bay	MA95-64	From the confluence with the Nasketucket River, Fairhaven south to the confluence with Nasketucket Bay at a line from the southernmost tip of Mirey Neck, Fairhaven (~latitude 41.625702, ~longitide 70.854045) to a point of land near Shore Drive (~latitude41.621994, ~longitude 70.855415), Fairhaven	0.361	SQUARE MILES	4A
Little Buttermilk Bay	MA95-76	off of Buttermilk Bay, Bourne	0.16	SQUARE MILES	5
Little Long Pond	MA95088	Plymouth	47.692	ACRES	3
Little Long Pond	MA95089	Wareham/Plymouth	12.411	ACRES	3
Little River	MA95-66	Dartmouth	0.18	SQUARE MILES	5
Little Rocky Pond	MA95091	Plymouth	9.453	ACRES	3
Little Sandy Pond	MA95092	Plymouth	28.91	ACRES	3
Little Sippewisset Marsh	MA95-24	From headwater north of Sippewisset Road and west of Maker Lane, Falmouth to the mouth at Buzzards Bay southwest of end of Saconesset Road, Falmouth	0.021	SQUARE MILES	4A
Little West Pond	MA95093	Plymouth	24.546	ACRES	3
Long Duck Pond	MA95095	Plymouth	21.79	ACRES	3
Long Pond	MA95096	Plymouth	208.287	ACRES	3

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NAME	SEGMENT ID	DESCRIPTION	SIZE	UNITS	CATEGORY
Long Pond	MA95097	Rochester	32.363	ACRES	4A
Mare Pond	MA95172	Plymouth	12.543	ACRES	3
Marys Pond	MA95100	Rochester	81.191	ACRES	3
Mattapoisett Harbor	MA95-35	From the mouth of the Mattapoisett River, Mattapoissett to a line drawn from Ned Point to a point of land between Bayview Avenue and Grandview Avenue, Mattapoisett	1.118	SQUARE MILES	5
Mattapoisett River	MA95-36	Outlet Snipatuit Pond, Rochester to River Road bridge, Mattapoisett.	10.117	MILES	3
Mattapoisett River	MA95-60	From the River Road bridge, Mattapoisett to the mouth at Mattapoisett Harbor, Mattapoisett.	0.048	SQUARE MILES	4A
Megansett Harbor	MA95-19	From the outlet of Squeteague Harbor, Falmouth to Buzzards Bay at a line from the western tip of Scraggy Neck, Bourne south to the tip of Nyes Neck, Falmouth.	1.461	SQUARE MILES	5
Micajah Pond	MA95102	Plymouth	20.215	ACRES	3
Mill Pond	MA95105	Wareham	148.573	ACRES	4C
Nasketucket Bay	MA95-65	From the confluence with Little Bay, Fairhaven to Buzzards Bay along Causeway Road, Fairhaven (on the south) and along a line from the southern tip of Brant Island, Mattapoisett to the eastern tip of West Island, Fairhaven	3.686	SQUARE MILES	4A
Nasketucket River	MA95-67	From outlet of unnamed pond north of Meadow Lane, Fairhaven to confluence with Little Bay, Fairhaven	0.889	MILES	5
New Bedford Inner Harbor	MA95-42	Coggeshall Street Bridge to hurricane barrier, Fairhaven/New Bedford.	1.251	SQUARE MILES	5
New Bedford Reservoir	MA95110	Acushnet	211.384	ACRES	5
New Long Pond	MA95112	Plymouth	20.977	ACRES	2
Noquochoke Lake	MA95113	(Main Basin) Dartmouth	87.945	ACRES	5
Noquochoke Lake	MA95170	(South Basin) Dartmouth	12.814	ACRES	5
Noquochoke Lake	MA95171	(North Basin) Dartmouth	16.711	ACRES	5
Onset Bay	MA95-02	Wareham	0.779	SQUARE MILES	5
Outer New Bedford Harbor	MA95-63	From the hurricane barrier, Fairhaven/New Bedford to a line drawn from Wilbur Point, Fairhaven to Clarks Point, New Bedford (segment changed 6/4/03, formerly reported as MA95-27).	5.789	SQUARE MILES	5
Oyster Pond	MA95927	west of Route 28A, Falmouth.	0.01	SQUARE MILES	4A
Parker Mills Pond	MA95115	Wareham	73.172	ACRES	5
Paskamanset River	MA95-11	Outlet Turners Pond Dartmouth/New Bedford to confluence with Slocums River, Dartmouth.	10.543	MILES	3
Phinneys Harbor	MA95-15	From the confluence with the Back River, to the mouth at Buzzards Bay (demarcated by a line from the southeastern point of Mashnee Island to the northwestern point of Toby Island), Bourne.	0.726	SQUARE MILES	4A
Pocasset Harbor	MA95-17	From the confluence with Red Brook Harbor near the northern portion of Bassetts Island and Patuisset, Bourne to the mouth at Buzzards Bay between the western portion of Bassetts Island and Wings Neck, Bourne	0.332	SQUARE MILES	5

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Pocasset River	MA95-16	From the outlet of Mill Pond, Bourne to the mouth at Buzzards Bay, Bourne.	0.052145	SQUARE MILES	4A
Queen Sewell Pond	MA95180	Bourne (previously reported with PALIS # 96253).	17.614	ACRES	2
Quissett Harbor	MA95-25	The semi-enclosed body of water landward of a line drawn between The Knob and Gansett Point, Falmouth.	0.171	SQUARE MILES	4A
Rands Harbor	MA95-78	harbor south off Megansett Harbor, Falmouth	0.02	SQUARE MILES	5
Red Brook Harbor	MA95-18	From the confluence with Pocasset Harbor between the northern portion of Bassetts Island and Patuisset, Bourne to the mouth at Buzzards Bay between the southern portion of Bassetts Island and Scraggy Neck, Bourne (including Hen Cove).	0.92	SQUARE MILES	5
Rocky Meadow Brook Pond	MA95118	Carver	10.997	ACRES	3
Rocky Pond	MA95179	Plymouth	20.43	ACRES	3
Round Pond	MA95123	Plymouth	20.167	ACRES	3
Sampson Pond	MA95125	Carver	295.975	ACRES	5
Sand Pond	MA95127	Wareham	14.446	ACRES	3
Sandy Pond	MA95128	Wareham	15.292	ACRES	3
Shingle Island River	MA95-12	Outlet of small unnamed pond northeast of Flag Swamp Road, Dartmouth to inlet Noquochoke Lake (north basin), Dartmouth.	4.995	MILES	3
Sippican Harbor	MA95-69	The waters between a line demarcating the mouth of the harbor (from Converse Point to Butler Point, Marion) and a line from Allens Point, Marion around the southeastern tip of Ram Island, then westerly from the southern tip of Ram Island, to the point ofland south of Nyes Wharf, Marion excluding Blanketship Cove and Planting Island Cove (formerly reported as a portion of segment MA95-08).	1.943	SQUARE MILES	4A
Sippican River	MA95-06	Outlet Leonards Pond, Rochester to County Road, Marion/Wareham.	2.941	MILES	5
Sippican River	MA95-07	County Road, Marion/Webster to confluence with Weweantic River, Marion/Wareham.	0.081378	SQUARE MILES	4A
Slocums River	MA95-34	Rock O'Dundee Road (confluence with Paskemanset River), Dartmouth to mouth at Buzzards Bay, Dartmouth.	0.672	SQUARE MILES	5
Snell Creek	MA95-44	Headwaters west of Main Street, Westport to Drift Road, Westport.	1.487208	MILES	4A
Snell Creek	MA95-45	Drift Road, Westport to 'Marcus' Bridge', Westport	0.362	MILES	4A
Snell Creek	MA95-59	'Marcus' Bridge', Westport to confluence with East Branch Westport River, Westport.	0.008	SQUARE MILES	4A
Snipatuit Pond	MA95137	Rochester	644.187	ACRES	4A
South Meadow Brook Pond	MA95139	Carver	24.842	ACRES	3
South Meadow Pond	MA95140	Carver	22.196	ACRES	3
Southwest Atwood Bog Pond	MA95141	Carver	11.597	ACRES	3
Spectacle Pond	MA95142	Wareham	41.48	ACRES	3
Squeteague Harbor	MA95-55	Waters landward of the confluence with Megansett Harbor, Bourne/Falmouth.	0.146	SQUARE MILES	5
Three Cornered Pond	MA95145	Plymouth	12.268	ACRES	3

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NAME	SEGMENT ID	DESCRIPTION	SIZE	UNITS	CATEGORY
Tihonet Pond	MA95146	Wareham	86.615	ACRES	5
Tinkham Pond	MA95148	Mattapoisett/Acushnet	16.619	ACRES	3
Tremont Mill Pond	MA95150	Wareham	30.664	ACRES	4C
Turner Pond	MA95151	New Bedford/Dartmouth	86.005	ACRES	4A
Union Pond	MA95152	Wareham	17.007	ACRES	3
Unnamed Tributary	MA95-57	Outlet Cornell Pond, Dartmouth to confluence with Shingle Island River, Dartmouth.	1.009	MILES	3
Vaughn Pond	MA95153	Carver	19.629	ACRES	2
Wankinco River	MA95-30	Outlet East Head Pond, Carver/Plymouth (follows border through cranberry bogs) to Elm Street bridge, Wareham.	6.526	MILES	3
Wankinco River	MA95-50	From Elm Street, Wareham to the confluence with the Agawam River (at a line between a point south of Mayflower Ridge Drive and a point north of the railroad tracks near Sandwich Road), Wareham.	0.049024	SQUARE MILES	4A
Wareham River	MA95-03	From confluence of Wankinko and Agawam Rivers at Route 6 bridge, Wareham to Buzzards Bay (at an imaginary line from Cromeset Point to curved point east/southeast of Long Beach Point), Wareham. Including Marks Cove, Wareham	1.178	SQUARE MILES	5
West Branch Westport River	MA95-37	Outlet Grays Mill Pond, Adamsville, Rhode Island to mouth at Westport Harbor, Westport.	1.285255	SQUARE MILES	5
West Falmouth Harbor	MA95-22	From the confluence with Harbor Head at Chappaquoit Road, Falmouth to the mouth at Buzzards Bay at a line connecting the ends of the seawalls from Little Island and Chappaquoit Point, Falmouth (including Inner West Falmouth Harbor, Outer West FalmouthHarbor, Snug Harbor, and Mashapaquit Creek).	0.29	SQUARE MILES	4A
Westport River	MA95-54	From the confluences of the East Branch Westport River and the West Branch Westport River to Rhode Island Sound (at a line from the southwestern tip of Horseneck Point to the easternmost point near Westport Light), Westport.	0.74	SQUARE MILES	5
Weweantic River	MA95-04	Outlet of small, unnamed pond at the confluence of Rocky Meadow Brook and South Meadow Brook, Carver to the inlet of Horseshoe Pond, Wareham.	11.322	MILES	2
Weweantic River	MA95-05	Outlet Horseshoe Pond, Wareham to mouth at Buzzards Bay, Marion/Wareham.	0.617	SQUARE MILES	5
White Island Pond	MA95166	(East Basin) Plymouth/Wareham	164.803	ACRES	4A
White Island Pond	MA95173	(West Basin) Plymouth/Wareham	122.074	ACRES	4A
Whites Pond	MA95168	Plymouth	33.713	ACRES	3
Wild Harbor	MA95-20	Falmouth.	0.145	SQUARE MILES	4A
Wild Harbor River	MA95-68	Headwaters, Falmouth to mouth at Wild Harbor, Falmouth.	0.029	SQUARE MILES	5
Cape Cod					
Areys Pond	MA96-70	Orleans	0.02	SQUARE MILES	4A
Ashumet Pond	MA96004	Mashpee/Falmouth	203	ACRES	5
Baker Pond	MA96008	Orleans/Brewster	26	ACRES	4A
Barnstable Harbor	MA96-01	From the mouths of Scorton and Spring creeks, Barnstable east to an imaginary line drawn from Beach Point to the western edge of the Mill Creek estuary, Barnstable.	3.2	SQUARE MILES	5

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Bass River	MA96-12	Route 6, Dennis/Yarmouth to mouth at Nantucket Sound, Dennis/Yarmouth (excluding Grand Cove, Dennis).	0.69	SQUARE MILES	5
Bassing Harbor	MA96-48	Excluding Crows Pond and Ryder Cove, Chatham.	0.13	SQUARE MILES	2
Bearse Pond	MA96012	Barnstable	64	ACRES	4A
Boat Meadow River	MA96-15	Headwaters east of old railway grade, Eastham to mouth at Cape Cod Bay, Eastham.	0.05	SQUARE MILES	5
Bournes Pond	MA96-57	west of Central Avenue, Falmouth to Vineyard Sound, including Israels Cove, Falmouth.	0.24	SQUARE MILES	4A
Bucks Creek	MA96-44	Outlet from Harding Beach Pond (locally known as Sulfur Springs), Chatham to confluence with Cockle Cove, Nantucket Sound, Chatham.	0.02	SQUARE MILES	4A
Bumps River	MA96-02	From outlet of pond at Bumps River Road, Barnstable through Scudder Bay to South Main Street bridge (confluence with Centerville River), Barnstable.	0.07	SQUARE MILES	4A
Cedar Pond	MA96-88	Orleans (in Inner Cape Cod Bay ACEC)	0.03	SQUARE MILES	5
Centerville Harbor	MA96-03	From an imaginary line that extends from Dowses Beach, Barnstable to Hyannis Point including all waters north to the shore, Barnstable.	1.46	SQUARE MILES	2
Centerville River	MA96-04	Approximately 300 feet west of Elliot Road, Barnstable to confluence with Centerville Harbor, including East Bay, Barnstable.	0.24	SQUARE MILES	4A
Chase Garden Creek	MA96-35	New Boston Road, Dennis to mouth at Cape Cod Bay, Dennis/Yarmouth.	0.13	SQUARE MILES	4A
Chatham Harbor	MA96-10	Harbor, bounded on the east by the Cape Cod National Seashore (CCNS), with northern extent as an imaginary line drawn northeast from northern tip of Strong Island to a point on the inner CCNS and western extent as an imaginary line drawn from thesouthern tip of Strong Island south to Allen Point including waters south to an imaginary line along the northern edge of South Beach Bar extending from Chatham Lighthouse to inlet created by the 1987 storm, Chatham (area within CCSN designated as ORW).	2.85	SQUARE MILES	2
Clapps Pond	MA96035	Provincetown (area associated with Cape Cod National Seashore designated as ORW).	40	ACRES	3
Cliff Pond	MA96039	Brewster	191	ACRES	3
Cockle Cove Creek	MA96-79	Northeast of the bend in Cockle Drive, Chatham to confluence with Bucks Creek, Chatham (2005 orthophotos used to delineate segment).	0.007	SQUARE MILES	4A
Coonamessett River	MA96-69	Headwaters, outlet of Coonamessett Pond, Falmouth to the inlet of Great Pond, Falmouth.	3.4	MILES	3
Cotuit Bay	MA96-63	From North Bay at Point Isabella, Barnstable oceanward to a line extended along Oyster Harbors Beach, Barnstable.	0.85	SQUARE MILES	4A
Crows Pond	MA96-47	To Bassing Harbor, Chatham.	0.19	SQUARE MILES	2
Crystal Lake	MA96050	Orleans	33	ACRES	5
Depot Pond	MA96061	Eastham	26	ACRES	3
Dock Creek	MA96-86	From railroad crossing northeast of Route 6A, Sandwich to confluence with Old Harbor Creek, Sandwich.	0.02	SQUARE MILES	4A

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Duck Creek	MA96-32	Source west of Route 6, Wellfleet to Wellfleet Harbor (at a line from Shirttail Point to Taylor Road), Wellfleet.	0.15	SQUARE MILES	4A
Duck Pond	MA96068	Wellfleet	11	ACRES	4A
Dyer Pond	MA96070	Wellfleet	10	ACRES	4A
East Harbor (Pilgrim Lake)	MA96-83	Truro/Provincetown	0.5	SQUARE MILES	4A
Falmouth Inner Harbor	MA96-17	Waters included north of Falmouth Inner Harbor Light, Falmouth.	0.05	SQUARE MILES	2
Flax Pond	MA96090	Dennis	15	ACRES	3
Frost Fish Creek	MA96-49	Outlet from cranberry bog northwest of Stony Hill Road, Chatham to confluence with Ryder Cove, Chatham.	0.01	SQUARE MILES	4A
Goose Pond	MA96106	Chatham	35	ACRES	3
Great Harbor	MA96-18	The waters north of an imaginary line drawn east from Penzance Point to Devils Foot Island and southeast from Devils Foot Island to Juniper Point (excludes Eel Pond), Falmouth.	0.31	SQUARE MILES	4A
Great Pond	MA96114	Truro	17	ACRES	4A
Great Pond	MA96115	Eastham	109	ACRES	5
Great Pond	MA96117	Wellfleet	41	ACRES	4A
Great Pond	MA96-54	From inlet of Coonamessett River, Falmouth to Vineyard Sound (excluding Perch Pond), Falmouth.	0.4	SQUARE MILES	4A
Great River	MA96-60	From inlet of Abigails Brook, Mashpee to Waquoit Bay (excluding Jehu Pond), Mashpee.	0.16	SQUARE MILES	4A
Green Pond	MA96-55	east of Acapesket Road, Falmouth outlet to Vineyard Sound, Falmouth.	0.21	SQUARE MILES	4A
Gull Pond	MA96123	Wellfleet	103	ACRES	3
Halls Creek	MA96-93	Estuarine portion, from Craigville Beach Road, Barnstable to mouth at Centerville Harbor, Barnstable.	0.07	SQUARE MILES	4A
Hamblin Pond	MA96126	Barnstable	114	ACRES	5
Hamblin Pond	MA96-58	From inlet of Red Brook, Falmouth/Mashpee to outlet of Little River, Mashpee and inlet/outlet of Waquoit Bay west of Meadow Neck Road, Falmouth/Mashpee.	0.19	SQUARE MILES	4A
Harding Beach Pond	MA96-43	locally known as Sulfur Springs (northeast of Bucks Creek), Chatham.	0.07	SQUARE MILES	4A
Herring Pond	MA96133	Eastham	42	ACRES	3
Herring Pond	MA96134	Wellfleet	18	ACRES	3
Herring River	MA96-22	Outlet of Herring River Reservoir (at North Harwich Reservoir Dam) west of Bells Neck Road, Harwich to mouth at Nantucket Sound, Harwich.	0.07	SQUARE MILES	4A
Herring River	MA96-33	South of High Toss Road, Wellfleet to Wellfleet Harbor (at an imaginary line drawn due north from the eastern tip of Great Island to the opposite shore), Wellfleet.	0.4	SQUARE MILES	5
Herring River	MA96-67	From outlet of Herring Pond, Wellfleet to south of High Toss Road, Wellfleet.	3.6	MILES	5
Hinckleys Pond	MA96140	Harwich	164	ACRES	2
Horseleach Pond	MA96144	Truro	23	ACRES	4A

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Hoxie Pond	MA96146	Sandwich	8	ACRES	3
Hyannis Harbor	MA96-05	The waters from the shoreline to an imaginary line drawn from the light at the end of Hyannis breakwater, Barnstable to the point west of Dunbar Point, Barnstable.	0.68	SQUARE MILES	4A
Hyannis Inner Harbor	MA96-82	Waters landward of an imaginary line drawn from Harbor Bluff, Barnstable to Hyannis Park, Yarmouth.	0.13	SQUARE MILES	5
Jehu Pond	MA96-59	Mashpee.	0.09	SQUARE MILES	4A
Johns Pond	MA96157	Mashpee	316	ACRES	4A
Kinnacum Pond	MA96163	Wellfleet	2	ACRES	3
Lake Elizabeth	MA96080	Barnstable	6	ACRES	3
Lawrence Pond	MA96165	Sandwich	138	ACRES	4A
Lewis Bay	MA96-36	Includes portion of Pine Island Creek and Uncle Roberts Cove to confluence with Nantucket Sound, Barnstable/Yarmouth (excluding Hyannis Inner Harbor, Barnstable/Yarmouth and Mill Creek, Yarmouth).	1.79	SQUARE MILES	5
Little Harbor	MA96-19	The waters north of an imaginary line drawn from Juniper Point, Falmouth east to Nobska Beach, Falmouth.	0.07	SQUARE MILES	4A
Little Namskaket Creek	MA96-26	Source to mouth at Cape Cod Bay, Orleans.	0.01	SQUARE MILES	4A
Little Pleasant Bay	MA96-78	Waters north and east of imaginary lines drawn from the northeasterly edge of Orleans (near The Horseshoe), southeasterly to the northeastern tip of Sipson Island, then continuing to and around the northeastern border of Sipson Meadow, Orleans then southto the northern tip of Strong Island, Chatham then east to a point on the inner Cape Cod National Seashore (excluding the delineated segments; The River, Pochet Neck, and Paw Wah Pond).	3.3	SQUARE MILES	4A
Little Pond	MA96-56	west of Vista Boulevard, Falmouth outlet to Vineyard Sound, Falmouth.	0.07	SQUARE MILES	4A
Little River	MA96-61	From outlet of Hamblin Pond, Mashpee to the Great River, Mashpee.	0.02	SQUARE MILES	4A
Long Pond	MA96179	Wellfleet	35	ACRES	4A
Long Pond	MA96180	Yarmouth	54	ACRES	3
Long Pond	MA96183	Brewster/Harwich	715	ACRES	5
Long Pond	MA96184	Barnstable	48	ACRES	4C
Lovells Pond	MA96185	Barnstable	54	ACRES	5
Lovers Lake	MA96186	Chatham	37	ACRES	5
Lower Mill Pond	MA96188	Brewster	44	ACRES	5
Maraspin Creek	MA96-06	From Commerce Road, Barnstable to confluence with Barnstable Harbor at Blish Point, Barnstable.	0.03	SQUARE MILES	4A
Mashpee Pond	MA96194	Mashpee/Sandwich	377	ACRES	4A
Mashpee River	MA96-24	Quinaquisset Avenue, Mashpee to mouth at Shoestring Bay (formerly to mouth at Popponesset Bay), Mashpee.	0.08	SQUARE MILES	4A
Mashpee River	MA96-89	Headwaters, outlet Mashpee Pond, Mashpee to Quinaquisset Avenue, Mashpee.	2.7	MILES	2

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NAME	SEGMENT ID	DESCRIPTION	SIZE	UNITS	CATEGORY
Middle Pond	MA96198	Barnstable	104	ACRES	5
Mill Creek	MA96-37	From Keveney Lane/Mill Lane, Barnstable/Yarmouth north to confluence with Cape Cod Bay, Barnstable/Yarmouth.	0.03	SQUARE MILES	4A
Mill Creek	MA96-41	Outlet of Taylors Pond, Chatham to confluence with Cockle Cove, Chatham.	0.03	SQUARE MILES	4A
Mill Creek	MA96-80	Headwaters, outlet Mill Pond, Yarmouth to confluence with Lewis Bay, Yarmouth.	0.07	SQUARE MILES	5
Mill Creek	MA96-85	Headwaters, outlet Shawme Lake Lower, Sandwich to confluence with Old Harbor Creek, Sandwich.	0.02	SQUARE MILES	4A
Mill Pond	MA96-52	including Little Mill Pond (PALIS # 96174), Chatham.	0.06	SQUARE MILES	4A
Miss Thachers Pond	MA96258	Yarmouth	6	ACRES	3
Muddy Creek	MA96-51	Source south of Countryside Drive and north-northeast of Old Queen Anne Road, Chatham to mouth at Pleasant Bay, Harwich/Chatham, including Upper and Lower reaches.	0.05	SQUARE MILES	4A
Mystic Lake	MA96218	Barnstable	146	ACRES	5
Namequoit River	MA96-71	Headwaters, outlet Areys Pond, Orleans to confluence with The River, Orleans.	0.06	SQUARE MILES	4A
Namskaket Creek	MA96-27	Source west of Route 6, Orleans to mouth at Cape Cod Bay, Brewster/Orleans.	0.03	SQUARE MILES	4A
Nauset Harbor	MA96-28	The waters south of an imaginary line drawn east from Woods Cove, Orleans around the southern point of Stony Island, around the southern end of the unnamed island in the harbor, to the Cape Cod National Seashore point, excluding Mill Pond, Orleans (areaassociated with Cape Cod National Seashore designated as ORW).	0.41	SQUARE MILES	2
North Bay	MA96-66	From Fox Island to just south of Bridge Street and separated from Cotuit Bay at a line from Point Isabella, Barnstable southward to the opposite shore (including Dam Pond), Barnstable.	0.47	SQUARE MILES	4A
Nye Pond	MA96228	Sandwich	6	ACRES	3
Old Harbor Creek	MA96-84	From Foster Road, Sandwich to Sandwich Harbor, Sandwich.	0.06	SQUARE MILES	4A
Oyster Pond	MA96-45	Including Stetson Cove, Chatham.	0.21	SQUARE MILES	4A
Oyster Pond	MA96-62	east of Fells Road, Falmouth.	0.1	SQUARE MILES	4A
Oyster Pond River	MA96-46	Outlet of Oyster Pond, Chatham to confluence with Stage Harbor, Chatham.	0.14	SQUARE MILES	4A
Pamet River	MA96-31	Tidegate at Route 6A, Truro to mouth at Cape Cod Bay (including Pamet Harbor), Truro.	0.14	SQUARE MILES	4A
Parkers River	MA96-38	Outlet Seine Pond, Yarmouth to mouth at Nantucket Sound, Yarmouth.	0.04	SQUARE MILES	4A
Paw Wah Pond	MA96-72	Orleans	0.008	SQUARE MILES	4A
Perch Pond	MA96-53	Connects to northwest end of Great Pond, west of Keechipam Way, Falmouth.	0.03	SQUARE MILES	4A

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NAME	SEGMENT ID	DESCRIPTION	SIZE	UNITS	CATEGORY
Peters Pond	MA96244	Sandwich	123	ACRES	4A
Pilgrim Lake	MA96246	Orleans	38	ACRES	3
Pleasant Bay	MA96-77	The waters between the mouth of Muddy Creek, Harwich and imaginary lines drawn from the northeastern edge of Orleans (near The Horseshoe), southeasterly to the northeastern tip of Sipson Island, then continuing to and around the northeastern border ofSipson Meadow, Orleans then south to the northern tip of Strong Island, Chatham and from the southeastern tip of Strong Island to Allen Point, Chatham (excluding the delineated segments; Bassing Harbor, Round Cove and Quanset Pond).	2.88	SQUARE MILES	4A
Pochet Neck	MA96-73	to confluence with Little Pleasant Bay, Orleans.	0.24	SQUARE MILES	4A
Popponesset Bay	MA96-40	From line connecting Ryefield Point, Barnstable and Punkhorn Point, Mashpee to inlet of Nantucket Sound (including Ockway Bay and Pinquickset Cove), Mashpee/Barnstable.	0.68	SQUARE MILES	4A
Popponesset Creek	MA96-39	All waters west of Popponesset Island (from Popponesset Island Road bridge at the north to a line extended from the southeastern most point of the island southerly to Popponesset Beach), Mashpee.	0.05	SQUARE MILES	5
Prince Cove	MA96-07	Includes areas east of Prince Cove which are locally known as "Warren Cove" and "Prince Cove Channel", Barnstable.	0.14	SQUARE MILES	4A
Provincetown Harbor	MA96-29	The waters northwest of an imaginary line drawn northeasterly from the tip of Long Point, Provincetown to Beach Point Beach, Truro (area associated with Cape Cod National Seashore designated as ORW).	4.33	SQUARE MILES	4A
Quanset Pond	MA96-74	Orleans.	0.02	SQUARE MILES	4A
Quashnet River	MA96-20	Just south of Route 28, Falmouth to mouth at Waquoit Bay, Falmouth. Also known as Moonakis River.	0.07	SQUARE MILES	4A
Quashnet River	MA96-90	Headwaters, outlet Johns Pond, Mashpee to just south of Route 28, Falmouth.	4.1	MILES	2
Quivett Creek	MA96-09	Outlet of unnamed pond just south of Route 6A, Brewster/Dennis to the mouth at Cape Cod Bay, Brewster/Dennis.	0.04	SQUARE MILES	4A
Red Brook	MA96-25	From dam at Red Brook Road, Falmouth/Mashpee to Hamblin Pond, Falmouth/Mashpee.	0.01	SQUARE MILES	2
Red Lily Pond	MA96257	Barnstable	4	ACRES	5
Rock Harbor Creek	MA96-16	Outlet Cedar Pond, Orleans to mouth at Cape Cod Bay, Eastham/Orleans.	0.03	SQUARE MILES	4A
Round Cove	MA96-75	Harwich.	0.02	SQUARE MILES	4A
Round Pond (East)	MA96260	Truro	6	ACRES	4A
Round Pond (West)	MA96261	Truro	2	ACRES	4A
Rushy Marsh Pond	MA96266	Barnstable	14	ACRES	3
Ryder Cove	MA96-50	Chatham	0.19	SQUARE MILES	4A
Ryder Pond	MA96268	Truro	18	ACRES	5
Santuit Pond	MA96277	Mashpee	164	ACRES	5

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NAME	SEGMENT ID	DESCRIPTION	SIZE	UNITS	CATEGORY
Santuit River	MA96-91	Headwaters, outlet Santuit Pond, Mashpee to confluence with tidal portion south of Old Mill Road, Mashpee.	1.6	MILES	2
Santuit River	MA96-92	From confluence with fresh water portion south of Old Mill Road, Mashpee to mouth at Shoestring Bay, Mashpee/Barnstable.	0.008	SQUARE MILES	4A
Saquatucket Harbor	MA96-23	South of Route 28, Harwich to confluence with Nantucket Sound, Harwich.	0.02	SQUARE MILES	4A
Scargo Lake	MA96279	Dennis	54	ACRES	3
Schoolhouse Pond	MA96281	Chatham	20	ACRES	3
Scorton Creek	MA96-30	Jones Lane, Sandwich to mouth at Cape Cod Bay, Sandwich.	0.03	SQUARE MILES	4A
Seapuit River	MA96-64	south of Osterville Grand Island, Barnstable to Cotuit Bay and West Bay, Barnstable.	0.06	SQUARE MILES	4A
Sesuit Creek	MA96-13	Approximately 625 feet east of Route 6A, Dennis to mouth at Sesuit Harbor, Cape Cod Bay, Dennis.	0.01	SQUARE MILES	4A
Shallow Pond	MA96285	Barnstable	76	ACRES	3
Shawme Lake Lower	MA96288	Sandwich	25	ACRES	5
Sheep Pond	MA96289	Brewster	138	ACRES	4A
Shoestring Bay	MA96-08	Quinaquisset Avenue, Mashpee/Barnstable to Popponesset Bay (line from Ryefield Point, Barnstable to Punkhorn Point, Mashpee, including Gooseberry Island), Barnstable/Mashpee.	0.31	SQUARE MILES	4A
Shubael Pond	MA96293	Barnstable	55	ACRES	3
Slough Pond	MA96298	Truro	29	ACRES	4A
Snake Pond	MA96302	Sandwich	81	ACRES	4A
Snow Pond	MA96303	Truro	7	ACRES	4A
Snows Creek	MA96-81	East of Old Colony Road, Barnstable to mouth at Lewis Bay, Barnstable.	0.02	SQUARE MILES	4A
Spectacle Pond	MA96306	Wellfleet	2	ACRES	4A
Spectacle Pond	MA96307	Sandwich	93	ACRES	4A
Springhill Creek	MA96-87	From railroad crossing northeast of Route 6A, Sandwich to confluence with Old Harbor Creek, Sandwich.	0.01	SQUARE MILES	4A
Stage Harbor	MA96-11	From the outlet of Mill Pond, Chatham (including Mitchell River) to the confluence with Nantucket Sound at a line from the southernmost point of Harding Beach southeast to the Harding Beach Point , Chatham.	0.56	SQUARE MILES	4A
Stewarts Creek	MA96-94	Estuarine portion west of Stetson Street, Barnstable to mouth at Hyannis Harbor, Barnstable.	0.01	SQUARE MILES	4A
Stillwater Pond	MA96309	Chatham	18	ACRES	5
Swan Pond River	MA96-14	Headwaters, outlet Swan Pond, Dennis to confluence with Nantucket Sound, Dennis.	0.04	SQUARE MILES	5
Taylors Pond	MA96-42	Chatham	0.02	SQUARE MILES	4A

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NAME	SEGMENT ID	DESCRIPTION	SIZE	UNITS	CATEGORY
The River	MA96-76	The water landward of an imaginary line drawn between Old Field Point and Namequoit Point including Meetinghouse Pond, and Kescayo Gansett Pond locally known as "Lonnies Pond", Orleans (excluding the delineated segments; Namequoit River and Areys Pond).	0.42	SQUARE MILES	4A
Town Cove	MA96-68	Entire cove to Nauset Harbor, including Rachael Cove and Woods Cove, Orleans/Eastham (area associated with Cape Cod National Seashore designated as ORW).	0.79	SQUARE MILES	5
Upper Mill Pond	MA96324	Brewster	249	ACRES	2
Upper Shawme Lake	MA96326	Sandwich	21	ACRES	5
Village Pond	MA96329	Truro	2	ACRES	3
Wakeby Pond	MA96346	Mashpee/Sandwich	353	ACRES	4A
Walkers Pond	MA96331	Brewster	100	ACRES	5
Waquoit Bay	MA96-21	From mouths of Seapit River, Quashnet River (also known as Moonakis River), Falmouth and Great River, Mashpee to confluence with Vineyard Sound, Falmouth/Mashpee.	1.42	SQUARE MILES	5
Wellfleet Harbor	MA96-34	The waters north of an imaginary line drawn east from the southern tip of Jeremy Point, Wellfleet to Sunken Meadow, Eastham excluding the estuaries of Herring River, Duck Creek, Blackfish Creek, and Fresh Brook, Wellfleet (area associated with Cape CodNational Seashore designated as ORW).	8.4	SQUARE MILES	2
Wequaquet Lake	MA96333	Barnstable	576	ACRES	4A
West Bay	MA96-65	South of the Bridge Street bridge, Barnstable to Nantucket Sound including Eel River, Barnstable.	0.52	SQUARE MILES	4A
Charles					
Alder Brook	MA72-22	Headwaters northwest of the Route 135 and South Street intersection, Needham to the confluence with the Charles River, Needham.	0.282	MILES	5
Beaver Brook	MA72-12	Headwaters, outlet Beaver Pond, Bellingham to the confluence with the Charles River, Bellingham.	1.413	MILES	5
Beaver Brook	MA72-28	Headwaters, north of Route 2, Lexington through culverting to Charles River, Waltham.	5.535	MILES	5
Beaver Pond	MA72004	Bellingham/Milford	86.679	ACRES	4A
Beaver Pond	MA72006	Franklin	31.789	ACRES	4C
Bogastow Brook	MA72-16	Headwaters, outlet Factory Pond, Holliston to inlet South End Pond, Millis.	9.492	MILES	4A
Brookline Reservoir	MA72010	Brookline	21.111	ACRES	3
Bulloughs Pond	MA72011	Newton	6.887	ACRES	5
Cambridge Reservoir	MA72014	Waltham/Lincoln/Lexington	532.011	ACRES	3
Cambridge Reservoir, Upper Basin	MA72156	Lincoln/Lexington	43.998	ACRES	5
Cedar Swamp Pond	MA72016	locally known as "Milford Pond", Milford	98.978	ACRES	4A
Chandler Pond	MA72017	Boston	11.394	ACRES	5
Charles River	MA72-01	Headwaters, outlet Echo Lake, Hopkinton to Dilla Street (just upstream of Cedar Swamp Pond), Milford.	2.482	MILES	4A

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NAME	SEGMENT ID	DESCRIPTION	SIZE	UNITS	CATEGORY
Charles River	MA72-03	Milford WWTF discharge, Hopedale to outlet Box Pond (formerly segment MA72008), Bellingham.	3.374	MILES	5
Charles River	MA72-04	Outlet Box Pond, Bellingham to inlet Populatic Pond, Norfolk/Medway.	11.457	MILES	5
Charles River	MA72-05	Outlet Populatic Pond, Norfolk/Medway to South Natick Dam, Natick.	18.078	MILES	5
Charles River	MA72-06	South Natick Dam, Natick to Chestnut Street, Needham/Dover.	8.356	MILES	5
Charles River	MA72-07	Chestnut Street, Needham to Watertown Dam, Watertown.	24.774	MILES	5
Charles River	MA72-33	Outlet Cedar Swamp Pond, Milford to the Milford WWTF discharge, Hopedale (formerly part of segment MA72-02).	2.037	MILES	4A
Charles River	MA72-36	Watertown Dam, Watertown to the Boston University Bridge, Boston/Cambridge (formerly part of segment MA72-08).	6.052	MILES	5
Charles River	MA72-38	Boston University Bridge, Boston/Cambridge to the New Charles River Dam, Boston (formerly part of segment MA72-08).	3.092	MILES	5
Cheese Cake Brook	MA72-29	Emerges south of Route 16, Newton to confluence with the Charles River, Newton.	1.416	MILES	4A
Chestnut Hill Reservoir	MA72023	Boston	82.253	ACRES	3
Chicken Brook	MA72-34	Source, outlet Waseeka Sanctuary Pond, Holliston to the confluence with the Charles River, Medway.	7.407	MILES	2
Crystal Lake	MA72030	Newton	27.273	ACRES	3
Dug Pond	MA72034	Natick	50.191	ACRES	4C
Echo Lake	MA72035	Milford/Hopkinton	72.335	ACRES	4A
Factory Pond	MA72037	Holliston	9.699	ACRES	4A
Farm Pond	MA72039	Sherborn	125.03	ACRES	2
Franklin Reservoir Northeast	MA72095	Franklin	21.03	ACRES	4A
Franklin Reservoir Southwest	MA72032	Franklin	13.12	ACRES	4A
Fuller Brook	MA72-18	Headwater south of Route 135, Needham to confluence with Waban Brook, Wellesley.	4.282	MILES	5
Halls Pond	MA72043	Brookline	0.57	ACRES	3
Hammond Pond	MA72044	Newton	22.382	ACRES	2
Hardys Pond	MA72045	Waltham	42.769	ACRES	4A
Hopping Brook	MA72-35	Source in Cedar Swamp, Holliston to the confluence with the Charles River, Bellingham/Medway.	4.863	MILES	2
Houghton Pond	MA72050	Holliston	17.521	ACRES	4A
Jamaica Pond	MA72052	Boston	66.734	ACRES	5
Jennings Pond	MA72053	Natick	7.428	ACRES	2
Kendrick Street Pond	MA72055	Needham	39.264	ACRES	5
Kingsbury Pond	MA72056	Norfolk	15.36	ACRES	4C
Lake Archer	MA72002	Wrentham	77.118	ACRES	4C
Lake Pearl	MA72092	Wrentham	236.692	ACRES	4A
Lake Waban	MA72125	Wellesley	108.997	ACRES	4C

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NAME	SEGMENT ID	DESCRIPTION	SIZE	UNITS	CATEGORY
Lake Winthrop	MA72140	Holliston	131.341	ACRES	5
Linden Pond	MA72063	Holliston	1.399	ACRES	4A
Little Farm Pond	MA72064	Sherborn	23.801	ACRES	3
Louisa Lake	MA72068	Milford	7.772	ACRES	3
Lymans Pond	MA72070	Dover	4.395	ACRES	4A
Mill River	MA72-15	Headwaters, outlet Bush Pond, Norfolk to confluence with the Charles River, Norfolk.	3.47	MILES	5
Mine Brook	MA72-14	Headwaters in Franklin State Forest, Franklin to the confluence with the Charles River, Franklin (through Mine Brook Pond, formerly segment MA72077).	8.942	MILES	5
Mirror Lake	MA72078	Wrentham/Norfolk	61.55	ACRES	4A
Morses Pond	MA72079	Wellesley/Natick	111.817	ACRES	4C
Muddy River	MA72-11	Headwaters, outlet Ward Pond in Olmstead Park, Boston through Leverett Pond, Boston/Brookline to confluence with Charles River, Boston.	3.6	MILES	5
Noannet Pond	MA72084	Westwood/Dover	49.71	ACRES	4C
Nonesuch Pond	MA72085	Natick/Weston	38.78	ACRES	4C
Norumbega Reservoir	MA72086	[North Basin] Weston	13.643	ACRES	3
Norumbega Reservoir	MA72087	[South Basin] Weston	38.41	ACRES	3
Populatic Pond	MA72096	Norfolk	41.911	ACRES	5
Powissett Brook	MA72-20	Headwaters, outlet Noannet Pond, Westwood to confluence with Charles River, Dover.	1.849	MILES	5
Rock Meadow Brook	MA72-21	Headwaters in Fisher Meadow, Westwood through Stevens Pond and Lee Pond, Westwood to confluence with Charles River, Dedham.	3.771	MILES	5
Rosemary Brook	MA72-25	Headwaters, outlet Rosemary Lake, Needham to confluence with the Charles River, Wellesley.	3.266	MILES	4A
Sandy Pond	MA72105	Lincoln	157.108	ACRES	3
Sawmill Brook	MA72-23	Headwaters, Newton to confluence with Charles River, Boston.	2.397	MILES	5
Scarboro Golf Course Pond	MA72107	Boston	6.107	ACRES	4C
South End Pond	MA72109	Millis	29.525	ACRES	3
South Meadow Brook	MA72-24	From emergence west of Parker Street, Newton to confluence with the Charles River, Newton (sections culverted).	1.706	MILES	4A
Stony Brook	MA72-26	Headwaters, outlet Beaver Pond, Lincoln to inlet Stony Brook Reservoir, Waltham/Weston.	5.122	MILES	2
Stony Brook	MA72-37	Outlet Turtle Pond, Boston to culvert entrance, Boston.	1.62	MILES	3
Stony Brook Reservoir	MA72114	Waltham/Weston	63.58	ACRES	3
Stop River	MA72-09	Headwaters near Dedham Street (Route 1A), Wrentham to Norfolk-Walpole MCI discharge, Norfolk (through Highland Lake formerly segment MA72047).	5.566	MILES	5
Stop River	MA72-10	Norfolk-Walpole MCI discharge, Norfolk to confluence with Charles River, Medfield.	4.168	MILES	5
Todd Pond	MA72117	Lincoln	9.257	ACRES	3
Trout Brook	MA72-19	Headwaters, outlet Channings Pond, Dover to confluence with Charles River, Dover.	2.772	MILES	5
Uncas Pond	MA72122	Franklin	17.3	ACRES	4A

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NAME	SEGMENT ID	DESCRIPTION	SIZE	UNITS	CATEGORY
Unnamed Tributary	MA72-27	Headwaters, outlet Stony Brook Reservoir, Waltham/Weston to confluence with the Charles River, Waltham/Weston.	0.191	MILES	4C
Unnamed Tributary	MA72-30	Locally known as Laundry Brook - emerges north of California Street, Watertown to the confluence with the Charles River, Watertown.	0.023	MILES	5
Unnamed Tributary	MA72-31	Locally known as "Millers River" - from emergence near Route 93, Cambridge/Boston to the confluence with the Charles River, Cambridge.	0.207	MILES	5
Unnamed Tributary	MA72-32	Locally known as Sawins Brook - emerges east of Elm Street, Watertown to confluence with the Charles River, Watertown (sections culverted).	0.539	MILES	4A
Waban Brook	MA72-17	Headwaters, outlet Lake Waban, Wellesley to confluence with the Charles River, Wellesley.	0.717	MILES	5
Walker Pond	MA72126	Millis	9.008	ACRES	3
Waseeka Sanctuary Pond	MA72155	Holliston	17.053	ACRES	3
Weld Pond	MA72131	Dedham	26.786	ACRES	2
Weston Reservoir	MA72134	Weston	58.655	ACRES	3
Weston Station Pond	MA72135	Weston	37.666	ACRES	3
Chicopee					
Abbey Brook	MA36-40	Headwaters west of Saint James Avenue, Springfield through Bemis Pond (formely reported as segment MA36011) to the confluence with the Chicopee River, Chicopee.	1.5	MILES	5
Adams Pond	MA36001	Oakham	30	ACRES	3
Alden Pond	MA36003	Ludlow	4	ACRES	5
Asnacomet Pond	MA36005	Hubbardston	126	ACRES	3
Atherton Brook	MA36-30	Headwaters at confluence of Town Farm and Osgood Brooks, Shutesbury to mouth at Quabbin Reservoir, Pelham.	1.9	MILES	2
Beaver Lake	MA36010	Ware	150	ACRES	4C
Bemis Road Pond	MA36012	Hubbardston	16	ACRES	3
Bennett Street Pond	MA36014	Palmer	6	ACRES	3
Bickford Pond	MA36015	Hubbardston/Princeton	163	ACRES	3
Brigham Pond	MA36020	Hubbardston	45	ACRES	3
Brookhaven Lake	MA36021	West Brookfield	34	ACRES	5
Brooks Pond	MA36022	Petersham	86	ACRES	3
Brooks Pond	MA36023	N.Brookfield/New Braintree/Spencer/Oakham	179	ACRES	4C
Browning Pond	MA36025	Oakham/Spencer	106	ACRES	5
Burnshirt River	MA36-37	Headwaters - Outlet Stone Bridge Pond, Templeton/Phillipston to confluence with Canesto Brook, Barre. (through Williamsville Pond formerly segment MA36167)	8.6	MILES	2
Cadwell Creek	MA36-29	Headwaters east of Route 202 and northwest of Dodge Hill, Pelham to mouth at Quabbin Reservoir, Belchertown.	3.2	MILES	2
Calkins Brook	MA36-26	Headwaters, southeast of Baptist Hill, Palmer to confluence with Twelvemile Brook, Wilbraham.	2.7	MILES	3

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NAME	SEGMENT ID	DESCRIPTION	SIZE	UNITS	CATEGORY
Canesto Brook	MA36-36	Headwaters northwest of Hubbardston State Forest near Hubbardston/Templeton town line to confluence with Ware River, Barre.	7.3	MILES	2
Carter Pond	MA36029	Petersham	44	ACRES	3
Chicopee Brook	MA36-21	Headwaters, east of Peaked Mountain, Monson (through Chicopee Brook Pond, formerly segment MA36031) to confluence with Quaboag River, Monson.	9.9	MILES	3
Chicopee Reservoir	MA36033	Chicopee	22	ACRES	3
Chicopee River	MA36-22	Source, confluence of Ware River and Quaboag River, Palmer (through Red Bridge Impoundment formerly segment MA36171) to Red Bridge Impoundment Dam, Wilbraham/Ludlow.	2.8	MILES	5
Chicopee River	MA36-23	Red Bridge Impoundment Dam, Wilbraham/Ludlow to Wilbraham Pumping Station (old WWTP), Wilbraham/Ludlow.	3.8	MILES	2
Chicopee River	MA36-24	Wilbraham Pumping Station (old WWTP), Wilbraham/Ludlow to Chicopee Falls Dam, Chicopee.	9.1	MILES	5
Chicopee River	MA36-25	Chicopee Falls Dam, Chicopee to confluence with Connecticut River, Chicopee.	3	MILES	5
Cloverdale Street Pond	MA36036	Rutland	19	ACRES	3
Comins Pond	MA36037	Warren	26	ACRES	3
Conant Brook Reservoir	MA36038	Monson	4	ACRES	2
Cooley Brook	MA36-38	From the outlet of Chicopee Reservoir, Chicopee to the confluence with the Chicopee River, Chicopee. (segment includes "braid" that confluences with the Chicopee River upstream of the mouth of Cooley Brook)	1.2	MILES	2
Cranberry Meadow Pond	MA36040	Spencer/Charlton	69	ACRES	3
Cranberry River	MA36-20	Source, outlet Cranberry Meadow Pond, Spencer to confluence with Sevenmile River, Spencer. (through Howe Pond formerly segment MA36073)	3.6	MILES	2
Crystal Lake	MA36043	Palmer	16	ACRES	3
Cunningham Pond	MA36044	Hubbardston	27	ACRES	3
Cusky Pond	MA36045	New Braintree	28	ACRES	3
Dean Pond	MA36049	Brimfield/Monson	10	ACRES	4C
Dean Pond	MA36050	Oakham	64	ACRES	5
Demond Pond	MA36051	Rutland	120	ACRES	3
Dimmock Pond	MA36053	Springfield	9	ACRES	3
Doane Pond	MA36054	North Brookfield	28	ACRES	5
Dunn Brook	MA36-19	From confluence with Forget-Me-Not Brook, East Brookfield/Brookfield to confluence with Quaboag River, Brookfield.	2.4	MILES	2
Eames Pond	MA36056	Paxton	58	ACRES	5
East Branch Swift River	MA36-35	Headwaters at the confluence of Shattuck and Popple Camp Brooks, Phillipston to mouth at Pottapaug Pond, Petersham. (through Connor Pond formerly segment MA36039)	9.8	MILES	2
East Branch Ware River	MA36-01	Outlet Bickford Pond, Hubbardston to confluence with the West Branch Ware River, Barre.	12.4	MILES	5
East Brookfield River	MA36-13	Outlet Lake Lashaway, East Brookfield to Quaboag Pond, East Brookfield.	2.4	MILES	5

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NAME	SEGMENT ID	DESCRIPTION	SIZE	UNITS	CATEGORY
Edson Pond	MA36180	Rutland	36	ACRES	3
Fivemile Pond	MA36061	Springfield	36	ACRES	3
Fivemile Pond South	MA36182	Springfield	4	ACRES	3
Forest Lake	MA36063	Palmer	45	ACRES	4C
Forget-Me-Not Brook	MA36-18	Headwaters, North Brookfield to North Brookfield WWTP discharge, North Brookfield.	1.7	MILES	2
Forget-Me-Not Brook	MA36-28	North Brookfield WWTP discharge, North Brookfield to confluence with Dunn Brook, East Brookfield/Brookfield.	1.3	MILES	5
Fuller Brook	MA36-41	From the Ludlow/Chicopee corporate boundary where the stream name changes from Higher Brook, to the confluence with the Chicopee River, Chicopee.	1.9	MILES	5
Gaston Pond	MA36065	Barre	15	ACRES	3
Hardwick Pond	MA36066	Hardwick	67	ACRES	4C
Haviland Pond	MA36069	Ludlow	25	ACRES	3
Higher Brook	MA36-42	Headwaters south of Route 21, Ludlow through Harris Pond (formely reported as segment MA36067) to the Ludlow/Chicopee corporate boundary where the stream name changes to Fuller Brook.	6.3	MILES	2
Hop Brook	MA36-32	Headwaters upstream of West Street, New Salem to mouth at Quabbin Reservoir, New Salem.	3.7	MILES	2
Horse Pond	MA36072	North Brookfield	63	ACRES	3
Knights Pond	MA36077	Belchertown	36	ACRES	3
Lake Lashaway	MA36079	North Brookfield/East Brookfield	274	ACRES	4A
Lake Lorraine	MA36084	Springfield	28	ACRES	4C
Lake Whittemore	MA36165	Spencer	52	ACRES	5
Long Pond	MA36082	Rutland	167	ACRES	4C
Long Pond	MA36083	Springfield	14	ACRES	4A
Lovewell Pond	MA36085	Hubbardston	82	ACRES	3
Mare Meadow Reservoir	MA36090	Westminster/Hubbardston	240	ACRES	3
Mare Meadow Reservoir North	MA36178	Westminster	38	ACRES	3
Middle Branch Swift River	MA36-33	Headwaters just north of Wendell and New Salem State Forests (south of the Swift River School), Wendell to mouth at Quabbin Reservoir, New Salem.	6.9	MILES	2
Minechoag Pond	MA36093	Ludlow	21	ACRES	4A
Mona Lake	MA36094	Springfield	11	ACRES	4A
Moose Hill Reservoir	MA36179	Spencer/Leicester	52	ACRES	3
Moosehorn Pond	MA36097	Hubbardston	67	ACRES	4C
Moulton Pond	MA36098	Rutland	65	ACRES	3
Muddy Pond	MA36102	Oakham/Rutland	23	ACRES	3
Murphy Pond	MA36103	Ludlow	6	ACRES	3
Old Reservoir	MA36114	Barre	37	ACRES	4C

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NAME	SEGMENT ID	DESCRIPTION	SIZE	UNITS	CATEGORY
Palmer Reservoir	MA36115	Palmer	8	ACRES	3
Paradise Lake	MA36116	Monson	17	ACRES	3
Pattaquattic Pond	MA36117	Palmer	18	ACRES	3
Peppers Mill Pond	MA36121	Ware	11	ACRES	3
Perry Hill Pond	MA36122	Hubbardston	23	ACRES	3
Pottapaug Pond	MA36125	Petersham/Hardwick	568	ACRES	4A
Prince River	MA36-08	Source, outlet Hemingway Pond, Barre to confluence with Ware River, Barre (excluding approximately 0.6 miles through Old Reservoir, segment MA36114).	7.1	MILES	3
Quabbin Reservoir	MA36129	Petersham/Pelham/Ware/Hardwick/Shutesbury/Belchertown/New Salem	24012	ACRES	4A
Quaboag Pond	MA36130	Brookfield/East Brookfield	544	ACRES	5
Quaboag River	MA36-14	Outlet of Quaboag Pond, Brookfield to Route 67 bridge, West Brookfield.	6.1	MILES	2
Quaboag River	MA36-15	Route 67 bridge, West Brookfield to Warren WWTP discharge, Warren.	6.3	MILES	2
Quaboag River	MA36-16	Warren WWTP discharge, Warren to Route 32 bridge, Palmer/Monson.	8.7	MILES	5
Quaboag River	MA36-17	Route 32 bridge, Palmer/Monson to confluence with Ware River forming headwaters of Chicopee River, Palmer.	5.3	MILES	5
Quacumquasit Pond	MA36131	Brookfield/East Brookfield/Sturbridge	223	ACRES	4A
Queen Lake	MA36132	Phillipston	139	ACRES	3
Sevenmile River	MA36-11	Source, outlet Browning Pond, Spencer to confluence with Cranberry River, Spencer.	7.3	MILES	2
Sevenmile River	MA36-12	Confluence with Cranberry River, Spencer to confluence with East Brookfield River, East Brookfield.	2.5	MILES	2
Shaw Pond	MA36138	Leicester	64	ACRES	3
Spectacle Pond	MA36142	Wilbraham	9	ACRES	4A
Springfield Reservoir	MA36145	Ludlow	393	ACRES	3
Stone Bridge Pond	MA36148	Templeton	32	ACRES	3
Sugden Reservoir	MA36150	Spencer	85	ACRES	4A
Swift River	MA36-09	Winsor Dam, Belchertown to Upper Bondsville Mill Dam, Belchertown/Palmer.	5.6	MILES	2
Swift River	MA36-10	Upper Bondsville Mill Dam, Belchertown/Palmer to confluence with Ware River, Palmer.	3.9	MILES	2
Thayer Pond	MA36181	Rutland	46	ACRES	3
Thompson Lake	MA36154	Palmer	34	ACRES	3
Thompsons Pond	MA36155	Spencer	116	ACRES	3
Town Barn Beaver Pond	MA36156	Petersham	20	ACRES	3
Turkey Hill Pond	MA36157	Rutland/Paxton	90	ACRES	4C
Unnamed Tributary	MA36-39	Unnamed tributary to the Chicopee River locally known as "Poor Brook" from headwaters near the Conrail tracks, Springfield to the confluence with the Chicopee River, Chicopee.	2.2	MILES	5
Waite Pond	MA36161	Hubbardston	34	ACRES	3

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Ware River	MA36-03	MDC intake, Barre to dam at South Barre Reservoir, Barre. (through former segments Powder Mill Pond MA36126 and South Barre Reservoir MA36141)	2.1	MILES	5
Ware River	MA36-04	Dam at South Barre Reservoir, Barre to Wheelwright Dam, New Braintree/Hardwick.	4.9	MILES	2
Ware River	MA36-05	Wheelwright Dam, New Braintree/Hardwick to Ware Dam, Ware.	11.5	MILES	5
Ware River	MA36-06	Ware Dam, Ware to Thorndike Dam, Palmer.	10.1	MILES	5
Ware River	MA36-07	Thorndike Dam, Palmer to confluence with Quaboag River, forming headwaters Chicopee River, Palmer.	2.5	MILES	2
Ware River	MA36-27	Confluence of East Branch Ware and West Branch Ware rivers, Barre to MDC intake, Barre.	4.9	MILES	5
West Branch Fever Brook	MA36-34	Headwaters just north (upstream) of Route 122, Petersham to mouth at Quabbin Reservoir, Petersham.	3.4	MILES	2
West Branch Swift River	MA36-31	Headwaters - Outlet of small unnamed impoundment east of Cooleyville Road in Wendell State Forest, Wendell to mouth at Quabbin Reservoir, Shutesbury/New Salem.	6.3	MILES	2
West Branch Ware River	MA36-02	Outlet Brigham Pond, Hubbardston to confluence with the East Branch Ware River, Barre.	4.5	MILES	2
Wickaboag Pond	MA36166	West Brookfield	315	ACRES	4A
Concord (SuAsCo)					
Ashland Reservoir	MA82003	Ashland	167.961	ACRES	4A
Assabet Brook	MA82B-17	Headwaters, outlet of Fletchers Pond, Stow to the confluence with the Assabet River, Stow.	1.982	MILES	2
Assabet River	MA82B-01	Outlet of the Assabet River Reservoir, Westborough to the Westborough WWTP discharge, Westborough.	1.249	MILES	5
Assabet River	MA82B-02	From the Westborough WWTP discharge, Westborough to the Route 20 Dam, Northborough.	3.802	MILES	5
Assabet River	MA82B-03	From the Route 20 Dam, Northborough to the Marlborough West WWTP discharge, Marlborough.	2.439	MILES	5
Assabet River	MA82B-04	From the Marlborough West WWTP discharge, Marlborough to the Hudson WWTP discharge, Hudson.	8.017	MILES	5
Assabet River	MA82B-05	From the Hudson WWTP discharge, Hudson to the USGS gage at Routes 27/62, Maynard.	8.197	MILES	5
Assabet River	MA82B-06	From the USGS gage at Routes 27/62, Maynard to the Powdermill Dam, Acton.	1.22	MILES	5
Assabet River	MA82B-07	From the Powdermill Dam, Acton to the confluence with the Sudbury River, Concord.	6.402	MILES	5
Assabet River Reservoir	MA82004	Westborough	338.14	ACRES	5
Bartlett Pond	MA82007	Northborough	51.815	ACRES	4C
Batemans Pond	MA82008	Concord	25.69	ACRES	4C
Boons Pond	MA82011	Stow/Hudson	173.442	ACRES	4A
Carding Mill Pond	MA82015	Sudbury	40.466	ACRES	5
Cedar Swamp Pond	MA82016	Westborough	16.579	ACRES	3
Chauncy Lake	MA82017	Westborough	173.313	ACRES	4C
Clamshell Pond	MA82018	Clinton	24.326	ACRES	3

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Cold Harbor Brook	MA82B-18	Headwaters, outlet of Rocky Pond, Boylston to confluence with Howard Brook, Northborough.	6.061	MILES	2
Concord River	MA82A-07	From the confluence of the Assabet and Sudbury rivers, Concord to the Billerica Water Supply intake, Billerica.	10.394	MILES	5
Concord River	MA82A-08	From the Billerica Water Supply intake, Billerica to Rogers Street bridge, Lowell.	5.073	MILES	5
Concord River	MA82A-09	From the Rogers Street bridge, Lowell to the confluence with the Merrimack River, Lowell.	0.899	MILES	5
Danforth Brook	MA82B-19	Headwaters at the confluence of Mill Brook and an unnamed tributary draining from Little Pond, Bolton to the inlet of Bruces Pond, Hudson.	2.366	MILES	2
Denny Brook	MA82A-27	From outlet of unnamed pond west of South Street, Westborough to confluence with Jackstraw Brook, Westborough	0.642	MILES	3
Dudley Pond	MA82029	Wayland	83.173	ACRES	5
Eames Brook	MA82A-13	From the outlet of Farm Pond, Framingham to the confluence with the Sudbury River, Framingham.	0.566	MILES	5
Elizabeth Brook	MA82B-12	From the outlet of an unnamed pond (Delaney Project on Stow/Harvard border) west of Harvard Road, Stow to the inlet of Fletchers Pond, Stow.	3.71	MILES	5
Elm Street Pond	MA82032	Chelmsford/Carlisle	65.646	ACRES	3
Farm Pond	MA82035	Framingham	139.682	ACRES	5
Farrar Pond	MA82036	Lincoln	83.012	ACRES	3
Fisk Pond	MA82038	Natick	61.757	ACRES	4C
Fiske Street Pond	MA82037	Carlisle/Chelmsford	37.732	ACRES	3
Fort Meadow Brook	MA82B-11	Outlet of Fort Meadow Reservoir, Marlborough/Hudson to confluence with Assabet River, Hudson.	2.718	MILES	2
Fort Meadow Reservoir	MA82042	Marlborough/Hudson	254	ACRES	5
Fort Pond	MA82043	Littleton	101.823	ACRES	3
Fort Pond Brook	MA82B-13	From source in a wetland just west of Fort Pond, Littleton to the inlet of Warners Pond, Concord.	10.239	MILES	3
Framingham Reservoir #1	MA82044	Framingham	117.597	ACRES	5
Framingham Reservoir #2	MA82045	Framingham/Ashland	114.357	ACRES	5
Framingham Reservoir #3	MA82046	Framingham	221.244	ACRES	4C
Gates Pond	MA82047	Berlin	72.666	ACRES	3
Gates Pond Brook	MA82B-10	From the outlet of Gates Pond, Berlin to the confluence with the Assabet River, Berlin.	1.042	MILES	3
Gleasons Pond	MA82048	Framingham	10.504	ACRES	3
Great Meadows Pond #3	MA82053	Concord	53	ACRES	4C
Grist Mill Pond	MA82055	Sudbury/Marlborough	16.731	ACRES	5
Hager Pond	MA82056	Marlborough	29.917	ACRES	5
Heard Pond	MA82058	Wayland	75.632	ACRES	5
Heart Pond	MA82059	Chelmsford/Westford	93.862	ACRES	5
Hocomonco Pond	MA82060	Westborough	26.938	ACRES	5

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NAME	SEGMENT ID	DESCRIPTION	SIZE	UNITS	CATEGORY
Hop Brook	MA82A-05	Outlet of Carding Mill Pond, Sudbury to confluence with Allowance Brook, Sudbury (Allowance Brook was identified as Landham Brook on USGS quads prior to 1987).	6.717	MILES	5
Hop Brook	MA82A-06	From the confluence of Allowance Brook, Sudbury to the confluence with the Sudbury River, Wayland (this segment was formerly identified as Wash Brook, Hop Brook appeared as Wash Brook and Allowance Brook was previously identified as Landham Brook on USGSquads prior to 1987).	2.971	MILES	5
Hop Brook	MA82B-20	From the outlet of Smith Pond, Northborough to the confluence with the Assabet River, Northborough.	1.259	MILES	2
Hopkinton Reservoir	MA82061	Hopkinton/Ashland	161.09	ACRES	5
Ice House Pond	MA82066	Acton	11.219	ACRES	3
Indian Brook	MA82A-23	Headwaters, outlet of Icehouse Pond, Hopkinton to the inlet of Hopkinton Reservoir, Hopkinton (formerly part of segment MA82A-12).	2.33	MILES	3
Indian Brook	MA82A-24	Outlet of Hopkinton Reservoir, Ashland to the confluence with the Sudbury River, Ashland (formerly part of segment MA82A-12).	1.702	MILES	2
Jackstraw Brook	MA82A-28	From headwaters west of Upton Road, Westborough to inlet of Cedar Swamp Pond, Westborough	1.919	MILES	3
Lake Cochituate	MA82020	[North Basin] Natick/Framingham/Wayland	195.59	ACRES	5
Lake Cochituate	MA82125	[Middle Basin] Natick/Wayland	134.528	ACRES	5
Lake Cochituate	MA82126	[Carling Basin] Natick	14.318	ACRES	5
Lake Cochituate	MA82127	[South Basin] Natick	239.605	ACRES	5
Learned Pond	MA82069	Framingham	33.857	ACRES	3
Little Chauncy Pond	MA82070	Northborough	43.338	ACRES	4C
Long Pond	MA82072	Littleton	101.744	ACRES	5
Meadow Pond	MA82129	Carlisle	12.354	ACRES	4C
Milham Reservoir	MA82077	Marlborough	66.594	ACRES	3
Mill Brook	MA82A-20	From the outlet of Crosby Pond, Concord to the confluence with the Concord River, Concord.	2.694	MILES	4C
Nagog Pond	MA82082	Littleton/Acton	277.719	ACRES	3
Nashoba Brook	MA82B-14	From source just south of Route 110 in Westford to confluence with Fort Pond Brook, Concord.	9.411	MILES	5
North Brook	MA82B-21	Headwaters, east of Ballville Road and north of Wataquadock Hill Road, Bolton to the confluence with the Assabet River, Berlin.	7.763	MILES	2
North Great Meadows	MA82084	Concord	73.479	ACRES	4C
Nutting Lake	MA82088	[East Basin] Billerica	30.481	ACRES	5
Nutting Lake	MA82124	[West Basin] Billerica	51.408	ACRES	4A
Pantry Brook	MA82A-19	From source west of Haynes Road, Sudbury to the confluence with the Sudbury River, Sudbury.	3.226	MILES	5
Piccadilly Brook	MA82A-30	From headwaters, outlet of Westboro Reservoir, Westborough to inlet to Cedar Swamp Pond, Westborough	2.032	MILES	3
Pine Brook	MA82A-14	From source south of Route 20, just east of the Weston/Wayland border to the confluence with the Sudbury River, Wayland.	2.485	MILES	2

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Puffers Pond	MA82092	Maynard/Sudbury	28.441	ACRES	5
River Meadow Brook	MA82A-10	From the outlet of Russell Mill Pond, Chelmsford to the confluence with the Concord River, Lowell.	6.415	MILES	5
Rocky Pond	MA82095	Boylston	61.83	ACRES	4C
Russell Millpond	MA82096	Chelmsford	32.9	ACRES	4C
Rutters Brook	MA82A-29	From headwaters near Robin Road, Westborough to confluence with Jackstraw Brook, Westborough	1.968	MILES	3
Saxonville Pond	MA82097	Framingham	58.818	ACRES	5
Second Division Brook	MA82B-09	From the headwaters at the outlet of small unnamed pond north of Waltham Street, Maynard to the confluence with the Assabet River, Concord.	2.909	MILES	3
Smith Pond	MA82099	Northborough	15.553	ACRES	3
Solomon Pond	MA82100	Northborough	21.242	ACRES	3
Spencer Brook	MA82B-15	From the outlet of an unnamed pond north of Bellows Hill, Carlisle to the inlet of Angiers Pond, Concord.	3.794	MILES	3
Stearns Mill Pond	MA82104	Sudbury	19.079	ACRES	5
Sudbury Reservoir	MA82106	Southborough/Marlborough	1177.986	ACRES	4A
Sudbury River	MA82A-01	From the source at the outlet of Cedar Swamp Pond, Westborough to the Fruit Street Bridge, Hopkinton/Westborough.	1.895	MILES	3
Sudbury River	MA82A-03	Outlet Saxonville Pond, Framingham to confluence with Hop Brook (the lower portion of Hop Brook was identified as Wash Brook on USGS quads prior to 1987), Wayland.	5.547	MILES	5
Sudbury River	MA82A-04	Confluence with Hop Brook (the lower portion of Hop Brook was identified as Wash Brook on USGS quads prior to 1987), Wayland to confluence with Assabet River, Concord.	11.693	MILES	5
Sudbury River	MA82A-25	From the Fruit Street bridge Hopkinton/Westborough to the inlet of Framingham Reservoir #2, Ashland (formerly part of segment MA82A-02).	6.295	MILES	5
Sudbury River	MA82A-26	From the outlet of Framingham Reservoir #1, Framingham to the inlet of Saxonville Pond, Framingham (formerly part of segment MA82A-02).	2.764	MILES	5
Taylor Brook	MA82B-08	From the outlet of Puffer Pond, Maynard to the confluence with the Assabet River, Maynard.	1.770802	MILES	2
Tripp Pond	MA82107	Hudson	3.501	ACRES	3
Unnamed Tributary	MA82A-15	From the source northeast of Indian Head Hill (near Route 20), Marlborough to the inlet of Hager Pond, Marlborough.	1.056231	MILES	5
Unnamed Tributary	MA82A-16	From the outlet of Hager Pond, Marlborough to the inlet of Grist Mill Pond, Marlborough.	0.165	MILES	5
Unnamed Tributary	MA82A-17	From the outlet of Grist Mill Pond, Sudbury to the inlet of Carding Mill Pond, Sudbury.	0.519	MILES	5
Unnamed Tributary	MA82A-21	From the outlet of Heart Pond, Chelmsford to the inlet of Russell Millpond, Chelmsford.	4.113	MILES	2
Unnamed Tributary	MA82A-22	Unnamed tributary to the Sudbury River locally known as Cochituate Brook, from the outlet of the north basin of Lake Cochituate, Framingham to confluence with Sudbury River, Framingham.	1.352	MILES	5
Unnamed Tributary	MA82B-16	From the outlet of Angiers Pond, Concord to confluence with the Assabet River, Concord (this segment is locally known as part of Spencer Brook).	0.486	MILES	2

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Walden Pond	MA82109	Concord	62.946	ACRES	4A
Warners Pond	MA82110	Concord	59.338	ACRES	4A
Waushakum Pond	MA82112	Framingham/Ashland	87.195	ACRES	5
West Pond	MA82115	Bolton	18.986	ACRES	2
Westborough Reservoir	MA82114	Westborough	41.007	ACRES	3
White Pond	MA82118	Concord	36.112	ACRES	3
White Pond	MA82119	Hudson/Stow	48.837	ACRES	3
Whitehall Brook	MA82A-11	From the outlet of Whitehall Reservoir, Hopkinton to confluence with the Sudbury River, Westborough.	3.485	MILES	3
Whitehall Reservoir	MA82120	Hopkinton	559.601	ACRES	5
Williams Lake	MA82121	Marlborough	69.316	ACRES	3
Willis Pond	MA82122	Sudbury	67.329	ACRES	2
Winning Pond	MA82123	Billerica	22.216	ACRES	4C
Connecticut					
Amethyst Brook	MA34-35	Headwaters, confluence of Buffum and Harris brooks, Pelham to the confluence with Adams River (forming the headwaters of Fort River), Amherst.	2.143	MILES	2
Arcadia Lake	MA34005	Belchertown	32.314	ACRES	5
Atkins Reservoir	MA34006	Shutesbury	46.468	ACRES	3
Bachelor Brook	MA34-07	Outlet Forge Pond, Granby to confluence with Connecticut River, South Hadley (through former segments Aldrich Lake [East Basin] MA34002 and Aldrich Lake [West Basin] MA34106).	11.606	MILES	4A
Barton Cove	MA34122	(CT River) Gill	159.684	ACRES	5
Bloody Brook	MA34-36	From the railroad tracks north of North Main Street, Deerfield to the confluence with Mill River, Whately.	3.679	MILES	5
Brickyard Brook	MA34-13	Headwaters, Westfield to confluence with Manhan River, Westfield.	1.616	MILES	3
Broad Brook	MA34-18	Headwaters, Holyoke to inlet Nashawannuck Pond, Easthampton.	9.285	MILES	2
Buttery Brook	MA34-42	Headwaters (perennial portion), west of Haig Avenue, South Hadley to the confluence with the Connecticut River, South Hadley (interrupted urban, portions culverted).	1.6	MILES	5
Connecticut River	MA34-01	New Hampshire/Vermont/Massachusetts state line to Route 10 bridge, Northfield.	3.48	MILES	5
Connecticut River	MA34-02	Route 10 bridge, Northfield to Turners Falls Dam, Gill/Montague.	11.213	MILES	5
Connecticut River	MA34-03	Turners Falls Dam, Gil/Montague to confluence with Deerfield River, Greenfield/Montague/Deerfield.	3.604	MILES	5
Connecticut River	MA34-04	Confluence with Deerfield River, Greenfield/Montague/Deerfield to Holyoke Dam, Holyoke/South Hadley.	34.372	MILES	5
Connecticut River	MA34-05	Holyoke Dam, Holyoke/South Hadley to Massachusetts/Connecticut border.	15.853	MILES	5
Cooley Brook	MA34-20	Headwaters, Longmeadow to confluence with Connecticut River, Longmeadow.	1.44	MILES	3
Cranberry Pond	MA34018	Sunderland	28.146	ACRES	4C

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NAME	SEGMENT ID	DESCRIPTION	SIZE	UNITS	CATEGORY
Cushman Brook	MA34-34	Headwaters, outlet Atkins Reservoir, Shutesbury to the inlet of Factory Hollow Pond, Amherst.	2.462	MILES	2
Danks Pond	MA34019	Northampton/Easthampton	2.796	ACRES	3
East Branch Mill River	MA34-37	Headwaters, confluence of Bradford Brook, Williamsburg to confluence with the West Branch Mill River (forming the headwaters of the Mill River), Williamsburg.	2.753	MILES	2
Factory Hollow Pond	MA34021	Amherst	11.89	ACRES	3
Fall River	MA34-33	Vermont/Massachusetts border, Bernardston to the confluence with the Connecticut River, Greenfield/Gill	10.246	MILES	2
Forge Pond	MA34024	Granby	72.034	ACRES	5
Fort River	MA34-27	Headwaters (confluence of Adams and Amethyst brooks, Amherst), to confluence Connecticut River, Hadley.	12.812	MILES	5
Green Pond	MA34028	Montague	14.727	ACRES	3
Ingraham Brook Pond	MA34037	Granby	4.623	ACRES	4C
Lake Bray	MA34013	Holyoke	10.301	ACRES	4C
Lake Holland	MA34035	Belchertown	10.552	ACRES	4C
Lake Lookout	MA34044	Springfield	6.644	ACRES	5
Lake Pleasant	MA34070	Montague	54.006	ACRES	3
Lake Warner	MA34098	Hadley	65.132	ACRES	4A
Lake Wyola	MA34103	Shutesbury	126.119	ACRES	4A
Lampson Brook	MA34-06	Belchertown WWTP discharge, Belchertown to confluence with Weston Brook, Belchertown.	1.158	MILES	5
Leaping Well Reservoir	MA34040	South Hadley	8.806	ACRES	5
Leverett Pond	MA34042	Leverett	90.709	ACRES	4A
Log Pond Cove	MA34124	Holyoke	19.205	ACRES	5
Long Plain Brook	MA34-09	Headwaters, Leveret/Sunderland town line (in Mt. Toby State Forest) to confluence with Russellville Brook at Route 116, Sunderland.	5.012	MILES	3
Longmeadow Brook	MA34-21	Headwaters, outlet Turner Park Pond, Longmeadow to confluence with Connecticut River, Longmeadow.	4.454	MILES	3
Loon Pond	MA34045	Springfield	25.104	ACRES	4A
Lower Highland Lake	MA34047	Goshen	90.731	ACRES	3
Lower Mill Pond	MA34048	Easthampton	29.641	ACRES	4C
Lower Van Horn Park Pond	MA34129	Springfield	11.13	ACRES	4C
Manhan River	MA34-10	Headwaters, northeast of Norwich Pond, Huntington to inlet Tighe Carmody Reservoir, Southampton (thru White Reservoir formely segment MA34100).	6.551	MILES	3
Manhan River	MA34-11	Outlet Tighe Carmody Reservoir, Southampton to confluence with Connecticut River, Easthampton.	19.168	MILES	5
Metacomet Lake	MA34051	Belchertown	50.525	ACRES	5
Mill Pond	MA34052	Springfield	13.241	ACRES	5
Mill River	MA34-24	Headwaters east of Fisher Hill, Conway to confluence with the Connecticut River, Hatfield.	24.63	MILES	2

