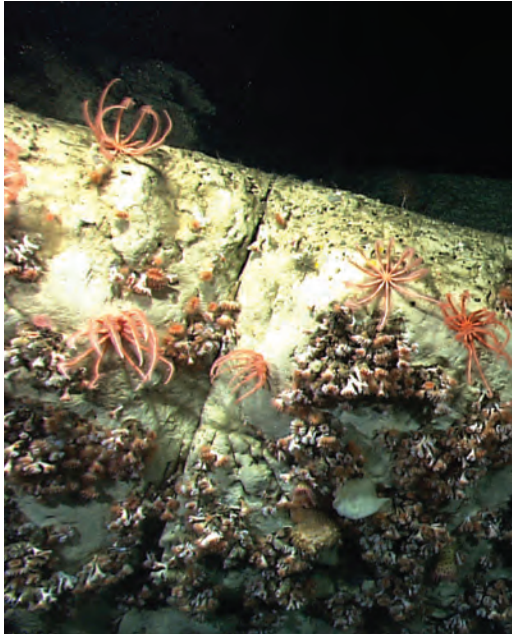




RESTORATION



Several sections of this Plan recognize the important linkage between the ocean and coasts, communities, and the ecosystem as a whole. Coastal communities and many marine species depend on healthy nearshore habitats, estuaries, marshes, and watersheds. In recognition of this relationship, the RPB included an objective and an action in the *Framework for Ocean Planning in the Northeast United States* to identify, support, and coordinate existing nonregulatory opportunities for activities, such as restoration, that are important management goals of many agency programs, tribes, and states.

Therefore, for the purposes of this section of the Plan, restoration refers to projects that are not associated with permitting, leasing, or licensing (recognizing that restoration activities may occur as part of the mitigation or other aspects of those regulatory programs), nor does this section address environmental reviews or specific permitting associated with restoration activities. Instead, by incorporating this topic into the framework, the RPB recognized the importance of coastal, nearshore, and estuarine habitats to the ocean and identified the opportunity to coordinate and highlight regional restoration activities.

Most fish and shellfish consumed in the United States complete at least part of their life cycles in estuaries.¹ Estuaries also help to maintain healthy ocean environments by retaining sediments from rivers and streams before they flow into the oceans and, through detrital export, by linking primary production of vegetated shallows and marshes to the coastal food web. Healthy salt marshes provide habitat and water quality improvement, and they can provide

other benefits such as flood damage reduction. Functioning riverine systems also provide habitat, connection to spawning grounds for diadromous fish, and other benefits to people and animal life.

In many places across the region, these important habitats are threatened or have been degraded by historic development practices, fragmentation of habitats, dams, pollution, inadequate sizing and design of culverts, and other factors. Additional future stressors affecting such habitats include sea level rise and stronger, more intense storms.

Thus, in recognition of the continued and future importance of these components of the ecosystem, many federal agencies, states, and tribes have developed or provide funding for restoration programs intended to restore lost habitat function. New England has a history of successful restoration of coastal, riverine, and nearshore habitats, and there are significant additional opportunities in the future to build on these successes.

CASE STUDY

COLLABORATIVE RESTORATION

The Ten Mile River Restoration Project is an example of a collaborative restoration project in the region that partially benefited from contributions of American Recovery and Reinvestment Act (ARRA) funds from USACE and NOAA, along with contributions from the Rhode Island Department of Environmental Management and many other federal, state, and nongovernmental organizations. That project, completed in 2015, is expected to restore and sustain a population of approximately 200,000 anadromous river herring (alewife and blueback herring) and up to 25,000 American shad in the Ten Mile River, which flows into upper Narragansett Bay in Rhode Island. The restoration partners in the Narragansett Bay watershed are currently working on a study to demonstrate the landscape-level regional benefits of the many projects already accomplished in the watershed.





Examples of the ecological value of restoration projects in New England are as widespread as the types of projects that have been undertaken. Improving estuarine habitats and restoring the connection of spawning habitats for diadromous fish through fish passage projects contribute to healthier fish populations in the ocean by providing vital spawning, nesting, and feeding habitats for many species of birds and fish. Appropriately sizing culverts, fixing tide gates so that they properly function, removing old fill material, or restoring tidal flow all can help restore salt marsh function. Projects have also included planting of eelgrass and other native coastal vegetation, controlling invasive species, restoring oyster reefs and clamflats, and removing marine debris. Such habitat improvements sometimes can include control or cleansing of stormwater runoff or other efforts to enhance water quality. All of these types of activities occur throughout the region as part of restoration projects.

