

TRWA Monitoring

Taunton WWTP Veolia personnel analysis monthly

pH
Total Suspended Solid
Dissolved Oxygen
Fecal Coliform bacteria

Rhode Island Analytical Laboratories analysis monthly

Total Phosphorus
Nitrate-Nitrogen

TRWA Volunteer

Turbidity

Citizen Volunteer

Habitat Survey
Temperature
Odor
Salinity

QAPP not yet developed

Data from 2006 – present

Earlier data exists from 1980s forward

sites: 2007—9; 2010—16; 2011--14

Massachusetts Year 2010 Integrated List of Waters

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

Featuring new water quality assessments for the Chicopee, French, Quinebaug and Nashua watersheds and the Narragansett Bay and Mount Hope Bay Coastal

Drainage Areas

Prepared by:

Division of Watershed Management

Watershed Planning Program

Worcester, Massachusetts

CN: 360.0

April, 2010

Same as 2008 List

Taunton data not updated since 2001

USGS WaterAlert [wateralert@usgs.gov] daily gage height and discharge in cubic feet per second for locations

USGS 01108410 MILL RIVER AT SPRING STREET AT TAUNTON, MA

LOCATION--Lat 41°53'59", long 71°05'24", Bristol County, Hydrologic Unit 01090004, on left bank, 20 ft upstream from Spring Street bridge in Taunton, and about 0.8 mi upstream from mouth at Taunton River.

DRAINAGE AREA--43.5 mi².

PERIOD OF RECORD--Discharge: December 2005 to current year.

GAGE--Data Collection Platform with satellite telemeter. Datum of gage is 15 ft above National Geodetic Vertical Datum of 1929, from topographic map.

USGS 01108000 TAUNTON RIVER NEAR BRIDGEWATER, MA

LOCATION--Lat 41°56'02", long 70°57'25", Plymouth County, Hydrologic Unit 01090004, on right bank at bridge on Titicut Road, 1 mi upstream from Sawmill Brook, 3.5 mi northwest of Middleboro, and 4.0 mi southeast of Bridgewater.

DRAINAGE AREA--261 mi².

PERIOD OF RECORD--October 1929 to April 1976, April 1985 to May 1988, October 1996 to current year. Published as "at State Farm" October 1929 to September 1969, and as "at State Farm near Bridgewater" October 1969 to April 1976.

REVISED RECORDS--WSP 781: 1934. WSP 1051: 1933. WSP 1201: 1931. WSP 1301: 1930(M), 1933(M), 1935(M). WDR MA-RI-84-1: drainage area.

REMARKS--Flow affected by diversions to and from basin for municipal supplies. Flow regulated by reservoirs and, prior to about 1975, by powerplants upstream.

USGS 01109060 THREEMILE RIVER AT NORTH DIGHTON, MA

LOCATION--Lat 41°51'58", long 71°07'24", Bristol County, Hydrologic Unit 01090004, Bristol County, on right bank, 800 ft downstream from Warner Boulevard at North Dighton and 1.4 mi upstream from mouth.

DRAINAGE AREA--84.3 mi².

PERIOD OF RECORD--Discharge: July 1966 to current year.

Water-quality records: Water years 1967--68.

GAGE--Data Collection Platform with satellite telemeter. Datum of gage is 11.38 ft above National Geodetic Vertical Datum of 1929.

REMARKS--Flow regulated by Lake Mirimichi and other lakes and reservoirs upstream. Diversion to and from basin upstream for municipal supplies.

USGS 01109000 WADING RIVER NEAR NORTON, MA

LOCATION--Lat 41° 56'51", long 71° 10'38", Bristol County, Hydrologic Unit 01090004, on left bank 200 ft downstream from bridge on State Highway 140, 0.9 mi upstream from confluence with Rumford River, and 1.5 mi southeast of Norton.

DRAINAGE AREA--43.3 mi².

PERIOD OF RECORD--Discharge: June 1925 to current year.

Water-quality records: Water year 1967--68, 1999.

