

Annual Report FY2014

# Natural Resource Damages Program



*State Endangered yellow lampmussel documented in the Connecticut River. Photo by Steve Johnson, Ph.D. New England Environmental, Inc.*



Commonwealth of Massachusetts  
Executive Office of Energy & Environmental Affairs  
Department of Environmental Protection



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# Program Overview

## Restoring the Commonwealth's Natural Resources Injured by Oil Spills or Releases of Hazardous Substances and Materials

The Commonwealth of Massachusetts protects and manages natural resources such as fish, shellfish, wildlife, rare species and groundwater, rivers, lakes, ponds, and wetlands.

When an oil spill or release of hazardous substances or materials occurs, federal, state and tribal governments are authorized to act on behalf of the public as Trustees of these natural resources under several laws, including, but not limited to:

- The Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA), as amended, commonly known as Superfund (42 United States Code (U.S.C.) § 9601 et seq.)
- The Clean Water Act (CWA) (33 U.S.C. §1251 et seq.)
- The Oil Pollution Act of 1990 (33 U.S. Code 2701-2761 et seq.)
- The Massachusetts Oil and Hazardous Material Release Prevention and Response Act (Massachusetts General Laws (M.G.L.) Chapter 21E)

Trustees assess injuries to natural resources resulting from spills and releases, bring claims against responsible parties for monetary damages to compensate the public for these injuries, and plan and implement projects to restore, replace, or acquire the equivalent of natural resources and the services that they provide to the environment and to the public. This process is known as Natural Resource Damages (NRD) Assessment and Restoration. The Secretary of Energy and Environmental Affairs (EEA) serves as the Commonwealth's Natural Resource Trustee. Within EEA, the Massachusetts Department of Environmental Protection (MassDEP) administers the NRD Program.

Through successful implementation of the NRD program, the Commonwealth enhances its protection and management of a vast array of natural resources. Restoration directly benefits the Commonwealth's wildlife and habitat as well as its citizens who rely on these resources for their health, livelihood and recreation.

From 1992 through 2014, the Commonwealth, working in cooperation with federal Trustees, successfully negotiated 20 NRD settlements with parties responsible for the injuries to natural resources that occurred as the result of releases of oil and hazardous substances or materials to the environment. The settlements, totaling more than \$63 million, have funded, or will fund, projects to restore habitats, species, and the public's access to and use of natural resources. Highlights of restoration projects completed or underway are featured in this report and the settlement map is displayed on page 15.



*On behalf of MassDEP, Karen Pelto accepts the Group Award for Restoration from Steve Glomb of the U.S. Department of the Interior, presented at the biennial Natural Resource Damages Assessment and Restoration National Workshop. Photo by Molly Sperduto, USFWS*

## Trustee Councils

The Secretary of Energy and Environmental Affairs is the Commonwealth's Natural Resource Trustee, authorized to act on behalf of the public to assess and recover natural resource damages and to plan and implement actions to restore, rehabilitate, replace, or acquire the equivalent of the affected natural resources injured as a result of a release of oil or hazardous substances and materials.

Often EEA works with federal Trustees when they have joint Trusteeship over natural resources. Either during the assessment phase prior to settling a natural resource damages claim or during the restoration phase following settlement of a claim, a Trustee Council may be established. The participating Trustees sign a Memorandum of Agreement that facilitates their coordination in conducting assessment and/or restoration activities. They also designate representatives to conduct the Trustee Council's day-to-day work.

During the restoration phase, Trustee Councils create opportunities for public input. In some cases, Trustee Councils prepare Restoration Plans detailing the spill or release impacts to natural resources, restoration project selection criteria, and descriptions of proposed restoration projects, and provide the opportunity for public comment. Public meetings are held during the comment period to further encourage public participation. After consideration of all public comment, a final Restoration Plan with the preferred restoration projects is approved by the Trustees. For cases where a formal Restoration Plan is not prepared, MassDEP holds public meetings prior to a grant-making process to identify and evaluate restoration projects. In either instance, the preferred restoration projects are implemented by various entities (municipalities, non-profit organizations, government agencies, and private contractors) under contracts, cooperative agreements, interagency service agreements, and other administrative mechanisms managed by one or more of the Trustee Council members. These members monitor and oversee project implementation to ensure that restoration goals are met and public benefits are achieved.

