

Advocates for Wetlands and Watersheds

Dirty Water Fact Sheet

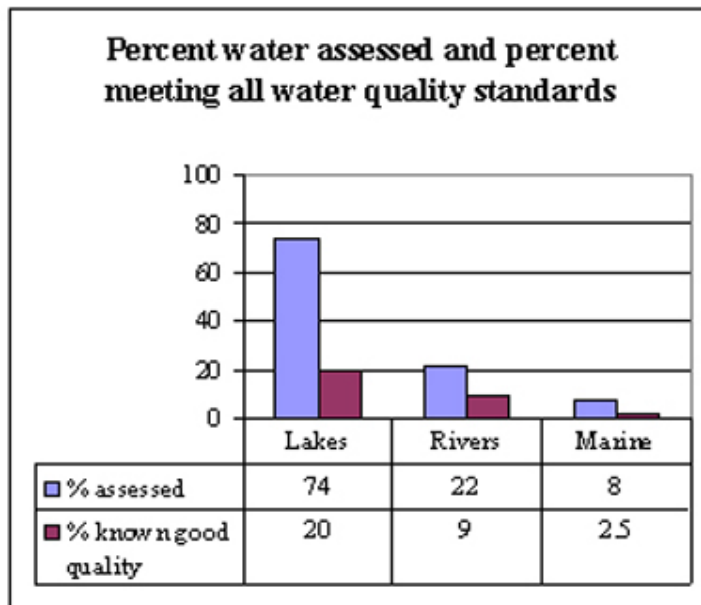
Earth Day 2005

The Environmental Progress Report (<http://mass.gov/dep/brp/epp/epphome.htm>) describes the state of the Commonwealth's waters. Specifically, Massachusetts DEP states:

“Only a small percentage of Massachusetts' waters are known to meet water quality standards. The majority of our rivers and marine areas have not been sampled to see what pollution might be present. For example, we have only monitored 22% of the river miles in the state; 60% of the miles sampled have one or more water quality problems, 40% of the assessed miles meet water quality standards. This translates into only 9% of the total river miles known to meet water quality standards (78% not assessed, 14% not meeting water quality standards).”

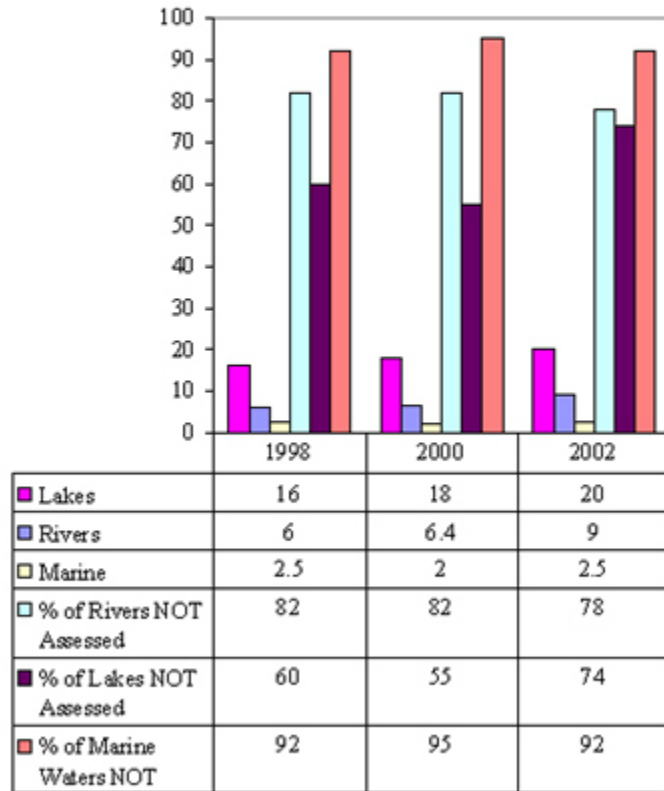
Finally, DEP states that “Although we hope that we have identified the most severe problems, such a limited monitoring program cannot determine the full extent of our pollution issues nor can it identify the subbasins where problems are most acute.”

