Natural Resources Damages Restoration Planning Buzzards Bay Oil Spill

Massachusetts Executive Office of Energy and Environmental Affairs

State of Rhode Island and Providence Plantations

Department of the Interior – U.S. Fish and Wildlife Service

Department of Commerce – National Oceanic and Atmospheric Administration

September 2011 – Buzzards Bay and Fall River, MA Public Meetings

Presentation Topics

- Who are the Natural Resource Trustees
- Natural Resource Damages (NRD) Assessment and Restoration Process
- Restoration Plan (RP) and Environmental Assessment (EA)
  - Statutory and Consent Decree Requirements
  - Trustee Restoration Planning Process
  - General Restoration Project Evaluation Criteria
- Injured Resources/Appropriate, Potential and Inappropriate Restoration Projects or Activities:
  - Shoreline Resources
  - Aquatic Resources
  - Ram Island Shoreline Resources
  - Lost Recreational Uses
  - Birds and Wildlife
- Next Steps
- Trustee Contact Information

Who Are the Natural Resource Trustees

Agency staff appointed to serve as Trustees on behalf of the public

- Commonwealth of Massachusetts
  - Secretary of Energy and Environmental Affairs (EEA)
    - Represented by Massachusetts Department of Environmental Protection (DEP)
- State of Rhode Island and Providence Plantations
  - Director of the Department of Environmental Management
    - Represented by Rhode Island Department of Environmental Management (RIDEM)
- Department of the Interior
  - U.S. Fish and Wildlife Service (USFWS)
- Department of Commerce
  - National Oceanic and Atmospheric Administration (NOAA)

Natural Resource Damages (NRD) Assessment and Restoration Process

When there is a release of oil or other hazardous substances or materials, in accordance with the federal Oil Pollution Act ('OPA') and the Superfund Act ('CERCLA'); MA General Law Chapter 21E, Section 5, and RI General Law, Section 46-12.5.1, Trustees:

- Assess injuries to natural resources resulting from the release
- Determine damages by Responsible Party(ies) and seek compensation for injuries
- Develop, prepare and implement plans to *restore, replace, or acquire the equivalent* of injured natural resources

Long Island oiling, Fairhaven, MA 2003

Buzzards Bay Oil Spill Restoration Plan

Trustees are required to:

- Develop and implement plans to *restore, replace, or acquire the equivalent of injured natural resources*

2011 Consent Decree:

- Prepare a Restoration Plan(s) for Shoreline Resources, Aquatic Resources, Ram Island Shoreline Resources, Lost Recreational Uses, and Piping Plovers
- Jointly plan, implement, oversee and monitor the implemented restoration (in accordance with the Plan)

Buzzards Bay Oil Spill Restoration Plan

Settlement Funds Available:

To be expended jointly by State and Federal Trustees for restoration planning, project implementation, and oversight

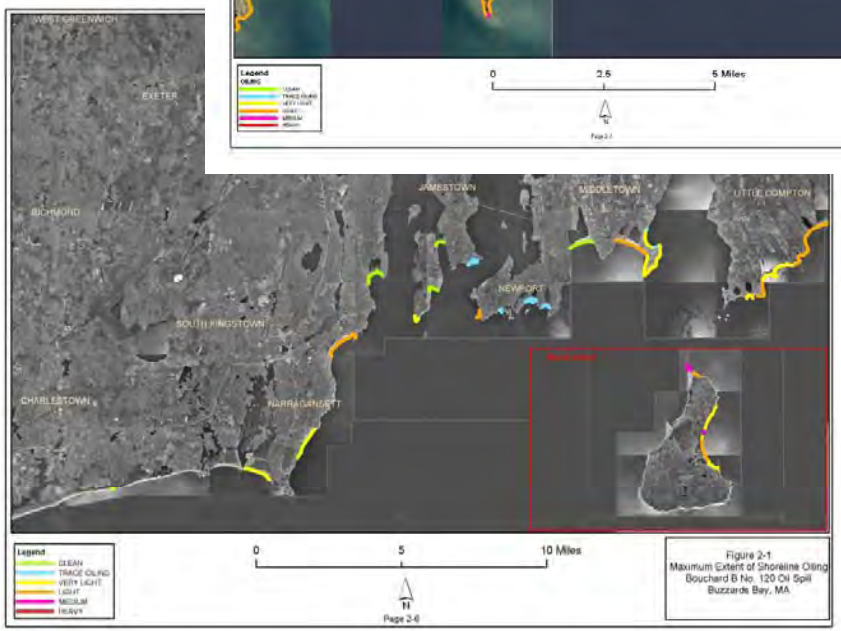
Restoration Planning Process:

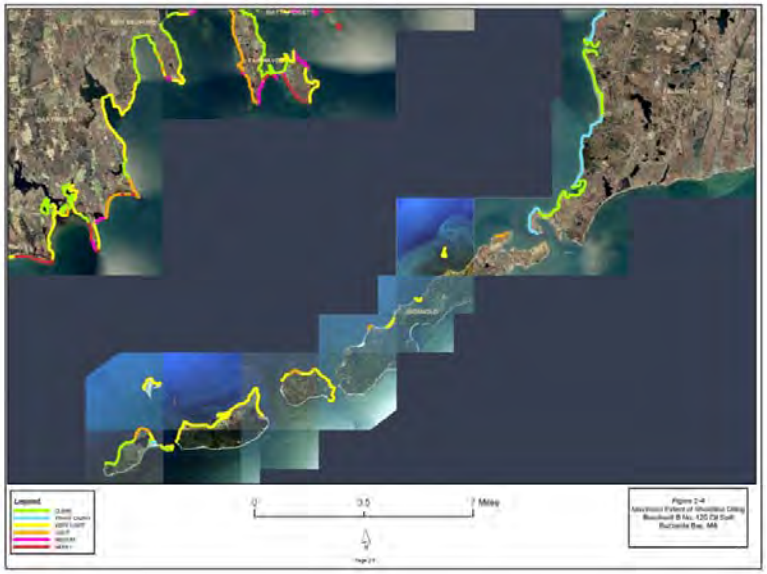
1. Interagency consultation
2. Public meetings (Sept 2011)
3. Identify and evaluate restoration alternatives
4. Prepare Draft Restoration Plan/Environmental Assessment (RP/EA)
5. Solicit public review and comment
6. Revise RP/EA and prepare Final RP/EA
7. Implement restoration projects
8. Oversee and monitor project performance

General Restoration Project Evaluation Criteria

- Extent project alternative meets restoration goals and objectives
  - Proximity to the injury
  - Ecological benefits of the habitat or resource to be restored
- Technical and regulatory feasibility
- Cost to plan, design, permit and implement the alternative
- Likelihood of measureable project success and sustainability
- Project avoids or minimizes impacts to natural resources
- Multiple natural resources or ecological service benefits are optimally achieved
- Public health and safety is not adversely affected

98,000 Gallons of Oil and 98+ Miles of Shoreline and Coastal Waters Affected





Source: B-120 Exposure Report

Injured Resources Categories and Types

Shoreline Resources

- Tidal marshes, sand and gravel beaches, boulder and bedrock shores
  - Including plants and animals

Aquatic Resources

- Intertidal and subtidal habitats
- Substrate habitat
  - Including shellfish and other benthic organisms
- Water Column
  - Including fish and other aquatic organisms