MassDEP staff served as members of several active Trustee Councils in FY14. These Councils are listed at right.

## List of Trustee Councils

### MA SUBCOUNCIL OF THE GE/HOUSATONIC TRUSTEE COUNCIL

Karen Pelto, MA Trustee Representative  
Thomas Potter, MA Alternate Trustee Representative  
Jane Rothchild, MA Legal Advisor  
Kenneth Munney, Federal Trustee Representative,  
USFWS

### HOLYOKE COAL TAR TRUSTEE COUNCIL

Brian Harrington, MA Trustee Representative  
Thomas Potter, MA Alternate Trustee Representative  
Jane Rothchild, MA Legal Advisor  
Molly Sperduto, Federal Trustee Representative,  
USFWS  
James Turek, Federal Trustee Representative, NOAA

### NYANZA TRUSTEE COUNCIL

Rosemary Knox, MA Trustee Representative  
Lisa Alexander, MA Alternate Trustee Representative  
Gail McCarthy, MA Legal Advisor  
Molly Sperduto, Federal Trustee Representative,  
USFWS  
Eric Hutchins, Federal Trustee Representative, NOAA  
Karen Pelto, Restoration Coordinator

### NEW BEDFORD HARBOR TRUSTEE COUNCIL

Lisa Alexander, MA Trustee Representative  
Rosemary Knox, MA Alternate Trustee Representative  
Andy Cohen, MA Legal Advisor  
Molly Sperduto, Federal Trustee Representative,  
USFWS  
John Catena, Federal Trustee Representative, NOAA  
Steve Block, Restoration Coordinator

### BOUCHARD B-120 TRUSTEE COUNCIL

Millie Garcia-Serrano, MA Trustee Representative  
Karen Pelto, MA Alternate Trustee Representative  
Chris Ayers, MA Legal Advisor  
Molly Sperduto, Federal Trustee Representative,  
USFWS  
James Turek, Federal Trustee Representative, NOAA

### MMR NATURAL RESOURCES TRUSTEE COUNCIL

Karen Pelto, MA Trustee Representative  
Dawn Stolfi-Stalenhof, MA Legal Advisor  
Millie Garcia-Serrano, MA Technical Advisor  
Len Pinaud, MA Technical Advisor  
Andrew Major, Federal Trustee Representative,  
USFWS  
Jonathan Davis, Federal Trustee Representative,  
US Air Force  
Mary Ellen Maly, Federal Trustee Representative,  
US Army  
Donald Campbell, Federal Trustee Representative, VA

# Program Highlights

## Restoration Achievements: Public Involvement

### Restoration Planning to Identify and Evaluate Projects

Prior to spending settlement funds on restoration, Trustees consult with the public to identify potential restoration projects. Certain settlements require that the Trustees develop and adopt Restoration Plans that are subject to public review and comment.

#### Bouchard B-120 Oil Spill Settlement:

During state fiscal year 2014, the Draft Restoration Plan/Environmental Assessment (RP/EA) for the Bouchard Barge-120 Oil Spill was released for public review. This RP/EA proposed allocating \$4,268,438 to implement projects to restore shoreline and aquatic resources, coastal access and recreational boating, and recreational shellfishing and shellfish in Massachusetts and Rhode Island. The Draft RP/EA proposed more than 20 projects throughout Buzzards Bay in Massachusetts and Rhode Island to restore shoreline and aquatic habitats such as tidal marshes and migratory fish populations; enhance populations of shellfish, including quahog, bay scallop, and oyster, through transplanting and seeding programs in nu-

merous towns in both states; improve trails and other public access opportunities; create a handicapped accessible fishing pier and other opportunities for universal access to the coast; and acquire additional land to increase the Nasketucket Bay State Reservation, and install new and improved public boat ramps.

During project implementation, public workshops and meetings are often held to seek further input on design elements and volunteers are involved in conducting habitat and species surveys and plantings.

