

Massachusetts Office of Coastal Zone Management Wetlands Restoration Program (WRP) Project Nomination Form

This form should be used by a project sponsor to nominate a potential wetland restoration project to be designated as a priority project in order to receive assistance from CZM. Based on the information provided as well as other available data, program staff will review the nomination with review criteria contained in the RFR. CZM will contact the project sponsor to discuss the nomination and to arrange for a site visit as necessary. The sponsor will be notified in writing of the decision to accept or reject the potential restoration project as a current program priority after the review is complete. Please fill out the form as thoroughly as possible and return to the address below. Contact CZM with any questions. Thank you for your interest in restoring Massachusetts wetlands!

(Attach additional sheets as necessary)

Site Name: Herring River Salt Marsh

Site Location: City/Town: Wellfleet, MA

Nearest Road(s): Chequessett Neck Road (dike); Old High Toss Bridge Rd. (culvert)

Adjacent Waterbody: Wellfleet Harbor

Location notes: The tidal restriction is located on Chequessett Neck Road within the Wellfleet Harbor Area of Critical Environmental Concern (ACEC). This site is described in the Cape Cod Atlas of Tidally Restricted Salt Marshes (attached). See attached maps for detail on the project location.

*Please attach a USGS topographic map with the site location clearly marked. If available, also attach current and historic photos, maps, and aerial photos of the project site.

Project Sponsor: Wellfleet Conservation Commission

Designated Representative: Erik Mitchell & Emily Beebe

Name: Erik Mitchell & Emily Beebe **Title:** Assistant Health & Conservation Agent & Health & Conservation Agent

Address: 220 West Main Street

City/Town: Wellfleet **Postal Code:** 02667

Day Phone: (508)349-0308 **Email:** erik@cape.com

Landowner(s): Town of Wellfleet (tide & sluice gates) Cape Cod National Seashore (marshes to be restored); Two private homes within the floodplain that could potentially be impacted; the properties are owned by Sarah Rosenberg and Gerald & Hila Feil. Chequessett Yacht & Country Club (CYCC).

Has landowner expressed support for wetlands restoration at the site? Yes X No X Explain:

The Cape Cod National Seashore owns virtually all of the salt marsh that would be restored by implementing this project. They have expressed support for wetland restoration. The Town of Wellfleet owns the dike (sluice gate & tide gates) which controls the tidal restriction. On May 21, 2003, the Wellfleet Conservation Commission voted in favor (5-0-1) of restoring this valuable natural resource. The 1995 Local Comprehensive Plan received by Town Meeting (p. 2-53) seeks "to preserve and restore the quality and quantity of inland coastal wetlands in [sic] Wellfleet". The Rosenbergs have expressed some concern about the impact the restoration may have on their property and it is imperative to involve them, as well as the Feils and the CYCC, in the process. The CYCC is currently exploring the feasibility of relocating some of their fairways from the wetlands to the upland portions of their property.

Project Description: Briefly describe the history, current condition, and restoration needs of the wetland and surrounding landscape. What are the goals and objectives of the restoration project? What impacts have damaged the wetland? What is the extent and severity of the damage? What size is the area proposed to be restored (acres)? What physical actions are needed to restore the wetland? Are there practical and/or political issues that may impede this proposed restoration?

History - The Herring River dike was constructed in 1908 to control mosquitoes and create agricultural land. From 1908 through the 1930's the salt marshes were ditched and the river was straightened and channelized. Spoils were placed on the river banks which further impeded the flow of water into the interior marsh. Around 1934 a golf course was constructed in the flood plain at Mill Creek (a tributary (tidal) to Herring River). During the 1950s homes were built in the floodplain. During the 1960's the dike began to come apart, allowing the tidal range and salinity to increase above the structure. Shellfish began to re-colonize the upstream habitat. The golf course experienced high water levels during storm tides. In 1968 the dike gates rusted open. At Town Meeting in 1973 the citizens voted to appropriate \$37,500 to repair the dike. In 1973 the Conservation Commission issued an Order of Conditions for the dike repair, requiring the water levels to be restored to those observed prior to the dike repairs. The DNR (now DEP) upheld the Commission's Order upon appeal. The dike was reconstructed by the state in 1974 amid great controversy. The Association to Preserve Cape Cod (APCC) sponsored a report describing the water levels and vegetation, prepared by Moody and Snow. APCC objected to MA DPW for not opening the dike sufficiently, to no avail. In 1977 the State Attorney General ordered the town to transfer control of the dike valve to the DNR to allow the State to increase tidal flow. In 1980 there was a fish (eel) kill. In 1983 summertime oxygen depletions and herring kills were documented by the National Park Service. In 1984 the NPS determined that the principal nuisance mosquitoes emerged from the diked flood plain. Freshwater and brackish, not salt marsh, mosquitoes were dominant. In 1985 DEQE (now DEP) intensified bacterial sampling and classified the river as "prohibited" due to bacterial contamination. In 1986 the NPS began blocking herring emigration from the ponds to avert fish kills in the summertime. From 1987 to present day the NPS has published numerous studies, papers and reports on the impacts of the diking of the river (see attached).