Appendix 1
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NAME	SEGMENT ID	DESCRIPTION	SIZE	UNITS	CATEGORY
Mill River	MA34-25	Headwaters, outlet Factory Hollow Pond, Amherst to inlet Lake Warner, Hadley.	5.228	MILES	5
Mill River	MA34-28	Headwaters (confluence of East and West Branch Mill River, Williamsburg), to outlet Paradise Pond, Northampton.	9.979	MILES	5
Mill River	MA34-29	Headwaters, outlet Watershops Pond, Springfield to confluence with Connecticut River, Springfield. (Interrupted stream)	1.294	MILES	5
Mill River Diversion	MA34-32	Headwaters, outlet Paradise Pond to confluence with Oxbow (east of Old Springfield Road), Northampton (thru Hulberts Pond formely segment MA34036).	2.538	MILES	3
Moose Brook	MA34-17	Headwaters, Southampton to confluence with Manhan River, Southampton.	2.627	MILES	2
Mountain Street Reservoir	MA34056	Williamsburg/Hatfield/Whately	66.673	ACRES	3
Nashawannuck Pond	MA34057	Easthampton	30.068	ACRES	5
Nine Mile Pond	MA34127	Wilbraham (PALIS/Segment changed from 36107 to 34127, TRD 6/21/02)	32.531	ACRES	3
Noonan Cove	MA34058	Springfield	2.712	ACRES	5
Northampton Reservoir	MA34059	Whately	80.365	ACRES	3
Northfield Mountain Reservoir	MA34061	Erving	237.269	ACRES	3
Oxbow	MA34066	The waterbody west of Route 91 (bounded on the northeast by Route 91, the southeast by the Manhan River, and the west by Old Springfield Road), Northampton/Easthampton (excluding the delineated segment; Danks Pond MA34019).	148.057	ACRES	5
Oxbow Cutoff	MA34067	The waterbody north of Island Road and south of Oxbow Road (between Routes 91and 5), Northampton.	48.805	ACRES	4C
Pine Island Lake	MA34069	Westhampton	55.096	ACRES	3
Plympton Brook Pond	MA34071	Wendell	4.894	ACRES	3
Porter Lake	MA34073	Springfield	27.931	ACRES	5
Porter Lake West	MA34072	Springfield	5.036	ACRES	5
Potash Brook	MA34-12	Headwaters to confluence with Manhan River, Southampton.	0.96	MILES	3
Raspberry Brook	MA34-22	From Massachusetts/Connecticut border to confluence with Connecticut River, Longmeadow.	1.794	MILES	3
Roberts Meadow Reservoir	MA34076	Northampton	22.421	ACRES	3
Sawmill River	MA34-40	Headwaters, outlet Lake Wyola, Shutesbury to Dudleyville Road, Leverett (formerly part of MA34-26).	2.032	MILES	3
Sawmill River	MA34-41	Dudleyville Road, Leverett to confluence with Connecticut River, Montague (formerly part of MA34-26).	10.965	MILES	2
Sawyer Ponds	MA34078	[North Basin] Northfield	9.263	ACRES	3
Sawyer Ponds	MA34079	[South Basin] Northfield	12.41	ACRES	3
Scantic River	MA34-30	Massachusetts/Connecticut border, Monson downstream to the Massachusetts/Connecticut border, Hampden.	9.599	MILES	2
Silver Lake	MA34084	Agawam	8.696	ACRES	3
Stony Brook	MA34-19	Headwaters, Granby to confluence with Connecticut River, South Hadley (thru Upper Pond formerly segment MA34095 and Lower Pond formerly segment MA34049).	13.334	MILES	5

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NAME	SEGMENT ID	DESCRIPTION	SIZE	UNITS	CATEGORY
Temple Brook	MA34-08	Headwaters, outlet Bradley Pond, Monson to confluence with Scantic River, Hampden.	3.724	MILES	2
Tighe Carmody Reservoir	MA34089	Southampton	353.401	ACRES	3
Tripple Brook	MA34-16	Headwaters, Southampton to confluence with Manhan River, Southampton.	1.016	MILES	2
Unnamed Tributary	MA34-31	Headwater, outlet Lake Warner to confluence with Connecticut River, Hadley.	0.531	MILES	3
Upper Highland Lake	MA34093	Goshen	51.244	ACRES	2
Upper Van Horn Park Pond	MA34128	Springfield (Changed from MA36158 to 34128 on 6/21/02, TRD)	8.261	ACRES	5
Venture Pond	MA34096	Springfield	6.516	ACRES	5
Watershops Pond	MA34099	Springfield	161.531	ACRES	5
West Branch Mill River	MA34-38	East Street, Goshen to the confluence of Meekin Brook, Williamsburg.	5.917	MILES	2
West Branch Mill River	MA34-39	From the confluence of Meekin Brook, Williamsburg to the confluence with the East Branch Mill River (forming the headwaters of the Mill River), Williamsburg.	0.641	MILES	2
Weston Brook	MA34-23	Headwaters, Belchertown to inlet Forge Pond, Granby.	2.702	MILES	5
White Brook	MA34-14	Headwaters, Easthampton to inlet Nashawannuck Pond, Easthampton.	1.807	MILES	3
Whiting Street Reservoir	MA34101	Holyoke	102.438	ACRES	4C
Wilton Brook	MA34-15	Headwaters, Easthampton to outlet RubberThread Pond (formerly segment MA34105) , Easthampton.	1.132	MILES	5
Deerfield					
Ashfield Pond	MA33001	Ashfield	38.041	ACRES	4A
Bear River	MA33-17	Headwaters west of Barnes Road, Ashfield to confluence with Deerfield River, Conway.	6.926	MILES	2
Bog Pond	MA33003	Savoy	34.994	ACRES	3
Bozrah Brook	MA33-13	Headwaters, located west of East Hawley Road, Hawley (drains wetland) to confluence with Deerfield River, Charlemont.	2.996	MILES	3
Burnett Pond	MA33005	Savoy	17.717	ACRES	3
Chickley River	MA33-11	Headwaters Savoy Mountain State Forest, Savoy to confluence with Deerfield River, Charlemont.	11.084	MILES	5
Clark Brook	MA33-16	Headwaters, near Moonshine Road (Howes Road)/East Buckland Road, Buckland to confluence with Clesson Brook, Buckland.	3.779086	MILES	2
Clesson Brook	MA33-15	Outlet of unnamed pond south of Forget Road, Hawley through Cox Pond to confluence with Deerfield River, Buckland.	10.346	MILES	2
Cold River	MA33-05	Source in Florida to confluence with Deerfield River, Charlemont.	13.719	MILES	2
Davis Mine Brook	MA33-18	Headwaters, just south of Dell Road, Rowe to confluence with Mill Brook, Charlemont.	3.301077	MILES	5
Deerfield River	MA33-01	Outlet Sherman Reservoir Monroe/Rowe, to confluence with Cold River, Charlemont (through former segment, Lower Reservoir MA33028).	13.43029	MILES	2
Deerfield River	MA33-02	Confluence with Cold River, Charlemont to confluence with North River, Charlemont/Shelburne	11.414	MILES	2
Deerfield River	MA33-03	Confluence with North River, Charlemont/Shelburne to confluence with Green River, Greenfield.	16.945	MILES	2

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NAME	SEGMENT ID	DESCRIPTION	SIZE	UNITS	CATEGORY
Deerfield River	MA33-04	Confluence with Green River, Greenfield to confluence with Connecticut River, Greenfield/Deerfield.	2.061	MILES	2
Dragon Brook	MA33-20	Headwaters north of Patten Road, Shelburne to confluence with the Deerfield River, Shelburne	4.352	MILES	3
Drakes Brook	MA33-23	Headwaters west of North Warger Road, Ashfield to confluence with Bear River, Conway.	2.016	MILES	2
East Branch North River	MA33-19	Vermont line, Colrain to confluence with West Branch North River, Colrain.	7.58	MILES	2
Foundry Brook	MA33-25	Headwaters north of Calvin Coombs Road, Colrain to confluence with East Branch North River, Colrain.	2.773	MILES	2
Fox Brook Upper Reservoir	MA33006	Colrain	2.954	ACRES	3
Goodnow Road Pond	MA33007	Buckland	10.918	ACRES	3
Green River	MA33-28	Vermont line, Colrain to Greenfield water supply dam (north of Eunice Williams Road), Greenfield. (formerly part of MA33-09)	8.474	MILES	2
Green River	MA33-29	From Greenfield water supply dam (north of Eunice Williams Road), Greenfield to the Greenfield swimming pool dam (northwest of Nashs Mill Road), Greenfield. (formerly part of MA33-09)	4.633	MILES	2
Green River	MA33-30	From Greenfield swimming pool dam (northwest of Nashs Mill Road), Greenfield to confluence with the Deerfield River, Greenfield . (formerly segment MA33-10 and part of segment MA33-09)	3.735	MILES	5
Hallockville Pond	MA33009	Plainfield/Hawley	18.555	ACRES	3
Highland Pond	MA33032	Greenfield	2.104	ACRES	3
Hinsdale Brook	MA33-21	Headwaters east of Fiske Mill Road, Shelburne to confluence with Punch Brook, Greenfield	2.831	MILES	3
Maynard Pond	MA33011	Greenfield	3.249	ACRES	3
McLeod Pond	MA33012	Colrain	41.336	ACRES	3
Mill Brook	MA33-14	Headwaters, originating north of Rowe Road, Heath to confluence with the Deerfield River, Charlemont.	5.757	MILES	2
Mt. Brook Reservoir	MA33024	Colrain	1.471	ACRES	3
Newell Pond	MA33013	Greenfield	0.928	ACRES	3
North Pond	MA33014	Florida	19.115	ACRES	2
North River	MA33-06	From confluence of East and West branches of the North River, Colrain to confluence with Deerfield River, Shelburne/Charlemont. (Segment changed 1997 - East Branch no longer included in length)	3.341	MILES	2
Papoose Lake	MA33023	Heath	14.088	ACRES	3
Pelham Brook	MA33-12	Headwaters at outlet Pelham Lake, Rowe to confluence with Deerfield River, Charlemont.	4.861	MILES	2
Pelham Lake	MA33016	Rowe	79.545	ACRES	5
Phelps Brook Reservoir	MA33030	Monroe	0.052	ACRES	3
Plainfield Pond	MA33017	Plainfield	59.616	ACRES	4A
Pumpkin Hollow Brook	MA33-32	Headwaters north of Conway State Forest and south of Old Cricket Hill Road, Conway to confluence with South River, Conway.	2.297	MILES	2

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NAME	SEGMENT ID	DESCRIPTION	SIZE	UNITS	CATEGORY
Sherman Reservoir	MA33018	Massachusetts portion only. Rowe/Monroe/Whitingham, Vt.	72.437	ACRES	5
Shingle Brook	MA33-22	Headwaters north of Guy Manners Road, Shelburne to confluence with the Deerfield River, Deerfield.	2.764	MILES	3
Smith Brook	MA33-26	Headwaters, outlet Upper Reservoir, Ashfield to confluence with Clesson Brook, Buckland.	2.664	MILES	3
South Pond	MA33019	Savoy	28.675	ACRES	2
South River	MA33-07	Headwaters at outlet Ashfield Pond to Emments Road, Ashfield.	2.263668	MILES	2
South River	MA33-08	Emments Road Ashfield to confluence with Deerfield River, Conway (through South River Impoundment formerly segment MA33022).	12.957	MILES	5
Tannery Pond	MA33020	Savoy	0.523	ACRES	4C
Taylor Brook	MA33-31	From the confluence of Kinsman Brook and Davenport Brook, Heath to confluence with West Branch North River, Colrain.	2.635	MILES	2
Tisdell Brook	MA33-24	Headwaters west of Christian Hill, Colrain to confluence with West Branch North River, Colrain.	1.698	MILES	2
Upper Greenfield Reservoir	MA33021	Leyden	5.748	ACRES	3
Upper Highland Springs Reservoir	MA33025	Ashfield	2.483	ACRES	3
Upper Reservoir Bear Swamp	MA33026	Rowe	108.283	ACRES	3
West Branch North River	MA33-27	Confluence of West Branch Brook and Burrington Brook, Heath to confluence with North River, forming the North River, Colrain.	7.127	MILES	2
Farmington					
Benton Brook	MA31-11	Drainage from Hayden Swamp, Otis to the confluence with the West Branch Farmington River, Otis.	5.240824	MILES	2
Benton Pond	MA31003	Otis	61.428	ACRES	4C
Big Pond	MA31004	Otis	325.203	ACRES	5
Buck River	MA31-12	Headwaters draining wetland just south of Morley Hill and Cronk Road, Sandisfield to confluence with the Clam River, Sandisfield.	6.398259	MILES	2
Clam River	MA31-03	Outlet of Royal Pond, Otis to confluence with West Branch Farmington River, Sandisfield.	9.542	MILES	2
Cone Brook	MA31-08	Drainage from Angerman Swamp in Beartown State Forest, Otis to Hayden Pond, Otis.	2.101	MILES	2
Cranberry Pond	MA31008	Tolland	75.489	ACRES	3
Creek Pond	MA31009	(Watson Pond) Otis	51.734	ACRES	3
Dimmock Brook	MA31-10	Outlet of Dimmock Brook Pond, Otis to confluence with West Branch Farmington River, Otis.	1.006	MILES	3
Dimmock Brook Pond	MA31010	Otis	15.166	ACRES	3
Fall River	MA31-02	Outlet Larkum Pond, Otis to confluence with West Branch Farmington River, Otis.	0.761	MILES	2
Hayden Pond	MA31016	Otis	27.999	ACRES	3
Hubbard Brook	MA31-16	Confluence Babcock Brook and Hall Pond Brook, Tolland to border of Granville, Massachusetts/Hartland, Connecticut.	4.0271	MILES	2

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NAME	SEGMENT ID	DESCRIPTION	SIZE	UNITS	CATEGORY
Long Bow Lake	MA31019	Becket	25.585	ACRES	3
Lower Spectacle Pond	MA31020	Sandisfield	69.815	ACRES	3
Noyes Pond	MA31026	Tolland	166.019	ACRES	4C
Otis Reservoir	MA31027	Otis/Tolland/Blandford	988.88	ACRES	4A
Royal Pond	MA31034	Otis/Monterey	7.419	ACRES	3
Sandy Brook	MA31-14	Outlet York Lake, New Marlborough to border of Sandisfield, Massachusetts/Norfolk, Connecticut.	4.977348	MILES	2
Shales Brook	MA31-04	Source north of Tyringham Road, Becket to inlet Shaw Pond, Becket.	1.238268	MILES	3
Shaw Pond	MA31036	Becket/Otis	80.431	ACRES	5
Silver Brook	MA31-13	Confluence of North Branch and South Branch Silver Brook, Sandisfield to confluence with Clam River, Sandisfield.	0.957688	MILES	3
Silver Shield Pond	MA31054	Becket	9.792	ACRES	3
Thomas Brook	MA31-06	Outlet Thomas Pond, Becket to confluence with unnamed tributary, Otis.	0.823572	MILES	3
Unnamed Tributary	MA31-05	Source in wetlands southwest of Route 90 and east of Route 20, Becket to inlet Shaw Pond, Becket.	1.333735	MILES	3
Unnamed Tributary	MA31-07	Outlet Shaw Pond, Becket/Otis to inlet Hayden Pond, Otis.	0.889249	MILES	3
Unnamed Tributary	MA31-09	Source north of Route 23 and east of Harrington Road, Otis to confluence with West Branch Farmington River, Otis.	1.997087	MILES	3
Upper Spectacle Pond	MA31044	Sandisfield/Otis	52.655	ACRES	5
Valley Brook	MA31-15	Source, northwest of Holden Hill, Granville to border of Granville, Massachusetts/Hartland, Connecticut.	5.894326	MILES	2
Ward Pond	MA31047	Becket	27.153	ACRES	3
West Branch Farmington River	MA31-01	Outlet of Hayden Pond, Otis to Sandisfield/Tolland, Massachusetts and Colebrook, Connecticut in the Colebrook Reservoir.	16.134	MILES	5
West Lake	MA31050	Sandisfield	60.286	ACRES	3
White Lily Pond	MA31051	Otis	62.146	ACRES	3
York Lake	MA31052	New Marlborough	28.763	ACRES	5
French					
Bartons Brook	MA42-08	Headwaters, outlet Stiles Reservoir, Leicester to inlet Greenville Pond West, Leicester.	1.1	MILES	3
Bouchard Pond	MA42003	Leicester	2	ACRES	4C
Buffum Pond	MA42004	Charlton/Oxford	23	ACRES	4C
Buffumville Lake	MA42005	Charlton/Oxford	199	ACRES	4A
Burncoat Brook	MA42-07	Headwaters, outlet Bouchard Pond, Leicester to confluence with Town Meadow Brook, Leicester (through former pond segment Ballard Hill Pond MA42069).	1	MILES	5
Burncoat Pond	MA42007	Leicester/Spencer	115	ACRES	3
Carbuncle Pond	MA42008	Oxford	11	ACRES	3
Cedar Meadow Pond	MA42009	Leicester	140	ACRES	4A
Dresser Hill Pond	MA42014	Charlton	8	ACRES	4A

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NAME	SEGMENT ID	DESCRIPTION	SIZE	UNITS	CATEGORY
Dutton Pond	MA42015	Leicester	6	ACRES	4A
Easterbrook Pond	MA42017	Dudley	5	ACRES	3
French River	MA42-03	Headwaters, outlet Greenville Pond, Leicester to the outlet of Thayer Pond, Oxford (excluding approximately 0.6 miles through Rochdale Pond segment MA42048) (through former pond segments Texas Pond MA42058 and Thayers Pond MA42059).	3.8	MILES	5
French River	MA42-04	From dam just upstream of Clara Barton Road, Oxford, to dam at North Village, Webster/Dudley.	9.6	MILES	5
French River	MA42-05	Dam at North Village, Webster/Dudley to Webster WWTP outfall, Webster/Dudley.	2.4	MILES	5
French River	MA42-06	Webster WWTP outfall, Webster/Dudley to state line, Dudley, MA/Thompson,CT.	1	MILES	5
Gore Pond	MA42018	Dudley/Charlton	169	ACRES	4A
Granite Reservoir	MA42019	Charlton	207	ACRES	4A
Greenville Pond	MA42023	Leicester	31	ACRES	4A
Greenville Pond West	MA42022	Leicester	6	ACRES	3
Grindstone Brook	MA42-18	Headwaters outlet Henshaw Pond, Leicester to inlet Rochdale Pond, Leicester.	2.3	MILES	5
Hayden Pond	MA42024	Dudley	44	ACRES	3
Henshaw Pond	MA42025	Leicester	37	ACRES	3
Hudson Pond	MA42029	Oxford/Sutton	15	ACRES	4A
Hultered Pond	MA42072	Charlton	4	ACRES	3
Jones Pond	MA42030	Charlton/Spencer	30	ACRES	4A
Larner Pond	MA42068	Dudley	27	ACRES	4A
Little Nugget Lake	MA42032	Charlton	13	ACRES	3
Little River	MA42-13	Headwaters, outlet Pikes Pond, Charlton to inlet Buffumville Lake, Charlton (formerly part of segment MA42-09).	3.5	MILES	5
Little River	MA42-14	Outlet Buffum Pond, Oxford to confluence with French River, Oxford (formerly part of segment MA42-09).	1.3	MILES	3
Low Pond	MA42033	Dudley	4	ACRES	4C
Lowes Pond	MA42034	Oxford	33	ACRES	4A
McKinstry Pond	MA42035	Oxford	16	ACRES	4A
Merino Pond	MA42036	Dudley	75	ACRES	3
Mill Brook	MA42-10	Headwaters, outlet Webster Lake, Webster to confluence with French River, Webster.	1.2	MILES	2
Mine Brook	MA42-16	Headwaters, Webster to inlet Club Pond, Webster.	1.4	MILES	2
Mosquito Pond	MA42060	Dudley	11	ACRES	4A
New Pond	MA42037	Dudley	33	ACRES	4A
Nipmuck Pond	MA42039	Webster	20	ACRES	3
Packard Pond	MA42040	Dudley	6	ACRES	4C
Peter Pond	MA42042	Dudley	42	ACRES	4A

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NAME	SEGMENT ID	DESCRIPTION	SIZE	UNITS	CATEGORY
Pierpoint Meadow Pond	MA42043	Dudley/Charlton	95	ACRES	4A
Pikes Pond	MA42044	Charlton	28	ACRES	4A
Putnam Pond	MA42046	Charlton	20	ACRES	3
Robinson Pond	MA42047	Oxford	99	ACRES	2
Rochdale Pond	MA42048	Leicester	43	ACRES	4A
Sargent Pond	MA42049	Leicester	65	ACRES	4C
Shepherd Pond	MA42051	Dudley	16	ACRES	4A
Slaters Pond	MA42053	Oxford	105	ACRES	3
Snow Pond	MA42054	Charlton	1	ACRES	3
Stiles Reservoir	MA42055	Spencer/Leicester	309	ACRES	3
Sucker Brook	MA42-15	Headwaters, outlet Nipmuck Pond, Webster to inlet Club Pond, Webster	1.7	MILES	5
Town Meadow Brook	MA42-02	Headwaters, outlet Dutton Pond, Leicester to inlet Greenville Pond, Leicester.	1.9	MILES	3
Unnamed Tributary	MA42-01	Unnamed tributary to Town Meadow Brook, outlet Sargent Pond, Leicester to inlet Dutton Pond, Leicester.	0.5	MILES	2
Unnamed Tributary	MA42-12	Unnamed tributary to Wellington Brook, perennial portion from Depot Road, Oxford to confluence with Wellington Brook, Oxford.	0.2	MILES	3
Unnamed Tributary	MA42-19	Unnamed tributary to the French River on the 1982 USGS quad as 'Lowes Brook' , from the outlet of Lowes Pond, Oxford to the confluence with the French River, Oxford.	1.3	MILES	2
Unnamed Tributary	MA42-20	Unnamed tributary to South Fork locally known as 'Potters Brook', from outlet of Old Mill Pond Dam (MA01833), Charlton to the confluence with South Fork, Charlton.	0.9	MILES	2
Wallis Pond	MA42062	Dudley	24	ACRES	4A
Watson Millpond	MA42063	Spencer	2	ACRES	3
Webster Lake	MA42064	Webster	1275	ACRES	4C
Wee Laddie Pond	MA42065	Charlton	6	ACRES	3
Wellington Brook	MA42-11	Headwaters south of Cedar Street, Auburn to confluence with French River, Oxford.	3.4	MILES	2
Housatonic					
Anthony Brook	MA21-10	Headwaters, outlet of Anthony Pond, Dalton to the confluence with Wahconah Falls Brook, Dalton.	2.568	MILES	3
Ashley Lake	MA21003	Washington	93.644	ACRES	3
Ashmere Lake	MA21005	Hinsdale/Peru	293.502	ACRES	4C
Benedict Pond	MA21011	Great Barrington/Monterey	37.034	ACRES	3
Cady Brook	MA21-12	Source, Peru to the inlet of Windsor Reservoir, Hinsdale.	3.507	MILES	2
Card Pond	MA21015	West Stockbridge	11.424	ACRES	3
Cleveland Brook	MA21-08	Headwaters, outlet of Cleveland Brook Reservoir, Hinsdale to confluence with East Branch Housatonic River, Dalton.	1.927	MILES	2
Cleveland Brook Reservoir	MA21019	Hinsdale	155.627	ACRES	3
Cookson Pond	MA21021	New Marlborough	67.096	ACRES	3

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NAME	SEGMENT ID	DESCRIPTION	SIZE	UNITS	CATEGORY
Crane Lake	MA21025	West Stockbridge	27.474	ACRES	3
East Branch Housatonic River	MA21-01	Outlet of Muddy Pond, Washington to the outlet of Center Pond, Dalton.	11.251	MILES	5
East Branch Housatonic River	MA21-02	Outlet of Center Pond, Dalton to confluence with the Housatonic River, Pittsfield.	8.019	MILES	5
East Indies Pond	MA21029	New Marlborough	72.217	ACRES	3
Farnham Reservoir	MA21033	Washington	40.87	ACRES	3
Furnace Brook	MA21-21	Headwaters south of Route 295 (Canaan Road), Richmond to inlet Mud Ponds, West Stockbridge.	3.649	MILES	2
Goodrich Pond	MA21042	Pittsfield	15.355	ACRES	5
Goose Pond	MA21043	Lee/Tyringham	237.942	ACRES	4C
Goose Pond Brook	MA21-07	Outlet of Goose Pond, Tyringham to confluence with the Housatonic River, Lee.	3.252	MILES	2
Green River	MA21-23	Alford, Massachusetts/Hillsdale, New York border southwest of Route 71 to confluence with the Housatonic River, Great Barrington.	10.139	MILES	2
Greenwater Brook	MA21-27	Headwaters, outlet of Greenwater Pond, Becket to the confluence with Goose Pond Brook, Lee	4.435	MILES	2
Greenwater Pond	MA21044	Becket	88.73	ACRES	4C
Hayes Pond	MA21051	Otis	46.264	ACRES	3
Hop Brook	MA21-28	Headwaters, outlet of Curtin Pond, Otis to the confluence with the Housatonic River, Lee	11.948	MILES	2
Housatonic River	MA21-04	Confluence of Southwest Branch Housatonic River and West Branch Housatonic River, Pittsfield to outlet of Woods Pond, Lee/Lenox (pond was formerly segment MA21120).	12.322	MILES	5
Housatonic River	MA21-19	Outlet of Woods Pond, Lee/Lenox to the Risingdale Impoundment dam, Great Barrington (impoundment formerly segment MA21121).	19.88	MILES	5
Housatonic River	MA21-20	Outlet of Risingdale Impoundment, Great Barrington to the state line in Sheffield, MA/Canaan, CT.	23.036	MILES	5
Hubbard Brook	MA21-15	Source, northwest of Townhouse Hill Road, Egremont to confluence with the Housatonic River, Sheffield (thru Mill Pond formerly reported as segment MA21068).	9.375	MILES	4C
Karner Brook	MA21-16	Headwaters east of East Street, Mount Washington to the inlet of Mill Pond, Egremont.	4.664	MILES	4C
Konkapot River	MA21-25	Outlet of Brewer Lake, Monterey to the state line in New Marlborough, MA/Canaan, CT.	16.467	MILES	5
Konkapot River	MA21-26	From the state line in Sheffield, MA/Canaan, CT, to the confluence with the Housatonic River, Sheffield.	2.866	MILES	5
Lake Averic	MA21006	Stockbridge	41.962	ACRES	4C
Lake Buel	MA21014	Monterey/New Marlborough	194.396	ACRES	5
Lake Garfield	MA21040	Monterey	256.898	ACRES	5
Larrywaug Brook	MA21-29	Headwaters, outlet Stockbridge Bowl, Stockbridge to confluence with Housatonic River, Stockbridge	2.863	MILES	2
Laurel Lake	MA21057	Lee/Lenox	173.51	ACRES	5
Long Pond	MA21062	Great Barrington	114.398	ACRES	4C

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NAME	SEGMENT ID	DESCRIPTION	SIZE	UNITS	CATEGORY
Long Pond Brook	MA21-14	Outlet of Long Pond, Great Barrington to the confluence with Seekonk Brook, Great Barrington.	2.047	MILES	4C
Mansfield Pond	MA21065	Great Barrington	27.783	ACRES	4C
Mill Pond	MA21069	Egremont	10.403	ACRES	3
Morewood Lake	MA21071	Pittsfield	19.519	ACRES	5
Onota Lake	MA21078	Pittsfield	662.202	ACRES	4C
Plunkett Reservoir	MA21082	Hinsdale	71.567	ACRES	4C
Pontoosuc Lake	MA21083	Lanesborough/Pittsfield	500.316	ACRES	5
Prospect Lake	MA21084	Egremont	58.619	ACRES	4C
Richmond Pond	MA21088	Richmond/Pittsfield	227.905	ACRES	4C
Seekonk Brook	MA21-22	Outlet of small impoundment east of West Road, Alford to confluence with the Green River, Great Barrington.	4.787	MILES	3
Shaker Mill Pond	MA21094	West Stockbridge	27	ACRES	4C
Southwest Branch Housatonic River	MA21-17	Headwaters, outlet Richmond Pond, Pittsfield to confluence with West Branch Housatonic River, Pittsfield.	5.835	MILES	5
Stevens Pond	MA21104	Monterey	38.771	ACRES	4C
Stockbridge Bowl	MA21105	Stockbridge	383.495	ACRES	4A
Thousand Acre Pond	MA21106	New Marlborough	144.801	ACRES	4C
Unnamed Tributary	MA21-24	Headwaters, outlet of Mill Pond, Egremont to confluence with Hubbard Brook, Egremont.	1.481	MILES	3
Unnamed Tributary	MA21-31	Unnamed tributary to the Housatonic River, locally known as "Laurel Brook", from the outlet of Laurel Lake, Lee to the confluence with the Housatonic River, Lee.	0.8	MILES	4C
Upper Goose Pond	MA21110	Lee/Tyringham	55.337	ACRES	4C
Upper Sackett Reservoir	MA21113	Hinsdale	19.454	ACRES	3
Wahconah Falls Brook	MA21-11	Headwaters, outlet of Windsor Reservoir, Windsor to confluence with East Branch Housatonic River, Dalton.	3.381	MILES	5
West Branch Housatonic River	MA21-18	Headwaters, outlet of Pontoosuc Lake, Pittsfield to confluence with Southwest Branch Housatonic River (forming the headwaters of the Housatonic River), Pittsfield.	4.088	MILES	5
Willard Brook	MA21-30	Headwaters north of Salisbury Road, Sheffield to the confluence with Hubbard Brook, Sheffield	4.022	MILES	4C
Williams River	MA21-06	Source, outlet Shaker Mill Pond, West Stockbridge to confluence with Housatonic River, Great Barrington.	11.006	MILES	2
Windsor Brook	MA21-09	Source, southeast of Fobes Hill (west of Savory Road/Route 8A), Windsor to the Windsor Reservoir, Windsor.	6.11	MILES	4C
Windsor Reservoir	MA21119	Hinsdale/Windsor	74.354	ACRES	3
Hudson: Hoosic					
Bassett Brook	MA11-17	Headwaters southeast slope of Saddle Ball Mountain, Adams to inlet Bassett Reservoir, Cheshire.	1.939	MILES	3
Berkshire Pond	MA11001	Lanesborough	21.426	ACRES	4C

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NAME	SEGMENT ID	DESCRIPTION	SIZE	UNITS	CATEGORY
Broad Brook	MA11-23	From Vermont state line, Williamstown to the confluence with the Hoosic River, Williamstown.	2.184	MILES	3
Cheshire Reservoir, Middle Basin	MA11018	[Middle Basin] Cheshire/Lanesborough	186.35	ACRES	5
Cheshire Reservoir, North Basin	MA11002	[North Basin] Cheshire	284.024	ACRES	5
Cheshire Reservoir, South Basin	MA11019	[South Basin] Cheshire/Lanesborough	91.718	ACRES	5
Dry Brook	MA11-13	Headwaters, west of Jackson Road (in Savoy Wildlife Management Area), Savoy to confluence with Hoosic River, Adams.	6.702	MILES	2
East Branch Green River	MA11-21	Headwaters, northeast of Sugarloaf Mountain, New Ashford to confluence with Green River, New Ashford.	2.227	MILES	2
Green River	MA11-06	Headwaters southwest of Sugarloaf Mountain (west of Ingraham Road), New Ashford to confluence with Hoosic River, Williamstown.	12.498	MILES	5
Hemlock Brook	MA11-09	Headwaters, south of Route 2 in the Taconic Trail State Park to confluence with the Hoosic River, Wiliamstown.	7.083	MILES	2
Hoosic River	MA11-03	Headwaters, outlet Cheshire Reservoir, Cheshire to Adams WWTP discharge, Adams.	8.841	MILES	5
Hoosic River	MA11-04	Adams WWTP discharge, Adams to confluence with North Branch Hoosic River, North Adams.	5.387	MILES	5
Hoosic River	MA11-05	Confluence with North Branch Hoosic River, North Adams to the Vermont State line, Williamstown.	8.225	MILES	5
Kitchen Brook	MA11-24	From the outlet of the unnamed reservoir (Kitchen Brook Reservoir), Cheshire to the confluence with the Hoosic River, Cheshire.	1.445	MILES	2
Mauserts Pond	MA11009	Clarksburg	50.896	ACRES	5
McDonald Brook	MA11-16	Source, southeast of Woodchuck Hill, Windsor to confluence with South Brook, Cheshire.	3	MILES	2
Mt. Williams Reservoir	MA11010	North Adams	45.842	ACRES	3
North Branch Hoosic River	MA11-01	Vermont State line, Clarksburg to USGS Gage, North Adams.	4.281	MILES	2
North Branch Hoosic River	MA11-02	From USGS Gage, North Adams to confluence with Hoosic River, North Adams.	1.537	MILES	5
Notch Reservoir	MA11011	North Adams	12.287	ACRES	3
Paull Brook	MA11-20	Headwaters, outlet of Mt. Williams Reservoir, North Adams to confluence with unnamed tributary, Williamstown.	2.089	MILES	5
Pecks Brook	MA11-18	Headwaters west of West Mountatin Road to confluence with the Hoosic River, Adams.	2.703	MILES	2
South Brook	MA11-15	Headwaters, west of Weston Mountain, Dalton to confluence with the Hoosic River, Cheshire.	4.138	MILES	2
Thunder Brook	MA11-10	Headwaters, Cheshire to confluence with Kitchen Brook, Cheshire.	1.545	MILES	3
Tophet Brook	MA11-19	Source west of Burnett Road, Savoy (in the Savoy Mountain State Forest) to the confluence with the Hoosic River, Adams.	6.151	MILES	4C
West Branch Green River	MA11-22	Headwaters, west of Route 43, Hancock (near New York border) to confluence with Green River, Williamstown.	7.896	MILES	2
Windsor Lake	MA11016	North Adams	23.993	ACRES	3

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NAME	SEGMENT ID	DESCRIPTION	SIZE	UNITS	CATEGORY
Hudson: Kinderhook					
Kinderhook Creek	MA12-01	Headwaters, northwest of Sheeps Heaven Mountain and east of Route 43, Hancock to New York/Massachusetts border, Hancock.	5.495	MILES	5
Ipswich					
Bear Meadow Brook	MA92-07	Headwaters in Cedar Swamp, Reading to confluence with Ipswich River, Reading/North Reading.	2.842773	MILES	3
Beaver Pond	MA92002	Beverly	18.534	ACRES	3
Berry Pond	MA92003	North Andover	3.896	ACRES	2
Black Brook	MA92-19	Outlet Cutler Pond, Hamilton to confluence with Ipswich River, Hamilton.	3.62	MILES	3
Boston Brook	MA92-13	Outlet of Towne Street Pond, North Andover to confluence with the Ipswich River, Middleton.	7.521	MILES	2
Brackett Pond	MA92004	Andover	15.671	ACRES	5
Bradford Pond	MA92005	North Reading	14.169	ACRES	3
Collins Pond	MA92010	Andover	2.089	ACRES	5
Creighton Pond	MA92011	Middleton	18.66	ACRES	3
Crystal Pond	MA92013	Peabody	8.173	ACRES	5
Devils Dishfull Pond	MA92015	Peabody	14.328	ACRES	5
Eisenhaures Pond	MA92016	North Reading	11.977	ACRES	3
Elginwood Pond	MA92017	Peabody	8.502	ACRES	3
Emerson Brook Reservoir (Forest Street Pond)	MA92021	Middleton	195.429	ACRES	3
Farnum Street Pond	MA92018	North Andover	8.609	ACRES	3
Field Pond	MA92019	Andover	56.706	ACRES	4C
Fish Brook	MA92-14	Headwater, outlet Stiles Pond, Boxford to confluence with Ipswich River, Topsfield/Boxford.	8.246	MILES	2
Fourmile Pond	MA92022	Boxford	28.683	ACRES	3
Frye Pond	MA92023	Andover	7.287	ACRES	5
Gravelly Brook	MA92-18	Headwaters, Willowdale State Forest, Ipswich to confluence with Ipswich River, Ipswich.	1.518	MILES	2
Hood Pond	MA92025	Ipswich/Topsfield	67.446	ACRES	4A
Howes Pond	MA92026	Boxford	6.615	ACRES	3
Howlett Brook	MA92-17	Headwaters north of Great Hill, Topsfield to confluence with Ipswich River, Topsfield.	2.796	MILES	5
Idlewild Brook	MA92-24	Outlet of Pleasant Pond, Hamilton to confluence with Ipswich River, Hamilton.	0.809	MILES	3
Ipswich River	MA92-02	Ipswich Dam (formerly known as Sylvania Dam), Ipswich to mouth at Ipswich Bay, Ipswich.	0.411	SQUARE MILES	5
Ipswich River	MA92-06	Source at confluence of Maple Meadow Brook and Lubbers Brook, Wilmington, to Salem Beverly Waterway Canal, Topsfield.	20.415	MILES	5
Ipswich River	MA92-15	Salem Beverly Waterway Canal, Topsfield to Ipswich Dam (formerly known as Sylvania Dam), Ipswich.	10.977	MILES	5

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NAME	SEGMENT ID	DESCRIPTION	SIZE	UNITS	CATEGORY
Kimball Brook	MA92-21	Headwaters, west of Scott Hill, Ipswich to confluence with Ipswich River, Ipswich.	2.241	MILES	5
Kimballs Pond	MA92027	Boxford	7.468	ACRES	3
Labor In Vain Creek	MA92-22	South of Argilla Road, Ipswich to confluence with Ipswich River Estuary, Ipswich.	0.03	SQUARE MILES	5
Long Causeway Brook	MA92-20	Headwaters near Boston & Maine Railroad, south of Pigeon Hill, Hamilton to confluence with Miles River, Hamilton/Ipswich.	1.896231	MILES	3
Longham Reservoir	MA92030	Wenham	34.152	ACRES	3
Lowe Pond	MA92034	Boxford	35.761	ACRES	5
Lower Boston Brook Pond	MA92031	Middleton	9.333	ACRES	4C
Lower Four Mile Pond	MA92032	Boxford	18.426	ACRES	4C
Lubber Pond East	MA92035	Wilmington	6.237	ACRES	4C
Lubber Pond West	MA92036	Wilmington	9.561	ACRES	4C
Lubbers Brook	MA92-05	Billerica/Burlington boundry to confluence with Maple Meadow Brook forming headwaters of Ipswich River, Wilmington.	6.329	MILES	2
Maple Meadow Brook	MA92-04	Outlet of Mill Pond, Burlington to confluence wtih Lubbers Brook, Wilmington.	4.197642	MILES	4C
Martins Brook	MA92-08	Outlet of Martins Pond, North Reading to the confluence with the Ipswich River, North Reading.	4.561	MILES	5
Martins Pond	MA92038	North Reading	89.012	ACRES	5
Middleton Pond	MA92039	Middleton	128.95	ACRES	3
Mile Brook	MA92-16	Headwaters, east of North Street, Topsfield to confluence with Ipswich River, Topsfield.	2.54	MILES	3
Miles River	MA92-03	Outlet Longham Reservoir, Beverly to confluence with Ipswich River, Ipswich.	8.892	MILES	5
Mill Pond	MA92041	Burlington	59.084	ACRES	4A
Nichols Brook	MA92-25	Headwaters (near Rowley Hill Street and Route 95 and Newburyport Turnpike) in Danvers, to confluence with the Ipswich River, Middleton.	2.475	MILES	3
Norris Brook	MA92-11	Outlet of Elginwood Pond, Peabody to confluence with Ipswich River, Danvers (Danvers/Middleton town line).	1.541	MILES	5
Pierces Pond	MA92048	Peabody	2.609	ACRES	3
Pleasant Pond	MA92049	(Idlewood Lake) Wenham/Hamilton	26.551	ACRES	5
Putnamville Reservoir	MA92052	Danvers	282.517	ACRES	3
Salem Pond	MA92057	North Andover/Andover	14.681	ACRES	5
Salem Street Pond	MA92076	North Andover	10.601	ACRES	3
Silver Lake	MA92059	Wilmington	29.874	ACRES	5
Spofford Pond	MA92060	Boxford	28.102	ACRES	3
Stearns Pond	MA92061	North Andover	42.929	ACRES	3
Stevens Pond	MA92062	Boxford	11.054	ACRES	4C
Stiles Pond	MA92063	Boxford	59.042	ACRES	2
Sudden Pond	MA92064	North Andover	5.204	ACRES	3

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NAME	SEGMENT ID	DESCRIPTION	SIZE	UNITS	CATEGORY
Suntaug Lake	MA92065	Lynnfield/Peabody	150.1	ACRES	3
Swan Pond	MA92066	North Reading	42.036	ACRES	3
Towne Pond	MA92068	Boxford/North Andover	23.362	ACRES	3
Unnamed Tributary	MA92-09	Outlet of Eisenhaures Pond, North Reading to confluence with Ipswich River, North Reading.	1.387	MILES	3
Unnamed Tributary	MA92-12	Outlet of Middleton Pond, Middleton to confluence with Ipswich River, Middleton.	1.387	MILES	5
Unnamed Tributary	MA92-23	Headwaters, east of Jeffreys Neck Road, north of Newmarch Street to confluence with Ipswich River Estuary, Ipswich. (locally known as Greenwood Creek)	0.03	SQUARE MILES	5
Unnamed Tributary	MA92-26	Unnamed intermittent tributary to Martins Brook, from source in wetland west of the Route 93/Route 125 intersection, Wilmington to confluence with Martins Brook, Wilmington.	1.3	MILES	5
Upper Boston Brook Pond	MA92070	Middleton	7.054	ACRES	3
Wenham Lake	MA92073	Beverly/Wenham	242.571	ACRES	5
Wills Brook	MA92-10	Headwater, (just north of Lowell Street) Lynnfield to confluence with Ipswich River, Lynnfield.	1.701	MILES	5
Winona Pond	MA92077	Peabody	91.393	ACRES	3
Islands					
Cape Poge Bay	MA97-08	From the outlet of The Lagoon at Toms Neck, Edgartown to the confluence with Edgartown Harbor at the Cape Poge Gut, (excluding Shear Pin Pond and Pease Pond) Edgartown, Martha's Vineyard.	2.296	SQUARE MILES	2
Chilmark Pond	MA97-05	South of South Road including Wades Cove and Gilberts Cove, Chilmark, Martha's Vineyard.	0.313379	SQUARE MILES	5
Coskata Pond	MA97-03	Pond north of Nantucket Harbor, Nantucket to confluence with Nantucket Harbor, Nantucket	0.082	SQUARE MILES	2
Cuttyhunk Pond	MA97-21	Waters west of the channel connecting Cuttyhunk Pond to Cuttyhunk Harbor, Gosnold, Elizabeth Islands. (Changed from MA95-26 to MA97-21 on 10/7/97)	0.154	SQUARE MILES	5
Edgartown Great Pond	MA97-17	excluding Jacobs Pond (PALIS# 97038) Edgartown, Martha's Vineyard.	1.355	SQUARE MILES	5
Edgartown Harbor	MA97-15	Waters west of Cape Poge Gut bounded by an imaginary line drawn from Chappaquiddick Point to Dock Street and northeasterly from the end of Plantingfield Way to Cape Poge Elbow (excluding Eel Pond), Edgartown, Martha's Vineyard.	3.086	SQUARE MILES	5
Gibbs Pond	MA97028	Nantucket	34.048	ACRES	4A
Great Point Pond	MA97-04	On Great Point, to confluence with Nantucket Sound, Nantucket	0.056	SQUARE MILES	2
Hither Creek	MA97-28	From the outlet of Madaket Ditch to Madaket Harbor at an imaginary line drawn easterly from Jackson Point to Little Neck, Nantucket	0.067	SQUARE MILES	5
Katama Bay	MA97-16	Waters south of an imaginary line from Chappaquiddick Point to Dock Street excluding Caleb Pond and Mattakeset Bay, Edgartown, Martha's Vineyard.	2.044	SQUARE MILES	5
Lagoon Pond	MA97-11	From Head of the Pond Road to confluence with Vineyard Haven Harbor at Beach Road, Tisbury/Oak Bluffs, Martha's Vineyard.	0.819	SQUARE MILES	5
Lake Tashmoo	MA97-12	Waters including Drew Cove and Rhoda Pond to confluence with Vineyard Sound at channel south of Herring Creek Road, Tisbury, Martha's Vineyard.	0.414	SQUARE MILES	5

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Long Pond	MA97-29	South of Madaket Road, including White Goose Cove, Nantucket	0.121	SQUARE MILES	5
Madaket Harbor	MA97-27	Waters encompassed within imaginary lines from Eel Point to the northern tip of Esther Island, from the southern tip of Esther Island southeasterly to the opposite shore and from Jackson Point easterly to Little Neck, Nantucket	1.437	SQUARE MILES	5
Mattakeset Bay	MA97-14	Waters west of an imaginary line drawn southeasterly from Katama Point to Norton Point, Edgartown, Martha's Vineyard.	0.173	SQUARE MILES	2
Menemsha Pond	MA97-06	Waters between Nashaquitsa Pond and Menemsha Creek, Chilmark/Gay Head, Martha's Vineyard.	0.891	SQUARE MILES	2
Miacomet Pond	MA97055	Nantucket	34.227	ACRES	4A
Mill Brook	MA97-22	Outlet of Bliss Pond, Chilmark to inlet Chilmark Pond, Chilmark, Martha's Vineyard	2.392	MILES	2
Mill Brook	MA97-24	Source in wetlands west of Roth Woodland Road, Chilmark to inlet Old Millpond, West Tisbury, Martha's Vineyard	3.416	MILES	2
Nantucket Harbor	MA97-01	Waters south and east of an imaginary line drawn from Jetties Beach to Coatue Point (excluding Polpis Harbor and Coskata Pond), Nantucket.	7.16	SQUARE MILES	5
Oak Bluffs Harbor	MA97-07	North of Lake Avenue to confluence with Nantucket Sound, Oak Bluffs, Martha's Vineyard.	0.047	SQUARE MILES	5
Oyster Pond	MA97-13	Including Ripley Cove, Edgartown, Martha's Vineyard.	0.293	SQUARE MILES	3
Paint Mill Brook	MA97-23	Source east of Tea Lane, Chilmark to inlet of Paint Mill Brook Pond, Chilmark, Martha's Vineyard	0.884	MILES	2
Polpis Harbor	MA97-26	Polpis Harbor and all adjacent coves, to an imaginary line drawn from Quaise Point to the opposite shore, Nantucket.	0.302	SQUARE MILES	5
Sengekontacket Pond	MA97-10	Between East Vineyard Haven Road and Beach Road, including Majors Cove, Edgartown/Oak Bluffs, Martha's Vineyard.	1.098	SQUARE MILES	2
Sesachacha Pond	MA97-02	South of Quidnet Road and north of Polpis Road, Nantucket.	0.423	SQUARE MILES	5
Seths Pond	MA97085	West Tisbury	10.82	ACRES	5
Tiasquam River	MA97-25	Source in wetlands west of Tea Lane, Chilmark to inlet of Looks Pond, West Tisbury, Martha's Vineyard	2.83	MILES	2
Tisbury Great Pond	MA97-18	Including Town Cove, Muddy Cove, Pear Tree Cove, Short Cove, Tiah Cove, Tississa Pond, Deep Bottom Cove, and Thumb Cove, Chilmark/West Tisbury, Martha's Vineyard.	1.103	SQUARE MILES	5
Tom Nevers Pond	MA97097	Nantucket	11.221	ACRES	4A
Vineyard Haven Harbor	MA97-09	The waters south and west of an imaginary line drawn from the tip of West Chop, Tisbury and the tip of East Chop, Oak Bluffs to the confluence of Lagoon Pond at Beach Road, Tisbury/Oak Bluffs, Martha's Vineyard.	1.545	SQUARE MILES	5
Westend Pond	MA97-20	Cuttyhunk Island, Gosnold, Elizabeth Islands.	0.058	SQUARE MILES	5
Merrimack					
Back River	MA84A-16	New Hampshire state line, Amesbury to inlet Clarks Pond, Amesbury.	2.7	MILES	5
Bailey Pond	MA84003	Amesbury	13	ACRES	3
Bare Meadow Brook	MA84A-18	Headwaters, Methuen to confluence with Merrimack River, Methuen.	3	MILES	5

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Bartlett Brook	MA84A-36	New Hampshire state line, Dracut to inlet Mill Pond, Methuen.	3.7	MILES	5
Beaver Brook	MA84A-11	New Hampshire state line, Dracut to confluence with Merrimack River, Lowell.	4.8	MILES	5
Beaver Brook	MA84B-02	Outlet Mill Pond, Littleton to inlet Forge Pond, Westford.	4.9	MILES	5
Beaver Brook	MA84B-05	Headwaters, outlet of "Wolf Swamp", Boxborough to inlet of Mill Pond, Littleton.	5.5	MILES	3
Bennetts Brook	MA84B-06	Headwaters, north of Route 2, Harvard to the inlet of Spectacle Pond, Ayer/Littleton.	4.3	MILES	5
Black Brook	MA84A-17	Headwaters, Chelmsford to confluence with Merrimack River, Lowell.	2.3	MILES	5
Bridge Meadow Brook	MA84A-34	Headwaters, north of Chestnut Road, Tyngsborough to inlet Flint Pond, Tyngsborough.	4	MILES	2
Chadwicks Pond	MA84006	Haverhill/Boxford	173	ACRES	5
Cobbler Brook	MA84A-22	Headwaters, Merrimac to confluence with Merrimack River, Merrimac.	4.4	MILES	4C
Creek Brook	MA84A-37	Headwaters, outlet Crystal Lake, Haverhill to confluence with Merrimack River, Haverhill.	2.3	MILES	5
Crystal Lake	MA84010	Haverhill	161	ACRES	5
Deep Brook	MA84A-21	Headwaters east of Everett Turnpike, Tyngsborough to confluence with Merrimack River, Chelmsford.	2.9	MILES	5
East Meadow River	MA84A-39	Headwaters, outlet Neal Pond, Haverhill to inlet Millvale Reservoir, Haverhill.	3	MILES	5
Fish Brook	MA84A-40	Headwaters, east of Greenwood Road, Andover to confluence with Merrimack River at Fish Brook Dam, Andover.	4.1	MILES	5
Flint Pond	MA84012	Tyngsborough	72	ACRES	5
Forest Lake	MA84014	Methuen	48	ACRES	5
Forge Pond	MA84015	Westford/Littleton	203	ACRES	4A
Haggets Pond	MA84022	Andover	211	ACRES	5
Hoveys Pond	MA84025	Boxford	36	ACRES	5
Johnson Creek	MA84A-15	Headwaters, Groveland (excluding intermittent portion) to confluence with Merrimack River, Groveland/Haverhill.	1.1	MILES	5
Johnsons Pond	MA84027	Groveland/Boxford	194	ACRES	5
Joint Grass Brook	MA84A-32	Headwaters, between Hollis Street and Hawk Swamp, Dunstable to the confluence with Salmon Brook, Dunstable.	3.2	MILES	2
Kenoza Lake	MA84028	Haverhill	240	ACRES	5
Knops Pond/Lost Lake	MA84084	Groton	187	ACRES	4A
Lake Attitash	MA84002	Amesbury/Merrimac	369	ACRES	5
Lake Cochichewick	MA84008	North Andover	575	ACRES	5
Lake Mascuppic	MA84037	Tyngsborough/Dracut	210	ACRES	4C
Lake Pentucket	MA84051	Haverhill	38	ACRES	5
Lake Saltonstall	MA84059	Haverhill	44	ACRES	5
Lawrence Brook	MA84A-20	Headwaters, Tyngsborough (excluding intermittent portion) to confluence with Merrimack River, Tyngsborough.	2	MILES	2
Little River	MA84A-09	New Hampshire state line, Haverhill to confluence with Merrimack River, Haverhill.	4.6	MILES	5

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NAME	SEGMENT ID	DESCRIPTION	SIZE	UNITS	CATEGORY
Locust Pond	MA84031	Tyngsborough	16	ACRES	4A
Long Pond	MA84032	Dracut/Tyngsborough (size indicates portion in Massachusetts)	137	ACRES	5
Lowell Canals	MA84A-29	Canal system near Pawtucket Falls, Lowell.	4.9	MILES	5
Martins Pond Brook	MA84A-19	Outlet Martins Pond, Groton to inlet Lost Lake, Groton.	2.3	MILES	2
Massapoag Pond	MA84087	Dunstable/Groton/Tyngsborough	111	ACRES	5
Merrimack River	MA84A-01	State line at Hudson, NH/Tyngsborough, MA to Pawtucket Dam, Lowell.	9	MILES	5
Merrimack River	MA84A-02	Pawtucket Dam, Lowell to Lowell Regional Wastewater Utilities outfall at Duck Island, Lowell.	3.2	MILES	5
Merrimack River	MA84A-03	Lowell Regional Wastewater Utilities outfall at Duck Island, Lowell to Essex Dam, Lawrence.	8.8	MILES	5
Merrimack River	MA84A-04	Essex Dam, Lawrence to confluence with Little River, Haverhill.	10	MILES	5
Merrimack River	MA84A-05	Confluence Little River, Haverhill to confluence Indian River, West Newbury/Amesbury.	1.83	SQUARE MILES	5
Merrimack River	MA84A-06	Confluence Indian River, West Newbury/Amesbury to mouth at Atlantic Ocean, Newburyport/Salisbury (includes Back River, Salisbury).	4.46	SQUARE MILES	5
Merrimack River	MA84A-26	The Basin in the Merrimack River Estuary, Newbury/Newburyport.	0.17	SQUARE MILES	5
Mill Pond	MA84038	[North Basin] Littleton	30	ACRES	5
Mill Pond	MA84039	West Newbury	18	ACRES	3
Mill Pond	MA84081	[South Basin] Littleton	12	ACRES	5
Millvale Reservoir	MA84041	Haverhill	44	ACRES	5
Nabnasset Pond	MA84044	Westford	134	ACRES	4A
Newfield Pond	MA84046	Chelmsford	77	ACRES	5
Peppermint Brook	MA84A-35	Headwaters, outlet of unnamed pond east of Route 38, Dracut to confluence with Beaver Brook, Dracut.	2.7	MILES	5
Plum Island River	MA84A-27	From Chaces Island, Merimack River Estuary, to the "high sandy" sand bar just north of the confluence with Pine Island Creek, Newbury (formerly encompassed in MA84A-23).	0.13	SQUARE MILES	5
Powwow River	MA84A-08	Tidal portion, just downstream of Main Street, Amesbury to confluence with Merrimack River, Amesbury.	0.06	SQUARE MILES	5
Powwow River	MA84A-25	Outlet of Lake Gardner, Amesbury to tidal portion, just downstream of Main Street, Amesbury.	0.6	MILES	5
Powwow River	MA84A-28	Headwaters, outlet Tuxbury Pond, Amesbury to New Hampshire state line, Amesbury.	2.9	MILES	5
Reed Brook	MA84B-08	Headwaters, south of the West Street/Cowdry Hill Road intersection, Westford to the confluence with Stony Brook, Westford.	0.6	MILES	2
Richardson Brook	MA84A-12	Headwaters, Dracut (excluding intermittent portion) to confluence with Merrimack River, Dracut.	1.9	MILES	5
Salmon Brook	MA84A-33	Headwaters, outlet Lower Massapoag Pond, Dunstable to New Hampshire state line, Dunstable.	2.9	MILES	2
South Branch Souhegan River	MA84A-31	Headwaters, outlet Watatic Pond, Ashburnham to New Hampshire state line, Ashby.	3	MILES	2

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NAME	SEGMENT ID	DESCRIPTION	SIZE	UNITS	CATEGORY
Spectacle Pond	MA84089	Littleton/Ayer	79	ACRES	5
Spicket River	MA84A-10	New Hampshire state line, Methuen to confluence with Merrimack River, Lawrence.	5.8	MILES	5
Stevens Pond	MA84064	North Andover	23	ACRES	5
Stony Brook	MA84B-03	Outlet Forge Pond, Westford to Brookside Road, Westford.	6.5	MILES	5
Stony Brook	MA84B-04	Brookside Road, Westford to confluence with Merrimack River, Chelmsford.	3.4	MILES	5
Tadmuck Brook	MA84B-07	Headwaters south of Main Street, Westford to confluence with Stony Brook, Westford.	1.4	MILES	5
Trout Brook	MA84A-13	Headwaters, Dracut to confluence with Richardson Brook, Dracut.	2.6	MILES	5
Trull Brook	MA84A-14	Source, Tewksbury (excluding intermittent portion) to confluence with Merrimack River, Tewksbury.	2.1	MILES	5
Unnamed Tributary	MA84A-30	Unnamed tributary to Powwow River locally considered portion of Back River from outlet of Clarks Pond, Amesbury to confluence with Powwow River, Amesbury (formerly portion of segment MA84A-16).	0.003	SQUARE MILES	5
Unnamed Tributary	MA84A-38	(Locally known as Argilla Brook) Unnamed tributary to Johnson Creek (excluding intermittent portion) from Center Street, Groveland to confluence with Johnson Creek, Groveland.	1.3	MILES	2
Unnamed Tributary	MA84B-01	(Locally known as Reedy Meadow Brook) Headwaters, outlet of small unnamed impoundment upstream of Bruce Street, Littleton to inlet Mill Pond, Littleton.	1.5	MILES	5
Uptons Pond	MA84075	Tyngsborough	6	ACRES	3
Ward Pond	MA84096	PALIS id changed from 35094 to 84096 on October 10, 1997. (WBID from MA35094 to MA84096) Ashburnham	54	ACRES	5
Millers					
Bassett Pond	MA35002	New Salem	26.012	ACRES	3
Beaver Brook	MA35-09	Fernald School discharge, Templeton to confluence with Millers River, Royalston.	3.426302	MILES	5
Beaver Flowage Pond	MA35005	(Beaver Pond) Royalston	38.034	ACRES	3
Bents Pond	MA35006	Hubbardston	28.747	ACRES	3
Bents Pond	MA35007	Gardner	6.158	ACRES	4A
Bourn-Hadley Pond	MA35008	Templeton	25.788	ACRES	4A
Bowens Pond	MA35009	Wendell	16.774	ACRES	3
Boyce Brook	MA35-17	NH State Line, Royalston to confluence with East Branch Tully River, Royalston.	3.227	MILES	5
Brazell Pond	MA35010	Templeton	14.669	ACRES	4A
Cowee Pond	MA35013	Gardner	18.263	ACRES	3
Crystal Lake	MA35014	Gardner	142.259	ACRES	3
Davenport Pond	MA35015	Petersham/Athol	30.42	ACRES	3
Depot Pond	MA35018	(Railroad Pond) Templeton	15.208	ACRES	4A
Dunn Pond	MA35021	Gardner	17.997	ACRES	2
East Branch Tully River	MA35-12	Confluence of Tully Brook and Falls Brook in Royalston State Forest, Royalston through Long Pond and Tully Lake to confluence with the West Branch Tully River forming headwaters Tully River, Orange/Athol.	10.013	MILES	5

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NAME	SEGMENT ID	DESCRIPTION	SIZE	UNITS	CATEGORY
East Templeton Pond	MA35022	Templeton	8.891	ACRES	3
Ellis Pond	MA35023	Athol	87.539	ACRES	4A
Gales Pond	MA35024	Warwick	11.732	ACRES	5
Greenwood Pond	MA35025	Westminster	26.984	ACRES	3
Greenwood Pond	MA35026	Templeton	12.451	ACRES	4A
Hastings Pond	MA35028	Warwick	18.311	ACRES	3
Hilchey Pond	MA35029	Gardner	7.61	ACRES	4A
Kendall Pond	MA35034	Gardner	21.907	ACRES	3
Keyup Brook	MA35-16	Headwaters Great Swamp Northfield State Forest, Northfield, to confluence with Millers River, Erving.	4.968	MILES	5
Lake Denison	MA35017	Winchendon	83.492	ACRES	4A
Lake Mattawa	MA35112	(PALIS ID Changed on 10/6/97 from 36092 to 35112 - Concurently changed WBID to reflect this change - See PALIS for details) Orange	111.982	ACRES	2
Lake Monomonac	MA35047	Massachusetts portion only. Winchendon/Rindge,N.H.	185.507	ACRES	5
Lake Rohunta	MA35070	(Middle Basin) Athol/Orange/New Salem	208.954	ACRES	5
Lake Rohunta	MA35106	(North Basin) Athol/Orange	34.359	ACRES	4A
Lake Rohunta	MA35107	(South Basin) New Salem	41.63	ACRES	5
Lake Watatic	MA35095	Ashburnham	133.102	ACRES	3
Laurel Lake	MA35035	Erving/Warwick	44.426	ACRES	5
Lawrence Brook	MA35-13	New Hampshire state line, Royalston through Doane Falls to confluence with East Branch Tully River, Royalston.	7.124	MILES	5
Little Pond	MA35037	Royalston	9.977	ACRES	3
Lower Naukeag Lake	MA35041	Ashburnham	295.481	ACRES	3
Lyons Brook	MA35-19	Outlet of Ruggles Pond, Wendell to confluence with Millers River, Montague/Wendell	2.119	MILES	5
Millers River	MA35-01	Outlet of Whitney Pond, Winchendon to Winchendon WWTP, Winchendon.	3.303	MILES	5
Millers River	MA35-02	Winchendon WWTP, Winchendon to confluence with Otter River, Winchendon.	5.609	MILES	5
Millers River	MA35-03	Confluence with Otter River, Winchendon to South Royalston USGS Gage, Royalston.	3.516031	MILES	5
Millers River	MA35-04	South Royalston USGS Gage, Royalston to Erving Center WWTP (formerly known as Erving Paper Company), Erving.	18.462	MILES	5
Millers River	MA35-05	Erving Center WWTP (formerly known as Erving Paper Company), Erving to confluence with Connecticut River, Erving.	9.21	MILES	5
Millers River	MA35-20	Outlet of Sunset Lake, Ashburnham to inlet of Whitney Pond, Winchendon.	6.362	MILES	3
Minott Pond	MA35046	Westminster	8.439	ACRES	3
Minott Pond South	MA35045	Westminster	27.319	ACRES	3
Moores Pond	MA35048	Warwick	39.114	ACRES	4A
Mormon Hollow Brook	MA35-15	Headwaters just north of Montague Road, Wendell to confluence with Millers River, Wendell.	3.825	MILES	5

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North Branch Millers River	MA35-21	Outlet of Lake Mononomac, Winchendon to inlet of Whitney Pond, Winchendon	2.006	MILES	5
North Spectacle Pond	MA35052	New Salem	42.893	ACRES	3
Otter River	MA35-06	Source, Hubbardston (north of Pitcherville Road) to Gardner WWTP, Gardner/Templeton.	4.304796	MILES	2
Otter River	MA35-07	Gardner WWTP, Gardner/Templeton to Seaman Paper Dam, Templeton.	4.379	MILES	5
Otter River	MA35-08	Seaman Paper Dam, Templeton to confluence with Millers River, Winchendon.	5.548	MILES	5
Packard Pond	MA35053	Orange	43.116	ACRES	3
Parker Pond	MA35056	Gardner	32.188	ACRES	4A
Partridgeville Pond	MA35057	Templeton	37.685	ACRES	3
Perley Brook Reservoir	MA35059	Gardner	54.682	ACRES	3
Phillipston Reservoir	MA35060	Philipston/Athol	19.931	ACRES	3
Priest Brook	MA35-10	Headwaters at the confluence of Towne and Scott Brooks, Royalston to the confluence with the Millers River, Winchendon. (According to SARIS includes lower portion of Scott Brook.)	6.826	MILES	2
Ramsdall Pond	MA35062	Gardner	2.145	ACRES	4A
Reservoir No. 1	MA35063	Athol	7.684	ACRES	4A
Reservoir No. 2	MA35064	Phillipston/Athol (Secret Lake)	48.32	ACRES	3
Riceville Pond	MA35065	Athol/Petersham	61.372	ACRES	3
Richards Reservoir	MA35067	Warwick	21.202	ACRES	3
Royalston Road Pond	MA35071	Orange	5.306	ACRES	3
Ruggles Pond	MA35072	Wendell	14.832	ACRES	2
Sheomet Lake	MA35074	Warwick	30.583	ACRES	3
South Athol Pond	MA35078	Athol	82.785	ACRES	4A
South Spectacle Pond	MA35081	New Salem	37.892	ACRES	3
Sportsmans Pond	MA35082	Athol	92.724	ACRES	3
Stoddard Pond	MA35083	Winchendon	51.848	ACRES	4A
Sunset Lake	MA35086	Ashburnham/Winchendon	274.257	ACRES	3
Tully Lake	MA35111	Royalston/Athol	213.679	ACRES	3
Tully Pond	MA35089	Orange	70.152	ACRES	3
Tully River	MA35-14	Confluence East and West Branches Tully River, Orange/Athol to confluence with Millers River, Athol.	1.585	MILES	5
Upper Naukeag Lake	MA35090	Ashburnham	305.262	ACRES	4A
Upper Reservoir	MA35091	Westminster	41.563	ACRES	4A
Wallace Pond	MA35092	Ashburnham	46.086	ACRES	3
Ward Pond	MA35093	Athol	5.899	ACRES	3
West Branch Tully River	MA35-11	Outlet Sheomet Lake, Warwick to confluence with East Branch Tully River forming headwaters Tully River, Orange/Athol.	6.619	MILES	5

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NAME	SEGMENT ID	DESCRIPTION	SIZE	UNITS	CATEGORY
Wheelers Pond	MA35097	Warwick	28.286	ACRES	3
Whetstone Brook	MA35-18	Headwaters northeast of Orcutt Hill near New Salem Rd, Wendell to confluence with Millers River, Wendell.	4.885	MILES	5
White Pond	MA35098	Athol	62.629	ACRES	4C
Whites Mill Pond	MA35099	Winchendon	42.426	ACRES	5
Whitney Pond	MA35101	Winchendon	96.839	ACRES	5
Wickett Pond	MA35102	Wendell	29.931	ACRES	3
Wrights Reservoir	MA35104	Gardner/Westminster	130.848	ACRES	3
Mount Hope Bay (Shore)					
Cole River	MA61-03	Wood Street, Swansea to Route 6, Swansea	1.6	MILES	4C
Cole River	MA61-04	Route 6, Swansea to the mouth at Mount Hope Bay at old railway grade, Swansea	0.31	SQUARE MILES	5
Cook Pond	MA61001	Fall River, MA/Tiverton, RI	157	ACRES	3
Kickamuit River	MA61-08	Outlet Warren Resevoir, Swansea, to state line, Swansea, MA/Warren, RI	2.8	MILES	4A
Lee River	MA61-01	From confluence with Lewin Brook, Swansea to Route 6, Swansea/Somerset	0.02	SQUARE MILES	5
Lee River	MA61-02	Route 6, Swansea/Somerset to mouth at Mount Hope Bay, Swansea/Somerset	0.51	SQUARE MILES	5
Lewin Brook Pond	MA61011	Swansea	11	ACRES	4A
Mount Hope Bay	MA61-06	the Massachusetts portion from the Braga Bridge, Fall River/Somerset to the state border Fall River, MA/Tiverton, RI to the line from Braton Point Somerset to MA/RI border approximately 3/4 of a mile due east of Spar Island, RI	2.29	SQUARE MILES	5
Mount Hope Bay	MA61-07	the Massachusetts portion from mouth of Cole River (at old railway grade), Swansea to state border Swansea, MA/Warren, RI to the line from Brayton Point, Somerset to MA/RI border approximately 3/4 of a mile due east of Spar Island, RI to the line betweenBay Point, Swansea and Brayton Point, Somerset (the mouth of the Lee River)	1.84	SQUARE MILES	5
North Watuppa Pond	MA61004	Fall River/Westport	1730	ACRES	4A
Quequechan River	MA61-05	Outlet South Watuppa Pond, Fall River to confluence with the Taunton River/Mount Hope Bay (at Braga Bridge), Fall River	2.4	MILES	4C
Sawdy Pond	MA61005	Westport/Fall River	368	ACRES	4A
South Watuppa Pond	MA61006	Fall River/Westport	1473	ACRES	3
Narragansett Bay (Shore)					
Bad Luck Brook	MA53-11	Headwaters, outlet Warren Upper Reservoir, Rehoboth to confluence with East Branch Palmer River, Rehoboth	1.7	MILES	3
Beaverdam Brook	MA53-10	Headwaters, southeast of Chestnut Street, Rehoboth to confluence with Palmer River, Rehoboth	2.9	MILES	3
Clear Run Brook	MA53-13	Headwaters, outlet unnamed pond northwest of Miller Street, Seekonk to confluence with Palmer River, Rehoboth	1.6	MILES	4A
East Branch Palmer River	MA53-08	Headwaters, near Stevens Corner Cemetery, Rehoboth to confluence with West Branch Palmer River (forming Palmer River), Rehoboth	7.2	MILES	3

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NAME	SEGMENT ID	DESCRIPTION	SIZE	UNITS	CATEGORY
Fullers Brook	MA53-12	Headwaters in wetland north of Jacobs Street, Seekonk to confluence with Palmer River, Rehoboth	1.7	MILES	3
Oak Swamp Brook	MA53-15	Headwaters in Oak Swamp east of School Street, Rehoboth to confluence with Rocky Run, Rehoboth	3	MILES	3
Palmer River	MA53-03	From Route 6 bridge, Rehoboth to state line, Swansea, MA/Barrington, RI	0.11	SQUARE MILES	4A
Palmer River	MA53-04	From confluence of East and West Branches of the Palmer River, Rehoboth to the Shad Factory Pond dam, Rehoboth	5.6	MILES	5
Palmer River	MA53-05	From the Shad Factory Pond dam, Rehoboth to the Route 6 bridge, Rehoboth	0.09	SQUARE MILES	4A
Rocky Run	MA53-16	Headwaters in wetland east of Simmons Street, Rehoboth to approximately 0.1 mile east of Mason Street, Rehoboth	8.6	MILES	4A
Rocky Run	MA53-18	approximately 0.1 mile east of Mason Street, Rehoboth to confluence with Palmer River, Rehoboth	0.002	SQUARE MILES	4A
Rumney Marsh Brook	MA53-09	Headwaters, east of Locust Avenue, Rehoboth to confluence with Beaverdam Brook, Rehoboth	1.3	MILES	3
Runnins River	MA53-01	Route 44, Seekonk to Mobile Dam, Seekonk, MA/East Providence, RI (through Burrs Pond formerly segment MA53001)	3.7	MILES	5
Torrey Creek	MA53-14	Headwaters in wetland east of Benson Avenue, Seekonk to Barney Avenue, Rehoboth (includes culverted section near Seekonk Speedway, Seekonk)	2.1	MILES	3
Torrey Creek	MA53-17	From Barney Avenue, Rehoboth to confluence with Palmer River, Rehoboth	0.004	SQUARE MILES	4A
Warren River Pond	MA53-06	Salt pond in Swansea on MA/RI border (portion in MA only)	0.06	SQUARE MILES	4A
West Branch Palmer River	MA53-07	From confluence of Bliss Brook, Rehoboth to confluence with East Branch Palmer River (forming Palmer River), Rehoboth	3.8	MILES	3
Nashua					
Ashby Reservoir	MA81001	Ashby	36	ACRES	3
Asnebumskit Brook	MA81-56	From outlet Eagle Lake, Holden to the confluence with the Quinapoxet River, Holden.	2.9	MILES	5
Asnebumskit Pond	MA81002	Paxton	43	ACRES	3
Baker Brook	MA81-62	From headwaters at confluence of Pearl Hill and Falulah brooks, Fitchburg to confluence with North Nashua River, Fitchburg	2.5	MILES	3
Ball Brook	MA81-45	Headwaters, north of Sterling Road, Holden to the confluence with the Stillwater River, Sterling.	1.6	MILES	2
Bare Hill Pond	MA81007	Harvard	311	ACRES	4A
Barrett Pond	MA81162	Leominster	7	ACRES	3
Bartlett Pond	MA81008	Lancaster	5	ACRES	5
Bartlett Pond	MA81009	Leominster	23	ACRES	3
Bixby Reservoir	MA81010	Townsend	21	ACRES	3
Catacoonamug Brook	MA81-16	Outlet Lake Shirley, Lunenburg to confluence with Nashua River, Shirley/Harvard.	3.2	MILES	2
Chaffin Pond	MA81017	Holden	90	ACRES	4C

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Chaffins Brook	MA81-33	Headwaters south of Malden Street/west of Wachusett Street, Holden to inlet of Unionville Pond, Holden.	0.9	MILES	2
Coachlace Pond	MA81019	Clinton	31	ACRES	3
Connelly Brook	MA81-57	Headwaters, southwest of Rowley Hill Road, Sterling to the inlet of The Quag, Sterling.	2.9	MILES	2
Coon Tree Pond	MA81168	Pepperell	29	ACRES	3
Crocker Pond	MA81025	Westminster	101	ACRES	3
Dawson Pond	MA81028	Holden	22	ACRES	4C
Eagle Lake	MA81034	Holden	56	ACRES	4C
East Wachusett Brook	MA81-30	Headwaters northeast of Little Wachusett Mountain, Princeton to confluence with Stillwater River, Sterling.	4.6	MILES	2
East Waushacum Pond	MA81035	Sterling	182	ACRES	3
Fall Brook	MA81-38	From the outlet of Fall Brook Reservoir, Leominster to the inlet of Lake Samoset, Leominster (formerly part of segment MA81-14).	1.3	MILES	3
Fall Brook	MA81-39	From the outlet of Lake Samoset, Leominster to the confluence with the North Nashua River, Leominster (formerly part of segment MA81-14).	3	MILES	2
Fall Brook Reservoir	MA81038	Leominster	88	ACRES	3
FALULAH BROOK	MA81-63	Headwaters near Ringe Road, Ashby to confluence with Pearl Hill Brook, forming headwaters Baker Brook, Fitchburg (excluding approximately 0.6 miles through Lovell Reservoir segment MA81074)	6	MILES	3
Fitchburg Reservoir	MA81043	Ashby	150	ACRES	3
Flag Brook	MA81-10	Outlet Crocker Pond, Westminster to confluence with North Nashua River, Fitchburg (excluding approximately 0.7 miles through Sawmill Pond segment MA81118).	2.2	MILES	2
Flannagan Pond	MA81044	Ayer	80	ACRES	4C
Fort Pond	MA81046	Lancaster	76	ACRES	5
French Brook	MA81-48	Headwaters, west of Linden Street, Boylston to the inlet of Wachusett Reservoir (Andrews Harbor), Boylston.	1.4	MILES	2
Gates Brook	MA81-24	Headwaters west of Prospect Street, West Boylston to inlet Wachusett Reservoir (Gates Cove), West Boylston.	3.4	MILES	5
Grove Pond	MA81053	Ayer	67	ACRES	5
Haynes Reservoir	MA81055	Leominster	56	ACRES	3
Heald Pond	MA81056	Pepperell	28	ACRES	3
Hickory Hills Lake	MA81031	Lunenburg	310	ACRES	4A
Houghton Brook	MA81-55	Headwaters, south of Merrill Road, Sterling to confluence with Stillwater River, Sterling.	1.5	MILES	2
Hy-Crest Pond	MA81060	Sterling	104	ACRES	3
James Brook	MA81-20	Headwaters, Groton to confluence with Nashua River, Ayer/Groton.	3.9	MILES	5
Justice Brook	MA81-41	Headwaters, outlet Stuart Pond, Sterling to confluence with Keyes Brook forming headwaters Stillwater River, Princeton/Sterling.	1	MILES	2
Kendall Reservoir	MA81062	Holden	179	ACRES	3

