Potential Restoration Projects
Northeast United States
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Prepared for*:*
Northeast Regional Ocean Council (NROC)
www.northeastoceandata.org

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1. INTRODUCTION

This dataset shows the locations of regional ecosystem restoration projects that, when implemented, will improve ocean health in New England (Maine, New Hampshire, Massachusetts, Rhode Island and Connecticut). The dataset was developed and is maintained by the Northeast Regional Planning Body (RPB) Restoration Subcommittee. Each project site includes a description of the habitat functions to be enhanced or restored, a link to the project website (if available), and information on project phase, cost, and acres or stream miles to be restored. The dataset only includes those projects that are not fully funded and therefore represent an opportunity to invest in ocean health. A majority of these projects are eligible for federal funding and are seeking the non-federal cost sharing match. A point has been placed at the approximate location of the restoration project. See process steps for more information on how site locations were mapped for each project. Any parties interested in funding the non-federal portion of a project can contact BillHubbard@CoastalAmericaFoundation.org or the appropriate state subcommittee representative for additional information. The Subcommittee Roster and a list of potential funding sources developed by the Subcommittees are linked here.

2. PURPOSE

This dataset supports regional planning for ocean health and communicates the opportunities and locations for ecosystem restoration. This dataset identifies projects that are not fully funded and therefore represent an opportunity to invest in ocean health.

3. SOURCES AND AUTHORITIES

- Northeast Regional Planning Body Restoration Subcommittee

- U.S. Department of Transportation: Maritime Administration
- Mohegan Tribe of Indians of Connecticut
- U.S. Department of Agriculture: Natural Resource Conservation Service
- New Hampshire Department of Environmental Services: New Hampshire Coastal Program
- Connecticut Department of Energy & Environmental Protection: Office of Long Island Sound Programs
- Rhode Island Coastal Resources Management Council
- U.S. Fish & Wildlife Service: Northeast Region
- Massachusetts Department of Fish & Game: Division of Ecological Restoration
- National Oceanic and Atmospheric Administration: Restoration Center, National Marine Fisheries Service
- U.S. Environmental Protection Agency: Ocean and Coastal Protection Unit
- U.S. Army Corps of Engineers, New England District
- Coastal America Foundation
- Massachusetts Office of Coastal Zone Management
- Maine Department of Agriculture, Conservation and Forestry: Maine Coastal Program
- U.S. Fish and Wildlife Service: North Atlantic Landscape Conservation Cooperative
- The Nature Conservancy
- Maine Rivers

4. DATABASE DESIGN AND CONTENT

Native storage format: ArcGIS File Geodatabase – point feature class

Feature Types:
  Potential Restoration Projects:

  Dam Removal or Fish Passage: Modification of structure(s) to allow fish passage

  Eelgrass, Oysters, Other: Improvements to eelgrass beds, oyster beds, or other resources

  Land Conservation: Acquisition of or improvements on lands which contain a designated high quality watershed, an occurrence of state threatened or endangered species, and/or extensive wetlands or floodplains

  Watershed and Water Quality: Improvements to the health, water quality, and/or connectivity of a watershed

Wetland: Improvements to freshwater and tidal wetlands (either marsh or non-marsh). Projects may restore a natural tidal flow or occur in the stream/riparian zone.

Data Dictionary:

Line	Name	Definition	Type	Size
1	OBJECTID	Uniquely identifies a feature	OBJECTID	*
2	Shape	Geometric representation of the feature	geometry	*
3	name	Name of project	text	254
4	state	State where project is located	text	2
5	location	Location of the project	text	100
6	projectTyp	Type of project	text	64
7	projectDes	Description of the project	text	2000
8	locationSo	Source of the project location or method of determining location	text	254
9	projectURL	Link additional project information	text	254
10	estimatedCost	Estimated cost of the project	long	*
11	projectPhase	Current phase of the project	text	100
12	shellfishAcres	Number of acres of shellfish habitat to be restored	double	*
13	eelgrassAcres	Number of acres of eelgrass habitat to be restored	double	*
14	wetlandNoMrsh	Number of acres of tidal wetlands (non-marsh) to be restored	double	*
15	wetlandMarsh	Number of acres of tidal wetlands (marsh) to be restored	double	*
16	streamAcres	Number of stream channel acres to be restored	double	*
17	streamMiles	Number of miles of stream channel to be restored	double	*
18	barrierFree	Number of barrier-free stream miles to be restored	double	*
19	fishPassage	Number of fish passage stream miles to be restored	double	*
20	diadSpawn	Number of acres of diadromous fish spawning habitat to be restored	double	*
21	offshoreHab	Number of offshore habitat acres to be restored	double	*
22	marDebRemove	Number of tons of marine debris to be removed during project	double	*
23	riparian	Number of riparian habitat miles to be restored	double	*

Line	Name	Definition	Type	Size
24	freshwater	Number of freshwater wetland acres to be restored	double	*
25	latitude	Latitude of the project	double	*
26	longitude	Longitude of the project	double	*
27	notes	Any additional information about the project	text	254