These graphs and accompanying text were taken from DEP's web page at <http://www.mass.gov/dep/brp/epp/sg/sggwhome.htm> and <http://www.mass.gov/dep/brp/epp/sg/cw/pwqd.html>



WE DO NOT HAVE ADEQUATE DATA TO PREDICT TRENDS IN WATER QUALITY STATEWIDE.

Percent of all waters fully meeting all designated uses and waters not assessed



Examples of Water Quality Monitoring in Two Watersheds, the Neponset and the Mystic. Excerpts taken from:

Massachusetts Year 2004 Integrated List of Waters
Proposed listing of the condition of Massachusetts' waters pursuant to Sections 303(d) and 305(b) of the Clean Water Act

<http://www.mass.gov/dep/brp/wm/files/2004il2.pdf>

Definitions:

Primary Contact Recreational Use

This use is suitable for any recreational or other water use in which there is prolonged and intimate contact with the water with a significant risk of ingestion of water during the primary contact recreation season (1 April to 15 October). These include, but are not limited to, wading, swimming, diving, surfing and water skiing.

Secondary Contact Recreational Use

This use is suitable for any recreation or other water use in which contact with the water is either incidental or accidental. These include, but are not limited to, fishing, boating and limited contact incident to shoreline activities.

Category 1 Waters

Waters attaining all designated uses. No Massachusetts waters are listed in Category 1 because a state-wide health advisory pertaining to the consumption of fish precludes any waters from being in full support of the fish consumption use.

Category 2 Waters

Attaining some uses; other uses not assessed. No waters listed in Category 2 were found to support the uses for which they were assessed, but other uses were unassessed.

Category 3 Waters

No uses assessed. 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. 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).

Category 4a Waters

TMDL is completed

Category 4b Waters

Waters expected to attain all designated uses in the near future

Category 4c Waters

Impairment not caused by a pollutant

Category 5 Waters

Waters requiring a TMDL

TMDL

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 surface water quality standards after the implementation of technology-based controls and to prioritize and schedule them for the development of a total maximum daily load (TMDL). 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.

NEPONSET RIVER WATERSHED

Massachusetts Category 2 Waters

"Attaining some uses; other uses not assessed"

| Name | Description | Size | Uses Attained |
|------------------------------------|---|-----------|---|
| Boston Harbor: Neponset | | | |
| Pecunit Brook | Headwaters east of Carey Circle and west of Pecunit Street, Canton to the confluence with Neponset River, Canton. | 1.8 miles | -Primary Contact -Secondary Contact -Aesthetics |

Massachusetts Category 3 Waters

"No Uses Assessed"

| Name | Description | Size |
|------------------------------------|---|------------|
| Boston Harbor: Neponset | | |
| Blue Hills Reservoir | Quincy | 12.2 acres |
| Bubbling Brook | Headwaters at small unnamed pond north of Rt. 109 and Dover/Walpole/Westwood town lines to inlet Pettee Pond, Walpole/Westwood border | 1.3 miles |
| Buckmaster Pond | Westwood | 34.3 acres |
| Crackrock Pond | Foxborough | 2.7 acres |
| Flynns Pond | Medfield | 7.5 acres |
| Glen Echo Pond | Canton/Stoughton | 15.8 acres |
| Hammer Shop Pond | Sharon | 2.2 acres |
| Jewells Pond | Medfield | 3.7 acres |
| Lymans Pond | Westwood | 25.1 acres |
| Sprague Pond | Boston/Dedham | 7.4 acres |

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| Steep Hill Brook | Outlet of Pinewood Pond, Stoughton, to the inlet of Bolivar Pond, Canton. | 0.89 miles |
| Tubwreck Brook | 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 | Outlet Willet Pond, Walpole, to inlet Ellis Pond, Norwood. | 0.35 miles |
| Unnamed Tributary | Outlet Turner Pond to confluence with Neponset River, Walpole | 0.38 miles |

