

Assessing harm to ecosystems from oil spills: A new approach

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Natural Resources Held in Trust for the Public by the Commonwealth

Resources include:

Biota (fish and wildlife)
Surface Water
Groundwater
Air
Soils and Sediment

Services provided by Natural Resources include:

Fishing, hunting and shellfishing
Habitat for wildlife
Recreation
Spiritual or cultural use
Water supply





Example of Trust Resources: Sea Lamprey, Surface Water, Sediment

Photo courtesy of Robin MacEwan, Stantec

When oil spills or releases of hazardous materials, cleanup and assessment occur

Cleanup

Determine nature and extent of contamination

Evaluate, select and take actions to eliminate or reduce risks to human health and the environment

Damages Assessment

Determine type and extent of injuries to natural resources

Evaluate, select and take actions to restore natural resources that compensates the public for injuries

Example of Natural Resource Injury and Restoration: Bouchard B-120 Oil Spill

Oiled shoreline impacting intertidal habitat and public use

Shoreline land acquisition, trails, and equipment for public use



Natural Resource Damages Authority and Trustees

<u>Massachusetts General Laws:</u>	<u>Federal Laws:</u>
<ul style="list-style-type: none">• Chapter 21E, sections 5A and 11A• Chapter 21A section 2A	<ul style="list-style-type: none">• Superfund (CERCLA)• Oil Pollution Act of 1990
<u>State Trustee:</u>	<u>Federal Trustees:</u>
<ul style="list-style-type: none">• Secretary of Energy and Environmental Affairs• MassDEP delegated authority to administer NRD Program	<ul style="list-style-type: none">• National Oceanic and Atmospheric Administration• U.S. Fish and Wildlife Service• Federally recognized Tribes



Over \$76 million in Natural Resource Damages settlements in Massachusetts

New Bedford Harbor \$20 M

GE/Housatonic \$15 M

Fireworks (Tronox) \$6.8 M

Bouchard B-120 \$19.3 M

IndustriPlex \$4.3 M

Nyanza \$3.1 M

Sutton Brook Disposal Area

\$1.65 M

Textron/MMR \$1.3 M

Charles George \$1.2 M

Blackburn & Union \$1 M

Rubchinuk \$747,000

Holyoke Coal Tar \$500,000

Global/Irving \$312,500

Island End \$300,000

Reed & Barton \$236,447

Framingham GM \$157,425

PSC Palmer \$157,000

Posavina \$155,000

JP Noonan \$55,100

Colrain Acid Spill \$30,000

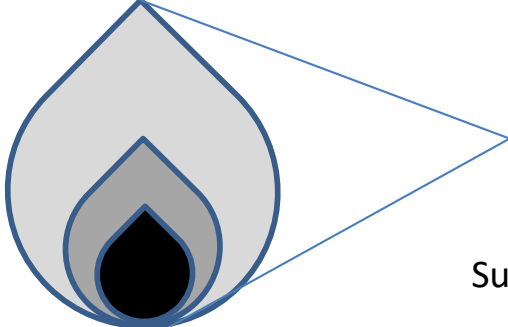
Hallmark/Mystic \$26,801



Small to Medium Volume Oil
Releases to Surface Waters
2009-2017

Oil or Oil/Hazardous
Materials Releases
(Temporary or
Permanent Solution
Statements)

