



Herring River Estuary Restoration Project

Background

Encompassing nearly 1,000 acres and over 6 miles of waterways, the Herring River in Wellfleet and Truro, Massachusetts, is one of the largest tidally-restricted estuaries in the northeastern United States. Historically, the river supported a vibrant, regionally-important wetland and coastal river ecosystem and hosted one of the most important herring fish runs on Outer Cape Cod.

The ecosystem was dramatically altered in 1909 when efforts to control mosquitos resulted in the construction of a dike across the river's mouth at Chequessett Neck in Wellfleet. Designed to block the flow of ocean tides and salt water, the dike had immediate and devastating effects on the natural and social values of the upstream river and wetlands. The tide range upstream of the dike was reduced from 10 feet to less than 2 feet and circulation of salt water was essentially eliminated (see photo, next page). Blocked tidal flow has caused toxic water quality and fish kills from acidic leaching, closure of downstream shellfish beds, sinking of the marsh by up to four feet, and loss of one of the largest nurseries for commercial and recreational fisheries in the Gulf of Maine.

This project will restore natural tidal flow to the estuary by replacing the old dike at the river's mouth with a new bridge. Just as unblocking a clogged artery can restore a person's health, restoring tidal flow to the Herring River will reverse the severe damage that has occurred over the past 100 years and bring back the critical ecological, economic and social benefits that a healthy and productive tidal estuary provides.

Impact

Completion of this project will bring significant benefits and will serve as a model for restoring other estuaries in Massachusetts and America's coast. Reconnecting the Herring River to the Gulf of Maine will let it once again support the natural coastal food web that numerous fish, birds and other wildlife depend on for their survival. Restoring the estuary is an important step to help increase fish populations and revive the region's commercial and recreational fisheries.

Expanding harvestable shellfish beds will help support Wellfleet's economy, which is heavily dependent on the Cape's \$10.8 million shellfishing industry. Water quality will be significantly improved, allowing extensive areas of shellfish beds that are now closed due to bacteria contamination to be reopened for harvest.



ENVIRONMENTAL BENEFITS

- » Reduce bacteria loading and acidity contamination by restoring tidal flushing.
- » Remove river from EPA Impaired Waters List.
- » Enhance resilience to climate change and sea level rise by restoring marsh health and sediment delivery.
- » Restore productive habitats for finfish, shellfish, and migratory waterfowl.
- » Restore eel and herring runs.
- » Reduce invasive species and re-establish native wetland vegetation.
- » Enhanced floodplain protection and management.
- » Improved resiliency to flooding in a changing climate.



Restoring the estuary's tidal flows hinge on replacing the 1908 dike with a new bridge and two secondary dikes. With strong partnerships and funding, we hope to start construction in 2018. © Friends of Herring River.

Tourism is a major economic engine in Wellfleet and surrounding communities. In Wellfleet alone, the tourism industry contributes nearly \$11 million annually to the local community and supports jobs. People from around the globe are drawn to Cape Cod for its natural beauty, healthy environment and scenic vistas. The overgrown and degraded Herring River estuary is a severely impaired natural asset. Once restored with clean flowing water, open salt marsh vistas and abundant fish and wildlife, more people will enjoy the region and its amenities.

Project Status

Over the past decade, numerous partners have worked to develop restoration plans and are firmly committed to seeing this project completed. Engineering design and environmental review are well underway to prepare the project for construction. Preliminary cost estimates range from \$40-\$50 million over 5 years to build a new bridge and two secondary dikes, elevate 1.7 miles of roads above restored tides and implement measures to protect low-lying structures from flood waters. The Final Environmental Statement was published in June, 2016 and is currently under review

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PROJECT PROPONENTS Towns of Truro and Wellfleet National Park Service Cape Cod National Seashore

PARTNER ORGANIZATIONS American Rivers Association to Preserve Cape Cod Cape Cod Conservation District Coastal America Foundation Conservation Law Foundation Ducks Unlimited Environmental Protection Agency Friends of Cape Cod National Seashore Friends of Herring River Gulf of Maine Council on the Marine Environment Herring River Restoration Committee Marine Biological Laboratory Mass Audubon MassBays Program MA Corporate Wetlands Restoration Partnership MA Division of Ecological Restoration MA Environmental Trust National Park Service Natural Resource Conservation Service—USDA The Nature Conservancy National Oceanic & Atmospheric Administration Provincetown Center for Coastal Studies Restore America's Estuaries US Fish & Wildlife Service Wellfleet Conservation Trust



ECONOMIC AND SOCIAL BENEFITS

- » Estuaries provide habitat for more than 75 percent of the U.S. commercial fish catch, and an even greater percentage of the recreational fish catch.
- » Enhanced harvestable shellfish and finfish resources within the estuary and Wellfleet Bay.
- » Coastal recreation and tourism generate \$8-\$12 billion per year to the U.S. economy.
- » Improved public access for recreation, boating, birding, fin and shellfishing.
- » Improved operations, management and oversight of water management infrastructure.
- » Significant local and regional economic stimulus from both short-term construction and long-term project benefits.