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NAME	SEGMENT ID	DESCRIPTION	SIZE	UNITS	CATEGORY
Keyes Brook	MA81-40	Headwaters, outlet Paradise Pond, Princeton to confluence with Justice Brook forming headwaters Stillwater River, Princeton/Sterling.	3.2	MILES	2
Lake Samoset	MA81116	Leominster	35	ACRES	4C
Lake Shirley	MA81122	Lunenburg	360	ACRES	5
Lake Wampanoag	MA81151	Ashburnham/Gardner	224	ACRES	4A
Lake Whalom	MA81154	Lunenburg/Leominster	96	ACRES	4C
Lancaster Millpond	MA81065	Clinton	21	ACRES	3
Lincoln Pond	MA81070	Ashburnham	31	ACRES	3
Long Pond	MA81073	Ayer/Groton	46	ACRES	3
Lovell Reservoir	MA81074	Fitchburg	35	ACRES	3
Lower Crow Hill Pond	MA81026	Princeton/Westminster	14	ACRES	3
Malagasco Brook	MA81-29	Headwaters southwest of Apron Hill, Boylston through Pine Swamp to the inlet of Wachusett Reservoir (South Bay), Boylston.	2.4	MILES	5
Malden Brook	MA81-27	Headwaters northeast of Lee Street, West Boylston to the inlet of Wachusett Reservoir (Thomas Basin), West Boylston.	1.9	MILES	2
Maple Spring Pond	MA81077	Holden	39	ACRES	3
Massapoag Pond	MA81080	Lunenburg	64	ACRES	3
Meetinghouse Pond	MA81083	Westminster	151	ACRES	3
Mirror Lake	MA81084	Fitchburg	6	ACRES	3
Mirror Lake	MA81085	Harvard	28	ACRES	5
Monoosnuc Brook	MA81-13	Outlet of Simonds Pond, Leominster to confluence with North Nashua River, Leominster (through former pond segments Pierce Pond MA 81101 and Rockwell Pond MA81112).	6.1	MILES	5
Morse Reservoir	MA81086	Leominster	15	ACRES	3
Muddy Brook	MA81-28	Headwaters west of Shrewsbury Street, West Boylston to inlet of Wachusett Reservoir (South Bay), West Boylston.	0.8	MILES	5
Mulpus Brook	MA81-36	Headwaters, north of Howard Street, Lunenburg to the inlet of Hickory Hills Lake, Lunenburg (formerly part of segment MA81-22).	3.8	MILES	3
Mulpus Brook	MA81-37	From the outlet of Hickory Hills Lake, Lunenburg to the confluence with the Nashua River, Shirley (formerly part of segment MA81-22).	6.3	MILES	5
Muschopauge Pond	MA81089	Rutland	61	ACRES	3
Nashua River	MA81-05	Confluence with North Nashua River, Lancaster to confluence with Squannacook River, Shirley/Groton/Ayer.	14.2	MILES	5
Nashua River	MA81-06	Confluence with Squannacook River, Shirley/Groton/Ayer to Pepperell Dam, Pepperell. (through Pepperell Pond formerly segment MA81167)	9.1	MILES	5
Nashua River	MA81-07	Pepperell Dam, Pepperell to New Hampshire state line, Pepperell/Dunstable.	3.7	MILES	5
Nashua River	MA81-08	("South Branch" Nashua River) Outlet Lancaster Millpond, Clinton to Clinton WWTP discharge, Clinton.	2.8	MILES	2
Nashua River	MA81-09	("South Branch" Nashua River) Clinton WWTP discharge, Clinton to confluence with North Nashua River, Lancaster.	1.8	MILES	5

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Assessment Units and Integrated List Categories by Major Watershed

NAME	SEGMENT ID	DESCRIPTION	SIZE	UNITS	CATEGORY
Nissitissit River	MA81-21	New Hampshire state line, Pepperell to confluence with Nashua River, Pepperell.	4.6	MILES	5
Nonacoicus Brook	MA81-17	Outlet Plow Shop Pond, Ayer to confluence with Nashua River, Ayer/Shirley.	1.4	MILES	5
North Nashua River	MA81-01	Outlet Snows Millpond, Fitchburg to Fitchburg Paper Company Dam #1, Fitchburg.	1.7	MILES	5
North Nashua River	MA81-02	Fitchburg Paper Company Dam #1, Fitchburg to Fitchburg East WWTP outfall, Leominster.	6.9	MILES	5
North Nashua River	MA81-03	Fitchburg East WWTP outfall, Leominster to Leominster WWTP outfall, Leominster.	1.6	MILES	5
North Nashua River	MA81-04	Leominster WWTP outfall, Leominster to confluence with Nashua River, Lancaster.	10.4	MILES	5
Notown Reservoir	MA81092	Leominster	240	ACRES	3
Paradise Pond	MA81097	Princeton	61	ACRES	4C
Partridge Pond	MA81098	Westminster	25	ACRES	5
Phillips Brook	MA81-12	Outlet Winnekeag Lake, Ashburnham to Westminster Street (Route 2A/31), Fitchburg.	8.4	MILES	2
Pine Hill Reservoir	MA81102	Paxton/Holden/Rutland	336	ACRES	3
Plow Shop Pond	MA81103	Ayer	29	ACRES	5
Poor Farm Brook	MA81-52	Headwaters east of Salisbury Street, Holden to inlet Chaffin Pond, Holden.	1.2	MILES	2
Quinapoxet Reservoir	MA81108	Holden/Princeton	266	ACRES	3
Quinapoxet River	MA81-32	Outlet Quinapoxet Reservoir, Holden to inlet of Wachusett Reservoir (Thomas Basin), West Boylston.	7.9	MILES	4C
Robbins Pond	MA81111	Harvard	11	ACRES	4C
Rocky Brook	MA81-42	Headwaters, outlet Hy-Crest Pond, Sterling to confluence with Stillwater River, Sterling.	3	MILES	2
Round Meadow Pond	MA81114	Westminster	54	ACRES	3
Sandy Pond	MA81117	Ayer	69	ACRES	3
Sawmill Pond	MA81118	Fitchburg/Westminster	65	ACRES	4C
Scanlon Brook	MA81-44	Headwaters, west of Birch Drive, Sterling to the confluence with the Stillwater River, Sterling.	1.5	MILES	2
Scarletts Brook	MA81-25	Headwaters west of West Boylston Street (Route 12), West Boylston to confluence with Gates Brook, West Boylston.	0.5	MILES	2
Scott Reservoir	MA81119	Fitchburg	33	ACRES	3
Snows Millpond	MA81127	Fitchburg/Westminster	38	ACRES	3
South Meadow Pond	MA81129	[East Basin] Clinton	37	ACRES	3
South Meadow Pond	MA81165	[West Basin] Clinton/Lancaster	34	ACRES	3
Spectacle Pond	MA81132	Lancaster	61	ACRES	3
Squannacook River	MA81-18	Confluence Mason and Willard brooks, Townsend to Hollingsworth and Vose Dam, Groton/Shirley. (through Harbor Pond formerly segment MA81054)	12.6	MILES	5
Squannacook River	MA81-19	Hollingsworth and Vose Dam, Groton/Shirley to confluence with Nashua River, Shirley/Groton/Ayer.	3.7	MILES	2
Still River	MA81-15	From Route 117, Bolton to confluence with Nashua River, Harvard/Lancaster.	2.7	MILES	3

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NAME	SEGMENT ID	DESCRIPTION	SIZE	UNITS	CATEGORY
Still River	MA81-60	Headwaters, Lancaster to Route 117, Bolton (formerly the upper portion of MA81-15).	0.6	MILES	5
Stillwater River	MA81-31	Confluence of Justice and Keyes brooks, Princeton/Sterling to the inlet of Wachusett Reservoir (Stillwater Basin), Sterling.	6.7	MILES	2
Streeter Pond	MA81136	Paxton/Holden	18	ACRES	3
Stuart Pond	MA81137	Sterling	42	ACRES	4C
Stump Pond	MA81171	Holden	27	ACRES	4C
Sucker Brook	MA81-23	Outlet Coon Tree Pond, Pepperell to confluence with Nissitissit River, Pepperell.	4	MILES	2
The Quag	MA81170	Sterling	32	ACRES	3
Trout Brook	MA81-26	Outlet Cournoyer Pond, Holden to confluence with Quinepoxet River, Holden.	1.9	MILES	2
Unionville Pond	MA81143	Holden	19	ACRES	4C
Unnamed Tributary	MA81-35	AKA-"Lower Chaffin Brook" - Outlet Unionville Pond, Holden to confluence with Quinepoxet River, Holden.	0.5	MILES	5
Unnamed Tributary	MA81-46	Unnamed tributary to Rocky Brook from headwaters south of Upper North Row Road, Sterling to the confluence with Rocky Brook, Sterling.	0.7	MILES	2
Unnamed Tributary	MA81-49	Unnamed tributary to Wachusett Reservoir, from headwaters, outlet Carrolls Pond, West Boylston to inlet Wachusett Reservoir, West Boylston.	0.8	MILES	2
Unnamed Tributary	MA81-50	Unnamed tributary to Wachusett Reservoir, from headwaters, east of Linden Street, Boylston to the inlet of Wachusett Reservoir (Hastings Cove), Boylston.	1.3	MILES	2
Unnamed Tributary	MA81-51	Unnamed tributary to Quinapoxet River, from headwaters, south of Malden Street, Holden to the confluence with the Quinapoxet River, Holden.	1.5	MILES	2
Unnamed Tributary	MA81-54	Unnamed tributary to Wachusett Reservoir, from headwaters, west of Route 140, West Boylston to inlet of Wachusett Reservoir (Stillwater Basin), West Boylston.	0.8	MILES	2
Unnamed Tributary	MA81-58	Unnamed tributary to Quinapoxet Reservoir, from headwaters, west of Route 68, Rutland to the confluence with an unnamed tributary to the Quinapoxet Reservoir west of Bryant Road, Holden.	1.3	MILES	2
Unnamed Tributary	MA81-59	Unnamed tributary to Quinapoxet River, from headwaters, southwest of Hog Hill, Sterling to the confluence with the Quinapoxet River, Sterling.	1.6	MILES	2
Unnamed Tributary	MA81-61	Unnamed tributary to the North Nashua River, locally considered a portion of Wekepeke Brook, from the outlet of Bartlett Pond to the confluence with the North Nashua River, Lancaster.	0.3	MILES	5
Unnamed Tributary (Boylston Brook)	MA81-34	Unnamed tributary locally known as "Boylston Brook." Headwaters north of French Drive, Boylston to the confluence with Potash Brook, Boylston.	0.5	MILES	2
Upper Crow Hill Pond	MA81169	Westminster	5	ACRES	3
Vinton Pond	MA81145	Townsend	16	ACRES	3
Wachusett Lake	MA81146	Westminster/Princeton	129	ACRES	3
Wachusett Reservoir	MA81147	Boylston/West Boylston/Clinton/Sterling	3967	ACRES	4A
Warren Tannery Brook	MA81-53	Headwaters, north of Route 122A, Holden to confluence with Asnebumskit Brook, Holden.	1.4	MILES	2
Washacum Brook	MA81-47	Headwaters, outlet West Waushacum Pond, Sterling to inlet of Wachusett Reservoir (Stillwater Basin), West Boylston.	1.8	MILES	2
West Waushacum Pond	MA81153	Sterling	111	ACRES	3

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NAME	SEGMENT ID	DESCRIPTION	SIZE	UNITS	CATEGORY
White Pond	MA81155	Lancaster/Leominster	47	ACRES	4C
Whitman River	MA81-11	Outlet Lake Wampanoag, Ashburnham to inlet Snows Millpond, Fitchburg (excluding the approximately 1.2 miles through Whitmanville Reservoir segment MA81109 and the approximately 0.8 miles through Crocker Pond segment MA81025).	6.3	MILES	2
Whitmanville Reservoir	MA81109	Westminster/Ashburnham	107	ACRES	3
Wilder Brook	MA81-43	Headwaters west of Osgood Road, Sterling to confluence with Stillwater River, Sterling.	2.3	MILES	2
Winnekeag Lake	MA81157	Ashburnham	112	ACRES	3
Wright Pond	MA81159	[West Basin] Ashby	21	ACRES	3
Wyman Pond	MA81161	Westminster	198	ACRES	4C
North Coastal					
Alewife Brook	MA93-26	Headwaters just north of B&M Railroad, Rockport to inlet Babson Reservoir, Gloucester.	0.972	MILES	3
Alewife Brook	MA93-45	Headwaters, outlet Chebacco Lake, Essex to Landing Road, Essex.	1.404	MILES	4A
Alewife Brook	MA93-46	Landing Road, Essex to confluence with Essex River, Essex.	0.01	SQUARE MILES	4A
Annisquam River	MA93-12	The waters from the Gloucester Harbor side of the Route 127 bridge, Gloucester to Ipswich Bay at an imaginary line drawn from Bald Rocks to Wigwam Point, Gloucester.	0.82	SQUARE MILES	4A
Babson Reservoir	MA93001	Gloucester	39.661	ACRES	3
Bass River	MA93-07	Headwaters west of Wenham Lake, Beverly to the outlet of "Lower Shoe Pond" north of Route 62, Beverly.	2.107	MILES	5
Bass River	MA93-08	Outlet of "Lower Shoe Pond" north of Route 62, Beverly to confluence with Danvers River, Beverley.	0.121	SQUARE MILES	4A
Beaver Brook	MA93-37	Headwaters west of Route 95, Danvers to inlet Mill Pond, Danvers.	2.687	MILES	5
Beaverdam Brook	MA93-30	Headwaters west of Main Street, Lynnfield to confluence with Saugus River (Reedy Meadow), Lynnfield.	1.461	MILES	5
Beck Pond	MA93003	Hamilton	34.591	ACRES	2
Bennetts Pond Brook	MA93-48	Headwaters east of Lynn Fells Parkway (in Bellevue Golf Course), Melrose to confluence with Saugus River, Saugus.	2.41	MILES	4A
Beverly Harbor	MA93-20	From the mouth of the Danvers River, Salem/Beverly to an imaginary line from Juniper Point, Salem to Hospital Point, Beverly.	1.02	SQUARE MILES	4A
Birch Pond	MA93004	Saugus/Lynn	80.386	ACRES	3
Breeds Pond	MA93006	Lynn	195.228	ACRES	3
Browns Pond	MA93008	Peabody	24.491	ACRES	3
Buswell Pond	MA93009	Gloucester	4.413	ACRES	3
Cape Pond	MA93011	Rockport	42.45	ACRES	5
Cat Brook	MA93-29	Headwaters east of Route 128, Manchester to confluence with Manchester Harbor (Route 127), Manchester.	1.679	MILES	5
Causeway Brook	MA93-47	Headwaters, outlet Dexter Pond, Manchester to confluence with Cat Brook, Manchester.	1.077	MILES	4A

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NAME	SEGMENT ID	DESCRIPTION	SIZE	UNITS	CATEGORY
Cedar Pond	MA93013	Peabody	34.029	ACRES	4C
Chebacco Lake	MA93014	Hamilton/Essex	204.374	ACRES	4A
Coy Pond	MA93016	Wenham	23.167	ACRES	2
Crane Brook	MA93-02	Headwaters east of Route 95, Danvers to inlet Mill Pond, Danvers.	1.808	MILES	4A
Crane River	MA93-38	Outlet Mill Pond, Danvers to outlet of the pump house sluiceway, Purchase Street, Danvers.	0.332	MILES	2
Crane River	MA93-41	Outlet pump house sluiceway, Purchase Street, Danvers to confluence with Danvers River, Danvers.	0.07	SQUARE MILES	4A
Crystal Lake	MA93018	Wakefield/Stoneham	81.966	ACRES	3
Danvers River	MA93-09	Confluence of Porter, Crane and Waters rivers, Danvers to mouth at Beverly Harbor, Beverly/Salem.	0.53	SQUARE MILES	4A
Days Pond	MA93092	Gloucester	0.516	ACRES	4C
Edgewater Office Park Pond	MA93094	Wakefield	14.563	ACRES	4C
Essex Bay	MA93-16	The waters landward of Ipswich Bay contained within an imagiany line drawn from the northwestern tip of Gloucester near Coffins Beach to the southern tip of Castle Neck, Ipswich to the eastern most point of Dilly Island, Essex (mouth of Castle NeckRiver) and then from Cross Island, Essex to Conomo Point, Essex (mouth of Essex River) excluding Walker, Lanes, and Farm creeks.	0.97	SQUARE MILES	4A
Essex River	MA93-11	Source east of Southern Avenue, Essex to mouth at Essex Bay, Essex.	0.501	SQUARE MILES	4A
Fernwood Lake	MA93022	Gloucester	25.379	ACRES	3
First Pond	MA93081	Saugus (also known as Upper Griswold Pond).	4.214	ACRES	4C
Flax Pond	MA93023	Lynn	55.449	ACRES	5
Floating Bridge Pond	MA93024	Lynn	11.905	ACRES	5
Forest River	MA93-10	Approximately 0.4 miles upstream of Loring Avenue, Salem to Salem Harbor, Salem.	0.026	SQUARE MILES	5
Foster Pond	MA93026	Swampscott	4.619	ACRES	5
Frost Fish Brook	MA93-36	Cabot Road, Danvers to Porter River confluence at Route 62, Danvers.	1.028	MILES	4A
Gloucester Harbor	MA93-18	The waters landward of an imaginary line drawn between Mussel Point and the tip of the Dog Bar Breakwater, Gloucester excluding the Annisquam River.	2.325	SQUARE MILES	5
Goldthwait Brook	MA93-05	Outlet Cedar Pond, Peabody to confluence with Proctor Brook, Peabody.	3.291	MILES	5
Goose Cove Reservoir	MA93093	Gloucester	57.664	ACRES	3
Gravelly Pond	MA93028	Hamilton	49.738	ACRES	3
Griswold Pond	MA93029	Saugus	12.972	ACRES	4C
Haskell Pond	MA93031	Gloucester	58.332	ACRES	3
Hawkes Brook	MA93-32	Headwaters near the Lynn/Lynnfield border to the inlet of Hawkes Pond, Lynnfield.	2.608	MILES	4A
Hawkes Brook	MA93-33	Outlet of Hawkes Pond, Saugus to confluence with Saugus River, Saugus.	1.087	MILES	4A
Hawkes Pond	MA93032	Lynnfield/Saugus	65.172	ACRES	5
Lake Quannapowitt	MA93060	Wakefield	246.002	ACRES	5

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NAME	SEGMENT ID	DESCRIPTION	SIZE	UNITS	CATEGORY
Lily Pond	MA93039	Gloucester	23.744	ACRES	5
Lower Pond	MA93044	Saugus	21.166	ACRES	3
Lynn Harbor	MA93-52	The "inner" portion of Lynn Harbor; the waters landward of an imaginary line drawn from Black Rock Point, Nahant to the eastern edge of Point of Pines, Revere excluding the Saugus River (formerly part of segment 93-23).	1.623	SQUARE MILES	4A
Lynn Harbor	MA93-53	The "outer" portion of Lynn Harbor; the waters landward of an imaginary line drawn from Baileys Hill, Nahant to the eastern point of Winthrop Highlands, Winthrop to the seaward edge of the "inner" portion of Lynn Harbor (at an imaginary line drawn fromBlack Rock Point, Nahant to the eastern edge of Point of Pines, Revere) (formerly part of segment 93-23).	6.557	SQUARE MILES	4A
Manchester Harbor	MA93-19	The waters landward of an imaginary line drawn between Gales Point and Chubb Point, Manchester excluding Cat Brook.	0.333	SQUARE MILES	4A
Marblehead Harbor	MA93-22	The waters landward of an imaginary line drawn northwesterly from the northern tip of Marblehead Neck to Fort Sewall, Marblehead.	0.561	SQUARE MILES	4A
Mill Pond	MA93050	Gloucester	17.602	ACRES	3
Mill River	MA93-28	Headwaters, outlet Mill Pond, Gloucester to confluence with Annisquam River, Gloucester.	0.097	SQUARE MILES	4A
Mill River	MA93-31	From headwaters in wetlands north of Salem Street, Wakefield to confluence with Saugus River, Wakefield.	1.993	MILES	5
Nahant Bay	MA93-24	The waters landward of an imaginary line drawn between Galloupes Point, Swampscott and East Point, Nahant.	5.117	SQUARE MILES	4A
Niles Pond	MA93052	Gloucester	34.415	ACRES	3
North River	MA93-42	Downstream of Route 114 bridge (Proctor Brook becomes North River at this bridge), Salem to confluence with Danvers River, Salem (formerly part of MA93-06).	0.145	SQUARE MILES	5
Pillings Pond	MA93056	Lynnfield	90.314	ACRES	5
Pines River	MA93-15	Headwaters east of Route 1, Revere/Saugus to confluence with the Saugus River, Saugus/Revere.	0.577	SQUARE MILES	4A
Porter River	MA93-04	Confluence with Frost Fish Brook at Route 62, Danvers to confluence with Danvers River, Danvers.	0.134	SQUARE MILES	4A
Proctor Brook	MA93-39	Outlet of small pond in wetland north of Downing Road, Peabody to Grove/Goodhue Street bridge, Salem (formerly part of MA93-06).	2.948	MILES	5
Proctor Brook	MA93-40	Grove/Goodhue Street bridge, Salem to Route 114 culvert, Salem (formerly part of MA93-06).	0.005	SQUARE MILES	5
Quarry Reservoir	MA93053	Rockport	7.44	ACRES	3
Rockport Harbor	MA93-57	Waters landward of an imaginary line from Gully Point, Rockport to Granite Pier, Rockport (including Back Harbor and a portion of Sandy Bay) (includes area formerly reported as segment MA93-17)	0.35	SQUARE MILES	4A
Round Pond	MA93063	Hamilton	37.51	ACRES	3
Rum Rock Lake	MA93064	Rockport	9.62	ACRES	3
Salem Harbor	MA93-54	Waters landward of an imaginary line from Naugus Head, Marblehead to the northwest point of Bakers Island, Salem to Hospital Point, Beverly to Juniper Point, Salem (excluding Forest River) (formerly segment MA93-21 Salem Harbor and a portion of segmentMA93-25 Salem Sound [waterbody code 93907])	4.91	SQUARE MILES	5

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NAME	SEGMENT ID	DESCRIPTION	SIZE	UNITS	CATEGORY
Salem Sound	MA93-55	Northern portion of Salem Sound, waters landward of and within imaginary lines from Chubb Point, Manchester to Gales Point, Manchester to the northwest point of Bakers Island, Salem to Hospital Point, Beverly (formerly reported as a portion of segmentMA93-25)	3.46	SQUARE MILES	4A
Salem Sound	MA93-56	Southern portion of Salem Sound, waters landward of and within imaginary lines from Fort Sewall, Marblehead to the Marblehead Lighthouse on Marblehead Neck, Marblehead to the northwest point of Bakers Island, Salem to Naugus Head, Marblehead (formerlyreported as a portion of segment MA93-25)	2.55	SQUARE MILES	4A
Saugus River	MA93-34	Headwaters, outlet of Lake Quannapowitt, Wakefield (thru Reedy Meadow) to Lynn Water & Sewer Commission diversion canal, Wakefield/Lynnfield (canal diverts to Hawks Pond) (formerly part of segment MA93-13).	3.083	MILES	5
Saugus River	MA93-35	From the Lynn Water & Sewer Commission diversion canal, Wakefield/Lynnfield to Saugus Iron Works, Bridge Street, Saugus (formerly part of segment MA93-13).	5.367	MILES	4A
Saugus River	MA93-43	Saugus Iron Works, Bridge Street, Saugus to Lincoln Avenue/Boston Street, Saugus/Lynn (formerly part of segment 93-14).	0.038	SQUARE MILES	5
Saugus River	MA93-44	Lincoln Avenue/Boston Street, Saugus/Lynn to mouth (east of Route 1A) at Lynn Harbor, Lynn/Revere (formerly part of segment 93-14).	0.363	SQUARE MILES	5
Shute Brook	MA93-49	Approximately 350 feet downstream from Central Street, Saugus to the confluence with the Saugus River, Saugus.	0.007	SQUARE MILES	4A
Shute Brook	MA93-50	From the confluence of Fiske Brook, Saugus to approximately 350 feet downstream from Central Street, Saugus.	0.892	MILES	4A
Sluice Pond	MA93071	Lynn	41.514	ACRES	4C
Spring Pond	MA93072	Saugus	8.183	ACRES	4C
Spring Pond	MA93073	[South Basin] Peabody/Lynn/Salem	66.216	ACRES	3
Spring Pond	MA93074	[North Basin] Peabody	16.586	ACRES	3
Strangman Pond	MA93076	Gloucester	3.341	ACRES	5
Swains Pond	MA93095	Melrose	2.978	ACRES	4C
Unnamed Tributary	MA93-27	Outlet Babson Reservoir, Gloucester to inlet Mill Pond, Gloucester.	0.745	MILES	3
Unnamed Tributary	MA93-51	Unnamed tributary locally known as "Town Line Brook", from Route 99, Malden to the confluence with the Pines River, Revere.	0.017	SQUARE MILES	5
Upper Banjo Pond	MA93080	Gloucester	10.531	ACRES	5
Upper Pond	MA93083	Saugus	12.707	ACRES	3
Walden Pond	MA93084	Lynn/Saugus/Lynnfield	223.113	ACRES	3
Wallace Pond	MA93085	Gloucester	21.725	ACRES	3
Waters River	MA93-01	Headwaters west of Route 128, Peabody/Danvers, to confluence with Danvers River, Danvers.	0.09	SQUARE MILES	4A
West Pond	MA93089	Gloucester	7.142	ACRES	5
Parker					
Baldpate Pond	MA91001	Boxford	60	ACRES	5
Bull Brook	MA91-04	Headwaters, Ipswich to inlet Bull Brook Reservoir, Ipswich.	1.4	MILES	3
Bull Brook Reservoir	MA91002	Ipswich	7	ACRES	3

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Central Street Pond	MA91003	Rowley	3	ACRES	3
Crane Pond	MA91004	Groveland	22	ACRES	3
Dow Brook Reservoir	MA91005	Ipswich	16	ACRES	3
Eagle Hill River	MA91-06	Headwaters near Town Farm Road, Ipswich to the mouth at Plum Island Sound, Ipswich.	0.35	SQUARE MILES	5
Egypt River	MA91-13	Outlet Bull Brook Reservoir, Ipswich to east of Jewett Hill (Latitude 42:42:23.40, Longitude 70:51:47.58 DMS), Ipswich.	1.1	MILES	3
Egypt River	MA91-14	East of Jewett Hill (Latitude 42:42:23.40, Longitude 70:51:47.58 DMS), Ipswich to confluence with Muddy Run and Rowley River, Rowley/Ipswich.	0.01	SQUARE MILES	5
Jackman Brook	MA91-07	Northeast of intersection of Jewett and Tenney streets, Georgetown to confluence with Wheeler Brook, Georgetown.	0.8	MILES	3
Little Crane Pond	MA91007	West Newbury	4	ACRES	3
Little River	MA91-11	Scotland Road/Parker Street, Newbury/Newburyport to confluence with Parker River, Newbury.	0.09	SQUARE MILES	5
Mill River	MA91-08	Headwaters - Outlet of small unnamed pond between Route 95 and Rowley Road, Boxford to Route 1, Rowley/Newbury (through Upper Mill Pond formerly segment MA91015 and Lower Mill Pond formerly segment MA91008).	6.9	MILES	5
Mill River	MA91-09	Route 1, Rowley/Newbury to confluence with Parker River, Newbury.	0.09	SQUARE MILES	5
Ox Pasture Brook	MA91-10	Headwaters - Outlet of small unnamed impoundment east of Bradford Street, Rowley to the outlet of a small unnamed impoundment west of Ox Pasture Hill, Rowley.	2.5	MILES	3
Paine Creek	MA91-03	Headwaters to confluence with Eagle Hill River, Ipswich.	0.06	SQUARE MILES	5
Parker River	MA91-01	Source north of Silver Mine Road, Boxford to Central Street, Newbury (excluding Sperry Pond segment MA91013, Rock Pond segment MA91012, Pentucket Pond segment MA91010, and Crane Pond segment MA91004).	12.3	MILES	4C
Parker River	MA91-02	Central Street, Newbury to mouth at Plum Island Sound, Newbury.	0.6	SQUARE MILES	5
Penn Brook	MA91-16	Outlet Baldpate Pond, Boxford to confluence with Parker River, Georgetown.	3	MILES	2
Pentucket Pond	MA91010	Georgetown	92	ACRES	5
Plum Island River	MA91-15	From "high sandy" sandbar just north of the confluence with Pine Island Creek, Newbury to confluence with Plum Island Sound, Newbury.	0.39	SQUARE MILES	5
Plum Island Sound	MA91-12	From the mouth of both the Parker River and Plum Island River, Newbury to the Atlantic Ocean, Ipswich (Includes Ipswich Bay).	4.44	SQUARE MILES	5
Quills Pond	MA91011	Newbury	2	ACRES	3
Rock Pond	MA91012	Georgetown	49	ACRES	5
Rowley River	MA91-05	Confluence with Egypt River and Muddy Run, Rowley/Ipswich to mouth at Plum Island Sound, Rowley/Ipswich.	0.27	SQUARE MILES	5
Sperrys Pond	MA91013	Boxford	26	ACRES	3
State Street Pond	MA91014	Newburyport	4	ACRES	4C
Wilson Pond	MA91017	Rowley	5	ACRES	3

Appendix 1
Assessment Units and Integrated List Categories by Major Watershed

NAME	SEGMENT ID	DESCRIPTION	SIZE	UNITS	CATEGORY
Quinebaug					
Alum Pond	MA41001	Sturbridge	198	ACRES	5
Browns Brook	MA41-20	From the state line Holland, MA/Union, CT to the inlet of Hamilton Reservoir, Holland.	0.8	MILES	2
Cady Brook	MA41-05	Headwaters, outlet of Glen Echo Lake, Charlton to Charlton City WWTP outfall, Charlton.	1.5	MILES	5
Cady Brook	MA41-06	Charlton City WWTP outfall, Charlton to confluence with Quinebaug River, Southbridge.	5.1	MILES	5
Cedar Pond	MA41008	Sturbridge	149	ACRES	4C
Cohasse Brook	MA41-12	From the outlet of Cohasse Brook Reservoir, Southbridge through Wells Pond (formerly pond segment MA41053) to the confluence with the Quinebaug River, Southbridge.	2.7	MILES	5
East Brimfield Reservoir	MA41014	Brimfield/Sturbridge	313	ACRES	4A
Glen Echo Lake	MA41017	Charlton	115	ACRES	5
Hamant Brook	MA41-15	Headwaters, outlet unnamed pond, Sturbridge to the confluence with the Quinebaug River, Sturbridge.	3.1	MILES	2
Hamilton Reservoir	MA41019	Holland (size indicates portion in Massachusetts)	386	ACRES	4C
Hatchet Brook	MA41-14	From the outlet of No. 3 Reservoir, Southbridge to the confluence with the Quinebaug River, Southbridge.	1.3	MILES	5
Holland Pond	MA41022	Holland	66	ACRES	4A
Hollow Brook	MA41-24	Headwaters, west of Hollow Road, Wales to confluence with Mill Brook, Brimfield.	2.7	MILES	2
Lake George	MA41016	Wales	93	ACRES	3
Leadmine Brook	MA41-21	Headwaters, outlet Leadmine Pond, Sturbridge to the state line, Sturbridge, MA/Union, CT.	2.5	MILES	2
Leadmine Pond	MA41027	Sturbridge	52	ACRES	3
Lebanon Brook	MA41-11	From the state line, Southbridge, MA/Woodstock, CT, to the confluence with the Quinebaug River, Southbridge.	4.7	MILES	2
Little Alum Pond	MA41029	Brimfield	73	ACRES	3
McIntyre Pond	MA41031	Charlton	11	ACRES	3
McKinstry Brook	MA41-13	Headwaters, east of Brookfield Road, Charlton (excluding intermittent portion) to the confluence with the Quinebaug River, Southbridge.	7.3	MILES	5
Mill Brook	MA41-07	From inlet of Mill Road Pond (formerly pond segment MA41032), Brimfield to confluence with Quinebaug River, Brimfield.	4.7	MILES	4C
Monson Road Pond	MA41059	Wales	4	ACRES	3
Morse Pond	MA41033	Southbridge	41	ACRES	5
Mountain Brook	MA41-18	Headwaters, east of Steerage Rock Road (excluding intermittent portion), Brimfield to the confluence with Mill Brook, Brimfield.	1.9	MILES	2
New Boston Road Pond	MA41035	Sturbridge	13	ACRES	3
No. 3 Reservoir	MA41038	Southbridge	24	ACRES	3
No. 4 Reservoir	MA41039	Southbridge	69	ACRES	3

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NAME	SEGMENT ID	DESCRIPTION	SIZE	UNITS	CATEGORY
No. 5 Reservoir	MA41040	Southbridge	30	ACRES	3
Pistol Pond	MA41057	Sturbridge	5	ACRES	5
Prindle Lake	MA41043	Charlton	75	ACRES	3
Quinebaug River	MA41-01	Outlet Hamilton Reservoir, Holland, to Sturbridge WWTP outfall, Sturbridge (excluding Holland Pond segment MA41022 and East Brimfield Reservoir segment MA41014).	8.2	MILES	5
Quinebaug River	MA41-02	Sturbridge WWTP outfall, Sturbridge to confluence with Cady Brook, Southbridge.	6.5	MILES	5
Quinebaug River	MA41-03	Southbridge WWTP outfall, Southbridge to dam just upstream of West Dudley Road, Dudley.	2.2	MILES	5
Quinebaug River	MA41-04	From dam just upstream of West Dudley Road, Dudley to Connecticut state line, Dudley.	2.2	MILES	5
Quinebaug River	MA41-09	From confluence with Cady Brook, Southbridge to Southbridge WWTP outfall, Southbridge.	1.3	MILES	5
Railroad Pond	MA41058	Charlton	7	ACRES	4C
Rocky Brook	MA41-22	Headwaters east of Chamberlain Pond (excluding intermittent portion), Douglas to the state line Douglas, MA/Thompson, CT.	1.9	MILES	2
Sherman Pond	MA41046	Brimfield	76	ACRES	4C
Sibley Pond	MA41047	North Basin, Charlton	22	ACRES	5
Sibley Pond	MA41048	South Basin, Charlton	19	ACRES	5
Stevens Brook	MA41-19	From the state line Wales, MA/Stafford, CT to the inlet of Hamilton Reservoir, Holland.	4.7	MILES	2
Sylvestri Pond	MA41049	Dudley	30	ACRES	4C
Tufts Branch	MA41-10	Headwaters, north of Dudley-Southbridge Road, Dudley to the state line, Dudley, MA/Thompson, CT.	2.8	MILES	2
Unnamed Tributary	MA41-16	Unnamed tributary to Mill Brook, headwaters, outlet Sherman Pond, Brimfield to confluence with Mill Brook, Brimfield.	1.2	MILES	5
Unnamed Tributary	MA41-23	Unnamed tributary to the Quinebaug River from headwaters at the outlet of an unnamed pond on the Southbridge/Charlton border to the confluence with the Quinebaug River, Southbridge.	1.9	MILES	2
Unnamed Tributary	MA41-25	Unnamed tributary to Tufts Branch, headwaters, outlet Wielock Pond, Dudley to confluence with Tufts Branch, Dudley.	0.2	MILES	2
Unnamed Tributary	MA41-26	Unnamed tributary locally known as 'Freeman's Brook' from headwaters west of Cronin Road, Warren to an unnamed tributary to Long Pond, Sturbridge.	2.6	MILES	2
Unnamed Tributary	MA41-27	Unnamed tributary to Mill Brook, headwaters south of East Hill Road, Brimfield to confluence with Mill Brook, Brimfield.	1.7	MILES	2
Wales Brook	MA41-08	Headwaters, outlet Lake George, Wales to confluence with Mill Brook, Brimfield.	5.2	MILES	3
Walker Pond	MA41052	Sturbridge	104	ACRES	4C
West Brook	MA41-17	Headwaters, west of the Dix Hill Road/Route 19 intersection (excluding intermittent portion), Brimfield to the confluence with Mill Brook, Brimfield.	1.8	MILES	2
Wielock Pond	MA41056	Dudley	6	ACRES	2

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NAME	SEGMENT ID	DESCRIPTION	SIZE	UNITS	CATEGORY
Shawsheen					
Ames Pond	MA83001	Tewksbury	76.47	ACRES	5
Bakers Meadow Pond	MA83002	Andover	21.188	ACRES	3
Ballardvale Impoundment	MA83011	Andover (Lowell Junction Pond)	35.292	ACRES	5
Butterfield Pond	MA83003	Burlington/Lexington	2.968	ACRES	5
Content Brook	MA83-09	Outlet Richardson Pond, Billerica, to confluence with Shawsheen River, Tewksbury.	2.369	MILES	2
Elm Brook	MA83-05	Headwaters, Lincoln to confluence with Shawsheen River, Bedford.	5.043986	MILES	5
Fawn Lake	MA83004	Bedford	11.825	ACRES	3
Fosters Pond	MA83005	Andover/Wilmington	109.412	ACRES	5
Gravel Pit Pond	MA83007	Andover (Hussey Brook Pond East)	4.585	ACRES	4C
Hussey Brook Pond	MA83008	Andover	0.539	ACRES	3
Hussey Pond	MA83009	Andover	1.383	ACRES	5
Kiln Brook	MA83-10	Outlet unnamed pond (in Pine Meadows Country Club), Lexington, to confluence with Shawsheen River, Bedford.	1.54	MILES	4A
Long Meadow Brook	MA83-11	Wetland east of Lexington Street and north of Independence Drive, Burlington, to confluence with Vine Brook, Burlington.	1.284976	MILES	4A
Long Pond	MA83010	Tewksbury	42.483	ACRES	5
Meadow Brook	MA83-12	Outlet Ames Pond, Tewksbury, to confluence with Strong Water Brook, Tewksbury.	1.695	MILES	2
Pomps Pond	MA83014	Andover	24.635	ACRES	5
Pond Street Pond	MA83021	Billerica (unnamed pond west of Pond Street)	3.56	ACRES	3
Rabbit Pond	MA83015	Andover	1.857	ACRES	5
Richardson Pond North	MA83020	Billerica/Tewksbury (Richardson Pond North)	45.78	ACRES	3
Rogers Brook	MA83-04	From outlet of unnamed impoundment upstream of Morton Street, Andover (Prior to 1997 cycle listed as "Headwaters Billerica...") to confluence with Shawsheen River, Andover.	1.299	MILES	5
Round Pond	MA83018	Tewksbury	24.92	ACRES	3
Sandy Brook	MA83-13	Headwaters north of Bedford Street and east of Fairfax Street to confluence with Vine Brook, Burlington.	1.155097	MILES	4A
Shawsheen River	MA83-01	Summer Street (historcally listed as Maguire Road) to confluence with Spring Brook, Bedford.	1.625	MILES	5
Shawsheen River	MA83-08	Headwater, north of Folly Pond and North Great Road, Lincoln to Summer Street, Bedford.	2.091	MILES	5
Shawsheen River	MA83-17	Confluence with Spring Brook, Bedford to the Burlington Water Department's surface water intake, Billerica. (Formerly part of segment MA83-02, changed for 2004 cycle)	5.679	MILES	5
Shawsheen River	MA83-18	Burlington Water Department's surface water intake, Billerica to the Ballardvale Impoundment dam, Andover. (Formerly part of segment MA83-02, changed for 2004 cycle)	10.093	MILES	5
Shawsheen River	MA83-19	Outlet of Ballardvale Impoundment, Andover to the confluence with the Merrimack River, Lawrence. (Formerly part of segment MA83-02 and all of MA83-03, changed for 2004 cycle)	8.436	MILES	5

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NAME	SEGMENT ID	DESCRIPTION	SIZE	UNITS	CATEGORY
Spring Brook	MA83-14	Wetland northeast of Route 3 Billerica, to confluence with Shawsheen River, Bedford.	2.548839	MILES	4A
Strong Water Brook	MA83-07	Headwaters northeast of Long Pond, Tewksbury to confluence with Shawsheen River, Tewksbury.	4.942	MILES	4A
Unnamed Tributary	MA83-15	Unnamed tributary to Meadow Brook, also known as "Pinnacle Brook" - from small wetland east of Route 93, Andover, to confluence with Meadow Brook, Tewksbury (includes intermittent portion).	2.1	MILES	5
Unnamed Tributary	MA83-16	Also known as "Fosters Brook" - Outlet Fosters Pond, Andover through River Street Pond to confluence with Shawsheen River at Lowell Junction Pond, Andover.	0.97257	MILES	2
Unnamed Tributary	MA83-20	Unnamed intermittent tributary to the Shawsheen River, from Dascomb Road, Andover to confluence with Shawsheen River, Tewksbury.	0.9	MILES	5
Unnamed Tributary	MA83-21	Unnamed intermittent tributary to the Shawsheen River locally known as 'Sutton Brook', from headwaters north of Research Drive, Wilmington to confluence with the Shawsheen River, Tewksbury	3	MILES	3
Vine Brook	MA83-06	Headwaters (southeast of Granny Hill) near Grant Street, Lexington to confluence with Shawsheen River, Bedford.	6.846	MILES	4A
South Coastal					
Aaron River	MA94-28	Outlet Aaron River Reservoir, Cohasset to flow control structure near Beechwood Street, Cohasset.	1.004	MILES	5
Aaron River Reservoir	MA94178	Cohasset/Hingham/Scituate	136.13	ACRES	4A
Arnold School Pond	MA94004	Pembroke	11.635	ACRES	3
Bartlett Pond	MA94005	Plymouth	33.268	ACRES	3
Beaver Dam Pond	MA94006	Plymouth	29.204	ACRES	4C
Billington Sea	MA94007	Plymouth	262.722	ACRES	5
Black Jimmy Pond	MA94008	Plymouth	8.612	ACRES	2
Black Mountain Pond	MA94009	Marshfield	16.606	ACRES	4C
Bloody Pond	MA94015	Plymouth	100.726	ACRES	3
Bluefish River	MA94-30	Saltmarsh north of Harrison Street, Duxbury to mouth at Duxbury Bay, Duxbury.	0.065	SQUARE MILES	5
Boot Pond	MA94016	Plymouth	68.836	ACRES	3
Bound Brook	MA94-18	Flow control structure near Beechwood Street, Cohasset to outlet Hunters Pond, Scituate.	2.227	MILES	5
Bound Brook Pond	MA94017	Norwell	20.861	ACRES	3
Briggs Reservoir	MA94019	Plymouth	23.901	ACRES	4C
Briggs Reservoir	MA94020	Plymouth	16.325	ACRES	4C
Cohasset Cove	MA94-32	The waters south of a line drawn from the Bassing Beach jetty, Scituate westerly to the opposite shore, Cohasset excluding Baileys Creek and The Gulf.	0.087	SQUARE MILES	5
Cohasset Harbor	MA94-01	The waters south of a line drawn from the northwestern point of Scituate Neck, Scituate to just north of Quarry Point, Cohasset not including Cohasset Cove, Cohasset/Scituate.	0.695	SQUARE MILES	5
Cooks Pond	MA94027	Plymouth	21.237	ACRES	4C

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NAME	SEGMENT ID	DESCRIPTION	SIZE	UNITS	CATEGORY
Crossman Pond	MA94032	Kingston	12.706	ACRES	5
Drinkwater River	MA94-21	From Whiting Street, Hanover through Forge Pond to the inlet of Factory Pond, Hanover.	3.493	MILES	5
Duxbury Bay	MA94-15	The waters north and west of a line from Saquish Head to the tip of Plymouth Beach and from there to High Cliff, Plymouth excluding Back River and Bluefish River, Duxbury and Jones River, Kingston.	12.694	SQUARE MILES	5
Eel River	MA94-23	Outlet cranberry bog east of Long Pond Road, Plymouth through Russell Millpond to mouth at Plymouth Harbor, Plymouth.	3.931	MILES	4C
Elbow Pond	MA94035	Plymouth	20.943	ACRES	2
Ellisville Harbor	MA94-34	Plymouth	0.012	SQUARE MILES	5
Factory Pond	MA94175	Hanson/Hanover	51.395	ACRES	5
First Herring Brook	MA94-25	From the headwaters in South Swamp, Norwell (through Tack Factory Pond) to the inlet of Old Oaken Bucket Pond, Scituate.	3.945	MILES	2
Forge Pond	MA94036	Plymouth	13.738	ACRES	2
Forge Pond	MA94037	Hanover	15.907	ACRES	5
Foundry Pond	MA94038	Kingston	7.235	ACRES	5
French Stream	MA94-03	From the headwaters on the southeast side of the South Weymouth Naval Air Station, Rockland through Studleys Pond to the confluence with Drinkwater River, Hanover.	6.124887	MILES	5
Fresh Pond	MA94040	Plymouth	59.775	ACRES	2
Furnace Pond	MA94043	Pembroke	102.653	ACRES	5
Governor Winslow House Pond	MA94047	Marshfield	22.939	ACRES	3
Great Herring Pond	MA94050	Bourne/Plymouth	414.699	ACRES	4A
Great Sandy Bottom Pond	MA94053	Pembroke	103.094	ACRES	3
Great South Pond	MA94054	Plymouth	284.299	ACRES	4A
Green Harbor	MA94-11	From the tidegates at Route 139, Marshfield to the mouth of the harbor at Massachusetts Bay/Cape Cod Bay, Marshfield.	0.078	SQUARE MILES	5
Green Harbor River	MA94-10	Outlet Black Mountain Pond, Marshfield to the tidegate at Route 139, Marshfield.	5.648	MILES	5
Gunners Exchange Pond	MA94055	Plymouth	26.118	ACRES	3
Harrobs Corner Bog Pond	MA94061	Plympton	20.054	ACRES	3
Hedges Pond	MA94065	Plymouth	27.072	ACRES	2
Herring Brook	MA94-29	Outlet Lily Pond, Cohasset to confluence Aaron River, Cohasset.	0.3	MILES	4C
Herring River	MA94-07	Outlet Old Oaken Bucket Pond, Scituate to confluence with North River, Scituate.	0.077	SQUARE MILES	5
Hobomock Pond	MA94177	Pembroke	12.701	ACRES	2
Hoyts Pond	MA94070	Plymouth	19.505	ACRES	3
Indian Head Pond	MA94071	Hanson	119.478	ACRES	3

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NAME	SEGMENT ID	DESCRIPTION	SIZE	UNITS	CATEGORY
Indian Head River	MA94-04	Outlet of Factory Pond, Hanover/Hanson to Curtis Crossing Dam (also called Ludhams Ford Dam) west of Elm Street, Hanover/Pembroke.	2.914	MILES	5
Indian Head River	MA94-22	From Curtis Crossing Dam (also called Ludhams Ford Dam) west of Elm Street, Hanover/Pembroke to confluence with Herring Brook, (forming headwaters of North River) Hanover/Pembroke.	0.883	MILES	5
Indian Pond	MA94072	Kingston/Plympton	63.795	ACRES	3
Iron Mine Brook	MA94-24	Headwaters north of Route 139, Hanover to the confluence with Indian Head River, Hanover.	1.393	MILES	5
Island Creek Pond	MA94073	Duxbury	39.716	ACRES	4C
Island Pond	MA94074	[west of the locality of Cedarville] Plymouth	51.804	ACRES	3
Island Pond	MA94075	[locally known as Great Island Pond] Plymouth	79.418	ACRES	4C
Island Pond	MA94076	[south of locality of South Pond] Plymouth	12.12	ACRES	3
Jacobs Pond	MA94077	Norwell	60.801	ACRES	4C
Jones River	MA94-12	Headwaters outlet Silver Lake, Kingston to dam near Wapping Road, Kingston.	4.057	MILES	5
Jones River	MA94-13	From dam near Wapping Road, Kingston to dam at Elm Street, Kingston.	0.93	MILES	5
Jones River	MA94-14	From dam at Elm Street, Kingston to mouth at Duxbury Bay, Kingston.	0.089	SQUARE MILES	5
Keene Pond	MA94079	Duxbury	10.664	ACRES	3
Lily Pond	MA94179	Cohasset	50.503	ACRES	5
Little Harbor	MA94-20	Cove south of Nichols Road, west of Atlantic Avenue, and north of Cohasset center, Cohasset	0.24	SQUARE MILES	4A
Little Herring Pond	MA94082	Plymouth	81.243	ACRES	3
Little Pond	MA94182	Plymouth	40.474	ACRES	2
Little Sandy Bottom Pond	MA94085	Pembroke	56.106	ACRES	2
Little South Pond	MA94087	Plymouth	62.815	ACRES	3
Long Island Pond	MA94088	Plymouth	33.137	ACRES	4C
Lorings Bogs Pond	MA94089	Duxbury	32.999	ACRES	4C
Lout Pond	MA94090	Plymouth	17.8	ACRES	3
Lower Chandler Pond	MA94091	Duxbury/Pembroke	37.388	ACRES	4C
Maquan Pond	MA94096	Hanson	45.034	ACRES	2
Mill Pond	MA94101	Duxbury	7.022	ACRES	3
Morey Hole	MA94102	Plymouth	22.456	ACRES	3
Musquashcut Pond	MA94-33	Scituate (formerly reported as MA94105)	0.109	SQUARE MILES	5
North Hill Marsh Pond	MA94109	Duxbury	42.959	ACRES	3
North River	MA94-05	Confluence of Indian Head River and Herring Brook, Hanover/Pembroke to Route 3A (Main Street), Marshfield/Scituate.	0.302	SQUARE MILES	5
North River	MA94-06	Route 3A (Main Street), Marshfield/Scituate to confluence with South River/Massachusetts Bay, Scituate.	0.555	SQUARE MILES	5

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NAME	SEGMENT ID	DESCRIPTION	SIZE	UNITS	CATEGORY
North Triangle Pond	MA94110	Plymouth	21.773	ACRES	3
Old Oaken Bucket Pond	MA94113	Scituate	8.354	ACRES	5
Oldham Pond	MA94114	Pembroke/Hanson	231.859	ACRES	4C
Pembroke Street South Pond	MA94117	Kingston	6.246	ACRES	4C
Pine Lake	MA94120	Duxbury	22.125	ACRES	3
Pine Street Pond	MA94121	Duxbury	13.845	ACRES	3
Plymouth Bay	MA94-17	The waters southeast of a line drawn from Saquish Head to the tip of Plymouth Beach, Plymouth and west of a line from Gurnet Point, Plymouth to Rocky Point, Plymouth.	10.333	SQUARE MILES	2
Plymouth Harbor	MA94-16	The waters south of a line drawn from the tip of Plymouth Beach to High Cliff, Plymouth.	2.53	SQUARE MILES	5
Reeds Millpond	MA94126	Kingston	6.248	ACRES	4C
Reservoir	MA94127	Pembroke	16.194	ACRES	4C
Round Pond	MA94131	Duxbury	6.789	ACRES	3
Russell Millpond	MA94132	Plymouth	41.776	ACRES	5
Russell Pond	MA94133	Kingston	10.723	ACRES	3
Savery Pond	MA94136	Plymouth	28.872	ACRES	2
Scituate Harbor	MA94-02	The waters west of a line across the mouth of Scituate Harbor, from the elbow of the jetty southeast off Lighthouse Point to the jetty northeast of the U.S. Coast Guard Station, Scituate.	0.322	SQUARE MILES	5
Second Herring Brook	MA94-26	Outlet of Turner Pond, Norwell (through Torrey Pond) to the Second Herring Brook Pond Dam, Norwell.	1.744	MILES	2
Second Herring Brook	MA94-31	From the Second Herring Brook Pond Dam, Norwell to the confluence with the North River, Norwell.	0.003	SQUARE MILES	5
Shallow Pond	MA94140	Plymouth	18.861	ACRES	3
Ship Pond	MA94142	Plymouth	10.802	ACRES	3
Silver Lake	MA94143	Pembroke/Plympton/Kingston	616.668	ACRES	4C
Smelt Pond	MA94184	Kingston	44.797	ACRES	4C
South River	MA94-08	Headwaters from the outlet of unnamed pond north of Congress Street, Duxbury to dam at Main Street (Route 3A), Marshfield.	4.863	MILES	2
South River	MA94-09	From dam at Main Street, Marshfield to confluence with North River/Massachusetts Bay, Marshfield/Scituate.	0.625	SQUARE MILES	5
South River Pond	MA94148	Duxbury	3.253	ACRES	3
South Triangle Pond	MA94149	Plymouth	16.968	ACRES	3
Studleys Pond	MA94151	Rockland	25.471	ACRES	5
Tack Factory Pond	MA94152	Scituate	8.068	ACRES	2
The Gulf	MA94-19	Headwaters, outlet Hunters Pond, Scituate to confluence with Cohasset Cove just north of Border Street, Cohasset.	0.126	SQUARE MILES	5

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NAME	SEGMENT ID	DESCRIPTION	SIZE	UNITS	CATEGORY
Third Herring Brook	MA94-27	Headwaters, outlet of Jacobs Pond, Norwell/Hanover to confluence with North River, Norwell/Hanover.	5.318	MILES	5
Torrey Pond	MA94157	Norwell	18.684	ACRES	4C
Triangle Pond	MA94160	Plymouth	14.192	ACRES	3
Unnamed Tributary	MA94-35	unnamed tributary to the Eel River from outlet of cranberry bog south of Valley Road, Plymouth through Forge Pond, to confluence with Eel River, Plymouth.	2.365	MILES	3
Upper Chandler Pond	MA94165	Duxbury/Pembroke	7.695	ACRES	4C
Wampatuck Pond	MA94168	Hanson	62.879	ACRES	5
West Chandler Pond	MA94170	Pembroke	9.752	ACRES	3
Winslow Cemetary Pond	MA94172	Marshfield	6.462	ACRES	3
Wright Pond	MA94174	Duxbury	30.384	ACRES	3
Taunton					
Ames Long Pond	MA62001	Stoughton/Easton	87.694	ACRES	5
Assawompset Pond	MA62003	Lakeville/Middleborough	2033.577	ACRES	3
Assonet River	MA62-19	Outlet Forge Pond, Freetown to Tisdale Dam (north of Route 79/Elm Street intersection), Freetown.	0.877	MILES	2
Assonet River	MA62-20	From Tisdale Dam (north of Route 79/Elm Street intersection), Freetown to the confluence with the Taunton River, Freetown.	0.815	SQUARE MILES	4A
Barrowsville Pond	MA62007	Norton	46.658	ACRES	3
Beaumont Pond	MA62009	Foxborough	24.266	ACRES	3
Beaver Brook	MA62-09	Outlet Cleveland Pond, Abingtion to the confluence with the Salisbury Plain River (forming Matfield River), East Bridgewater.	6.817	MILES	4A
Beaver Brook	MA62-30	Source just west of Bay Road, Easton to the inlet Old Pond, Easton.	1.441	MILES	3
Big Bearhole Pond	MA62011	Taunton	37.68	ACRES	5
Blakes Pond	MA62221	Mansfield	5.974	ACRES	3
Briggs Pond	MA62021	Sharon	18.631	ACRES	3
Broad Cove	MA62-50	Dighton/Somerset (formerly reported as lake segment MA62022).	0.126	SQUARE MILES	4A
Brockton Reservoir	MA62023	Avon	89.399	ACRES	4C
Cabot Pond	MA62029	Mansfield	8.65	ACRES	5
Cain Pond	MA62030	Taunton	2.766	ACRES	5
Canoe River	MA62-27	Headwaters in wetland east of Cow Hill, Sharon to inlet of Winnecunnet Pond, Norton.	14.297	MILES	2
Carpenter Pond	MA62032	Foxborough	29.392	ACRES	3
Carver Pond	MA62033	Bridgewater	29.309	ACRES	4C
Cedar Swamp River	MA62-44	Headwaters south of Freetown Street, Lakeville to the inlet Forge Pond, Freetown (stream name changes to Assonet River at Lakeville/Freetown corporate boundary).	5.828	MILES	2
Chaffin Reservoir	MA62035	Pembroke	12.729	ACRES	3
Chartley Pond	MA62038	Norton/Attleboro	67.578	ACRES	3

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NAME	SEGMENT ID	DESCRIPTION	SIZE	UNITS	CATEGORY
Clear Pond	MA62041	Lakeville	17.866	ACRES	2
Cleveland Pond	MA62042	Abington	96.423	ACRES	4C
Cobb Brook	MA62-43	Headwaters south of Dunbar Street (in Crapo Bog), Taunton to confluence with the Taunton River, Taunton.	3.521	MILES	3
Cocasset Lake	MA62043	Foxborough	32.116	ACRES	3
Cooper Pond	MA62046	Carver	21.635	ACRES	2
Cotley River	MA62-41	Headwaters near cranberry bog south off Seekell Street, Taunton (thru Barstows Pond) to the confluence with the Taunton River, Taunton.	5.867	MILES	3
Coweeset Brook	MA62-22	Source, southwest of Route24/Belmont Street interchange, Brockton to confluence with the Hockomock River, West Bridgewater.	3.898	MILES	3
Crocker Pond	MA62051	Wrentham	17.138	ACRES	4C
Cross Pond	MA62052	Brockton	1.679	ACRES	3
Cross Street Pond	MA62053	Bridgewater	26.686	ACRES	3
Cushing Pond	MA62056	Abington	5.727	ACRES	4C
East Freetown Pond	MA62063	Freetown	11.051	ACRES	4C
Elm Street Pond	MA62066	Halifax/Hanson	19.146	ACRES	3
Forge Pond	MA62072	Freetown	55.756	ACRES	3
Forge River	MA62-37	Outlet of Kings Pond, Raynham to confluence with Taunton River, Raynham.	2.542	MILES	3
Fuller Street Pond	MA62234	Middleborough/Carver (formerly reported as MA95058)	20.273	ACRES	4C
Fulton Pond	MA62075	Mansfield	9.328	ACRES	5
Furnace Lake	MA62076	Foxborough	14.916	ACRES	3
Gavins Pond	MA62077	Sharon/Foxborough	17.607	ACRES	4C
Great Quittacas Pond	MA62083	Lakeville/Middleborough/Rochester	1124.265	ACRES	3
Gushee Pond	MA62084	Raynham	26.775	ACRES	4C
Hewitt Pond	MA62088	Raynham	13.642	ACRES	3
Hobart Pond	MA62090	Whitman	9.05	ACRES	5
Hockomock River	MA62-35	Source, west of Route 24 and north of the Old Railroad Grade, West Bridgewater to confluence with the Town River, Bridgewater.	5.06	MILES	3
Hodges Pond	MA62091	(Kingman Pond) Mansfield	6.972	ACRES	5
Island Grove Pond	MA62094	Abington	30.804	ACRES	5
Johns Pond	MA62096	Carver	21.27	ACRES	2
Johnson Pond	MA62097	Raynham	13.536	ACRES	4C
Kings Pond	MA62101	Raynham	13.043	ACRES	3
Lake Mirimichi	MA62118	Plainville/Foxborough	174.996	ACRES	4C
Lake Nippenicket	MA62131	Bridgewater/Raynham	375.001	ACRES	4A
Lake Rico	MA62148	Taunton	187.981	ACRES	4C
Lake Sabbatia	MA62166	Taunton	265.419	ACRES	5

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NAME	SEGMENT ID	DESCRIPTION	SIZE	UNITS	CATEGORY
Leach Pond	MA62103	Easton/Sharon	110.709	ACRES	3
Little Cedar Swamp	MA62106	Easton	90.898	ACRES	3
Little Quittacas Pond	MA62107	Lakeville/Rochester	294.78	ACRES	3
Long Pond	MA62108	Lakeville/Freetown	1741.496	ACRES	4C
Longwater Pond	MA62109	Easton	8.188	ACRES	4C
Lovett Brook	MA62-46	Headwaters north of Oak Street, Brockton to inlet Elis Brett Pond, Brockton.	1.541	MILES	2
Lower Porter Pond	MA62111	Brockton	7.861	ACRES	4C
Matfield River	MA62-32	Confluence of Beaver Brook and the Salisbury Plain River, East Bridgewater to the confluence with the Town River and the Taunton River, Bridgewater.	6.662	MILES	5
Meadow Brook	MA62-38	Headwaters north of Pine Street, Whitman (through Forge Pond, East Bridgewater) to the confluence with the Matfield River, East Bridgewater.	6.009	MILES	4A
Meadow Brook Pond	MA62113	Norton	13.322	ACRES	3
Middle Pond	MA62115	Taunton	25.864	ACRES	4C
Mill River	MA62-29	Outlet Whittenton Impoundment, Taunton to the confluence with Taunton River, Taunton.	3.386	MILES	3
Monponsett Pond	MA62119	[West Basin] Halifax/Hanson	282.79	ACRES	5
Monponsett Pond	MA62218	[East Basin] Halifax	244.567	ACRES	4A
Mount Hope Mill Pond	MA62122	Taunton/Dighton (includes Three Mile River Impoundment formerly reported as MA62231).	45.174	ACRES	4C
Muddy Cove Brook	MA62-51	From the outlet of the small impoundment behind 333 Main Street (Zeneca Inc.), Dighton to confluence with Taunton River, Dighton (formerly part of MA62-23).	0.008	SQUARE MILES	4A
Muddy Cove Brook	MA62-52	Source south of Hart Street, Dighton through Muddy Cove Brook Pond to the outlet of small impoundment behind 333 Main Street (Zeneca Inc.), Dighton (formerly part of segment MA62-23).	1.969	MILES	3
Muddy Cove Brook Pond	MA62124	Dighton	23.243	ACRES	5
Muddy Pond	MA62125	Carver	61.058	ACRES	4C
Muddy Pond	MA62126	Halifax	12.999	ACRES	3
Muddy Pond	MA62233	Kingston (formerly reported as MA94104).	41.422	ACRES	3
Mulberry Meadow Brook	MA62-31	Outlet New Pond, Easton to inlet of Winnecunnet Pond, Norton.	4.536	MILES	3
Mullein Hill Chapel Pond	MA62127	Lakeville	23.07	ACRES	3
Nemasket River	MA62-25	From the outlet of Assawompset Pond, Lakeville/Middleborough to Middleborough WWTP discharge, Middleborough.	6.093	MILES	2
Nemasket River	MA62-26	From the Middleborough WWTP discharge, Middleborough to the confluence with the Taunton River, Middleborough.	5.365	MILES	2
New Pond	MA62130	Easton	17.727	ACRES	4C
North Center Street Pond	MA62132	Carver	11.812	ACRES	3
Norton Reservoir	MA62134	Norton/Mansfield	556.491	ACRES	5
Oakland Pond	MA62136	Taunton	37.618	ACRES	3
Plymouth Street Pond	MA62141	Halifax/E. Bridgewater	165.015	ACRES	3

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NAME	SEGMENT ID	DESCRIPTION	SIZE	UNITS	CATEGORY
Pocksha Pond	MA62145	Lakeville/Middleborough	592.317	ACRES	3
Poor Meadow Brook	MA62-34	From a wetland near County Street, Hanson to the confluence with the Satucket River, East Bridgewater.	6.903	MILES	3
Poquoy Pond	MA62147	Lakeville	9.899	ACRES	3
Prospect Hill Pond	MA62149	Taunton	41.89	ACRES	3
Puds Pond	MA62151	Sharon/Easton	22.642	ACRES	3
Queset Brook	MA62-21	From the outlet of Ames Long Pond, Easton to the confluence with Coweeset Brook, West Bridgewater.	5.113	MILES	3
Rattlesnake Brook	MA62-45	Headwaters east of Riggenbach Road, Fall River to confluence with Assonet River, Freetown.	3.184	MILES	2
Reservoir	MA62157	Hanson	13.195	ACRES	3
Reservoir	MA62158	Easton	26.913	ACRES	3
Richmond Pond	MA62159	Taunton	5.773	ACRES	4C
Robbins Pond	MA62162	East Bridgewater	123.732	ACRES	3
Robinson Brook	MA62-14	Outlet Hersey Pond, Foxborough to confluence with Rumford River, Mansfield.	1.855	MILES	5
Robinson Pond	MA62163	Mansfield	8.855	ACRES	3
Route One Pond, West	MA62165	Wrentham	9.876	ACRES	3
Rumford River	MA62-39	Outlet Gavins Pond, Sharon to inlet Norton Reservoir, Mansfield (formerly part of segment MA62-15).	8.01	MILES	5
Rumford River	MA62-40	Outlet Norton Reservoir, Norton to confluence with Wading and Threemile rivers, Norton (formerly part of segment MA62-15).	4.532	MILES	2
Salisbury Brook	MA62-08	From the outlet of Cross Pond, Brockton to the confluence with Trout Brook forming the Salibury Plain River, Brockton.	2.542	MILES	5
Salisbury Plain River	MA62-05	From the confluence of Trout and Salisbury brooks, Brockton to the Brockton Advanced Water Reclamation Facility (AWRF) discharge, Brockton.	2.437	MILES	5
Salisbury Plain River	MA62-06	From the Brockton Advanced Water Reclamation Facility (AWRF) discharge, Brockton to the confluence with Beaver Brook forming the Matfield River, East Bridgewater.	2.262	MILES	5
Sassaquin Pond	MA62232	New Bedford (formerly reported as MA95129).	35.757	ACRES	5
Satucket River	MA62-10	From the outlet of Robbins Pond, East Bridgewater to the confluence with the Matfield River, East Bridgewater.	5.597	MILES	2
Savery Pond	MA62167	Middleborough	23.619	ACRES	4C
Sawmill Brook	MA62-36	Outlet of Ice Pond, Bridgewater to confluence with Taunton River, Bridgewater.	1.905	MILES	3
Segreganset River	MA62-53	Source in wetland north of Glebe Street, Taunton through the Segregansett River Ponds to the Segreganset River Dam, Dighton (formerly part of segment MA62-18).	7.854	MILES	4C
Segreganset River	MA62-54	From Segreganset River Dam, Dighton to approximately 250 feet north of Brook Street, Dighton (formerly part of segment MA62-18).	0.351	MILES	4C
Segreganset River	MA62-55	From approximately 250 feet north of Brook Street, Dighton to confluence with the Taunton River, Dighton (formerly part of segment MA62-18).	0.02	SQUARE MILES	4A
Segreganset River Ponds	MA62169	Taunton	13.729	ACRES	3
Shovelshop Pond	MA62172	Easton	7.018	ACRES	4C

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NAME	SEGMENT ID	DESCRIPTION	SIZE	UNITS	CATEGORY
Shumatuscacant River	MA62-33	From a wetland just west of Vineyard Road, Abington to the confluence with Poor Meadow Brook, Hanson.	8.504	MILES	5
Snake River	MA62-28	Outlet of Winnecunnet Pond, Norton to inlet of Lake Sabbatia, Taunton.	3.271	MILES	3
Somerset Reservoir	MA62174	Somerset	164.334	ACRES	4A
Stetson Pond	MA62182	Pembroke	88.209	ACRES	5
Sunset Lake	MA62184	Foxborough	13.526	ACRES	3
Sweets Pond	MA62185	Mansfield	13.484	ACRES	4C
Taunton River	MA62-01	Confluence of Town and Matfield rivers, Bridgewater to Route 24 bridge, Taunton/Raynham.	20.396	MILES	2
Taunton River	MA62-02	Route 24 bridge, Taunton/Raynham to Berkley Bridge, Dighton/Berkley.	0.287	SQUARE MILES	4A
Taunton River	MA62-03	Berkley Bridge, Dighton/Berkley to confluence with Assonet River at a line from Sandy Point, Somerset northeasterly to the southwestern tip of Assonet Neck, Berkley.	0.924	SQUARE MILES	5
Taunton River	MA62-04	Confluence with Assonet River at a line from Sandy Point, Somerset northeasterly to the southwestern tip of Assonet Neck, Berkley to mouth at Braga Bridge, Somerset/Fall River.	2.654	SQUARE MILES	5
The Reservoir	MA62189	Lakeville	22.952	ACRES	3
Thirtyacre Pond	MA62190	Brockton	26.277	ACRES	4C
Three Mile River	MA62-56	Confluence of Wading and Rumford rivers, Norton to impoundment spillway behind 66 South Street (Harodite Finishing Co.), Taunton (formerly part of segment MA62-16).	12.812	MILES	4A
Three Mile River	MA62-57	Impoundment spillway behind 66 South Street (Harodite Finishing Co.), Taunton to confluence with Taunton River, Taunton/Dighton (formerly part of segment MA62-16).	0.022	SQUARE MILES	4A
Thurston Street Pond	MA62192	Wrentham	6.592	ACRES	3
Tispaquin Pond	MA62195	Middleborough	194.595	ACRES	2
Town River	MA62-11	Outlet of Lake Nippenicket, Bridgewater to Route 28 bridge, West Bridgewater.	4.474	MILES	3
Town River	MA62-12	Route 28 bridge, West Bridgewater to Bridgewater WWTP discharge, Bridgewater.	3.842	MILES	3
Town River	MA62-13	Bridgewater WWTP discharge, Bridgewater to confluence with Matfield River forming the Taunton River, Bridgewater.	2.356	MILES	3
Trout Brook	MA62-07	Source northeast of Argyle Avenue and west of Conrail Line, Avon to the confluence with the Salisbury Brook forming the Salisbury Plain River, Brockton.	3.408	MILES	5
Turnpike Lake	MA62198	Plainville	99.029	ACRES	4C
Unnamed Tributary	MA62-42	Headwaters, south off Slab Bridge Road (in Cedar Swamp portion of Freetown-Fall River State Forest), Freetown to confluence with the Cedar Swamp River, Lakeville.	4.012	MILES	5
Unnamed Tributary	MA62-48	Channel from Taunton Municipal Lighting Plant, Taunton to confluence with Taunton River, Taunton.	0.002	SQUARE MILES	5
Upper Leach Pond	MA62123	(Mountain Street Pond) Sharon	27.881	ACRES	3
Upper Porter Pond	MA62200	Brockton	11.395	ACRES	4C
Vandys Pond	MA62112	(Mcavoy Pond) Foxborough	8.58	ACRES	4C

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NAME	SEGMENT ID	DESCRIPTION	SIZE	UNITS	CATEGORY
Wading River	MA62-47	Source in wetland north of West Street, Foxborough to Balcolm Street, Mansfield (due to error on 1987 Wrentham quad it appears segment includes part of Cocasset River, Foxborough) (formerly part of segment MA62-17)	4.158	MILES	5
Wading River	MA62-49	Balcolm Street, Mansfield to confluence with Threemile River, Norton (formerly part of segment MA62-17).	9.668	MILES	4A
Waldo Lake	MA62201	Avon/Brockton	72.384	ACRES	4C
Ward Pond	MA62203	Easton	5.565	ACRES	3
Watson Pond	MA62205	Taunton	77.523	ACRES	5
West Meadow Pond	MA62208	West Bridgewater	103.81	ACRES	4C
Whiteville Pond	MA62211	Mansfield	14.418	ACRES	3
Whittenton Impoundment	MA62228	Taunton	20.05	ACRES	4C
Winnecunnet Pond	MA62213	Norton	152.274	ACRES	4C
Winnetuxet River	MA62-24	From the outlet of a small unnamed pond near Cole Mill, Carver to the confluence with the Taunton River, Halifax.	11.816	MILES	2
Wolomolopoag Pond	MA62216	Sharon	12.517	ACRES	3
Woods Pond	MA62220	Middleborough	51.081	ACRES	5
Ten Mile					
Bungay River	MA52-06	Headwaters, outlet Greenwood Lake, North Attleborough to confluence with Ten Mile River, Attleboro.	5.083	MILES	5
Cargill Pond	MA52004	Plainville	1.563	ACRES	5
Central Pond	MA52006	Seekonk,MA/Pawtucket,RI/Providence,RI (size indicates portion in Massachusetts)	5.816	ACRES	5
Coles Brook	MA52-11	Headwaters, Grassie Swamp west of Allens Lane, Rehoboth to inlet Central Pond, Seekonk.	4.181	MILES	4C
Falls Pond, North Basin	MA52013	North Attleborough	54.093	ACRES	5
Falls Pond, South Basin	MA52014	North Attleborough	49.367	ACRES	4C
Fourmile Brook	MA52-10	Headwaters, outlet Manchester Pond Reservoir, Attleboro to inlet Orrs Pond, Attleboro.	0.992	MILES	5
Greenwood Lake	MA52017	Mansfield/N. Attleborough	96.64	ACRES	3
Hoppin Hill Reservoir	MA52021	North Attleborough	22.446	ACRES	3
James V. Turner Reservoir	MA52022	Seekonk,MA/E. Providence,RI (size indicates portion in Massachusetts)	28.436	ACRES	5
Lake Como	MA52010	Attleboro/N. Attleborough	4.807	ACRES	5
Manchester Pond Reservoir	MA52026	Attleboro	237.347	ACRES	3
Orrs Pond	MA52029	Attleboro	57.864	ACRES	4C
Plain Street Pond	MA52032	Mansfield	12.231	ACRES	5
Scotts Brook	MA52-09	Headwaters, north of High Street, North Attleborough to confluence with Ten Mile River, North Attleborough.	2.11	MILES	4C
Sevenmile River	MA52-07	Headwaters, outlet Hoppin Hill Reservoir, North Attleborough to inlet Orrs Pond, Attleboro (thru Luther Reservoir formerly segment MA52025).	3.2	MILES	2