Feature Class Name: Potential Restoration Projects

Total Number of Unique Features: 130

Dataset Status: In Progress

5. SPATIAL REPRESENTATION

Geometry Type: vector point
Reference System: GCS North American 1983
Horizontal Datum: North American Datum 1983
Ellipsoid: Geodetic Reference System 1980

XY Resolution: XY Scale is .000000001
Tolerance: 0.000000008983153

Geographic extent: : -73.501580 to -67.100251, 41.052862 to 46.171266

IS0 19115 Topic Category: biota, environment, inlandWaters, oceans

Place Names:

Alna, Maine; Belle Isle Park, Massachusetts; Bound Brook, Massachusetts; Broad Cove, Massachusetts; Cherryfield, Maine; Durham, New Hampshire; East Harwich, Massachusetts; East Machias, Maine; East Sandwich, Massachusetts; Eddington, Maine; Frankport, Maine; Great Bay, New Hampshire; Greenland, New Hampshire; Harrington, Maine; Ipswich, Massachusetts; Ledyard, Connecticut; Little River, Massachusetts; Lyme, Connecticut; Milford, Maine; Neponset River, Massachusetts; New Market, New Hampshire; Orland, Maine; Plymouth, Massachusetts; Point Judith Pond, Rhode Island; Portsmouth, New Hampshire; Providence, Rhode Island; Provincetown, Massachusetts; Quonochontaug Pond, Rhode Island; Robbinston, Maine; Rye, New Hampshire; Seal

Cove, Maine; South Branch Lake, Maine; Stage Harbor, Massachusetts; Stonington, Connecticut; Surry, Maine; Swan Pond, Massachusetts

Recommended Cartographic Properties:
(Using ArcGIS ArcMap nomenclature)

Simple Fill Symbol:
Dam Removal, Fish Passage: color: 0-112-255, no outline, size = 8.0, color model: RGB
Eelgrass, Oysters, Other: color: 255-0-0, no outline, size = 8.0, color model: RGB
Land Conservation: color: 255-170-0, no outline, size = 8.0, color model: RGB
Watershed or Water Quality: color: 255-255-0, no outline, size = 8.0, color model: RGB
Wetland: color: 76-230-0, no outline, size = 8.0, color model: RGB

Scale range for optimal visualization: 1:6,000 to 1:500,000

6. DATA PROCESSING

The locations of project sites were identified by members of the Northeast Regional Planning Body Restoration Subcommittee in one of two ways. Subcommittee members could supply the latitude and longitude of a project location, which was then added to the by importing the coordinates into ArcMap or project sites were located in Google Earth and were exported as KMZs and imported into ArcMap where they were converted to a feature class. Project sites were placed to generally locate the aquatic habitat where a modification would improve that habitat. More details are provided below. The project sites were classified into the following groups:

- Watershed or Water Quality: The removal of a tide gate or restoration of fish passage can greatly improve the health and connectivity of a watershed. For example, the Herring River watershed is in several towns on Cape Cod – so the marker was placed at the Tide gate constricting flows from the ocean into the watershed. For other watersheds, especially tribal watershed projects, the marker was placed in the river closest to tribal lands. In the cases of stormwater remediation projects in Massachusetts, projects were grouped by municipality, so that the centerpoint of each town represents the various stormwater remediation projects occurring in each municipality.

- Dam Removal, Fish Passage: Generally the place marker was set in the impoundment behind the structure to be modified to allow fish passage into that impoundment. If

there were a series of dams, the marker was located in the most seaward impoundment or midway in the system.

- Wetland: The place marker was usually established at the center of the tidal wetland that will be restored (e.g. upstream of a failed culvert to be replaced).

- Eelgrass, Oysters, Other: These markers were placed on the location that will contain the improved resource (e.g. the actual site of an historic oyster bed to be reestablished in Great Bay, NH).

- Land Conservation: Markers were placed on the center of the location of the property where the conservation acquisition or improvement project will take place

Restoration site project descriptions, URLs, and project and habitat metrics were compiled and sent in an excel table in order to join to mapped restoration site locations.

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Processing environment: ArcGIS 10.2, Windows 7 Professional, Intel Core i5 CPU

	Process Steps Description
1	KMZs (exported from Google Earth) for restoration sites were converted to layers using the KML TO LAYER conversion tool
2	Attributes were edited in the editing environment to reflect information about project location, description, URL and project metrics
3	Additional sites were added by importing x,y coordinate data and using MERGE to combine it with existing data

7. QUALITY PROCESS

Attribute Accuracy: Based on project site information submitted/reviewed by the Northeast Regional Planning Body Restoration Subcommittee

Logical Consistency: None

Completeness: This dataset contains all known project locations as submitted to the Northeast Regional Planning Body Restoration Subcommittee as of January 2016.The dataset only includes those projects that require funding and, therefore, represent an opportunity to invest in ocean health. It should be noted that other projects that meet the RPB project criteria are likely to exist and will be added in subsequent updates of the data layer. It is anticipated that locations will be reviewed for accuracy and updated at least once per year.

Positional Accuracy: May vary as each point is an approximation of each project site. See data processing section for information about placing site points.

Timeliness: Based on best available information as of January 2016.

Use restrictions: All data are provided as is. It is strongly recommended that careful attention be paid to the contents of the metadata file associated with these data.

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