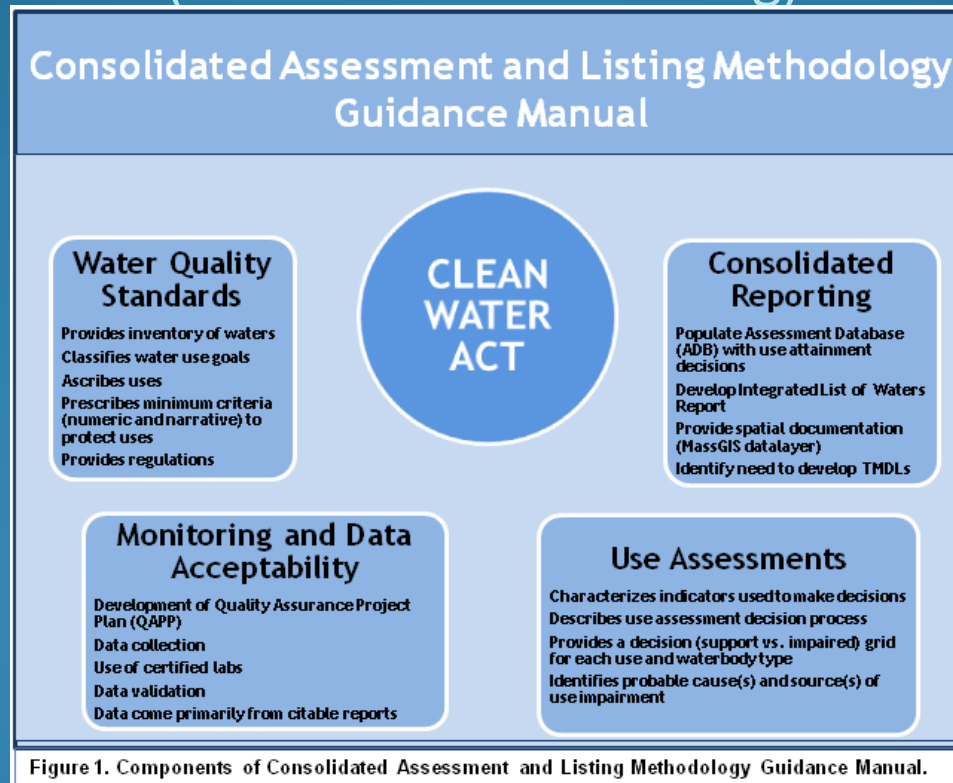


Assessment

Consolidated (305(b)/303(d)) Reporting

Integrated Report

(Assessment and Listing)



Massachusetts Water Quality Standards

Water Quality Standards

Provides inventory of waters
Classifies water use goals
Ascribes uses
Prescribes minimum criteria (numeric and narrative) to protect uses
Provides regulations

WQS CLASSIFICATION OF SURFACE WATERS

Designated Uses described in the classes:

INLAND WATER CLASSES (Rivers and Lakes)

CLASS A - public water supply and their tributaries, excellent habitat for fish, other aquatic life and wildlife, primary and secondary contact recreation, even if not allowed, excellent aesthetic value, protected as Outstanding Resource Waters.

CLASS B - habitat for fish, other aquatic life, and wildlife (Cold and Warm), primary and secondary contact recreation. treated water supply, irrigation and other agricultural uses, industrial cooling and process, good aesthetic value.

CLASS C - habitat for fish, other aquatic life and wildlife, secondary contact recreation, irrigation of crops used for consumption after cooking, industrial cooling and process, good aesthetic value.

COASTAL AND MARINE CLASSES (Estuaries)

CLASS SA - excellent habitat for fish, other aquatic life and wildlife, primary and secondary contact recreation, sea grass, shellfish harvesting without depuration (Approved and Conditionally Approved Shellfish Areas), excellent aesthetic value.

CLASS SB - habitat for fish, other aquatic life and wildlife, primary and secondary contact recreation, seagrass, shellfish harvesting with depuration (Restricted and Conditionally Restricted Shellfish Areas), good aesthetic value.

CLASS SC - habitat for fish, other aquatic life and wildlife, secondary contact recreation. certain industrial cooling and process, good aesthetic value.