Ram Island Shoreline Resources

- Tidal marshes, sand and gravel beaches, boulder shores

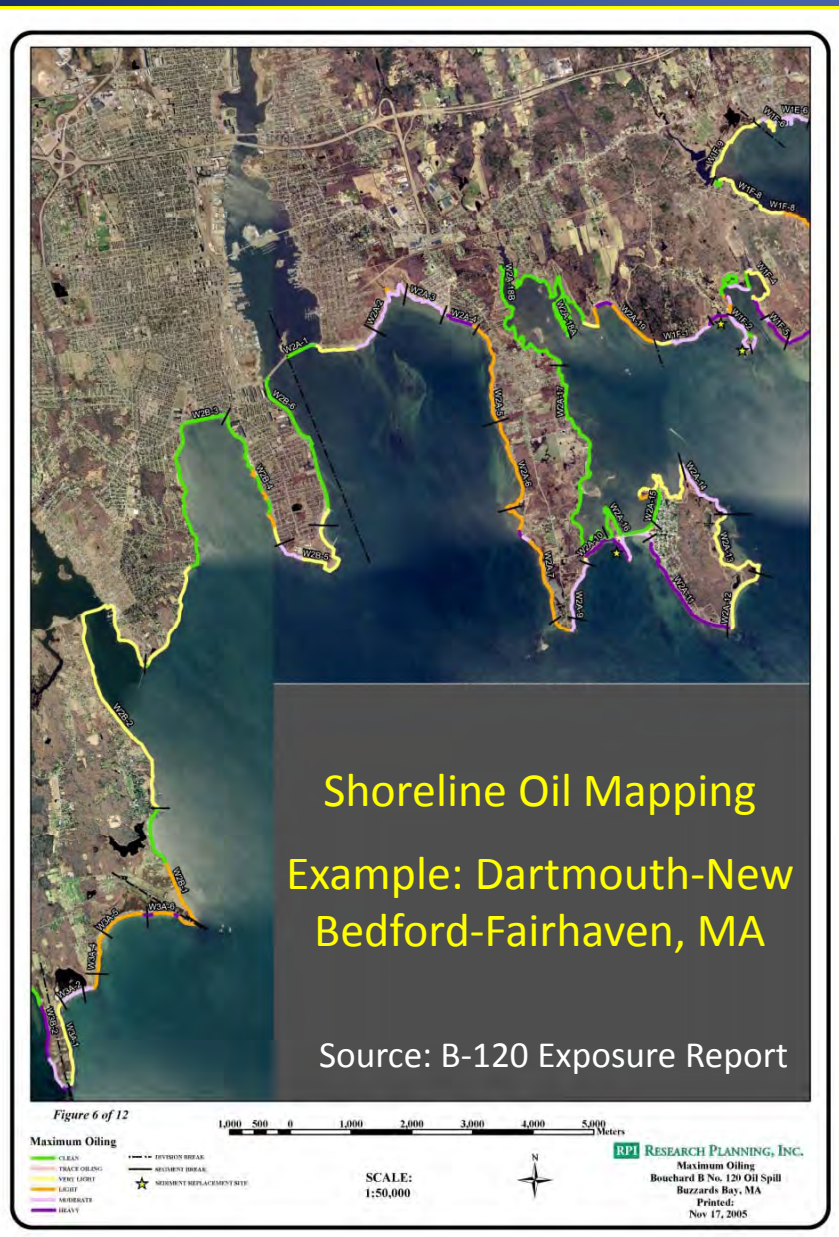
Lost Recreational Uses

- Shoreline access and uses
- Shellfishing
- Boating

Birds and Wildlife

- Piping Plovers
- Terns
- Loons and other birds
- Terrapins and other wildlife