Restoration projects provide economic benefits as well. Under the American Recovery and Reinvestment Act of 2009 (ARRA), NOAA awarded \$167 million in funding for 50 coastal restoration projects. On average, every \$1 of ARRA funds spent on these restoration projects resulted in \$1.60 of economic benefit. NOAA's restoration work under ARRA created an average of 17 jobs, and as many as 33 jobs, for every

\$1 million invested.² Those benefiting from ecological improvements also include commercial and recreational fisheries interests, as well as industries dependent on healthy coastal ocean habitats (e.g., the tourism sector).

RESTORATION SUBCOMMITTEE

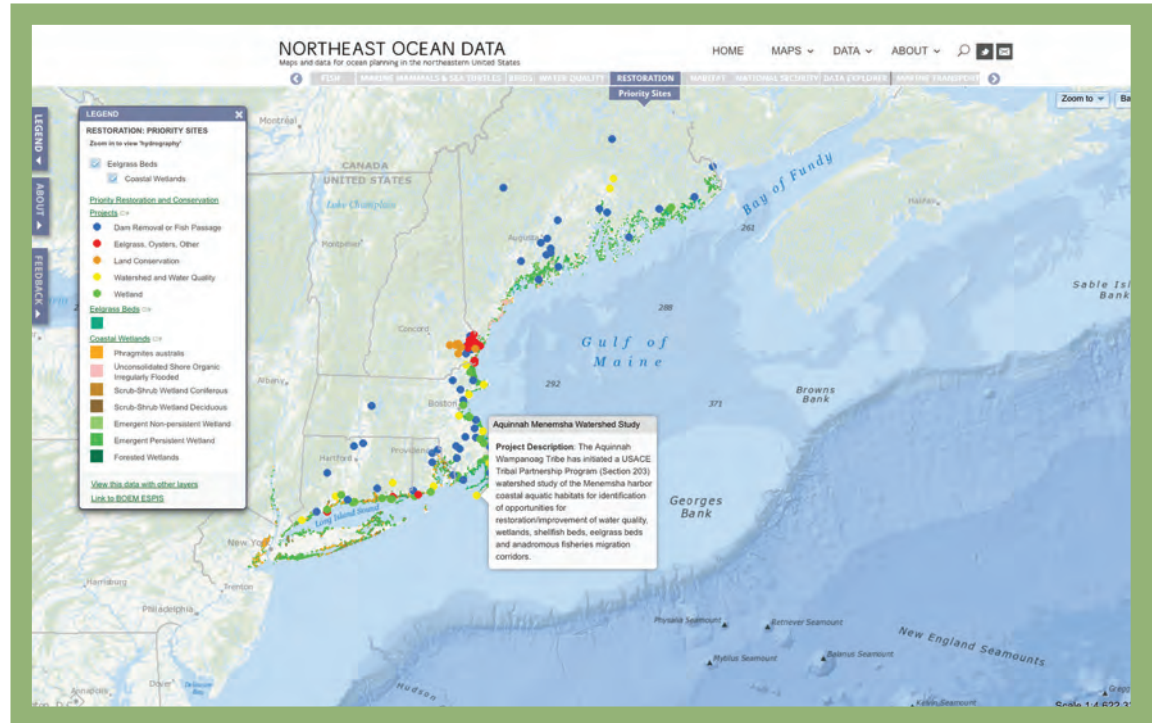
The RPB established a subcommittee of restoration experts in 2013. Led by the EPA and USACE, and including NGO, state, and tribal members, the subcommittee met and discussed several approaches to enhance regional coordination, noting that additional coordination and support from all levels of government are needed to advance the significant restoration opportunities throughout New England. To strengthen the impact of available funds and to highlight regional restoration opportunities, the subcommittee decided to identify existing potential restoration projects in need of funding, using an initial set of draft criteria. This initial set of draft criteria was intended to identify projects that, upon completion, would improve ocean or coastal watershed condition either directly or indirectly; complement adjacent habitat; have a strong likelihood of achieving a sustainable, restored condition; be adaptable in the face of climate change; and other goals. Recognizing the complexity of developing and implementing such criteria for the wide array of restoration activities that federal agencies, states, and tribes wish to pursue,

the subcommittee had extensive discussions regarding how these criteria could evolve in the future, including their use and relationship to specific management goals or questions. The subcommittee also discussed the importance of focusing on the various habitat types in need of restoration, and, as a result, the subcommittee generated an initial set of habitat types to inform its discussions. This set of criteria, habitat types, and related deliberations helped in identifying an initial list of restoration projects.