6,476



Oil or Oil/Hazardous Material to
Surface Water releases

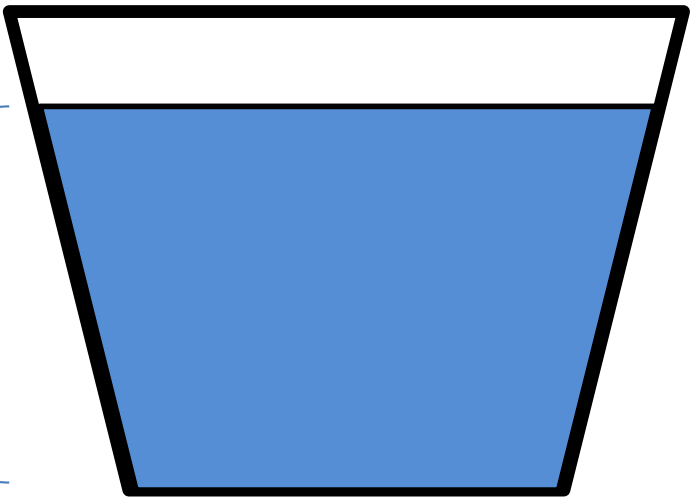
693

Oil or Oil/Hazardous Material to
Surface Water releases 10 to 10,000
gallons

517

All Releases of Oil or
Oil/Hazardous
Materials

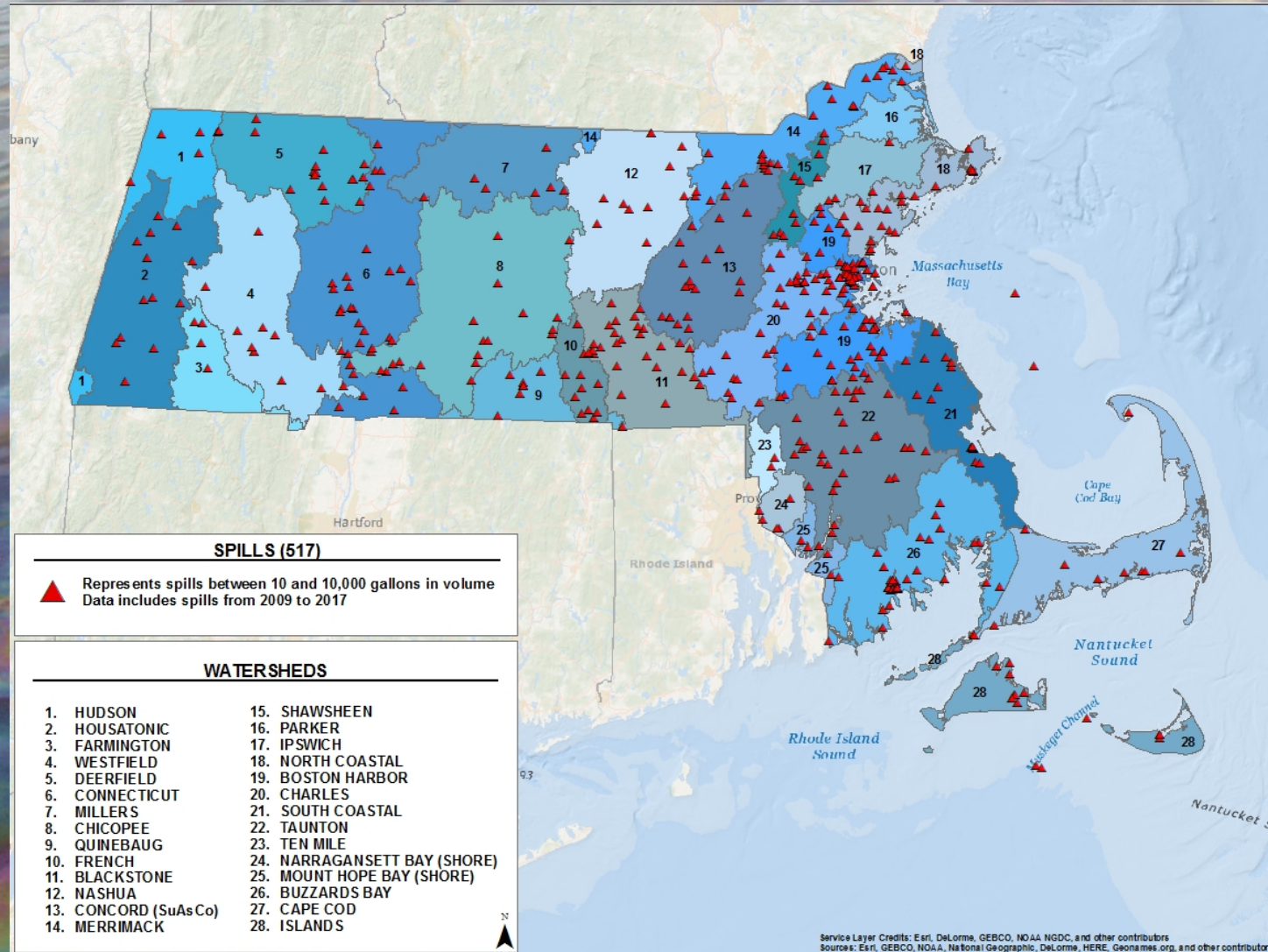
8,193