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NAME	SEGMENT ID	DESCRIPTION	SIZE	UNITS	CATEGORY
Sevenmile River	MA52-08	Outlet Orrs Pond, Attleboro to confluence with Ten Mile River, Pawtucket, Rhode Island.	3.402	MILES	5
Speedway Brook	MA52-05	(locally known as Thacher Brook) Headwaters, Attleboro to inlet of Dodgeville Pond (a Ten Mile River impoundment), Attleboro.	0.9	MILES	5
Ten Mile River	MA52-01	Headwaters, outlet Cargill Pond, Plainville to West Bacon Street, Plainville (through Fuller Pond formerly segment MA52016).	1.538	MILES	5
Ten Mile River	MA52-02	West Bacon Street, Plainville to North Attleborough WWTP discharge, Attleboro (excluding 0.9 miles thru Falls Pond segment MA52013, but including thru Wetherells Pond formerly segment MA52041).	4.087	MILES	5
Ten Mile River	MA52-03	North Attleborough WWTP discharge, Attleboro to the MA/RI border near Central Avenue, Seekonk, MA/Pawtucket, RI (thru former segments; Farmers Pond MA52015, Mechanics Pond MA52027, Dodgeville Pond MA52011, and Hebronville Pond MA52020).	9.084	MILES	5
Whiting Pond	MA52042	North Attleborough/Plainville	23.582	ACRES	4A
Westfield					
Ashley Brook	MA32-37	Headwaters (perennial portion), south of Hillside Road, Westfield to confluence with Jacks Brook, Westfield.	0.5	MILES	5
Ashley Cutoff	MA32001	Holyoke	30.738	ACRES	3
Ashley Pond	MA32002	Holyoke	132.604	ACRES	3
Bedlam Brook	MA32-33	Source, north of Blandford Road to confluence with Peebles Brook, Blandford.	3.208729	MILES	2
Blair Pond	MA32009	Blandford	69.182	ACRES	4C
Borden Brook Reservoir	MA32011	Granville/Blandford	210.832	ACRES	3
Bradley Brook	MA32-21	From the confluence of Black and Stage brooks, Russell to the confluence with the Westfield River, Russell.	0.722654	MILES	2
Buck Pond	MA32012	Westfield	22.754	ACRES	4C
Buckley-Dunton Lake	MA32013	Becket	153.635	ACRES	4A
Center Pond	MA32015	Becket	113.857	ACRES	4C
Clear Pond	MA32077	Holyoke	9.772	ACRES	3
Cobble Mountain Reservoir	MA32018	Blandford/Granville/Russell	1033.76	ACRES	3
Congamond Lakes	MA32021	[Middle Basin] Southwick	278.774	ACRES	5
Congamond Lakes	MA32022	[North Basin] Southwick	46.052	ACRES	5
Congamond Lakes	MA32023	[South Basin] Southwick	144.049	ACRES	4C
Connor Reservoir	MA32024	Holyoke	17.05	ACRES	3
Cook Brook	MA32-38	Headwaters, outlet small unnamed pond west of the intersection of Gorge and Granville roads, Westfield to the confluence with Little River, Westfield.	2	MILES	2
Cooley Lake	MA32026	Granville	66.304	ACRES	3
Crooked Pond	MA32028	Plainfield	33.696	ACRES	3
Damon Pond	MA32029	Chesterfield/Goshen	77.573	ACRES	3
Depot Brook	MA32-17	Source in Washington (north of Beach Road) to confluence with Yokum Brook, Becket.	6.040331	MILES	2

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Dickinson Brook	MA32-34	Source, confluence of Trumble Brook and Seymour Brook to confluence with Munn Brook, Granville.	3.424544	MILES	2
Garnet Lake	MA32037	Peru	17.484	ACRES	3
Glendale Brook	MA32-10	From headwaters in a wetland in Peru State Forest, Peru to confluence with Middle Branch Westfield River, Middlefield.	6.048302	MILES	3
Granville Reservoir	MA32038	Granville	73.81	ACRES	3
Great Brook	MA32-25	Source at outlet of Congamond Lakes, Southwick to confluence with Westfield River, Westfield.	10.69273	MILES	2
Hammond Pond	MA32040	Goshen	37.951	ACRES	3
Horse Pond	MA32043	Westfield	24.284	ACRES	4C
Jacks Brook	MA32-39	Headwaters, east of Fowler Road, Westfield to inlet of Crane Pond/Little River, Westfield.	2.4	MILES	5
Kinne Brook	MA32-32	Source, west of West Street, Worthington to confluence with Middle Branch Westfield River, Chester.	5.583392	MILES	2
Little River	MA32-08	Horton's Bridge, Westfield to confluence with Westfield River, Westfield.	5.386436	MILES	5
Little River	MA32-16	Confluence of Watts and Wards streams in Worthington (Ringville) to confluence with Westfield River, Huntington.	5.677	MILES	2
Little River	MA32-35	Source at the outlet of Cobble Mountain Reservoir dam, Russell to dam northwest of Gorge Road, Russell. (formerly part of segment MA32-26)	2.633	MILES	2
Little River	MA32-36	From the dam northwest of Gorge Road, Russell to Horton's Bridge, Westfield. (formerly part of segment MA32-26)	5.809	MILES	5
Littleville Lake	MA32046	Chester/Huntington	251.557	ACRES	3
Mclean Reservoir	MA32050	Holyoke	55.154	ACRES	3
Meadow Brook	MA32-11	Outlet of unnamed pond in Plainfield, south of Route 116, to confluence with Westfield River, Cummington.	4.567083	MILES	3
Middle Branch Westfield River	MA32-02	Source in Peru State Wildlife Management Area, Peru to inlet of Littleville Lake just upstream from boat ramp (south of Kinne Brook Road), Chester.	14.743	MILES	2
Middle Branch Westfield River	MA32-03	Littleville Dam, Chester/Huntington to confluence with Westfield River, Huntington.	1.091059	MILES	3
Miller Brook	MA32-27	Outlet from small unnamed pond in Robinson State Park, north of North Street, Agawam to confluence with Westfield River, Agawam.	0.628635	MILES	2
Moose Meadow Brook	MA32-23	Source in wetland west of Bungy Mountain, Montgomery to confluence with Westfield River, Westfield.	8.175	MILES	5
North Railroad Pond	MA32053	Holyoke	9.125	ACRES	3
Norwich Pond	MA32054	Huntington	116.015	ACRES	3
Paucatuck Brook	MA32-29	From outlet of Bearhole Reservoir, West Springfield to confluence with Westfield River, West Springfield.	1.475756	MILES	3
Pequot Pond	MA32055	Westfield/Southampton	155.002	ACRES	5
Pond Brook	MA32-24	Outlet of Chapin Pond, Westfield to confluence with Powdermill Brook, Westfield.	3.89069	MILES	2
Potash Brook	MA32-22	Source at outlet of Dunlap Pond in Blandford to confluence with Westfield River at village of Woronoco, Russell.	5.163059	MILES	5

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Powdermill Brook	MA32-09	Source, east of Pitcher Road, Montgomery to confluence with Westfield River, Westfield.	9.542397	MILES	5
Roaring Brook	MA32-30	Source north of Horse Hill in Huntington State Forest, Huntington to confluence with Westfield River, Montgomery.	4.336	MILES	2
Robin Hood Lake	MA32057	Becket	63.634	ACRES	3
Rudd Pond	MA32060	Becket	71.857	ACRES	3
Russell Pond	MA32061	Russell	82.18	ACRES	2
Sanderson Brook	MA32-31	Source north of Chester Road in the Chester/Blandford State Forest, Blandford to confluence with West Branch Westfield River, Chester.	3.460416	MILES	2
Scout Pond	MA32063	Chesterfield	36.779	ACRES	3
Shaker Mill Brook	MA32-18	Source in October Mountain State Forest, Washington to confluence with Depot Brook, Becket.	4.175987	MILES	2
Swift River	MA32-12	Source, southwest of Hawley center to confluence with Westfield River at village of Swift River, Cummington.	11.50344	MILES	2
Walker Brook	MA32-20	Headwaters at outlet of Center Pond (north of YMCA Road), Becket to confluence of the West Branch Westfield River, Chester.	7.124	MILES	2
Wards Stream	MA32-15	Source southeast of Knowles Hill, Worthington to confluence with Watts Stream at Ringville, Worthington.	5.213408	MILES	2
Watts Stream	MA32-14	Source near West Hill, Worthington to confluence with Wards Stream at Ringville, Worthington.	5.17417	MILES	2
West Branch Westfield River	MA32-01	Source formed by confluence of Depot Brook and Yokum Brook in Becket to confluence with Westfield River, Huntington.	18.105	MILES	2
West Falls Branch	MA32-13	Headwaters at confluence of Bronson Brook and an unnamed tributary near the intersection of Dingle Road and Route 143, Worthington to confluence with Westfield River near the village of West Chesterfield, Chesterfield. (formerly identified by theMassachusetts Stream Classification Program as West Branch)	2.791	MILES	3
Westfield Reservoir	MA32074	Montgomery	40.049	ACRES	3
Westfield River	MA32-04	Confluence of Drowned Land Brook and Center Brook in Savoy to confluence with Middle Branch Westfield River, Huntington.	33.156	MILES	2
Westfield River	MA32-05	Confluence with Middle Branch Westfield River, Huntington to Route 20 bridge, Westfield.	17.837	MILES	5
Westfield River	MA32-06	Route 20 bridge, Westfield to Westfield city boundary with West Springfield and Agawam.	1.911025	MILES	3
Westfield River	MA32-07	Westfield/West Springfield/Agawam city line to confluence with Connecticut River, Agawam.	8.47687	MILES	2
White Brook	MA32-28	Source just north of Route 147, Agawam to confluence with Westfield River, Agawam.	0.929925	MILES	2
Windsor Pond	MA32076	Windsor	46.598	ACRES	5
Wright Pond	MA32078	Holyoke	28.124	ACRES	3
Yokum Brook	MA32-19	Source at outlet of Buckley-Duton Lake (east of Walling Mountain), Becket to confluence with Depot Brook, Becket.	4.006738	MILES	2
Yokum Pond	MA32079	Becket	97.745	ACRES	3

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Appendix 2
§ 303(d) Causes *added* to Category 5 of the 2014 Integrated List

Water Body	Segment ID	Category 2012	Category 2014	Impairment Cause	Explanation
Blackstone					
Dark Brook	MA51-16	5	5	Chloride	"Chloride" added based on comment by the EPA
Unnamed tributary	MA51-38	--	5	Chloride	**New segment.** Impaired by "Chloride" based on comment by the EPA
Boston Harbor: Mystic					
Horn Pond	MA71019	5	5	DDT in Fish Tissue	"DDT in Fish Tissue" added based on new DPH fish advisory (August, 2013)
Buzzards Bay					
Buttermilk Bay	MA95-01	5	5	Nutrient/Eutrophication Biological Indicators	"Nutrient/Eutrophication Biological Indicators" added in response to comment from the Buzzards Bay Coalition
Little Buttermilk Bay	MA95-76	5	5	Nutrient/Eutrophication Biological Indicators	"Nutrient/Eutrophication Biological Indicators" added in response to comment from the Buzzards Bay Coalition
Mattapoisett Harbor	MA95-35	4A	5	Estuarine Bioassessments, Nutrient/Eutrophication Biological Indicators	"Estuarine Bioassessments" and "Nutrient/Eutrophication Biological Indicators" added in response to comment from the Buzzards Bay Coalition
Megansett Harbor	MA95-19	2	5	Estuarine Bioassessments, Nutrient/Eutrophication Biological Indicators	Added to the 303(d) List as impaired by "Estuarine Bioassessments" and "Nutrient/Eutrophication Biological Indicators" based on a comment from the Buzzards Bay Coalition
Red Brook Harbor	MA95-18	4A	5	Estuarine Bioassessments, Nutrient/Eutrophication Biological Indicators	"Estuarine Bioassessments" and "Nutrient/Eutrophication Biological Indicators" added in response to comment from the Buzzards Bay Coalition
Chicopee					
Browning Pond	MA36025	4A	5	Mercury in Fish Tissue	"Mercury in Fish Tissue" added based on new DPH fish advisory (August, 2013)
Deerfield					
Pelham Lake	MA33016	3	5	Mercury in Fish Tissue	"Mercury in Fish Tissue" added based on new DPH fish advisory (August, 2013)
Housatonic					
Lake Garfield	MA21040	5	5	Mercury in Fish Tissue	"Mercury in Fish Tissue" added based on new DPH fish advisory (August, 2013)

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Appendix 3
§ 303(d) Causes *removed* from Category 5 of the 2014 Integrated List

Name	Segment ID	Category 2012	Category 2014	Impairment Cause	EPA TMDL No.	Explanation
Boston Harbor: Neponset						
Neponset River	MA73-01	5	5	*Escherichia coli*	54840	Bacteria TMDL (CN 121.5) approved 7/3/2013
Pecunit Brook	MA73-25	5	4A	*Escherichia coli*	54842	Bacteria TMDL (CN 121.5) approved 7/3/2013
Unnamed Tributary	MA73-32	5	5	*Escherichia coli*	54860	Bacteria TMDL (CN 121.5) approved 7/3/2013
Unnamed Tributary	MA73-33	5	5	*Escherichia coli*	54861	Bacteria TMDL (CN 121.5) approved 7/3/2013
North Coastal						
Alewife Brook	MA93-45	5	4A	Fecal Coliform	50120	Bacteria TMDL (CN 155.0) approved 10/25/2012
Alewife Brook	MA93-46	5	4A	Fecal Coliform	50121	Bacteria TMDL (CN 155.0) approved 10/25/2012
Annisquam River	MA93-12	5	4A	Fecal Coliform	50121	Bacteria TMDL (CN 155.0) approved 10/25/2012
Bass River	MA93-08	5	4A	Fecal Coliform	50121	Bacteria TMDL (CN 155.0) approved 10/25/2012
Beaverdam Brook	MA93-30	5	5	Fecal Coliform	50120	Bacteria TMDL (CN 155.0) approved 10/25/2012
Bennetts Pond Brook	MA93-48	5	4A	Fecal Coliform	50120	Bacteria TMDL (CN 155.0) approved 10/25/2012
Beverly Harbor	MA93-20	5	4A	Fecal Coliform	50122	Bacteria TMDL (CN 155.0) approved 10/25/2012
Cat Brook	MA93-29	5	5	Fecal Coliform	50120	Bacteria TMDL (CN 155.0) approved 10/25/2012
Causeway Brook	MA93-47	5	4A	Fecal Coliform	50120	Bacteria TMDL (CN 155.0) approved 10/25/2012
Crane Brook	MA93-02	5	4A	Fecal Coliform	50120	Bacteria TMDL (CN 155.0) approved 10/25/2012
Crane River	MA93-41	5	4A	Fecal Coliform	50121	Bacteria TMDL (CN 155.0) approved 10/25/2012
Danvers River	MA93-09	5	4A	Fecal Coliform	50121	Bacteria TMDL (CN 155.0) approved 10/25/2012
Essex Bay	MA93-16	5	4A	Fecal Coliform	50121	Bacteria TMDL (CN 155.0) approved 10/25/2012
Essex River	MA93-11	5	4A	Fecal Coliform	50121	Bacteria TMDL (CN 155.0) approved 10/25/2012
Frost Fish Brook	MA93-36	5	4A	Fecal Coliform	50120	Bacteria TMDL (CN 155.0) approved 10/25/2012
Gloucester Harbor	MA93-18	5	5	Fecal Coliform	50122	Bacteria TMDL (CN 155.0) approved 10/25/2012
Goldthwait Brook	MA93-05	5	5	Fecal Coliform	50120	Bacteria TMDL (CN 155.0) approved 10/25/2012
Hawkes Brook	MA93-32	5	4A	Fecal Coliform	50120	Bacteria TMDL (CN 155.0) approved 10/25/2012
Hawkes Brook	MA93-33	5	4A	Fecal Coliform	50120	Bacteria TMDL (CN 155.0) approved 10/25/2012
Lynn Harbor	MA93-52	5	4A	Fecal Coliform	50122	Bacteria TMDL (CN 155.0) approved 10/25/2012
Lynn Harbor	MA93-53	5	4A	Fecal Coliform	50122	Bacteria TMDL (CN 155.0) approved 10/25/2012
Manchester Harbor	MA93-19	5	4A	Fecal Coliform	50122	Bacteria TMDL (CN 155.0) approved 10/25/2012

Appendix 3
§ 303(d) Causes *removed* from Category 5 of the 2014 Integrated List

Name	Segment ID	Category 2012	Category 2014	Impairment Cause	EPA TMDL No.	Explanation
Marblehead Harbor	MA93-22	5	4A	Fecal Coliform	50121	Bacteria TMDL (CN 155.0) approved 10/25/2012
Mill River	MA93-28	5	4A	Fecal Coliform	50121	Bacteria TMDL (CN 155.0) approved 10/25/2012
Mill River	MA93-31	5	5	Fecal Coliform	50120	Bacteria TMDL (CN 155.0) approved 10/25/2012
Nahant Bay	MA93-24	5	4A	Fecal Coliform	50121	Bacteria TMDL (CN 155.0) approved 10/25/2012
North River	MA93-42	5	5	Fecal Coliform	50121	Bacteria TMDL (CN 155.0) approved 10/25/2012
Pines River	MA93-15	5	4A	Fecal Coliform	50122	Bacteria TMDL (CN 155.0) approved 10/25/2012
Porter River	MA93-04	5	4A	Fecal Coliform	50121	Bacteria TMDL (CN 155.0) approved 10/25/2012
Proctor Brook	MA93-39	5	5	Fecal Coliform	50120	Bacteria TMDL (CN 155.0) approved 10/25/2012
Proctor Brook	MA93-40	5	5	Fecal Coliform	50123	Bacteria TMDL (CN 155.0) approved 10/25/2012
Rockport Harbor	MA93-57	5	4A	Fecal Coliform	50122	Bacteria TMDL (CN 155.0) approved 10/25/2012
Salem Harbor	MA93-54	5	5	Fecal Coliform	50122	Bacteria TMDL (CN 155.0) approved 10/25/2012
Salem Sound	MA93-55	5	4A	Fecal Coliform	50121	Bacteria TMDL (CN 155.0) approved 10/25/2012
Salem Sound	MA93-56	5	4A	Fecal Coliform	50121	Bacteria TMDL (CN 155.0) approved 10/25/2012
Saugus River	MA93-34	5	5	Fecal Coliform	50120	Bacteria TMDL (CN 155.0) approved 10/25/2012
Saugus River	MA93-35	5	4A	Fecal Coliform	50120	Bacteria TMDL (CN 155.0) approved 10/25/2012
Saugus River	MA93-43	5	5	Fecal Coliform	50122	Bacteria TMDL (CN 155.0) approved 10/25/2012
Saugus River	MA93-44	5	5	Fecal Coliform	50122	Bacteria TMDL (CN 155.0) approved 10/25/2012
Shute Brook	MA93-49	5	4A	Fecal Coliform	50121	Bacteria TMDL (CN 155.0) approved 10/25/2012
Shute Brook	MA93-50	5	4A	Fecal Coliform	50120	Bacteria TMDL (CN 155.0) approved 10/25/2012
Unnamed Tributary	MA93-51	5	5	Fecal Coliform	50123	Bacteria TMDL (CN 155.0) approved 10/25/2012
Waters River	MA93-01	5	4A	Fecal Coliform	50121	Bacteria TMDL (CN 155.0) approved 10/25/2012

Appendix 4
Massachusetts Year 2014 Integrated List of Waters – Responses to public comments

This report summarizes and presents responses to the comments received on the *Proposed Massachusetts Year 2014 Integrated List of Waters* (2014 Integrated List) that was prepared by the Massachusetts Department of Environmental Protection (MassDEP) in fulfillment of reporting requirements of sections 305(b) (Summary of Water Quality Report) and 303(d) (List of Impaired Waters) of the Clean Water Act (CWA).

The integrated list format provides the current status of all previously assessed waters in a single multi-part list. Each waterbody or segment thereof is placed in one of the following five categories:

1) Unimpaired and not threatened for all designated uses;
2) Unimpaired for some uses and not assessed for others;
3) Insufficient information to make assessments for any uses;
4) Impaired or threatened for one or more uses, but not requiring the calculation of a Total Maximum Daily Load (TMDL); or
5) Impaired or threatened for one or more uses and requiring a TMDL.

Thus, the waters listed in Category 5 are the 303(d) List and, as such, are reviewed and approved by the U. S. Environmental Protection Agency (EPA). The remaining four categories are submitted in fulfillment of the requirements under § 305(b).

The *Proposed Massachusetts Year 2014 Integrated List of Waters* was placed on the MassDEP web site at http://www.mass.gov/dep/water/resources/tmdls.htm. Notice of its availability for public review and comment appeared in Vol. 82, Issue 4 of the Massachusetts Environmental Monitor (June 25, 2014) and was provided directly to over one hundred different watershed associations and other interested parties. Paper copies of the document were also available from the Division of Watershed Management's Watershed Planning Program Office in Worcester. The public comment period ended on August 1, 2014.

This document summarizes and provides responses to all comments received on the *Proposed Massachusetts Year 2014 Integrated List of Waters*. In most cases, the comments are reprinted here in their entirety; however, some of the longer comment letters were excerpted or paraphrased, and some comments were edited slightly to conform to the format adopted for this document. A final version of the *Massachusetts Year 2014 Integrated List of Waters*, incorporating the comments and responses presented here, will be prepared and submitted to the EPA for final approval of the 303(d) List (i.e., Category 5). The following table presents a list of those who submitted comments and the pages on which they appear in this document.

Appendix 4
Massachusetts Year 2014 Integrated List of Waters – Responses to public comments

Back River Watershed Association

Comment 1: The Weymouth Back River is a sub-basin of the Boston Harbor Basin and located largely in the coastal communities of Weymouth and Hingham, Massachusetts. The Weymouth Back River and Estuary should remain on this important monitoring list. The Weymouth Back River, which is designated an Area of Critical Environmental, Local Scenic River, Wildlife Refuge, and One of Massachusetts Special Places is under study at UMASS Dartmouth, by Dr. Brian House and Dr. David White, Mass Estuaries Project.

Response 1: No response required.

Neponset River Watershed Association

"Please find below comments from the Neponset River Watershed Association on the 2014 Proposed Massachusetts Integrated List of Waters. Supporting data is attached from our Citizen's Water Monitoring Network, an annual volunteer water quality sampling program which was and is conducted under the auspices of our EPA/DEP approved QAPP."

Comment 2: Stream Segment 73-06, listed as Category 4A for fecal coliform. This stream segment should also be considered for an impairment of dissolved oxygen (DO). DO levels on this stream segment, as measured at our sampling site SMB001, averaged 4.5 mg/L during 2013. The lowest recorded measurement was 1.62 mg/L and four out of six DO measurements were below the Massachusetts water quality standard of 5 mg/L for Class B Waters as set by 314 CMR 4.00.

Response 2: MassDEP has reviewed the data submitted by the NepRWA in support of this comment and has concluded that there is too much uncertainty with respect to whether or not School Meadow Brook is actually impaired to list it as such at this time. MassDEP has some concern with respect to the lack of calibration records and validation of the NepRWA DO data; however, the source of most of the uncertainty relates to the location of the sampling site SMB001. This site is situated directly below the outlet of Ganawatte Farm Pond, a water body that is already listed in Category 5 (i.e., 303(d) List) as impaired by low DO and related causes. It is likely that conditions at SMB001 are a direct reflection of the condition of the upstream pond, and should not be considered indicative of the condition of the approximately two-mile reach of School Meadow Brook described by segment 73-06. Data from one or more sampling sites, representative of the entire segment, are needed in order to assess the use-support status of School Meadow Brook. In any case, the derivation and implementation of a TMDL, as currently required for Ganawatte Farm Pond, would likely address downstream water quality impairments, if any, in the brook.

Comment 3: Stream Segment 73-22, listed as Category 5 for dissolved oxygen. This stream segment should also be considered for an impairment of total phosphorus (TP). TP levels on this stream segment, as measured at our sampling site PQB036, averaged 0.15 mg/L during 2013. The highest recorded measurement was 0.225 mg/L and three out of five TP measurements were above the 0.1 mg/L standard set by the EPA's "Quality Criteria for Water" (1986) and referenced in the Charles River TMDL (2011).

Response 3: There is no numerical standard for total phosphorus in the Massachusetts Surface Water Quality Standards, nor are there specific guidelines for interpreting total phosphorus data in MassDEP's Consolidated Assessment and Listing Methodology (CALM) document. Furthermore, phosphorus criteria published by the EPA, as well as target phosphorus concentrations established by TMDL analyses for other water bodies, are not necessarily applicable to Pequid Brook. Therefore, the MassDEP does not usually list total phosphorus as a cause of impairment on the 303(d) List. Generally, waters are added to the 303(d) List if a combination of biological responses to increased nutrient levels, such as wide ranges in DO concentration, high chlorophyll levels or algal or plant "bloom" conditions indicate that one or more designated uses are actually impaired. In this case, it was noted that Pequid Brook (segment 33-22) is

already listed in Category 5 of the Integrated List (i.e., the 303(d) List) as impaired by low DO levels. As such, the development and implementation of the TMDL to restore the brook will focus on reducing loadings of total phosphorus, as well as any other pollutants that may be adversely affecting instream DO concentrations.

Jones River Watershed Association

Comment 4: Upon cursory view of the South Coastal Basin section and the Category 5 List, in particular pg 185, my general comment is that the report does not reflect updates that should reasonably be included in such a document. On Pg 185, relative to the Category 5 of listed impairments for the Jones River--the description of river segments fails to note that there is no longer a dam at Wapping Road, which was removed in 2011. It would be most useful if the department would use updated information in this reference document, and let us know when sampling was performed. Perhaps an additional column with the list of waterbodies indicating when the assessment was performed, or some date reference, would be helpful. I believe that to be useful and appropriate that the Department should use up to date information, and at the very least, state clearly on reference pages the dates when information was obtained.

Response 4: MassDEP concurs that, ideally, all of the information presented for every watershed would be updated for each new Integrated List. However, in order to make best use of limited resources, MassDEP follows a five-year rotating watershed monitoring and assessment schedule that, at best, allows for new assessments to be completed and listing decisions to be made for 40 percent of Massachusetts' watersheds in any two-year listing cycle. As a result, much of the information pertaining to the South Coastal watersheds has not been updated since the completion of the 2006 Integrated List, and this would explain why information such as the removal of the dam described above is not reflected in the 2014 Integrated List. Over the past two years, MassDEP has made improvements to the process by which watershed assessments are carried out and has substantially revised its CALM document for the 2016 listing cycle. The updates to the CALM document will help MassDEP carry out timelier watershed assessment and listing decisions. The completion of an updated assessment of the South Coastal watersheds is now planned for the next integrated list cycle in 2016.

The Buzzards Bay Coalition

[**Note:** The Buzzards Bay Coalition included data tables and attachments with their comment letter that, to save space, are not reproduced here.]

The Buzzards Bay Coalition began its comment letter: "Please accept the following as the Buzzards Bay Coalition's ("Coalition's") request to include the following water bodies as Category 5 waters on the Department of Environmental Protection's ("MassDEP's") proposed Massachusetts Year 2014 Integrated List of Waters. The Coalition is a non-profit membership organization dedicated to the restoration, protection, and sustainable use and enjoyment of Buzzards Bay and its watershed. We represent more than 8,000 individuals, families, organizations and businesses in southeastern Massachusetts who are committed to maintaining the health and ecological vitality of the Bay.

Pursuant to §303(d) of the Clean Water Act, each state shall identify those waters within its boundaries for which effluent limitations are not stringent enough to maintain water quality standards applicable to such waters. 33 USC §1313(d)(1)(A). Furthermore, Federal regulations dictate that in promulgating the 303(d) list the state shall assemble and evaluate all existing and readily available water quality-related data and information. Such information includes, but is not limited to, waters for which water quality problems have been reported by local, state, or federal agencies; members of the public; or academic institutions. These organizations and groups should be actively solicited for research they may be conducting or reporting. 40 CFR 130.7(b)(5)(iii). As a membership supported organization conducting on-going water quality monitoring in Buzzards Bay, it is pursuant to this legal framework that the Coalition submits this report and request.

The Coalition's 303(d) submittal substantially conforms to the DEP Data Submittal Guidelines in the Monitoring Method Guidance document CN 0.71 (December, 2006) as well as the Recommended Content of Data Report Submittals Monitoring Method Guidance CN 0.74 (November, 2006). The Coalition notes that the MassDEP Data Submittal Guidelines are recommended guidelines and are intended to serve as guidance in order to help evaluate the accuracy, precision and representativeness of the data and are not intended to serve as regulations or requirements. Therefore, the Coalition expects that if MassDEP finds additional information necessary, they will present the Coalition with an opportunity to comply.

Comment 5: Based on the Coalition's water quality monitoring data, which meets the MassDEP's and EPA's reliability requirements as discussed above and detailed below, the Coalition requests that the following waters be added to the Commonwealth of Massachusetts' 303(d) list of Category 5 waters requiring a TMDL for nutrients.

Water Segment	Municipality
Buttermilk Bay and Little Buttermilk Bay	Wareham/Bourne
Mattapoisett Harbor	Mattapoisett
Megansett Harbor	Bourne/Falmouth
Red Brook Harbor	Bourne

The Massachusetts Surface Water Quality Standards designate these waterbodies as Class SA waters. Class SA waters are waters with excellent habitat for fish, other aquatic life and wildlife and for primary and secondary contact recreation. The standards also clearly state that these waters shall have excellent aesthetic value (314 CMR 4.05(4)(a)), have dissolved oxygen levels not below 6.0mg/l (314 CMR 4.05(4)(a)(1)(a)) requiring that natural seasonal and daily variations above this level be maintained (314 CMR 4.05(4)(a)(1)(b)).

Response 5: It is important to note here that there is currently no numerical standard for nitrogen in the Massachusetts Surface Water Quality Standards, nor are there specific guidelines for interpreting nitrogen data in the CALM document. Therefore, except in limited instances, MassDEP does not include nitrogen concentration as a cause of impairment on the 303(d) List. Instead, the MassDEP relies, for assessment and listing purposes, on a number of indicators that represent responses to excessive nutrient enrichment. For example, the cause "Estuarine Bioassessments" is applied in cases where impairment from nutrient enrichment is indicated by the loss of sea grasses (e.g., eelgrass) over time. Furthermore, such nutrient-related "response indicators" as DO depletion and supersaturation, elevated chlorophyll concentrations and noxious algae blooms are all encompassed in the cause code "Nutrient/Eutrophication Biological Indicators", which, when appearing on the 303(d) List, does require that a TMDL for nutrients be developed.

The development of site-specific critical nitrogen thresholds for coastal embayments is an essential element of the Massachusetts Estuaries Project (MEP), and some of these thresholds are already available for embayments with completed nitrogen TMDLs. However, when making assessment and listing decisions for additional embayments, it is important not to compare nitrogen concentration data from those water bodies with nitrogen thresholds already established for other estuaries. As explained in the MEP's "Site-specific Nitrogen Thresholds Document," the "quantitative thresholds will vary between and within embayments" and "site-specific thresholds are developed on the basis of specific basin configuration, source water quality and watershed spatial features for each embayment. The MEP has already determined that total nitrogen thresholds based upon the same habitat quality can vary more than 50%, due to their specific oceanographic setting. This wide range greatly increases the need for site specific quantitative thresholds…"

In light of the information presented above, MassDEP performed a thorough review of the Coalition's data submittal and request to place five water bodies on the 2014 303(d) list of waters as requiring a TMDL for

nutrients. All of the materials submitted by the Coalition were subjected to a detailed external data review by MassDEP quality assurance/quality control (QA/QC) staff and recommendations were made pertaining to the usability of data and information for assessing and listing waters under sections 305(b) and 303(d) of the CWA. For example, the use of DO data obtained through the use of DO kits was not recommended, whereas validated data from properly calibrated probes were considered acceptable. In addition, water quality data (e.g., nutrients, chlorophyll, etc.) were recommended for use if they were supported by adequate field duplicates and met stated data quality objectives. Finally, the locations of the Coalition's sampling stations (e.g., open water sites vs. sampling from piers; sampling at surface water vs. sampling at depth, etc.) were examined to assess their representativeness with respect to the conditions prevailing throughout the water body as a whole. When completing this review, MassDEP placed more emphasis on data and information obtained from sampling stations that were judged to be more representative. Results of the review are discussed below for each water body in question.

Buttermilk Bay (MA95-01) and Little Buttermilk Bay (MA95-76)

Comment 6: The Coalition requests that Buttermilk and Little Buttermilk Bay, in the towns of Bourne and Wareham, be added to the Commonwealth of Massachusetts' 303(d) list of Category 5 waters as impaired for nutrients requiring a nutrient TMDL. The Coalition's water quality monitoring data support its listing.

Buttermilk and Little Buttermilk Bay demonstrate water quality decline related to excess nutrients. The Coalition submits multiple years of oxygen data taken from multiple site locations depicting water quality decline due to nutrient overenrichment. The Coalition recognizes that while Little Buttermilk Bay was listed by MassDEP on the 2012 list for bioassessment, it is critical that the regulatory agencies recognize that this water segment is impaired for nutrients and list it as such.

Nutrient-specific assessments lead to direct removal of nutrients from the coastal waters of Buzzards Bay. Bioassesments or biomonitoring look at various factors to determine the overall health of a body of water. While these types of assessment are important and provide a general condition of the ecosystem, they are not focused enough to lead to action items or the actual immediate removal of pollutants, such as nitrogen, from the Bay.

MassDEP has classified nitrogen as a pollutant that requires a TMDL in many areas of southeastern Massachusetts. Excessive levels of nitrogen can lead to loss of eelgrass beds, algae blooms, fish kills and reductions in critical marine life. Increases in nitrogen levels stem from point sources, non point sources as well as natural sources. In order to target areas that are suffering from excessive levels nitrogen, like Buttermilk Bay, and remove as much nitrogen as possible from these areas, it is imperative that MassDEP list Buttermilk Bay as impaired for nutrients areas requiring a TMDL for nutrients.

Dissolved oxygen data for sampling sites LB1 and LB2 are in clear violation of surface water quality standards, falling below dissolved oxygen levels of 6mg/l, and having significantly elevated chlorophyll levels that degrade water clarity and aesthetic value, as well as total nitrogen concentrations higher than similar estuaries with established TMDLs. A listing for estuarine bioassessment is inadequate to restore water quality. A nutrient TMDL must be established for this water body.

Response 6: As mentioned in Comment 6, both Buttermilk Bay and Little Buttermilk Bay are already listed in Category 5 of the Proposed 2014 Integrated List with "Estuarine Bioassessment" listed as an impairment cause. This listing was based on the loss of eel grass beds associated with nutrient enrichment and, as such, identified the need for a TMDL to control nutrient loadings to these embayments. Nonetheless, in response to the above comment, the MassDEP reviewed the Coalition's data submittal which included additional variables that typically respond to nutrient enrichment (e.g., water-column chlorophyll concentrations). The Coalition's data on these "response indicators" further corroborate MassDEP's original conclusion that these waters are impaired and in need of nutrient TMDLs. Therefore, consistent with the MassDEP's approach described above for assessing and listing

nutrient-impaired waters, "Nutrient/Eutrophication Biological Indicators" will be added as a cause of impairment for these two embayments, thereby specifying that a TMDL for nutrients be developed for these waters.

Red Brook Harbor (MA95-18)

Comment 7: The Coalition requests that Red Brook Harbor in Bourne, be added to the Commonwealth of Massachusetts' 303(d) list of Category 5 waters requiring a Nutrient TMDL. The Coalition's water quality monitoring data support its listing. The Coalition's dissolved oxygen data show that Red Brook Harbor consistently falls below the numeric criteria of 6mg/l as designated in 314 CMR 4.05(4)(a)(1)(a) and warrants listing on the 303(d) list. The DO concentrations sampling sites RB1, RB2, RB3, and RB4, clearly show a significant number of samples which fall below the numeric dissolved oxygen criteria established in the Massachusetts Surface Water Quality Standards. The Coalition's Chlorophyll data show that Red Brook Harbor does not possess the excellent aesthetic values required of SA waters pursuant to 314 CMR 4.05(4)(a), "These waters shall have excellent aesthetic value" and warrants listing on the 303(d) list. The phytoplankton pigment data show rising levels in pigment concentrations at sampling station RB1 in Red Brook Harbor. This indicates degraded water clarity in violation of the excellent aesthetic value required in Massachusetts Surface Water Quality Standards.

The Coalition's total nitrogen data for Red Brook Harbor suggests that the nitrogen levels are causing low dissolved oxygen numbers and promoting algae growth. It is important to note that the total nitrogen concentrations measured in Red Brook Harbor exceed those levels identified to support healthy benthic communities and eelgrass meadows in other systems. For instance, the US EPA has established nitrogen limits for West Falmouth Harbor in Falmouth, MA and Phinneys Harbor in Bourne, MA through approved TMDLs at a level of .35mg/L total nitrogen. The nitrogen levels in Red Brook Harbor exceed .35mg/L total nitrogen nearly 100% of the time.

It is clear that Red Brook Harbor is suffering from accelerated eutrophication due to excess nutrients and must be listed on the Commonwealth of Massachusetts' 303(d) list of Category 5 waters requiring a TMDL for nutrients. The state listed adjacent Pocasset Harbor in the 2012 listing, and not surprisingly, given the inadequate amount of nitrogen reductions occurring throughout the watershed, Red Brook Harbor water quality also continues to decline due to nutrient pollution. Listing Red Brook Harbor will help restore water quality and protect the many uses the Harbor provides to the community. In addition to bathing beaches and shellfishing, Red Brook Harbor is home to Cape Cod's largest commercial marina. Restoring and protecting water quality in Red Brook Harbor serves an important ecological and economic priority to the community.

Response 7: Red Brook Harbor appeared in section 4a of the *Proposed Massachusetts Year 2014 Integrated List of Waters* indicating that it was impaired by fecal coliform and that an EPA-approved TMDL was available for this impairment. However, in response to this comment, the MassDEP reviewed the Coalition's water monitoring data submittal (four sites) along with applicable GIS eelgrass datalayers and the Massachusetts Estuaries Project *Site-specific Nitrogen Thresholds Document* prepared by University of Massachusetts' School for Marine Science and Technology (SMAST) and MassDEP to determine whether sufficient information was available to list this water body as impaired by nutrients. The Coalition provided data on nitrogen, DO and algal pigments (i.e., chlorophyll and phaeophytin). There is no numerical criterion for nitrogen in the Massachusetts Surface Water Quality Standards and, currently, no site-specific threshold for nitrogen has been established for Red Brook Harbor. Nonetheless, the Coalition reported that mean total nitrogen concentrations were 0.5 mg/l or higher at all four sites. Furthermore, DO levels are below 6.0 mg/l on average and sometimes decrease to 2-3 mg/l. Generally, MassDEP places more emphasis, when assessing and listing waters, on a number of indicators that represent responses to excessive nutrient enrichment, such as nutrient-related eelgrass loss, DO depletion and supersaturation, elevated chlorophyll concentration and the occurrence of excessive algae blooms. From this review, MassDEP concurs that Red Brook Harbor is exhibiting signs of eutrophication to the extent that the aquatic life use is impaired. Accordingly, this water body will be added to the 2014

303(d) List with both "Estuarine Bioassessments" and "Nutrient/Eutrophication Biological Indicators" specified as the impairment causes. This will serve to identify the need for a nutrient TMDL for Red Brook Harbor.

Mattapoisett Harbor (MA95-35)

Comment 8: While once heralded as the standard to which all other Harbors in Buzzards Bay were held, even Mattapoisett Harbor is demonstrating nutrient related water quality decline. The Coalition requests that Mattapoisett Harbor in Mattapoisett, be added to the Commonwealth of Massachusetts' 303(d) list of Category 5 waters requiring a TMDL. The Coalition's water quality monitoring data provide data to support its listing. Mattapoisett Harbor demonstrates water quality decline related to excess nutrients. Coalition submits multiple years of oxygen data taken from sampling sites MH1, MH2X, MH3, MH4X, and MH5 depicting water quality decline. Coalition's dissolved oxygen data show that Mattapoisett Harbor consistently falls below the numeric criteria of 6mg/l as designated in 314 CMR 4.05(4)(a)(1)(a) and warrants listing on the 303(d) list. The Coalition's Chlorophyll data show that Mattapoisett Harbor does not possess the excellent aesthetic values required of SA waters pursuant to 314 CMR 4.05(4)(a), "These waters shall have excellent aesthetic value" and warrants listing on the 303(d) list. The phytoplankton pigment data show rising levels in pigment concentrations at sampling station MH1 in Mattapoisett Harbor. This indicates degraded water clarity in violation of the excellent aesthetic value required in Massachusetts Surface Water Quality Standards.

The Coalition's total nitrogen data for Mattapoisett Harbor suggests that the nitrogen levels are causing low dissolved oxygen numbers and promoting algae growth. It is important to note that the total nitrogen concentrations measured in Mattapoisett Harbor are beginning to regularly exceed those levels identified to support healthy benthic communities and eelgrass meadows in other systems. For instance, the US EPA has established nitrogen limits for West Falmouth Harbor in Falmouth, MA and Phinneys Harbor in Bourne, MA through approved TMDLs at a level of .35mg/L total nitrogen. The nitrogen levels in Mattapoisett Harbor have often exceeded .35mg/L total nitrogen in the last 10 years.

It is clear that Mattapoisett Harbor is suffering from accelerated eutrophication due to excess nutrients and must be listed on the Commonwealth of Massachusetts' 303(d) list of Category 5 waters requiring a TMDL for nutrients.

Response 8: MassDEP reviewed the Coalition's water monitoring data submittal, along with applicable GIS eelgrass datalayers and the MEP *Site-specific Nitrogen Thresholds Document* prepared by SMAST and MassDEP, to determine whether sufficient information was available to list Mattapoisett Harbor as impaired by nutrients. The Coalition's submittal included nitrogen, chlorophyll and DO data, although the latter were obtained primarily through the use of test kits, and not from calibrated probes. Because MassDEP generally relies, for assessment and listing purposes, on indicators that respond to nutrient enrichment, rather than water-column nutrient concentrations, more weight was placed on the evaluation of MassDEP's multi-year eelgrass habitat mapping, as well as the Coalition's chlorophyll data. From this review, MassDEP concluded that enough credible information existed to support the addition of Mattapoisett Harbor to Category 5 (i.e., the 303d List) of the Final 2014 Integrated List with "Estuarine Bioassessments" and "Nutrient/Eutrophication Biological Indicators" specified as the impairment causes. This will serve to identify the need for a nutrient TMDL for Mattapoisett Harbor.

Megansett Harbor (MA95-19)

Comment 9: The Coalition requests that Megansett Harbor in Bourne and Falmouth, be added to the Commonwealth of Massachusetts' 303(d) list of Category 5 waters requiring a TMDL. The Coalition's water quality monitoring data provide data to support its listing. Megansett Harbor demonstrates water quality decline related to excess nutrients. Coalition submits multiple years of oxygen and nutrient data taken from sampling sites MG1X, MG2 and MG4 depicting water quality decline. Coalition dissolved oxygen data show that Megansett Harbor consistently falls below the numeric criteria of 6mg/l as

designated in 314 CMR 4.05(4)(a)(1)(a) and warrants listing on the 303(d) list. The Coalition's Chlorophyll data show that Megansett Harbor does not possess the excellent aesthetic values required of SA waters pursuant to 314 CMR 4.05(4)(a), "These waters shall have excellent aesthetic value" and warrants listing on the 303(d) list. The phytoplankton pigment data show rising levels in pigment concentrations at sampling station MG1 in Megansett Harbor. This indicates degraded water clarity in violation of the excellent aesthetic value required in Massachusetts Surface Water Quality Standards.

The Coalition's total nitrogen data for Megansett Harbor suggests that the nitrogen levels are causing low dissolved oxygen numbers and promoting algae growth. It is important to note that the total nitrogen concentrations measured in Megansett Harbor are beginning to regularly exceed those levels identified to support healthy benthic communities and eelgrass meadows in other systems. For instance, the US EPA has established nitrogen limits for West Falmouth Harbor in Falmouth, MA and Phinneys Harbor in Bourne, MA through approved TMDLs at a level of .35mg/L total nitrogen. The nitrogen levels in Megansett Harbor frequently exceed .35mg/L total nitrogen. Taken together, it is clear that Megansett Harbor is suffering from accelerated eutrophication due to excess nutrients and must be listed on the Commonwealth of Massachusetts' 303(d) list of Category 5 waters requiring a TMDL for nutrients.

Response 9: MassDEP reviewed the Coalition's water monitoring data submittal (four sites), along with applicable GIS eelgrass datalayers and the MEP *Site-specific Nitrogen Thresholds Document* prepared by SMAST and MassDEP, to determine whether sufficient information was available to list Megansett Harbor as impaired by nutrients. There is currently no site-specific threshold for nitrogen available for Megansett Harbor, and examination of the Coalition's monitoring data from more representative sampling sites did not appear to indicate obvious bay-wide overenrichment. For example, whereas mean total nitrogen and chlorophyll concentrations were elevated at a near-shore station (MG1) sampled from a dock, these variables were substantially lower at more open-water sites (i.e., MG2, MG4) that were judged to be more representative of bay-wide conditions. Nonetheless, when assessing and listing waters for nutrient-related impacts, MassDEP places more emphasis on a number of indicators that represent responses to excessive nutrient enrichment, such as nutrient-related eelgrass loss, DO depletion and supersaturation, elevated chlorophyll concentration and the occurrence of excessive algae blooms. A review of historical and current eelgrass datalayers from Megansett Harbor indicate that eelgrass is being lost at the outer edges of the beds as the result of diminished light penetration associated with nutrient enrichment. MassDEP concurs, therefore, that Megansett Harbor is showing signs of eutrophication to the extent that the aquatic life use is impaired. Therefore, this water body will be added to the 2014 303(d) List with both "Estuarine Bioassessments" and "Nutrient/Eutrophication Biological Indicators" specified as the impairment causes. By doing so, the derivation of a nutrient TMDL becomes a requirement for Megansett Harbor.

Charles River Watershed Association

[**Note:** CRWA included data tables and appendices with their comment letter that, to save space, are not reproduced here.]

Comment 10: As stated in previous comment letters, CRWA is concerned about the pace at which waterbody segment impairments are being assessed and addressed in the Charles River watershed. The Charles River segment listings on the Proposed Year 2014 Integrated List of Waters are nearly identical to the Year 2012 and 2010 Integrated List of Waters. MassDEP adjusted its Surface Water Monitoring 5-Year Basin schedule for the Charles to 2010. Five years later, that assessment has yet to happen. Many Massachusetts river basins have not been assessed in over a decade. In our opinion, this program is not complying with the requirements of the Clean Water Act. There are well over 100 pollutant and pollution impairments in the Charles River watershed alone which are not currently being addressed through a Total Maximum Daily Load (TMDL). The existing TMDL development process is extremely resource intensive, making TMDL development even more challenging in the face of scarce resources. However, MassDEP should address how it will comply with the Clean Water Act in the Charles River

watershed by ensuring all waterbodies are being assessed on a regular cycle and that no waterbody segments violate state water quality standards.

Response 10: As stated in the narrative portion of the Proposed 2014 Integrated List, a conscious decision was made to submit the 2014 Integrated List to the EPA as close to the April 1, 2014 deadline as possible even though no new watershed assessments were included in this submittal. MassDEP acknowledges that the pace at which watershed assessments are carried out has slowed considerably in recent years. However, a number of initiatives and program enhancements are underway at MassDEP that are designed to streamline certain resource-intensive program elements, such as watershed assessment, and focus more directly on the restoration of waters that are already known to be impaired. For example, since the completion of the 2012 reporting cycle, MassDEP has taken several steps to automate, to the extent possible, the process by which watershed assessments are completed and has significantly revised its CALM document for the 2016 listing cycle and beyond. The use of the new CALM document will result in greater confidence in future assessment and listing decisions and more accurate integrated reports.

A review of recent 303(d) list submittals will reveal that the major causes of surface water impairment in Massachusetts are bacteria and excess nutrients. MassDEP continues to place a high priority on developing and implementing TMDLs for these pollutants, and a lot of progress has been made with the completion of TMDLs for waters in the Charles River Watershed. EPA-approved TMDLs are now in place for 20 segments impaired by bacteria, and for over 80 nutrient-related impairment causes associated with 32 different segments. These TMDLs will be implemented through the issuance of national pollutant discharge elimination system (NPDES) and municipal separate storm sewer system (MS4) permits, as well as a variety of measures to control non-point source pollution (NPS).

In 2014 EPA approved the 2014-2019 update of the Massachusetts Nonpoint Source Management Program Plan (NPS Plan) which presents the planning framework which must be used to address NPS pollution in the Commonwealth. The updated plan follows guidance provided by the EPA and provides an overarching strategy as well as specific, measurable actions aimed at reducing the impacts of NPS pollution and improving water quality in Massachusetts. The NPS Plan is implemented through the development of individual Watershed-Based Plans (WBP). The WBP are required for all projects implemented with CWA Section 319 incremental dollars and are recommended for all watershed projects, whether they are designed to protect unimpaired waters, restore impaired waters, or both. MassDEP's approach has been to develop the WBP statewide, so that good projects in all river basins will remain eligible for CWA Section 319 implementation funds. To learn more about the Massachusetts NPS Plan and WBP, please visit http://www.mass.gov/eea/agencies/massdep/water/watersheds/nonpoint-source-pollution.html .

Massachusetts has begun to work collaboratively with EPA to develop a new, long-term vision and associated goals for the CWA Section 303(d) Program ("303d Vision"). The 303(d) Vision approach is based on directing state resources to address the state's highest self-identified water quality priorities. Furthermore, the 303d Vision embraces the concept that states can select priorities based on both the restoration of impaired waters as well as protection of unimpaired waters. The EPA website: http://water.epa.gov/lawsregs/lawsguidance/cwa/tmdl/upload/vision_303d_program_dec_2013.pdf provides a comprehensive description of the purpose, goals and elements of this new approach to addressing water quality restoration and protection that is currently being considered by Massachusetts.

Comment 11: Overall, we are concerned about the paucity of water quality monitoring by MassDEP across the state since "[r]esults of the MassDEP's monitoring efforts, combined with all other reliable information, constitute the basis for making water quality assessments in accordance with the requirements set forth in Section 305(b) and 303(d) of the CWA." Massachusetts Consolidated Assessment and Listing Methodology Guidance Manual (2012) (CALM Manual) at p. 6. Given the high bar established by MassDEP for the acceptance of third party data, MassDEP monitoring is critically

important. As far as we are aware, no MassDEP monitoring occurred statewide, let alone in the Charles, between the 2012 and Proposed 2014 Integrated Lists of Waters. We note that according to the CALM Manual, "[i]deally these data are 5 years old or less; the DWM data used for the 2012 reporting cycle are 9 years old or less." Id. Now it appears that the data underpinning the 2014 Integrated List of Waters is even staler, calling into serious question its validity.

Response 11: MassDEP acknowledges both the lack of targeted monitoring to support a number of different programs required by the CWA, and the slow pace at which the watershed assessments are proceeding, as reflected in the Proposed 2014 Integrated List. However, it is not accurate to state that no monitoring occurred during the time between the 2012 and 2014 integrated lists. Over the past several years changes were made to MassDEP's monitoring program in order to more fully comply with the EPA's guidelines for monitoring. For example, in 2010 a decision was made to focus MassDEP's dwindling monitoring and assessment resources on a state-wide, statistically-valid survey of wadeable streams. Implemented over a period of five years, the randomization of sampling site selection allows conclusions to be drawn with respect to the condition of all of Massachusetts' wadeable streams. This survey is described in more detail on pages 4-5 of the Proposed 2014 List document. MassDEP anticipates that the results of this survey will be released as part of the 2016 integrated list reporting cycle.

MassDEP is currently developing a ten-year strategic plan for its monitoring program. The ultimate goal is to implement a comprehensive monitoring program that serves all water quality management needs and addresses all water body types. This planning effort will identify future monitoring needs and outline a strategy for meeting those needs. While probabilistically-derived sampling networks will continue to play a role in MassDEP's monitoring program in the future, the plan will also highlight the need for site-specific, targeted monitoring programs to meet multiple water management objectives including, but not limited to, the assessment and listing of waters pursuant to sections 305(b) and 303(d) of the CWA. Furthermore, it is likely that MassDEP will have to rely more heavily on external sources of water monitoring data in the future, due to a number of constraints on its existing monitoring resources. To that end, MassDEP is establishing partnerships, developing guidance on data submittals for outside parties and organizations, and implementing measures to streamline data review and validation protocols. See, for example, http://www.mass.gov/eea/agencies/massdep/water/watersheds/external-data-submittals-for-the-wpp.html.

Comment 12: In its response to CRWA's comments on the 2012 Integrated List of Waters concerning the Biological Categories and what are now referred to as Groundwater Withdrawal Levels (GWL) developed in the Sustainable Water Management Initiative (SWMI), MassDEP stated that it had "yet to evaluate the USGS studies, or the SWMI framework within the context of Massachusetts' Surface Water Quality Standards and reporting under the Clean Water Act" because the draft "Framework Summary was not published until one month after the release of the Proposed 2012 Integrated List of Waters and long after the completion of the watershed assessments represented in the 2012 list" Appendix 5: Massachusetts Year 2012 Integrated List of Waters—Response to public comments, at p. 293. We note that although the SWMI Framework was scientifically peer reviewed and validated and finalized in November, 2012, there is no reliance on or attempt to integrate this information in the Proposed 2014 List.

According to the CALM Manual at p. 10, "[i]n a Class B Warm Water Fishery, the fish population should be well represented by fluvial specialist/dependents species . . ." Most subbasins, with the exception of MWRA-served communities, in the Charles are Biological Category 4 or 5 and GWL 4 and 5. As the narrative for Biological Category 4s and 5s makes clear, BC 4s and 5s do not meet Massachusetts Water Quality Standards. Indeed, even BC 3 (15 to 35% Alteration of the Range of Fluvial Fish Relative Abundance) "represents fish communities that have exhibited considerable change in the structure of the fish community." "[T]the estimated flow alteration in a stream due to the impact of groundwater withdrawals alone were [also] calculated in SWMI. *See,* Interactive SWMI map for Charles River basin BC and GWL categories at: http://209.80.128.252/flexviewers/SWMI_Viewer/index.html. This best available scientific data should be utilized in the 2014 Integrated List of Waters.

Response 12: As a part of SWMI, MassDEP along with the Executive Office of Energy and Environmental Affairs (EEA) and its member agencies, worked with numerous stakeholder groups to develop a new policy framework for comprehensively managing water withdrawals throughout the Commonwealth to ensure an appropriate balance among competing water needs and the preservation of water resources. As noted in the above comment, the SWMI framework was in draft form at the time of the publication of the Final 2012 Massachusetts Integrated List of Waters, and MassDEP had not reviewed it within the context of reporting under the Clean Water Act (CWA). However, at the request of the CRWA, a brief description of SWMI was added to the introductory section of the final 2012 Massachusetts Integrated List of Waters and this has been updated slightly in the 2014 document. Since then, MassDEP has reviewed the SWMI framework and associated research performed by the USGS in an effort to determine its applicability to the Massachusetts' Surface Water Quality Standards (SWQS) and the assessment and listing of waters under the CWA and has concluded that it is inappropriate to list waters as impaired based solely on the biological categories (BC) or groundwater withdrawal categories (GWC) (formerly GWL) derived from the SWMI models. While these predicted BC and GWC values are appropriate for their intended use, that is, permitting under the Water Management Act (WMA), they have no direct relationship to the SWQS and are not sufficient, in and of themselves, for determining the use-support status of specific water bodies.

Massachusetts presents its methodology for assessing and listing waters pursuant to sections 305(b), 314 and 303(d) of the CWA in its CALM document. This document describes, in considerable detail, how physico-chemical, biological, flow and habitat data, and other information are used as multiple lines of evidence to assess aquatic life use support. Critical to this assessment process is the availability of credible scientific data obtained from the actual water bodies under assessment. BC and GWC values, however, do not represent actual instream measurements of water quality and biological integrity but are derived from GIS large-scale overlays (such as impervious surface, watershed area, wetland area) or are themselves modeled (August flow alteration), to facilitate permitting activities. Therefore, they cannot be used as surrogates for the site-specific data and information required for assessing and listing waters in accordance with the requirements of the CWA. MassDEP will continue to list in Category 4c those waters for which site-specific flow data, field observations or habitat assessments indicate impairments from low-flow conditions.

Segment and Pollutant Specific Comments

Comment 13: MA72-01 (Charles River) – This section was observed to be dry during a UMass Boston sampling outing to the Echo Lake Downstream (ELDS) site located 0.5 mi from the outlet of Echo Lake in the fall of 2013 (See attached *Biology Honors Thesis, p. 6)*. Additionally, benthic macroinvertebrate sampling conducted by UMass Boston from this site in 2012 and 2013 indicate significant impairment at this site. CRWA acknowledges that UMass Boston does not have a DEP approved QAPP or lab, nor do they follow DEP's exact protocols, nevertheless this information should be used to place this segment on Alert Status while sufficient data can be gathered to assess impairment. Additionally, there are multiple dams along this segment although it is not currently listed for (Fish-Passage Barrier*).

Response 13: Observations of low or no stream flow, such as those mentioned in this comment, are useful and will be considered in the next assessment of the Charles River Watershed. However, long-term stream discharge data and related information pertaining to the frequency, magnitude and duration of low-flow events need to be assembled and reviewed before adding an impairment cause such as "low flow alterations" to this segment. It should be noted that this comment pertains to stream flow issues which are not managed through the CWA 303(d) listing and TMDL process. Nevertheless, as a part of SWMI, MassDEP along with EEA and its member agencies, worked with numerous stakeholder groups to develop a new policy framework for comprehensively managing water withdrawals in the Charles River Watershed and throughout the Commonwealth to ensure an appropriate balance among competing water needs and the preservation of water resources.

Appendix 4
Massachusetts Year 2014 Integrated List of Waters – Responses to public comments

CRWA/UMass-Boston collaborative macroinvertebrate monitoring program - MassDEP applauds the CRWA's collaborative efforts with UMass-Boston to develop a benthic macroinvertebrate monitoring program for the Charles River Watershed. Despite the lack of a DEP-approved QAPP, this program has the potential to serve as a valuable screening tool for evaluating the general condition of the wadeable streams in the watershed. It should be noted, however, that the taxonomic resolution currently offered by the CRWA's benthic monitoring program (i.e., family- or order-level depending upon the invertebrate group in question) does not meet the MassDEP's minimum data requirements for assessing the Aquatic Life use in accordance with requirements of the CWA. As outlined in its CALM document, MassDEP utilizes a modification of the EPA's Rapid Bioassessment Protocol (RBP) III metrics and scoring to assess aquatic life use support, and this approach relies on taxonomic identification of invertebrate specimens to genus or species level. Nonetheless, the results of the benthic macroinvertebrate sampling conducted by UMass Boston in this segment will be taken into consideration when completing the next assessment of the Charles River Watershed and, if applicable, this segment may be assigned an "Alert Status."

MassDEP's policy for assessing and listing fish passage issues - MassDEP acknowledges the enormous number of dams on rivers and streams in Massachusetts that can affect, to a greater or lesser degree, the hydrology, biology and water quality of those water bodies. However, it is not MassDEP's policy to identify every stream impounded by a dam in Massachusetts as impaired by the stressor "Fish-Passage Barrier." This cause code is only applied in situations where a fish passage structure is in place, but it is functioning poorly or not at all. MassDEP's CALM document states: "If impediments to fish passage (such as dams) exist but no structure has ever been built to allow for fish passage, no impairment decision is currently made." For this reason "Fish-Passage Barrier" is not included as a stressor to Segment MA72-01. However, like stream flow, fish passage limitation is not a pollutant that would result in the listing of a segment in Category 5 (i.e., the 303d List) and would not be managed through the provisions of the CWA.

Comment 14: MA72-33 / MA72-03 (Charles River) – UMass Boston and CRWA also conducted benthic macroinvertebrate monitoring along segment MA72-33 (site 35CS). Overall, water quality scores for this site using the Invertebrate Community Index (ICI), Stream Biotic Index (SBI), and EPA Streamside Biosurvey scoring models were not as poor as many of the other sites assessed, however, certain metrics included in the ICI were very poor for this site including Dominant Taxon Contribution, EPT Index, EPT: Chironomidae, and Reference Affinity (See Excerpt From: *Efficacy of Citizen Science in Water Quality Studies: A Macroinvertebrate Biomonitoring Project in the Charles River Watershed, Massachusetts).* There are multiple dams along this segment therefore it should be listed for (Fish-Passage Barrier*).

Response 14: Please refer to the sections of Response 13 that pertain to the CRWA/UMass-Boston collaborative invertebrate monitoring program and the policy for assessing and listing fish passage issues.

Comment 15: MA72-04 (Charles River) – CRWA regularly records excessively high total nitrogen and nitrate / nitrite concentrations in this segment through our Volunteer Monthly Monitoring (VMM) Program. CRWA's VMM Program is run in accordance with a MassDEP and EPA approved Quality Assurance Project Plan (QAPP), samples are analyzed at MWRA's Deer Island lab, a state-approved lab, and citable reports from 2012 and 2013 are attached (additionally year reports available upon request if MassDEP does not already have copies). Sampling site 90CS had the highest nitrogen concentrations for any site along the Charles in both 2012 and 2013. Results are frequently over an order of magnitude larger than CRWA's Action Limits for these parameters. Acknowledging that the state does not have numeric criteria for nutrient parameters, CRWA believes the data presented are enough to show excess nitrogen above background levels and believes this segment should be listed as impaired for Total Nitrogen. Additionally, there are multiple dams along this segment although it is not currently listed for (Fish-Passage Barrier*).

Response 15: MassDEP has reviewed the CRWA's data submittal in support of the above comment and found it to be very satisfactory, with most of the data deemed suitable for assessment and listing

purposes. Furthermore, MassDEP acknowledges that nitrogen (particularly nitrate) levels are significantly elevated at CRWA sampling site 90CS, although they are substantially lower, within this same segment, downstream at site 199S. What is less certain, however, is whether the elevated nitrogen values, in and of themselves, actually constitute an impairment of the beneficial uses designated for this water body. As stated in the CRWA's comment, there is no numerical standard for nitrogen in the Massachusetts Surface Water Quality Standards, nor are there specific guidelines for interpreting nitrogen data in the CALM document, and MassDEP typically does not determine use impairment from data on nitrogen or phosphorus concentration alone. Rather, waters are identified as impaired by nutrients only if a combination of factors, such as wide ranges in DO concentration, high chlorophyll levels or algal or plant "bloom" conditions indicate a response to increased nutrient levels. Such is the case in the next downstream segment, MA72-05, where no less than six nutrient-related causes of impairment are covered by the EPA-approved *Total Maximum Daily Load for Nutrients in the Upper/Middle Charles River, Massachusetts.* Segment MA72-04 is also covered by this TMDL and, while the focus of the TMDL is on controlling total phosphorus, measures to do so will likely also tend to reduce nitrogen loadings to this segment. Nitrogen to phosphorus (N:P) ratios in both segments indicate that phosphorus is the limiting nutrient and should continue to be the target for load reductions to control eutrophic conditions in the Charles River. As such, MassDEP does not find a compelling case for listing "nitrogen" as a stressor to segment MA72-04 at this time.

MassDEP acknowledges the enormous number of dams on rivers and streams in Massachusetts that can affect, to a greater or lesser degree, the hydrology, biology and water quality of those water bodies. However, it is not MassDEP's policy to identify every stream impounded by a dam in Massachusetts as impaired by the stressor "Fish-Passage Barrier." This cause code is only applied in situations where a fish passage structure is in place, but it is functioning poorly or not at all. MassDEP's CALM document states: "If impediments to fish passage (such as dams) exist but no structure has ever been built to allow for fish passage, no impairment decision is currently made." For this reason "Fish-Passage Barrier" is not included as a stressor to this segment. However, like stream flow, fish passage limitation is not a pollutant that would result in the listing of a segment in Category 5 (i.e., the 303d List) and would not be managed through the provisions of the CWA.

Comment 16: MA72-05 / MA72-06 (Charles River) – There are dams along these segments although it is not currently listed for (Fish-Passage Barrier*).

Response 16: Please refer to the section of Response 13 that pertains to MassDEP's policy for assessing and listing limitations to fish passage.

Comment 17: MA72-10 (Stop River) – UMass Boston and CRWA conducted biological monitoring along Stop River in Medfield in 2012 and 2013. The ICI results from 2012 show this site as impacted in comparison to the other sites sampled with very poor performance in certain metrics including Scraper: Filterer, EPT Index, EPT: Chironomidae, and Reference Affinity.

Response 17: Please refer to the section of Response 13 that pertains to the CRWA/UMass-Boston collaborative invertebrate monitoring program. This segment is already listed as impaired by "organic enrichment (sewage) biological indicators" and this stressor would be applicable where deleterious effects on the benthic macroinvertebrate community are noted. It is anticipated that, over time, the implementation of the EPA-approved nutrient TMDL for the Upper Charles Watershed will result in improvements to water quality in the Stop River and that this will be reflected in improvements to its resident biological communities.

Comment 18: MA72-18 (Fuller Brook) – UMass Boston conducted biological monitoring along Fuller Brook in Wellesley in 2013, results from this sampling event show poor water quality and poor habitat quality at the sampling location (See *An Independent Study BIOL 478)*. This water body should be placed

on Alert Status and assessed to determine if there are additional impairments in addition to those listed that are causing poor water quality at this site.

Response 18: Please refer to the section of Response 13 that pertains to the CRWA/UMass-Boston collaborative invertebrate monitoring program. This segment is already listed as impaired by "nutrient/eutrophication biological indicators" based on MassDEP's findings of a moderately impaired benthic macroinvertebrate community in 2002. It is anticipated that, over time, the implementation of the EPA-approved nutrient TMDL for the Upper Charles Watershed will result in improvements to water quality in Fuller Brook and that this will be reflected in improvements to the benthic macroinvertebrate community.

Comment 19: MA72-23 (Sawmill Brook) – UMass Boston conducted biological monitoring along Sawmill Brook in Boston in 2013. The results of this sampling was a very poor water quality score (See *An Independent Study BIOL 478)*. This water body should be placed on Alert Status and assessed to determine if there are additional impairments in addition to those listed that are causing poor water quality at this site.

Response 19: Please refer to the section of Response 13 that pertains to the CRWA/UMass-Boston collaborative invertebrate monitoring program. Note, however, that this segment is already listed as impaired by "organic enrichment (sewage) biological indicators" and this stressor would be applicable where deleterious effects on the benthic macroinvertebrate community are observed. It is anticipated that, over time, the implementation of the EPA-approved nutrient TMDL for the Upper Charles Watershed will result in improvements to water quality in Sawmill Brook and that this will be reflected in improvements to its resident biological communities.

Comment 20: MA72-24 (South Meadow Brook) – UMass Boston conducted biological monitoring along South Meadow Brook in Newton in 2013. The result from this sampling was a very poor water quality score (See *A Biology Honors Thesis)*. This water body should be placed on Alert Status and assessed to determine if there are additional impairments in addition to those listed and addressed through existing TMDLs that are causing poor water quality at this site.

Response 20: Please refer to the section of Response 13 that pertains to the CRWA/UMass-Boston collaborative invertebrate monitoring program. This segment currently appears in Category 4a with EPA-approved TMDLs for bacteria and nutrients in place. Several habitat-related stressors are also noted; however, no historical data and information were available on the status of the biological communities in South Meadow Brook until now. The results of the benthic macroinvertebrate sampling conducted by UMass Boston in this segment will be taken into consideration when completing the next assessment of the Charles River Watershed and, if applicable, this segment may be assigned an "Alert Status." Meanwhile, it is expected that the implementation of the EPA-approved nutrient TMDL for the Upper Charles Watershed will result in improvements to water quality in South Meadow Brook and that this will be reflected in improvements to the benthic macroinvertebrate and other resident aquatic communities.

Comment 21: MA72-28 (Beaver Brook) – UMass Boston conducted biological monitoring along Beaver Brook in Waltham in 2012 and 2013. In 2012, poor water quality was observed, while moderately impacted water quality was observed in 2013. The ICI results from 2012 show this site as impacted in comparison to the other sites sampled with very poor performance in certain metrics including Taxonomic Richness, Scraper: Filterer, EPT Index, and Reference Affinity (See Excerpt From: *Efficacy of Citizen Science in Water Quality Studies: A Macroinvertebrate Biomonitoring Project in the Charles River Watershed, Massachusetts).* In 2013, flow levels were observed to be very low during sampling. This water body should be placed on Alert Status and assessed to determine if there are additional impairments in addition to those listed that are causing poor water quality at this site. This site should be listed for (Low flow alterations*). There are barriers along this segment and therefore it should be listed for (Fish-Passage Barrier*).

Response 21: Please refer to the sections of Response 13 that pertain to the CRWA/UMass-Boston collaborative invertebrate monitoring program and the policy for assessing and listing fish passage issues. Beaver Brook segment MA72-28 currently appears in Category 5 with EPA-approved TMDLs covering bacterial contamination as well as several nutrient-related stressors (i.e., excess algal growth, organic enrichment (sewage) biological indicators, dissolved oxygen, total phosphorus and turbidity). It is anticipated that, over time, the implementation of the EPA-approved nutrient TMDL for the Upper Charles Watershed will result in improvements to water quality in Beaver Brook and that this will be reflected in improvements to its resident macroinvertebrate community.

MassDEP has occasionally observed low flow conditions in this brook in the past and this, in addition to the culverted aspect of the lower 0.6 miles of the stream, led to the addition of the stressor "other flow regime alterations" to this segment. MassDEP has elected not to assign the stressor "low flow alterations" based on limited field observations only. More information pertaining to the frequency and duration of low-flow events in Beaver Brook would be needed before a determination of low-flow impairment could be made. MassDEP will consider the CRWA/UMass-Boston's field observations when completing the next assessment of the Charles River Watershed.

Comment 22: MA72-29 (Cheese Cake Brook) – UMass Boston and CRWA conducted biological monitoring along Cheesecake Brook in Newton in 2012 and 2013. The results indicate very poor water quality in the downstream section (north of Route 16) of this stream. Low flow levels and significant sediment deposits were also observed during both sampling outings. This water body should be placed on Alert Status and assessed to determine if there are additional impairments in addition to those listed and addressed through existing TMDLs that are causing poor water quality at this site. This segment should be listed for (Sedimentation/Siltation*) and (Low flow alterations*) (See Excerpt From: *Efficacy of Citizen Science in Water Quality Studies: A Macroinvertebrate Biomonitoring Project in the Charles River Watershed, Massachusetts).*

Response 22: Please refer to section of Response 13 that pertains to the CRWA/UMass-Boston collaborative invertebrate monitoring program. Cheese Cake Brook, segment MA72-29, currently appears in Category 4a with EPA-approved TMDLs covering bacterial contamination as well as nutrient-related stressors (i.e., excess algal growth, DO saturation and total phosphorus). Additional causes of impairment listed for this segment are "other anthropogenic substrate alterations" and "alteration in stream-side or littoral vegetative covers," both of which are a reflection of the channelization and other habitat degradation that has occurred in this stream. While these are not pollutants requiring a TMDL, it is anticipated that, over time, the implementation of the EPA-approved nutrient TMDL for the Upper Charles Watershed will result in reduced solids loading and improved water quality in Cheese Cake Brook.

MassDEP does not believe there is sufficient evidence at this time to assign the stressor "low flow alterations" to this segment based on the limited field observations. More information pertaining to the frequency and duration of low-flow events in Cheese Cake Brook would be needed before a determination of low-flow impairment could be made. MassDEP will consider the CRWA/UMass-Boston's field observations when completing the next assessment of the Charles River Watershed.

Comment 23: MA72-36 (Charles River) – A large sediment island continues to impede river recreation in this stretch. Photos and sediment sampling results are attached. This segment should be listed for (Sedimentation/Siltation*) or placed on Alert Status.

Response 23: MassDEP is not inclined to add the stressor "sedimentation/siltation" to this segment at this time. More information pertaining to the source, character and extent of the sand bars is needed to determine whether one or more designated uses are, in fact, impaired and, if so, to develop the appropriate steps to restore those uses. Nonetheless, MassDEP will consider the CRWA/UMass-Boston's

comment when completing the next assessment of the Charles River Watershed and, if applicable, this segment may be assigned an "Alert Status."

Comment 24: MA72-11 (Muddy River) – UMass Boston and CRWA conducted biological monitoring along the Muddy River in Brookline in 2012 and 2013. The results indicate very poor water quality in the River. Low flow levels and significant sediment deposits were also observed during both sampling outings. This site is presently listed for Total Phosphorus but no TMDL number is listed as addressing it although the Muddy River watershed is included in the Lower Charles Phosphorus TMDL.

Response 24: Please refer to the section of Response 13 that pertains to the CRWA/UMass-Boston collaborative invertebrate monitoring program. MassDEP concurs that water quality in Muddy River is poor and this segment (MA72-11) appears in Category 5 of the Integrated List (i.e., the 303(d) List) with a combination of eleven different pollutant and non-pollutant impairment codes. MassDEP will consider the observations of low flow and sedimentation when completing the next assessment of the Charles River Watershed. Contrary to what is implied in this comment, the Lower Charles Phosphorus TMDL does not apply to the Muddy River segment MA72-11. Only the reach of the main stem Charles River extending from the Watertown Dam to the New Charles River Dam in Boston is covered by this TMDL.

Center for Biological Diversity

(The comment letter began: "Ocean acidification is an overarching threat to ocean ecosystems and fisheries that depend on a healthy environment. Massachusetts should provide leadership on ocean acidification. The state has an opportunity to take steps to address this important water quality problem before it is too late. On behalf of the Center for Biological Diversity, I am writing to request that Massachusetts amend its Proposed 303(d) Integrated List of Waters to identify coastal waters as threatened or impaired water bodies due to ocean acidification under section 303(d) of the Clean Water Act. Massachusetts' 2014 draft list lacks any information on ocean acidification, and does not describe the steps that the state took to assess coastal waters for impairments by ocean acidification. EPA has directed states to evaluate information on ocean acidification and to include such description in their integrated reports. At minimum, Massachusetts must evaluate all readily available data on pH and ocean acidification to determine if water quality standards are being attained. Ocean acidification is already causing measurable impacts on coastal and bay waters. The state has a duty to look at the information that is available to it to evaluate the condition of its coastal waters in the face of ocean acidification. Some of the most recent science with specific relevance to this determination is summarized below and enclosed, and the Center's prior submission is incorporated herein by reference."

Note: A brief narrative summary of pertinent scientific literature on ocean acidification and its effects on marine life followed these introductory remarks. A compact disc containing over a dozen research articles was also submitted. Some of the following comments were paraphrased or excerpted from the lengthier comment letter.)

Comment 25: Several water quality standards are threatened or not attained. Massachusetts must list ocean waters as impaired for ocean acidification because (1) designated uses habitat for fish, other aquatic life and wildlife are not attained due to ocean acidification; (2) ocean acidification is affecting the chemical composition of marine water and interfering with fish and shellfish propagation; (3) numeric pH criteria are not attained or threatening nonattainment; and (4) antidegradation policies are violated by continuing ocean acidification.

Response 25: MassDEP concurs that ocean acidification is a serious issue of global concern and the Commonwealth plans to expand its ocean monitoring and assessment activities in the future as part of its strategy for assessing and managing the effects of climate change. However, Massachusetts, like most coastal states, does not presently have sufficient data and information to suggest that the four conditions associated with ocean acidification listed above currently exist in Massachusetts' ocean waters. In

accordance with EPA regulations and guidance pertaining to section 303(d) of the CWA, MassDEP only assesses and lists waters for which credible scientific data are available *from those waters.* While data and information pertaining to ocean acidification are available from other regions of the world, as evidenced from the literature cited by the Center for Biological Diversity, none of the data and information contained in the submitted documents were collected from waters within Massachusetts' jurisdiction. Therefore, MassDEP does not agree that these waters should be placed on the 303(d) List.