REVISED RECORDS--WSP 871: 1938. WSP 1301: 1929--33(M). WSP 1621: 1925--58 (monthly runoff). WDR MA-RI-84-1: drainage area.

GAGE--Data Collection Platform with satellite telemeter. Datum of gage is 55.14 ft above sea level. Prior to Oct. 1, 1930, nonrecording gage at same site at datum 0.62 ft higher and Oct. 1, 1930, to May 5, 1933, at same site at present datum.

REMARKS--Flow regulated to some extent by Lake Mirimichi and other lakes and reservoirs upstream. Diversion upstream for municipal supply of Attleboro and small diversions to and from basin for other municipal supplies.

USGS 01109070 SEGREGANSET RIVER NEAR DIGHTON, MA

LOCATION--Lat 41°50'25", long 71°08'36", Bristol County, Hydrologic Unit 01090004, on left bank 50 ft upstream from twin culverts on Center Street and 1.8 mi northwest of Dighton.

DRAINAGE AREA--10.6 mi².

PERIOD OF RECORD--Discharge: July 1966 to February 1992, July 1992 to current year.

Water-quality records: Water years 1967--68.

GAGE--Data Collection Platform with satellite telemeter. Elevation of gage is 30 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS--Occasional regulation by ponds upstream. Diversion upstream for Dighton Water District.

RIFLS River Instream Flow Stewards (Mass Dept. of Fish and Game

Includes discharge charts, period recorded, flow measurement data, maps & photos

Nemasket River : Murdock St, Middleborough

Drainage area: 69.55 square miles

Weather Station: Middleborough, MA

Group: Bridgewater State College Watershed Access Lab

Description: This site was established in 2005 to determine the effects of upstream reservoir (Assawompset Pond) management on streamflows and to supplement water quality data collection by Bridgewater State College. The Nemasket River supports the largest herring run in the state.

Matfield River : High St, Bridgewater

Drainage area: 64.1 square miles

Weather Station: Bridgewater, MA

Group: Bridgewater State College Watershed Access Lab

Description: This site was established in 2004 to monitor baseline flow and complement water quality data collection by Bridgewater State College.

Stump Brook : Elm St / Burrage Pond WMA, Halifax

Drainage area: 7 square miles

Weather Station: Bridgewater, MA

Group: Jones River Watershed Association

Description: This site was established in 2005 to determine the effects of flow management upstream at Monponsett Pond. This site is not currently being monitored. RIFLS staff did not complete a rating curve before discontinuing monitoring at this site, so no discharge chart appears here.

Raven Brook : Wood St, Halifax

Drainage area: 3.59 square miles

Weather Station: Bridgewater, MA

Group: Bridgewater State College Watershed Access Lab

Description: This site was established in 2004 to monitor baseline flow and complement water quality data collection by Bridgewater State College.

Town River : Hayward St, Bridgewater

Drainage area: 59.85 square miles

Weather Station: Bridgewater, MA

Group: Bridgewater State College Watershed Access Lab

Description: This site was established in 2004 to monitor baseline flow and complement water quality data collection by Bridgewater State College.

Nemasket River : Vaughn St, Middleborough

Drainage area: 49.68 square miles

Weather Station: Middleborough, MA

Group: Bridgewater State College Watershed Access Lab

Description: This site was established in 2005 to determine the effects of upstream reservoir (Assawompset Pond) management on streamflows and to supplement water quality data collection by Bridgewater State College. The Nemasket River supports the largest herring run in the state.

Watershed Access Lab Bridgewater State University

Conducts watershed projects with schools

East Bridgewater High School 2011

[Chemistry of the
Matfield River](#)

East Bridgewater High School 2011

[Land Use and
Macroinvertebrates of
the Matfield River](#)

Hanson Middle School [River Watch 2010](#)

□ Draft Pathogen TMDL for the Taunton River Watershed (MA-DEP, USEPA) 2005

Key Features: Pathogen TMDL for the Taunton River Watershed

Location: EPA Region 1

Land Type: New England Coastal

303(d) Listings: Pathogens

Assonet River (MA62-20);