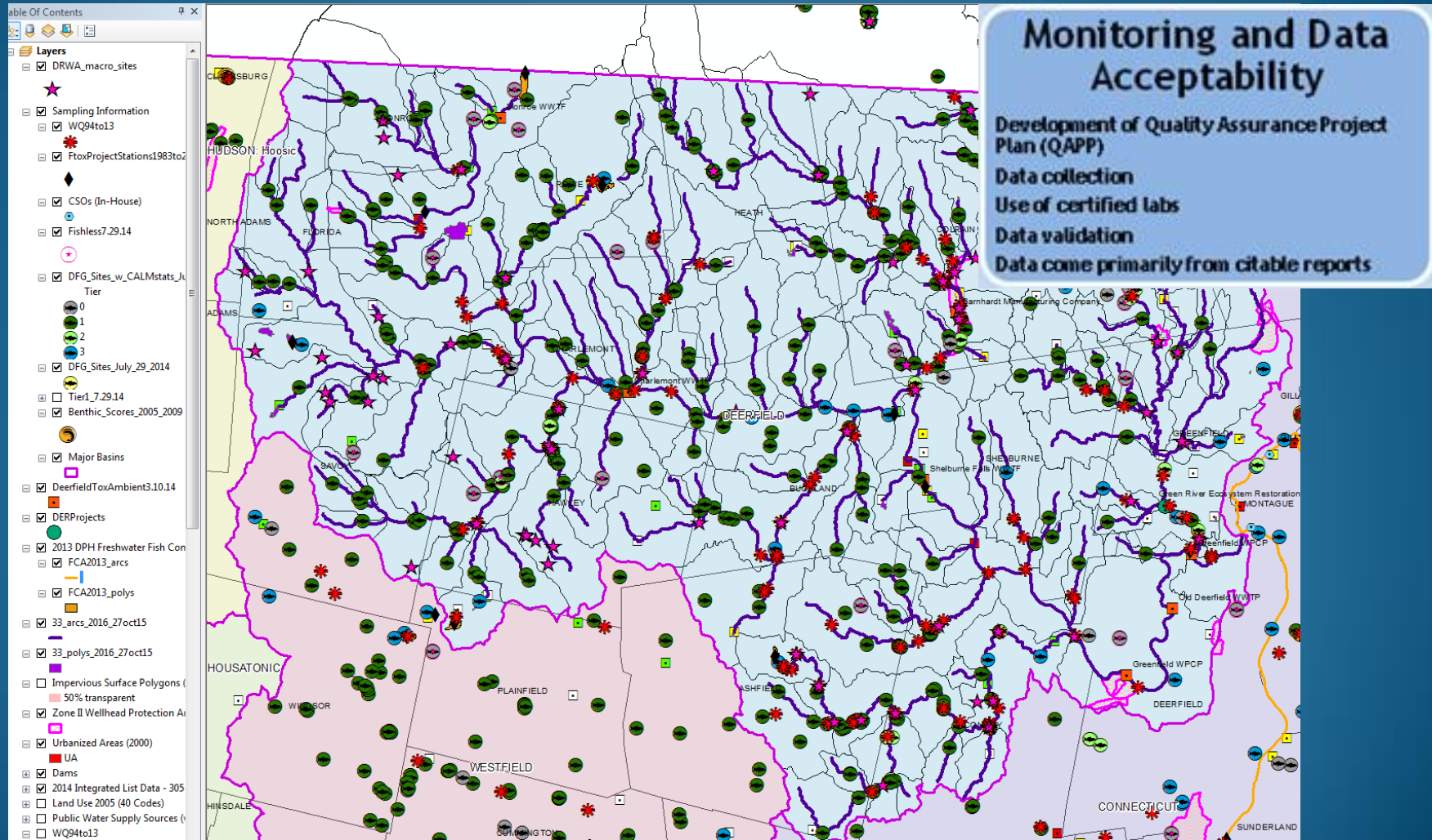
MA WQS – Classify waters, designate uses and define criteria



- Aquatic Life
- Fish Consumption
- Public Water Supply (acknowledged as use but not assessed) refer to Drinking Water Program/public water suppliers for info)
- Shellfish Harvesting
- Primary Contact Recreational (e.g., swimming)
- Secondary Contact Recreational (e.g., boating)
- Aesthetics
- Agricultural (presumed support)
- Industrial (presumed support)