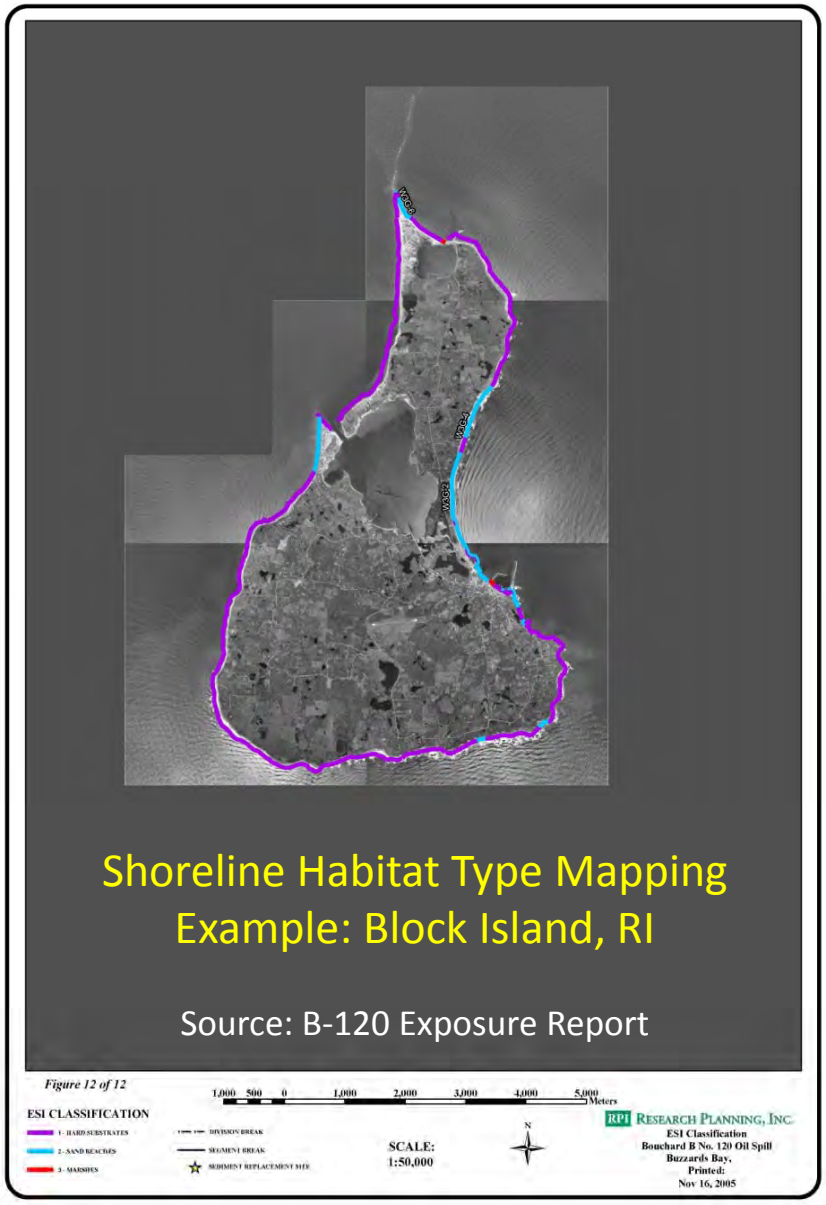
Degree of Oiling and Oiled Shoreline Types (MA and RI)



Shoreline Oil Mapping

Example: Dartmouth-New Bedford-Fairhaven, MA

Source: B-120 Exposure Report



Shoreline Habitat Type Mapping

Example: Block Island, RI

Source: B-120 Exposure Report

Shoreline and Aquatic Injuries ($1.52M)