Goals and Objectives - To restore the salt marsh, shellfish, finfish and wildlife habitat and the water quality of the Herring River and it's floodplain through incrementally opening the tidal restriction at the Herring River dike and ultimately removing it. To restore the ability of the salt marsh to benefit the public interests in the protection of marine fisheries, wildlife habitat, land containing shellfish, prevention of pollution, and storm damage prevention.

Impacts - The most significant impact to the salt marsh is caused by the tidal restriction at the Herring River dike. Other impacts include the resulting impediment to herring and eel passage and the encroachment of woody, upland species into the drained marshes.

Extent and Severity of Damage - According to a NPS report (Portnoy and Roman) approximately 1,000 acres of salt marsh has been impacted and up to 800 acres could potentially be restored. Species density of bivalves, gastropods, crustaceans and fish is significantly less above the dike than below (Roman 1987). The salt marsh above the dike is drained and is subsiding. The water in portions of the Herring River is highly acidic (values as low as 3.5 pH have been measured following summer rainfalls). Aluminum concentrations have been measured as high as 49 ppm. Woody, upland vegetation and invasive species have encroached onto large portions of the salt marsh. Fish kills occurred in the early 1980s. The tidal restriction inhibits adult herring returning to spawn and juvenile eels from returning to the river and ponds thereby increasing their susceptibility to predation and potentially resulting in adverse impacts to their populations.

Size of Restoration - According to a personal communication with the NPS somewhere in the neighborhood of 800 acres could potentially be restored by incrementally opening the tidal restriction.

Physical Actions Needed - The restoration is almost entirely dependent on opening the tide gates at the Herring River. There is also the potential reconstruction of a dike at Mill Creek to prevent damage to the golf course. However, the Chequessett Yacht & Country Club is currently exploring the possibility of moving some of their golf holes to the uplands in order to restore the wetlands on their property (which are currently being managed as turf fairways), therefore the reconstruction of the Mill Creek dike may not be necessary and an additional, significant area could also be restored. There are two private homeowners within the floodplain of the Herring River which may be impacted. The NPS will be negotiating with these homeowners regarding possible acquisition of the properties and relocation onto other parcels within the park outside of the floodplain or some other alternative or compromise that the private homeowners might be willing to accept.

Practical/Political Issues – The major practical and political issues relating to the Herring River include the private homeowners and golf course within the floodplain. Also commercial aquacultural grants lie downstream (approx. 1 – 1.5 miles) of the Herring River and there is some concern about the impacts the restoration may have on their livelihood. The history of the Herring River is long and well-known. Many misperceptions might be diminished through educational outreach and involving the community in such things as monitoring of shellfish & finfish populations, changes in vegetation, and providing valuable observations, etc... if the tidal restriction is opened.

Is any part of the site subject to a wetlands permit or enforcement order?¹ Yes X* No ___ If yes, explain:

An Order of Conditions issued by the Wellfleet Conservation Commission determined the extent of the opening of the sluice gate. However, pursuant to the MA Wetlands Protection Act, an Order of Conditions expires after 3 years. Conditions may be continued at the time a Certificate of Compliance is issued. Some research may be required at the DEP regional office in Lakeville to determine if the Certificate of Compliance includes such a continuing condition. The files regarding the Herring River can not be located in the Wellfleet Conservation Office.

Has any funding been identified for this project? Yes ___ No X If yes, describe:

Potential from: American Rivers, NOAA, CCNS, Ducks Unlimited

Have any other restoration partners (actual or potential) been identified? Yes X No ___ If yes, please state their relationship to the project and include contact information:

NOAA – Steve Block

NPS – Cape Cod National Seashore – John Portnoy, Nancy Finley, Maria Burks

Please send this form with attachments to:

Bruce Carlisle, Coordinator
Wetlands Restoration Program
MA Office of Coastal Zone Management
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Boston, MA 02114