### Reclaiming Riverfronts in Environmental Justice Neighborhoods

#### Rubchinuk Landfill Settlement:

##### 5 Ward Pocket Park

Residents of the Point neighborhood in Salem participated in a visioning process to transform an abandoned lot into a safe and inviting “pocket park.” In addition to hosting two community meetings, North Shore Community Development Coalition (CDC) staff went door-to-door to solicit input and conducted “on the street” interviews in order to capture neighborhood ideas and preferences. Meeting community needs while contending with the unique design challenges of an urban site resulted in a flexible space that toddlers, teens, and older residents can use for multiple purposes, including basketball, small children’s play, and community gathering. According to the CDC, brightly colored benches and fencing will energize and enliven the space and a virtually unobstructed view to the site from the street and adjacent buildings will help maintain a safe, fun space for neighborhood residents to enjoy. Low-maintenance plantings will provide visual year-round interest. Stormwater will be managed on site by infiltrating runoff through two planting beds and an onsite dry well.



*A vacant lot in Salem will be transformed into a multi-generational recreational amenity. Image provided by North Shore Community Development Corporation/Michelle Crowley Landscape Architecture*

## Restoring Floodplain Forests

### GE/Housatonic NRD Settlement: Bartholomew's Cobble Floodplain Forest Restoration and Habitat Improvement Project

Volunteers planted nearly 2,000 trees over two weeks in August 2013 to restore 10 acres of floodplain forest along the Housatonic River in Sheffield. A local Boy Scout troop added 20 more trees while earning their forestry badge and learning about the importance of floodplain forests. Almost all of the trees survived the winter; when these trees were monitored the following May, results showed less than 2 % mortality.

Led by The Trustees of Reservations in partnership with Project Native, this project also involves intensive efforts that allow the trees to flourish as the land transitions back to the floodplain forest that once stood in these fields. To prevent beaver damage, protective cages were installed around two hundred of the trees growing closest to the river and cages or tree wrap were placed around approximately 25% of the trees to discourage rodent browsing. All of the plantings are periodically checked and watered during periods of inadequate rainfall. The invasive reed canary grass and other vegetation surrounding the trees is being periodically mowed to enable the trees to grow to a height where they will begin to shade out the field vegetation and create an understory of native forest vegetation.



*Open fields along the Housatonic River in Sheffield were replanted to restore 10 acres of floodplain forest – immediately after planting and during flood conditions the following spring.  
Photo by Julie Richburg, TTOR*



*Volunteers assisted TTOR and PN staff in planting nearly 2,000 trees over two weeks in August 2013. Photo by Rene Wendell, TTOR*

## Restoration Achievements: Project Implementation

### Restoring Fish Passage

#### Holyoke Coal Tar NRD Settlement:

#### Restoring Fish Passage on the Manhan River

Just one month after the fishway at the Manhan River Dam became operational in early May of 2014, migratory fish such as sea lamprey and Atlantic salmon, as well as at least four resident riverine species, were already using it to move upstream to access 11 miles of quality habitat. The Manhan River is a tributary that joins the Connecticut River approximately seven miles upstream of the Holyoke Dam. The Holyoke Coal Tar NRD Trustee Council provided the funds necessary to implement structural modifications to the fishway that were identified in 2010 as construction of the fishway got underway. In addition to NRD settlement funds, this project leveraged other

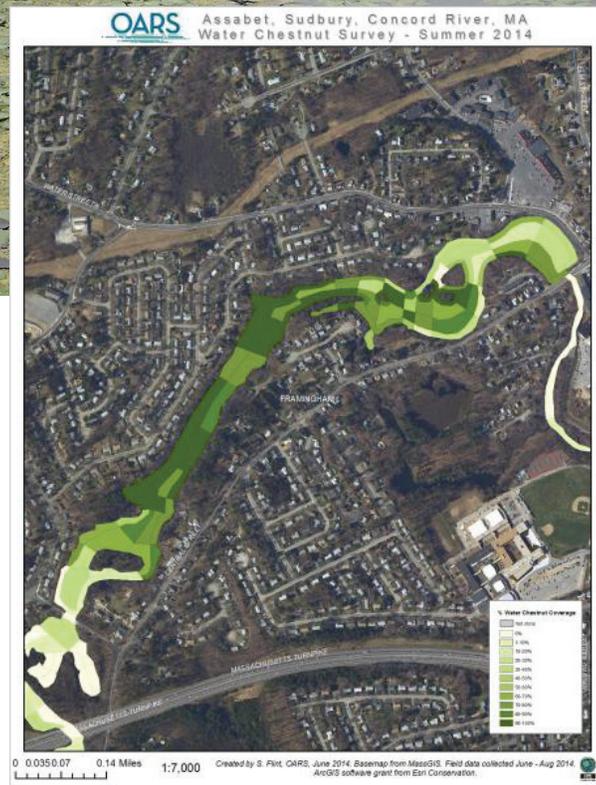
funding sources, including an American Recovery and Reinvestment Act award from the U.S. Fish and Wildlife Service to the City of Easthampton and the U.S. Geological Survey.