- **Intertidal and Subtidal Habitats**
- **Sediment Habitat**

  Including shellfish and other benthic organisms
- **Water Column**

  Including fish and other aquatic organisms
- **Shoreline Resources**

  Tidal marshes, sand and gravel beaches, boulder and bedrock shores

  Including plants and animals

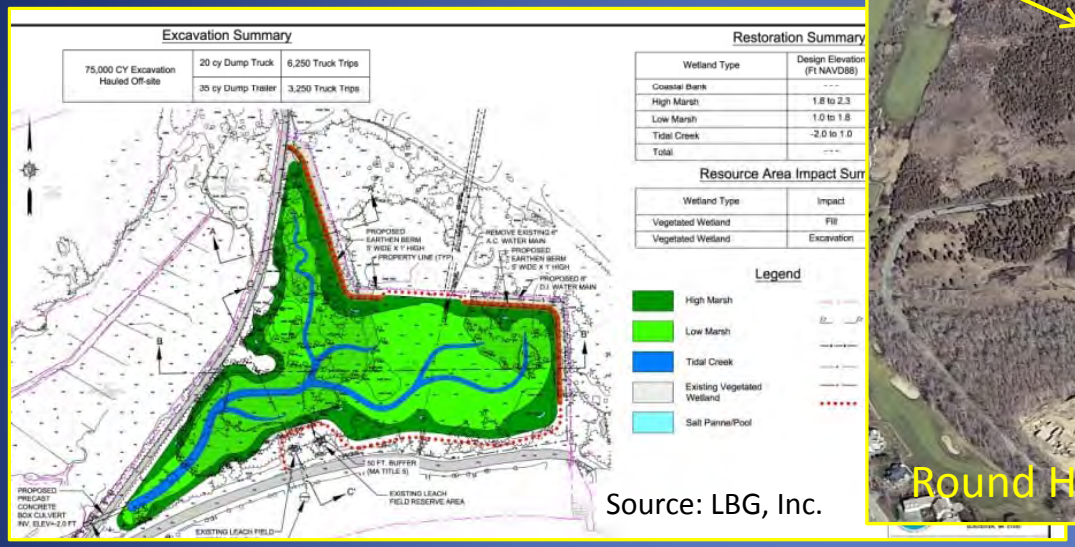
Appropriate Shoreline and Aquatic Restoration

- Projects that restore the same or similar natural resources or natural resource services that were injured, for example:
  - Restoring or enhancing fish populations such as river herring or other species that are forage species to gamefish such as striped bass and summer flounder
  - Restoring or rehabilitating tidal marshes by removing obstructions to normal tidal exchange, removing soil fill, or controlling non-native invasive plants in marshes
  - Restoring or enhancing shellfish populations such as bay scallop, oyster, and quahog by creating spawner sanctuaries, releasing seed, or enhancing their benthic habitats
  - Beach nourishment for enhancing habitat and beach biota
  - Planting or seeding of eelgrass beds
  - Construction of artificial reefs for enhancing lobster and fish habitat

Potential Shoreline Injury Restoration Projects

Marsh Restoration

Soil Fill Removal



Source: LBG, Inc.

Round Hill Marsh, Dartmouth, MA

Gray Gables Marsh, Bourne, MA

Hydrologic Restoration: Culvert Replacement

Source: MA DEP Pictometry

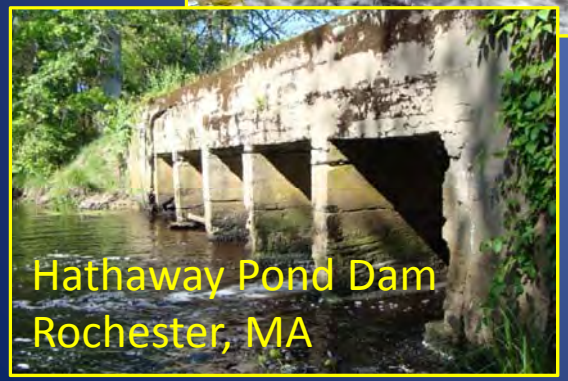
Potential Aquatic Injury Restoration Projects

River Herring Passage

Oyster Grow-Out

Horseshoe Pond Dam
Wareham, MA

Lobster V-Notching


Hathaway Pond Dam
Rochester, MA

Scallop Spawner Sanctuary

Photo Source: NOAA

Inappropriate Shoreline and Aquatic Restoration Projects and Activities

- Activities that are "otherwise required" by law or permit
  - For example, providing funds for constructing a federally-required municipal waste water discharge outfall; or constructing a mitigation wetland required for offsetting impacts from a roadway construction project