Comment 26: Massachusetts has an independent duty to evaluate ocean acidification during its water quality assessment. Specifically, EPA directed states to evaluate ocean acidification data for their 2012 integrated reports. The Clean Water Act provides that states must "evaluate all existing and readily available water quality-related data and information to develop the list." 40 C.F.R. § 130.7(b)(5); *see also Sierra Club v. Leavitt*, 488 F.3d 904 (11th Cir. 2007). Beyond reviewing the information submitted by the Center, Massachusetts must also evaluate pH, biological information, and other monitoring data that is available to it and seek out ocean acidification data from state, federal, and academic research institutions. EPA's 2010 memo and Integrated Report Guidance discussed several sources, including the National Oceanic and Atmospheric Administration data. There are now several sources for high resolution ocean acidification data. Massachusetts must obtain and evaluate data from research institutions, including but not limited to:

- NERACOOS, the Northeastern Regional Association of Coastal and Ocean Observing Systems http://www.neracoos.org/
- National Ocean Data Center http://www.nodc.noaa.gov/
- Integrated Ocean Observing System http://www.ioos.noaa.gov/
- Woods Hole Oceanographic Institute http://www.whoi.edu/

Response 26: The regulation governing § 303(d) that requires states to "assemble and evaluate all existing and readily available water quality-related data and information to develop the § 303(d) list" does not mandate that states use all data and information regardless of the quality or representativeness of that information. In fact, the EPA strongly encourages states to establish minimum data requirements and acceptable criteria for submitting data for consideration for listing. To that end, MassDEP has established criteria for receiving and evaluating scientific data and information from outside sources, such as other state and federal agencies, universities and citizen monitoring groups. MassDEP will accept and review data and information pertaining to the quality of Massachusetts' waters if the following are provided: 1) an appropriate Quality Assurance Project Plan (QAPP) including a laboratory Quality Assurance/Quality Control (QA/QC) plan, 2) use of a state certified lab (certified for the applicable analyses), 3) a description of data validation and management QA/QC, and 4) all of the information is documented in a citable report that includes the QA/QC analyses.

MassDEP does not dispute the assertion by the Center for Biological Diversity that the data and information they provided on ocean acidification is from highly credible scientific journals and reports. What is much less certain is the representativeness and applicability of this information to the specific coastal and marine waters of Massachusetts. As indicated earlier, none of the data and information contained in the submitted documents were collected from waters within Massachusetts' jurisdiction. In fact, there are not a lot of data available from Massachusetts' marine waters that can be used to assess potential effects of ocean acidification.

MassDEP has reviewed data and information provided by the organizations listed above, but most of these monitoring programs do not contain representative data from Massachusetts' waters. For example, information pertaining to one of the NERACOOS projects, the Northeast Coastal Acidification Network. (NECAN) can be found at www.neracoos.org/necan. NECAN is currently completing a report on the state of the science for ocean and coastal acidification in the Northeast. However, no routine monitoring for pH or pCO_2 is conducted in Massachusetts waters. Another program element of NERACOOS involves the maintenance, by the University of Maine, of one monitoring buoy in Massachusetts near Cape Ann, but there are no pH or pCO_2 sensors on that buoy. Finally, the Woods Hole Oceanographic Institution (WHOI)

Martha's Vineyard Coastal Observatory (MVCO) (http://www.whoi.edu/mvco) also deploys sensors, but these sensors, until very recently, did not measure pH or pCO_2. Sensors for pH and pCO_2 were installed at the MVCO in 2014.

A few pH or pCO_2 sensors have been deployed in coastal waters near Massachusetts. Also part of NERACOOS, the University of New Hampshire (UNH) operates buoys with sensors in New Hampshire waters. They measure pCO_2, but not pH, on a continuous basis. Early in 2015 UNH established a monitoring station in Casco Bay at the Southern Maine Community College (SMCC) in South Portland, ME to measure pH, pCO_2 and other water quality parameters.

It can be seen, from the information above, that monitoring systems are gradually being established to measure pH, pCO_2 and other variables in ocean water related to climate change. However, most of these programs are new, monitoring sites are scattered, and periods of record are too short to allow for the determination of natural background conditions or trends in marine pH and other important indicators.

Comment 27: Massachusetts must also analyze its own water quality monitoring data for information that may be relevant to ocean acidification, including pH measurements. Massachusetts has failed to meet these requirements. To correct its integrated report, the state needs to obtain and evaluate all relevant parameters of ocean acidification data available from these sources that serve as clearinghouses for ocean acidification data, especially those that are specific to Massachusetts' waters.

Response 27: As indicated above, there presently exist very little data from Massachusetts' ocean waters to support assessment and listing decisions under the CWA, although limited monitoring has recently begun. In 2009, the Massachusetts Office of Coastal Zone Management (CZM) released an Ocean Management Plan, part of which included a Baseline Assessment of Massachusetts marine waters. At that time, CZM staff reviewed pH measurements taken from Massachusetts Bay by the Massachusetts Water Resources Authority (MWRA). No violations of the pH standard were observed, and data were insufficient for determining long-term trends. The 2009 baseline assessment was recently updated and released with the (currently draft) 2014 Ocean Management Plan and this revision can be accessed at http://www.mass.gov/eea/waste-mgnt-recycling/coasts-and-oceans/mass-ocean-plan/2014-draft-ocean-plan.html. One new monitoring effort is described as follows. Between December 2011 and June 2012, Stellwagen Bank National Marine Sanctuary (SBNMS) staff deployed instruments to measure CO_2, pH, oxygen, temperature, salinity, and beam attenuation on the Traffic Separation Scheme Test Auto Buoy (TSS Test AB) located at 42º 19.946' N, 70º 26.640' W at a depth of 85 m. The purpose of the project was to evaluate the feasibility of incorporating long-term ocean acidification monitoring sensors on existing passive acoustic monitoring moorings. While the SBNMS serves as a sentinel site within the National Oceanic and Atmospheric Administration (NOAA) Ocean and Great Lakes Acidification Research Plan, it should be noted that it lies outside of Massachusetts' jurisdictional waters. From all of the previous discussion, it is plain that monitoring to assess acidification in Massachusetts' ocean waters is in its infancy, and more funding will be needed to support a focused, representative monitoring program to address this important issue in the future.

Comment 28: In summary, Massachusetts' coastal waters are imperiled by ocean acidification. The state should list its waters as threatened or impaired under the Clean Water Act. At minimum, the state must evaluate all available data on pH and ocean acidification for impairments of both numeric and narrative water quality standards. Delaying action will only allow the problem and impacts to become more severe.

Response 28: MassDEP agrees that ocean acidification is an issue of global concern that must be closely monitored and that excess carbon dioxide emissions contributing to this problem should be managed under the Clean Air Act through strict emission limits on greenhouse gases (GHG). MassDEP acknowledges further that the 303(d) program under the Clean Water Act has the potential to complement and aid these efforts by ensuring that, over time, waters that are impaired due to ocean acidification are identified and targeted for restoration. To that end, Massachusetts will list waters not

meeting water quality standards, including marine pH, where data and assessment methods are available.

On August 7, 2008, Massachusetts Governor Deval Patrick signed the Global Warming Solutions Act, which in addition to GHG reduction mandates, also calls for the secretary to "convene an advisory committee to analyze strategies for adapting to the predicted impacts of climate change in the commonwealth." Furthermore, Massachusetts has joined with other northeastern states in addressing GHG emissions through the Regional Greenhouse Gas Initiative (RGGI), a cap-and-trade program designed to reduce GHG emissions from electricity generation. Massachusetts will continue to monitor and manage the effects of climate change on its marine resources through the implementation of the strategies set forth in the *Massachusetts Climate Change Adaptation Report* (http://www.mass.gov/eea/docs/eea/energy/cca/eea-climate-adaptation-report.pdf), published in 2011, and the Ocean Management Plan.

U. S. Environmental Protection Agency Region 1

Comment 29: Please consider Dark Brook and its unnamed tributary in Auburn, MA within the Blackstone River watershed (MA51) for inclusion in the Massachusetts Year 2014 Integrated List of Waters pursuant to sections 305(b), 314 and 303(d) of the Clean Water Act. Detailed USEPA studies during the winter of 2013-2014 show that this stream is highly impaired by chloride concentrations that exceed both acute and chronic water-quality standards for aquatic life and ecosystem health. On March 21, 2014, technical information supporting this submittal was given to you by the U. S. Environmental Protection Agency's Region I New England office in a report titled "Acute Road Salt Contamination of Dark Brook and the Auburn Water District's Church Street Wellfield in Auburn, Massachusetts," dated March 2014.

Response 29: MassDEP has reviewed the above-cited data report and other documentation pertaining to the effects of deicing practices on ground and surface waters in the watershed of Dark Brook in Auburn, MA. All data were determined to be acceptable for use in assessing and listing waters in accordance with sections 305(b) and 303(d) of the CWA. EPA's study found a strong correlation between aqueous chloride concentrations and specific conductance (R^2=.99). By continuously monitoring specific conductance *in situ*, multiple exceedances of EPA acute and chronic criteria for chloride were demonstrated in Dark Brook and an unnamed tributary to this brook. Based on this research, MassDEP concurs that these streams are contaminated by chloride from road-salting practices, and "chloride" will be added to the list of impairments already attributed to Dark Brook (i.e., "Aquatic Macroinvertebrate Bioassessments", "Non-native Aquatic Plants" and "Escherichia coli"). In addition, a new segment will be created for the unnamed tributary to Dark Brook, and this will be added to the 303(d) List as impaired by "chloride."

155 FERC ¶ 62,117
UNITED STATES OF AMERICA
FEDERAL ENERGY REGULATORY COMMISSION

Essential Power Massachusetts, LLC Project No. 2334-055

ORDER MODIFYING AND SUSPENDING LICENSE ARTICLES 403 AND 404

(Issued May 16, 2016)

1. On March 30, 2016, Essential Power Massachusetts, LLC, licensee for the Gardners Falls Project No. 2334, filed a request to discontinue operation of the downstream fish passage facilities required by Article 403 and 404 of the project license.[1] The project is located on the Deerfield River in Franklin County, Massachusetts. The project does not occupy federal lands.

REQUIREMENTS AND BACKGROUND

2. License Article 403 requires the licensee to file, for Federal Energy Regulatory Commission (Commission) approval, detailed design drawings of the proposed downstream fish passage facilities together with a plan and schedule to construct and install the facilities. The licensee is required to prepare the design drawings and schedule after consultation with the U.S. Fish and Wildlife Service (FWS) and the Massachusetts Division of Fisheries and Wildlife (Massachusetts DFW). In addition, the Article requires that the facilities operate April 1 through June 15 and from September 15 to November 15 each year.

3. License Article 404 requires the licensee to file, for Commission approval, a plan to monitor the effectiveness of the permanent downstream fish passage facilities required by Article 403 and associated operational flows to safely and efficiently pass Atlantic salmon smolts down the Deerfield River past the Gardners Falls Project. The licensee's plan was approved by order dated June 1, 2001[2] and the as-built drawings under Article 403 were approved by the Commission on November 1, 2002.

[1] Order Issuing New License (79 FERC ¶ 61,007), issued April 4, 1997.

[2] Order Approving Final Downstream Fish Passage Effectiveness Report and Recommended Modifications (95 FERC ¶ 62,225).

LICENSEE'S REQUEST

4. In its filing, the licensee requested to discontinue operation of the downstream fish passage facilities approved in Article 403, suspend monitoring of the facilities required in Article 404, and delete Exhibit F drawings F-8 through F-18 from its project license. On May 6, 2016, Commission staff requested that the licensee clarify if downstream facilities would actually physically be removed from the project, necessitating deletion of certain Exhibit F drawings. In response, the licensee stated that facilities would not physically be removed and would therefore rescind its request to delete the aforementioned Exhibits.[3]

CONSULTATION

5. The licensee's filing indicates that it was notified by the Massachusetts DFW on February 24, 2016, that it was no longer necessary for hydroelectric project owners on the Deerfield River to operate downstream fish passage facilities at their projects for Atlantic salmon smolts beginning in 2016. In its letter, it stated that the Massachusetts Atlantic salmon restoration effort ended in 2013 and that it expected any Atlantic salmon fry to smolt and out-migrate after two years in freshwater (2015). The FWS concurred with the Massachusetts DFW's comments and the licensee's request on March 24, 2016.

CONCLUSION

6. Articles 403 and 404 were intended to support Atlantic salmon restoration efforts in the Deerfield River. The resource agencies agree that the efforts are not likely to provide any measureable benefit without continued stocking efforts and that the two years should have provided sufficient time for any fish stocked in 2013 to smolt and out-migrate. In the event that the Massachusetts DFW reinitiates Atlantic salmon restoration efforts in the future, the Commission reserves the right to reinstate Articles 403 and 404. For these reasons, the licensee's request to discontinue operation of downstream fish passage facilities and suspend the requisite effectiveness monitoring is reasonable and therefore, should be approved.

[3] Email communication on May 9, 2016 with the licensee and Joseph Enrico, Commission staff.

The Director orders:

(A) Essential Power Massachusetts, LLC's (licensee) request, filed with the Federal Energy Regulatory Commission (Commission) on March 30, 2016, to suspend the requirements of Articles 403 and 404 of the license for the Gardner Falls Hydroelectric Project No. 2334, as modified in paragraph B, is approved.

(B) The Commission reserves the right to reinstate Articles 403 and 404 based on fishery management information provided by the licensee, the U.S. Fish and Wildlife Service or the Massachusetts Division of Fisheries and Wildlife.

(C) This order constitutes final agency action. Any party may file a request for rehearing of this order within 30 days from the date of its issuance, as provided in section 313(a) of the Federal Power Act, 16 U.S.C. § 825*l* (2012), and the Commission's regulations at 18 CFR § 385.713 (2015). The filing of a request for hearing does not operate as a stay of the effective date of this order, or of any other date specified in this order. The licensee's failure to file a request for rehearing shall constitute acceptance of this order.

Thomas J. LoVullo
Chief, Aquatic Resources Branch
Division of Hydropower Administration
and Compliance

Document Content(s)

ATTACHMENT A-5

Cogentrix

Essential Power Massachusetts, LLC

15 Agawam Ave
West Springfield, MA 01089
413-730-4721

January 13, 2017

VIA E-File

John Spain, P.E.
Regional Engineer
Federal Energy Regulatory Commission
Division of Dam Safety and Inspections
New York Regional Office
19th West 34th Street – Suite 400
New York, NY 10001

Gardners Falls Project
P-2334-MA (NATDAM No. MA00853)
EAP Exemption Annual Reconnaissance

Dear Mr. Spain:

Essential Power Massachusetts, LLC owns and operates the Gardners Falls Project on the Deerfield River in Franklin County, MA. This letter is to notify the Commission that there have been no changes in land use upstream or downstream of the Gardners Falls Project during the 2016 calendar year that would affect the hazard potential classification. This notification is being filed in accordance with 18 CFR §12.21 and the Commission's Letter dated June 11, 1997, exempting the Project from EAP requirements.

If you have any questions, or require additional information, please do not hesitate to contact me (413) 730-4721 (email: kimmarsili@cogentrix.com)

Sincerely,

Kim Marsili
General Manager,
Gardner Falls Facility

cc: Tony Halcomb (Cogentrix)
John Collins (Cogentrix)

FEDERALLY LISTED ENDANGERED AND THREATENED SPECIES IN MASSACHUSETTS

COUNTY	SPECIES	FEDERAL STATUS	GENERAL LOCATION/HABITAT	TOWNS
Barnstable	Piping Plover	Threatened	Coastal Beaches	All Towns
	Roseate Tern	Endangered	Coastal beaches and the Atlantic Ocean	All Towns
	Northeastern beach tiger beetle	Threatened	Coastal Beaches	Chatham
	Sandplain gerardia	Endangered	Open areas with sandy soils.	Sandwich and Falmouth.
	Northern Red-bellied Cooter	Endangered	Inland Ponds and Rivers	Bourne (north of the Cape Cod Canal)
	Red Knot[1]	Threatened	Coastal Beaches and Rocky Shores, sand and mud flats	Coastal Towns
	Northern Long-eared Bat	Threatened Final 4(d) Rule	Winter- mines and caves, Summer – wide variety of forested habitats	Statewide
Berkshire	Bog Turtle	Threatened	Wetlands	Egremont and Sheffield
	Northern Long-eared Bat	Threatened Final 4(d) Rule	Winter- mines and caves, Summer – wide variety of forested habitats	Statewide
Bristol	Piping Plover	Threatened	Coastal Beaches	Fairhaven, Dartmouth, Westport
	Roseate Tern	Endangered	Coastal beaches and the Atlantic Ocean	Fairhaven, New Bedford, Dartmouth, Westport
	Northern Red-bellied Cooter	Endangered	Inland Ponds and Rivers	Taunton
	Red Knot[1]	Threatened	Coastal Beaches and Rocky Shores, sand and mud flats	Coastal Towns
	Northern Long-eared Bat	Threatened Final 4(d) Rule	Winter- mines and caves, Summer – wide variety of forested habitats	Statewide
Dukes	Roseate Tern	Endangered	Coastal beaches and the Atlantic Ocean	All Towns
	Piping Plover	Threatened	Coastal Beaches	All Towns
	Northeastern beach tiger beetle	Threatened	Coastal Beaches	Aquinnah and Chilmark
	Sandplain gerardia	Endangered	Open areas with sandy soils.	West Tisbury
	Red Knot[1]	Threatened	Coastal Beaches and Rocky Shores, sand and mud flats	Coastal Towns
	Northern Long-eared Bat	Threatened Final 4(d) Rule	Winter- mines and caves, Summer – wide variety of forested habitats	Statewide

Updated 02/05/2016

FEDERALLY LISTED ENDANGERED AND THREATENED SPECIES IN MASSACHUSETTS

COUNTY	SPECIES	FEDERAL STATUS	GENERAL LOCATION/HABITAT	TOWNS
Essex	Small whorled Pogonia	Threatened	Forests with somewhat poorly drained soils and/or a seasonally high water table	Gloucester, Essex and Manchester
	Piping Plover	Threatened	Coastal Beaches	Gloucester, Essex, Ipswich, Rowley, Revere, Newbury, Newburyport and Salisbury
	Red Knot[1]	Threatened	Coastal Beaches and Rocky Shores, sand and mud flats	Coastal Towns
	Northern Long-eared Bat	Threatened Final 4(d) Rule	Winter- mines and caves, Summer – wide variety of forested habitats	Statewide
Franklin	Northeastern bulrush	Endangered	Wetlands	Montague, Warwick
	Dwarf wedgemussel	Endangered	Mill River	Whately
	Northern Long-eared Bat	Threatened Final 4(d) Rule	Winter- mines and caves, Summer – wide variety of forested habitats	Statewide
Hampshire	Small whorled Pogonia	Threatened	Forests with somewhat poorly drained soils and/or a seasonally high water table	Hadley
	Puritan tiger beetle	Threatened	Sandy beaches along the Connecticut River	Northampton and Hadley
	Dwarf wedgemussel	Endangered	Rivers and Streams.	Hatfield, Amherst and Northampton
	Northern Long-eared Bat	Threatened Final 4(d) Rule	Winter- mines and caves, Summer – wide variety of forested habitats	Statewide
Hampden	Small whorled Pogonia	Threatened	Forests with somewhat poorly drained soils and/or a seasonally high water table	Southwick
	Northern Long-eared Bat	Threatened Final 4(d) Rule	Winter- mines and caves, Summer – wide variety of forested habitats	Statewide
Middlesex	Small whorled Pogonia	Threatened	Forests with somewhat poorly drained soils and/or a seasonally high water table	Groton
	Northern Long-eared Bat	Threatened Final 4(d) Rule	Winter- mines and caves, Summer – wide variety of forested habitats	Statewide
Nantucket	Piping Plover	Threatened	Coastal Beaches	Nantucket
	Roseate Tern	Endangered	Coastal beaches and the Atlantic Ocean	Nantucket
	American burying beetle	Endangered	Upland grassy meadows	Nantucket
	Red Knot[1]	Threatened	Coastal Beaches and Rocky Shores, sand and mud flats	Coastal Towns
	Northern Long-eared Bat	Threatened Final 4(d) Rule	Winter- mines and caves, Summer – wide variety of forested habitats	Statewide

Updated 02/05/2016

FEDERALLY LISTED ENDANGERED AND THREATENED SPECIES IN MASSACHUSETTS

COUNTY	SPECIES	FEDERAL STATUS	GENERAL LOCATION/HABITAT	TOWNS
Plymouth	Piping Plover	Threatened	Coastal Beaches	Scituate, Marshfield, Duxbury, Plymouth, Wareham and Mattapoisett
	Northern Red-bellied Cooter	Endangered	Inland Ponds and Rivers	Kingston, Middleborough, Carver, Plymouth, Bourne, Wareham, Halifax, and Pembroke
	Roseate Tern	Endangered	Coastal beaches and the Atlantic Ocean	Plymouth, Marion, Wareham, and Mattapoisett.
	Red Knot[1]	Threatened	Coastal Beaches and Rocky Shores, sand and mud flats	Coastal Towns
	Northern Long-eared Bat	Threatened Final 4(d) Rule	Winter- mines and caves, Summer – wide variety of forested habitats	Statewide
Suffolk	Piping Plover	Threatened	Coastal Beaches	Revere, Winthrop
	Red Knot[1]	Threatened	Coastal Beaches and Rocky Shores, sand and mud flats	Coastal Towns
	Northern Long-eared Bat	Threatened Final 4(d) Rule	Winter- mines and caves, Summer – wide variety of forested habitats	Statewide
Worcester	Small whorled Pogonia	Threatened	Forests with somewhat poorly drained soils and/or a seasonally high water table	Leominster
	Northern Long-eared Bat	Threatened Final 4(d) Rule	Winter- mines and caves, Summer – wide variety of forested habitats	Statewide

[1]Migratory only, scattered along the coast in small numbers

-Eastern cougar and gray wolf are considered extirpated in Massachusetts.
-Endangered gray wolves are not known to be present in Massachusetts, but dispersing individuals from source populations in Canada may occur statewide.
-Critical habitat for the Northern Red-bellied Cooter is present in Plymouth County.

Updated 02/05/2016

DEERFIELD RIVER WATERSHED

Assessment Report

2004-2008

Downstream of Fife Brook Dam

The Commonwealth of Massachusetts

Executive Office of Environmental Affairs

The Commonwealth of Massachusetts
Executive Office of Environmental Affairs
251 Causeway Street, Suite 900
Boston, MA 02114-2119

Mitt Romney
GOVERNOR

Kerry Healey
LIEUTENANT GOVERNOR

Ellen Roy Herzfelder
SECRETARY

Tel: (617) 626-1000
Fax: (617) 626-1181
or (617) 626-1180
http://www.state.ma.us/envir

November 19, 2004

Dear Friends of the Deerfield River Watershed:

It is with great pleasure that I present you with the Assessment Report for the Deerfield River Watershed. The report helped formulate the 5-year watershed action plan that will guide local and state environmental efforts within the Deerfield River Watershed over the next five years. The report expresses some of the overall goals of the Executive Office of Environmental Affairs, such as improving water quality, restoring natural flows to rivers, protecting and restoring biodiversity and habitats, improving public access and balanced resource use, improving local capacity, and promoting a shared responsibility for watershed protection and management.

The Deerfield River Watershed Assessment Report was developed with input from the Deerfield River Watershed Team and multiple stakeholders including watershed groups, state and federal agencies, Regional Planning Agencies and, of course, the general public from across the Watershed. We appreciate the opportunity to engage such a wide group of expertise and experience as it allows the state to focus on the issues and challenges that might otherwise not be easily characterized. From your input we have identified the following priority issues:

- Water Quantity
- Water Quality
- Fish Communities
- Wildlife and Terrestrial Habitat
- Open Space
- Recreation

I commend everyone involved in this endeavor. Thank you for your dedication and expertise. If you are not currently a participant, I strongly encourage you to become active in the Deerfield River Watershed restoration and protection efforts.

Regards,

Ellen Roy Herzfelder

Ellen Roy Herzfelder

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List of Abbreviations

BRPC	Berkshire Regional Planning Commission
cfs	cubic feet per second
CMR	Code of Massachusetts Regulations
COE	United States Corps of Engineers
ConEd	Consolidated Edison
CRASC	Connecticut River Atlantic Salmon Commission
DO	Dissolved Oxygen
DRWA	Deerfield River Watershed Association
EOEA	Executive Office of Environmental Affairs
FERC	Federal Energy Regulatory Commission
FRCOG	Franklin Regional Council of Governments
ft/mi	feet per mile
gpd	gallons per day
gpm	gallons per minute
IWPA	Interim Wellhead Protection Area
MDCR	Massachusetts Department of Conservation and Recreation
MDEP	Massachusetts Department of Environmental Protection
MDFW	Massachusetts Department of Fish and Wildlife
MDPH	Massachusetts Department of Public Health
mi^2	square miles
mgd	Million gallons per day
mg/l	milligrams per liter
MS4s	Municipal Separate Storm Sewer Systems
MWI	Massachusetts Watershed Initiative
MWRC	Massachusetts Water Resource Commission
MWQS	Massachusetts Water Quality Standards
msl	Mean Sea Level
NPDES	National Pollution Discharge Elimination System
ntu	Nephlometric Turbidity Units
ppm	parts per million
SWQS	State Water Quality Standards
TMDL	Total Maximum Daily Loads
µg/l	microgram per liter
USFWS	United State Fish and Wildlife Service
USGen	USGen New England Inc.
USGS	United States Geological Survey
VDFW	Vermont Department of Fish and Wildlife
VWQS	Vermont Water Quality Standards
YAEC	Yankee Atomic Electric Company
WAP	Watershed Action Plan
WMA	Water Management Act
WMZ	Waste Management Zones

1 INTRODUCTION

The Deerfield River Watershed[1] is a part of the 27 major river basins that lie within the Commonwealth of Massachusetts. The Deerfield River, a tributary to the Connecticut River, is located in western Massachusetts. The watershed supports a wide variety of ecological, recreational, and commercial uses, and there are many active stakeholders that have a vested interest in maintaining a high degree of watershed quality and stewardship.

This watershed assessment summarizes much of the existing physical, ecological, and social information that is currently available for the Deerfield River Watershed. Information has been gathered from numerous sources including several federal, state, and municipal agencies as well as non-governmental organizations, universities, and business interests.

This watershed assessment is written as part of the five-year watershed cycle under the Massachusetts Watershed Initiative (MWI) and will be a useful source of information for the citizens of the watershed as well as for municipalities, government agencies, private and non-profit organizations, schools, and research institutions. The watershed assessment also identifies priority issues currently affecting the watershed's resources.

In addition, this watershed assessment will form the basis for a Watershed Action Plan (WAP) that will be subsequently prepared with the assistance of community input and watershed partners. The forthcoming watershed action plan will address the priority issues currently affecting the resources within the Deerfield River Watershed, and define priority actions to protect, improve, and restore these watershed resources.

[1] A watershed is an area of land that catches precipitation and in turn drains or seeps the resulting runoff into a marsh, stream, river, lake, or groundwater. Similar terms include basin, subwatershed, drainage basin, catchment, and catch basin.

2 GENERAL DESCRIPTION OF THE WATERSHED

The Deerfield River begins near the towns of Glastenbury and Stratton in Vermont and flows approximately 70 miles mostly south and east to its confluence with the Connecticut River in Greenfield, Massachusetts (Figure 2.0-1). The watershed drainage area is 665 square miles with about half the area in southern Vermont (318 square miles) and half in western Massachusetts (347 square miles).

The Deerfield River Watershed is bordered by the Connecticut River Watershed to the east, the West River Watershed to the north, the Hudson-Hoosic River Watershed to the southwest, and the Westfield River Watershed to the southeast. There are 149 rivers, streams, brooks, or creeks in the Massachusetts portion of the Deerfield River Watershed covering 345 total river miles (MDEP 2003a). There are also 27 lakes, ponds, or impoundments in the watershed covering 749 acres.

2.1 Subwatersheds

The entire Deerfield River Watershed is comprised of 12 major subwatersheds (Figure 2.0-1).

East Branch Deerfield River Subwatershed

The East Branch Deerfield River subwatershed has a drainage area of 36.9 square miles with Grout Pond (84 acres) and Somerset Reservoir (1,568 acres) forming its headwaters within Stratton and Somerset, Vermont. From Somerset Reservoir, the East Branch flows south for approximately 5.5 miles until it reaches the mainstem of Deerfield River, just upstream of Searsburg Impoundment in Searsburg, Vermont (VANR 2003).

North Branch Deerfield River Subwatershed

The North Branch Deerfield River enters Harriman Reservoir approximately 2 miles east of where the mainstem Deerfield River enters, and drains 55.9 square miles of land northeast of Harriman Reservoir. The North Branch begins in the Green Mountain National Forest, near Mount Snow, in Dover, Vermont and flows approximately 11 miles to Wilmington, Vermont, before entering Harriman Reservoir (VANR 2003).

West Branch Deerfield River Subwatershed

The West Branch Deerfield River drains an area of 31.8 square miles (VANR 2003), and begins in Woodford, Vermont within a large wetland complex and flows approximately 10.5 miles before entering the mainstem Deerfield River in Readsboro, Vermont.

Pelham Brook Subwatershed

The total drainage area of the subwatershed is 13.7 square miles. Pelham Brook begins at the outlet of Pelham Lake in Rowe, Massachusetts, and flows southwest for approximately 4.9 miles through a narrow and steep valley before entering the mainstem Deerfield River in Charlemont, Massachusetts. Land use is comprised primarily of forest (87.1%), agricultural (4.0%), and residential (3.9%) (MDEP 2003a).

Cold River Subwatershed

The Cold River drains an area of 31.7 square miles and lies on the western border of the Deerfield River Watershed and flows south through Florida, Massachusetts then east through Savoy and Charlemont,

Massachusetts before entering the mainstem Deerfield River. Most of its 14 river miles are characterized by a steep gradient flowing through a narrow river valley. Land use in the subwatershed is primarily forest (93%) with a small number of farms (2%) and residential properties (2%) (MDEP 2003a).

Chickley River Subwatershed

Located in the southern portion of the Deerfield River Watershed, the Chickley River flows 8.7 miles east and north through Savoy and Hawley, Massachusetts before entering the Deerfield River in Charlemont, Massachusetts approximately 2 miles downstream of the Cold River confluence. Much of the 27.4 square mile subwatershed is forested (93%) with some farmland located on floodplains in Hawley, Massachusetts (2% agriculture) (MDEP 2003a).

Mill Brook Subwatershed

Mill Brook begins in Heath, Massachusetts and flows south through a steep, narrow valley for approximately 5.7 miles to its confluence with the Deerfield River in Charlemont, Massachusetts. A tributary, Davis Mine Brook, enters Mill Brook just south of the Heath, Massachusetts border. The total drainage area of the subwatershed is approximately 15 square miles. Land use is primarily forest (90%), agricultural (6%), and residential (3%) (MDEP 2003a).

Clesson Brook Subwatershed

The headwaters of Clesson Brook begin at an unnamed pond in Hawley, Massachusetts and then flow through Cox Pond. From the outlet of Cox Pond the brook flows easterly through steep terrain entering Buckland, Massachusetts, before flowing southeasterly until it reaches Buckland Four Corners. From this point, the brook flows northeast with a lower gradient and the floodplain widens which allows farming. Clesson Brook then continues to its confluence with the Deerfield River in Buckland, Massachusetts. Land use in the 21.2 square miles subwatershed is primarily forest (81.4%), agriculture (9.6%), and open land (4.7%) (MDEP 2003a).

North River Subwatershed

The North River is formed at the confluence of the East and West Branches of the North River in Colrain, Massachusetts and flows approximately 3 miles through Shelburne, Massachusetts to its confluence with the Deerfield River. The East and West Branches flow south from their headwaters in Halifax and Whitingham, Vermont through Colrain and Heath, Massachusetts. The total drainage area of the North River Subwatershed is 92.9 square miles; most of this area is very hilly terrain, which results in very flashy streamflows. Fifty-two percent (48.4 square miles) of the watershed lies in Massachusetts with land use totaling 83% forest, 9% agriculture, and 3% residential (MDEP 2003a).

South River Subwatershed

The South River begins at the outlet of Ashfield Pond in Ashfield, Massachusetts and flows east then north through Conway, Massachusetts to its confluence with the mainstem Deerfield River approximately 4 miles downstream of the Station No. 2 Dam. Agriculture and residential properties dominate the floodplains in the lower 7 miles of river where the valley widens. Overall, land use in the 26.3 square miles subwatershed is 77% forest, 13% agriculture, 6% residential, and 2% open land (MDEP 2003a).

Green River Subwatershed

The Green River begins in Marlboro, Vermont and flows east through Halifax, Vermont into Guilford, Vermont where it turns south toward Massachusetts for a total of 13 river miles in Vermont. Once in Massachusetts, the Green River flows approximately 20 miles south through Leyden and Greenfield, Massachusetts to its confluence with the Deerfield River. The total drainage area of the Green River subwatershed is 89.8 square miles. Land use in the Massachusetts portion of the subwatershed (52.6 square miles) is primarily forest (65%) and a nearly equal amount of agricultural and residential (13% and 11% respectively) land with the majority of the residential properties in the Town of Greenfield (MDEP 2003a).

Deerfield River Mainstem Subwatershed

The Deerfield River mainstem begins in Glastenbury and Stratton in Vermont and flows approximately 70 miles (25 miles in Vermont and 45 miles in Massachusetts) mostly south and east to its confluence with the Connecticut River in Greenfield, Massachusetts. The total drainage area of this subwatershed is 259 square miles. Land use is predominantly forest (approximately 88%) with agricultural land use ranging from approximately 2% in the upper portion of the subwatershed to approximately 8% in the lower 20 river miles, where the river and floodplain gradient begins to diminish (MDEP 2003a).

2.2 Population by Community

The watershed includes all or part of 16 Vermont towns and 20 Massachusetts towns. Stratton, Sunderland, Glastenbury, Somerset, Dover, Woodford, Searsburg, Wilmington, Marlboro, Brattleboro, Readsboro, Stamford, Whitingham, Halifax, Guilford, and Wardsboro are in Vermont. Adams, Ashfield, Bernardson, Buckland, Charlemont, Colrain, Conway, Deerfield, Florida, Greenfield, Hawley, Heath, Leyden, Monroe, North Adams, Plainfield, Rowe, Savoy, Shelburne, and Goshen are in Massachusetts.

In 2000, the population of all towns in the Massachusetts portion of the watershed was approximately 64,640 (Table 2.2-1) with about one quarter of these people in the Town of Greenfield (18,168). The population within the actual watershed, however, is less than the total population since not all communities lie completely within the watershed and some densely populated areas might fall outside the watershed boundaries. The total population of towns in the Vermont portion of the watershed is 24,764; however, not all towns lie completely within the watershed (Table 2.2-2). The estimated total number of people living within the watershed boundaries is approximately 47,000.

Table 2.2-1: Population of Communities within the Deerfield River Watershed (Massachusetts) (Source: United States Census Bureau 2004)

Community	Percent of Community In Watershed	Total Population
Buckland	100%	1,991
Charlemont	100%	1,358
Colrain	100%	1,813
Heath	100%	805
Monroe	100%	93
Rowe	100%	351
Shelburne	100%	2,058
Florida	95%	676
Hawley	94%	336
Greenfield	85%	18,168
Leyden	76%	772

Community	Percent of Community In Watershed	Total Population
Ashfield	61%	1,800
Conway	60%	1,809
Savoy	59%	705
Deerfield	43%	4,750
Bernardston	12%	2,155
North Adams	5%	14,681
Plainfield	2%	589
Adams	2%	8,809
Goshen	1%	921
Total		**64,640**

Table 2.2-2: Population of Communities within the Deerfield River Watershed (Vermont) (Source: United States Census Bureau 2004)

Community	Percent of Community In Watershed	Total Population
Halifax	100%	782
Searsburg	100%	96
Somerset	100%	5
Whitingham	100%	1,298
Wilmington	100%	2,225
Readsboro	95%	809
Dover	68%	1,410
Stratton	41%	163
Woodford	40%	414
Glastenbury	39%	16
Marlboro	35%	978
Guilford	26%	2,046
Stamford	9%	813
Sunderland	6%	850
Wardsboro	2%	854
Brattleboro	1%	12,005
Total		**24,764**

2.3 Surficial Geology

The surficial geology of the Deerfield River Watershed is primarily till and bedrock. There are some sand and gravel deposits located within the river and stream valleys and along the eastern Deerfield Watershed lowlands. Some floodplain alluvium also exists towards the Connecticut River Valley (Figure 2.3-1). The groundwater supply potential of these surficial formations are discussed in more detail within Section 3.1.

2.4 Topography

Land surface altitudes range from just under 4,000 feet above sea level in the Vermont Mountains to 120 feet above sea level in the Connecticut River Valley (Figure 2.4-1). The river gradient through Vermont and upper Massachusetts is steep and averages 28.4 feet/mile from the Massachusetts border to West

Deerfield (33 river miles). The steep gradient makes the river ideal for power generation and there are 11 hydroelectric facilities along the mainstem that effectively control the river flow. The steep gradient and cool mountainous source waters also make the river ideal for kayaking and cold-water fish species like trout and salmon.

2.5 Precipitation

Annual precipitation ranges from approximately 53 inches at Searsburg (Table 2.5-1) in the upper, mountainous reaches (elevation 2,100 feet) of Vermont to approximately 45 inches at Greenfield (Table 2.5-2) in the lower reaches (elevation 250 feet) closer to the Connecticut River Valley. On average, November is the wettest month, while February is the driest.

Table 2.5-1 Monthly and Annual Precipitation (inches) Statistics at Searsburg, Vermont (Source: MDCR 2004)

	Average	Median	Standard Deviation	Minimum	Maximum
January	4.2	3.9	1.9	0.8	11.8
February	3.6	3.5	1.3	0.3	10.9
March	4.4	4.2	1.9	1.6	10.6
April	4.7	4.8	1.5	0.9	8.31
May	4.7	4.0	2.3	1.3	12.5
June	4.2	4.0	1.9	0.7	8.76
July	4.5	4.2	1.9	0.9	10.7
August	4.5	4.0	2.1	1.7	11.3
September	4.7	4.7	2.3	0.5	13
October	4.2	3.7	2.6	0.4	13.9
November	5.0	4.9	1.9	1.3	9.24
December	4.6	4.7	2.0	0.9	10.9
Annual	**53.3**	**4.1**	**0.3**	**0.3**	**13.9**

Table 2.5-2 Monthly and Annual Precipitation (inches) Statistics at Greenfield, Massachusetts (Source: MDCR 2004)

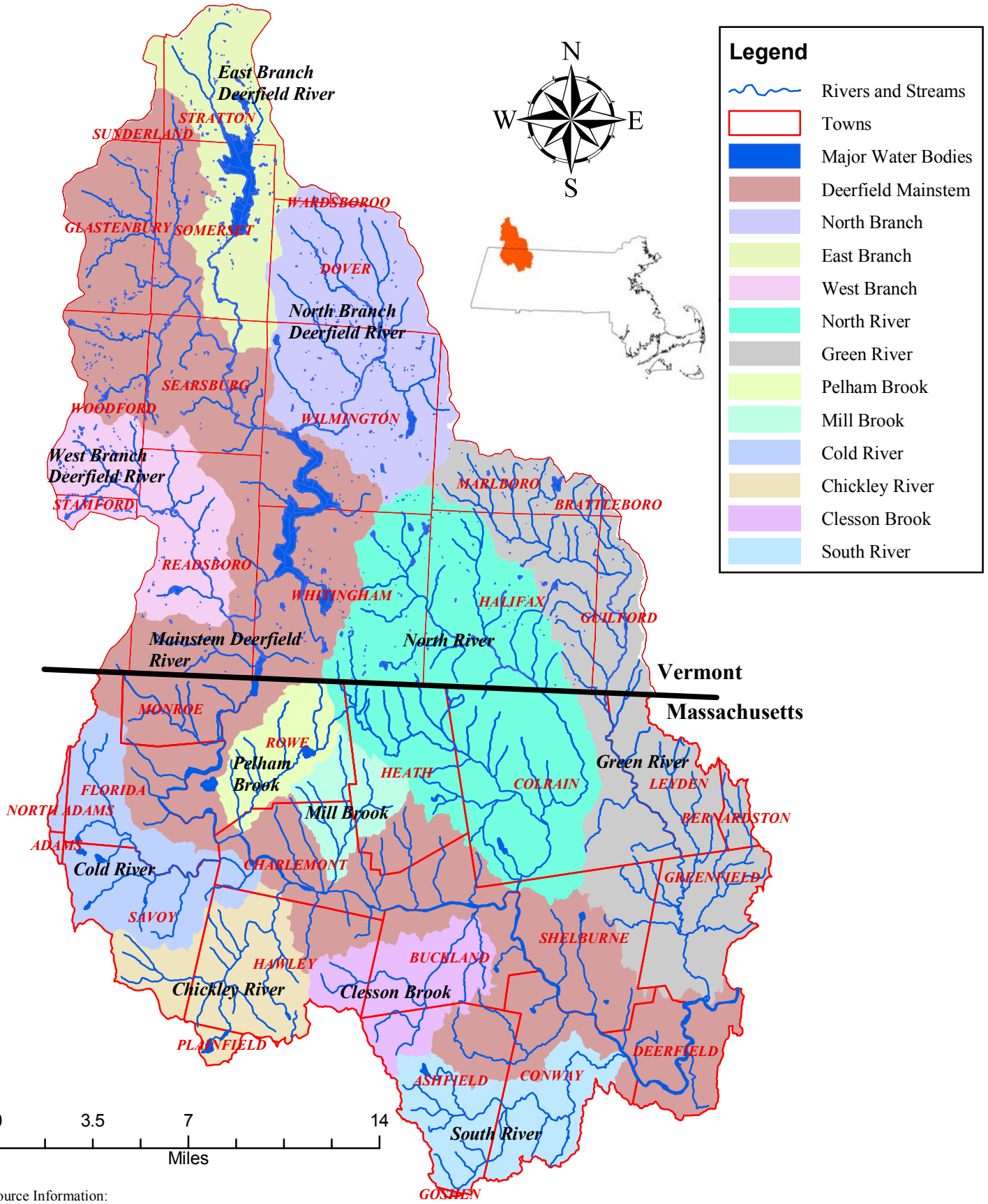
	Average	Median	Standard Deviation	Minimum	Maximum
January	3.4	3.0	1.7	0.6	8.9
February	2.9	2.9	1.3	0.2	10.4
March	3.7	3.4	1.7	0.6	8.6
April	3.9	3.9	1.7	0.8	9.1
May	4.1	3.8	2.2	1.0	12.8
June	3.9	3.5	2.0	0.6	8.5
July	3.9	3.7	1.8	0.6	9.7
August	3.9	3.5	2.2	0.4	11.3
September	3.8	3.2	2.5	0.8	13.0
October	3.4	2.9	2.0	0.6	11.1
November	4.2	4.0	1.9	0.8	9.0
December	3.7	3.5	1.8	0.5	10.3
Annual	**44.8**	**3.5**	**0.3**	**0.2**	**13.0**

2.6 Roads

Major roads running through the watershed include Interstate 91, State Highway Route 2, Route 10, Route 112, Route 116, and Route 8A-L (Figure 2.6-1). A major railroad also runs along the Deerfield River from Deerfield to Florida. The eastern portion of the watershed (specifically Greenfield and Deerfield) is the most populated part of the watershed and has the greatest density of roads.

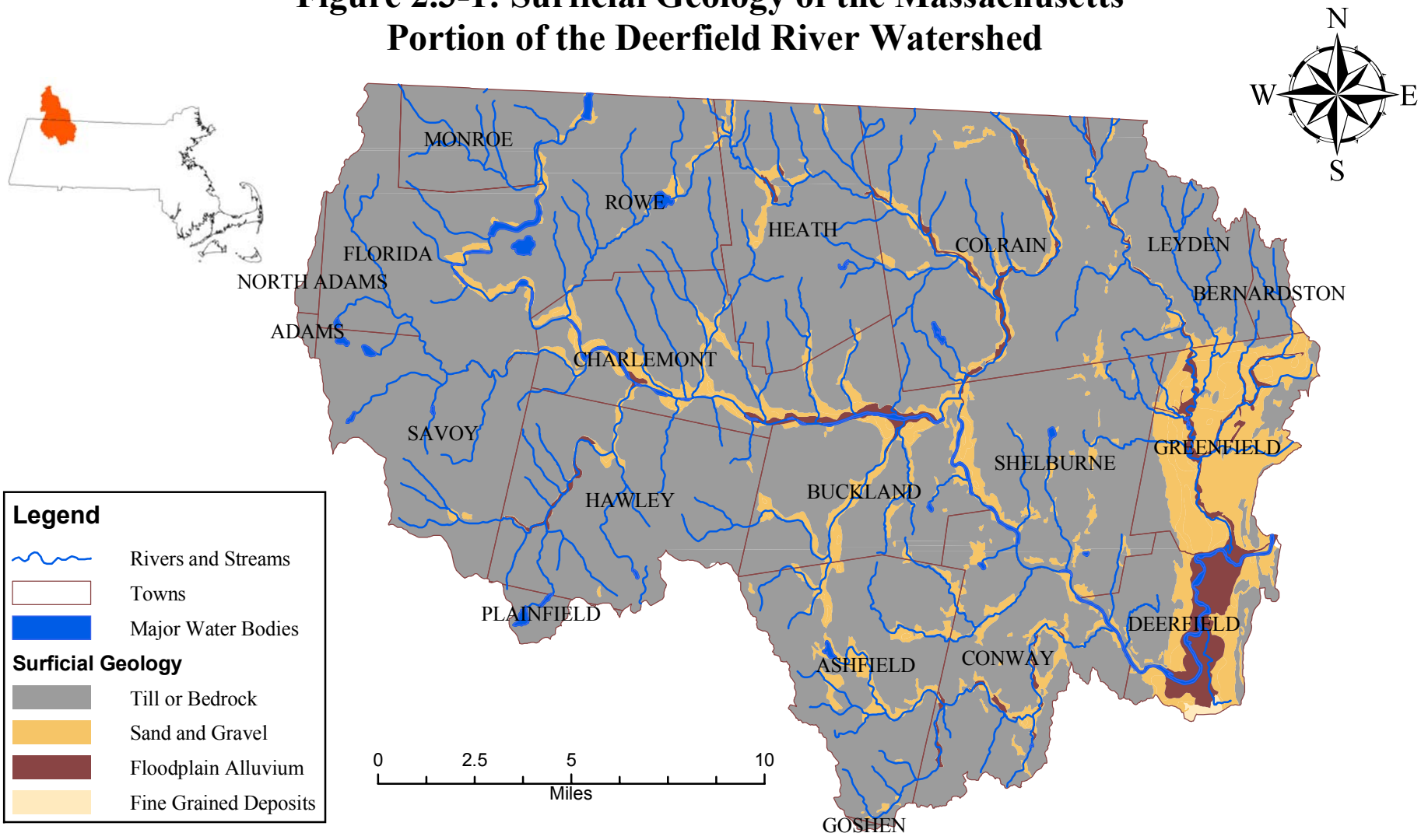
Major road crossings in the eastern portion of the watershed include Interstate 91 in Deerfield and Route 10 in Greenfield. Interstate 91 also crosses the Green River in Greenfield. Major road crossings in the central portion of the watershed include Route 2 (3 times), Route 8A-L, and Route 2A. Route 112 crosses the North River and East Branch North River four times in Massachusetts. There are no major road crossings in the northern Massachusetts portion of the Deerfield River watershed. Major road crossings in Vermont include Route 9 in Wilmington and Searsburg, and Route 100 in Readsboro, Wilmington, and Dover. In addition, there are several rural roads that either cross or run along the mainstem Deerfield River or its tributaries. Roadways adjacent to rivers can impact water quality, riparian habitat, and overall aesthetics through increased stream bank erosion, reductions in overhanging cover for fish, and limiting riverbank access for land mammals.

Figure 2.0-1: Deerfield River Watershed Map



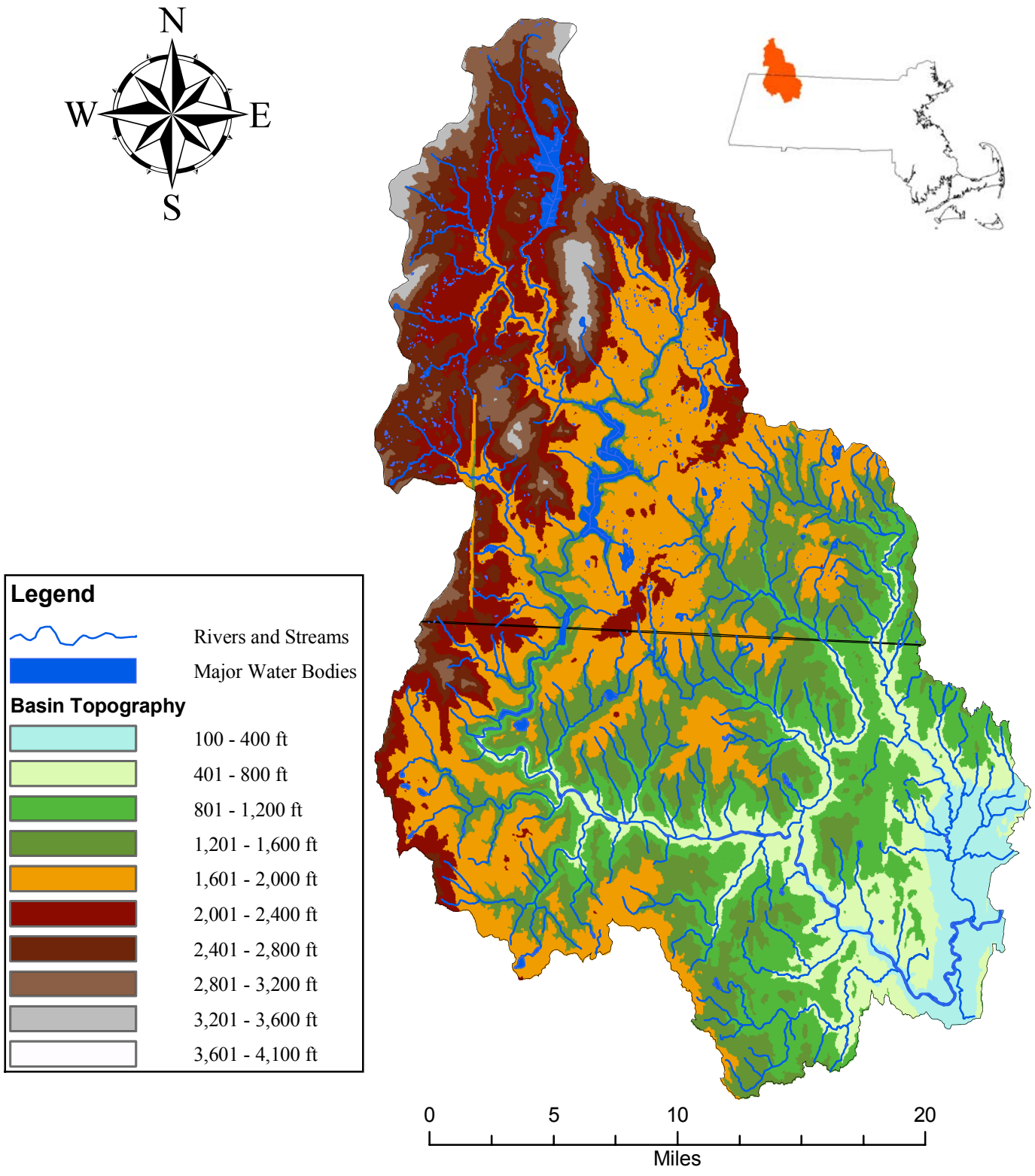
Source Information:
- Office of Geographic and Environmental Information (MassGIS), Commonwealth of Massachusetts Executive Office of Environmental Affairs
- Vermont Center for Geographic Information

Figure 2.3-1: Surficial Geology of the Massachusetts Portion of the Deerfield River Watershed



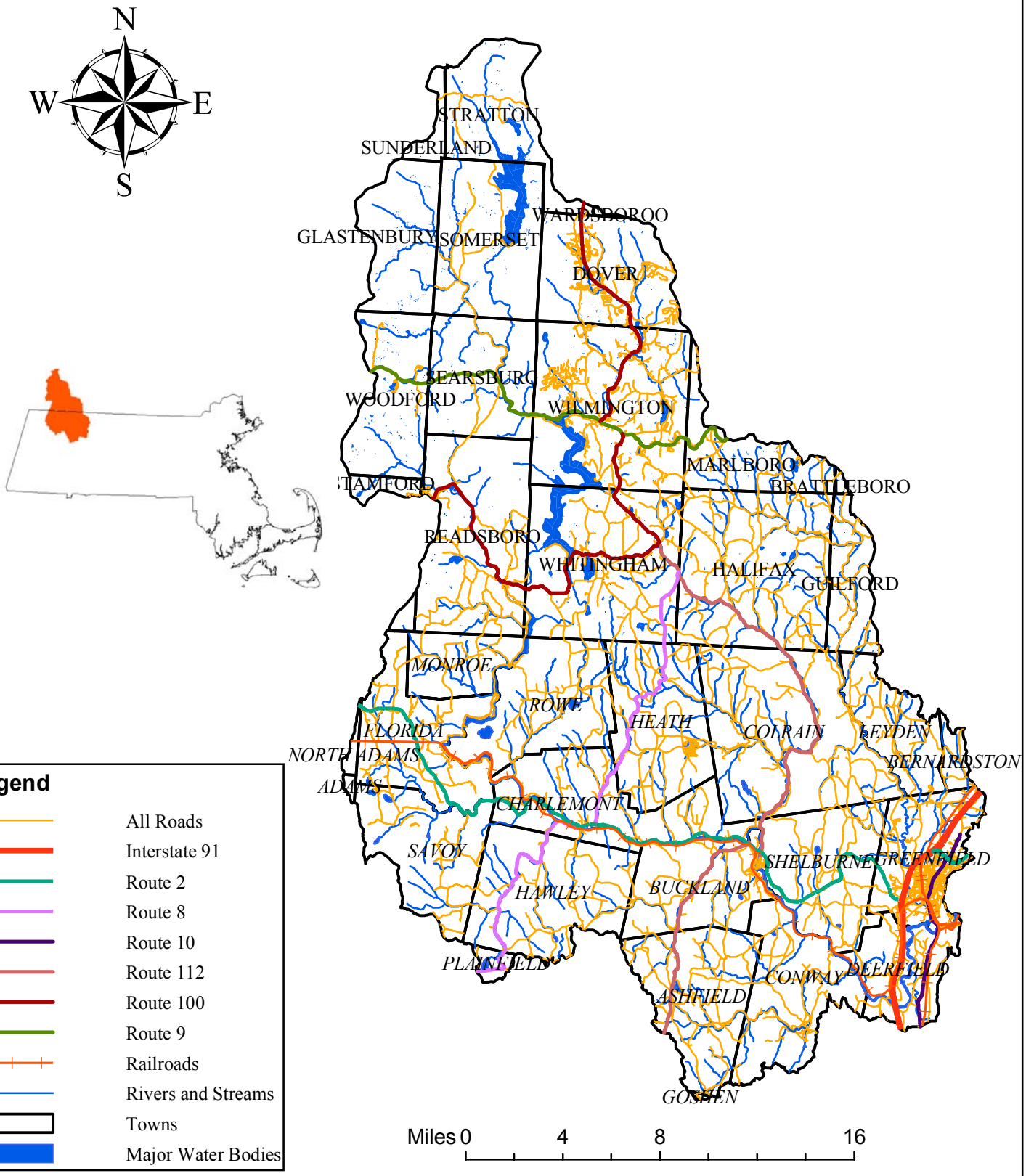
Source Information:
- Office of Geographic and Environmental Information (MassGIS), Commonwealth of Massachusetts Executive Office of Environmental Affairs

Figue 2.4-1: Topography in the Deerfield River Watershed.



Source Information:
- Office of Geographic and Environmental Information (MassGIS), Commonwealth of Massachusetts Executive Office of Environmental Affairs
- Vermont Center for Geographic Information

Figure 2.6-1: Major Roads and Railroads in the Deerfield River Watershed



Source Information:
- Office of Geographic and Environmental Information (MassGIS), Commonwealth of Massachusetts Executive Office of Environmental Affairs
- Vermont Center for Geographic Information

3 ASSESSMENT OF ENVIRONMENTAL CONDITIONS

The following sections describe the environmental conditions of the Deerfield River Watershed in terms of water quantity, water quality, fisheries, wildlife, open space, and recreational resources. The information in this section comes from a variety of sources, including data that has been collected by federal and state agencies, municipalities, the Deerfield River Watershed Association (DRWA), as well as USGen New England, Inc. (USGen) and its predecessors. In addition, priority projects funded by the MWI also serve to describe the watershed's natural resources with recent projects providing information on water quality conditions, amphibians and marshbirds, and open space/recreation.

This section will be used to identify the main environmental issues (i.e., priority issues) in the watershed, as well as some of the gaps in information that might be the focus of future data collection efforts. An effort was made not only to describe the resources associated with the mainstem of the Deerfield River, but its subwatersheds as well.

3.1 Water Quantity

Much of the terrain within Deerfield River Watershed is characterized by shallow depth to bedrock with relatively steep valley slopes. These conditions contribute to the "flashiness" of the Deerfield River and its tributaries. Dam construction on the Deerfield River began in the late 18th and early 19th centuries with the establishment of several mill dams. By 1880, the lower portion of the Deerfield River provided hydromechanical power for approximately 117 mills; however, the longevity of these facilities remained at the whim of the wild and flashy nature of the river (FERC 1997).

The "flashiness" of the Deerfield was finally tamed by construction of the present-day hydroelectric generation facilities, which began in the early 20th century. In particular, the Somerset (1,623 acres) and Harriman (2,039 acres) reservoirs were constructed for seasonal water storage; retaining the majority of spring runoff, thereby, allowing for augmented summer flows for downstream projects to enhance power production. Currently, the Somerset and Harriman reservoirs are drawn down about 15 feet and 40 feet, respectively, over the course of the fall and winter to accommodate spring runoff and may be drawn down more in anticipation of higher-than-normal spring runoff.

3.1.1 Streamflow Magnitude and Patterns

The United States Geological Survey (USGS) currently maintains five stream gages in the Massachusetts portion of the watershed, two on the mainstem Deerfield River and one each on the North, Green, and South rivers. An additional gage on the Deerfield near Rowe, Massachusetts was decommissioned in 1997 (Figure 3.1.5-1). Gage identification, drainage area, and period of record are found in Table 3.1.1-1.

Table 3.1.1-1: USGS Gages in the Deerfield River Watershed within Massachusetts (Source: USGS 2003)

Gage	Gage No.	Drainage Area (square miles)	Period of Record
Deerfield River at Rowe, MA	01168151	254	1974-1997
Deerfield River at Charlemont, MA	01168500	361	1913-Present
North River at Shattuckville, MA	01169000	89.0	1939-Present
South River near Conway, MA	01169900	24.1	1967-Present
Green River near Colrain, MA	01170100	41.4	1966-Present
Deerfield River near West Deerfield, MA	01170000	557	1904-Present

Streamflow data were analyzed for the Deerfield River at the West Deerfield USGS gage for the period 1940-2002 to illustrate the long-term flow conditions within the watershed. Table 3.1.1-2 shows the annual and monthly average, standard deviation, median, minimum, and maximum flows for the gage. The watershed area at the gage location is 557 square miles, and it is located approximately 9.5 miles from the river's mouth. These flows reflect upstream hydroelectric water regulation, particularly at Somerset and Harriman reservoirs. Monthly average flows ranged from 569 cfs (August) to 2,896 cfs (April) over the period of record.

Figure 3.1.1-1 was developed to illustrate the seasonal variation in streamflow for the mainstem Deerfield River and several of its tributaries. Specifically, this figure compares average monthly flows (in units of cfs per square mile[2]) for the period 1967-2002 in the Deerfield River at the Charlemont and West Deerfield gages with the South River and North River gages. Both mainstem Deerfield River gages reflect regulated conditions, while the South River and North River gages are essentially unregulated. The effects of seasonal flow regulation are demonstrated by generally higher spring flows (March through May) within the South and North rivers compared to the Deerfield River mainstem as a result of spring runoff being stored within Somerset and Harriman reservoirs. During the summer, fall, and winter period, (July through February), flows are higher along the Deerfield River mainstem compared to the South and North Rivers, due to mainstem flows being augmented by releases from Somerset and Harriman reservoirs.

Table 3.1.1-2: Streamflow Statistics at the West Deerfield USGS Gage, Mainstem Deerfield River (Source: USGS 2003)

	Average	Std. Deviation	Median	Minimum	Maximum
January	1,406	927	1,300	109	19,100
February	1,439	872	1,320	130	14,500
March	2,105	1,654	1,685	180	17,800
April	2,896	2,101	2,385	356	29,300
May	1,715	1,661	1,270	82	26,800
June	994	1,170	650	66	16,100
July	594	677	437	28	11,900
August	569	684	426	34	14,500
September	575	610	426	44	8,130
October	835	1,297	558	44	30,000
November	1,224	1,150	965	50	16,400
December	1,430	1,315	1,260	60	38,300
Annual	1,315	693	1,057	28	38,300

The USGS Streamstats program (USGS 2000) was used to estimate an unregulated/natural flow regime for the mainstem of the Deerfield River. The program estimates a variety of low flow statistics including the annual and August median flows. Table 3.1.1-3 shows a comparison of the estimated natural and actual annual and August median flows for the mainstem Deerfield River at both Charlemont and West Deerfield. Due to the flow augmentation provided by Somerset and Harriman reservoirs, actual annual and August median flows are much higher than would naturally occur in the watershed without flow regulation.

[2] Cubic feet per second per square mile (cfsm) is the number of cubic feet of water flowing per second from each square mile are drained, assuming the runoff is distributed uniformly in time and area.

Table 3.1.1-3: Comparison of the Estimated Natural and Actual Annual and August Median Flows for the Mainstem Deerfield River (Source: USGS 2003 and USGS 2000)

	Charlemont		West Deerfield	
	Actual	Estimated Natural	Actual	Estimated Natural
Annual Median Flow (cfs)	761	383	1060	598
Annual Median Flow (cfsm)	2.11	1.06	1.90	1.07
August Median Flow (cfs)	448	106	457	161
August Median Flow (cfsm)	1.24	0.29	0.82	0.29

In addition to altering seasonal flow regimes, hydroelectric flow regulations affect daily streamflow patterns as well. Several hydroelectric projects operate on a daily peaking schedule and release variable flows throughout the day, often ranging from full generation to minimum flows. Figure 3.1.1-2 illustrates daily streamflow patterns on the North River and the Deerfield River mainstem (Charlemont and West Deerfield) from November 17 to December 1, 2003. The rise and fall of the North River hydrograph is very smooth in contrast to the frequent flow fluctuations and reversals exhibited on the mainstem Deerfield River.

Approximately 19 % of the 72-mile long Deerfield River has reaches that are diverted or bypassed from the main river channel due to hydroelectric operations. Since 1997, all of these river reaches have been subject to minimum flow requirements per a FERC license for the Deerfield River Hydroelectric Project (FERC No. 2323). These minimum flows were determined through studies and negotiations with stakeholders during the hydroelectric project relicensing process, and were established to protect aquatic life in the Deerfield River. They are summarized in Table 3.1.1-4.

Table 3.1.1-4: Minimum Flows at Deerfield River Hydroelectric Facilities (Source: FERC 1997)

Time Period	Project	Minimum Flow (cfs)
October 1-December 15	Somerset	30
December 16- February 28		48
March 1-April 30		30
May 1 to September 30		12 (9 if necessary)
June 1-September 30	Searsburg	35
October 1-May 31		55
October1-June 30	Harriman	70
July 1-September 30		57
All Year	Sherman	57
All Year	Station No. 5	73
All Year	Fife Brook	125
October 1-May 31	Station No. 4	100
June 1-September 30		125
All Year	Station No. 3	100
All Year	Gardners Falls	150
All Year	Station No. 2	200

3.1.2 Groundwater Flow and Aquifers

Porous deposits of proglacial and fluvial stratified drift (i.e., sand and gravel) are ideal for the production of groundwater resources. The largest aquifers in the watershed are located in its eastern portion (Figure

3.1.2-1). Bedrock and fine-grained clay-like till often transmit less groundwater and are not good public water supply sources.

A study conducted by the USGS (Friesz 1996) found that stratified drift thickness ranged from 0 to 385 feet along 7.4 miles of the Deerfield River east of Interstate 91 to its confluence with the Connecticut River. The thick deposit fills a deep north-south trending valley with coarse-grained alluvium below finer glacial lake deposits. The deposit is a valuable source of groundwater.

The study also detailed hydraulic properties and groundwater recharge characteristics in the eastern Deerfield Valley (east of Interstate 91), in the Clesson Brook Valley of the Berkshire Hills, and in the Green River Valley north of the Deerfield. These areas contained the largest deposits of stratified drift and groundwater capacity within the watershed. It was found that groundwater levels within stratified drift areas adjacent to the Deerfield River responded instantaneously to streamflow fluctuations. For example, the water table at the riverbank in Charlemont rose 1.06 feet during a 1.49-foot rise in streamflow level (the effect diminishes away from the river). Groundwater flow patterns also change with rising and falling streamflow levels. In early spring (high flows), the direction of groundwater flow is nearly perpendicular to the valley length, whereas in late summer (low flows), groundwater flow is nearly down-valley. The nature of groundwater flow patterns could have implications on any future groundwater solute transport studies.

3.1.3 Water Withdrawals

Within the Vermont portion of the Deerfield River Watershed, the Mount Snow/Haystack ski area maintains three water withdrawals for snowmaking purposes. Firstly, Snow Lake on the North Branch of the Deerfield has a withdrawal capacity of approximately 5.76 mgd. There is no limit on the amount of water that can be withdrawn at this location as long as the minimum flow requirements downstream of the site are met. A second withdrawal is located at an on-stream pond on Mount Snow. The source is an intermittent stream and small wetland. At this site, there is no limit on the withdrawal, as long as the minimum flow requirement at the site is met. The third withdrawal is located on Cold Brook, a tributary to the North Branch Deerfield. The maximum pumping rate is 5.18 mgd, but higher withdrawals are possible during high flow periods. There is a minimum flow requirement at the site as well (VANR 2004).

Figure 3.1.3-1 shows the 85 public water supply withdrawals listed by Massachusetts Department of Environmental Protection (MDEP). Also, shown in Figure 3.1.3-1 are the surface water supply protection zones (A, B, and C) delineated per the Massachusetts Drinking Water Regulations. These zones are defined as the following:

- ZONE A: represents a) the land area between the surface water source and the upper boundary of the bank; b) the land area within a 400 foot lateral distance from the upper boundary of the bank of a Class A surface water source, as defined in 314 CMR 4.05(3)(a); and c) the land area within a 200 foot lateral distance from the upper boundary of the bank of a tributary or associated surface water body.

- ZONE B: represents the land area within one-half mile of the upper boundary of the bank of a Class A surface water source, as defined in 314 CMR 4.05(3)(a), or edge of watershed, whichever is less. Zone B always includes the land area within a 400 ft lateral distance from the upper boundary of the bank of the Class A surface water source.

- ZONE C: represents the land area not designated as Zone A or B within the watershed of a Class A surface water source, as defined in 314 CMR 4.05(3)(a).

Surface water protection zones have been delineated within Colrain, Shelburne, Monroe, Ashfield, and Leyden.

Wellhead protection areas are also shown on Figure 3.1.3-1. These areas are important for protecting the recharge area around public water supply wells. Zone II is a wellhead protection area that has been determined by hydrogeologic modeling and approved by the MDEP. In cases where hydro-geologic modeling studies have not been performed and there is no approved Zone II, an Interim Wellhead Protection Area (IWPA) is established based on MDEP well pumping rates. Certain land uses may be either prohibited or restricted in both approved (Zone II) and interim (IWPA) wellhead protection areas. Zone II wellhead protection areas have been identified in Colrain, Greenfield, and Deerfield. Many of these withdrawals in the watershed are quite small; however, there are several larger water users within the watershed as represented in Table 3.1.3-1 (MDEP 2003a). The largest water user is the Greenfield Water Department with a permitted withdrawal amount of 2.12 million gallons per day (mgd). A combination of surface and groundwater withdrawals within the Green River subwatershed is the source of the water. BBA Nonwovens, which withdraws from the North River, is the next largest water user at 0.89 mgd. Several fire departments and agricultural businesses in the watershed also have modest withdrawal totals as well.

Table 3.1.3-1: Major Water Withdrawals within the Massachusetts Portion of the Deerfield River Watershed (Source: MDEP 2003a)

Facility	PWS ID#	WMA[3] Registration #	Source	Authorized Withdrawal (mgd)	Location
BBA Nonwovens		10306601	North River	0.89	Colrain
Shelburne Falls Fire District	1268000	10326801	Fox Brook Reservoir-01S Well #1 Replacement-03G Well #2-02G	0.21	Colrain
Deerfield Fire District	1074000	10307401	Harris Spring-04G Keats Spring-02G Stillwater Spring-06G Stillwater Well-05G Wells Spring-03G GP Well Rt. 5/ Wapping Well-01G	0.10	Deerfield
Savage Farms Inc.		10307402	Savage Farm #1 Savage Farm #2 Savage Farm #3 Savage Farm #4	0.29	Deerfield
Williams Farm Inc.		10307402	Williams Farm #1 Williams Farm #2 Williams Farm #3 Pond Williams Farm #4 Pond	0.08	Deerfield

[3] WMA- Water Management Act.

Facility	PWS ID#	WMA[3] Registration #	Source	Authorized Withdrawal (mgd)	Location
Greenfield Water Department	1114000	10311401	Green River-03S Glen Brook-Upper Reservoir-01S Millbrook Well #1-04 Millbrook Well #2-05 Millbrook Well #3-06	2.12	Greenfield
Bernardston Fire & Water District	1029000	10302901	Dug Well-01G Gravel Dug Well #2-02G	0.17	Bernardston
Trew Corporation		10307402	Trew Corp Well	0.14	Deerfield

3.1.4 Stressed Basins

An interagency committee, formed by the Massachusetts Water Resource Commission (MWRC), identified several methods to identify stressed river basins in Massachusetts (MWRC 2001). The stressed basin classification system is intended to identify areas requiring a more comprehensive and detailed review of environmental impacts prior to the implementation of a proposed project. Factors that are considered to affect stress include streamflow quantity, quality, and habitat. To date, a preliminary investigation of stressed rivers has been conducted based solely on water quantity, as streamflow data is readily available.

A lack of adequate biological and hydrological data has necessitated the development of an interim methodology for defining quantitative stress, which was applied at the major watershed and major subwatershed level. The state evaluated 72 USGS stream gages in Massachusetts and developed three parameters to quantify streamflow, median of annual 7-day low flow, median of annual 30-day low flow, and median of low pulse duration. The statistical results were then used to determine a watershed's stress level as low, medium, or high. At this juncture, only the quantity of streamflow has been examined; water quality and habitat factors have not been examined. The reported stress levels for the Deerfield River and several tributaries are shown in Table 3.1.4-1.

Table 3.1.4-1: Final Stress Classifications for the Deerfield River Watershed USGS Gages (Source: MWRC 2001)

Station No.	Gage Name	Final Stress Level
01170100	Green River near Colrain	Medium
01169000	North River at Shattuckville	Medium
01169900	South River near Conway	Medium
01168500	Deerfield River at Charlemont	Low
01170000	Deerfield River near W. Deerfield	Low

3.1.5 Hydroelectric Generation Facilities and Dams

There are 11 hydroelectric facilities along the Deerfield mainstem (8 in Massachusetts, 3 in Vermont) including one pumped storage facility (Bear Swamp Pumped Storage Facility on Negus Mountain in Florida, Massachusetts) (Figure 3.1.5-1 and Table 3.1.5-1). All of the facilities are currently owned by USGen, with exception of the Gardners Falls facility, which is owned by Consolidated Edison (ConEd). These facilities utilize ten dams, and their impoundments effectively control the river flow and serve to

alleviate downstream flooding as well as produce electricity. Most of the power projects were built in the early 1900's and their impoundments have since become an integral part in the river's ecologic and recreational character.

The hydroelectric facilities on the Deerfield River mainstem are regulated by the Federal Energy Regulatory Commission (FERC). There are three FERC licensed projects on the Deerfield River including:

- Deerfield River Project (FERC No. 2323) which includes the following eight projects: Somerset, Searsburg, Harriman, Sherman, Station Nos. 5, 4, 3 and 2.
- Bear Swamp Pump Storage Project (FERC No. 2669) which includes the following facilities: Fife Brook Reservoir which serves as the lower reservoir and Bear Swamp Reservoir which serves as the upper reservoir for the pump storage project.
- Gardners Falls Project (FERC No. 2334) which includes only the Gardner Falls facility.

Every 30 to 50 years, a new FERC license is required to operate these projects. As part of the relicensing process, project owners are required to conduct various environmental studies to determine the impact of project operations on environmental resources. New FERC 40 year licenses were issued for the Deerfield River Project and Gardners Falls Project in 1997 (expiration 2037). The Bear Swamp Pump Storage Project has a license expiration date of March 2020 (it was licensed in 1970).

A brief description of each project from upstream to downstream is provided below.

Somerset

Somerset Dam, located at river mile 66 in Vermont, is the most upstream facility and is the only dam that does not produce hydroelectric power. Somerset Reservoir serves to retain runoff for downstream power generation and flow augmentation throughout the summer and fall, as well as flood reduction during high flow periods. During normal operations, Somerset Reservoir has a maximum winter drawdown of 15 feet and an average summer drawdown of 5 feet. The amount of drawdown varies seasonally depending on the amount of precipitation. Maximum normal reservoir elevation is reached by June 1. Reservoir fluctuations are limited to +/- 3 inches during the period June 1 through July 31 to facilitate common loon nesting. The reservoir then begins a slow drawdown until December and then a steady drawdown to minimum reservoir elevation in March.

Searsburg

Water leaving Somerset Reservoir flows approximately six miles to the Searsburg Dam for use in hydroelectric power generation. Water is diverted from the main river reach through a three-mile penstock to the Searsburg powerhouse, which discharges to the Deerfield River in Wilmington, Vermont just upstream from the Harriman Reservoir. Water is also released from the Searsburg Dam to the bypass reach created by the flow diversion. It should be noted that all of the facilities described below have minimum flow requirements that are described later in this report.

Harriman

The Harriman Reservoir (river mile 48.5) is the most downstream facility in Vermont and is the largest of all reservoirs on the Deerfield River (2,039 acres). It has average drawdown of 42 feet during the winter and an average drawdown of 11 feet from the spillway crest in the summer under typical hydrologic conditions. The reservoir is typically filled in May. The reservoir levels are maintained as stable or rising from May 1 through June 15 and can drop no more than 1 foot per day from June 16 to July 15. After

July 15, the reservoir falls slowly until December and then falls steadily to normal maximum winter drawdown in March. Water from the Harriman reservoir is either diverted downstream through an excavated tunnel for power generation at the Harriman powerhouse, or released from the dam where it flows approximately 4.4 miles along the Deerfield River into Sherman reservoir. Concerns have been raised that the water level management plans adopted as part of USGen's 1997 relicensing could reduce the ability of the reservoir to store runoff during flood events.

Sherman

The Sherman Reservoir straddles the Vermont and Massachusetts border with the power generation facility located at the Sherman Dam in Rowe, Massachusetts. Power is generated at the Sherman facility without bypassing the mainstem. Due to the proximity of Sherman Dam to the Station No. 5 dam (0.8 miles) there is no riverine reach between the two facilities (i.e., the Sherman powerhouse tailwater flows directly into the Station No. 5 impoundment).