**Massachusetts Category 4a Waters
"TMDL is Completed"**

| Name | Description | Size | Pollutants addressed by TMDL |
|------------------------------------|---|------------|--|
| Boston Harbor: Neponset | | | |
| Gulliver Creek | From confluence Unquity Brook to confluence Neponset River, Milton. | 0.02 sq mi | Pathogens |
| Hawes Brook | Outlet of Ellis Pond to confluence with Neponset River, Norwood. | 1.1 miles | Pathogens, taste, odor and color, objectionable deposits |
| Mill Brook | Source north east of Ledgewood Drive, Dover to inlet of Pettee Pond, Westwood | 3.1 miles | Pathogens |
| Ponkapog Brook | Outlet of Ponkapoag Pond to confluence with Neponset River, Canton. | 3.1 miles | Pathogens |

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| Purgatory Brook | Headwaters east of Farm Lane, Westwood to confluence with Neponset River, Norwood. | 5.9 miles | Pathogens |
| School Meadow Brook | Outlet of Ganawatte Farm Pond to confluence with Neponset River, Walpole | 1.9 miles | Pathogens |
| Traphole Brook | Headwaters west of Everett Street, Sharon, to confluence with Neponset River, Sharon/ Norwood | 3.9 miles | Pathogens |
| Unnamed Tributary | Outlet of Massapoag Lake to inlet of Hammer Shop Pond, Sharon. | 0.24 miles | Pathogens |
| Unnamed Tributary | Outlet Pettee Pond Walpole/Westwood to inlet Willet Pond, Walpole/Westwood | 0.02 miles | Pathogens |

**Massachusetts Category 4c Waters
"Impairment not caused by a pollutant"**

| Name | Description | Size | Impairment |
|------------------------------------|--|-------------|-------------------|
| Boston Harbor: Neponset | | | |
| Billings Street/East Street Pond | Sharon | 2.1 acres | Exotic species |
| Clark Pond | Walpole | 6.7 acres | Exotic species |
| Ellis Pond | Norwood | 17.1 acres | Exotic species |
| Farrington Pond | Stoughton | 5.7 acres | Exotic species |
| Massapoag Lake | Sharon | 389 acres | Exotic species |
| Pinewood Pond | Stoughton | 25.2 acres | Exotic species |
| Plantingfield Brook | Headwaters east of Thatcher Street, Westwood, to the confluence with Purgatory Brook, Norwood. | 1.9 miles | Flow alteration |

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| Ponkapoag Pond | Canton | 214 acres | Exotic species |
| Reservoir Pond | Canton | 251 acres | Exotic species |
| Town Pond | Stoughton | 8.1 acres | Exotic species |
| Turner Pond | Walpole | 17.6 acres | Exotic species |
| Woods Pond | Stoughton | 14.1 acres | Exotic species |

**Massachusetts Category 5 Waters
“Waters requiring a TMDL”**

| Name | Description | Size | Pollutants needing TMDL |
|------------------------------------|--|------------|---|
| Boston Harbor: Neponset | | | |
| Beaver Brook | Headwaters just west of Moose Hill Street through Sawmill Pond to confluence with Massapoag Brook, Sharon | 3.8 miles | Cause Unknown -Organic enrichment/Low DO |
| Beaver Meadow Brook | Outlet of Glenn Echo Pond, Stoughton, to the inlet of Bolivar Pond, Canton. | 3.6 miles | Organic enrichment/Low DO, Pathogens |
| Bird Pond | Walpole | 20.4 acres | Priority organics |
| Bolivar Pond | Canton | 19.8 acres | Turbidity Exotic species |
| Cobbs Pond | Walpole | 14.2 acres | Nutrients -Organic enrichment/Low DO -Noxious aquatic plants -Turbidity Exotic species |
| East Branch | East Branch Neponset River - Outlet of Forge Pond through unnamed pond southwest of Forge Pond and East Branch Pond to confluence with Neponset River, Canton. (locally known as Canton River) | 3.2 miles | -Cause Unknown -Metals -Organic enrichment/Low DO -Thermal modifications -Flow alteration -Pathogens |