Matfield River (MA62-32);

Rumford River (MA62-15) was divided into two segments in the 2001 Water

Quality Assessment Report: (MA62-39) and (MA62-40); (MA62-15) no longer exists

Salisbury Brook (MA62-08);

Salisbury Plain River (MA62-05, MA62-06);

Taunton River (MA62-02, MA62-03, MA62-04);

Threemile River (MA62-16) was divided into two segments in the 2001 Water Quality

Assessment Report: (MA62-56) and (MA62-57); (MA62-16) no longer exists

Trout Brook (MA62-07);

Wading River (MA62-17) was divided into two segments in the 2001 Water Quality Assessment

Report: (MA62-47) and (MA62-49); (MA62-17) no longer exists

Data Sources: MADEP "Taunton River Watershed 2001 Water Quality Assessment Report"

Data Mechanism: Massachusetts Surface Water Quality Standards for Fecal Coliform; The

Federal BEACH Act; Massachusetts Department of Public Health Bathing

Beaches; Massachusetts Division of Marine Fisheries Shellfish Sanitation

and Management; Massachusetts Coastal Zone Management

This TMDL applies to the 15 pathogen impaired segments of the Taunton River watershed that are currently listed on the CWA § 303(d) list of impaired waters. MADEP recommends however, that the information contained in this TMDL guide management activities for all other waters throughout the watershed to help maintain and protect existing water quality. For these non-impaired waters, Massachusetts is proposing "pollution prevention TMDLs" consistent with CWA § 303(d)(3). The analyses conducted for the pathogen impaired segments in this TMDL would apply to the nonimpaired segments, since the sources and their characteristics are equivalent. The waste load and/or load allocation for each source and designated use would be the same as specified herein. Therefore, the pollution prevention TMDLs would have identical waste load and load allocations based on the sources present and the designated use of the water body segment (see Table ES-1

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Draft Pathogen TMDL for the Narragansett/Mt. Hope Bay Watershed

January, 2010
CN# 351.0 Report # 61 – TMDL - 2

Massachusetts Department of Environmental Protection (MassDEP)
Division of Watershed Management
627 Main Street
Worcester, Massachusetts 01608

303(d) Listings: Pathogens

Runnins River (MA53-01)
Warren River Pond (MA53-06)
Lee River (MA61-01 & MA61-02)
Cole River (MA61-04)

Mt. Hope Bay (MA61-06 & MA61-07).

Data Sources: MassDEP 2002. Narragansett/Mt. Hope Bay Watershed 1999 Water Quality Assessment Report.; RIDEM Dry and Wet weather Monitoring 2006; Massachusetts Division of Marine Fisheries

In Massachusetts, eastern Mt. Hope Bay and the tidal portion of the Taunton River Estuary south of Route 24 are classified as SB Waters and shall be suitable for shellfish harvesting with depuration (Restricted and Conditionally Restricted Shellfish Areas).

The TMDL analysis has determined that the most significant point source contributors of fecal coliform to the MA portions of Mount Hope Bay (all of MA 61-06, and the eastern portion of MA 61-07) include the direct pollution effects of the City of Fall River, and secondary effects from the City of Taunton. The main stem Taunton River drains directly into the MA and RI Mount Hope Bay areas. Flows from the Taunton River carry Combined Sewer Overflow discharges from both cities following wet weather directly into these Mount Hope Bay MA and RI areas. Additionally, general overland stormwater draining directly into the Taunton from both urban areas during wet weather is another important bacteria pollution contributor to the Bay. It should be noted that significant improvements have been recently made to the Fall River collection system over the last several years to address the CSO issue including the completion and implementation of a rock tunnel storage system that went on line in 2009 which is expected to result in significant water quality improvements.

Just upstream from this segment, in the Taunton River segment (MA62-04), the RIDEM and MADMF had 8 sampling stations which go up the Taunton to almost as far as the

city of Taunton. These were sampled 4 times between June 1 -5 (see Table 4-10 below). Fecal coliform levels ranged between 3- 1,500 CFU/100mL.