Station No. 5

Water from the Station No. 5 dam (river mile 41.2) is diverted about five miles downstream through a penstock to the Station No. 5 powerhouse, where it eventually re-enters into the Fife Brook impoundment. The Station No. 5 bypass reach is historically known as the "dryway" because the entire flow of the river was often diverted for power generation prior to the issuance of the new FERC license in 1997.

Fife Brook/Bear Swamp

The Fife Brook impoundment is located at river mile 37 in Florida, Massachusetts, where water is also pumped to the Bear Swamp Storage Facility on Negus Mountain, and used for power generation at the Fife Brook powerhouse. Water pumped up to the storage facility is released back down into the impoundment to generate electricity during periods of peak demand. Power is generated at the Fife Brook facility without bypassing the mainstem.

Station No. 4

From the tailwaters of the Fife Brook powerhouse, the river flows unimpeded for 17 miles to Charlemont, Massachusetts until it enters the Station No. 4 impoundment. Water from this impoundment is diverted 1.5 miles downstream for energy generation at the Station No. 4 powerhouse, after which it re-enters the river just above the Station No. 3 impoundment. The North River, a major tributary, enters the Deerfield River in the Station No. 4 bypass reach.

Station No. 3/Gardners Falls

Located in Shelburne Falls at river mile 17, the Station No. 3 dam diverts water 0.4 miles to the project powerhouse for generation. The tailwaters from this plant flow into the Gardners Falls impoundment. Water is diverted for approximately 0.3 miles at the Gardners Falls Dam to the project powerhouse.

Station No. 2

Water leaving the Gardners Falls facility flows about 2.5 miles to the Station No. 2 facility located at river mile 13.2. This facility is the last on the Deerfield River and power is generated at the dam without bypassing the mainstem.

Table 3.1.5-1: Hydroelectric Projects Located on the Deerfield River (Source: FERC 1997)

Station Name	Approximate River Mile	State	Capacity (MW)	Drainage Area (square miles)
Somerset	66.0	VT	0	30
Searsburg	60.3	VT	4.2	90
Harriman	48.5	VT	33.6	184
Sherman	42.0	VT / MA	7.2	234
Station No. 5	41.2	MA	17.6	237
Bear Swamp	39.0	MA	600	254
Fife Brook	37.0	MA	11.3	254
Station No. 4	20.0	MA	4.8	404
Station No. 3	17.0	MA	4.8	500
Gardners Falls	15.7	MA	3.6	502
Station No. 2	13.2	MA	4.8	505

Overall, there are at least 33 dams in the Deerfield River Watershed in Vermont. Aside from the hydroelectric facilities located on the mainstem Deerfield River, other significant dams include Heartwellville (breached) on the West Branch of the Deerfield River and Snow Pond on the North Branch of the Deerfield River (Figure 3.1.5-1).

Within the Massachusetts portion of the watershed, there are over 50 dams (MDEP 2003a). Aside from the aforementioned USGen hydroelectric facilities located on the Deerfield River, other major dams are located on the North, South, and Green rivers. Specifically, they include the BBA Nonwovens dam on the North River; the Shelburne Falls Road and Conway Electric dams on the South River; and the Greenfield Water Supply, Swimming Pool, Mill Street, and Wiley & Russell dams located on the Green River (Figure 3.1.5-1). None of these dams have provisions for fish passage. Many of the other dams that occur throughout the watershed are small, impounding relatively little water.

Several dams no longer fulfill a useful purpose and have fallen into a state of disrepair. The MDEP's 2000 water quality assessment report for the watershed (MDEP 2003a) stated that many of the unused dams may pose a threat to human lives, ecosystems, and downstream properties, since they are not well maintained. In addition, sediments deposited behind dams were identified as a possible source of contamination.

The United State Army Corps of Engineers (COE) is currently undertaking a feasibility study of four dams located on the Green River. The purpose of the study is to investigate the hydrologic, environmental, physical, cultural, and economic impacts of dam removal and/or fish passage structures on these dams as well as other potential stream ecosystem restoration activities. Recommendations are expected to include dam removal and/or fish passage structures at Wiley Russell Dam and Mill Street Dam and fish passage structures at Swimming Pool Dam and the Water Supply Dam. The Conway Electric Dam on the South River is currently inactive and is now owned by the Massachusetts Department of Conservation and Recreation (MDCR). There are no fish passage facilities at the site.

Figure 3.1.1-1: Seasonal Flow Comparison of the North River, South River, and Mainstem Deerfield River (Source: USGS 2003)

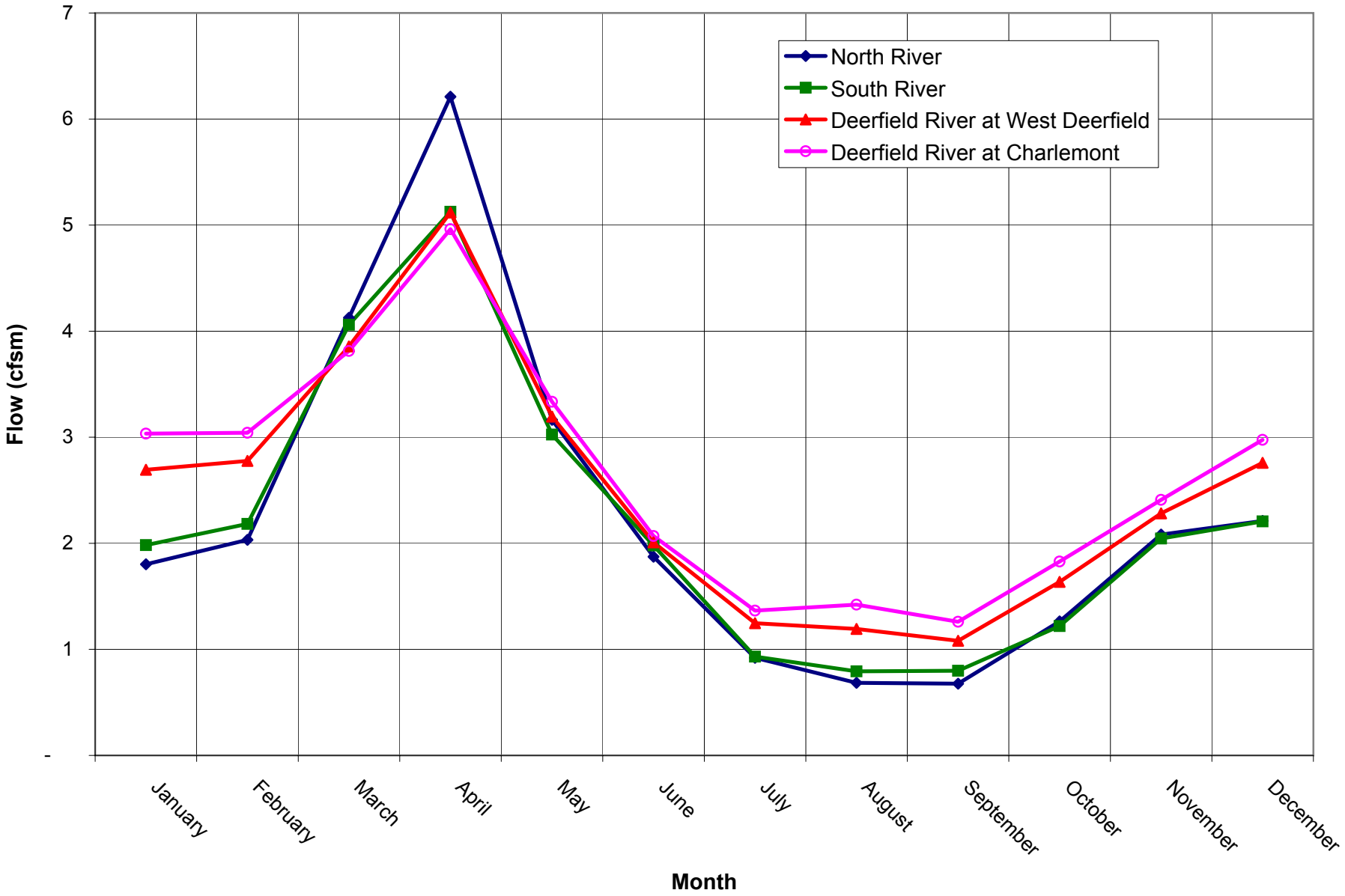


Figure 3.1.1-2: Daily Streamflow Patterns on the North River and the Deerfield River Mainstem (Source: USGS 2003)

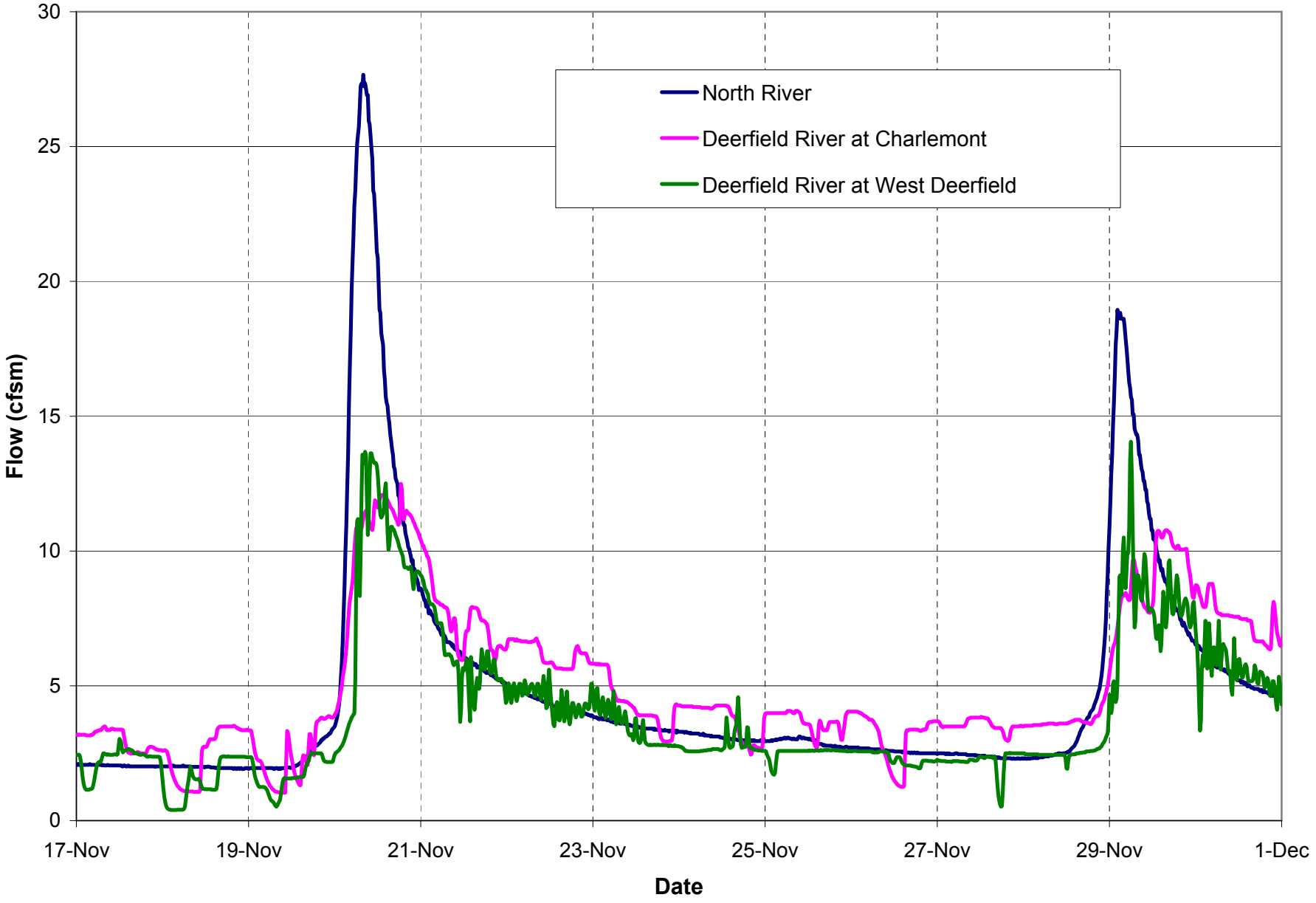
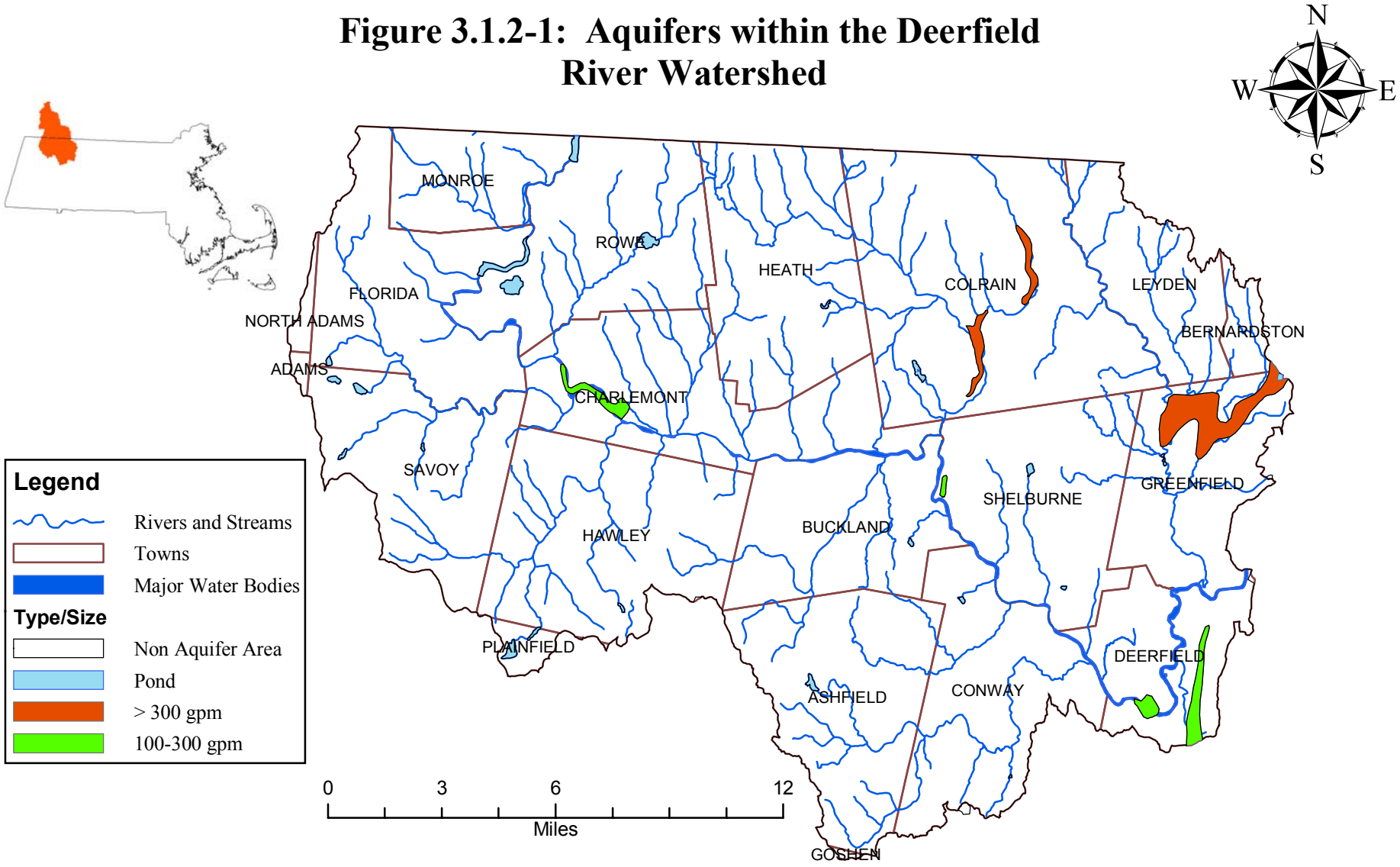
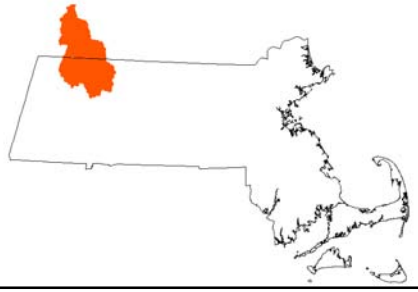


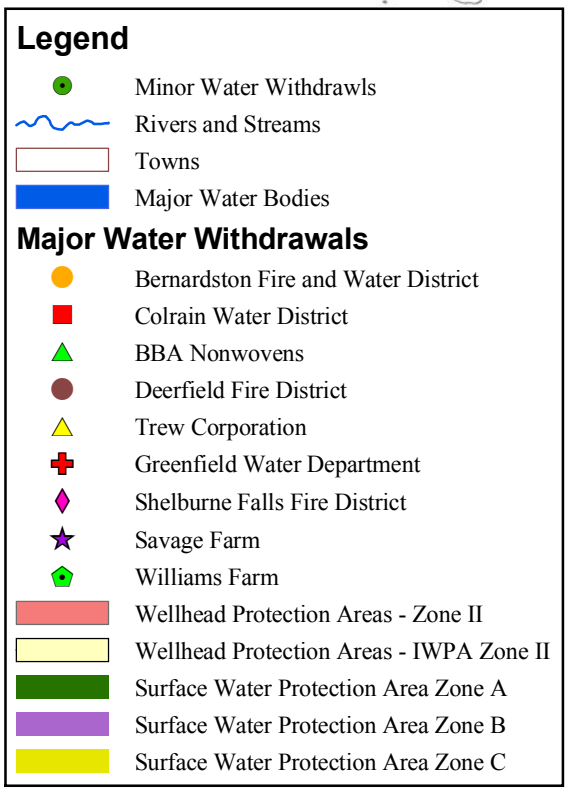
Figure 3.1.2-1: Aquifers within the Deerfield River Watershed

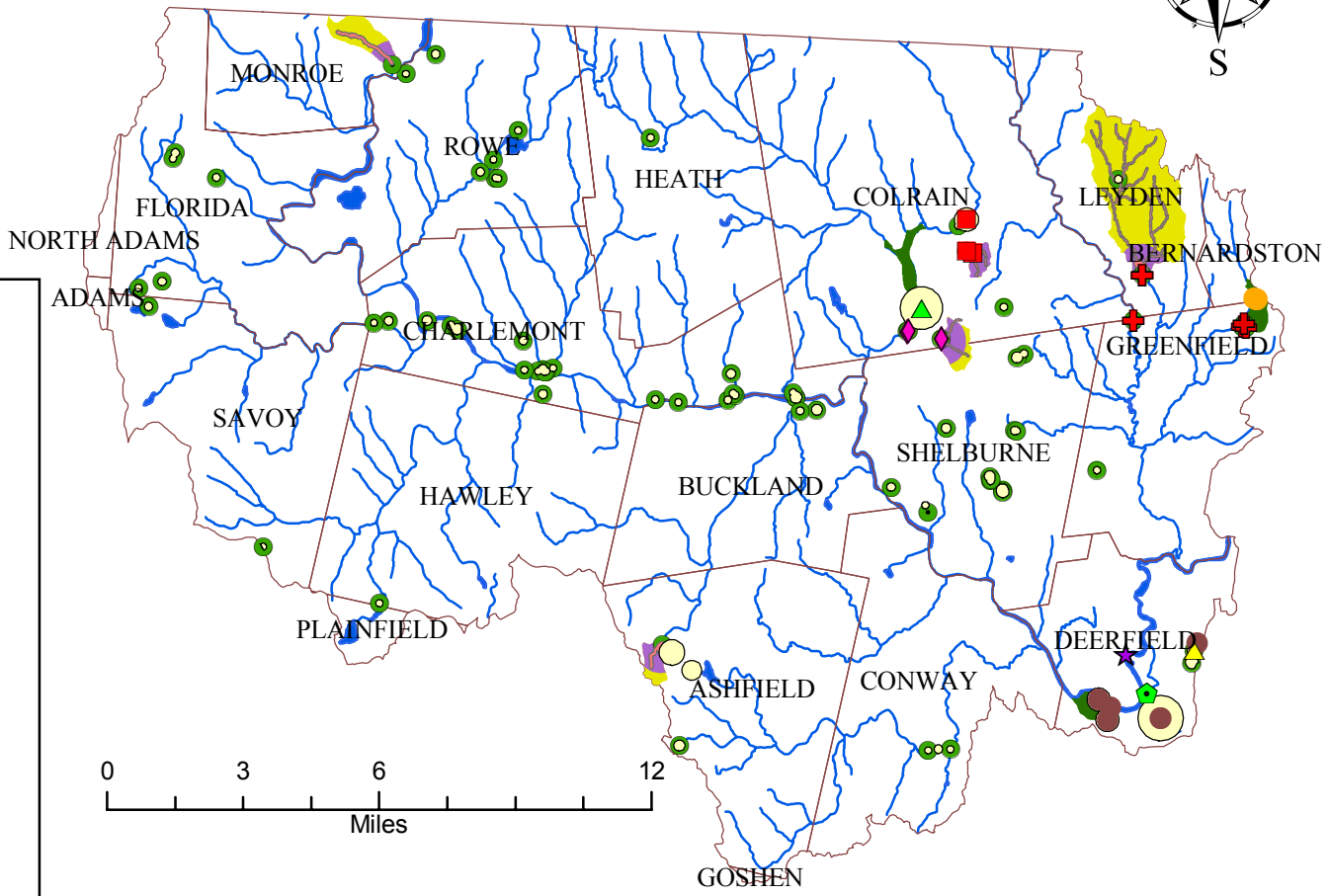


Source Information:
- Office of Geographic and Environmental Information (MassGIS), Commonwealth of Massachusetts Executive Office of Environmental Affairs

Figure 3.1.3-1: Public Water Supply Withdrawals within the Massachusetts Portion of the Deerfield River Watershed

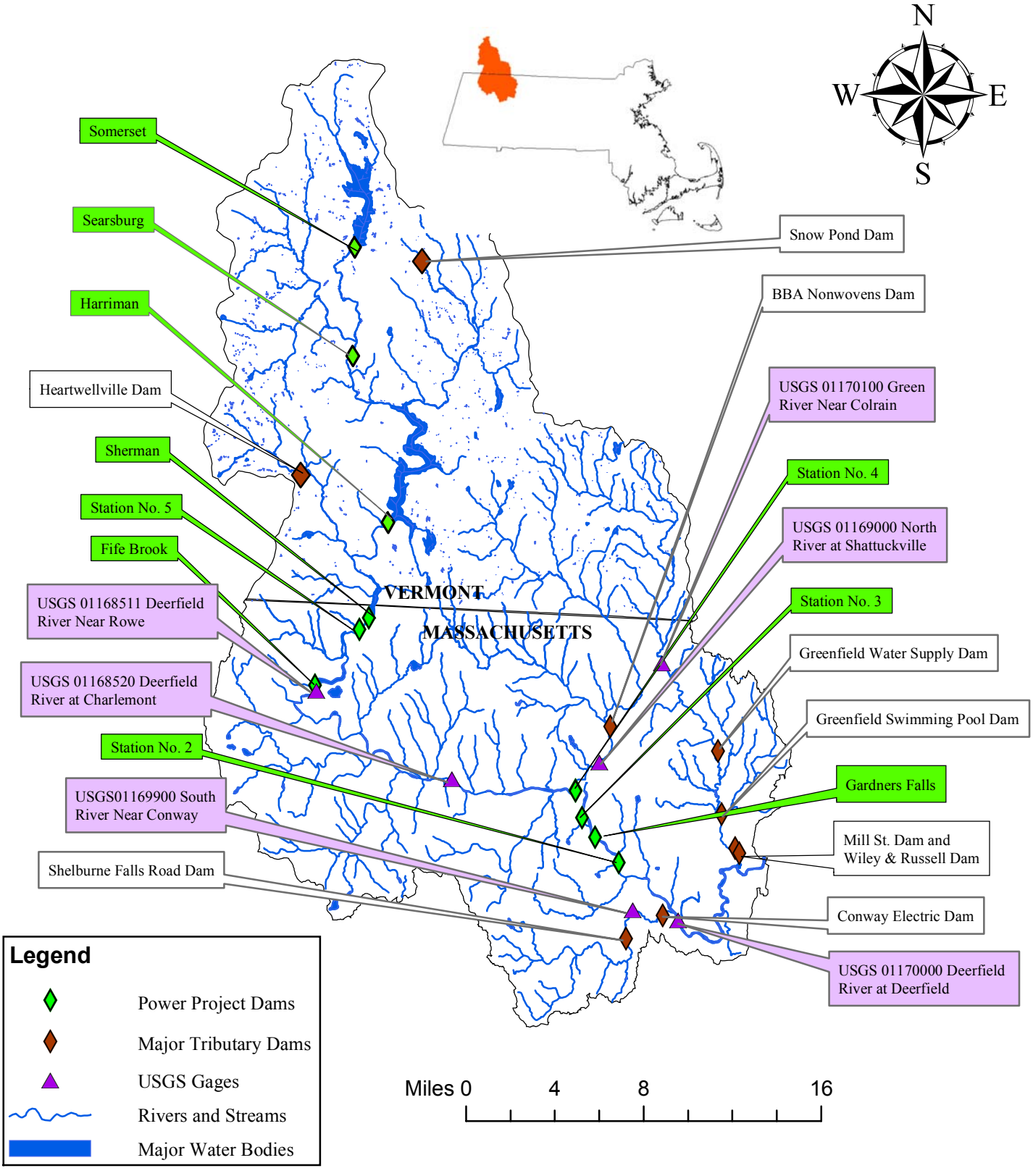






Source Information:
- Office of Geographic and Environmental Information (MassGIS), Commonwealth of Massachusetts Executive Office of Environmental Affairs

Figure 3.1.5-1: Major Dams and USGS Gages Within the Deerfield River Watershed



Source Information:
- Office of Geographic and Environmental Information (MassGIS), Commonwealth of Massachusetts Executive Office of Environmental Affairs
- Vermont Center for Geographic Information

3.2 Water Quality

Overall, water quality in the Deerfield River Watershed is quite good; however, several areas have encountered local water quality problems. The principal water quality problem has been fecal coliform counts that exceed state standards occasionally during wet weather events.

One area of concern for many of the major waterbodies in the upper portion of the Deerfield Watershed is the low buffering capacity of the environment. Due to a lack of natural buffering materials, waters tend to be slightly acidic, and this circumstance can be further exacerbated by the deposition of acid rain (VANR 2003). Water quality sampling that was conducted in the upper watershed during April 2002 showed only the Deerfield River near Stillwater meeting the Massachusetts pH standard of 6.5 (DRWA 2002). Non-point source pollution particularly from localized illegal dumping, acid mine drainage, stormwater runoff, failing septic systems, and agricultural activities, as well as elevated levels of arsenic within sediments behind several impoundments are also areas of concern

3.2.1 State Water Quality Classifications

Current Vermont Water Quality Standards (VWQS) classify waters in Vermont as being either Class A or Class B, with specific reaches of Class B waters designated as Waste Management Zones (WMZ). Waters designated as WMZ have permitted discharges of treated wastes within the reach. Table 3.2.1-1 describes the potential uses for Class A and Class B waters. In addition to having a designated class, stream reaches are categorized either as a coldwater fishery or a warmwater fishery. Criteria for coldwater streams that must be satisfied include standards for turbidity (less than 10 nephlometric turbidity units [ntu]), dissolved oxygen (DO) (concentrations of greater than or equal to 6 milligrams per liter [mg/l]), saturation (greater than or equal to 70%), and temperature (less than or equal to 20°C (68°F)).

All waters within the Vermont portion of the watershed are Class B except for Haystack Pond, Howe Pond, Howe Pond Brook, Cold Brook, and all waters above elevation 2,500 feet, mean sea level (msl), which are Class A (Vermont Water Resources Board, 2000).

Table 3.2.1-1: Vermont Water Quality Classification (Source: Vermont Water Resources Board 2000)

Class A	Waters of a quality which is suitable for public water supply with disinfection when necessary. When compatible, for the enjoyment of water in its natural condition.
Class B	Waters suitable for swimming, recreation, irrigation, and other agricultural uses; good habitat for aquatic biota, fish and wildlife; good aesthetic value, acceptable for public water supply with filtration and disinfection.

According to the 1996 Massachusetts Water Quality Standards (MWQS) there are three classifications of inland waters in Massachusetts, Class A, B, and C (Table 3.2.1-2). In addition, stream reaches are categorized as either a coldwater fishery or a warmwater fishery.

Table 3.2.1-2: Massachusetts Water Quality Classification (MDEP 2003a)

Class A	These waters are designated as a source of public water supply. To the extent compatible with this use they shall be an excellent habitat for fish, other aquatic life and wildlife, and suitable for primary and secondary contact recreation. These waters shall have excellent aesthetic value. These waters are designated for protection as Outstanding Resource Waters (ORWs) under 314 Code of Massachusetts Regulations (CMR) 4.04(3).
Class B	These waters are designated as a habitat for fish, other aquatic life, and wildlife, and for

	primary and secondary contact recreation. Where designated they shall be suitable as a source of water supply with appropriate treatment. They shall be suitable for irrigation and other agricultural uses and for compatible industrial cooling and process uses. These waters shall have consistently good aesthetic value.
Class C	These waters are designated as a habitat for fish, other aquatic life and wildlife, and for secondary contact recreation. These waters shall be suitable for the irrigation of crops used for consumption after cooking and for compatible industrial cooling and process uses. These waters shall have good aesthetic value.

There are five Class A waters in the Massachusetts portion of the watershed, summarized in Table 3.2.1-3. The remainder of the Deerfield River Watershed is classified as Class B cold or warm water fishery. There are no Class C waters in the Deerfield River Watershed.

Table 3.2.1-3: Class A Waters in the Massachusetts Portion of the Deerfield River Watershed (Source: MDEP 2003a)

Water Body	Location/Outlet
Upper Reservoir and Lower Reservoir* (Highland Springs)	Source to outlet in Ashfield and those tributaries thereto
Unnamed Reservoir (Mt. Spring Reservoir, Mountain Brook Reservoir)	Source to outlet in Colrain and those tributaries thereto
Greenfield Reservoir (Glen Brook Upper Reservoir)	Source to outlet in Leyden and those tributaries thereto
Unnamed Reservoir (Fox Brook Upper Reservoir)	Source to outlet in Colrain and those tributaries thereto
Unnamed Reservoir (Phelps Brook Reservoir)	Reservoir outlet in Monroe and those tributaries thereto

*Lower Reservoir no longer exists and will be removed from the list of Class A waterbodies in the next revising of the MWQS.
Note: MDEP has recommended that the Green River and its tributaries from the Vermont border to Greenfield pumping station be reclassified from Class B to Class A in the next revision of the MWQS.

3.2.2 Designated Uses for Massachusetts Waters

The status of certain designated uses as defined in the State Water Quality Standards (SWQS) was assessed recently (MDEP 2003a). The designated uses include: aquatic life, fish consumption, primary and secondary contact recreation and aesthetics. Each use, within a given segment, was individually assessed as 1) Support, 2) Impaired, 3) Alert, and 4) Not Assessed. When too little current or reliable information was available, the use is not assessed; however, if the limited information indicates some evidence of water quality impairment which is not "naturally occurring", the use was identified with an "Alert Status."

For the 30 river segments investigated, sufficient data was available to adequately assess many segments for the five main uses evaluated (i.e., aquatic life, fish consumption, primary, and secondary contact, and aesthetics) (MDEP 2003a). At least one designated use was assessed in 25 river segments. Of those segments that were assessed, two were considered to be "Impaired" for one or more designated uses (Table 3.2.2-1) as a result of mercury contamination and acid mine drainage. Sixteen segments in the watershed were placed on "Alert Status" for aquatic life, primary contact, secondary contact, or aesthetics as a result of flow regulation, erosion and sedimentation, nutrients, high temperature, low dissolved oxygen, bacteria, or illegal waste dumping concerns.

Table 3.2.2-1: River Segment Assessment Summary (Source: MDEP 2003a)

Location	Segment #	Aquatic Life	Fish Consumption	1° Contact	2° Contact	Aesthetics
Deerfield River	MA33-01	S*	NA	S	S	S
Deerfield River	MA33-02	S*	NA	S	S	S
Deerfield River	MA33-03	S*	NA	S*	S	S
Deerfield River	MA33-04	S*	NA	S	S	S*
Pelham Brook	MA33-12	S	NA	NA	NA	S
Cold River	MA33-05	S	NA	S	S	S
Chickley River	MA33-11	S	NA	NA	NA	S
Bozrah Brook	MA33-13	NA	NA	NA	NA	NA*
Davis Mine Brook	MA33-18	NA (1.6 mi), NS (1.7 mi)	NA	I	I	NA (1.6 mi), NS (1.7 mi)
Mill Brook	MA33-14	S*	NA	NA	NA	S
Clesson Brook	MA33-15	S*	NA	S	S	S
Smith Brook	MA33-26	NA	NA	NA	NA	NA
Clark Brook	MA33-16	S	NA	NA	NA	S
East Branch North River	MA33-19	S*	NA	S*	S	S
Foundry Brook	MA33-25	NA	NA	NA	NA	S
West Branch North River	MA33-27	S	NA	NA	NA	NA
Tissdell Brook	MA33-24	NA	NA	NA	NA	S
Taylor Brook	MA33-31	S*	NA	S	S	S
North River	MA33-06	S*	NA	S*	S	S
Bear River	MA33-17	S	NA	NA	NA	S
Drakes Brook	MA33-23	S	NA	NA	NA	S
Dragon Brook	MA33-20	NA	NA	NA	NA	NA
Shingle Brook	MA33-22	NA	NA	NA	NA	NA
South River	MA33-07	S*	NA	S	S	NA
South River	MA33-08	S*	NA	S*	S*	S
Pumpkin Hollow Brook	MA33-32	S*	NA	NA	NA	S
Hinsdale Brook	MA33-21	NA*	NA	NA	NA	NA
Green River	MA33-28	S	NA	NA	NA	S*
Green River	MA33-29	S	NA	S	S	S
Green River	MA33-30	S*	NA	I	S*	S*

Legend: S=Support; NA=Not Assessed; I=Impaired; numbers in parentheses indicate river miles meeting that condition.
**=Alert Status*

A total of 24 lakes and ponds exist in the watershed. Designated uses were assessed at some lakes and ponds based on surveys conducted by MDEP in 1995 and 2000. The 1995 surveys conducted on 13 lakes were cursory in nature and relied on visual rather than quantitative observations. In 2000, more intensive baseline surveys were conducted at two lakes (Pelham Lake and Plainfield Pond).

Bog Pond was placed on "Alert Status" for aquatic life due to an unconfirmed report of non-native species (variable water milfoil) presence and Sherman Reservoir was given an "Alert Status" for aquatic life because of elevated arsenic and copper in the sediment; however, the aquatic life use was not fully assessed in any of the 24 lakes and ponds within the watershed. Sherman Reservoir and Plainfield Pond

were determined to be "Impaired" for fish consumption due to mercury contamination. The remaining lakes in the watershed were not assessed for fish consumption. The primary and secondary recreation use was assessed and determined to have "Support" status in North Pond and South Pond. For the remaining lakes and ponds in the watershed, recreational and aesthetic uses were not assessed due to lack of data.

3.2.3 303d Impaired Waters

Section 303(d)[4] of the Clean Water Act, requires that various states identify waterbodies that do not meet standards and requires the development of Total Maximum Daily Loads[5] (TMDLs) for these waterbodies. The waterbodies requiring a TMDL assessment, per the Massachusetts Year 2002 Integrated List of Waters, within the Deerfield River Watershed are illustrated in Table 3.2.3-1.

Table 3.2.3-1: Massachusetts Category 5 Waters-Waters requiring a TMDL (Source: MDEP 2003b)

Name/Segment	Location	Cause of Impairment
Deerfield River/MA33-01	Vermont line/Monroe/Rowe, to confluence with Cold River, Charlemont.	Metals
Deerfield River/MA33-02	Confluence with Cold River, Charlemont to confluence with North River, Charlemont/Shelburne Falls.	Unknown Toxicity, Metals, and Chlorine
Chickley River/MA33-11	Confluence with Tilton and Horsefords brooks, Savoy to confluence with Deerfield River, Hawley.	Pathogens
Davis Mine Brook/MA33-18	Headwaters, just south of Dell Road, Rowe to confluence with Mill Brook, Charlemont.	pH, Other Habitat Alterations
Green River/MA33-09	Vermont line, Colrain to former Greenfield WWTP outfall, Greenfield.	Pathogens, Metals, Cause Unknown
Green River/MA33-10	Former Greenfield WWTP outfall to confluence with Deerfield River, Greenfield.	Unionized Ammonia, Pathogens, Metals, Cause Unknown
North River/MA33-06	From confluence of East and West Branches of the North River, Colrain to confluence with Deerfield River, Shelburne.	Pathogens, Taste, Odor and Color
South River/MA33-08	Emments Road Ashfield to confluence with Deerfield River, Conway.	Pathogens, Other Habitat Alterations, Cause Unknown
Plainfield Pond	Plainfield	Metals, Noxious aquatic plants
Sherman Reservoir	Rowe/Monroe/Whitingham, Vt.	Metals
Tannery Pond	Savoy	Flow Alteration

3.2.4 Water Quality Conditions by Subwatershed

A summary of water quality conditions along the Deerfield River and its major tributaries from Somerset Reservoir to the Connecticut River is provided below.

[4] The Clean Water Act contains several sections requiring reporting on the quality of waters. Section 303(d) requires, from time to time, a list of waters for which effluent limitations are not sufficient to meet water quality standards. In its regulations implementing Section 303(d), the Environmental Protection Agency has defined "time to time" to mean on April 1 of every even-numbered year.

[5] A TMDL is the total amount of a pollutant that a waterbody may receive from all sources without exceeding water quality standards.

East Branch Deerfield River Subwatershed

Water temperatures within Somerset reservoir support coldwater fish species. Temperature and dissolved oxygen (DO) stratification occurs during the summer months; however, DO levels remain near saturation above the thermocline. The waters downstream of the reservoir are classified as a Class B coldwater fishery by the state of Vermont and temperature/DO levels range from 10ºC to 12ºC (50ºF to 53.6ºF) and 9.1 to 13.0 mg/l, respectively, during July, August, and September (FERC 1997).

North Branch Deerfield River Subwatershed

Approximately four miles downstream of the Searsburg Dam is Harriman Reservoir. The North Branch Deerfield joins the East Branch Deerfield at this location to form the mainstem Deerfield. Aside from snowmaking withdrawals, the North Branch is largely unregulated in terms of streamflow. However, there is a long history of land and instream alterations in the North Branch subwatershed that have impacted water quality conditions. A section of the North Branch and a tributary (Iron Stream) were assigned a "Non-Support" status by VANR due to low flows that resulted from snowmaking withdrawals and high levels of iron from ski area development. Another section of the North Branch and two tributaries (Cold Brook and an unnamed tributary) were assigned a "Partial Support" status due to low flows as a result of snowmaking withdrawals. In addition, a section of the North Branch and a tributary (Beaver Brook) were also assigned a "Non-Support" status due to stream channelization and erosion concerns (VANR 2003). The town of Wilmington holds a NPDES permit to discharge 0.0135 mgd of treated wastewater to the North Branch Deerfield River.

Deerfield River Mainstem-Vermont

Water in the Searsburg Impoundment is classified as Class B by the state of Vermont. Due to the riverine nature of the impoundment, there is little or no stratification during the summer months, and little change from the upstream reaches in water quality. The bypass reach below the Searsburg Dam did not meet minimum state water quality standards before 1997 due to low flow conditions and significant warming of the water (FERC 1997). Water temperatures would rise as much as 3ºC (37.4ºF) before being cooled again at the confluence with the Searsburg powerhouse tailrace. However, the new FERC license for the project issued in 1997 set minimum flow requirements for the bypass reach, which resulted in improved temperature and DO conditions.

Water quality in Harriman Reservoir meets Vermont state water quality standards, but there is evidence that increased housing density, land clearing, and agricultural uses have elevated phosphorus levels. It is important to note that, overall, the reservoir is relatively low in productivity. In addition, historic water quality sampling has shown that water tends to be somewhat acidic with pH ranging from 6.4 to 5.9 and is sensitive to acidic inputs. Thermal stratification occurs during the summer and cooler temperatures at depth support cold-water fish species. The Harriman bypass reach receives well-oxygenated, cold water from the reservoir, which helps support a downstream coldwater fishery. The unregulated West Branch Deerfield River joins the mainstem in the Harriman bypass reach before eventually flowing into the Sherman Reservoir. The Village of Whitingham holds an NPDES permit to discharge 0.012 mgd of treated wastewater into the Harriman Reservoir, while the Town of Readsboro discharges treated wastewater to mainstem below Harriman Reservoir (Table 3.2.4-1).

West Branch Deerfield River Subwatershed

Water quality information within the West Branch Deerfield River Subwatershed is limited; however, high summer water temperatures resulting from a lack of stream shading and summer low flows have

been identified as a concern. In addition, waters within the watershed can experience low alkalinity and low pH as well (VANR 2003).

Deerfield River Mainstem-Massachusetts

The Class B waters leaving the Harriman Reservoir enter the Sherman Reservoir, located in Rowe, Massachusetts, at the border of Vermont and Massachusetts. From 1961 to 1992 the Sherman Reservoir received once-through cooling water from the Yankee Atomic Electric Company (YAEC) Rowe Nuclear Powerplant. The most recent NPDES permit issued in 1988 allowed non-contact discharges of up to 225 mgd of cooling water with a maximum allowable temperature rise of 13.1ºC (rise of 23.5ºF) over intake, 10.8 mgd of service water consisting of turbine lubricating oil, cooling water, generator hydrogen cooling water, and the primary plant effluent, and 1.0 mgd of water treatment plant effluent, transformer cooling water, and floor drain water with a maximum allowable temperature rise of 19.4ºC (rise of 35ºF) over intake temperature (Table 3.2.4-1) (MDEP 2003a).

The nuclear plant has been actively decommissioning since February 1992, and a permit has been drafted to authorize discharge of up to 0.22 mgd of wastewater consisting of spent fuel pool heat exchanger, dilution test tank effluent, stormwater, and excavation de-watering during the decommissioning process. The power plant draws its water from a pipe about 70 feet deep and 200 feet offshore in the Sherman Reservoir and discharges via three outfalls back into the reservoir. Additionally, when the plant is preparing for final dismantlement, the spent fuel pool containing 145,000 gallons of water must be drained and rinsed requiring another 20,000 gallons. All water must pass through a purification system to minimize the release of radioactive materials to the environment (MDEP 2003a).

Presently, the Sherman Reservoir is a Class B waterbody and meets both Vermont and Massachusetts surface water quality standards. Temperatures remain under 20ºC (68ºF) below approximately 30 feet of depth during summer stratification and DO levels are good throughout (FERC 1997). Sediment grab samples from the Sherman Reservoir showed elevated levels of arsenic (25.5 ppm, four times the low effects range) and copper (32.3 ppm two times the low effects range) (ESS, Inc. 2002). The Massachusetts Department of Public Health (MDPH) has issued a fish consumption advisory for Sherman Reservoir due to elevated mercury levels (MDPH 2002). As a result, the fish consumption use for this portion of the river was "Impaired" (MDEP 2003a).

Outflow from the Sherman powerhouse (located at the dam) travels about 0.8 miles downstream into the Station No. 5 impoundment. USGen was authorized in September 1997 via NPDES permit MA0034908 to discharge 0.05 mgd of station sump water, and 0.002 mgd of bearing cooling water into the Deerfield River near Mill Street/Monroe Bridge, in Monroe just below the Sherman Reservoir. In addition, the Town of Monroe is authorized (permit number MA0100188) to discharge 0.015 mgd from their wastewater treatment facility at this same location (Table 3.2.4-1). Sampling conducted upstream of the Monroe wastewater facility showed alkalinity and pH ranges of 10 to 20 mg/l and 6.3 to 6.8, respectively (MDEP 2003a).

Water in the Station No. 5 impoundment is classified as Class B by the state of Massachusetts. Temperatures are typically below 20ºC (68ºF) and DO near saturation throughout the impoundment (FERC 1997); however, high summertime temperatures may present problems for coldwater fish species. Water from the impoundment is diverted 3.1 miles downstream to the Station No. 5 powerhouse where it discharges into the Fife Brook Impoundment. The entire flow of Dunbar Brook is also diverted into the power canal in Monroe. USGen is authorized by NPDES permit MA0034894 (issued September 1997) to discharge 0.072 mgd of station sump water with oil floatation, 0.252 mgd of bearing cooling water, 0.0126 mgd of strainer backwash, and <10 gallons per day (gpd) of sump water with oil floatation at the Station No. 5 Dam (Table 3.2.4-1). Water quality and chemistry in the 3.1 mile Station No. 5 bypass

reach is good and meets Class B standards for coldwater fish, since the minimum flow of 73 cfs was established in 1997 (MDEP 2003a).

Water from the Station No. 5 impoundment enters the Fife Brook Impoundment via the bypass reach and the tailwater of the Station No. 5 powerhouse. The Fife Brook Impoundment is classified as a Class B waterbody by the state of Massachusetts and supports coldwater fish species. The FERC requires a minimum flow of 125 cfs to be released from the Fife Brook Dam. Water quality sampling conducted a short distance below Fife Brook Dam in the summer of 2000 by MDEP showed DO ranging from 8.5 to 9.8 mg/l, and the maximum recorded temperature reaching 17.0ºC (62.6ºF). The pH and alkalinity at this site ranged from 5.8 to 6.5 and 4 to 5 mg/l, respectively. Turbidity was low, ranging from 1.3 to 2.4 nephlometric turbidity units (ntu) (MDEP 2003a). Fecal coliform counts below the Fife Brook dam near Zoar Gap ranged from 7 to 10 colonies/100 milliliters (DRWA 2002).

The 17-mile stretch of river between the Fife Brook Dam/Powerhouse and the Station No. 4 Impoundment is the longest unimpeded reach of the entire 70.4 miles of the Deerfield River and is used heavily for recreation. This reach is classified as a Class B coldwater fishery. Five significant tributaries enter this river reach; Pelham Brook, Cold River, Chickley River, Mill Brook, and Clesson Brook.

Water quality sampling conducted near the Charlemont USGS gage in the summer of 2000 showed DO ranging from 9.3 to 12.8 mg/l and saturation was not less than 91%. The maximum temperature recorded was 19.7ºC (67.5ºF) (MDEP 2003a). Fecal coliform counts ranged from 10 to 50 colonies/100 milliliters (ESS Inc. 2002). The pH ranged from 6.4 to 6.8 and alkalinity was low (4 to 6 mg/l). Suspended solids measurements were very low ranging between 1.4 to 1.9 mg/l and measurements for turbidity were very low ranging between 0.15 to 1.7 ntu (MDEP 2003a and ESS Inc. 2002).

There is one NPDES permit for wastewater discharge in this mainstem segment. The NPDES permit number MA0103101 issued in September 1997 authorizes the Charlemont Wastewater Treatment Plant to discharge 0.05 mgd of treated wastewater to the Deerfield River just downstream of the confluence with Mill Brook in Charlemont (Table 3.2.4-1). The facility was upgraded in 1999 and effluent toxicity has improved as a result (MDEP 2003a).

The Deerfield River Valley begins to broaden through Charlemont, and temperature, DO, and pH remain at satisfactory levels; however, sediments sampled within the Station No. 3, Station No 2, and Gardners Falls impoundments all showed slightly elevated levels of arsenic (1-3 times greater than low effects ranges) (ESS Inc 2002). Despite these non point sources of pollution, the aquatic life in the Deerfield River is apparently not affected and the water quality meets all MWQS uses (MDEP 2003a).

The Station No. 4 Impoundment is a shallow, riverine impoundment about 1.5 miles long and meets Class B coldwater fishery standards. Sediment grab samples in the No. 4 impoundment found all analyzed chemicals to fall below the low effects range with the exception of arsenic which had a slightly elevated level (12.0 ppm, two times greater than low effects range) (ESS Inc. 2002).

The Station No. 4 Dam diverts water downstream to the powerhouse, where it empties upstream of the Station No. 3 Impoundment in Shelburne Falls. The 1.4-mile bypass reach, below the Station No. 4 Dam makes a wide northern loop before turning south again and entering Shelburne Falls. The North River, the Deerfield's largest tributary, enters the Deerfield 0.8 miles downstream from the Station No. 4 Dam in the bypass reach.

The Deerfield River below the Station No. 4 dam is classified as a Class B warmwater fishery as temperatures in the summer may rise above 20ºC (68ºF). There are no water quality issues in the mainstem from the Station No. 4 powerhouse to the Station No. 3 impoundment. USGen is authorized by

NPDES permit MA0034860 issued in September 1997 to discharge 0.0015 mgd of floor drain water, 0.06 mgd of transformer cooling water, and 0.0216 mgd of bearing cooling water at the Station No. 4 dam (Table 3.2.4-1).

The Station No. 3 Impoundment is classified as a Class B warmwater fishery. Sediment grab samples collected behind the Station No. 3 Dam showed that the arsenic concentration at 10.7 ppm, which is approximately 1.8 times greater than the low effects level (ESS Inc. 2002). The Station No. 3 powerhouse has an NPDES permit (MA0034851) issued September, 1997 to discharge the following volumes: 0.0015 mgd of internal facility drainage, 0.06 mgd of transformer non-contact cooling water, 0.0216 mgd bearing contact cooling water, and 0.0432 mgd of cooling water strainer backwash (Table 3.2.4-1). The 0.4-mile bypass reach has no water quality issues aside from maintenance of a 100 cfs minimum flow. However, a fecal coliform level of 350 colonies/100 milliliters (a violation of state standards is 400 colonies/100 milliliters) was recorded in the glacial potholes below the Station No. 3 Dam (DRWA 2002).

The town of Buckland is authorized to discharge from the Shelburne Falls Wastewater Treatment Facility to the Deerfield River (NPDES permit MA0101044 issued September 1997). The permittee is authorized to discharge 0.25 mgd of treated sanitary wastewater.

Below Station No. 3 the river is quickly impounded again by the Gardners Falls Dam. The impounded waters again are shallow Class B waters supporting a warmwater fishery. Sampling conducted in April 2002 just upstream of the Gardners Falls Dam showed pH, alkalinity, DO, and DO saturation levels of 6.34, 10.30 mg/l, 10.54 mg/l, and 93%, respectively (DRWA 2002). However, sediment grab samples collected behind the Gardners Falls Dam showed the arsenic concentration at 10.3 ppm, which is approximately 1.7 times greater than the low effects level, and the lead concentration at 43.5 ppm, which is approximately 1.4 times greater than the low effects level (ESS Inc. 2002).

The Gardners Falls project is certified by NPDES permit MA0035670 to release 0.00864 mgd of bearing cooling water and 10 gpd of boiler blowdown (max temp 32.2ºC [90ºF]) (Table 3.2.4-1). There is a 0.3-mile bypass reach below the Gardners Falls Dam as the water is diverted along the west bank to the powerhouse. Required minimum flow in the mainstem Deerfield below Gardners Falls Dam is 150 cfs. There are no water chemistry or water quality issues in the 2.5-mile reach between Gardners Falls and the Station No. 2 impoundment; however, in June of 2002, a fecal coliform level of 400 colonies/100 milliliters (a violation of state standards) was recorded in the Wilcox Hollow area below the Gardners Falls Dam (DRWA 2002).

The Station No. 2 Impoundment holds Class B waters, and the Station No. 2 powerhouse is certified (NPDES permit MA0034851 in September 1997) to release 0.0015 mgd of internal facility drainage, 0.06 mgd of non-contact transformer cooling water, 0.0216 mgd of bearing cooling water, and 0.0432 mgd of cooling water strainer backwash (Table 3.2.4-1). Sediment grab samples showed that the arsenic concentration at 16.3 ppm, which is approximately 2.7 times greater than the low effects level (ESS Inc. 2002).

From the tailwaters of the Station No. 2 Dam the Deerfield River flows 13.2 miles to its confluence with the Connecticut River with the South and Green rivers entering in Conway and Greenfield. In June of 2002, a fecal coliform level of 620 colonies/100 milliliters (a violation of state standards) was recorded at the South River confluence, and a level of 740 colonies/100 milliliters was collected a short distance downstream at the Stillwater bridge (DRWA 2002). DO just upstream of the confluence with the Green River in Greenfield ranged from 9.28 to 11.78 mg/l and saturation was not less than 83% during the summer of 2000. The maximum temperature in this segment of the Deerfield River in 2000 was 20.5ºC. The pH ranged from 6.8 to 7.0 (ESS Inc. 2002).

The Town of Deerfield is authorized to discharge from the Old Deerfield Wastewater Treatment Facility to the Deerfield River in Deerfield (NPDES permit MA0101940 issued September 1997). The permittee is authorized to discharge 0.25 mgd of treated sanitary wastewater. In addition, the Greenfield Water Pollution Control Plant located in Greenfield, Massachusetts is authorized by NPDES permit MA0101214 issued in October 2002 to discharge 3.2 mgd of sanitary wastewater to the Deerfield (Table 3.2.4-1). The location of this outfall has recently been moved from the Green River to the Deerfield River, which has resulted in improvements to Green River water quality conditions.

DO measurements taken near the Route 5/10, below the Green River confluence, in Greenfield during 2000 were not less than 8.9 mg/l and were as high as 11 mg/l. Percent saturation ranged from 88% to a high of 95%. The maximum temperature measured in 2000 was 20.2ºC. The pH ranged between 6.8 and 7.0 and alkalinity ranged from 11 to 17 mg/l during the summer of 2000 (MDEP 2003a and ESS Inc. 2002). There have been concerns related sources of elevated phosphorus and occasional high turbidity in this segment (MDEP 2003a).

Pelham Brook Subwatershed

Water quality sampling of fecal coliform bacteria from Pelham Brook was conducted in November and December 1995 and April 1996 by MDEP. Fecal coliform counts ranged from <4 to 74 colonies/100 milliliters. In addition, fish species were collected in this brook, and the presence of multiple age classes of brook trout and Altantic salmon, multiple intolerant species, and the absence of macrohabitat generalists indicated excellent water quality conditions as well as stable flow regimes (MDEP 2003a).

Cold River Subwatershed

The Cold River flows approximately 14 miles southeasterly before entering the Deerfield River in Charlemont, Massachusetts. Sampling conducted in April 2002 by DRWA showed that Cold Brook has pH, alkalinity, DO, and DO saturation levels of 5.59, 5.80 mg/l, 10.06 mg/l, and 87%, respectively. Fecal coliform counts ranged from 0 to 80 colonies/100 milliliters. (DRWA 2002). In addition, fish species were collected in this brook, and the presence of multiple age classes of brook trout and Altantic salmon, multiple intolerant species, and the absence of macrohabitat generalists indicated excellent water quality conditions as well as stable flow regimes (MDEP 2003a).

Chickley River Subwatershed

The Chickley River flows 8.7 miles northeasterly before entering the Deerfield River in Charlemont approximately 2 miles downstream of the Cold River confluence, and is classified as a Class B coldwater fishery. Dissolved oxygen in the Chickley River ranged from 9.3 to 11.6 mg/l and saturation was not less than 90% during the summer of 2000. The maximum temperature recorded in the Chickley River was 15.8ºC (60.4ºF), while pH ranged between 6.9 and 7.2 (ESS, Inc. 2002).

Mill Brook Subwatershed

Davis Mine Brook is a sub-tributary and begins in Rowe before flowing into Mill Brook in Charlemont. This brook has been severely impacted by the now defunct Davis Mine in Rowe, and assigned a "Impaired" status for aquatic life and aesthetic uses (MDEP 2003a). The Davis Mine was a sulfur mine containing pyrite and was active from 1882 to 1910 when it collapsed and groundwater filled the shafts. Since that time, extremely acidic water (pH < 2) has been entering the Davis Mine Brook and has led to the disappearance of fish and many macroinvertebrates. Acid mine drainage is evident in the streambed near the mine as the water is brightly colored due to the colonization of acidophilic microbes. Mill Brook

has some potential water quality issues and was placed on Alert Status for aquatic life uses (MDEP 2003a), as it may be affected by Davis Mine Brook's acidic water, or by junkyards/landfills in its watershed.

Clesson Brook Subwatershed

Clesson Brook in Hawley-Buckland met MWQS for a coldwater fishery, but fish sampling conducted by MDEP revealed that there were no salmonids (trout, salmon) present and only one of the fish species collected was considered to be intolerant of pollution. Therefore, it was placed on "Alert Status" for aquatic life use. Water quality samples were collected from Clesson Brook during the summer of 2000. Dissolved oxygen and DO saturation were not less than 11.5 mg/l or 90.6% saturation. The maximum instream temperature was 17.1ºC (62.8ºF), pH ranged from 7.0 to 7.3, and turbidity ranged from 0.08 to 1.92 ntu (ESS, Inc. 2002).

North River Subwatershed

The North River is formed at the confluence of the East and West Branches of the North River in Colrain, Massachusetts and flows 3.3 miles through Shelburne, Massachusetts to its confluence with the Deerfield River. The East and West Branches flow south from their headwaters in Halifax and Whitingham, Vermont through Colrain and Heath, Massachusetts.

The North River and its tributaries are classified as Class B coldwater fisheries and have generally good water quality with the exception of erosion, sedimentation, landfill seepage, and wastewater discharge concerns. Parts of the North River and some of its tributaries have been experiencing significant erosion in localized areas. These erosion sites, combined with upstream road crossing and agricultural runoff, have potential impacts on productivity and nutrient loading. Significant turbidity in the North River and its tributaries was observed during wet weather conditions.

Water quality data collected during the summer of 2000 in the East Branch North River showed DO conditions were not less than 11.2 mg/l or 93.9% saturation. The maximum instream temperature was 19.6ºC (67.3ºF), and pH ranged from 6.9 to 7.4. Turbidity ranged from 0.60 to 41.8 ntu although five of six measurements were less than 1.6 ntu. The elevated turbidity occurred during a wet weather event (ESS, Inc. 2002).

The lower 3.3 miles of the North River (before it enters the Deerfield River) support the MWQS for a Class B coldwater fishery; however, there are several pollution issues. Dissolved oxygen measurements in the North River collected during the summer of 2000 near the BBA Nonwovens facility were not less than 9.3 mg/l and were as high as 13 mg/l. Percent saturation ranged from 89.3 to a high of 110%. The maximum temperature in the North River was 19ºC (66.2ºF). The pH of the North River ranged between 6.5 and 7.8. However, sediment grab samples collected in 2000 showed the arsenic concentration at 12.6 ppm, which is approximately two times greater than the low effects level (ESS Inc. 2002). In 2002, fecal coliform levels ranged from 16 to 236 colonies/100 milliliters just upstream of the BBA Nonwovens facility (DRWA 2002).

BBA Nonwovens is authorized via NPDES permit MA0003697 issued in March 1997 to discharge 1.35 mgd of treated industrial and domestic wastewater and stormwater to the North River (Table 3.2.4-1). Eight of 21 tests conducted from 1997 to 2002 on the wastewater facility effluent did not meet permit requirements. Fecal coliform bacteria counts have been slightly elevated below the facility. In addition, an acid spill to the North River occurred at the BBA Nonwovens facility in September 1999. The spill of approximately 700 gallons of 93% sulfuric acid resulted in extensive fish kill in the 3.3-mile reach from

the facility to the confluence with the Deerfield River. Actions were taken to minimize the impact, and a Natural Resource Damage settlement was reached in 2003 for damages incurred.

South River Subwatershed

The South River begins at the outlet of Ashfield Pond in Ashfield and flows northeasterly through Conway to its confluence with the Deerfield River about 4 miles downstream of the Station No. 2 Dam. The water quality is generally good although it was put on the 1998 303d list of impaired waters for unknown causes/habitat alteration and pathogens.

Water quality sampling conducted in 2000, showed that six out of twenty fecal coliform tests conducted at various locations had bacteria counts greater than 200 colonies/100 milliliters and all occurred during wet weather conditions (ESS, Inc. 2002). A sewage treatment system called Solar Aquatics was installed to treat municipal wastewater from the Ashfield town center. This facility has a groundwater discharge (permit # GW-594-0) with a limit of 0.025 mgd.

Dissolved oxygen measurements in the South River collected in the summer of 2000 in the lower portion of the river were not less than 9.3 mg/l and were as high as 13.1 mg/l. Percent saturation ranged from 88.4 to a high of 100. The maximum temperature was 20°C (68°F) (ESS, Inc. 2002).

Green River Subwatershed

The Green River begins in Marlboro, Vermont and flows approximately 33 miles south into the Deerfield River, entering in Greenfield, Massachusetts. The northern portion of the river down to the Greenfield Water Supply Dam in Greenfield (8.3 miles north of the confluence) is classified as a Class A public water supply coldwater fishery and water quality is good. DO measurements in this section taken by MDEP in 2000 were not less than 9.4 mg/l. Percent saturation ranged from 91% to a high of 98%. The maximum temperature was 16°C (61°F), pH ranged between 7.3 and 7.7, alkalinity ranged from 31 to 38 mg/l, and suspended solids were below detection (MDEP 2003a). Despite good water quality the river does have some aesthetic and ecologic quality issues in this northern section. There is a dumping area present along the river in Colrain that contains household appliances, household trash, construction debris, paint cans, and furniture. The area is cleaned up by volunteers on an annual basis. There is also a junkyard located in Guilford, Vermont and the Greenfield Department of Public Works along with the town of Guilford have addressed concerns about vehicles in the floodplain and stormwater best management practices.

The health of the final 3.7-mile reach to the confluence with the Deerfield River is compromised by high fecal coliform counts, limited riparian zones, and one dam in disrepair. Fecal coliform counts are high (range from 80 to 6,870 colonies/100 milliliters) both in the mainstem Green River and in its tributary streams near the confluence with the Deerfield. The high counts occurred during wet weather events in the fall of 2000. Sewage contamination was ruled out as the source of high counts in the Cherry Rum Brook subtributary. High counts in the Arms Brook subtributary are attributed to neighboring cattle fields, high counts in the Maple Brook subtributary are attributed to sewage leakage in Greenfield, and high counts in the Wheeler Brook subtributary could not be explained.

Turbidity and trash along some areas of the riverbank in Greenfield and a petroleum odor from the sediment have been noted (MDEP 2003a). The Greenfield Water Pollution Control Plant discharged treated wastewater to the Green River near the confluence with the Deerfield until 1998 when the discharge was moved to the mainstem Deerfield (Table 3.2.4-1).

Dissolved oxygen measurements in the Green River collected in the summer of 2000 within the lower portion of the river were not less than 8.2 mg/l and were as high as 11.0 mg/l. Percent saturation ranged from 75.0 to a high of 103. The maximum temperature was 20°C (68°F), pH ranged between 7.1 and 7.5, alkalinity ranged from 41 to 46 mg/l, suspended solids ranged from 1.6 to 4.4 mg/l during the 2000 (ESS, Inc. 2002).

3.2.5 Landfills

Fuss and O'Neil (2003) conducted an assessment of the environmental risk posed by current and historic landfills in the Deerfield River watershed. As part of the assessment, all current and historic landfills in the Massachusetts portion of the Deerfield River watershed were identified (Figure 3.2.5-1). These landfills were then prioritized in terms of the likelihood to adversely impact nearby natural resources. Further evaluation of these priority sites, including field reconnaissance and screening level sampling, was then conducted; and recommendations were developed to address identified problems. The results of the landfill assessment are summarized in Table 3.2.5-1. Recommendations from the study included the following.

- Management of the Rowe Landfill along Pelham Brook, including removal of solid waste from Pelham Brook, cleanup of refuse along the base of the landfill, and repair and stabilization of the eroded areas of the landfill side slopes. Additional field investigation may be warranted to further assess the environmental risk posed by the landfill and determine the need for corrective/remedial action.

- Management of the Charlemont Landfill, including removal of the exposed bulky waste adjacent to Tatro Brook, and additional field investigation to further assess the environmental risk from the landfill and determine the need for corrective/remedial action. Inspection and additional field investigation of the former municipal brush dump on Warner Hill Road is also recommended.

- Management of the Colrain Brush landfill/Former Town Dump including; performing additional field investigation to assess environmental risk, identifying and characterizing the extent of any impacts that may be present, and determining the need for corrective action. The report identified significant quantities of exposed refuse within 50 feet of the North River and groundwater seeps hydraulically connected to the North River as major issues of concern.

- Management of the Buckland Wood and Demolition Landfill, additional field investigation is recommended to further assess the environmental risk posed by the landfill, identify and characterize the extent of any impacts that may be present, and determine the need for corrective/remedial action. The investigation should include field measurement of hydraulic conductivity, depth to groundwater, confirmation of groundwater flow rate and direction, and collection of upgradient and downgradient groundwater samples and additional seep samples.

- Management of the Lampson & Goodnow site, additional investigation is recommended to address potential contamination associated with the former process wastewater discharge and identified waste disposal area behind the manufacturing building. The vertical and lateral extent of impacted soils in the area should be delineated, and remedial alternatives should be identified. Additional inspection and sampling of the historical waste disposal area is also recommended to further identify the nature and extent of the waste.

- Management of the former Conway/Buckland Landfill, additional field investigation is recommended to further assess the environmental risk posed by the landfill, identify and characterize the extent of

any impacts that may be present, and determine the need for corrective action. Field measurement of hydraulic conductivity, depth to groundwater, confirmation of groundwater flow rate and direction, and collection of upgradient and downgradient groundwater samples and additional seep sampling should be performed.

- Management of the Greenfield tire pile, the tire pile should be removed and the ravine should be stabilized to reduce the potential for erosion and sedimentation in the Deerfield River. This effort should be coordinated with the Greenfield Board of Health and the property owner.

3.2.6 Stormwater Management

Phase I of the National Pollutant Discharge Elimination System (NPDES) stormwater program was established in 1990. It required NPDES permit coverage for municipalities that had populations of 100,000 or more.

Phase II of the NPDES stormwater program was signed into law in December 1999. This regulation builds upon the existing Phase I program by requiring smaller communities, also known as small municipal separate storm sewer systems (MS4s), to be permitted.

Regulated small MS4s must apply for permit coverage by March 2003. Those communities permitted under Phase II are required to develop and implement a comprehensive stormwater management program that includes six minimum measures: (1) public education and outreach on stormwater impacts; (2) public involvement/participation; (3) illicit discharge detection and elimination; (4) construction site stormwater runoff control; (5) post-construction stormwater management for new development and redevelopment; and (6) pollution prevention/good housekeeping for municipal operations.

One way a small MS4 becomes part of the Phase II program is through an automatic designation, which applies to areas designated as an urbanized area by the U.S. Census Bureau. The definition of an urbanized area is any local government or group of local governments that combined have a population of 50,000 and a density of 1,000 people per square mile. Currently, there are no Phase II stormwater communities in the Deerfield River Watershed.

Table 3.2.4-1: NPDES Permit Dischargers in the Deerfield River Watershed (Source MDEP 2003a and VANR 2003)

Company	NPDES Permit #	Issue Date	Discharge Amount (mgd)	Type of Discharge	Receiving Water
* Wilmington WWTF			0.0135	Treated sanitary wastewater	North Branch Deerfield River
* Whitingham WWTF			0.00123	Treated sanitary wastewater	Harriman Reservoir
* Readsboro WWTF			0.0075	Treated sanitary wastewater	Deerfield River mainstem
*Jacksonville WWTF			0.00501	Treated sanitary wastewater	East Branch North River
YAEC	MA0004367	9/1988 (2/1993)	225 10.8 1.0	Condenser cooling water Service water Effluent/floor drain water	Sherman Reservoir
USGen	MA0034908	9/1997	0.05 0.002	Station sump water Bearing cooling water	Sherman Reservoir
Town of Monroe	MA0100188	9/1997	0.015	Treated sanitary wastewater	Sherman Reservoir
USGen	MA0034894	9/1997	0.072 0.252 0.0126 <10 gpd	Station sump water Bearing cooling water Strainer backwash Sump water w/ oil floatation	Fife Brook Impoundment
USGen	MA0034886	9/1997	6.58 0.22	Equipment cooling water/floor drain Strainer backwash	Fife Brook Impoundment
USGen	MA0034878	9/1997	0.07 0.35	Station sump water Bearing cooling water and strainer backwash	Fife Brook Impoundment
Town of Charlemont WWTP	MA0103101	9/1997	0.05	Treated sanitary wastewater	Deerfield River mainstem
BBA Nonwovens	MAR05B746 MA0003697	3/2001	N/A 1.35	Storm water Treated industrial wastewater	North River
USGen	MA0034860	9/1997	0.0015 0.06 0.0216	Floor drain water Transformer cooling water Bearing cooling water	Deerfield River mainstem
Town of Buckland from Shelburne Falls WWTP	MA0101044	9/1997	0.25	Treated sanitary wastewater	Deerfield River mainstem

Company	NPDES Permit #	Issue Date	Discharge Amount (mgd)	Type of Discharge	Receiving Water
Consolidated Edison	MA0035670	9/1997	0.00864 10 gpd	Bearing cooling water Boiler blowdown	Deerfield River mainstem
USGen	MA0034851	9/1997	0.0015 0.06 0.0216 0.0432	Internal facility drainage Non-contact cooling water Bearing cooling water Cooling water backwash	Deerfield River mainstem
Town of Deerfield WWTP	MA0101940	9/1997	0.25	Treated sanitary wastewater	Deerfield River mainstem
Town of Greenfield WPCP (water pollution control plant	MA0101214	10/2002	3.2	Treated sanitary wastewater	Deerfield River mainstem

* Denotes NPDES permits issued by the State of Vermont.

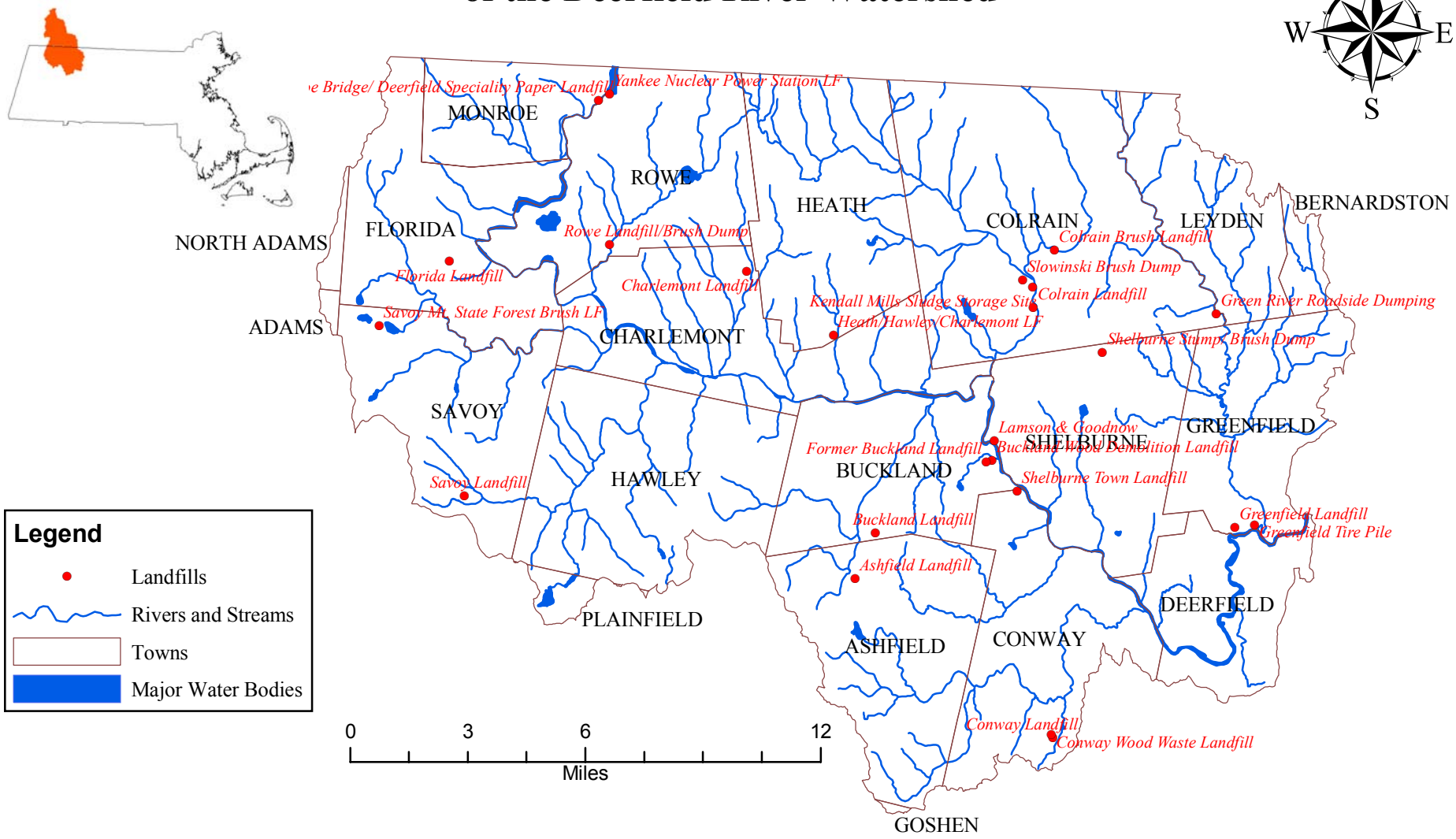
Table 3.2.5-1: Pertinent Results from Deerfield River Watershed Landfill Assessment (Source: Fuss and O'Neil 2003)

Landfill	Dates of Operation	Waste	Status	Monitoring	Nearest Water Body
Florida Landfill	1900-81	Wood, msw*, c/d+, tires	Closed/Capped	N	1,500 ft, Deerfield River
Monroe Bridge /Deerfield Specialty Paper Landfill	1900-84	Msw, paper sludge	Closed/Capped	1995-present	200 ft, Deerfield River
Yankee Nuclear Power Station-construction fill area	1900s-1980s	c/d waste	Inactive/Capped/Lined	1997-present	500 ft, Deerfield River
Rowe Brush Dump	Unknown	Demolition debris	Inactive	N	100 ft, Pelham Brook
Rowe Landfill	Unknown-1978	msw	Inactive	2003	100 ft, Pelham Brook
Savoy Mt. State Forest Brush Landfill	Unknown	Wood waste	Inactive	N	Cold River
Heath/Hawley/Charlemont Landfill	1972-89	msw	Inactive	1987-present	<500 ft. Deerfield River
Savoy Landfill	1959-93	msw	Closed/Partial Cap		1,000 ft, Tilton Brook
Charlemont Landfill	Unknown-1972	msw	Inactive	Recommended in 2002	10 ft, Tatro Brook/Mill Brook
Buckland Landfill	1966-96	Msw, c/d, industrial, sludge (from Shelburne WWTP), bottom ash daily cover	Closed/Capped	1991-present	Clesson Brook
Ashfield Landfill/Demolition/Wood Waste	Unknown-1993	msw and wood waste	Inactive/Capped	2002	2,000 ft, Smith Brook
Colrain Brush Landfill/ Former Town Dump	Unknown-1989	c/d, industrial waste, msw	Closed/Capped	Sampled in 2003	50 ft, North River
Kendall Mills Sludge Storage Site	1970-75	Sludge from Kendall Mills Plant treatment system	Closed	Recommended in 2002	North River
Colrain Landfill	1976-95	msw, industrial waste	Closed/Capped	1987-present	North River
Slowinski Brush Dump	1987	Soil/stumps from road construction	Closed	Test pits in 1987	North River
Buckland Wood Demolition Landfill	1970-84	c/d, asbestos	Closed/Capped	Recommended in 2002	500 ft, Deerfield River

Landfill	Dates of Operation	Waste	Status	Monitoring	Nearest Water Body
Lamson and Goodnow Mfg. Company	Unknown	Never officially recognized as a landfill	Unknown	Sampled in 2003	Deerfield River
Former Buckland Landfill	Unknown-1970s	msw and possibly industrial waste	Inactive	Recommended in 2002	100 ft, Deerfield River
Shelburne Town Landfill	1970-79	msw	Closed/Capped	Recommended in 2002	Deerfield River
Greenfield Landfill	1928-96	Msw, industrial waste (some hazardous), sludge, ash, petroleum, contaminated soils, wood, asbestos	Closed/Lined/Capped	1982-present	Deerfield River
Greenfield Tire Pile	1980-present	3-4,000 tires in a ravine along the river	Inactive	N	Deerfield River
Shelburne Stump/Brush Dump	Unknown-1986	Wood waste, c/d, household appliances, tires, metal	Closed/Capped	N	Deerfield River
Conway Landfill	Unknown-1977	Msw, hazardous waste, liquid waste in 1970's with open burning	Inactive	1994-present	Pumpkin Hollow Brook
Conway Wood Waste Landfill	1977-91	Wood waste	Closed/Capped/Lined	1994-present	Pumpkin Hollow Brook
Green River Roadside Dumping in Colrain	Unknown-present	Not official landfill, household appliances/trash, paint cans, furniture, c/d	Unknown	In works	Green River
Deerfield Landfill	Unknown-1998	Msw and sludge (ceased in 1997)	Closed	N	Deerfield River

* msw = municipal solid waste, + c/d = construction/demolition debris

Figure 3.2.5-1: Landfills Within the Massachusetts Portion of the Deerfield River Watershed



Source Information:
- Office of Geographic and Environmental Information (MassGIS), Commonwealth of Massachusetts Executive Office of Environmental Affairs

3.3 Fish Communities

3.3.1 Migratory Species

Historically, several fish species migrated into the Connecticut River Basin to utilize its mainstem fish habitat, as well as the fish habitat within its many tributaries, such as the Deerfield River Watershed. Damming, pollution, and other alterations within the Connecticut River Basin caused large declines in fish returns. Efforts continue to restore migratory fish runs to the Connecticut River Basin, and its tributaries.