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| Forge Pond | Canton | 8.0 acres | Turbidity |
| Ganawatte Farm Pond | Walpole/Sharon/Foxborough | 29.4 acres | -Organic enrichment/Low DO -Noxious aquatic plants -Turbidity |
| Germany Brook | Headwaters, east of Winter Street, to inlet of Ellis Pond, Norwood | 2.0 miles | -Nutrients -pH -Pathogens -Taste, odor and color -Objectionable deposits |
| Manns Pond | Sharon | 5.7 acres | Turbidity Exotic species |
| Massapoag Brook | Outlet Hammer Shop Pond, Sharon, through Manns Pond, Trowel Shop Pond, and Shephard Pond to the inlet of unnamed pond southwest of Forge Pond, Canton. | 4.2 miles | -Cause Unknown -Nutrients |
| Memorial Pond | Walpole | 8.0 acres | Noxious aquatic plants -Turbidity |
| Mill Brook | From headwaters north of Hartford Street, Medfield to inlet of Jewells Pond, Medfield. | 2.3 miles | Cause Unknown -Flow alteration |
| Mine Brook | Outlet of Jewells Pond, Medfield, to the inlet of Turner Pond, Walpole. | 3.0 miles | Organic enrichment/Low DO Pathogens |
| Mother Brook | Headwaters at the Charles River Diversion, Dedham to confluence with Neponset River, Boston | 3.6 miles | -Organic enrichment/Low DO -Flow alteration -Pathogens -Taste, odor and color -Nutrients |

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| Neponset Reservoir | Foxborough | 311 acres | -Noxious aquatic plants -Turbidity -Exotic species |
| Neponset River | Outlet of Neponset Reservoir, Foxborough to confluence with East Branch, Canton. | 13.3 miles | -Priority organics -Metals -Nutrients -Siltation -Organic enrichment/Low DO -Pathogens -Suspended solids -Noxious aquatic plants -Turbidity |
| Neponset River | Confluence with East Branch, Canton to confluence with Mother Brook, Boston | 8.4 miles | -Priority organics -Metals -Organic enrichment/Low DO -Pathogens -Oil and grease -Turbidity -Objectionable deposits |
| Neponset River | Confluence with Mother Brook, Boston to Milton Lower Falls Dam, Milton/Boston | 3.7 miles | -Priority organics -Metals -Organic enrichment/Low DO -Pathogens -Oil and grease -Objectionable deposits |
| Neponset River | Milton Lower Falls Dam, Milton/Boston to mouth at Dorchester Bay, Boston/Quincy. | 0.66 sq mi | -Priority organics -Organic enrichment/Low DO -Pathogens -Turbidity -Objectionable deposits |

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| Pequid Brook | Headwaters east of York Street through Reservoir Pond to the inlet of Forge Pond, Canton. | 4.1 miles | -Organic enrichment/Low DO -Pathogens |
| Pine Tree Brook | Outlet of Hillside Pond through Pope's Pond to confluence Neponset River, Milton | 4.6 miles | -Organic enrichment/Low DO -Other habitat alterations -Pathogens |
| Popes Pond | Milton | 6.0 acres | Noxious aquatic plants -Turbidity |
| Russell Pond | Milton | 8.9 acres | -Noxious aquatic plants -Turbidity -Exotic species |
| Turners Pond | Milton | 10.5 acres | -Nutrients -Organic enrichment/Low DO -Turbidity |
| Unnamed Tributary | From the outlet of Town Pond to the confluence with Steep Hill Brook, Stoughton | 1.0 miles | -Cause Unknown -Nutrients -pH |
| Unnamed Tributary | Locally Known as "Meadow Brook" - From where the underground/culverted stream emerges east of Pleasant Street, Norwood to confluence with Neponset River, Norwood. | 0.66 miles | -Nutrients -Pathogens -Taste, odor and color |
| Unquity Brook | Isolated (urban): Headwaters east of Sias Lane/west of 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) | 1.7 miles | -Nutrients -pH -Siltation -Organic enrichment/Low DO -Flow alteration -Other habitat alterations -Pathogens -Objectionable deposits |

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| Willet Pond | Walpole/Westwood/Norwood | 206 acres | -Metals |
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MYSTIC RIVER WATERSHED