*Fishway on the Manhan River in Easthampton was partially constructed with American Recovery and Reinvestment Act and other funds (top) and completed with Holyoke Coal Tar NRD settlement funds. Photos by: Melissa Grader, USFWS (Complete) and James Turek, NOAA (Partial)*



Volunteers led by OARS surveyed over 2,000 acres of river in the SuAsCo watershed and mapped the distribution of invasive water chestnut. Credit: OARS



## Restoring Habitat and Public Access

### Nyanza NRD Settlement: Control of Aquatic Weeds in the Sudbury River Watershed

The Nyanza NRD Trustee Council is supporting a multi-year effort to reduce the dominance of purple loosestrife and water chestnut in the Sudbury River and adjacent waterways and wetlands. The project is coordinated by the Sudbury, Assabet, and Concord Rivers Cooperative Invasive Species Management Area (SuAsCo Cisma), a partnership of over forty organizations that work together to manage and control invasive species throughout the Sudbury, Assabet, and Concord Rivers watershed.

SuAsCo Cisma member MassAudubon mapped the abundance of invasive Purple Loosestrife in 3,284 acres of wetlands along the Sudbury River and monitored sites where Galerucella beetles were previously released by others as a biological control (they feed on the plant's leaves, stems, and buds). The U.S. Fish and Wildlife Service hosted a demonstration beetle-rearing facility at the Assabet River National Wildlife Refuge and six SuAsCo Cisma members

also reared beetles. Approximately 370,000 beetles were released at sites within the watershed with high concentrations of loosestrife.

SuAsCo Cisma member OARS surveyed 2,133 acres of river within the watershed and mapped the distribution of invasive water chestnut. Water chestnut was found in sections of all three rivers; maps showing the extent are located on the SuAsCo Cisma website ([http://cisma-suasco.org/maps/WC\\_survey](http://cisma-suasco.org/maps/WC_survey)). These surveys revealed that water chestnut occurs upstream of current management efforts and the Trustee Council has approved plans to manage this invasive aquatic plant in Framingham.



*State Endangered yellow lampmussel documented in the Connecticut River.  
Photo by Steve Johnson, Ph.D. New England Environmental, Inc.*

## Restoration Achievements: Project Implementation cont.

### Restoring Rare Species

#### Holyoke Coal Tar NRD Settlement: Endangered Mussel Survey

To compensate for impacts to freshwater mussels from the Holyoke coal tar deposits, the Holyoke Coal Tar Trustee Council funded scientific surveys to delineate and monitor freshwater mussels and their associated habitat within selective areas of the Connecticut River mainstem and tributaries. These data will help protect and conserve existing mussel populations under the Massachusetts Endangered Species Act (MESA) (M.G.L c. 131A and regulations 321 CMR 10.00). Current survey data of mussel occurrences and populations is essential because regulatory protection of these populations under MESA only applies to records less than 25 years.

Working under contract to the Massachusetts Division of Fisheries and Wildlife (MassWildlife), New England Environmental, Inc. surveyed sites in the lower section of the Connecticut River while UMAss Boston surveyed sites in the Mill River, Running Gutter Brook, Broad Brook and Fort River tributaries. Highlights include finding yellow lampmussel (MESA Endangered) at seven locations in the lower Connecticut River and probable first documented locations of creeper (MESA Special Concern) in one of the tributaries.