The Holyoke Dam is the first dam on the mainstem Connecticut River, and is located 87 miles upstream from the rivers mouth. The Holyoke Dam is equipped with fish passage facilities (The Holyoke Dam fish lift). There are no other dams on the Connecticut River between Holyoke Dam and the point where the Deerfield River enters the Connecticut River (a total distance of approximately 32 miles).

On the mainstem Deerfield River, upstream fish migration is currently blocked below Shelburne Falls, Massachusetts at the Station No. 2 Dam. Downstream fish passage is provided at the Station No. 4, 3, 2 and Gardners Falls Dams.

Atlantic Salmon

Historic records suggest that Atlantic salmon used the Deerfield River for spawning at least as far upstream as Shelburne Falls (FERC 1997). The Deerfield River accounts for an estimated 13% of all Atlantic salmon nursery habitat in the entire Connecticut River Basin making it an integral part in the overall success and health of Connecticut River Atlantic salmon populations (FERC 1997). The Massachusetts Division of Fisheries and Wildlife (MDFW) currently stocks fry in several of the Deerfield River tributaries.

Under the terms of USGen's license for the Deerfield River Hydroelectric Project, there are two possible triggers that could initiate construction of permanent upstream fish passage at Station No. 2. One trigger includes documentation of four radio tagged salmon in the Station No. 2 tailwaters over two consecutive years. The other trigger includes documentation of 12 radio tagged salmon at Station No. 2 for two consecutive years with successful trapping of those tagged fish for transport upriver or to a hatchery (USGen 2002).

Since 1998, USGen has conducted radio tagging and monitoring studies to determine the number of adult Atlantic salmon that have migrated to the tailwaters of the Station No. 2 Dam. The study effort consists of capturing adult salmon at the Holyoke Dam fish lift on the Connecticut River, radio tagging, and releasing them to the Connecticut River below the mouth of the Deerfield River.

Adult salmon collected at the Holyoke fish lift are made available for these studies by the Connecticut River Atlantic Salmon Commission (CRASC). Typically, nine of every ten adult salmon collected in the fish lift are retained by the United States Fish and Wildlife Service (USFWS) for use as broodstock; and the tenth salmon is allowed to pass upstream of the Holyoke Dam to continue migration. USGen's radio telemetry monitoring effort has consisted of tagging those adult salmon that are allowed to pass upstream. During the prior four years of radio telemetry monitoring (1998 through 2001), 11%, 22%, 19% and 14% of all returning salmon collected at the Holyoke Dam fish lift were tagged.

Four tracking stations are typically used to monitor use of the Deerfield River. They are located on the Connecticut River below the mouth of the Deerfield River, on the Connecticut River upstream of the

Deerfield River mouth, approximately 4.5 miles upstream in the Deerfield River, and at the Station No. 2 Dam. Four adult salmon, representing 11.8% of the total number (34) of adult salmon trapped at the Holyoke Dam fish lift were tagged in 2002. Of this total, one salmon entered the Deerfield River and moved upstream to the Station No. 2 Dam, two salmon were presumed to have moved further upstream on the Connecticut River, and one salmon was never logged at any monitoring station and was presumed to have migrated back downstream past Holyoke Dam. It is likely that the one salmon that migrated to the Station No. 2 Dam was of upper Deerfield River origin.

Table 3.3.1-1 illustrates the results of past annual monitoring efforts. To date, 1999 represents the only year in which four or more adult salmon have reached the Station No. 2 Dam. USGen's annual radio telemetry evaluations are scheduled to continue until a trigger criterion is met or the CRASC determines that radio tagging is no longer necessary.

Based on the study results thus far, operation of an upstream fishway at Station No. 2 Dam would not occur until, at the earliest, spring 2007. This date is derived given that four or 12 individuals (depending on the trigger approach and interpretation) would have to arrive at the Station No. 2 Dam in the 2003 and 2004 monitoring years to trigger construction of the fishway. Construction of the fishway would be completed within two construction seasons (USGen 2002).

Table 3.3.1-1: Annual Adult Salmon Returns to the Deerfield River (Source: USGen 2002)

Year	# of Radio Tagged Salmon	# of Salmon Migrating into the Deerfield River Mouth	# of Salmon Migrating as Far Upstream as the Station No. 2 Dam
1998	22	4	3
1999	20	11	9
2000	10	4	0
2001	4	3	2
2002	4	1	1

American Shad

American shad historically entered virtually all coastal streams in Massachusetts. However, by the mid-1800s American shad were eliminated from the Massachusetts portions of the Connecticut River. Since the mid-1950's, American shad returns have increased dramatically in the Connecticut River due to newly constructed and improved fish passage facilities (Hartel et al. 2002). In 2003, 286,814 American shad were counted at the Holyoke Dam fish lift (USFWS 2004). Within the Deerfield River, American shad typically range as far upstream as the Station No. 2 Dam (USFWS 1999).

Sea Lamprey

Prior to the 1800s, sea lamprey entered virtually every Massachusetts stream and river that allowed them access to spawning sites. By the mid-1800s newly constructed dams blocked their migration routes and industrial pollution altered their habitat (Hartel et al. 2002). As a result of migratory fish restoration efforts, sea lamprey are now common in the Connecticut River and migrate well into New Hampshire. At the Holyoke Dam fish lift, 53,030 sea lamprey were counted in 2003 (USFWS 2004). Within the Deerfield River, sea lamprey typically range as far upstream as the Station No. 2 Dam (USFWS 1999).

Blueback Herring

Blueback herring are common in Massachusetts and enter numerous coastal streams. Their populations have been reduced or eliminated in some areas by river alterations. Currently, blueback herring are abundant in the Connecticut River where they migrate as far upstream as New Hampshire (Hartel et al. 2002). At the Holyoke Dam fish lift, 1,398 blueback herring were counted in 2003 (USFWS 2004). Blueback herring can range as far upstream as the Station No. 2 Dam on the Deerfield River (USFWS 1999).

American Eel

American eel are abundant along the Massachusetts coast; as well as in ponds, rivers, and in streams which are connected to the ocean (Hartel et al. 2002). In 2002, two juvenile American eels were counted at the Holyoke Dam fish lift, while in 2003 no American eels were counted (USFWS 2004).

During 2002, two American eels were captured in the Green River, above the Mill Street and Wiley & Russell Dams. These dams are not equipped with fish passage facilities; however, American eel are able to ascend smaller dams by climbing wetted margins (Haro 2002).

3.3.2 Fishery Conditions and Occurrence by Subwatershed

A summary of fishery conditions along the Deerfield River and its major tributaries from Somerset Reservoir to the Connecticut River is provided below. Within the Massachusetts portion of the Deerfield River watershed, MDFW annually stocks various species of trout in several areas for recreational fishing (Table 3.3.2-1). Stocking typically occurs during the spring with some limited stocking occurring in the fall as well. Table 3.3.2-2 summarizes the distribution, occurrence, and status of all fish species currently present in the Massachusetts portion of the Deerfield River watershed (Hartel et al. 2002).

Table 3.3.2-1: Trout Stocked Waters in the Deerfield River Watershed (Source: MDFW 2003)

Town	Waterbody
Ashfield	Ashfield Pond, Clesson Brook (Upper Branch), South River
Charlemont	Avery Brook, Chickley River, Maxwell Brook, Pelham Brook, Deerfield River, Cold River
Colrain	North River, North River (W. Branch), Green River
Conway	Bear River, Deerfield River, Poland Brook, South River
Deerfield	Deerfield River
Florida	Deerfield River, North Pond, Cold River
Greenfield	Allen Brook, Green River, Mill Brook
Hawley	Chickley River, Mill Brook
Heath	Avery Brook, Mill Brook, West Branch Brook
Leyden	Green River, Shattuck Brook
Monroe	Dunbar Brook, Sherman Reservoir
Rowe	Pelham Brook, Pelham Lake
Savoy	Chickley River, Cold River
Shelburne	Deerfield River, Dragon Brook

Table 3.3.2-2: Fish Species Present in the Massachusetts portion of the Deerfield River Watershed (Source: Hartel et al 2002)

Species	Distribution	Occurrence	Status
Sea lamprey	Mainstem, Green River	Native	
American eel	Mainstem, Chickley, Mill Brook, Clesson Brook, South River, E. Branch North River, Green River	Native	
Gizzard shad	Mainstem	Native	
Common carp	Mainstem, Green River	Introduced	
Eastern silvery minnow	Mainstem	Native	Special Concern
Golden shiner	Mainstem, Cold River, Pelham Brook, Mill Brook, South River, North River, Green River	Native	
Common shiner	Mainstem, Cold River, Mill Brook, Clesson Brook, South River, North River, Green River	Native	
Bridle shiner	Green River	Native	Special Concern
Mimic shiner	Mainstem	Introduced	
Spottail shiner	Mainstem, Green River	Native	
Northern redbelly dace	Green River	Native	Endangered
Blacknose dace	All	Native	
Longnose dace	All	Native	
Creekchub	All	Native	
Fallfish	Mainstem, Clesson Brook, North River, South River, Green River	Native	
Longnose sucker	Mainstem, Cold River, Pelham Brook, Mill Brook, Clesson Brook, North River, South River	Native	Special Concern
White sucker	All	Native	
Brown bullhead	All	Native	
Channel catfish	Mainstem, South River	Introduced	
Chain pickerel	Cold River, Chickley River, Pelham Brook, North River, South River, Green River	Native	
Northern pike	Mainstem only	Introduced	
Rainbow trout	Mill Brook, Clesson Brook	Introduced (Reproducing populations)	
Rainbow trout	Mainstem, North River	Stocked for summer (non-reproducing)	
Atlantic salmon	Mainstem, Cold River, South River, Green River	Stocked (non-reproducing)	
Brown trout	All	Introduced (some Reproducing and some Stocked only)	
Brook trout	All	Native (some Reproducing and some	

Species	Distribution	Occurrence	Status
		Stocked only)	
Banded killifish	Mainstem	Native	
Slimy sculpin	All	Native	
Rock bass	Mainstem	Introduced	
Redbreast sunfish	Mainstem	Native	
Pumpkinseed	Mainstem, Cold River, Pelham Brook, Chickley River, South River, Green River	Native	
Bluegill	Mainstem, Green River, South River	Introduced	
Smallmouth bass	Mainstem, Cold River, Pelham Brook, Chickley River, North River, South River, Green River	Introduced	
Largemouth bass	Mainstem, Chickley River, South River	Introduced	
Black crappie	Mainstem, Pelham Brook, South River	Introduced	
Tessellated darter	Mainstem, North River, South River, Green River	Native	
Yellow perch	Mainstem, Cold River, Chickley River, North River, South River, Green River	Native	

East Branch Deerfield River Subwatershed

Warmwater species common to Somerset Reservoir include smallmouth bass, rock bass, yellow perch, pumpkinseed, and chain pickerel. Recent FERC license stipulations (1997) limit water surface elevation fluctuations at Somerset Reservoir, to no more than ±1 foot from May 1 to July 31 to protect warmwater fish populations. During that time of year, smallmouth bass and panfish spawn in shallow waters and untimely reductions in water level can reduce or destroy spawning habitat.

The reservoir is managed primarily for a put-and-take brook trout fishery that is not affected by the changing water levels. Minimum flows below the Somerset Dam in the winter and summer are now in place to provide sufficient habitat to sustain a year round population of brook trout. Downstream fish passage is in place at Somerset Reservoir as well.

North Branch Deerfield River Subwatershed

Information on fisheries in the North Branch Deerfield is limited; however, it is likely this stream supports spawning runs of rainbow smelt, as well as brook trout from Harriman Reservoir. Overall, the species present in the North Branch Deerfield are likely similar to those in the East Branch Deerfield.

Deerfield River Mainstem-Vermont

The Searsburg Impoundment, located six miles downstream of Somerset Reservoir, is stocked with brook trout only. Minimum flow requirements to the bypass reach of 35 cfs in the summer and 55 cfs in the winter provide habitat for self-sustaining populations of brown trout and rainbow smelt spawning and incubation. Prior to 1997, there was little or no flow in the bypass reach. The new minimum flow

requirements greatly increase the habitat in the bypass reach for brook, rainbow, and brown trout, rainbow smelt, and landlocked salmon stocked in the Harriman Reservoir. The Vermont Department of Fish and Wildlife (VDFW) conducted electrofishing in the Searsburg bypass reach in 2002. Wild brook trout were captured below Searsburg Dam, and further downstream near the powerhouse yearling rainbow trout and young-of-the-year salmonids were caught (VANR 2003).

The VDFW manages Harriman Reservoir as a large salmonid fishery (lake, brown, rainbow, and brook trout as well as landlocked salmon). Rainbow smelt stocking began within Harriman Reservoir in 1954-55 and has produced a self-sustaining population. The 1970's and 1980's met with limited success in establishing a landlocked salmon fishery. A new water level management plan resulting from the 1997 relicensing will protect spawning, incubation, and fry rearing for rainbow smelt and smallmouth bass in addition to increasing littoral habitat for other warmwater fish. Minimum flow requirements in the 4.4-mile bypass reach below the Harriman Reservoir provide a naturally reproducing brook and brown trout fishery. The reach is continuously fed by coldwater releases from Harriman Reservoir and is relatively under-fished due to access requiring hiking in from public highways. In addition, vegetative growth in the bypass combined with significant beaver activity provides abundant cover for salmonids (FERC 1997). Trout population surveys have been completed in this reach annually since 1999. The survey results indicate that brook trout numbers continue to increase and that fish growth is depressed due to coldwater temperatures (VANR 2003).

West Branch Deerfield River Subwatershed

The West Branch Deerfield River enters into the Harriman bypass reach. Information on fishery conditions in the West Branch is limited. Generally, the watershed supports populations of brook, rainbow, and brown trout; however, overall productivity is low (VANR 2003).

Deerfield River Mainstem-Massachusetts

Sherman Reservoir offers an outstanding resource for trophy size brown trout and supports numerous species of warmwater fish. The main forage base in Sherman Reservoir appears to be smelt entrained through the Harriman powerhouse. Overall, water quality and fishery health in the reservoir is expected to have improved since the 1997 relicensing process due to minimum flows increasing upstream habitat quality, as well as the termination of once-through cooling waters released from the Yankee Atomic Electric Facility.

The Station No. 5 Impoundment downstream of the Sherman Dam is not managed for any fish species; however, populations of rainbow trout, smallmouth bass, rock bass, pumpkinseed, and white sucker are present. Current management efforts have concentrated on the bypass reach below the Station No. 5 dam that has historically been known as the "dryway." Minimum flows of 73 cfs are now required to pass at the Station No. 5 Dam providing suitable habitat for self-sustaining populations of brown and brook trout in the 2.6-mile bypass reach. In addition to daily minimum flows, whitewater releases of approximately 1,000 cfs are required to be passed through the Station No. 5 bypass reach 32 times each year from April 1 to October 31. Upramping and down ramping procedures are employed to allow fish to leave areas of potential stranding (FERC 1997).

Below Fife Brook Dam minimum flows of 125 cfs are required. Most of the 17-mile reach that eventually flows into the Station No. 4 Impoundment is managed by MDFW as a valuable catch and release trout fishing area (from Fife Brook Dam to Hoosac Tunnel and from Pelham Brook to the Mohawk Campground, and is typically stocked with rainbow and brown trout. Five significant tributaries (Pelham Brook, Cold River, Chickley River, Mill Brook, and Clesson Brook) enter this mainstem reach of the Deerfield River.

The Station No. 4 Impoundment is not managed for any particular fish species; however, populations of rainbow trout, brown trout, smallmouth bass, rock bass, white sucker, fallfish and spottail shiner have been noted. Size ranges of fish captured in the impoundment suggest that natural reproduction is occurring with the exception of some rainbow and brown trout that likely reached the impoundment from upstream stocking efforts (FERC 1997). Downstream fish passage is installed at the Station No. 4 dam and minimum flow requirements are 100 cfs in the winter and 125 cfs in the summer. The downstream fish passage and minimum flows are in place to support self-sustaining populations of brown trout in the bypass reach.

The Station No. 3, Gardners Falls, and Station No. 2 impoundments all support a variety of fish species including rainbow and brown trout, smallmouth bass, yellow perch, white sucker, and fallfish. The 1997 relicensing effort required the construction of downstream fish passage at all three dams and new minimum flow requirements to improve fish habitat in the bypass reaches. A minimum flow of 200 cfs to the 9-mile riverine reach below Station No. 2 provides nursery habitat for Atlantic salmon and ample habitat for self-sustaining populations of brown trout. The reach below Station No. 2 is managed as a put-and-take fishery with stocking of rainbow and brook trout.

Pelham Brook Subwatershed

Fish sampling was conducted by MDEP at Pelham Brook during September 2000. Fish species captured in order of abundance included slimy sculpin, longnose dace, Atlantic salmon, brook trout, blacknose dace, and brown trout. In addition, longnose sucker were collected by MDFW in Pelham Brook during August 2000 and September 2001. This collection effort also revealed the presence of multiple age classes of both Atlantic salmon and brook trout (MDEP 2003a).

Cold River Subwatershed

Fish species captured during the MDEP September 2000 sampling in order of abundance included Atlantic salmon, blacknose dace, longnose dace, and a brown trout. In addition to these species, MDFW documented slimy sculpin and rainbow trout in the Cold River in August 2000 and September 2001 investigations. This collection effort also revealed multiple age classes of Atlantic salmon (MDEP 2003a). In 2002, bridle shiner, a rare species in Massachusetts, was collected from Tannery Pond (Haro 2002).

Chickley River Subwatershed

September 2000 sampling efforts conducted by MDEP within the Chickley River several species were captured including Atlantic salmon, slimy sculpin, longnose dace, blacknose dace, brown trout and rainbow trout. Multiple age classes of brook trout and Atlantic salmon were documented in the Chickley River during the sampling period (MDEP 2003a).

Mill Brook Subwatershed

Fish species captured during MDEP's September 2000 sampling effort included in order of abundance Atlantic salmon, brook trout, and blacknose dace. Overall, a small number of fish were collected and species such as slimy sculpin and longnose dace were notably absent. In August 2000, the MDFW documented multiple age classes of both Atlantic salmon and brook trout in Mill Brook upstream of its confluence with Davis Mine Brook (MDEP 2003a).

Clesson Brook Subwatershed

The MDEP conducted fish population sampling in September 1996 at Clesson Brook. Fish collected in order of abundance included: blacknose dace, longnose dace, white sucker, slimy sculpin, and creek chub (MDEP 2003a).

North River Subwatershed

On the East Branch North River within Vermont, wild and stocked brook trout are present on the mainstem, and wild brook trout populations are prevalent throughout the upper watershed. Wild brown trout populations are also present on the mainstem and several tributaries (VANR 2003). In September 2000, fish species captured on the East Branch North River by MDEP in order of abundance included Atlantic salmon, longnose dace, blacknose dace, and one each of yellow bullhead, banded killifish, and tessellated darter (MDEP 2003a).

On the West Branch North River, the MDFW conducted fish population sampling between August 2000 and September 2001. Two locations were sampled and several species were collected including blacknose dace, slimy sculpin, longnose dace, Atlantic salmon, white sucker, brown trout, longnose sucker, eastern brook trout, and one brown bullhead. Multiple age classes of Altantic salmon and brook trout were documented (MDEP 2003a).

In September 2001, the MDFW conducted fish surveys along the mainstem North River. The fish community was dominated by multiple age classes of Atlantic salmon; with one rainbow, brown and brook trout also collected (MDEP 2003a).

South River Subwatershed

The South River was also sampled for fish by MDFW in recent years. Fish species found in the South River during an August 2000 collection consisted of blacknose dace, Atlantic salmon, longnose dace, common shiner, creek chub, eastern brook trout, slimy sculpin, and pumpkinseed (MDEP 2003a).

Green River Subwatershed

September 2000 sampling efforts within the Green River showed that fish communities were comprised of slimy sculpin, brown trout, longnose dace, and blacknose dace (MDEP 2003a). Atlantic salmon were also caught in several tributaries to the Green River. The Vermont portion of the Green River supports populations of wild brook trout as well (VANR 2003a).

During 2002, several locations within the Green River subwatershed were surveyed for rare native fishes. Overall, several species were collected including American eel, fathead minnows, common shiner, tessellated darters, northern redbelly dace, and banded killifish (Haro 2002). Only the northern redbelly dace is considered a rare species in Massachusetts. The fathead minnows collected were the first recorded within Deerfield River watershed. The species was likely introduced by bait bucket releases, as has occurred elsewhere in other western Massachusetts sites (Haro 2002).

3.3.3 Rare Species and Critical Habitats

Rare Species

Past surveys have identified three native minnow species in the Deerfield River watershed that are known to be uncommon or rare in Massachusetts, and have been listed by the state as endangered or of special

concern. These species include the eastern silvery minnow (status = special concern), bridle shiner (status = special concern), and the northern redbelly dace (endangered) (Haro 2002).

In Massachusetts, the eastern silvery minnow is only found in the mainstem of the Connecticut River north of the Holyoke Dam and in the lower Deerfield River. Historically, this species was once very common, particularly along the flooded flats of the Connecticut River near Hadley, Massachusetts. The last recorded collection within Deerfield River Watershed was along the lower Deerfield River near Greenfield, Massachusetts in 1959. Recent collection efforts in this same locale did not yield any specimens (Haro 2002). Their decline may be related flow alterations caused by dams, as these water control practices may reduce or change the character of backwaters and spawning sites utilized by the eastern silvery minnow (Hartel et al. 2002).

The bridle shiner was common in Massachusetts until the early 1960's, when populations began to decline. This species had been collected in several locations within the Green River subwatershed in 1962. Recent collections efforts in this subwatershed did not yield any specimens; however, sampling in Tannery Pond located in Savoy, Massachusetts (Cold River Subwatershed) yielded approximately 12 bridle shiners (Haro 2002).

Northern redbelly dace were first found in Massachusetts within the Green River subwatershed in 1940. This represents the only known population of this species in Massachusetts. Since 1979, this species has only been found within Glen Brook, a tributary to the Green River. Recent collections efforts at this site yielded small numbers of this species (Haro 2002).

The state and federally endangered shortnose sturgeon have been known to utilize the lower 2-mile reach of the Deerfield River. Historically a single population of shortnose sturgeon existed in the Connecticut River. Adults most likely spawned in the late spring near the confluence of the Deerfield River then moved downstream, in some cases as far Long Island Sound, to foraging areas, where they remained until fall. In the fall, spawning fish would then undertake the migration upstream to their natal spawning grounds near the Deerfield River. These adults would remain in this area through the winter and spawn the following spring.

The construction of Holyoke Dam in 1848 divided the Connecticut River shortnose sturgeon population. Until very recently, it was believed that the fish above the dam and those below the dam formed essentially discrete populations; however, recent evidence suggests that the downstream population is sustained by outmigrating sturgeon from the upstream group. Successful reproduction occurs within the upstream population when they migrate downstream and are unable to return back up over the dam (UMass 2004). The total number of adults in the Connecticut River is thought to be approximately 1,000 fish (Hartel et al. 2002).

The longnose sucker is a species of special concern in Massachusetts; however, it is fairly common in portions of the Deerfield River Watershed. The longnose sucker is currently listed as a species of special concern due to its decline in the lower Connecticut system (Connecticut mainstem, Westfield, and lower Chicopee rivers) and due to the poor water quality in parts of the Hoosic and Housatonic Watersheds (Hartel et al. 2002).

Critical Habitats

The Natural Heritage and Endangered Species Program (NHESP) recently completed the "Living Waters" project. The goal of the Living Waters project is to promote the protection of freshwater biodiversity in Massachusetts. Water flow manipulations and water quality degradation can threaten freshwater species

and their habitat; therefore, NHESP developed the Living Waters project to identify the most critical areas for freshwater biodiversity in the state in order to better protect these resources.

The results of the project were the delineation of Living Waters core habitats and critical supporting watersheds. Core Habitats either represent the lakes, ponds, rivers, and streams that provide habitat for rare freshwater species, or overall exemplary aquatic habitats. The critical supporting watershed identifies the more immediate portion of a core habitat's watershed where conservation efforts should be targeted (NHESP 2003).

Several Living Waters core habitat areas were identified within the Deerfield River Watershed, including several mainstem reaches and tributaries (Figure 3.3.3-1). Significant portions of the Cold River, Pelham Brook, Chickley River, Clesson Brook, North, South, and Green Rivers and their subtributaries were identified as core habitats. In addition, significant portions of the mainstem Deerfield between the Fife Brook and Station No. 4 dams were delineated as core habitats, as well as portions of the Deerfield below Station No. 2 Dam, and its mouth. Roads and agriculture were considered the greatest potential threats to the core habitats within the Deerfield River Watershed (NHESP 2003).

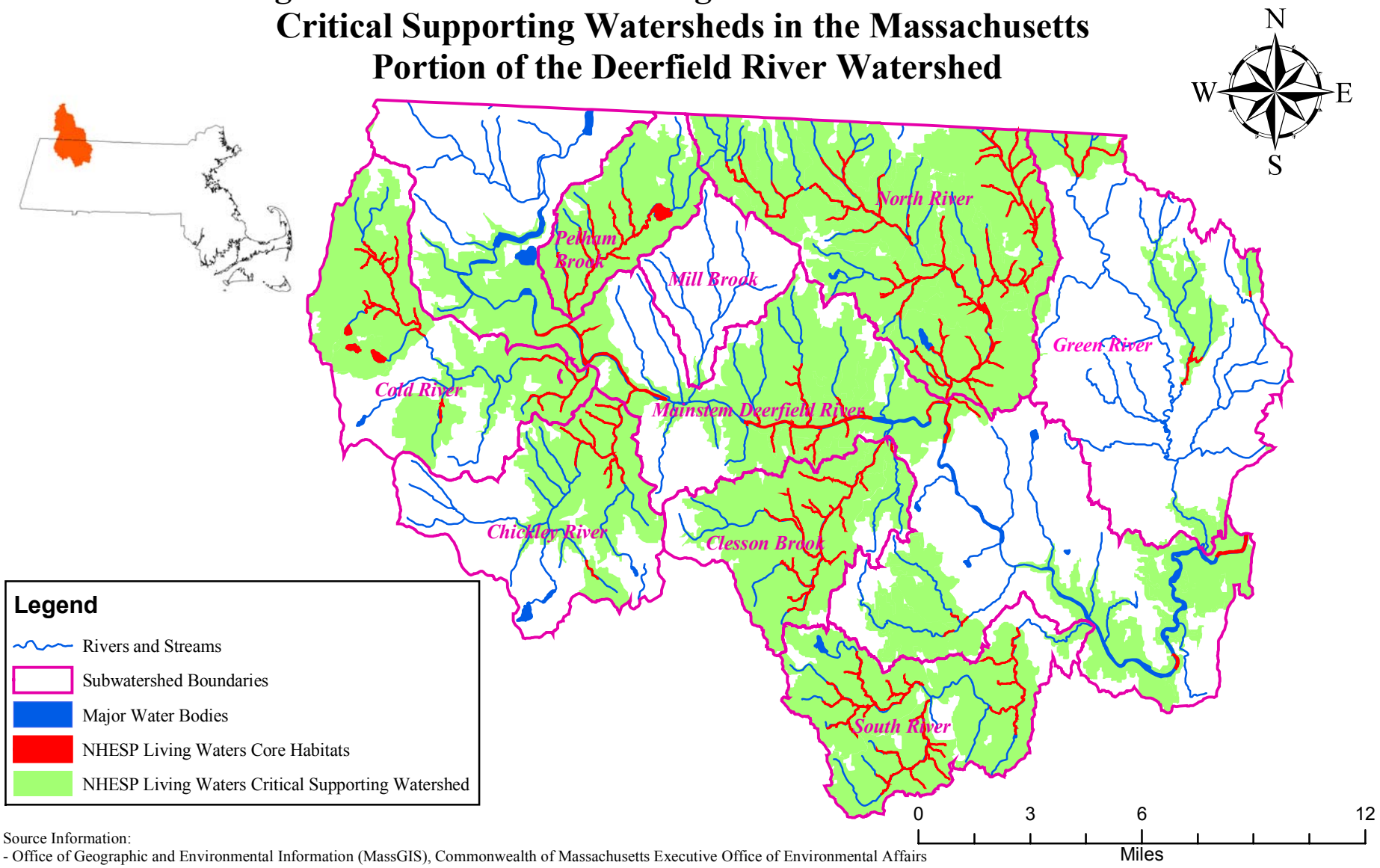
3.3.4 Non-native Fish Species

The majority of non-native fish species introduced in Massachusetts are native to the United States but transplanted outside their native ranges. The most widely recognized methods of freshwater introductions include the annual stocking of game fish, bait bucket introductions, and manmade canals which have allowed the flow of organisms from one waterbody to another (USGS 2004a).

A recent survey for several rare native minnow species uncovered the presence of fathead minnows in the Green River subwatershed. The species was likely introduced by bait bucket releases, as has occurred elsewhere in other western Massachusetts sites (Haro 2002). The potential impacts of this introduction are unknown (USGS 2004a).

Species such rainbow and brown trout are typically stocked in many locations within the Deerfield River Watershed. Rainbow trout, native to the Pacific Coast region, have been know to hybridize with other, more rare trout species, thereby affecting their genetic integrity (USGS 2004a). Brown trout are native to Europe, northern Africa, and western Asia, and can reduce native fish populations (especially other salmonids) through predation and food competition (USGS 2004a).

Figure 3.3.3-1: NHESP Living Waters Core Habitats and Critical Supporting Watersheds in the Massachusetts Portion of the Deerfield River Watershed



Source Information:
- Office of Geographic and Environmental Information (MassGIS), Commonwealth of Massachusetts Executive Office of Environmental Affairs

3.4 Wildlife and Terrestrial Habitat

3.4.1 Wildlife Species Occurrence

Mammals

Within the Deerfield River Watershed, many species of terrestrial mammals are likely to occur (Table 3.4.1-1) (Lovejoy and Hoagland 2004). Over time, several terrestrial mammal species have been extirpated from the watershed as well. They include elk, mountain lion, timber wolf, wolverine, marten, lynx, and Indiana bat (Lovejoy and Hoagland 2004).

Big game species include white-tailed deer, moose, and black bear. White-tailed deer are the only species requiring special winter habitats known as "deer yards." Studies in Vermont identified approximately 11 deer yards along the Deerfield River and various tributaries in the mid-1990's, while similar studies have not been completed in Massachusetts, it is believed that steep south and west facing slopes hold deer in the winter (FERC 1997).

Black bear populations in the Massachusetts portion of the watershed are relatively extensive. The watershed typically ranks among the highest in terms of annual bear harvest in Massachusetts. Black bear were hunted to near extirpation in the nineteenth century; however changes in land use and a reduction in hunting pressure have increased bear populations. Currently the population is increasing at approximately 8 to 10% annually and is expanding eastward into more densely populated areas (MDFW 2000a).

Moose are known to inhabit the Green Mountain region of the upper watershed. There have also been anecdotal sightings of moose in the eastern part of the Massachusetts portion of the watershed.

Furbearing species in the watershed include red fox, beaver, mink, muskrat, and otter with coyote and bobcat present in the upland areas. There have been anecdotal reports of fisher sightings in the Green River subwatershed.

Several mammal, as well as bird, species associated with early-successional habitats have declined throughout the region since the 1950's in response to the limited availability of these habitats. Even-aged forests characterize the Massachusetts landscape (see Section 3.4.4) and likely result from historic land use practices and farm abandonment (Litvaitis 1993).

The New England cottontail rabbit, the region's only native cottontail, was once common throughout all of Massachusetts. Prior to 1930, the New England cottontail was the only cottontail species occurring in Massachusetts; however, during the last 25 to 50 years New England cottontail populations have decreased dramatically. Recently, efforts have been underway to list the New England cottontail as a federally endangered species. The reasons for the population decline are attributed to shrinkage of favorable habitat and to competition with the non-native Eastern cottontail, which were first introduced to the region in the 1930s (MDFW 2004a).

The New England cottontail typically prefers early-successional habitats, such as dense understory vegetation associated with gaps in the forest, regenerating forest stands in disturbed areas, stream corridors, and shrubby woodlands. These habitat types have decreased throughout New England over the past century, with a coincident decrease in New England cottontail populations (Litvaitis 1993). Studies indicate that the New England cottontail population declines may be countered by a forest management program that increases early-successional habitat (Litvaitis et al 1996).

Fragmenting of these habitats can make species such as the New England cottontail more susceptible to predation as well. During winter, New England cottontails occupying small patches of habitat (<3 hectares) can experience food shortages, which necessitates movement to areas with more food supply and potentially less escape cover. These New England cottontails are killed by predators at approximately twice the rate as those on large patches of habitat (Barbour and Litviatis 1993).

Early-successional habitats are important to predatory mammal species as well. Species, such as bobcat, require a mix of young and old growth forest habitats to provide high densities of preferred prey sources (early successional areas) as well cover (late successional areas) (Litvaitis 1993). Habitat fragmentation put these species at risk as well. As a result of scattered prey populations, these species may be required to make frequent road crossings making them susceptible to vehicle collisions and other sources of mortality. A study in Maine determined that vehicle collisions were the second most frequent source of mortality among a group of transmitter equipped bobcats (Litvaitis et al 1987)

Table 3.4.1-1: Terrestrial Mammals Likely to Occur in the Deerfield River Watershed (Source: Lovejoy and Hoagland 2004)

Common Name	Species Name	Status
Opossum	Didelphis virginiana	Common
Short-tailed shrew	Blarina brevicauda	Common
Masked shrew	Sorex cinereus	Uncommon
Smoky shrew	Sorex fumeus	Uncommon
Water shrew	Sorex palustris	Uncommon
Star-nosed mole	Condylura cristata	Common
Hairy-tailed mole	Parascalops breweri	Uncommon
Big brown bat	Eptesicus fuscus	Common
Silver-haired bat	Lasionycteris noctivagens	Uncommon
Red bat	Lasiurus borealis	Uncommon
Northern long-eared bat	Myotis keenii	Common
Little brown bat	Myotis lucifugus	Common
Eastern pipistrelle	Pipistrellus subflavus	Rare
Coyote	Canis latrans	Common
Gray fox	Urocyon cinereoargenteus	Uncommon
Red fox	Vulpes vulpes	Common
Black bear	Ursus americanus	Common
Raccoon	Procyon lotor	Common
River otter	Lontra canadensis	Uncommon
Fisher	Martes pennanti	Uncommon
Skunk	Mephitis mephitis	Common
Short-tailed weasel	Mustela erminea	Uncommon
Long-tailed weasel	Mustela frenata	Uncommon
Mink	Mustela vison	Common
Bobcat	Lynx rufus	Common
Moose	Alces alces	Rare
White-tailed deer	Odocoileus virginianus	Common
Porcupine	Erethizon dorsatum	Common
Northern flying squirrel	Glaucomys sabrinus	Uncommon

Common Name	Species Name	Status
Southern flying squirrel	Glaucomys volans	Common
Woodchuck	Marmota monax	Common
Gray squirrel	Sciurus carolinensis	Common
Eastern chipmunk	Tamias striatus	Common
Red squirrel	Tamiastriatus hudsonicus	Common
Beaver	Castor canadensis	Common
Red-backed vole	Clethrionomys gapperi	Common
Meadow vole	Microtus pennsylvanicus	Common
Pine vole	Microtus pinetorum	Common
Muskrat	Ondatra zibethicus	Common
Southern bog lemming	Synaptomys cooperi	Uncommon
House mouse	Mus musculus	Common
White-footed mouse	Peromyscus leucopus	Common
Deer mouse	Peromyscus maniculatus	Common
Norway rat	Rattus norvegicus	Common
Woodland jumping mouse	Napaeozapus insignis	Uncommon
Meadow jumping mouse	Zapus hudsonicus	Uncommon
Snowshoe hare	Lepus americanus	Uncommon
Eastern cottontail	Sylvilagus floridanus	Common
New England cottontail	Sylvilagus transitionalis	Uncommon

Reptiles and Amphibians

Reptile and amphibian species likely to occur in the watershed are illustrated in Table 3.4.2-2 (MDFW 2004b). Snakes potentially occurring in the watershed include the green snake, brown snake, black rat snake, eastern ribbon snake, redbelly snake, garter snake, milk snake, ringneck snake, water snake, black racer snake, and hognosed snake.

The black rat snake is listed as endangered in Massachusetts (MDFW 2004b). In addition, black racer snake populations have been declining in recent times due to a lack of early-successional habitats for which they rely on for various stages of their life cycles (MDFW 2004c). The nonvenomous black racer inhabits shrublands and thickets, and grows up to six feet in length.

Several salamander and turtle species likely inhabit the watershed as well (Table 3.4.2-2). The Jefferson salamander, four-toed salamander, and spring salamander are listed as species of special concern in Massachusetts, while the marbled salamander is listed at threatened. The spotted turtle, wood turtle, and eastern box turtle are species of special concern. This blandings turtle is listed as threatened, and recent records of its occurrence in the watershed are limited (MDFW 2004b).

Recent studies (DRWA 2003a) were conducted by inventorying calling amphibians in the Massachusetts portion of the Deerfield River Watershed. The three most common and widely-distributed species of calling amphibians in the watershed were the spring peeper, green frog, and gray treefrog, which were found in a variety of wetland habitats. Intermediate in occurrence and distribution were the bullfrog and wood frog. Bullfrogs were only observed in wetlands with areas of open water, while wood frogs were found predominantly in seasonally flooded areas. The occurrence of wood frogs was positively associated with the amount of tree cover at a given site. The least frequently encountered amphibians

were the American toad, pickerel frog, and northern leopard frog. Habitat preferences for these species could not be determined by the study. Fowler's toad and the spadefoot toad were not observed during the study. The Fowler's toad is more common in eastern Massachusetts, and the spadefoot toad is listed as threatened in Massachusetts. The study concluded that on-road vehicle kills are probably a major cause of mortality to amphibian populations. Preservation of wetlands diversity and prevention of habitat fragmentation were deemed critical components of the long-term health of amphibian populations.

Table 3.4.1-2: Reptiles & Amphibians in the Deerfield River Watershed (Source: MDFW 2004b)

Common Name	**Scientific Name**
Jefferson Salamander	*Ambystoma jeffersonianum*
Spotted Salamander	*Ambystoma maculatum*
Marbled Salamander	*Ambystoma opacum*
Eastern Newt	*Notophthalmus viridescens*
Northern Dusky Salamander	*Desmognathus fuscus*
Eastern Red-backed Salamander	*Plethodon cinereus*
Four-toed Salamander	*Hemidactylium scutatum*
Spring Salamander	*Gyrinophilus porphyriticus*
Northern Two-lined Salamander	*Eurycea bislineata*
Eastern Spadefoot	*Scaphiopus holbrookii*
American Toad	*Bufo americanus*
Fowler's Toad	*Bufo fowleri*
Spring Peeper	*Pseudacris crucifer*
Gray Treefrog	*Hyla versicolor*
American Bullfrog	*Rana catesbeiana*
Green Frog	*Rana clamitans*
Pickerel Frog	*Rana palustris*
Northern Leopard Frog	*Rana pipiens*
Wood Frog	*Rana sylvatica*
Snapping Turtle	*Chelydra serpentina*
Eastern musk turtle	*Sternotherus odoratus*
Painted Turtle	*Chrysemys picta*
Spotted Turtle	*Clemmys guttata*
Wood Turtle	*Clemmys insculpta*
Eastern Box Turtle	*Terrapene carolina*
Black Racer Snake	*Coluber constrictor*
Ringnecked Snake	*Diadophis punctatus*
Black Rat Snake	*Elaphe obsoleta*
Hognosed Snake	*Heterodon platirhinos*
Milk Snake	*Lampropeltis triangulum*
Water Snake	*Nerodia sipedon*
Green Snake	*Opheodrys vernalis*
Brown Snake	*Storeria dekayi*
Redbellied Snake	*Storeria occipitomaculata*
Eastern Ribbon Snake	*Thamnophis sauritus*
Garter Snake	*Thamnophis sirtalis*

Birds

The North American Breeding Bird Survey is a long-term, large-scale, avian monitoring program initiated in 1966 to track the status and trends of North American bird populations. During each bird breeding season, trained participants collect bird population data along roadside survey routes. The data collected provides an index of population abundance that can be used to estimate population trends and relative abundances at various geographic scales. (USGS 2004b). Surveys have been conducted near Cummington, Massachusetts, slightly south of the Deerfield River Watershed, since the mid-1960's. During that time, approximately 110 different species of birds have been identified (Table A-1 located in Appendix A).

Data collected from the many eastern survey routes show declines among bird species that prefer early-successional habitats (e.g., abandoned fields, grasslands, and shrublands). Overall, 12 of 16 shrubland birds exhibited declining populations, including golden-winged warbler (endangered in Massachusetts), prairie warbler, and field sparrow, whose populations decreased by more than 2% annually. Other shrubland birds such as ruffed grouse and woodcock have declined by approximately 4% annually. In addition, five of six birds commonly associated with grasslands exhibited dramatic declines. Three of these species, the upland sandpiper, vesper sparrow, and grasshopper sparrow, are either threatened or endangered in Massachusetts (MDFW 2004c).

Recent studies also documented various marshbirds in the watershed (DRWA 2003a). Four of the eight target species of marshbirds were documented during the study. Three of the four species never observed, Pied-billed grebe, common moorhen, and sedge wren, rarely breed in Massachusetts. The fourth species, the king rail, is at the northernmost edge of its breeding range in Massachusetts.

American bitterns were identified at seven (29%) of the wetlands inventoried and five of the seven sites range in size from 15 to 23 acres. The least bittern was the rarest marshbird of the four target species observed, occurring at only one wetland. Species scarcity was attributed to their tendency to avoid high altitude-freshwater wetlands and unstable water regimes. Virginia rails were identified at 46% of wetlands surveyed, which made it the most frequently observed marshbird. This species was found in wetlands ranging from 8 to 33 acres. American and least bittern are listed as endangered species in Massachusetts.

Soras were rarely detected, as they were found at 13% of the wetlands surveyed. Soras typically occur at sites with greater amounts of cattails and increasing edge between aquatic bed/open water and emergent vegetation. Several wetlands appeared to contain appropriate habitat for breeding soras; however, no birds were detected at these sites. The study recommended that similar inventories be conducted in the future to determine whether changes have occurred in marshbird distribution and abundance.

Common loons have been observed on Somerset Reservoir in Vermont since 1977. Common loons nested on Somerset Reservoir during 13 of 17 years from 1977 to 1994 and were successful (young survived through August 31) in seven of those years accounting for 6% of the known common loon production in Vermont. Common loons set up breeding territories on large lakes. The common loon has reduced mobility on land and, therefore, its nest building is restricted to the waters edge. Due to its nest location and lack of mobility on land, common loon nesting success is sensitive to water level fluctuations and human disturbance. As this is the southernmost location of breeding loon pairs in Vermont, it represents a value of special significance to agencies, non-governmental organizations and to the general public. The water level management plan within Somerset Reservoir, adopted as part of the 1997 relicensing, will allow loons to more successfully nest on natural sites and enhance shoreline feeding habitat (FERC 1997).

Wild turkeys are relatively prevalent in the watershed, with the general area typically yielding the highest annual turkey harvests (MDFW 2004d).

3.4.2 Rare Species and Critical Habitats

The NHESP has identified locations of estimated habitats of rare wildlife and uses the information to assist in the enforcement of wetlands, endangered species, and forest management regulations. Figure 3.4.2-1 delineates the approximate geographical extent of these habitats of state protected rare wildlife. In the Massachusetts portion of the Deerfield River watershed, more than 38 estimated habitats have been identified by the NHESP.

Current data indicates that at least 67 vascular plants (Table 3.4.2-1) species of special concern occur in the watershed (NHESP 2003).

Table 3.4.2-1: List of Endangered, Threatened and Special Concern Vascular Plant Species Likely Occurring in the Massachusetts Portion of the Deerfield River Watershed (Source: NHESP 2003)

Common Name	Scientific Name	Status
Adder's-Tongue Fern	Ophioglossum pusillum	Threatened
Autumn Coralroot	Corallorhiza odontorhiza	Special Concern
Bailey's Sedge	Carex baileyi	Endangered
Barren Strawberry	Waldsteinia fragarioides	Special Concern
Bartram's Shadbush	Amelanchier bartramiana	Threatened
Black Maple	Acer nigrum	Special Concern
Boreal Wormwood	Artemisia campestris ssp borealis	Endangered
Bristly Black Currant	Ribes lacustre	Special Concern
Broad Waterleaf	Hydrophyllum canadense	Endangered
Canadian Sanicle	Sanicula canadensis	Threatened
Climbing Fern	Lygodium palmatum	Special Concern
Climbing Fumitory	Adlumia fungosa	Threatened
Crooked-Stem Aster	Symphyotrichum prenanthoides	Threatened
Downy Arrowwood	Viburnum rafinesquianum	Endangered
Dwarf Mistletoe	Arceuthobium pusillum	Special Concern
Dwarf Rattlesnake-Plantain	Goodyera repens	Endangered
Dwarf Scouring-Rush	Equisetum scirpoides	Special Concern
Farwell's Water-Milfoil	Myriophyllum farwellii	Endangered
Few-Flowered Sedge	Carex pauciflora	Endangered
Fragile Rock-Brake	Cryptogramma stelleri	Endangered
Frank's Lovegrass	Eragrostis frankii	Special Concern
Gattinger's Panic-Grass	Panicum gattingeri	Special Concern
Giant St. John's-Wort	Hypericum ascyron	Endangered
Green Dragon	Arisaema dracontium	Threatened
Green Rock-Cress	Arabis missouriensis	Threatened
Hairy Beardtongue	Penstemon hirsutus	Endangered
Hitchcock's Sedge	Carex hitchcockiana	Special Concern
Hooded Ladies'-Tresses	Spiranthes romanzoffiana	Endangered
Intermediate Spike-Sedge	Eleocharis intermedia	Threatened
Large-Leaved Goldenrod	Solidago macrophylla	Threatened
Large-Leaved Sandwort	Moehringia macrophylla	Endangered

Common Name	Scientific Name	Status
Leafy White Orchis	Platanthera dilatata	Threatened
Linear-Leaved Milkweed	Asclepias verticillata	Threatened
Long-Styled Sanicle	Sanicula odorata	Threatened
Low Bindweed	Calystegia spithamaea	Endangered
Many-Fruited False-Loosestrife	Ludwigia polycarpa	Endangered
Michaux's Sandwort	Minuartia michauxii	Threatened
Michaux's Sedge	Carex michauxiana	Endangered
Mountain Alder	Alnus viridis ssp crispa	Threatened
Mountain Firmoss	Huperzia selago	Endangered
Muskflower	Mimulus moschatus	Endangered
Nodding Pogonia	Triphora trianthophora	Endangered
Northern Bog Violet	Viola nephrophylla	Endangered
Northern Mountain-Ash	Sorbus decora	Endangered
Pale Green Orchis	Platanthera flava var herbiola	Threatened
Purple Clematis	Clematis occidentalis	Special Concern
Purple Milkweed	Asclepias purpurascens	Endangered
Purple Needlegrass	Aristida purpurascens	Threatened
Putty-Root	Aplectrum hyemale	Endangered
Red Mulberry	Morus rubra	Endangered
Roundleaf Shadbush	Amelanchier sanguinea	Special Concern
Sandbar Cherry	Prunus pumila var depressa	Threatened
Sandbar Willow	Salix exigua	Threatened
Shore Sedge	Carex lenticularis	Threatened
Slender Cottongrass	Eriophorum gracile	Threatened
Snowberry	Symphoricarpos albus var albus	Endangered
Spiked False Oats	Trisetum triflorum ssp molle	Endangered
Thread Rush	Juncus filiformis	Endangered
Threadfoot	Podostemum ceratophyllum	Special Concern
Tradescant's Aster	Symphyotrichum tradescantii	Threatened
Tuckerman's Sedge	Carex tuckermanii	Endangered
Tufted Hairgrass	Deschampsia cespitosa ssp glauca	Endangered
Upland White Aster	Solidago ptarmicoides	Endangered
Wall-Rue Spleenwort	Asplenium ruta-muraria	Threatened
White Adder's-Mouth	Malaxis brachypoda	Endangered
Wild Senna	Senna hebecarpa	Endangered
Woodland Millet	Milium effusum	Threatened

As a companion to the estimated habitats of rare wildlife information, NHESP also identified locations of priority habitats of rare species. This information consists of habitats for rare plant and animal populations that are protected under the Massachusetts Endangered Species Act regulations. There is typically substantial overlap between locations of estimated and priority habitats, there are also significant differences as well. In the Massachusetts portion of the Deerfield River Watershed, more than 80 priority habitats have been identified (Figure 3.4.2-1).

The NHESP completed the BioMap project to identify areas in need of protection in order to preserve native biodiversity, which is defined as the variety of life and its processes. The project focuses on state-listed rare species and significant natural communities. Maps were created through an evaluation of over 7,000 site-specific records of rare plants, animals, and natural communities. The maps delineate the most

viable rare species habitats and natural communities (i.e., core habitat), as well as large minimally-fragmented supporting natural landscapes that protect the core habitats. The goal of the BioMap project is to promote strategic land protection by identifying areas that provide suitable habitat for the maximum number of terrestrial and wetland plant and animal species and natural communities.

Significant concentrations of core habitats and supporting natural landscapes in the Deerfield River Watershed (Figure 3.4.2-2) occur within portions of the Savoy and Mohawk Trail state forests, in areas adjacent to Clesson Brook, the North, South, and Green Rivers, as well as along the Deerfield River below Station No. 2. Smaller core habitat areas occur in other portions of the watershed as well.

3.4.3 Vernal Pools and Wetlands

There are several wetlands in the Vermont portion of the watershed mostly located on the plateau east of the Green Mountain peaks. These include a 70-acre emergent marsh around Billings Pond in Searsburg, a 100-acre marsh around Red Mill Pond in Woodford, the 250-acre Beaver Meadows wetland complex in Woodford, the 200-acre Camp Meadows wetland complex in Woodford, the 50-acre Castle Meadows wetland complex in Glastonbury, and a number of 30-40 acre wetlands in the remaining parts of the watershed. Despite the apparent abundance of wetlands in Vermont, wetland habitat has been significantly reduced since the 19th century due to logging and agricultural land clearing. It is estimated that Vermont and Massachusetts have lost approximately 35% and 28%, respectively, of their wetlands in the last 200 years. This reduction of wetlands is primarily due to major changes in land use. Since 1880, over 1.7 million acres of farmland in Vermont have been reverted back to forest but wetland loss continues at a rate of about 120 acres annually (FERC 1997).

Vernal pools are small, shallow ponds characterized by periods of dryness. Vernal pool habitat is extremely important to a variety of wildlife species including some amphibians that breed exclusively in vernal pools, and other organisms, which spend their entire life cycles confined to vernal pool habitat. Many additional wildlife species utilize vernal pools for breeding, feeding, and other important functions (MassGIS 2003).

According to MassGIS data, there are 11 certified vernal pools (Figure 3.4.3-1) in the Massachusetts portion of the Deerfield River Watershed. These vernal pools were certified by the Natural Heritage and Endangered Species Program (NHESP) according to the Guidelines for Certification of Vernal Pool Habitat (5/88, MDFW). In most cases, certified vernal pools are offered protections under the state wetlands protection act regulations, as well as the state water quality certification, state Title 5, and forest cutting practices act regulations.

NHESP staff also identified locations of potential vernal pools by aerial photograph interpretation. However, in some instances, not all potential vernal pools were identified due to unfavorable conditions in the landscape topography, pool physiography and/or photograph quality. Furthermore, vernal pool habitats occur in a wide variety of landscape settings, including forested swamps, bogs, and other wetlands. Vernal pools within these settings were not typically interpreted, but are nonetheless legitimate and valuable vernal pools (MassGIS 2003).

Within the Massachusetts portion of the Deerfield River Watershed, over 450 potential vernal pools were identified as part of the NHESP effort (Figure 3.4.3-1). In order for a vernal pool to be officially certified, specific information must be collected in the field and presented to the NHESP. Potential vernal pools do not receive protection under state wetlands protection act regulations, or any other state or federal wetlands protection laws.

3.4.4 Forests

Approximately 83% of the entire Deerfield River Watershed is covered by forest. Detailed forest inventories have been completed for Vermont and Massachusetts. Many of the resulting statistics from the inventories were grouped by county (USDA 1998). Northern hardwood forests are the most common forest type within the watershed, accounting for approximately 66% of the forest area. This forest type is characterized by sugar maple, beech, yellow birch, and black cherry species. White/red pine forests cover approximately 19%, while oak/hickory forests cover approximately 12% of the watershed (USDA 1998). White/red pine forests consist principally of eastern white and red pine, with associated species including jack pine, aspen, birch, and maple. The oak/hickory forest type principally includes northern red oak, white oak, bur oak, or hickories, singly or in combination, as well as jack pine, beech, yellow-poplar, elm, and maple (USDA 1998).

In 1998, tree size classifications for all forest lands in the watershed were determined (USDA 1998). Sawtimber[6] sized trees comprise approximately 76% of forest lands area in the watershed, while poletimber[7] size trees and seedlings/saplings[8] comprise 18% and 5%, respectively. Similar size distributions were exhibited for the entire state of Massachusetts.

Within Massachusetts as a whole, in 1985 trees sizes were distributed more evenly across the sawtimber and poletimber classifications. Sawtimber stands covered 41%, while poletimber stands accounted for 51%. Seedling/sapling stands accounted for 8%. Relative to the 1998 inventory data, this represented a 51% decrease in poletimber stands while sawtimber stands increased by 48% (USDA 1998). This statewide trend is most likely exhibited within the Deerfield River Watershed as well. The trend is indicative of overall forest maturation, and a corresponding loss in early-successional forests (MDFW 2004c).

Forest growing stock is the total volume of all the trees in a forest. Net annual growth describes the increase in the volume of trees during a specified year. Components of net annual growth include the increment of net volume of trees at the beginning of the specified year that survive to the year's end, plus the net volume of trees reaching the minimum size class, minus the volume of trees that died. Growing stock removals are defined as the volume removed from poletimber and sawtimber trees in a forest. Within the Massachusetts portion of the watershed, between 1984 and 1997, the net annual growth of forest growing stock was approximately 2.2 times greater than the average annual removal rate. However, approximately 50% of this average annual removal is related to timber harvests on land in forest use, the remainder comes from conversion of forestland to residential and commercial development (MDFW 2000b).

Rates of growth to removals of growing stock volume vary with tree species. Within Massachusetts, red maple is growing 2.5 times faster than it is being removed, either by harvest or by land-use change, while northern red oak, the species with the highest amount of total growing-stock removals, has a growth to removals ratio of 0.8 (USDA 1998). Efforts are underway by the state of Massachusetts to reverse both the proliferation of red maple and the trend in regeneration failure of red oak (Wickersham 2000).

Several tree species in the region have been impacted by invasive pathogens. For example, oaks and other hardwoods have been stressed by the gypsy moth. The American chestnut has been rendered an

[6] Sawtimber sized trees are defined as trees containing at least one 12-foot saw log or two noncontiguous saw logs, each at least 8 feet long. Softwoods must be a least 9.0 inches in diameter at breast height and hardwoods at least 11.0 inches in diameter at breast height.
[7] Poletimber sized trees are at least 5.0 inches in diameter at breast height and smaller than sawtimber size.
[8] Seedlings/saplings are trees less than 5.0 inches in diameter at breast height.

understroy tree or shrub by the chestnut blight. Beech bark disease has greatly reduced numbers of large American beech. Currently, the hemlock wooly adelgid is causing mortality of eastern hemlock (DeGraaf and Miller 1996).

The MDCR oversees forest management practices in Massachusetts. Regulations require a landowner to file a cutting plan if more than 25,000 board feet (or >50 cord) of wood is proposed to be harvested. Development of the cutting plan requires a forester to visit the proposed site to evaluate potential impacts to streams and wetlands, as well as soil erosion prevention measures. If the harvest area falls within an estimated habitat of rare wildlife or priority habitat of rare species, the cutting plan is screened by NHESP to determine if the logging will have any negative impacts on these areas of special significance. NHESP will make recommendations to minimize any adverse impacts, if necessary.

If the plan complies with the state regulations, then it is approved and logging can commence. Interim checks by a licensed forester are conducted throughout the cutting process to ensure compliance with the plan. After cutting is completed, the site is visited by a licensed forester who submits a summary report to MDCR.

For the period 2001 to 2003, an annual average of 2,399 acres of land was logged in the Massachusetts portion of the Deerfield River Watershed. This logging activity required a total 203 stream crossings.

3.4.5 Exotic/Invasive Plant Species

Approximately 45% of all vascular plant species in Massachusetts are exotic (Sorrie and Somers 1999). Invasive exotic plants are quick colonizers of disturbed areas. The faster growing rates of invasive plants, coupled with efficient seed dispersal mechanisms, and tolerance for a wide range of environmental conditions often allow invasive exotics to out-compete native species. Japanese knotweed is native to Southeast Asia and was introduced into the United States during the late 1800s. Due to its rapid growth rate, ability to tolerate a wide range of environmental conditions, and difficulty in removal, Japanese knotweed is considered to be a highly threatening and invasive species. Field surveys for Japanese knotweed were completed on eight tributaries (Table 3.4.5-1) to the Deerfield River (DRWA 2003b).

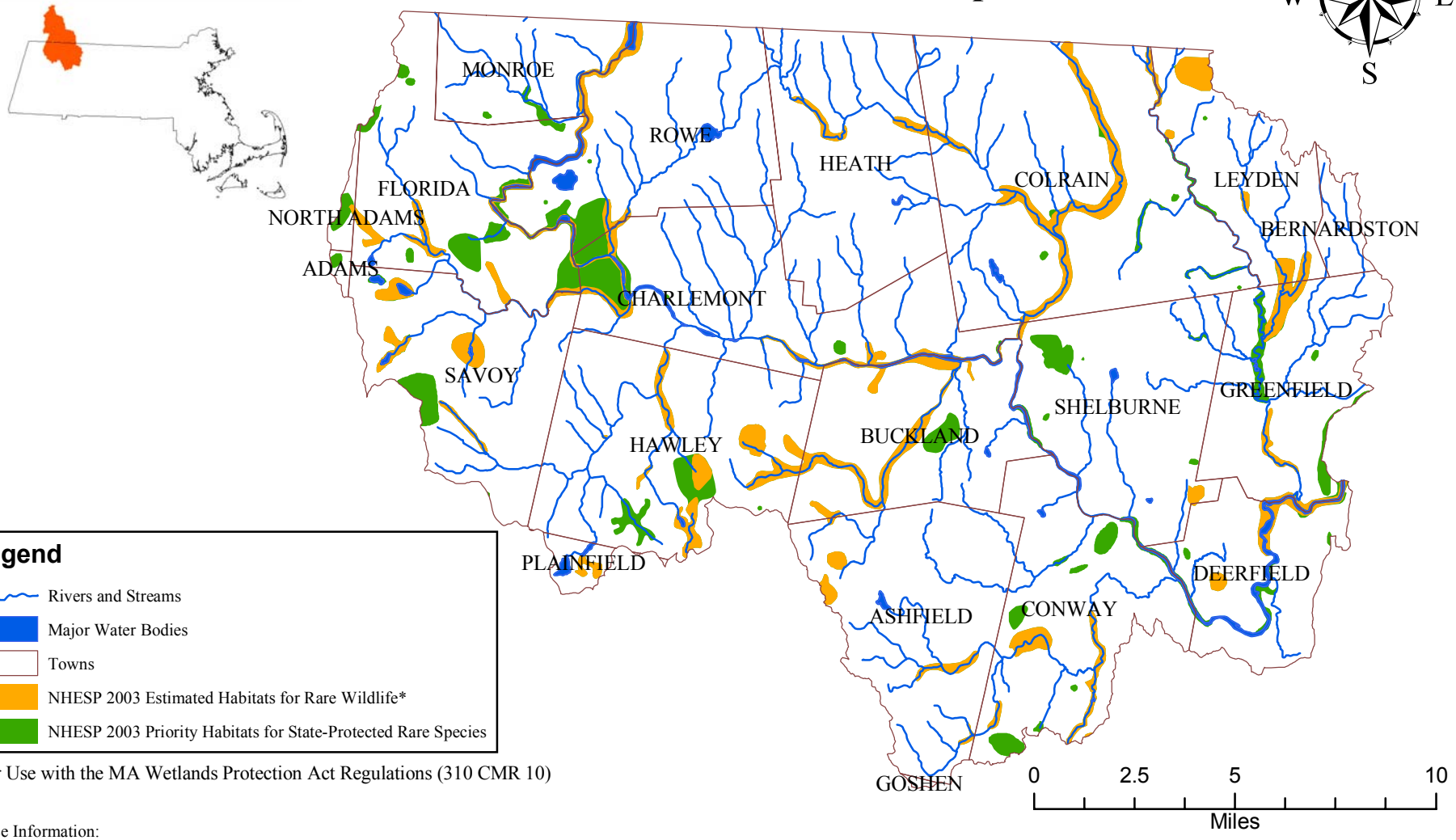
Table 3.4.5-1: Deerfield River Tributaries Surveyed for Japanese Knotweed (Source: DRWA 2003b)

Tributary Name	Proportion of Stream Surveyed
Avery Brook	93%
Bear River	23%
Chickley River	32%
Clesson Brook	70%
Green River	49%
Sanders Brook	47%
South River	46%
Tannery Brook	100%

Overall, Japanese knotweed infestations are relatively extensive along the tributaries surveyed and can be found on seven of the eight tributaries surveyed. Clesson Brook and the Chickley, Green, and South rivers have the most severe infestations of Japanese knotweed, while Avery Brook and Bear River have a moderate level of infestation. Tannery and Sanders Brook have little or no infestation (DRWA 2003b).

In general, knotweed infestations were more abundant in riparian areas that were adjacent to roads due to favorable growth conditions created by increased streambank disturbance and increased light levels (DRWA 2003b).

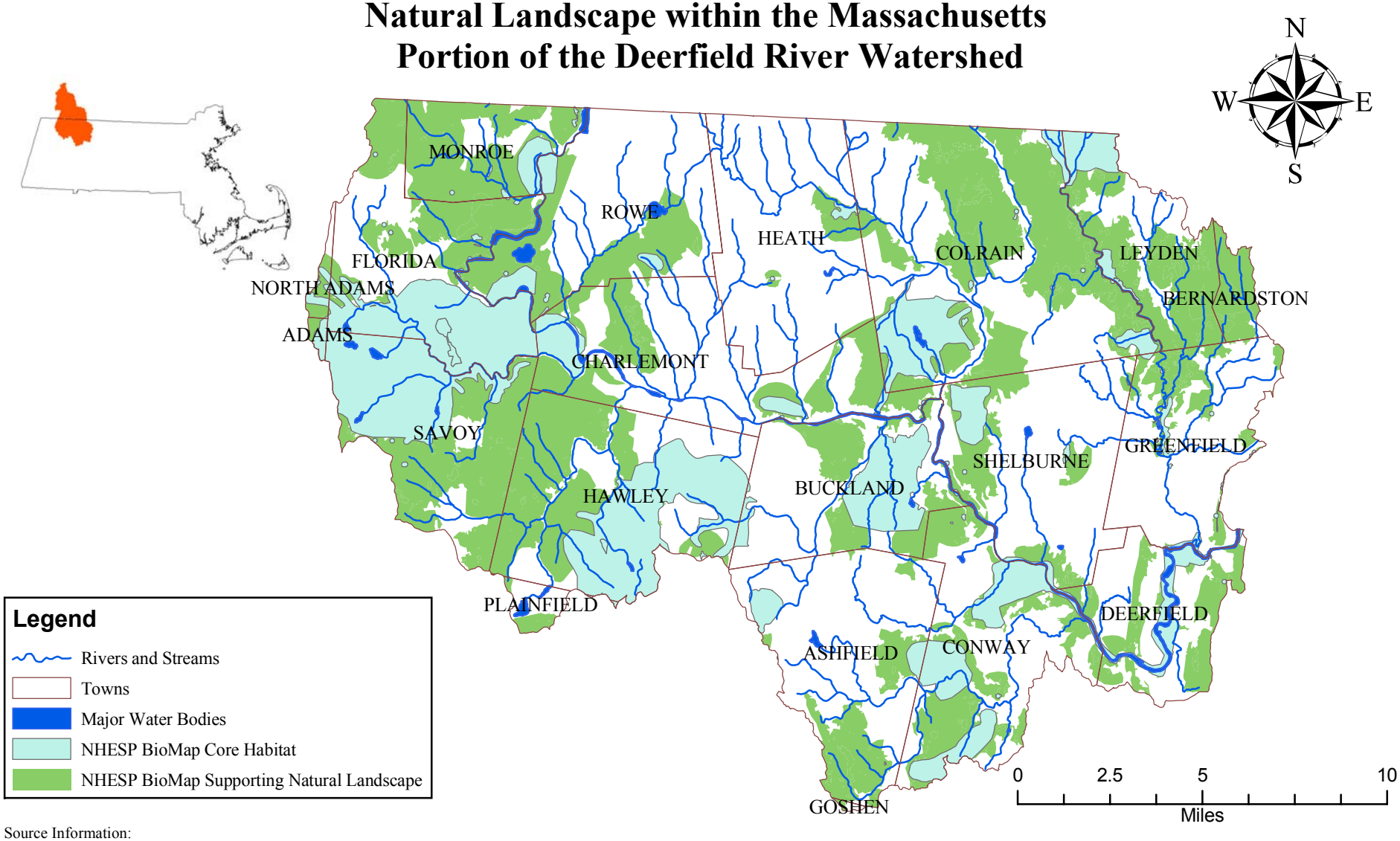
Figure 3.4.2-1: NHESP 2003 Massachusetts Estimated Habitats for Rare Wildlife and Priority Habitats for State Protected Rare Species



* For Use with the MA Wetlands Protection Act Regulations (310 CMR 10)

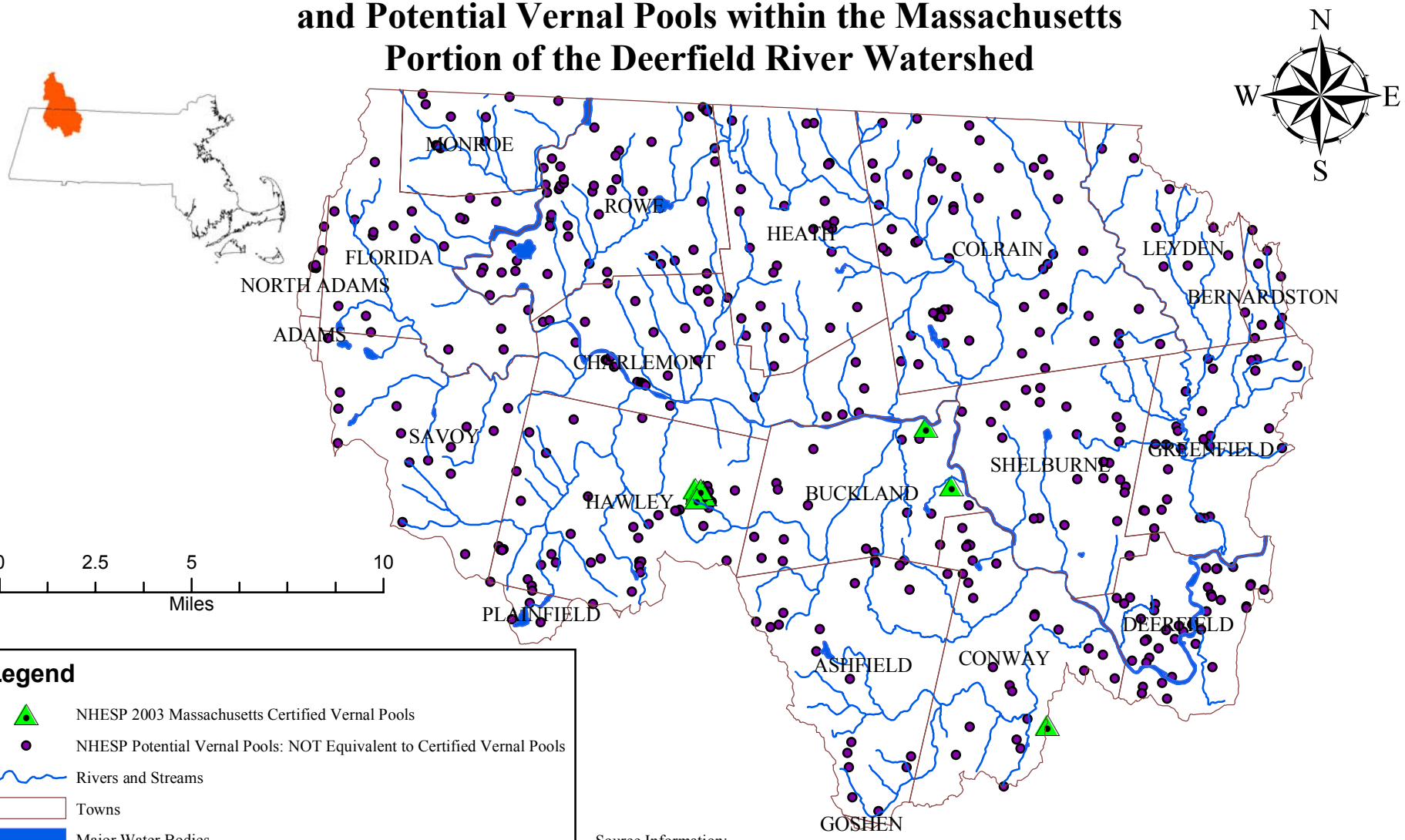
Source Information:
- Office of Geographic and Environmental Information (MassGIS), Commonwealth of Massachusetts Executive Office of Environmental Affairs

Figure 3.4.2-2: NHESP BioMap Core Habitat and Supporting Natural Landscape within the Massachusetts Portion of the Deerfield River Watershed



Source Information:
- Office of Geographic and Environmental Information (MassGIS), Commonwealth of Massachusetts Executive Office of Environmental Affairs

Figure 3.4.3-1: NHESP 2003 Massachusetts Certified and Potential Vernal Pools within the Massachusetts Portion of the Deerfield River Watershed



Source Information:
- Office of Geographic and Environmental Information (MassGIS), Commonwealth of Massachusetts Executive Office of Environmental Affairs

3.5 Open Space

Franklin Regional Council of Governments (FRCOG) recently completed an effort to develop an open space and recreation plan for the Deerfield River Watershed (FRCOG 2004). The plan contained several actions to protect and manage community growth, without losing valued open space and recreational assets.

3.5.1 Land Use Patterns and Changes

The majority of the watershed is heavily forested with farmland typifying the eastern portion. Development has been documented in distinct areas of the watershed, particularly in the towns of Greenfield and Shelburne. Industrial development is common along major rivers and commercial development in village centers and along the Mohawk Trail. Large residential subdivisions are uncommon in the watershed (FRCOG 2004).

Land use for the Vermont portion of the watershed consists of 86% forested, 5% water/wetland, 5% agriculture, and 4% residential (VANR 2003). Figure 3.5.1-1 depicts land use in the Deerfield River Watershed. The Massachusetts portion of the watershed is largely undeveloped and classified as approximately 81% forested, 9% agriculture, 5% urban/residential, and 1.5% water/wetland with most of the urban land in the southernmost portions of the watershed (Table 3.5.1-1).

Table 3.5.1-1: Land Use in the Massachusetts Portion of the Deerfield River Watershed (Source: MassGIS 2003)

Land Use Type	Percent	Description
Forest	80.6%	Forest
Cropland	5.7%	Intensive agriculture
Residential	4.5%	Multi-family; smaller than 1/4 acre lots; 1/4 - 1/2 acre lots; larger than 1/2 acre lots
Pasture	3.1%	Extensive agriculture
Open Land	2.4%	Abandoned agriculture; power lines; areas of no vegetation
Water	0.9%	Fresh water; coastal embayment
Woody Perennial	0.7%	Orchard; nursery; cranberry bog
Recreation	0.6%	Golf; tennis; playgrounds; skiing; stadiums; racetracks; fairgrounds; drive-ins; beaches; marinas; swimming pools
Wetland	0.5%	Nonforested freshwater wetland
Urban Open	0.3%	Parks; cemeteries; public & institutional greenspace; also vacant undeveloped land
Commercial	0.3%	General urban; shopping center
Transportation	0.3%	Airports; docks; divided highway; freight; storage; railroads
Mining	0.1%	Sand; gravel and rock
Industrial	0.1%	Light & heavy industry
Waste Disposal	0.02%	Landfills; sewage lagoons

Agricultural land in the watershed includes land growing feed crops to support dairy and beef farms, pasture for grazing, fruit tree orchard plantings, and sugar maple stands that are tapped to produce maple syrup. Within the watershed, agricultural fields are most prevalent in the areas east of the North River in Colrain, and Clesson Brook in Buckland. The amount of agricultural land varies by town:

- Monroe, Florida, Savoy, Hawley, and Rowe have 5% or less of their land in agriculture;
- Ashfield, Conway, Buckland, Charlemont, and Heath have between 9 and 11% of their land in agriculture; and,
- Colrain, Shelburne, Greenfield, Deerfield, and Leyden have between 12 and 23% of their land in agriculture.