Massachusetts Category 3 Waters "No Uses Assessed"

| Name | Description | Size |
|------------------------------|-------------|-----------|
| Boston Harbor: Mystic | | |
| Bellevue Pond | Medford | 2.1 acres |
| Hills Pond | Arlington | 2.2 acres |

Massachusetts Category 5 Waters "Waters requiring a TMDL"

| Name | Description | Size | Pollutants needing TMDL |
|----------------------------------|--|-----------|--|
| Boston Harbor: Mystic | | | |
| Aberjona River | Source just south of Birch Meadow Drive, Reading to inlet Upper Mystic Lake at Mystic Valley Parkway, Winchester | 9.2 miles | -Cause Unknown -Unionized Ammonia -Nutrients -Organic enrichment/Low DO -Other habitat alterations -Pathogens |

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| Alewife Brook | Outlet of Little Pond, Belmont to confluence with Mystic River, Arlington/Somerville | 2.3 miles | -Metals -Nutrients -Organic enrichment/Low DO -Pathogens -Oil and grease -Taste, odor and color -Objectionable deposits |
| Blacks Nook | Cambridge | 2.2 acres | -Nutrients -Noxious aquatic plants |
| Chelsea River | Confluence with Mill Creek, Chelsea/Revere to confluence with Mystic River, Chelsea/East Boston/Charlestown | 0.39 sq mi | -Priority organics -Unionized Ammonia -Organic enrichment/Low DO -Pathogens -Oil and grease -Taste, odor and color -Turbidity -Objectionable deposits |
| Clay Pit Pond | Belmont | 11.9 acres | -Pesticides |
| Ell Pond | Melrose | 23.3 acres | -Nutrients -Pathogens -Suspended solids |
| Horn Pond | Woburn | 108 acres | -Nutrients -Organic enrichment/Low DO -Noxious aquatic plants |
| Judkins Pond | Winchester | 2.8 acres | -Nutrients -Organic enrichment/Low DO -Pathogens |

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| Lower Mystic Lake | Arlington | 92.8 acres | -Cause Unknown -Organic enrichment/Low DO -Salinity/TDS/chlorides |
| Malden River | Headwaters south of Exchange Street, Malden to confluence with Mystic River, Everett/Medford | 2.5 miles | -Organic enrichment/Low DO -Pathogens -Oil and grease -Taste, odor and color -Suspended solids -Objectionable deposits |
| Mill Brook | Outlet of Arlington Reservoir to inlet of Lower Mystic Lake, Arlington (portions culverted underground). | 2.8 miles | -Other habitat alterations -Pathogens |
| Mill Pond | Winchester | 2.0 acres | -Organic enrichment/Low DO -Pathogens |
| Mystic River | Outlet Lower Mystic Lake, Arlington/ Medford to Amelia Earhart Dam, Somerville/Everett. | 5.0 miles | -Metals -Nutrients -Pathogens |
| Mystic River | Amelia Earhart Dam, Somerville/Everett to confluence with Chelsea River, Chelsea/Charlestown/ East Boston (Includes Island End River). | 0.50 sq mi | -Priority organics -Metals -Unionized Ammonia -Other inorganics -Organic enrichment/Low DO -Pathogens -Oil and grease -Taste, odor and color |

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| Spy Pond | Arlington | 98.4 acres | -Nutrients -Organic enrichment/Low DO -Noxious aquatic plants -Exotic species |
| Wedge Pond | Winchester | 22.9 acres | -Nutrients -Noxious aquatic plants |
| Winter Pond | Winchester | 15.1 acres | -Cause Unknown -Nutrients -Noxious aquatic plants -Turbidity |

TAUNTON RIVER WATERSHED

The Salisbury Plain River (a headwater tributary to the main stem of the Taunton River) is listed as a Category 5 Water: “Waters requiring a TMDL.” The pollutants listed as needing TMDLs in the Salisbury Plain River are: siltation, other habitat alterations, pathogens, and suspended solids. For photographs of the suspended solids in the Salisbury Plain River below the Brockton Wastewater Treatment Plant, see photographs below.