## Restoration Achievements: Project Design & Permitting

### Restoring Habitat and Public Access

#### New Bedford Harbor NRD Settlement: Palmer's Island Sanctuary and Interpretive Trail

To improve habitat conditions and the public's ability to use and enjoy this 5.6-acre island located in New Bedford Harbor just north of the Hurricane Barrier, the City of New Bedford Conservation Commission

completed the surveys, planning, and permitting necessary to manage invasive species in upland and brackish habitat and develop an interpretive, self-guided trail that will educate the public about habitat values and the history of the island.

## Restoration Achievements: Project Monitoring and Oversight

**New Bedford Harbor NRD Settlement: Buzzards Bay Tern Restoration and Stabilization Project**  
 Since 1999, the New Bedford Harbor Trustee Council (NBHTC) has supported efforts by MassWildlife to restore populations of federally- and state-endangered Roseate Terns and state special-concern Common Terns on Ram, Bird and Penikese Islands. MassWildlife staff, seasonal crews, and volunteers have conducted yearly habitat restoration, invasive plant species control, predator control, and stewardship and monitoring activities. Monitoring showed that 2014 had the highest number of Common Terns and the second highest number of Roseate Terns ever recorded nesting in Buzzards Bay. During the period of NBHTC support of the Buzzards Bay Tern Restoration Project, terns have increased approximately 80%, from 5,000 pairs in 1998 to nearly 9,000 today.

**Holyoke Coal Tar NRD Settlement: Bartlett Rod Shop Company Dam Removal**  
 Following removal of the Bartlett Rod Shop Co. Dam on Amethyst Brook in 2012, the Massachusetts Division of Ecological Restoration (MA DER) has led

efforts to observe and document stream channel evolution, stream bank planting success, and overall site restoration. Working with MA DER, researchers from Dartmouth College, UMass Amherst, and USDA Forest Service have completed geomorphic assessments, fish surveys, and surveys of native anadromous sea lamprey nest sites. Their work (described in a draft manuscript submitted for publication in the journal *Geomorphology*) shows that within one year of the dam removal, sea lamprey were constructing redds or nests to spawn in habitat that was either previously inaccessible or unsuitable as the dam limited upstream passage and downstream sediment movement in Amethyst Brook.

### Nyanza NRD Settlement: Neotropical Connections

Each spring, songbirds such as warblers, flycatchers, veeries, and thrushes fill the air along the Sudbury River with melodic sound. Unfortunately, as they nest and feed along the river, they are impacted by mercury contamination from the Nyanza Chemical Waste Dump Superfund Site in Ashland. These birds are not year-round residents, however, and spend their winters in Central and South America. Restoring these neotropical migratory songbirds requires a global perspective. Limitations on habitat and food sources on their wintering grounds can increase their mortality during migration and productivity when they return to Massachusetts to breed. The Nyanza NRD Trustee Council directed a small portion of settlement funds (\$75,000 out of a total of \$3.6 million) to work with the Belize Foundation for Research and Environmental Education to transition lands under intensive cultivation of crops such as pineapple and banana to sustainable agroforestry of cacao and coffee grown in structurally and floristically diverse forest that provides high-quality habitat for neotropical migrants.



*Dacia Wiitala with Roseate Tern chick.*  
 Photo © M. Gensler/MDFW, 2014

A key part of this effort is tracking the migration routes of these birds. In the summer of 2013, the Biodiversity Research Institute (BRI) attached 45

geolocators to veeries, gray catbirds, wood thrush, and rose-breasted grosbeaks captured at the Great Meadows National Wildlife Refuge in Sudbury and Wayland. In 2014, BRI recaptured 12 of these individuals with geolocators still attached. One example of a migration route that emerged from the data is for a bird that traveled through Florida to southern Brazil in the early winter then to northern Brazil in late winter before traveling back to Massachusetts via Central America and the Mississippi flyway. As part of MassAudubon's River Schools project, also funded through the Nyanza NRD settlement, children within the SuAsCo Watershed will be able to learn where "their birds" spend the winter.