There are many federal, state, local, and nongovernmental funding programs in place to facilitate restoration, and better coordination among entities in the region on project opportunities could demonstrate the region's ability to effectively leverage additional resources and increase the pace and scale of restoration. To begin addressing this opportunity, the subcommittee developed a comprehensive list of federal funding programs for the region to help inform project financing opportunities. The list can be found in the "About" section of the Restoration theme on the Portal.

MAPS AND DATA

The Restoration theme on the Portal displays the location of potential Northeast US restoration projects (of various types) as initially identified by individual RPB subcommittee members (the list of projects is considered a work in progress). Each site in the Portal dataset includes a project description with information on 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 and/or enhanced. As described in Action Rest-1, this data layer will be reviewed and updated periodically to ensure that it remains current. A majority of the restoration and conservation projects are eligible for federal funding³ and require a nonfederal cost-sharing match. The Restoration theme also includes several data layers intended to provide context for the restoration projects, including coastal wetlands, eelgrass beds, and watershed information. Finally, the Portal also includes a list of subcommittee members and a list of federal funding programs.



This map indicates restoration projects identified by the subcommittee.



OVERVIEW
ACTIONS

- Rest-1 Maintain and update the Restoration theme and data on the Portal
- Rest-2 Maintain and update the list of funding sources
- Rest-3 Use maps and funding sources identified in the Plan to identify regional restoration opportunities
- Rest-4 Continue regional coordination through the subcommittee under the direction of the RPB



ACTIONS: MAINTAIN AND UPDATE DATA

Rest-1. Maintain and update the Restoration theme and data on the Portal: The subcommittee will review the restoration dataset for necessary updates and additions (since it is a work in progress). Over the course of a year, some projects in the data layer will likely be funded or constructed, and therefore will be removed from the dataset. Other projects for potential inclusion will be brought to the subcommittee through its members. The subcommittee will also consider whether additional marine life, habitat, or other data or information should be included in the map to provide context for the restoration projects.

Rest-2. Maintain and update the list of funding sources: The inventory of active funding programs available through various federal agencies will continue to be maintained by the subcommittee and provided as a resource through the Portal. The subcommittee will provide the updated or revised inventory to the Portal Working Group annually or as otherwise needed.

ACTIONS: INFORM MANAGEMENT DECISIONS

Rest-3. Use maps and funding sources identified in the Plan to identify regional restoration opportunities: RPB agencies will to the extent practicable use the maps and data in the Portal as a source of information to identify restoration opportunities. The restoration data layer and the inventory of potential funding sources will be valuable resources for coordinating practitioners, agency reviewers, and funders. The restoration map may also be particularly useful when funding opportunities, such as emergency recovery funding for natural events, become available.

Additionally, marine life and habitat, cultural, and human use data in the Portal may provide helpful regional context for restoration projects by, for example, helping to identify species and habitats that could be affected by restoration projects; helping to understand competing or conflicting human uses in restoration areas; and helping to identify potentially interested partners and potentially affected stakeholders.

ACTIONS: ENHANCE AGENCY COORDINATION

Rest-4. Continue regional coordination through the subcommittee under the direction of the RPB: The restoration subcommittee will continue, under the direction of the RPB, to provide a forum for federal agencies, tribes,

states, and NGO partners to build awareness of potential restoration projects, explore potential topics for regional coordination, and identify funding sources and new opportunities. The subcommittee will be led by federal, state, and tribal co-chairs, and it is anticipated that the subcommittee will meet at least twice per year. During and between those meetings, subcommittee members will review the Portal for potential updates to the restoration projects (as described in Rest-1) and will review and update the list of funding sources (as described in Rest-2). The subcommittee will also continue to consider additional ways to enhance regional coordination and provide for stakeholder review of subcommittee activities, including:

- Reviewing the initial criteria that were developed to inform the map of restoration projects.
- Reviewing the list of habitat types and the potential to assess restoration projects by their likely impact to each habitat.
- Creating opportunities to enhance the visibility of New England restoration projects.