

Restoring the Herring River Estuary Wellfleet, Massachusetts



Existing dike constructed in the early 1900's

In the early 1900's, the residents of the seaside town of Wellfleet, Massachusetts constructed a large dike on the Herring River in an attempt to reduce the scourge of mosquitoes by blocking the tidal flow of saltwater. The river was an estuary believed to be a major breeding ground for the mosquitoes. This was an effort to make the area more attractive to tourists.



The Herring River is the largest river system within the Cape Cod National Seashore and one of the largest tidally-restricted estuaries in New England.

Over the years, however, it became clear that there were ecological consequences for blocking the river, with little reduction in mosquitoes. The herring run collapsed and oysters and other shellfish were contaminated. Invasive species took over the marshland, acidifying the peat and destroying its ability to absorb significant amounts of carbon.

By the early 2000's, state officials determined that the water quality had become so impaired that it violated the Clean Water Act, and local, state, and federal officials began looking at solutions to solve the problems created by the dike.

Since the early 1970s, seashore scientists and others have been studying the Herring River and documenting its degraded condition. The Towns of Wellfleet and Truro and the Cape Cod National Seashore established the Herring River Restoration Committee and tasked it with preparing an Environmental Impact Statement and Report (EIS/EIR) and developing a detailed restoration plan. A plan was developed to bring back as much of the natural flow of the river as possible. The plan included reclaiming more than 1,700 acres of habitat and to improve the area's ability to withstand climate change by restoring its wetlands.

Engineering and preliminary design of a bridge with tide control gates to replace the Chequessett Neck Road dike, a new dike and tide gates at Mill Creek and a tide control structure at Pole Dike Road to control water levels in Upper Pole Dike Creek have been completed. Several sections of low-lying roads will have to be raised and culverts replaced where needed.

Reintroduction of tidal flow is a long-term, phased process that will occur over several years. Gradual opening of adjustable control gates at the new Chequessett Neck Bridge will incrementally increase the tidal range in the river.

The primary reasons to implement the project in this manner are to avoid unexpected or sudden irreversible changes to the river and Wellfleet Harbor and to allow monitoring of the system so that unexpected and/or undesirable responses can be detected and appropriate remedial actions taken.

Phase one of the project is to remove the existing dike and replace it with a bridge that would allow more water into the river and have a tide control system. The first major construction contract, the Chequessett Neck Road bridge, was advertised on August 1, 2022.

The Town of Wellfleet received a \$27,200,000 grant award from USDA Natural Resource Conservation Service for construction and implementation. The Town has also received a \$22,670,000 grant from the Commonwealth for that purpose.

The NRCS will invest \$42.5 million to restore and protect water quality on Cape Cod. Some 21 individual projects will receive funding as part of the watershed-wide Cape Cod Water Resources Restoration Project, which will include seven fish passage installations, 10 stormwater remediation projects and four salt marsh restoration projects.

The NRCS funding is provided through the federal Watershed Protection and Flood Prevention Program. NRCS worked with the project sponsors – the Cape Cod Conservation District, the Barnstable County Commissioners, the Executive Office of Energy and Environmental Affairs and all 15 Cape Cod towns – to identify project sites.

Information for this article was provided by the Friends of Herring River. To view a video about the project click on this link: <http://friendsofherringriver.org/>

National Watershed Coalition
August 2022