*Biodiversity Research Institute staff attach a geocator to a veery in Great Meadows National Wildlife Refuge. Photo by Molly Sperduto, USFWS*



*Amethyst Brook flows through the former Bartlett Rod Shop Company Dam. Photo by Robin MacEwan, Stantec, Inc.*

# Looking Ahead

## Bankruptcy Settlement for “National Fireworks” Waste Site in Hanover:

One of the largest national environmental bankruptcy settlements in history, totaling \$5.15 billion, was announced in late March 2014 with Anadarko Petroleum Corp. and its affiliate Kerr-McGee. As part of this settlement, the Massachusetts Attorney General’s Office, with primary support from MassDEP, resolved environmental cleanup and natural resource damages claims stemming from the 2009 bankruptcy of Tronox, a former Anadarko affiliate. The Commonwealth received more than \$73 million for the severely contaminated “National Fireworks” site in Hanover, which is being cleaned up under the State’s Massachusetts Contingency Plan (M.G.L. Chapter 21E), and more than \$6 million for NRD. While the Commonwealth continues to negotiate settlements with the other parties involved at the site, this significant first settlement will help to get this site cleaned up and put back into productive re-use as well as provide funds to restore riverine and wetland habitats injured by the contaminants.

## J.P. Noonan Settlement for Oil Spill to Upper Mystic River in Arlington and Medford:

An October 2014 settlement agreement between the Commonwealth of Massachusetts and J. P. Noonan Transportation, Inc., included a total of \$55,100 for natural resources injured by the 2013 release of approximately 9,600 gallons of home heating oil

into the Mystic River in Arlington and Medford. The spill occurred on Route 60 in Arlington when an oil tanker truck crashed while going around a rotary at the Mystic Valley Parkway. As a result of the crash, the 10,000-gallon compartment of the tanker was breached, dumping nearly all of its contents onto the surface road, which then flowed into storm drains and into the Mystic River. Emergency response crews from Arlington, Medford, other nearby towns, MassDEP and a private contractor hired by Noonan were able over the next several days and weeks to contain and clean up virtually all of the spilled oil. The NRD settlement funds were deposited to the NRD Trust and will be used to fund projects to improve water quality and restore degraded aquatic habitats in the affected segment of the Mystic River.



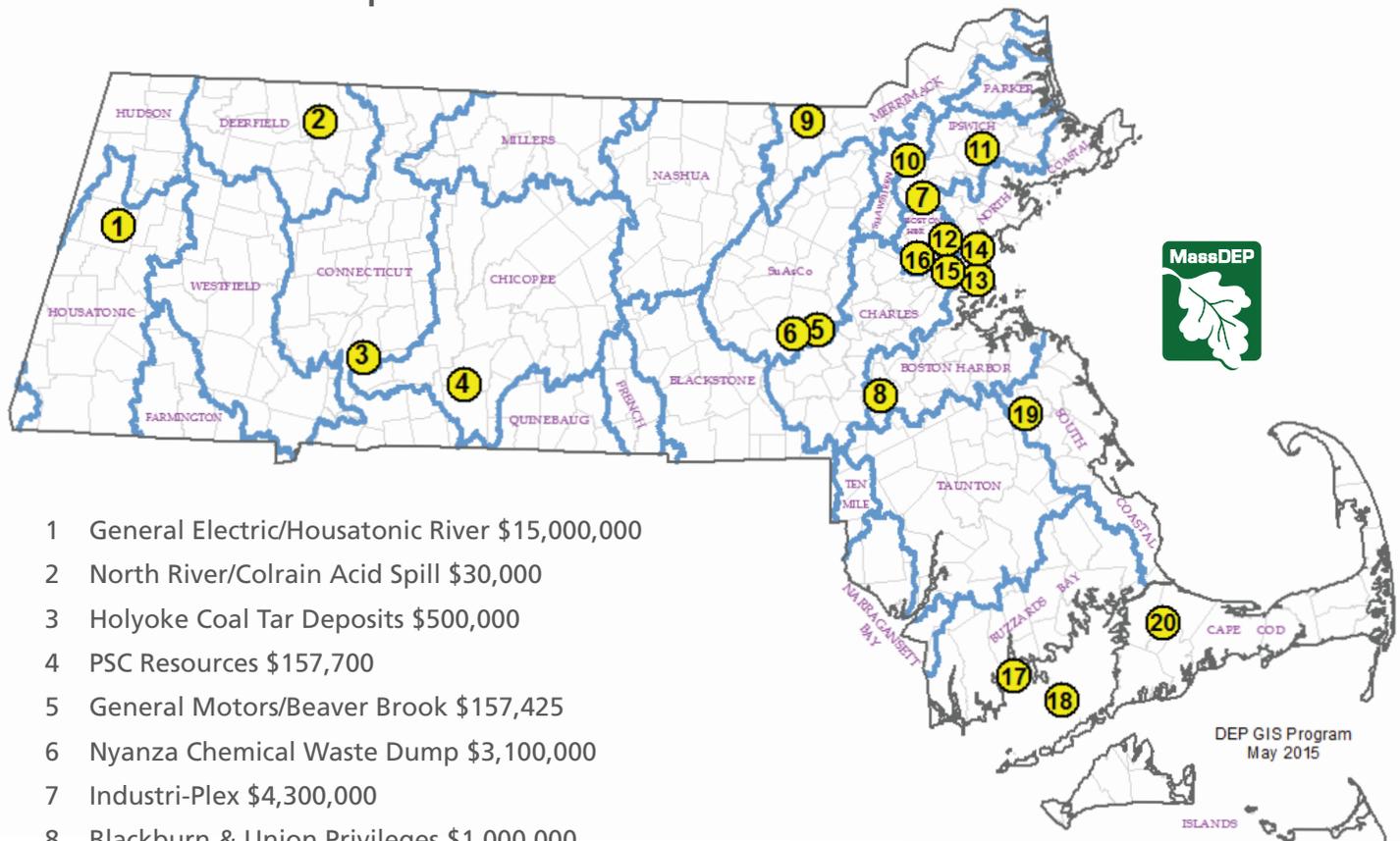
*Booms were deployed across the Upper Mystic River in response to a 2013 oil spill. Photo by Karen Pelto*