We report on these uses as three waterbody types – rivers, lakes, estuaries

Biological, Water Quality and other Monitoring Data

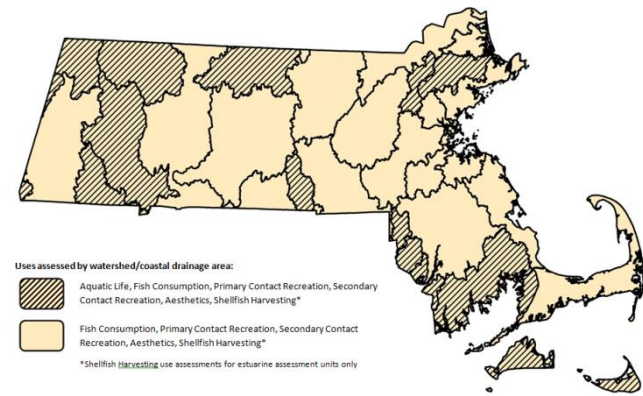


Massachusetts Consolidated Assessment and Listing Methodology (CALM) Guidance Manual

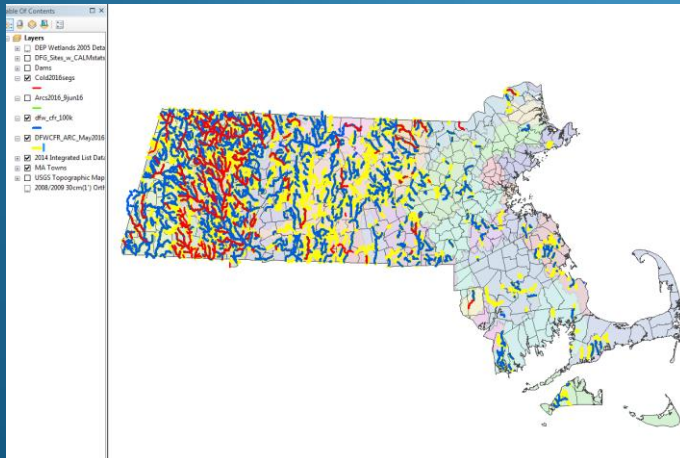
Use Assessments

Characterizes indicators used to make decisions
 Describes use assessment decision process
 Provides a decision (support vs. impaired) grid for each use and waterbody type
 Identifies probable cause(s) and source(s) of use impairment