- Projects that do not restore the same or similar resources as those that were injured by the spill
  - For example, construction of pond in a local park providing habitat for resident freshwater fishes (e.g., largemouth bass); use of funds to purchase hatchery-raised trout to stock a public pond

Ram Island Shoreline Injuries ($534,000)

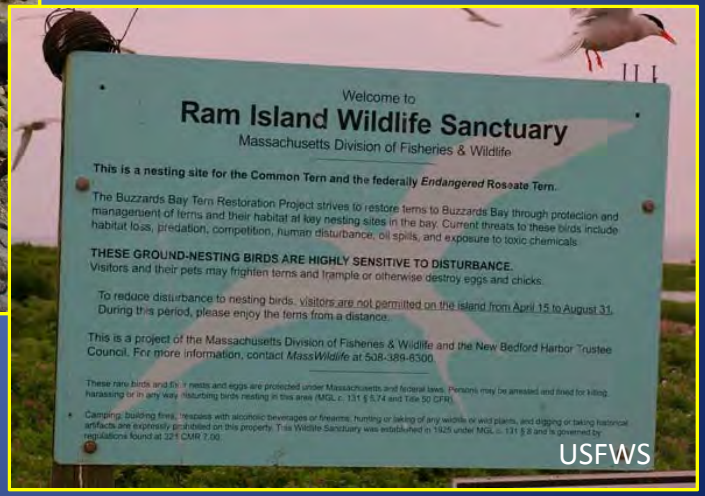
- **Shoreline Injuries**
  - Boulder and cobble shores, tidal marshes, and sand and gravel beaches
  - Unique state-owned wildlife sanctuary

Oiled Ram Island Marsh NOAA

NOAA

NOAA

Eroding Ram Island Marsh



USFWS

Appropriate Ram Island Shoreline Restoration Projects

- Projects that restore the same or similar natural resources or natural resource services that were injured, for example:
  - Construction of a protective measure to dissipate wave energies and shoreline erosion (e.g., stone revetment)
  - Construction of a tidal marsh fringe within the southern lagoon for fringe marsh habitat restoration or enhancement

Potential Ram Island Shoreline Restoration Projects

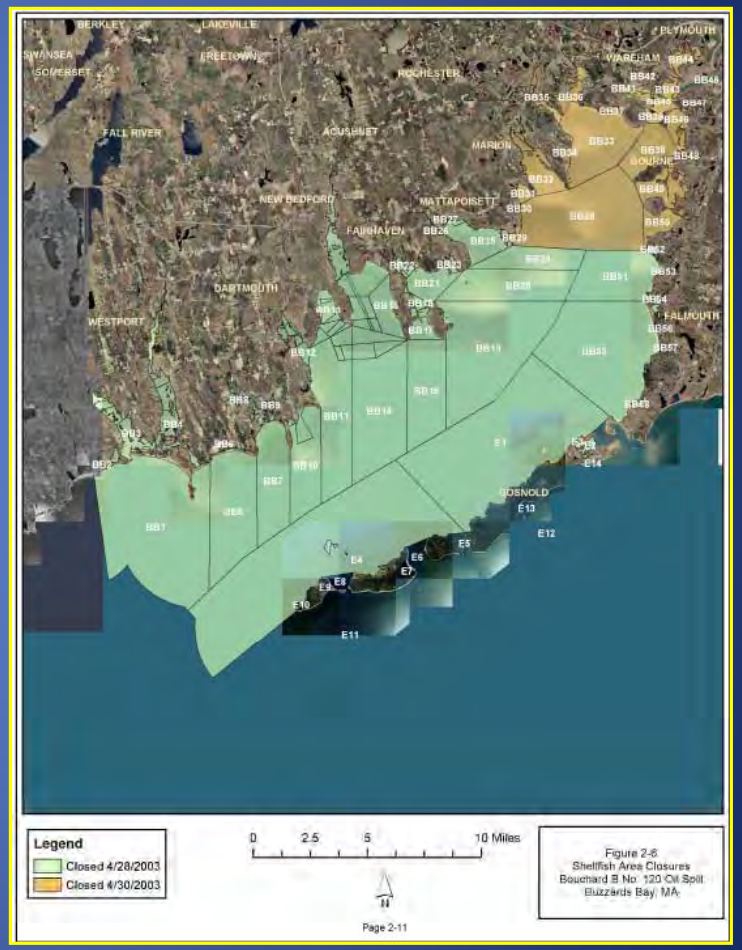
Inappropriate Ram Island Shoreline Restoration Projects/ Activities