Since 1985, there have been significant changes in land use within the Massachusetts portion of the watershed. Specifically, large lot residential development has resulted in the loss of forest and farmland. Between 1985 and 1999, the watershed experienced reductions in cropland (10%), pastureland (22%), and forest (1%), with a 58% increase in large-lot residential development. This development typically occurred via construction of single-family homes on lots along existing roadways (FRCOG 2004).

It is likely that land use in the watershed will follow a similar pattern in the foreseeable future. However, the population within the watershed is projected to increase at a faster rate than previously experienced; therefore, changes in land use patterns are expected to be more pronounced (FRCOG 2004).

3.5.2 Population Growth and Projections

Table 3.5.2-1 illustrates the population trends between 1970 and 2000 for towns within the Massachusetts portion of the watershed (FRCOG 2004). Significant increases in population (>10%) were experienced in 11 of the 15 towns located within the watershed. Overall, the Massachusetts portion of the watershed experienced a growth rate of 14.4%, while population in Massachusetts as a whole increased 11.6%.

Table 3.5.2-1: Population Trends (1970-2000) of Towns within the Massachusetts Portion of the Deerfield Watershed (Source: FRCOG 2004)

	1970 Population	2000 Population	Percent Change 1970-2000
Savoy	322	705	118.9%
Heath	383	805	110.2%
Leyden	376	772	105.3%
Conway	998	1,809	81.3%
Charlemont	897	1,358	51.4%
Hawley	224	336	50.0%
Ashfield	1,274	1,800	41.3%
Colrain	1,420	1,813	27.7%
Rowe	277	351	26.7%
Deerfield	3,873	4,750	22.6%
Shelburne	1,836	2,058	12.1%
Buckland	1,892	1,991	5.2%
Florida	672	676	0.6%
Greenfield	18,116	18,168	0.3%
Monroe	216	93	-56.9%
Deerfield River Watershed	**32,776**	**37,485**	**14.4%**
Massachusetts	**5,689,377**	**6,349,097**	**11.6%**

The FRCOG and the Berkshire Regional Planning Commission (BRPC) project populations for the majority of towns to increase by approximately 7,300 people by 2025, an increase of 19.5% (FRCOG 2004).

Build-out analyses provide another measure of the potential for future growth. Such analyses were completed for all towns within the Massachusetts portion of the watershed during 2001. The effort was sponsored by the Massachusetts Executive Office of Environmental Affairs (EOEA). The results of those analyses show the potential for significant growth and demand for services in the watershed's communities under maximum build-out conditions (Table 3.5.3-1).

Table 3.5.3-1: Results of Build-Out Analyses for Massachusetts Portion of the Deerfield River Watershed (Source: EOEA 2004)

Town	Additional Developable Land Area (acres)	Additional Residents	Additional Water Demand at Build-out (gallons/day)	Additional Solid Waste (tons/yr)
Ashfield	18,860	22,407	1,908,497	11,494
Buckland	8,212	10,310	887,017	5,289
Charlemont	8,336	13,917	1,110,250	15,169
Colrain	16,174	28,355	2,225,301	14,546
Conway	14,256	13,195	991,986	6,769
Deerfield	12,000	18,624	2,272,093	9,554
Greenfield	5,796	18,883	1,849,865	9,686
Hawley	6,965	8,057	604,241	4,113
Heath	11,011	13,942	1,104,264	7,152
Leyden	7,926	9,798	855,734	5,026
Monroe	3,080	3,403	300,567	1,745
Rowe	5,694	2,923	500,667	1,499
Shelburne	6,117	7,405	763,930	3,799
Florida	4,338	5,856	439,198	2,635
Savoy	6,954	6,027	451,994	2,712
Watershed	**135,719**	**183,102**	**16,265,604**	**101,188**

For all towns combined, build-out analyses indicate a significant future growth rate. In terms of infrastructure and space needs, these increases could result in an additional 135,719 acres being developed, almost 16 million gallons per day of additional water demand, and more than 101,188 additional tons/year of solid waste generation to serve the 183,102 additional residents.

The probability that maximum build-out conditions would occur in the watershed is low; however, if 20% of the watershed's open space were developed, significant alteration to watershed's character could be expected. Under these build-out conditions the population within the watershed would be expected to grow to approximately 70,000 (FRCOG 2004).

The potential for significant future growth means that substantial pressure will likely be placed on the natural resources of the watershed – particularly water and land resources – to meet the needs of expanding populations. This pressure will necessitate careful planning to reduce the environmental impacts of growth, including the protection of significant natural resources.

3.5.3 Protected Lands

Efforts by government agencies and private conservation organizations have resulted in a significant amount of protected land in the watershed. This includes permanently protected land owned by private landowners, municipal, state, and nonprofit organizations, and utilities (Figure 3.5.3-1), as well other areas with less stringent land protections. Overall, approximately 63.1 square miles of the watershed are considered "protected open space" (Table 3.5.3-1), representing approximately 18.2% of the watershed. Other open space lands with less stringent land protections also comprise significant parts of the watershed.

Table 3.5.3-1: Protected Open Space Lands in the Massachusetts Portion of the Deerfield River Watershed (Source: MassGIS 2003)

Category	Square Miles	% of Total
Protected in Perpetuity[9]	63.1	18.2
Temporary[10]	68.4	19.7
Limited[11]	1.8	0.5
None[12]	5.7	1.6

Temporarily protected parcels are those that are enrolled in the Massachusetts Chapter 61 tax abatement programs (Table 3.5.3-2). These programs offer landowners a reduction in their property taxes if the landowner agrees that the predominant use of the land will not change during a specified time period. Lands are protected for ten years under Chapter 61 and 61B, and one year under the Chapter 61A designation, which assists farmers by reducing taxes while land is maintain in agricultural use. The Chapter 61 designation provides incentives for owners of actively managed forestland, while landowners with a Chapter 61B designation receive lower property taxes in exchange for keeping land in open space for ten years.

Table 3.5.3-2: Chapter 61 Lands in Massachusetts Portion of the Deerfield River Watershed (Source: MassGIS 2003)

Category	Square Miles	% of Total
Chapter 61 (Forestry)	43.4	57.1
Chapter 61A (Agricultural)	10.0	13.2
Chapter 61B (Recreation)	22.6	29.7

In addition to the aforementioned watershed open space and recreation plan currently being conducted by FRCOG, several towns within the Massachusetts portion of the watershed have completed their open space plans. Table 3.5.3-3 depicts that status of each town's open space planning.

[9] Legally protected in perpetuity and recorded as such in a deed or other official document.
[10] Legally protected for less than perpetuity (e.g. short term conservation restriction or Chapter 61 lands), or temporarily protected through an existing functional use.
[11] Protected by legal mechanisms other than those above, or protected through functional or traditional use.
[12] Totally unprotected by any legal or functional means. This land is usually privately owned and could be sold without restriction at any time for another use (e.g. scout camps, private golf course, and private woodland).

Table 3.5.3-3: Status of Open Space Plan with Massachusetts Portion of the Deerfield River Watershed (Source: FRCOG 2004)

Town	Open Space Plan Status
Ashfield	Plan to be completed by June 2004
Buckland	Plan to be completed by June 2004
Charlemont	Plan to be completed by June 2004
Colrain	Plan to be completed by June 2004
Conway	Plan Complete
Deerfield	Plan Complete
Florida	Draft Plan Complete
Greenfield	Plan Complete
Hawley	No Plan
Heath	Plan Complete
Leyden	Plan to be completed by June 2004
Monroe	No Plan
Rowe	Plan Elements to be completed by June 2004
Savoy	Plan Complete
Shelburne	Plan to be completed by June 2004

3.5.4 Zoning

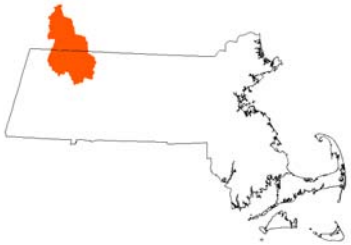
Communities use a variety of planning tools including local by-laws and ordinances to control or otherwise guide growth. The most widespread zoning district in the watershed is the Residential-Agricultural designation (Table 3.5.4-1). Buckland, Colrain, Deerfield, Greenfield, and Shelburne have commercial districts. Industrial zones are delineated in Buckland, Colrain, Conway, Deerfield, Greenfield, Rowe, and Shelburne.

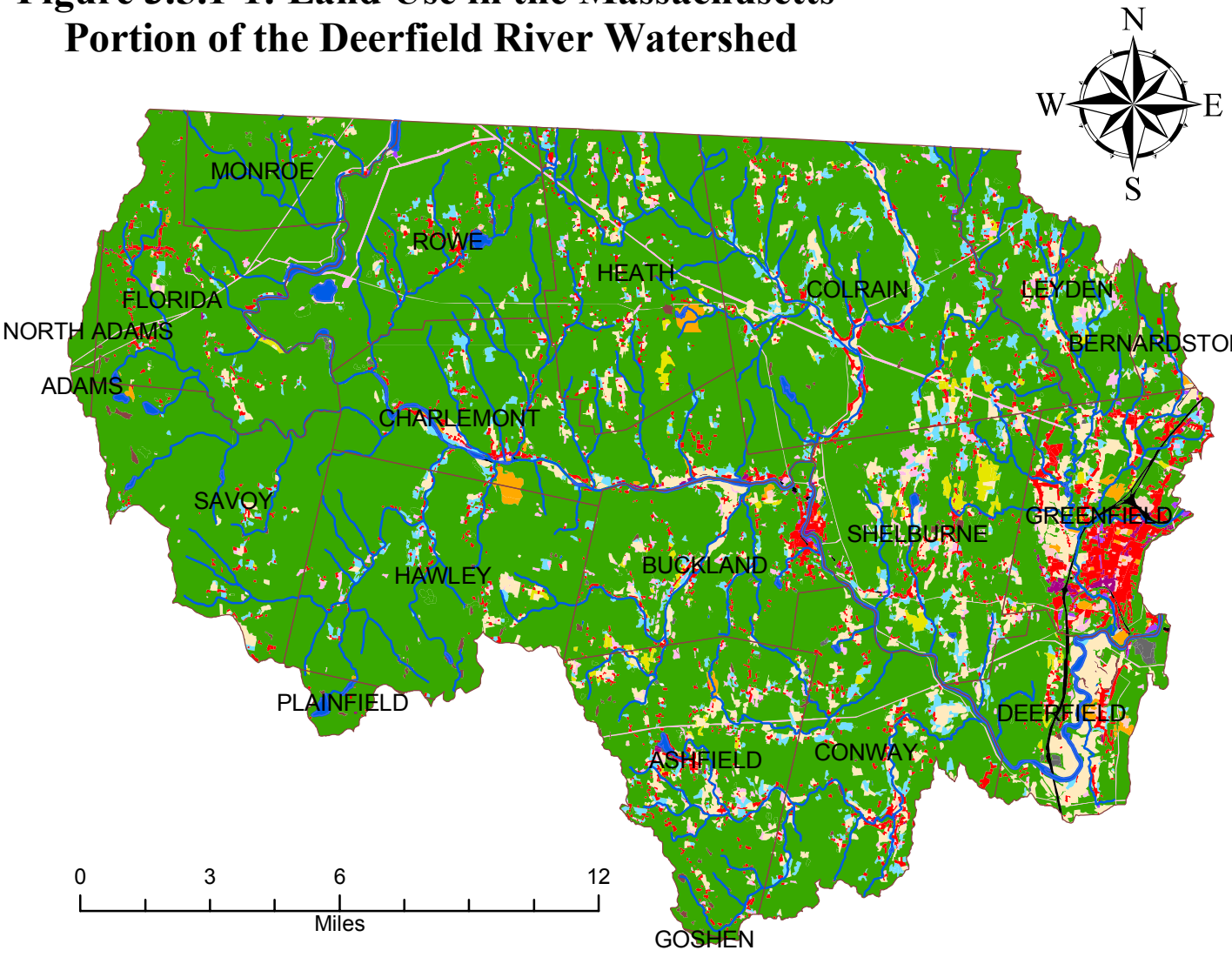
Table 3.5.4-1: Zoning Districts within Deerfield River Watershed Communities (Source: EOEA 2004)

Town	Zoning Districts
Ashfield	Rural-Residential and Agriculture
Buckland	Industrial Commercial Residential with sewer/water Residential without sewer/water
Charlemont	Residential/Agricultural
Colrain	Industrial Commercial Residential /Agriculture
Conway	Residential / Rural Agricultural Light Industrial
Deerfield	Small Business Commercial Industrial Central Village Residential Planned Industrial Residential -Agricultural Water Protection
Florida	Agricultural/Residence

Town	Zoning Districts
Greenfield	Central Commercial General Commercial General Industry Health Service Limited Commercial Office Planned Industry Urban Residential Suburban Residential Rural Residential Semi-Residential
Hawley	Rural
Heath	Primarily Agriculture and Residential Residential/Recreational Mohawk Estates Floodplain Town Center Water Supply
Leyden	Central Village Residential Residential/Agricultural
Monroe	Rural Residential
Rowe	Residential-Agricultural District Industrial
Savoy	Agricultural/Residential
Shelburne	Commercial Industrial Residential Village Residential

Figure 3.5.1-1: Land Use in the Massachusetts Portion of the Deerfield River Watershed





Legend

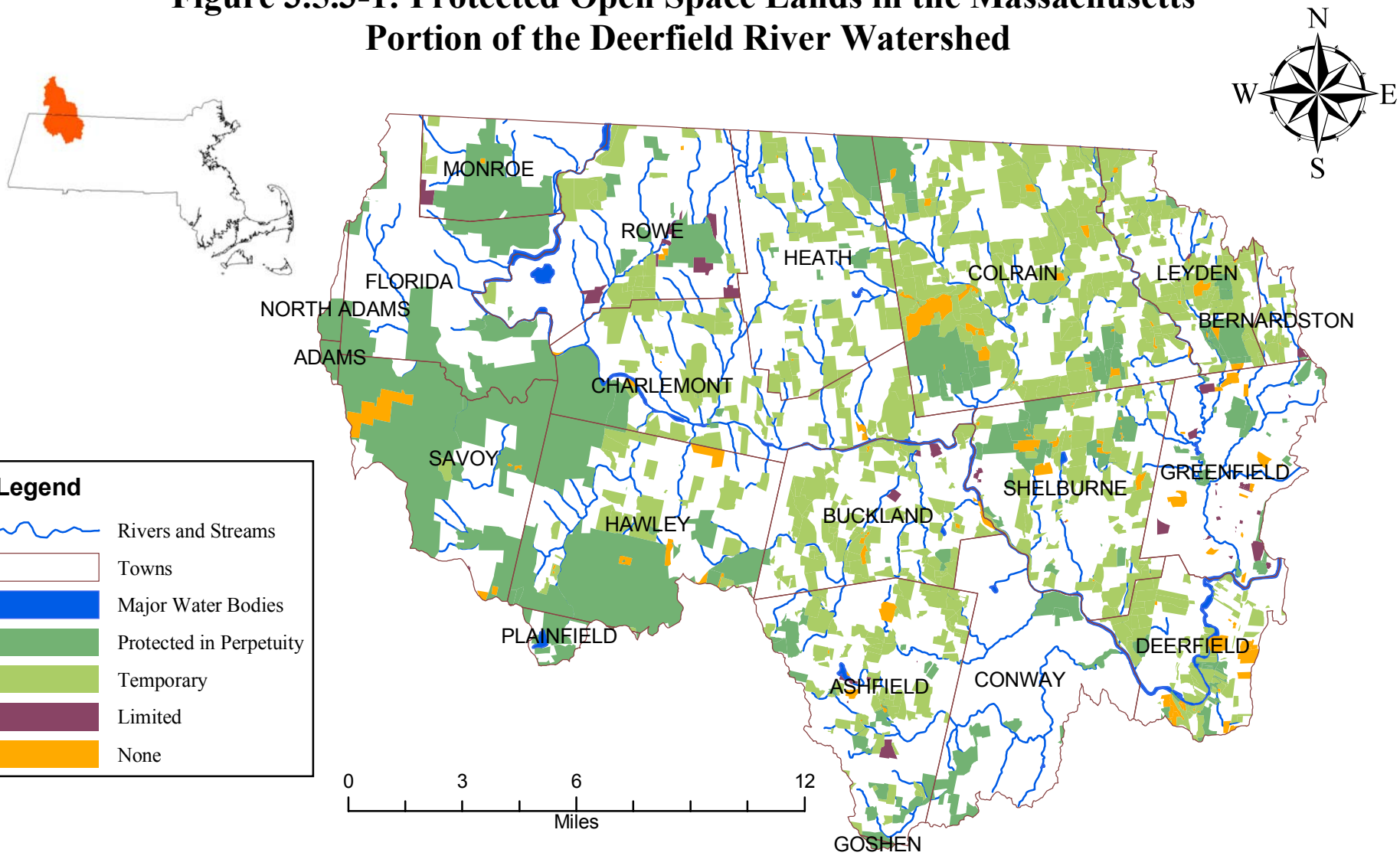
- Rivers and Streams
- Towns
- Major Water Bodies

Land Use Category

- Forest
- Cropland
- Residential
- Pasture
- Open Land
- Water
- Woody Perennial
- Recreation
- Wetland
- Urban Open
- Commercial
- Transportation
- Mining
- Industrial
- Waste Disposal

Source Information:
- Office of Geographic and Environmental Information (MassGIS), Commonwealth of Massachusetts Executive Office of Environmental Affairs

Figure 3.5.3-1: Protected Open Space Lands in the Massachusetts Portion of the Deerfield River Watershed



Source Information:
- Office of Geographic and Environmental Information (MassGIS), Commonwealth of Massachusetts Executive Office of Environmental Affairs

3.6 Recreation

The Deerfield River is one of the most heavily used recreational rivers in the New England Region, with the most favored activities being whitewater boating and angling (FERC 1997). Several commercial whitewater outfitters offer raft, canoe, and kayak trips within the watershed. These companies include Crabapple Whitewater Outfitters, North American Whitewater Expeditions, Wilderness Plus Rafting, and Zoar Outdoors. Individual recreational users are also attracted to the area for rafting, canoeing and kayaking, although kayak trips are somewhat more common (USGen 2000). Other activities within the watershed include angling, hiking, downhill skiing, cross-country skiing, camping, picnicking, swimming, snowmobiling, off-road recreational vehicles, foliage and wildlife viewing, and hunting.

3.6.1 Whitewater Boating

Due to its proximity to population centers and the predictability of its flows, the Deerfield River is one of the premier whitewater boating locations in the region. Whitewater boating has developed steadily along the river due to designated whitewater boating flows provided at several hydroelectric dams currently owned by USGen. Since 1991, USGen has provided scheduled flow releases suitable for whitewater boating at the Station No. 5 and Fife Brook dams. The availability of water from storage at Harriman Reservoir makes whitewater boating available at Station No. 5 and below Fife Brook at times of the year and on a predictable schedule that nature could not provide.

Overall, the Deerfield River provides opportunities for Class[13] I through Class V whitewater boating within a 15-mile radius of Charlemont. Whitewater boating primarily occurs in two stretches in Massachusetts: a 2.6-mile stretch in the Station No. 5 bypass (the Monroe Bridge Section or Dryway) and a 17-mile stretch between the Fife Brook Dam and the Station No. 4 Dam (the Fife Brook Section).

The Monroe Bridge Section is one of only four Adventure Class (at least Class IV) whitewater stretches offering commercial boating in New England. As a result of the recent FERC relicensing, USGen constructed a boat slide and launching ramp at the Monroe Bridge put-in site. The Dunbar Brook Picnic Area is used as a take-out point for this section (Banks 2001).

The Fife Brook Section consists of three distinct boating segments. The first segment starts below Fife Brook Dam and extends downstream approximately 5 miles to Zoar Gap, where the only Class III rapid exists in the entire section. This segment is frequented by commercial rafting companies, canoers, and kayakers. The middle segment extends from Zoar Gap to Shunpike Picnic Area, which caters to tubers and novice canoers, as well as more highly skilled boaters. The lower segment extends from Shunpike Picnic Area to the Station No. 4 Dam. Tubers, novice canoers, and persons who are on unguided commercial trips primarily use this area (Banks 2001).

During higher flow conditions, boaters occasionally float six miles of Class I and II whitewater along the East Branch Deerfield River from the Somerset Reservoir to the Searsburg Impoundment. In addition, Class II whitewater opportunities are available below the Station No. 2 Dam when the hydroelectric project is generating. A boat slide and stairs are currently planned for construction at the Station No. 2 Dam, which will likely result in increased boating activity. Currently due to limited access, boating activity between Station No. 3, Gardners Falls and Station No. 2 dams is sparse (Banks 2001). An 8-mile stretch of the Green River upstream of West Leyden, Massachusetts is largely Class II whitewater, with some Class III whitewater at high flows.

[13] Based on the International Scale of River Difficulty, which defines six difficulty classes of whitewater: Class I-easy, Class II-novice, Class III-intermediate, Class IV-advanced, Class V-expert, and Class VI-extreme.

There are several locations along the Deerfield River with public access for canoes, boats, and kayaks. USGen recently constructed a boat slide and launching ramp at the Monroe Bridge put-in site below the Station No. 5 Dam that is typically used by whitewater paddlers. The Dunbar Brook picnic area located approximately 2.5 miles downstream is used as a take-out point in this river reach. Below Fife Brook Dam in the town of Florida, there is popular access point frequently used by whitewater paddlers. The Zoar Gap Picnic Area, located in Charlemont, also represents a popular river access point for whitewater paddlers. Further downstream, the Shunpike Picnic Area, located in western Charlemont, also provides good access to the river. This site is owned by the Massachusetts Highway Department. There is another put-in site approximately one mile from the Buckland/Charlemont border that is not particularly well marked. Slightly west of this site, USGen owns and operates an access point that also has picnic tables. Wilcox Hollow is a river access point located near the Gardners Falls Dam in Shelburne. The site is owned and maintained Consolidated Edison. A boat slide and stairs are currently planned for construction at the Station No. 2 Dam.

3.6.2 Angling

Both lake and river angling opportunities abound within the Deerfield River Watershed. Warmwater and coldwater species inhabit the impoundment and riverine portions of the Deerfield River. In particular, Somerset Reservoir, largely surrounded by the Green Mountain National Forest, supports an excellent brook trout fishery. Harriman Reservoir has the highest amount of summer angler use in the watershed. This reservoir as well as the remaining Deerfield River impoundments also provides significant ice fishing opportunities. Harriman is stocked with landlocked salmon, lake trout, brook trout, brown and rainbow trout. There is also an abundance of warmwater species such as smallmouth bass, yellow perch, and rainbow smelt. The VDFW stocked the Harriman bypass reach in order to establish a brook trout population. This has presumably resulted in a self-sustaining brook trout population, which will likely increase angler usage.

Angling is particularly popular below Fife Brook Dam, as well, where the MDFW manages a highly valued catch and release trout fishing area (from Fife Brook dam to Hoosac Tunnel and From Pelham Brook to the Mohawk Campground). The MDFW typically stocks rainbow and brown trout in these areas. In the spring and fall, fly-fishing is very popular below the Station No. 4 Dam near the confluence with the North River (Banks 2001). Excellent trout fishing opportunities are also available below the Station No. 2 Dam, where anglers typically focus effort near Bardwell Ferry Bridge. This is due in part to the remote nature of the Station No. 2 reach. Major tributaries to the Deerfield, such as the Cold River, also provide angling opportunities.

3.6.3 Hiking

The Mohawk Trail of western Massachusetts, also known as state highway Route 2, was one of the earliest Scenic Byways in New England (FRCOG and BRPC 2002). Large portions of the trail follow the Deerfield River and the Mahican-Mohawk Trail, a former Native American trail linking the Hudson and Connecticut River Watersheds. This original trail is currently being reestablished as a recreational trail in the Deerfield River Watershed.

In addition, there is a vast network of trails throughout the watershed and particularly within the state forest lands (Section 3.6.5). These trails offer opportunities for hiking, horseback riding, and cross-country skiing.

3.6.4 Downhill and Cross Country Skiing

Commercial downhill ski areas located in the Deerfield River Watershed include the Berkshire East Ski Area in Charlemont, Massachusetts and the Mt. Snow Ski Area in Dover, Vermont. Cross Country skiing opportunities are also available via a network trails within state forest lands (Section 3.6.5) as well as in various other portions of the watershed, such as Highland Pond in Greenfield, which maintains 19 miles of cross country ski trails.

3.6.5 State Forests and Parks

The Green Mountain National Forest encompasses approximately 40% of the Deerfield River Watershed within the state of Vermont (VDEC 1992). In addition, the MDCR manages a number of lands and facilities in the watershed, including several state forests, and state parks (Figure 3.6.5-1).

The Mohawk Trail State Forest, located just west of Charlemont, encompasses approximately 6,457 acres, and is considered to be one of the most scenic woodland areas in Massachusetts (FRCOG and BRPC 2002). The forest includes much of the last remaining old growth forests in Massachusetts, as well as a swimming area in the Cold River and a day use picnic area. There are also 56 campsites and six overnight log cabins in the forest. In addition, several original Native American trails, including the Mahican-Mohawk Trail, are available for hiking.

The 11,118-acre Savoy Mountain State Forest is located slightly west of the Mohawk Trail State Forest. This forest consists of several miles of wooded trails with the very scenic North and South Ponds offering fishing, picnicking, and swimming opportunities. There are 45 campsites and four log cabins located within the forest. Significant natural features within the forest include Bog Pond, with its floating bog island, and Tannery Falls, with cascading waterfalls.

The Kenneth Dubuque Memorial State Forest encompasses 7,882 acres, and consists of 47 miles of snowmobile trails, 35 miles of horse trails, six miles of hiking trails and a one mile interpretive trail. The Monroe State Forest is a 4,321-acre forest encompassing southern and central Monroe, and extending into Florida. The forest includes a lookout platform on the side of Hunt Hill, more than five miles of streams supporting native brook trout, and several miles of trails for hiking and horseback riding. Hunting and winter activities are also available. Catamount State Forest is located on 1,125 acres in southwestern Colrain and eastern Charlemont. A 27-acre lake and nearby streams are stocked with trout. The area offers hiking and bridle trails, as well as the opportunity for various winter activities. H. O. Cook State Forest is located in the northwestern Colrain and northeastern Heath, just south of the Vermont state line. Its 1,620 acres offer hunting, fishing, hiking and horseback riding trails and winter activities. The more than five miles of streams support native brook trout.

The Conway State Forest, a 1,946-acre forest in southern Conway, provides hiking and horseback trails, and more than four miles of streams for trout fishing. It also offers hunting and winter activities. Nearby, the South River State Forest encompasses 500 acres in Conway and provides picnic tables along the South River to its confluence with the Deerfield River, plus several primitive campsites. Fishing is available in the South, Bear, and Deerfield Rivers.

Other state forest lands in the watershed include the D.A.R State Forest, Florida State Forest, Leyden State Forest, Buckland State Forest, and the Shelburne State Forest.

3.6.6 Snowmobiling

Snowmobiling is allowed within several state forests including Savoy Mountain State Forest, Monroe State Forest, Kenneth Dubuque State Forest, and Mohawk Trail State Forest. A major regional trail connects the Savoy Mountain State Forest and the Monroe State Forest. This trail also connects an extensive system of trails location in the upper Massachusetts portion of the Deerfield River Watershed. There are several snowmobile clubs in the watershed including the Buckland Riders Snowmobile Club, Indian Head Snowmobile Club, and the Snowmobile Association of Massachusetts (FRCOG and BRPC 2002).

3.6.7 Hunting

The MDFW manages a Wildlife Management Area within the watershed. The Poland Brook Wildlife Management Area is located in Conway, Massachusetts along Poland Brook, a tributary to the South River. Most of the 664-acre site was used as a dairy farm prior to acquisition by MDFW. Many of the farm fields are maintained either via mowing by MDFW personnel or via cooperative farm agreements with local farmers. One of primary activities at this site is pheasant hunting.

Big and small-game hunting are very popular throughout other portions of the watershed. The undeveloped nature of the watershed coupled with excellent wildlife habitats present many opportunities for recreational hunting. White-tailed deer and black bear populations are quite extensive in the watershed and the area typically ranks among the highest in terms of annual bear harvest in Massachusetts.

3.6.8 Swimming

Swimming uses are common throughout the Deerfield River Watershed. Within Vermont, the following lakes are popular for swimming and are known to receive fairly significant use. Adams Pond in Woodford, Vermont has two designated swim beaches, Grout Pond in Stratton, Vermont has one designated swim beach, and Lake Raponda in Wilmington, Vermont has a popular swim beach. Swimming also occurs at several locations on Harriman Reservoir including the south and north beaches, and swimmers typically use the public access area at Somerset Reservoir. In addition, there are popular swimming spots located near waterfall areas on the West Branch Deerfield and the East Branch of the North River. The Green River also has two notable swimming areas in the Vermont portion (VANR 2003).

Within the Massachusetts portion of the watershed, there was a high degree of informal recreational use directly below the Station No. 3 Dam. This site, known as the "potholes", is an area of exposed bedrock with glacial potholes. Access to the area was provided by stairs from downtown Shelburne Falls, and the site was used for swimming and sunbathing. The site is no longer publicly accessible as it was closed in 2002. During a typical summer day, hundreds of individuals would recreate at this site (Banks 2001). There is a similar setting near the confluence of the North River and the Deerfield River, although overall use is not as high. A large pool at this confluence below exposed bedrock and cascades attracts swimmers, sunbathers, and tubers (FERC 1997).

MDEM manages a swimming area at Mohawk State Park along the Cold River in Charlemont, Massachusetts. The Greenfield Swimming Pool Dam located on the Green River is popular public swimming area. The dam is about 2 feet high, and flashboards are used to raise the pool behind the dam during the swimming season (MDEP 2003a).

3.6.9 Passive Recreation

The rural/undeveloped nature of the watershed along with its established network of trails and conservation lands present opportunities for more passive types of recreation such as bird watching, nature photography, and winter animal tracking. The High Ledges Wildlife Sanctuary, owned by the Massachusetts Audubon Society, has a variety of flowering plants and a network of trails. The GTD Griswold Conservation Area in Greenfield consists of 200 acres of conservation land providing nature study and bird watching activities. Other passive recreation areas in the watershed include Greenfield Energy Park and Poet's Seat Tower. These facilities offer recreation activities including sightseeing, wildlife viewing, and picnicking.

3.6.10 Instream Recreation Safety

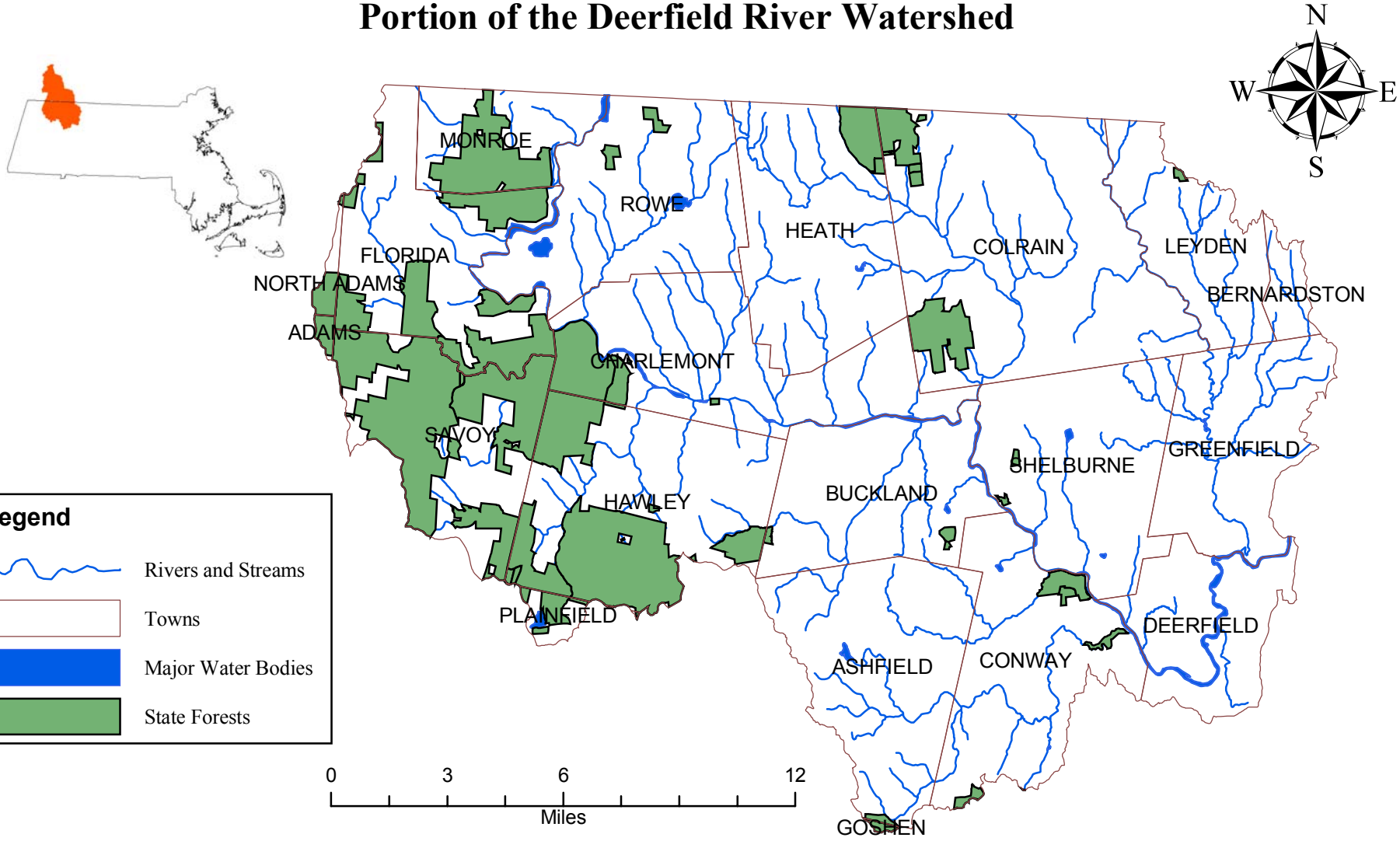
To assist water-based recreationalists, USGen maintains a river flow information phone (Flo-fone). The Flo-fone is a toll-free public service announcement that river users can access to determine flow release schedules from the hydroelectric projects for an upcoming 24-hour period. The Flo-fone is updated daily, at a minimum, to reflect current and anticipated flow release (generation) conditions.

An assessment of recreational safety issues within the watershed (Banks 2001) identified several issues related to the Flo-fone system. Since the advent of deregulation (1998), project operators have found it increasingly difficult to predict changes in flow. Competitive marketing of electricity can result in requests to generate electricity almost immediately resulting in rapid and previously unplanned increases in water level. This situation has been a source of frustration for many recreationists, who often arrive at the river to find water levels above or below those posted on the Flo-fone. The study also suggested a rating and definition system to accompany the Flo-fone. This system would allow users to understand the technical skills necessary to negotiate a given river flow.

A recent study (USGen 2000) conducted by USGen recommended several enhancements to the Flo-fone system. In general, when interviewed regular recreational users were familiar with the Flo-fone system; however occasional or first time recreational users were not as familiar with the system. The Flo-fone system is advertised in several publications and on the Internet. The study recommended that signs with the Flo-fone number also be posted within the project area to acquaint first time users with the system. In addition, occasional and first time users were found to be unfamiliar with the various projects names. Therefore, it was recommended to post the names of the dams with the Flo-fone number. Lastly, there is a public phone in Monroe Bridge near the Station No. 5 Dam, and it was recommended that directions be provided to it on any signs describing the Flo-fone system.

The USGen study also recommended several safety enhancements related to recreation use at several projects. Specifically, these enhancements include the placement of interpretive and informational signs at the whitewater boating put-in and take-out points below Station No. 5 Dam and near the Bardwell Ferry area below the Station No. 2 Dam.

Figure 3.6.5-1: State Forest Lands within the Massachusetts Portion of the Deerfield River Watershed



Source Information:
- Office of Geographic and Environmental Information (MassGIS), Commonwealth of Massachusetts Executive Office of Environmental Affairs

4 Key Areas of Concern and Assessment Needs

Based on the information and data described in Section 3, existing needs or areas of concern within the Deerfield River have been identified below.

4.1 Water Quantity

- Electric utility deregulation has resulted in flow related concerns by some river users, particularly anglers. The market-based bidding process used to determine when power generation occurs, has resulted in frequent and unscheduled high flow releases below several hydroelectric facilities on the mainstem Deerfield River. These conditions have raised access and river safety concerns for several river users (e.g., swimmers, anglers).
- Assess groundwater resources to identify protection measures and sustainable yield.

4.2 Water Quality

- Independent monitoring of wastewater treatment plant outfalls to ensure discharges are in compliance with NPDES permit standards.
- Detailed study of non-point pollution sources within the watershed, including sources related to landfills, junkyards and illegal garbage dumping areas, stormwater runoff from urban areas and rural dirt roads, road salt and herbicide/pesticide application, runoff from the East Deerfield railroad yard, petroleum spills, hazardous material spills, sewage contamination from failing private septic systems and municipal sewage infrastructure, streambank erosion, and agricultural runoff.
- Implementation of recommendations from the Fuss and O'Neil (2003) landfill assessment study.
- Assessment of lakes and ponds within the watershed to determine presence and extent of invasive plant species.
- Complete TMDLs for impaired waterbodies, per the Massachusetts Year 2002 Integrated List of Waters. (i.e., assessment of maximum amount of pollution a waterbody can accommodate before water quality standards are violated).
- MDEP acceptance of volunteer monitoring data.
- Water quality assessment for lakes and ponds in the watershed.
- Additional water quality data collection within the watershed.

4.3 Fish Communities

- Protection of Living Waters core habitats and critical supporting watersheds.
- Comprehensive assessment to identify impediments (i.e., dams, culverts) to fish passage and wildlife movement within tributaries of the Deerfield River.
- Collection of data to describe aquatic habitat conditions and biotic diversity in the Deerfield River mainstem.

4.4 Wildlife and Terrestrial Habitat

- Protection of BioMap core habitats and supporting natural landscapes in the Deerfield River Watershed.
- Increase early successional habitats, as well as overall terrestrial habitat diversity through forest and land management practices.
- Assessment and implementation of control measures to combat the infestation and spread of invasive terrestrial plant species (i.e., Japanese knotweed).
- Additional surveys of marshbirds and calling amphibians
- Assess the extent and condition of wetlands, as well as protection of existing resources, including vernal pools.

4.5 Open Space

- Implement land use and development patterns that manage growth and preserve scenic, rural character, open space, and water resources, and agricultural and forested lands.
- Protect existing agricultural lands in the watershed.
- Identify and conserve parcels with conservation, wildlife, and recreation interest.
- Coordination with state, regional, and local entities to maximize protection of joint open space resources.

4.6 Recreation

- Increased recreational boating safety in the watershed through greater enforcement of regulations and public outreach/education.
- Enforcement of regulations to control littering and trespassing associated with increased recreational use.
- Expand public river access sites along the mainstem Deerfield for recreational users.
- Promote and provide access to existing and new recreational trail networks for type of users on public and private lands.

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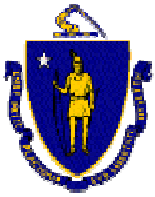
APPENDIX A

Table A-1: Bird Species Identified During North American Breeding Bird Surveys (1966-2003)

Species	Scientific Name
Green Heron	*Butorides virescens*
Turkey Vulture	*Cathartes aura*
Canada Goose	*Branta canadensis*
Mallard	*Anas platyrhynchos*
Sharp-shinned Hawk	*Accipiter striatus*
Cooper's Hawk	*Accipiter cooperii*
Northern Goshawk	*Accipiter gentilis*
Red-shouldered Hawk	*Buteo lineatus*
Broad-winged Hawk	*Buteo platypterus*
Red-tailed Hawk	*Buteo jamaicensis*
American Kestrel	*Falco sparverius*
Ring-necked Pheasant	*Phasianus colchicus*
Ruffed Grouse	*Bonasa umbellus*
Killdeer	*Charadrius vociferus*
Spotted Sandpiper	*Actitis macularia*
Upland Sandpiper	*Bartramia longicauda*
Common Snipe	*Gallinago gallinago*
American Woodcock	*Scolopax minor*
Rock Dove	*Columba livia*
Mourning Dove	*Zenaida macroura*
Black-billed Cuckoo	*Coccyzus erythropthalmus*
Yellow-billed Cuckoo	*Coccyzus americanus*
Great Horned Owl	*Bubo virginianus*
Barred Owl	*Strix varia*
Chimney Swift	*Chaetura pelagica*
Ruby-thr. Hummingbird	*Archilochus colubris*
Belted Kingfisher	*Ceryle alcyon*
Sapsucker (3 species)	*Sphyrapicus spp.*
Downy Woodpecker	*Picoides pubescens*
Hairy Woodpecker	*Picoides villosus*
Pileated Woodpecker	*Dryocopus pileatus*
Olive-sided Flycatcher	*Contopus cooperi*
Eastern Wood-Pewee	*Contopus virens*
Yellow-bell. Flycatcher	*Empidonax flaviventris*
Willow/Alder Flycatcher	*Empidonax spp.*
Least Flycatcher	*Empidonax minimus*
Eastern Phoebe	*Sayornis phoebe*
Grt. Crested Flycatcher	*Myiarchus crinitus*

Species	Scientific Name
Eastern Kingbird	*Tyrannus tyrannus*
Yellow-throated Vireo	*Vireo flavifrons*
Blue-headed Vireo	*Vireo solitarius*
Warbling Vireo	*Vireo gilvus*
Red-eyed Vireo	*Vireo olivaceus*
Blue Jay	*Cyanocitta cristata*
American Crow	*Corvus brachyrhynchos*
Common Raven	*Corvus corax*
Tree Swallow	*Tachycineta bicolor*
N. Rough-winged Swallow	*Stelgidopteryx serripennis*
Bank Swallow	*Riparia riparia*
Cliff Swallow	*Petrochelidon pyrrhonota*
Barn Swallow	*Hirundo rustica*
Black-capped Chickadee	*Poecile atricapillus*
Tufted Titmouse	*Baeolophus bicolor*
Red-breasted Nuthatch	*Sitta canadensis*
White-breasted Nuthatch	*Sitta carolinensis*
Brown Creeper	*Certhia americana*
House Wren	*Troglodytes aedon*
Winter Wren	*Troglodytes troglodytes*
Golden-crowned Kinglet	*Regulus satrapa*
Eastern Bluebird	*Sialia sialis*
Veery	*Catharus fuscescens*
Swainson's Thrush	*Catharus ustulatus*
Hermit Thrush	*Catharus guttatus*
Wood Thrush	*Hylocichla mustelina*
American Robin	*Turdus migratorius*
Gray Catbird	*Dumetella carolinensis*
Northern Mockingbird	*Mimus polyglottos*
Brown Thrasher	*Toxostoma rufum*
European Starling	*Sturnus vulgaris*
Cedar Waxwing	*Bombycilla cedrorum*
Blue-winged Warbler	*Vermivora pinus*
Nashville Warbler	*Vermivora ruficapilla*
Yellow Warbler	*Dendroica petechia*
Chestnut-sided Warbler	*Dendroica pensylvanica*
Magnolia Warbler	*Dendroica magnolia*
Black-thr. Blue Warbler	*Dendroica caerulescens*
Yellow-rumped Warbler	*Dendroica coronata*
Black-th. Green Warbler	*Dendroica virens*

Species	Scientific Name
Blackburnian Warbler	*Dendroica fusca*
Prairie Warbler	*Dendroica discolor*
Black-and-white Warbler	*Mniotilta varia*
American Redstart	*Setophaga ruticilla*
Ovenbird	*Seiurus aurocapillus*
Northern Waterthrush	*Seiurus noveboracensis*
Louisiana Waterthrush	*Seiurus motacilla*
Mourning Warbler	*Oporornis philadelphia*
Common Yellowthroat	*Geothlypis trichas*
Canada Warbler	*Wilsonia canadensis*
Scarlet Tanager	*Piranga olivacea*
Eastern Towhee	*Pipilo erythrophthalmus*
Chipping Sparrow	*Spizella passerina*
Field Sparrow	*Spizella pusilla*
Vesper Sparrow	*Pooecetes gramineus*
Savannah Sparrow	*Passerculus sandwichensis*
Song Sparrow	*Melospiza melodia*
Swamp Sparrow	*Melospiza georgiana*
White-throated Sparrow	*Zonotrichia albicollis*
Dark-eyed Junco	*Junco hyemalis*
Northern Cardinal	*Cardinalis cardinalis*
Rose-breasted Grosbeak	*Pheucticus ludovicianus*
Indigo Bunting	*Passerina cyanea*
Bobolink	*Dolichonyx oryzivorus*
Red-winged Blackbird	*Agelaius phoeniceus*
Eastern Meadowlark	*Sturnella magna*
Common Grackle	*Quiscalus quiscula*
Brown-headed Cowbird	*Molothrus ater*
Baltimore Oriole	*Icterus galbula*
Purple Finch	*Carpodacus purpureus*
House Finch	*Carpodacus mexicanus*
Pine Siskin	*Carduelis pinus*
American Goldfinch	*Carduelis tristis*
Evening Grosbeak	*Coccothraustes vespertinus*
House Sparrow	*Passer domesticus*



Mitt Romney
Governor

Kerry Healey
Lt. Governor

Ellen Roy Herzfelder
Secretary

Executive Office of Environmental Affairs
100 Cambridge Street, Suite 900
Boston, MA 02114

(617) 626-1000
http://www.mass.gov/envir/

MASSWILDLIFE

DIVISION OF
FISHERIES & WILDLIFE

1 Rabbit Hill Road, Westborough, MA 01581
p: (508) 389-6300 | f: (508) 389-7890
MASS.GOV/MASSWILDLIFE

Jack Buckley, *Director*

April 5, 2017

William P Short III
PO Box 237173
New York NY 10023-7173

RE: Project Location: Off Mohawk Trail
Town: BUCKLAND, SHELBURNE
NHESP Tracking No.: 17-36618

To Whom It May Concern:

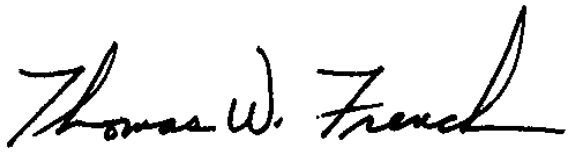
Thank you for contacting the Natural Heritage and Endangered Species Program of the MA Division of Fisheries & Wildlife (the "Division") for information regarding state-listed rare species in the vicinity of the above referenced site. Based on the information provided, this project site, or a portion thereof, is located **within** *Priority Habitat 1410* (PH 1410) and *Estimated Habitat 340* (EH 340) as indicated in the *Massachusetts Natural Heritage Atlas* (13th Edition). Our database indicates that the following state-listed rare species have been found in the vicinity of the site:

Scientific name	Common Name	Taxonomic Group	State Status
Alnus viridis ssp crispa	Mountain Alder	Plant	Special Concern
Neurocordulia yamaskanensis	Stygian Shadowdragon	Dragonfly	Special Concern
Boyeria grafiana	Ocellated Darner	Dragonfly	Special Concern
Glyptemys insculpta	Wood Turtle	Reptile	Special Concern
Symphyotrichum tradescantii	Tradescant's Aster	Plant	Threatened

The species listed above are protected under the Massachusetts Endangered Species Act (MESA) (M.G.L. c. 131A) and its implementing regulations (321 CMR 10.00). State-listed wildlife are also protected under the state's Wetlands Protection Act (WPA) (M.G.L. c. 131, s. 40) and its implementing regulations (310 CMR 10.00). Fact sheets for most state-listed rare species can be found on our website (www.mass.gov/nhesp).

This evaluation is based on the most recent information available in the Natural Heritage database, which is constantly being expanded and updated through ongoing research and inventory. If the purpose of your inquiry is to generate a species list to fulfill the federal Endangered Species Act (16 U.S.C. 1531 et seq.) information requirements for a permit, proposal, or authorization of any kind from a federal agency, we recommend that you contact the National Marine Fisheries Service at (978)281-9328 and use the U.S. Fish and Wildlife Service's Information for Planning and Conservation website (https://ecos.fws.gov/ipac). If you have any questions regarding this letter please contact Daisy Medeiros, Endangered Species Review Assistant, at (508) 389-6357.

Sincerely,



Thomas W. French, Ph.D.
Assistant Director

Kleinschmidt
Energy & Water Resource Consultants

February 29, 2012

VIA E-FILING AND FEDERAL EXPRESS

Kimberly Bose, Secretary
Federal Energy Regulatory Commission
888 1st Street, NE, Room 1A
Washington, DC 20426

Gardners Falls Project FERC No. 2334
2012 Annual Report of Cultural Resources Activities

Dear Secretary Bose:

EP Energy Massachusetts LLC (formally NAEA Energy Massachusetts, LLC) owns and operates the Gardners Falls Hydroelectric Project (No. 2334) located on the Deerfield River, Massachusetts. The Cultural Resource Management Plan (CRMP) for the project requires an annual report of cultural resource activities for the project. On behalf of our client, EP Energy Massachusetts LLC herein files an original and eight copies of the annual report of cultural resource activities for the Gardners Falls Project. This report complies with the Cultural Resources Management Plan (CRMP), approved by the Federal Energy Regulatory Commission (FERC) on November 17, 1998, and Section II paragraph D of the Programmatic Agreement (PA).

On August 28, 2011 a historic flood caused by 10-inches of rain from Tropical Storm Irene devastated the area near the Gardners Falls Project located in Franklin County, MA in the Town of Buckland, across the river from the Town of Shelburn (Attachment 1). On February 10, 2012, an employee of EP Energy conducted the annual visual site inspection of two potentially eligible archaeological sites located on the Gardners Falls impoundment. The Gardners Falls old stone foundation was found intact and documented in the attached photo (Attachment 2). However, due to the historic flooding of the Deerfield River caused by Tropical Storm Irene, the riverbank in the Gardners Falls impoundment has changed dramatically. The EP Energy employee was unable to find any sign of the Gardners Falls cave. He documented the changes with a series of photographs along the riverbank highlighting scouring, washouts and the general change in the view in an effort to document this new situation (Attachment 3).

Per the CRMP and PA, we are also forwarding a copy of this letter to the Massachusetts Historical Commission. If you have any questions, please contact me at (860) 767-5069 ext 421 (email: Chris.Tomichek@kleinschmidtusa.com).

Sincerely,

KLEINSCHMIDT ASSOCIATES

Christine A Tomichek

Chris Tomichek
Project Manager
CAT:TMJ
Attachment: Photos from Site Inspection
cc: Brona Simon (MHC), Kim Marsili, John Bahrs, Cynthia Lane
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ATTACHMENT 1

NEWS ARTICLES DOCUMENTING HISTORIC FLOODING

Flooding wreaks havoc in Franklin Cty

Section of I-91 closed, Rt 2 also closed

Updated: Sunday, 28 Aug 2011, 11:35 PM EDT
Published : Sunday, 28 Aug 2011, 4:50 PM EDT Ryan Walsh Barry Kriger

CHARLEMONT, Mass. (WWLP) - Much of Franklin County is feeling the wrath of Tropical Storm Irene. It could take days, even weeks for life to get back to normal.

The raging Deerfield River overflowed its banks completely covering Route 2 in Charlemont, turning streets into streams, and surrounding some houses near the bridge.

The river came right up to the decking of the bridge between Shelburne Falls and Buckland.
While our cameras were rolling, 22News witnessed a lot of debris moving very fast in the rushing muddy waters. A propane tank was bobbing in the angry waters, and also floating logs.

Parts of Interstate 91 and Route 2 West bound are closed due to the swollen Deerfield and Connecticut Rivers. I-91 is closed in both directions for seven miles between Deerfield and Greenfield. If you're heading that way, get ready for a really round-about detour, because routes 5 and 10 are closed for the same stretch.

On I-91 northbound when you enter Easthampton, warning signs flash about highway closure and that Route 2 west in Buckland is closed. Flooding has caused many roads to close along many of the rivers across Franklin County.

Greenfield Community College is where the National Guard and other emergency management teams are set up. They have to wait until the water recedes before they can make any decisions about opening the roads. "We have sections of route 2 in Charlemont, multiple sections of route 2 in Charlemont that are under water. The bridges that cross route 2, we have bridges in Deerfield, Shelburne Falls, Buckland. We have dams that are under water, so we don't know the capacity of those dams at this point in time," said Dennis Annear, Northwest Massachusetts Incident Management Team.

Annear told 22News their primary concern is to gain access to these washed out roads. The bridges and railroads need to be evaluated before they are re-opened.

Some people in Greenfield said they were prepared, but didn't think it would cause this much damage. "I think most people were just taking a wait-and-see attitude and I think past experiences a predictor of future performance," said Gregory Bell, "the past tropical storms that have come up the coast, as soon as they hit land they usually die out so that's what I was kind of thinking."

One woman said the situation went downhill fast when she went to the store to buy diapers. "I was gone about 7 minutes. Our road was filling up with water, so I rushed into the house, told my husband to get the kids. We got out by driving over our neighbors front lawn to get up to safety," said Lisa Aubrey, who lives next to the river in Shelburne Falls. Aubrey plans to stay with relatives who live on higher ground.

Bell told 22News he did pack up his furniture and move it into his shed, but his basement did flood.

If you are in these affected areas and need help, Annear told 22News that you should contact your local emergency management directors in your town. They can figure out what resources they need for Monday morning.

State Police told 22News that I-91 will be closed Monday morning and it could take a couple of days to reopen, until the state evaluates the roads and bridges.

Many people are still without power, according to WMECO's restoration website , close to 60 percent of Buckland and Sunderland is in the dark, around 500 people in Deerfield and Greenfield are without power as well.

New England cleans up amid severe flooding from Irene

By Zach Howard and Lauren Keiper
SHELBURNE FALLS, MA | Mon Aug 29, 2011 4:44pm EDT

(Reuters) - New England residents struggled on Monday with power outages and widespread flooding as they tried to clean up the mess left by Tropical Storm Irene.

Vermont and western Massachusetts were especially hard hit by the heavy rains during Irene's barrage, and more than 500,000 customers in Massachusetts remained without power.

A town employee from Southbridge, Massachusetts was electrocuted by a downed power line, authorities said.

"It's a tragic reminder that folks beginning the clean-up process need to do so safely," said Scott MacLeod, spokesman for the state emergency management agency.

The roaring Deerfield River in Shelburne Falls, Massachusetts, deluged streets and forced several hundred people to evacuate. The river picked up one building and pushed it about 100 feet across a street, said Will Mackie, local firefighter.

"It's on the right side of the road normally, but water moved it across to the left side," he said.

National Guard troops and emergency officials spread out across the state to assess conditions, and early reports showed no major structural or coastal infrastructure damage, said MacLeod. Once the beaches are safe to be inspected, MacLeod said erosion was likely to be found.

Shelburne's two-lane bridge over the Deerfield River and an adjacent pedestrian footbridge "took some heavy hits" from debris and need to be inspected before they reopen, Mackie said.

Governor Deval Patrick was checking the damage and meeting with residents and local authorities.

WATER HEADS SOUTH

Water was pouring south into Massachusetts and Connecticut from Vermont and New Hampshire after some Connecticut River Basin areas got as much as 14 inches of rain, said the U.S. Army Corps of Engineers.

"We've had major flooding in the Merrimack, Connecticut, and Hudson rivers, and some points in Vermont that feed into Lake Champlain," said Steve Nogueira, hydro-meteorologist with the National Weather Service's Northeast River Forecast Center in Taunton, Massachusetts.

In New Hampshire towns West Lebanon and North Walpole, flooding from the Connecticut River was possibly the worst since the 1938 hurricane, said Nicole Belk, a hydrologist from the Northeast River Forecast Center.

President Barack Obama has declared a state of emergency for Vermont, experiencing its worst flooding in recent memory.

At least one person was killed after being swept into a swollen river in the mountainous, land-locked New England state, which rarely sees tropical storms.

Many highways and roads remained closed, including a stretch of Interstate 91 southbound in Deerfield, Massachusetts.

Tropical Storm Irene wrecks havoc in Western Massachusetts

Published: Thursday, December 29, 2011, 5:21 AM

By **The Republican Newsroom**

Tropical Storm Irene dumped as much as 10 inches of rain in the region in late August, flooding homes and roads, damaging bridges and causing extensive power outages

The storm – the remnants of Hurricane Irene – caused the Deerfield, Green, Chicopee and Westfield rivers to overflow.

The federal government has approved $6.2 million so far for homeowners, renters and business owners in Berkshire and Franklin counties who suffered damage from the storm, according to the Federal Emergency Management Agency.

The devastating storm washed out a six-mile stretch of Route 2 between Charlemont and Florida, and it remained closed until Dec. 15.

On Nov. 8, the last of five Western Massachusetts disaster recovery centers, located in Williamstown, closed. The centers, operated by FEMA and the Massachusetts Emergency Management Agency, saw 1,852 visitors.

Counting auto, home and commercial claims overseen by the state, there were a total of 28,500 insurance claims filed as a result of Irene. The hill communities of western Franklin County, including Shelburne Falls, were especially hard hit when the Deerfield River flooded.

ATTACHMENT 2

GARDNERS FALLS FOUNDATION

Gardners Falls Foundation

ATTACHMENT 3

PHOTOGRAPHIC DOCUMENTATION OF GARDNERS FALLS IMPOUNDMENT RIVERBANK WHERE THE GARDNERS FALLS CAVE PREVIOUSLY EXISTED

Document Content(s)

ATTACHMENT A-11

Kleinschmidt

March 24, 2016

VIA E-FILING

Kimberly D. Bose, Secretary
Federal Energy Regulatory Commission
888 First Street, N. E.
Washington, DC 20426

FERC Form 80
Gardners Falls Project – FERC No. 2334-053

Dear Secretary Bose:

On behalf of Essential Power, LLC (EP) enclosed is the FERC Form 80 and associated memo explaining estimation methodology for the Gardners Falls Project. On March 4, 2014, a large sinkhole was discovered between the powerhouse and the river. As a result, EP closed the access road to all vehicles other than contractors and company employees which precluded access to most of the project recreation sites during much of the 2014 recreation season. Therefore, EP requested an extension of time to collect data during the 2015 recreation season. By letter dated July 11, 2014, FERC granted an extension of time to complete the Form 80 for the Project to April 1, 2016.

If you have any questions, please contact Mr. Kim Marsili of EP at (413) 730-4721 or me at (860) 767-5069.

Sincerely,

KLEINSCHMIDT ASSOCIATES

Andrew Qua
Senior Regulatory Coordinator

ADQ:TMJ
Attachments
cc: Kim Marsili (EP)

J:\803\034\calcs\2016 Form 80 FERC Submittal Letter.docx

MEMORANDUM

TO: Kim Marsili, Essential Power Massachusetts, LLC

FROM: Rachel Russo, Kleinschmidt Associates

DATE: March 21, 2016

RE: FERC Form 80 Estimation Method for Gardners Falls (P-2334)

Kleinschmidt Associates (Kleinschmidt) was retained by Essential Power Massachusetts, LLC (EP) to prepare the FERC Form 80 Recreation Report (Form 80) for the Gardners Falls Hydroelectric Project (FERC No. 2334), as required by 18 CFR Sec. 8.11. Schedule 1 of the Form 80 requires the data collection methods to be specified. If estimation is used, an explanation of the method is required. This memo provides Kleinschmidt's approach to recreation use estimates at the Gardners Falls Project for summer season day use, night-time use, and winter season use.

On March 4, 2014, a large sinkhole was discovered between the powerhouse and the river. As a result, EP closed the access road to all vehicles other than contractors and company employees which precluded access to most of the project recreation sites. As a result, the recreation amenities at Gardners Falls were closed for the duration of the 2014 recreation season; EP requested an extension of time to collect data during the 2015 recreation season. By letter dated July 11, 2014, FERC granted an extension of time to complete the Form 80 for the Project to April 1, 2016.

DAY USE ESTIMATES

Use estimates were developed through spot counts. EP staff counted the number of vehicles and people observed at the Nature Trail, Picnic Area, Walking Trail, Jetty, and Wilcox Hollow two times on select sample days. The two counts on each sample day were averaged. Spot counts were conducted on 8 weekdays, 11 weekend days, and 3 holiday weekends (Memorial Day, Independence Day, and Labor Day) throughout April 18 to October 31, 2015.

Following Pollock et al., (1994), recreation use estimates were developed using spot count data and on-site observations to calculate the weekday, weekend, and holiday recreation days for the summer recreation season (defined as April 15 to October 31). Recreation use at the formal public access sites was estimated as:

$$
\begin{aligned}
&Average\ Vehicle\ Count\ by\ Month\ and\ Day\ Type \\
&\times\ Average\ Group\ Size\ by\ Day\ Type \\
&\times\ Sample\ Shift\ Length \\
&\times\ Sample\ Shift/Recreation\ Day\ Ratio\ \ (Daylight\ Hours/Sample\ Shift) \\
&\times\ Number\ of\ Days\ in\ the\ Population\ (by\ Month\ and\ Day\ Type) \\
&\div\ Average\ Number\ of\ Hours\ per\ Trip\ by\ Day\ Type \\
&=\ Estimated\ Number\ of\ Recreation\ Days\ (by\ Month\ and\ Day\ Type)
\end{aligned}
$$

For each site, vehicle spot counts recorded by recreation clerks were averaged by month and day type. This total was then multiplied by the average group size to determine average hourly recreationists per sample shift. Average group size was derived from the average vehicle counts and the average people per vehicle observed. The recreation day was defined as extending from 7:00 am to 7:00 pm to ensure coverage during the majority of daylight hours and to account for recreation activities that are temporally disproportionate (i.e., anglers are expected more often at dawn and dusk than at mid-day). Total recreationist hours per sample shift were determined by multiplying the average hourly recreationists by the length of the sample shift. The sample period recreationist hours were then used to extrapolate to a daily effort by multiplying the total effort per sample shift by the ratio of the recreation day to the sample shift length. This estimated average daily effort (in recreationist hours) was then extrapolated out to month and day type by multiplying by the number of days in the population (by month and day type). The total was converted to a recreation day estimate by dividing by the average trip length. It was assumed the average trip length (hours per trip) was 3.0 hours because it is a representative length of time people spend fishing, picnicking, and walking. Recreation day totals were summed for all recreation sites.

NIGHTTIME USE ESTIMATES

Recreation sites within the project boundary are all day use sites. Thus, nighttime recreation use was not sampled and was assumed to be zero.

WINTER USE ESTIMATES

Little to no late fall, winter, or early spring use of the recreation sites occurs; thus, winter use was estimated to be zero.

FACILITY CAPACITY

Parking capacity was used as a proxy for facility-use capacity (i.e., the percent of the capacity at which the site is used) at the project based on the recreation site inventory. The facility-use capacity was estimated by comparing the average number of vehicles on non-peak weekend days with the optimal parking spaces for each recreation site. Optimal parking was determined by the total number of delineated spaces or by vehicle dimensions and turn-around space.

REFERENCES

Pollock, K. H., C. M. Jones, and T. L. Brown. 1994. Angler Survey Methods and Their Applications in Fisheries Management. American Fisheries Society Special Publication 25. 371 pp.

Document Content(s)

ATTACHMENT A-12

ATTACHMENT A-13

Federal Energy Regulatory Commission (FERC)
FERC Form 80

Licensed Hydropower Development Recreation Report

Form Approved
OMB No. 1902-0106
Expires: 09/30/2016
Burden 3.0 hours

General Information:
This form collects data on recreation amenities at projects licensed by FERC under the Federal Power Act (16 USC 791a-825r). This form must be submitted by licensees of all projects except those specifically exempted under 18 CFR 8.11 (c). For regular, periodic filings, submit this form on or before April 1, 2015. Submit subsequent filings of this form on or before April 1, every 6th year thereafter (for example, 2021, 2027, etc.). For initial Form No. 80 filings (18CFR 8.11(b)), each licensee of an unconstructed project shall file an initial Form No. 80 after such project has been in operation for a full calendar year prior to the filing deadline. Each licensee of an existing (constructed) project shall file an initial Form No. 80 after such project has been licensed for a full calendar year prior to the filing deadline. Filing electronically is preferred. (See http://www.ferc.gov for more information.) If you cannot file electronically, submit an original and two copies of the form to the: Federal Energy Regulatory Commission, Office of the Secretary, 888 First St., NE, Washington, DC 20426.

The public burden estimated for this form is three hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing the collection of information. Send comments regarding the burden estimate or any aspect of this collection of information, including suggestions for reducing burden, to: FERC via e-mail DataClearance@ferc.gov; or mail to 888 First Street NE, Washington, DC 20426 (Attention: Information Clearance Officer) and Office of Management and Budget (OMB), via e-mail to oira_submission@omb.eop.gov; or mail to OMB, Office of Information and Regulatory Affairs, Attention: Desk Officer for FERC, Washington, DC 20503. Include OMB Control Number 1902-0106 as a point of reference. No person shall be subject to any penalty for failing to comply with a collection of information if the collection of information does not display a valid control number (44 U.S.C. § 3512 (a)).

Instructions:
a. All data reported on this form must represent publicly available recreation amenities and services located within the project boundary.
b. To ensure a common understanding of terms, please refer to the Glossary on page 3.
c. Report actual data for each item. If actual data are unavailable, then please estimate.
d. Submit a completed form for each development at your project.

Schedule 1. General Data

1. Licensee Name: CONSOLIDATED EDISON ENERGY M/
2. Project Name: GARDNERS FALLS
3. Project Number: 2334
4. Development Name: GARDNER FALLS

Complete the following for each development if more than one.

8. Reservoir Surface Area at Normal Pool (acres): 35.00
9. Shoreline Miles at Normal Pool: 2.00
10. Percent of Shoreline Available for Public Use: 25.00

States Development/Project Traverses (List state with largest area within the development/project boundary first):

5. State #1: MA
6. State #2:

7. Type of Project License: (check one) Major _____ Minor _____

11. Data Collection Methods (enter percent for each method used; total must equal 100%):

0.00 traffic count/trail count
0.00 attendance records
80.00 staff observation
0.00 visitor counts or surveys
20.00 estimate (explain)

For 2014, enter only the licensee's annual recreational construction, operation, and maintenance costs for the development (project). Also, enter the annual recreational revenues for that year.

Item	Licensee's Annual Recreation Costs and Revenues (In Whole Dollars)	
	Construction, Operation and Maintenance Costs	Recreation Revenues for Calendar Year
12. Dollar Values	$7,000.00	$0.00

13. Length of Recreation Season: Summer: From (MM/DD) 4/15 To 10/31 Winter: From (MM/DD) 11/1 To 4/14

Period	Number of visits to all recreational areas at development/project (in Recreation Days)	
	Annual Total	Peak Weekend Average (see Glossary)
14. Daytime	4,607	78
15. Nighttime	0	0

Respondent Certification: The undersigned certifies that he/she examined this report; and to the best of his/her knowledge, all data provided herein are true, complete, and accurate.

Kim C. Marsili	Station Manager	(413) 730-4721
Legal Name	Title	Area Code/Phone No.
	03/23/16	2015
Signature	Date Signed	Reporting Year Ending

Title 18 U.S.C.1001 makes it a crime for any person knowingly and willingly to make to any Agency or department of the United States any false, fictitious or fraudulent statement or misrepresentation as to any matter within its jurisdiction.

Schedule 2. Inventory of Publicly Available Recreation Amenities Within the Project Boundary

16. Enter data for each Recreation Amenity Type (a). For User Free (b) and User Fee (c) enter the number of publicly available recreation amenities, located within the project boundary, regardless of provider. For FERC Approved (d) enter the number of amenities identified under User Free (b) and User Fee (c) for which the licensee has an ongoing responsibility for funding or maintenance (see Glossary for further detail). For Capacity Utilization(f), of the total publicly available amenities (b) + (c), compare the average non-peak weekend use (see Glossary) for each recreation amenity type (during the recreation season, with the highest use, reported on Schedule 1, Item 13) with the total combined capacity of each amenity type and enter a percentage that indicates their overall level of use. For example, if all public boat launches are used to half capacity during the non-peak weekend days, enter 50% (should use exceed capacity for an amenity type, enter the appropriate percentage above 100).

Recreation Amenity Type (a)	Number of Recreation Amenities			Total Units (e)	Capacity Utilization (%) (f)
	User Free (b)	User Fee (c)	FERC Approved (d)		
Boat Launch Areas. Improved areas having one or more boat launch lanes (enter number in column e) and are usually marked with signs, have hardened surfaces, and typically have adjacent parking.	2	0	2	2 Lanes	18
Marinas. Facilities with more than 10 slips on project waters, which include one or more of the following: docking, fueling, repair and storage of boats; boat/equipment rental; or sell bait/food (see Glossary FERC approved).				N/A	
Whitewater Boating. Put-ins/Take-outs specifically designated for whitewater access.				N/A	
Portages. Sites designed for launching and taking out canoes/kayaks and the improved, designated, and maintained trails connecting such sites (enter length of trail in column e).				Feet	
Tailwater Fishing. Platforms, walkways, or similar structures to facilitate below dam fishing.	1		1	N/A	13
Reservoir Fishing. Platforms, walkways, or similar structures to facilitate fishing in the reservoir pool or feeder streams.	1		1	N/A	23
Swim Areas. Sites providing swimming facilities (bath houses, designated swim areas, parking and sanitation facilities).				Acres	
Trails. Narrow tracks used for non-automobile recreation travel which are mapped and designated for specific use(s) such as hiking, biking, horseback riding, snowmobiling, or XC skiing (excludes portages, paths or accessible routes; See Glossary).	1		1	1 Miles	3
Active Recreation Areas. Playground equipment, game courts/fields, golf/disc golf courses, jogging tracks, etc.				Acres	
Picnic Areas. Locations containing one or more picnic sites (each of which may include tables, grills, trash cans, and parking).	1		1	1 Sites	8
Overlooks/Vistas. Sites established to view scenery, wildlife, cultural resources, project features, or landscapes.				Acres	
Visitor Centers. Buildings where the public can gather information about the development/project, its operation, nearby historic, natural, cultural, recreational resources, and other items of interest.				N/A	
Interpretive Displays. Signage/Kiosks/Billboards which provide information about the development/project, its operation, nearby historic, natural, cultural, recreational resources, and other items of interest.				N/A	N/A
Hunting Areas. Lands open to the general public for hunting.				Acres	
Winter Areas. Locations providing opportunities for skiing, sledding, curling, ice skating, or other winter activities.				Acres	
Campgrounds. Hardened areas developed to cluster campers (may include sites for tents, trailers, recreational vehicles [RV], yurts, cabins, or a combination, but excludes group camps).				Acres	N/A
Campsites. Sites for tents, trailers, recreational vehicles [RV], yurts, cabins, or a combination of temporary uses.				N/A	
Cottage Sites. Permanent, all-weather, buildings rented for short-term use, by the public, for recreational purposes.				N/A	
Group Camps. Areas equipped to accommodate large groups of campers that are open to the general public (may be operated by public, private, or non-profit organizations).				Sites	
Dispersed Camping Areas. Places visitors are allowed to camp outside of a developed campground (enter number of sites in clmn. e).				Sites	
Informal Use Areas. Well used locations which typically do not include amenities, but require operation and maintenance and/or public safety responsibilities					
Access Points. Well-used sites (not accounted for elsewhere on this form) for visitors entering project lands or waters, without trespassing, for recreational purposes (may have limited development such as parking, restrooms, signage).				N/A	
Other. Amenities that do not fit in the categories identified above. Please specify (if more than one, separate by commas):					

Federal Energy Regulatory Commission (FERC)
FERC Form 80

Licensed Hydropower Development Recreation Report

Glossary of FERC Form 80 Terms

Data Collection Methods. (Schedule 1, Item 11) – If a percentage is entered for the estimate alternative, please provide an explanation of the methods used (if submitted on a separate piece of paper, please include licensee name, project number, and development name)

Development. The portion of a project which includes:
(a) a reservoir; or
(b) a generating station and its specifically-related waterways.

Exemption from Filing. Exemption from the filing of this form granted upon Commission approval of an application by a licensee pursuant to the provisions of 18 CFR 8.11(c).

General Public. Those persons who do not have special privileges to use the shoreline for recreational purposes, such as waterfront property ownership, water-privileged community rights, or renters with such privileges.

Licensee. Any person, state, or municipality licensed under the provisions of Section 4 of the Federal Power Act, and any assignee or successor in interest. For the purposes of this form, the terms licensee, owner, and respondent are interchangeable *except where:*
(a) the *owner* or licensee is a subsidiary of a parent company which has been or is required to file this form; or
(b) there is more than one owner or licensee, of whom only one is responsible for filing this form. Enter the name of the entity that is responsible for filing this report in Schedule 1, Item 2.1.

Major License. A license for a project of more than 1,500 kilowatts installed capacity.

Minor License. A license for a project of 1,500 kilowatts or less installed capacity.

Non-Peak Weekend. Any weekend that is not a holiday and thus reflects more typical use during the recreation season.

Number of Recreation Amenities. Quantifies the availability of natural or man-made property or facilities for a given recreation amenity type. This includes all recreation resources available to the public within the development/project boundary. The resources are broken into the following categories:

User Free (Schedule 2, column b) - Those amenities within the development/project that are free to the public;

User Fee (Schedule 2, column c) - Those amenities within the development/project where the licensee/facility operator charges a fee;

FERC Approved (Schedule 2, column d) – Those amenities within the development/project required by the Commission in a license or license amendment document, including an approved recreation plan or report. Recreation amenities that are within the project boundary, but were approved by the licensee through the standard land use article or by the Commission through an application for non-project use of project lands and waters, are typically not counted as FERC approved, unless they are available to the public, but may be counted as either user free or user fee resources. The total FERC approved amenities column does not necessarily have to equal the sum of user free and user fee amenities.

Peak Use Weekend. Weekends when recreational use is at its peak for the season (typically Memorial Day, July 4th & Labor Day). On these weekends, recreational use may exceed the capacity of the area to handle such use. Include use for all three days in the holiday weekends when calculating Peak Weekend Average for items 14 & 15 on Schedule 1.

Recreation Day. Each visit by a person to a development (as defined above) for recreational purposes during any portion of a 24-hour period.

Revenues. Income generated from recreation amenities at a given project/development during the previous calendar year. Includes fees for access or use of area.

Total Units (Schedule 2, column e) – Provide the total length, or area, or number that is appropriate for each amenity type using the metric provided.

Trails. Narrow tracks used for non-automobile recreation travel which are mapped and designated for specific use(s) such as hiking, biking, horseback riding, snowmobiling, or XC skiing. Trails are recreation amenities which provide the opportunity to engage in recreational pursuits, unlike paths (means of egress whose primary purpose is linking recreation amenities at a facility) or accessible routes (means of egress which meets the needs of persons with disability and links accessible recreation amenities and infrastructure at a facility).

Document Content(s)

ATTACHMENT A-13