Integrated Report 2016 cycle DRAFT



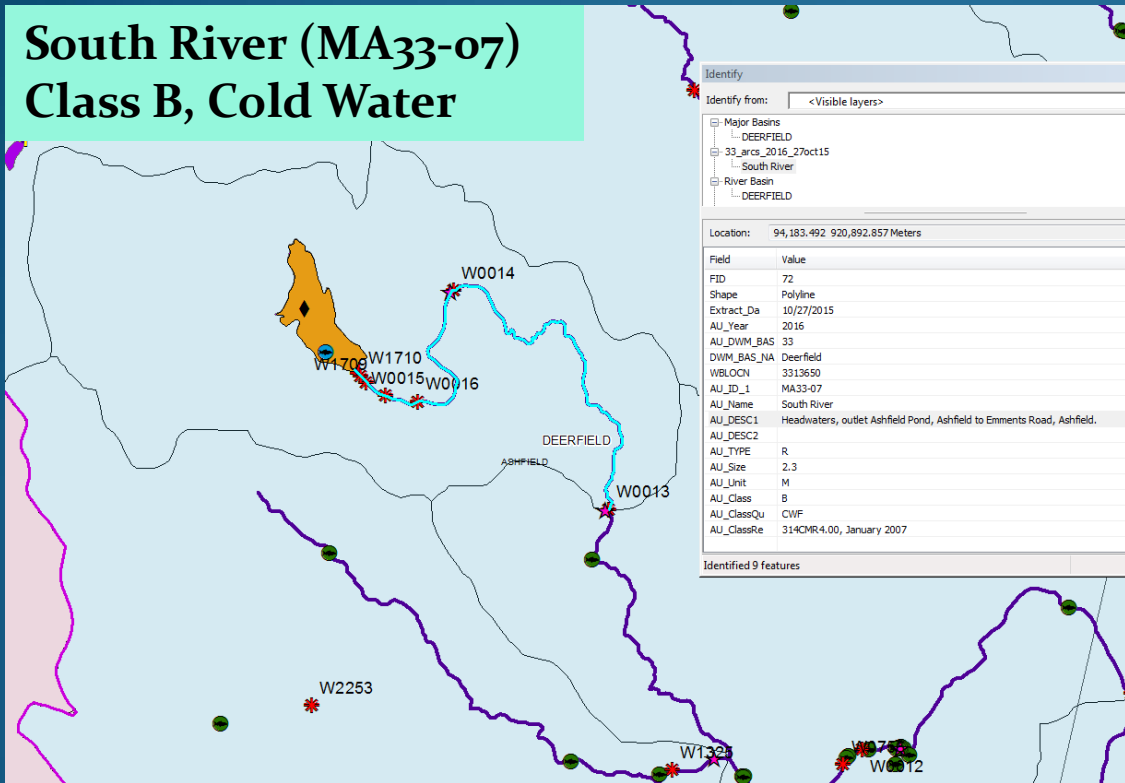
Include all Designated Cold Waters



Reporting Cycle	2014	2016
Total AUs	2182	2471
Rivers	733	1024
Lakes	1173	1157
Estuaries	276	290

Use Assessment Example

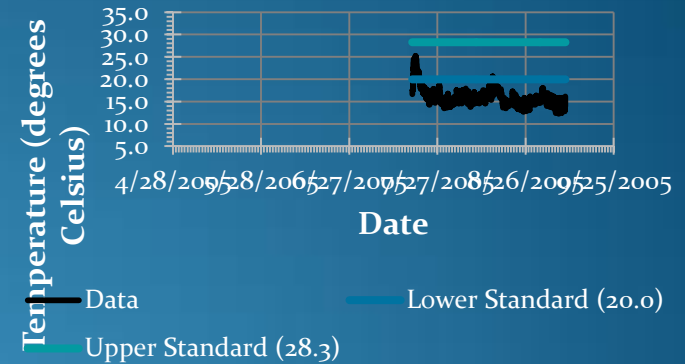
South River (MA33-07) Class B, Cold Water



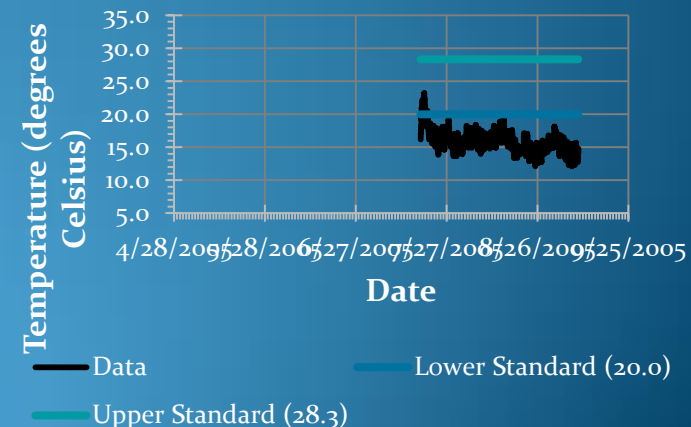
Fish, other Aquatic Life and Wildlife (Non Support)

Aquatic Life Use impaired based on violations of the acute 24-hour maximum average temperature criteria of 23.5°C (Tier I CWF temperature criteria) with (Violation of 24.2°C observed in July, 2005 which appeared to correlate with a storm event).

W0014



W0013



Consolidated Reporting Assessment and Listing



Consolidated Reporting

Populate Assessment Database (ADB) with use attainment decisions

Develop Integrated List of Waters Report

Provide spatial documentation (MassGIS datalayer)