Table 4-10. MA62-04 Taunton River Segment (just upstream of Mount Hope Bay MA61-06 Segment) RIDEM and MADMF 2006 Indicator Bacteria Data Summary

Stations	Range of Fecal Coliform CFU/100 mL. (No. of Samples)	Geometric Mean	90 th Percentile
8 stations, sampled 5 times, June 1-6, 2006	3- 1,500 (40)	133 (5)	460

It is important to point out as part of this TMDL the very obvious water quality impacts following a rain event that the city of Fall River CSO's have on (particularly) the eastern part of Mount Hope Bay segment MA61-06 (which is adjacent to the city of Fall River). Also, from the RIDEM data on the Taunton River MA62-04 segment, there are impacts (from the city of Taunton CSO's) coming downstream in the Taunton River into the MA61-06 Mount Hope Bay segment following a rain event. Two figures (see Figure 4-1 below) from the RIDEM Report "Total Maximum Daily Load Study for Bacteria, Mount Hope Bay and the Kickemuit River Estuary" (RIDEM 2009) ably demonstrate this point. June 1, 2006, (prior to the rain event), clearly shows remarkably low fecal coliform bacteria levels, with all readings meeting MA WQ Standards. But on June 3, 2006, just after a significant rain event, bacteria levels in both the Taunton River MA62-04, and Mount Hope Bay MA61-06 segments show a dramatic increase, particularly in waters just adjacent to the City of Fall River. It should be noted that since 2006, subsequent to this sampling survey, the City of Fall River has made over \$150 million in CSO infrastructure improvements, including a CSO tunnel going on- line this past summer for the South Siphon, which should have a dramatic beneficial reduction to the bacteria levels in the adjacent Taunton River and Mount Hope Bay waters.

Freshwater Fish Consumption Advisory List

<http://www.mass.gov/eohhs/docs/dph/environmental/exposure/fish-consumption-advisory-list.pdf>

Massachusetts Department of Public Health
Bureau of Environmental Health
(617) 624-5757
October 11, 2011

Nippenicket, Lake Bridgewater, Raynham P1 (all species), P2 (LMB), P4 Mercury
Sawdy Pond Fall River P1 (LMB), P3 (LMB) Mercury
Wequaquet Lake Barnstable P1 (LMB), P3 (LMB) Mercury
West Monponsett Pond Halifax P1 (LMB), P3 (LMB) Mercury
Copicut Reservoir Dartmouth, Fall River P6 Mercury
Copicut River Dartmouth, Fall River P1 (all species), P2 (AE), P3 (LMB) PCBs,
Mercury
East Monponsett Pond Halifax, Hanson P1 (LMB), P3 (LMB) Mercury

Advice Codes

P1 (all species) Children younger than 12 years or age, pregnant women, women of childbearing age who may become pregnant, and nursing mothers should not eat any fish from this water body.

P1 (species) Children younger than 12 years or age, pregnant women, women of childbearing age who may become pregnant, and nursing mothers should not eat any of the affected fish species (in parenthesis) from this water body.

P2 (species) The general public should not consume any of the affected fish species (in parenthesis) from this water body.

P3 (species) The general public should limit consumption of affected fish species (in parenthesis) to two meals per month.

P4 The general public should limit consumption of non-affected fish from this water body to two meals per month.

P5 The general public should limit consumption of all fish from this water body to two meals per month.

P6 No one should consume any fish from this water body.

Fish Codes

AE American Eel
B Bluegill
BB Brown Bullhead
BC Black Crappie
BT Brown Trout
C Carp

Final Baseline Fisheries and Water Quality Monitoring Report (July 1 – November
14, 2007
January 2008

Taunton River Desalination Plant
Dighton, MA

Prepared for: Inima USA Corporation
Prepared by: Metcalf & Eddy/AECOM

Ichthyoplankton and finfish

Water quality at 5 stations: temperature, conductivity, dissolved oxygen, pH, salinity, turbidity

Also: May 12 – Oct. 10, 2008
May 12, 2008 – May 14, 2009
July 9 – Nov. 12, 2010