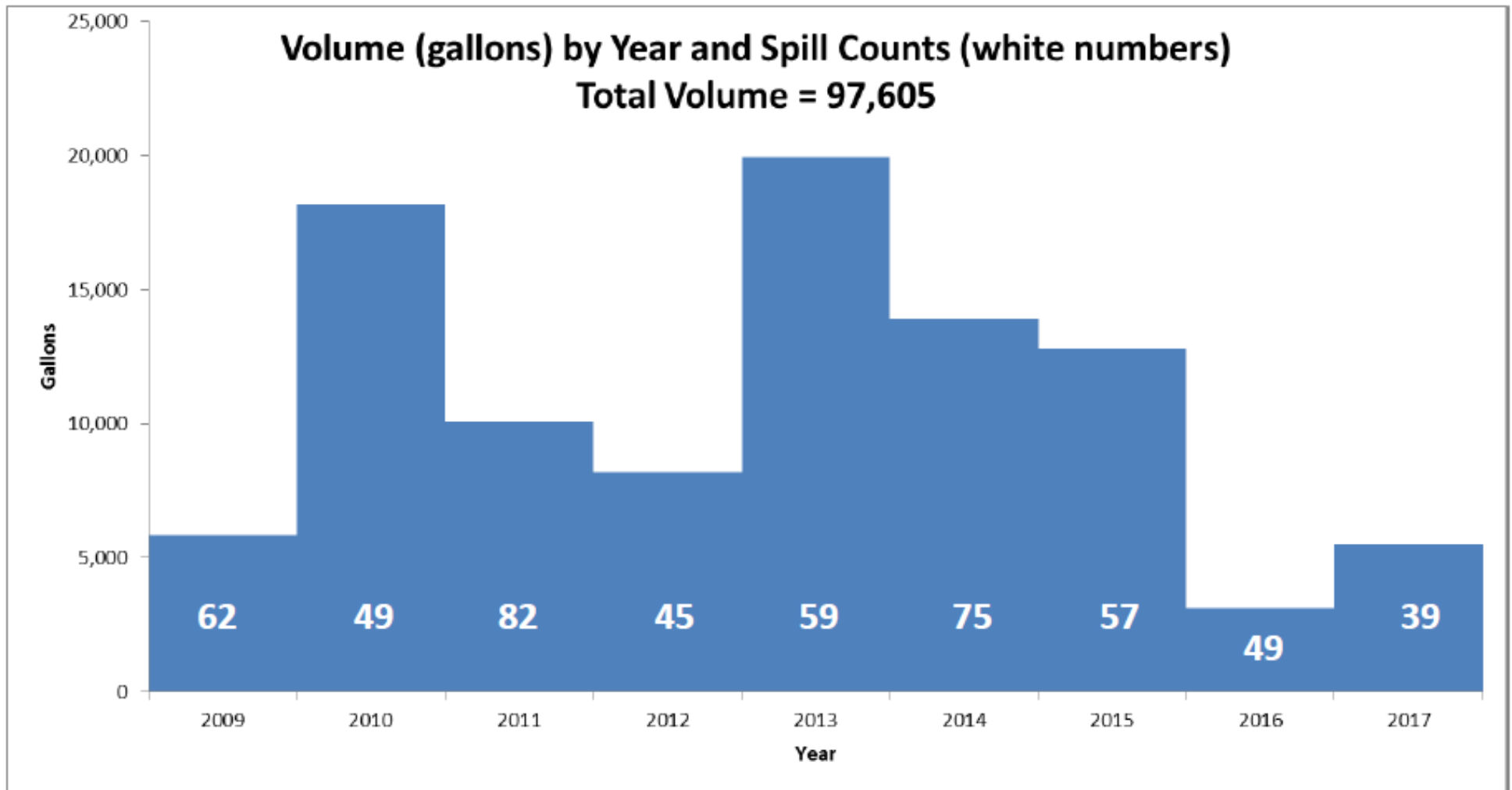
All Releases
1/1/2009 -12/31/2017

11,572

Oil Spills to Massachusetts Surface Waters



Standard Method for Small to Medium Volume Oil Spills

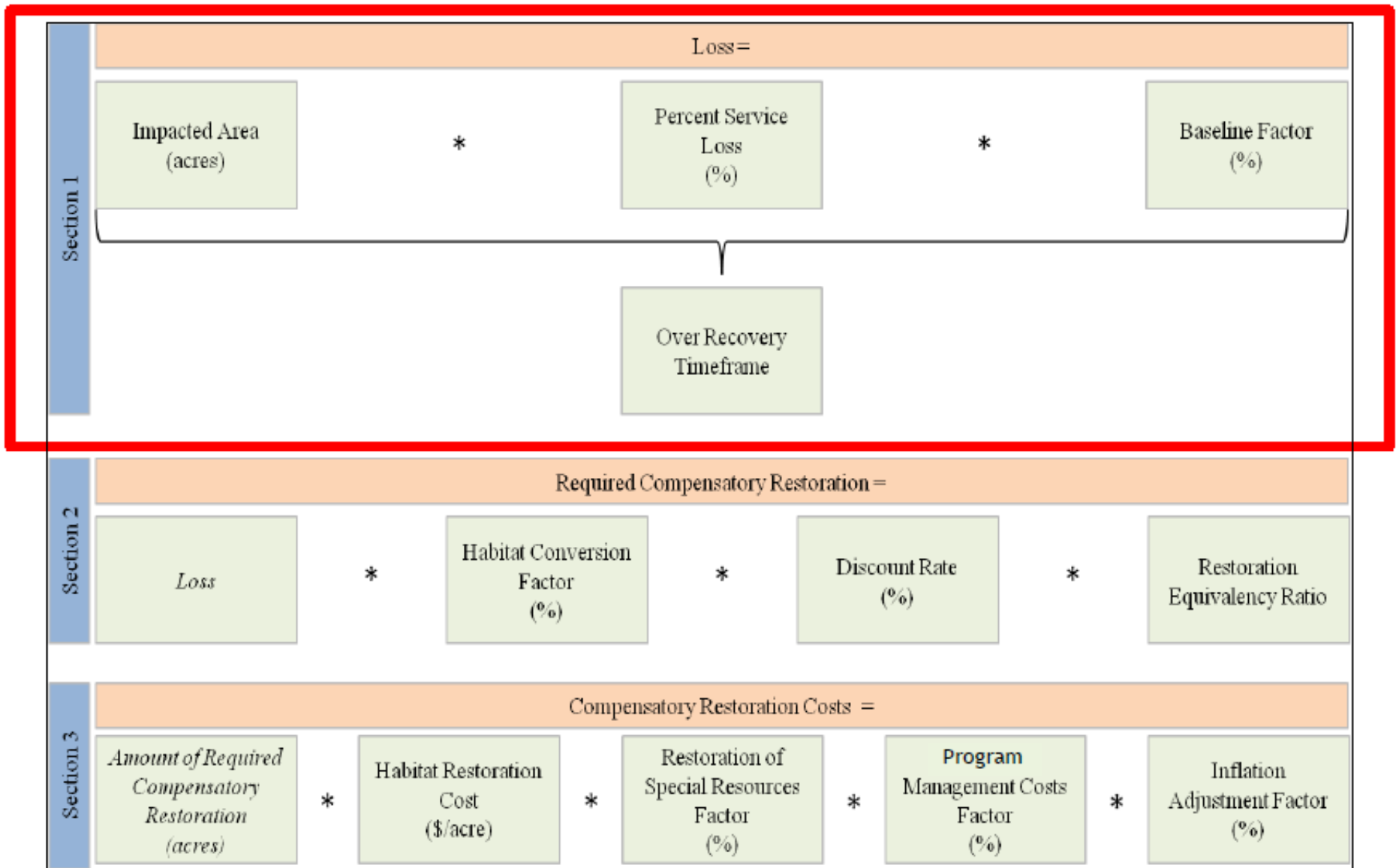


Standard Method for Small to Medium Volume Oil Spills

Goals

- Develop a standard approach for assessing damages from small to medium volume oil spills in Massachusetts (>10 to <10,000 gallons).
 - Increase efficiency and cost effectiveness of assessments.
 - Expedite restoration implementation.
 - Ensure citizens are compensated for damages.