Identify need to develop TMDLs

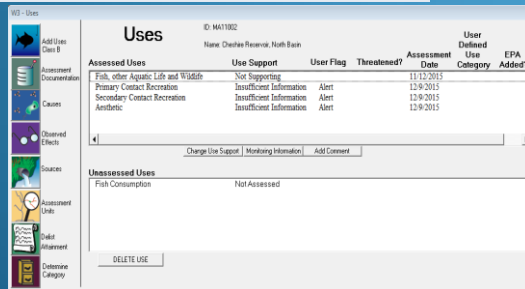
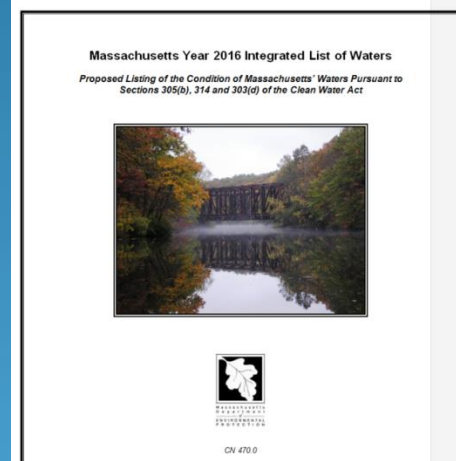
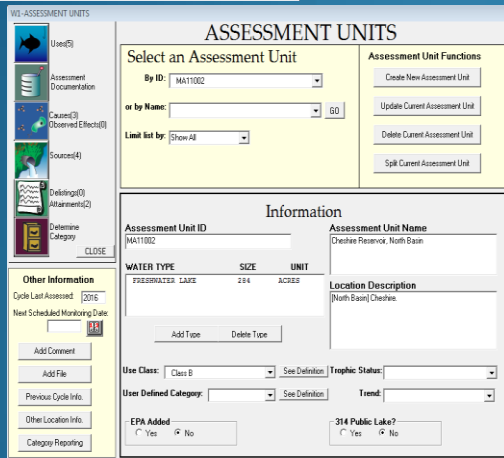


Table 4. Brief description of the five list categories of assessed waters used by MassDEP for the Integrated List of Waters.

The Integrated List of Waters -- categories of assessed waters	
Category 1	Support and not threatened for all designated uses
Category 2	Support for some uses and not assessed for others
Category 3	Insufficient information to make assessments for any uses
Category 4	Impaired for one or more uses, but not requiring the calculation of a Total Maximum Daily Load (TMDL); (impairment due to "pollution" such as low flow, habitat alterations or non-native species infestations).
Category 5	Impaired for one or more uses and requiring a TMDL (impairment due to pollutant(s) such as nutrients, metals, pesticides, solids and pathogens). This constitutes the 303(d) List.

Spatial Documentation: Integrated Report GIS datalayers and dataviewer

MassGIS Data - MassDEP 2014 Integrated List of Waters (305(b)/303(d))

May 2016

Download this layer:

- Shapefiles and DBF tables (9 MB)
- ArcGIS 10 File Geodatabase (6 MB)

Each download includes an ArcMap 10 layer (LYR) file and Excel spreadsheets.

View the data online at <http://www.mass.gov/eea/agencies/massdep/water/watersheds/integrated-list-of-waters.html>

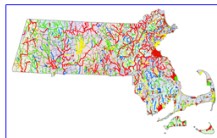
Overview

The MassDEP Division of Watershed Management (DWM), Watershed Planning Program (WPP) 2014 Integrated List of Waters (305(b)/303(d)) data layer represents the combined reporting elements for the 2014 cycle of both sections 305(b) and 303(d) of the Federal 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 waters 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 the Massachusetts Surface Water Quality Standards. These uses include aquatic life, fish consumption, drinking water, shellfish harvesting, primary (e.g., swimming) and secondary (e.g., boating) contact-recreation, and aesthetics. The 305(b) process entails assessing each of these uses, where applicable, for rivers, lakes and coastal waters. Where possible, causes and sources of use impairment are also identified. Once a water body is identified as impaired by a pollutant, MassDEP is required under Section 303(d) of the CWA, and the implementing regulations at 40 CFR 130.7, to develop a pollutant budget designed to restore the health of the impaired water body. The process of developing this pollutant budget, generally referred to as a Total Maximum Daily Load (TMDL), includes identifying the cause (type of pollutant) and source (where the pollutant comes from), determining how much of the pollutant is from direct discharges (point sources) or indirect discharges (non-point sources), determining the maximum amount of the pollutant that can be discharged to a specific water body to meet water quality standards, and developing a plan to meet that goal. In short a TMDL is a clean-up plan that is required under the CWA to restore water quality and enable waters to attain designated uses.