## Grant Opportunities Will Lead to Future Restoration

In FY14, the NRD Program developed and implemented a template for grantmaking that makes the process easier and more understandable for applicants and more efficient for reviewers. As a result of this effort, the NRD Program solicited and reviewed proposals for grant opportunities totaling over \$3 million to implement projects to restore wetlands, streams, and fisheries and conserve habitats in the Lower Mystic, Housatonic, and Sudbury, Assabet and Concord River watersheds as listed.

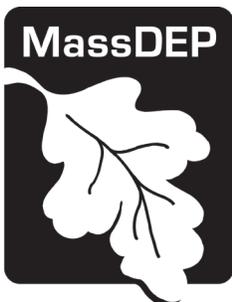
- Lower Mystic River Watershed Restoration \$238,710
- Housatonic River NRD Fund Round 3 Restoration Project Proposals for Land Acquisitions to Conserve Habitat \$2,000,000
- Sudbury River Corridor Land Acquisitions \$700,000
- Upper Sudbury River Stream and Wetland Restoration \$157,426
- Habitat Restoration to Benefit Coldwater Fish in the Sudbury, Assabet, and Concord River Watershed \$300,000

# Massachusetts NRD Trust Settlement Map



- 1 General Electric/Housatonic River \$15,000,000
- 2 North River/Colrain Acid Spill \$30,000
- 3 Holyoke Coal Tar Deposits \$500,000
- 4 PSC Resources \$157,700
- 5 General Motors/Beaver Brook \$157,425
- 6 Nyanza Chemical Waste Dump \$3,100,000
- 7 Industri-Plex \$4,300,000
- 8 Blackburn & Union Privileges \$1,000,000
- 9 Charles George Reclamation Landfill \$1,200,000
- 10 Sutton Brook Disposal Area \$1,650,000
- 11 Rubchinuk Landfill \$747,000
- 12 Hallmark/Lawrence Memorial Oil Spill \$26,800
- 13 Posavina Oil Spill \$155,000
- 14 Global/Irving Oil Spill \$312,500
- 15 Island End River Former Coal Tar Facility \$300,000
- 16 J.P. Noonan Upper Mystic Oil Spill \$55,100
- 17 New Bedford Harbor \$20,200,000
- 18 Buzzards Bay/Bouchard B-120 Oil Spill \$6,076,393
- 19 National Fireworks/Anadarko/Tronox \$6,892,797
- 20 Textron/MMR \$1,300,000

Total settlements amount to over \$63 million.



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Martin Suuberg, Commissioner  
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