- Projects that do not restore the same or similar shoreline resources that were injured by the spill or spill clean-up
  - For example, construction or enhancement of bird nesting habitats on Ram Island
  - Construction of a shoreline revetment or bulkhead to protect an eroding upland coastal bank in a public park

Ram Island, Mattapoisett, MA

Lost Recreational Uses ($3,305,393)

- Lost Shore Access and Use for Recreational Purposes by the Public
  - General Shoreline Use, MA and RI
    - Reduction in trips for fishing from the shoreline, non-motorized near-shore boating such as canoeing and kayaking, and sunbathing, swimming, walking, birding, and picnicking
  - Recreational Shellfishing – MA
    - Shellfish bed closures during 2003 and 2004 and reduction in trips
  - Recreational Boating – MA
    - Boating, sailing and boat-based recreational fishing

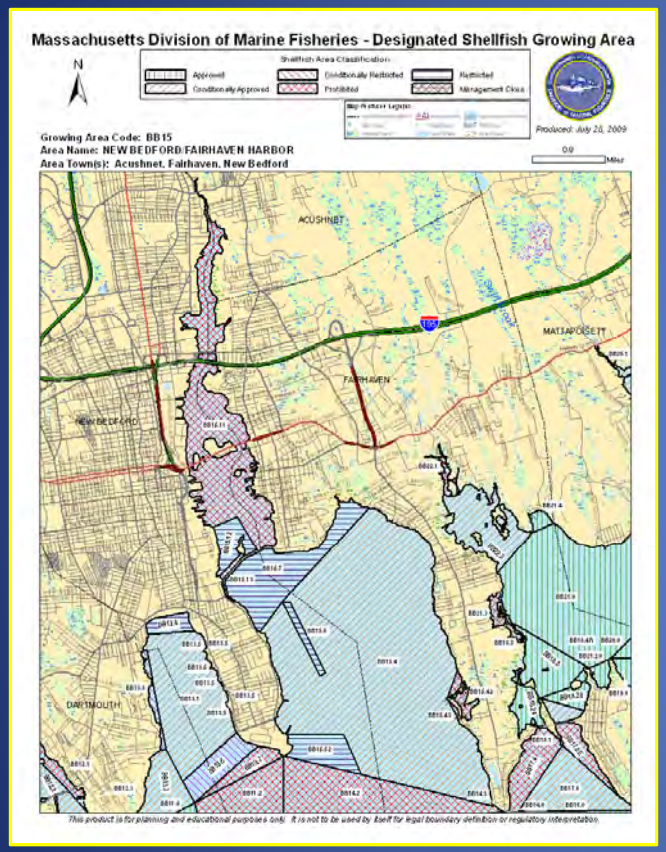


Source: B-120 Lost Use Valuation Report

Appropriate Lost Recreational Use Restoration Projects/Activities

- Projects that restore the same or similar natural resource services that were injured by the spill and spill clean-up, for example:
  - Purchase of a coastal property along Buzzards Bay for public access to the shore
  - Construction of a public boat ramp in an area where public facilities are lacking
  - Installation of a hiking trail and boardwalk to improve foot access to a beach or other public coastal property
  - Eliminating pollution sources to shellfish beds
    - Must not be “otherwise required”
  - Development of shellfish restoration or stock enhancement project to increase hard clam, bay scallop, and oyster populations in areas managed for recreational shellfishing
    - Consistent with Mass Division of Marine Fisheries *Shellfish Planting Guidelines*