Conceptual Model



Restoration Process

Pooling Recovered Funds

- By watershed or subwatershed
- In Environmental Justice areas, use funds to improve baseline conditions

Implementing Restoration

- 21E does not require a restoration plan
 - Public informational meetings
 - Interagency Consultation
 - MassDEP Grant process to solicit projects
 - Trustee must approve funding awards

Potential Restoration Types

Wetland restoration

Streambank restoration

Culvert replacement

Dam removal

Fish and wildlife habitat enhancement

Fish or shellfish restoration

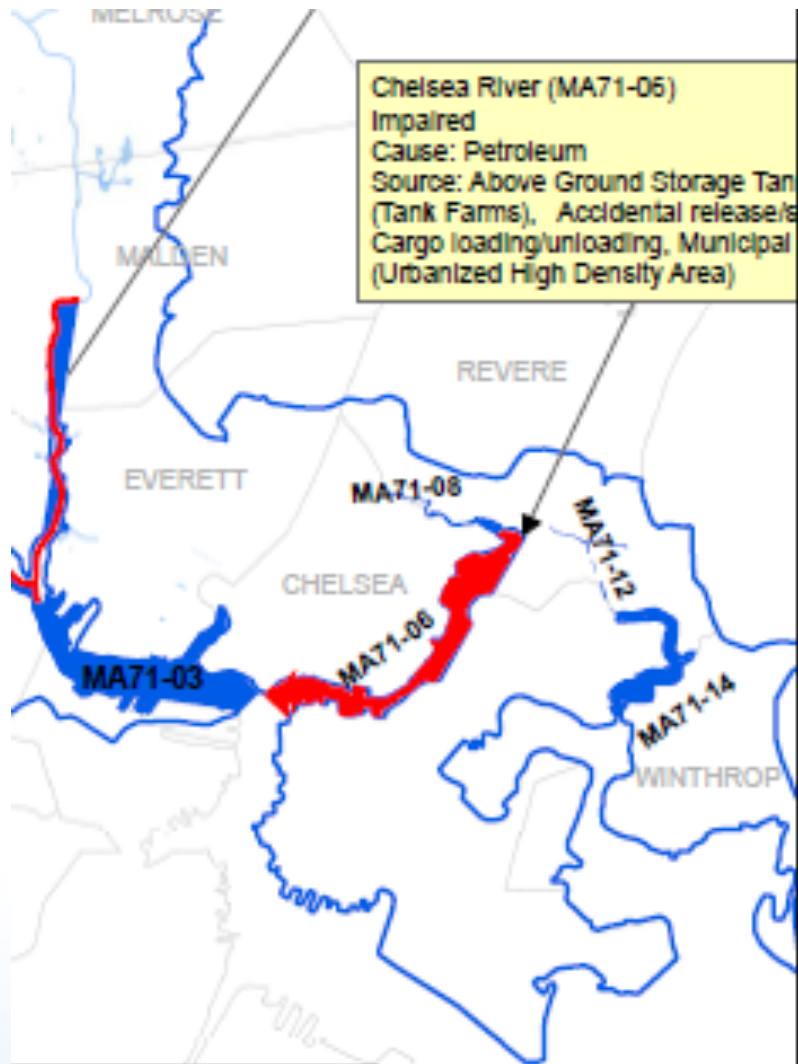
Water quality improvements

Invasive species control

- Upper Mystic Oil Spill 2014 NRD Standard Method settlement: \$55,100
 - Town of Arlington: Water Quality and Riparian Habitat Improvement



NRD Baseline: Database Project



Injury Assessment:
condition or conditions that would have existed ...had the discharge or release...not occurred

Restoration:
actions undertaken to return an injured resource to its baseline condition

NRD Baseline: Database Project

- Environmental conditions in urban waterways is collected by or submitted to MassDEP
- Available to the public...but often located in data “silos” and in formats not readily accessible (e.g. PDF) for analysis
- Pilot Project using the Chelsea Creek subwatershed of the Mystic River watershed as the focus area
- Data will be compiled in a format compatible with the Environmental Information and Public Access System (EIPAS)