In November 2001 EPA released guidance to the states for the preparation of an optional report that would combine reporting elements of both sections 305(b) and 303(d) of the CWA. This combined report format, the Integrated List of Waters report, allows states to provide the status of all their assessed waters in a single, multi-part list. States list each waterbody or segment thereof in one of the following five categories:

Category 1) Unimpaired and not threatened for all designated uses;



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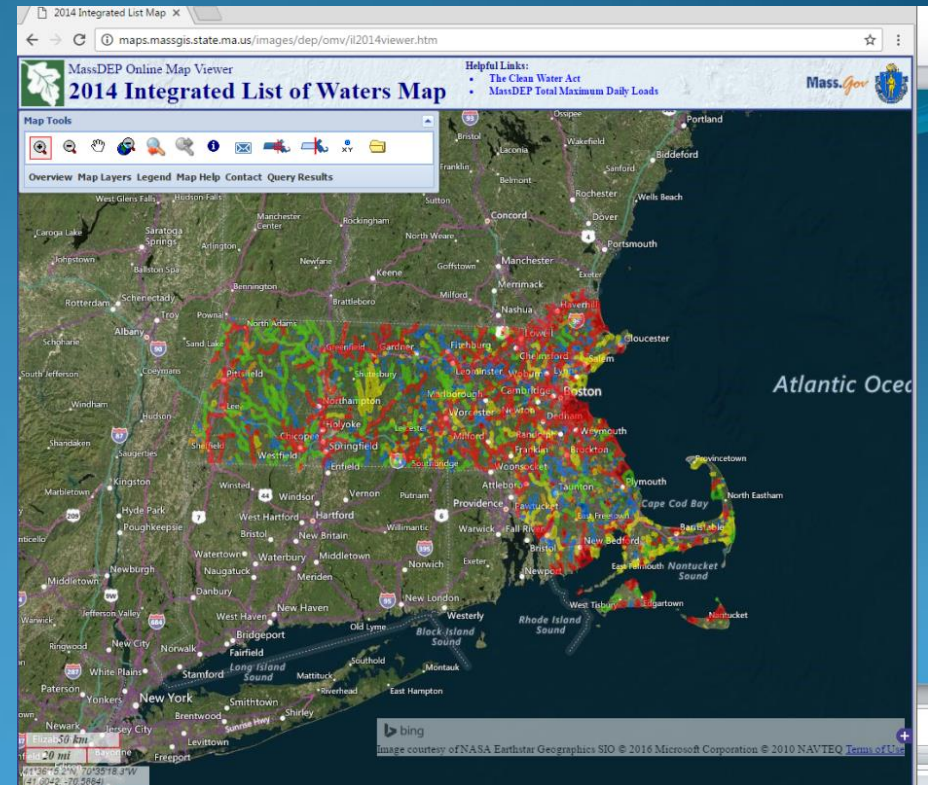
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Quick Dataviewer Demo

<http://maps.massgis.state.ma.us/images/dep/omv/il2014viewer.htm>

Visioning for Improved Assessments

- Increase use of external data via NEW WPP data submittal portal
- Improve data accessibility
 - EQuIS dataflow to EPA Water Quality Exchange (WQX),
 - Water Quality Exchange Grants (e.g., NHD baselayer for GIS products; interactive data viewer)
- Where possible, continued automation/streamlining of data flows and tool development to support assessment decision-making
- Implementation of EPA's new ATTAINS database for 2018 and beyond.
- Improved ability to evaluate/understand effectiveness measures (permits, grants, etc.)
- Continue to enhance dataflows to improve the geographic coverage and water quality reporting (e.g., emerging contaminants, aquatic invasive species, chloride, pathogens, continuous data etc.) including communicating with extern groups on DEP's data needs.

REFERENCES and LINKS

1. Mass Water Quality Standards:
<http://www.mass.gov/eea/agencies/massdep/water/regulations/314-cmr-4-00-mass-surface-water-quality-standards.html>
2. External Data Submittal Portal:
<http://www.mass.gov/eea/agencies/massdep/water/watersheds/external-data-submittals-for-the-wpp.html>
3. CALM Guidance Manuals:
<http://www.mass.gov/eea/agencies/massdep/water/watersheds/water-quality-assessments.html#3>
4. Integrated List of Waters:
<http://www.mass.gov/eea/agencies/massdep/water/watersheds/total-maximum-daily-loads-tmdls.html#2>
5. Integrated List of Waters GIS datalayers: <http://www.mass.gov/anf/research-and-tech/it-serv-and-support/application-serv/office-of-geographic-information-massgis/datalayers/wbs2014.html>
6. Integrated List of Waters dataviewer:
<http://www.mass.gov/eea/agencies/massdep/water/watersheds/integrated-list-of-waters.html>
7. Older Water Quality Assessment Reports:
<http://www.mass.gov/eea/agencies/massdep/water/watersheds/water-quality-assessments.html#3>