Potential Lost Recreational Use Restoration Projects



Shellfish Propagation and Planting

Public Boat Ramps

Public Park Trails Providing Coastal Access

Inappropriate Lost Recreational Use Restoration Projects/ Activities

- Activities that are "otherwise required" by law or permit:
  - For example, restoration of sub-tidal habitat as mitigation for the permitted activity to construct or expand a public or private marina
- Improvements to *private*, non-publically available beaches
- Projects that do not restore the same or similar resources that were injured:
  - For example, construction of a soccer field or other active sports field; construction or expansion of a public marina impacting marsh and sub-tidal waters

Birds and Wildlife: Piping Plover Injuries ($715,000)

- Species listed as *Threatened* under the Federal Endangered Species Act and State endangered species statutes
- Approximately 50 pairs of piping plovers nested on beaches affected by the spill
- Chicks generally hatch in late May and remain on beaches until August
- Feeding areas include intertidal areas, mudflats, wrack line
- 85% of the adult birds observed were oiled
- 2 dead chicks found following spill and 8-10 adults estimated to have died

Oiled Plover

Barney's Joy , South Dartmouth, MA

Appropriate Piping Plover Restoration Projects/Activities

- Projects that restore the same or similar natural resources or natural resource services that were injured, for example:
  - Protecting Nesting Habitat via Fee Acquisitions or Conservation Easements
  - Enhancing habitat by increasing the quality or spatial extent of nesting or foraging areas
  - Integrated Management Program; including predator control, outreach and education, and increased enforcement

Potential Piping Plover Restoration Projects – Habitat Protection and Enhancement

Protect existing nesting habitat

Expand nesting habitat and feeding areas

Potential Piping Plover Restoration Projects – Integrated Management Program

Inform beachgoers on how to help protect piping plovers

Enforce state and federal laws

Monitor predators and removing animals that harass or destroy piping plover nests.

Inappropriate Piping Plover Restoration Projects/Activities

- Activities that are "otherwise required" by law or permit
  - For example, routine monitoring in compliance with the federal Endangered Species Act and State endangered species statutes
- Projects that do not restore the same or similar resources that were injured
  - For example, projects targeted at other bird species or captive bird rearing projects

Next Steps: Piping Plovers

- Prepare Piping Plover Draft Restoration Plan/Environmental Assessment (RP/EA)
- Release Draft Piping Plover RP/EA for 30-day public comment period
  - Available on NOAA website: http://www.darrp.noaa.gov/northeast/index.html
  - Available on MassDEP website: http://www.mass.gov/dep/cleanup/sites/nrd/nrd.htm
  - Available on RIDEM website: http://www.dem.ri.gov
- Hold Public Meeting to Discuss Piping Plover RP/EA
- Prepare Final RP/EA
- Implement RP / EA
- Oversee / Monitor Restoration Performance

USFWS

Buzzards Bay Oil Spill Restoration Plan- Next Steps

Settlement Funds Available:

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Buzzards Bay Oil Spill Trustee Representatives Points of Contact

- **MA Department of Environmental Protection**
  Millie Garcia-Serrano, Deputy Regional Director/Trustee Representative
  508-946-2727

  Karen Pelto, NRD Coordinator/Alternate Trustee Representative
  617-292-5785

- **RI Department of Environmental Management**
  Mary E. Kay, Legal Services
  401-222-6607 ext. 2304

- **U.S. Fish and Wildlife Service**
  Molly Sperduto, Acting Trustee Representative
  603-223-2541 x 20

- **National Oceanic and Atmospheric Administration**
  James Turek, Assistant Northeast Team Leader/Trustee Representative
  Restoration Center
  401-782-3338

Turek, NOAA

This presentation available on:
http://www.darrp.noaa.gov/northeast/buzzard/index.html
or request a presentation hardcopy.