



NOAA Community-based Restoration Program



Mallard Road Salt Marsh Restoration Quincy, Massachusetts

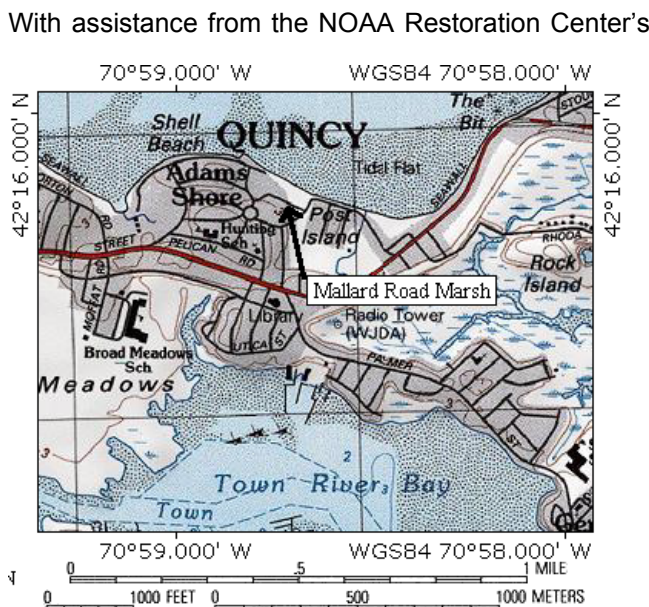
Hough's Neck, located in Quincy, MA, is a peninsula in Massachusetts Bay containing almost 170 acres of salt marsh. Once referred as the "Flounder capital of the world" the area used to be a popular recreational fishing spot for fish such as cod (*Gadus morhua*), bluefish (*Pomatomix saltatrix*), haddock (*Melanogrammus aeglefinus*), striped bass (*Morone saxatilis*) and flounder. Currently, however, fish stocks have been heavily impacted by a variety of human activities including the degradation of salt marshes that provide important nursery and spawning areas for fish.



Mallard Road Salt Marsh

Mallard Road marsh is a 1.5 acre salt marsh within Hough's Neck. Historically, part of Post Island Marsh, Mallard Road marsh was cut off from the main marsh in the early 1900's with a construction of a footbridge. This footbridge was eventually expanded to a dirt road providing residential access. As the road created a barrier between Mallard Road Marsh and Post Island Marsh, an undersized culvert was placed under this road in 1997 to promote tidal flow, but was insufficient in size to allow for adequate exchange into the marsh. As a consequence, the Mallard Road marsh receives little tidal water leading to decreased salinity levels. Low salinity levels favor the expansion of invasive species namely the common reed, *Phragmites australis*, which outcompetes native salt marsh vegetation such as cordgrass (*Spartina alterniflora*), salt marsh hay (*Spartina patens*) and hornwort (*Salicornia* sp.). Shifts in vegetation to a *Phragmites* dominated stand poses a major fire hazard for residents and degrades habitat for fish by eliminating nursery and spawning areas. Eliminating fish habitat impacts birds by reducing their forage area. In addition, gravel from the roadbed has over time washed into the marsh, raising the marsh bed to elevations unsuitable for salt marsh vegetation.

With assistance from the NOAA Restoration Center's Community-based Restoration Program, the City of Quincy along with support from and other project partners is taking the lead to restore tidal flow to the 1.5-acre Mallard Road marsh. The undersized culvert will be replaced with a larger culvert and the gravel road will be stabilized to prevent erosion of sediments and will be aesthetically enhanced to look like a wooden bridge crossing. A self-regulating tide gate will be installed reducing flooding potential to nearby low-lying houses by facilitating freshwater drainage during rain events as well as controlling water levels during high tide events. Gravel washed from the road will be removed and the area will be regraded to elevations better suited to salt marsh vegetation. The fill excavated from the marsh will be used to elevate adjacent areas to create a small coastal park that will showcase interpretive information about the restoration projects as well as provide educative information about the functions and values of coastal salt marshes. The City of Quincy along with local volunteers are committed to long term maintenance including cleaning of the culvert and





A seawall abuts the Mallard Road Marsh

debris removal in order to preserve the integrity of Mallard Road marsh. The total project cost is estimated to be approximately \$59,000 with completion expected in Fall 2003.

The benefits from restoring tidal exchange to Mallard Road marsh are numerous. Increased tidal flow will raise salinity levels helping to combat further invasion of *Phragmites* as well as encouraging the reestablishment of salt marsh vegetation. The restoration of salt marsh vegetation will restore nursery and forage areas for fish and invertebrates such as mummichogs (*Fundulus heteroclitus*), striped killfish (*Fundulus majalis*), sheepshead minnows (*Cyprinodon variegatus*) and winter flounder (*Pseudopleuronectes americanus*). These fish in turn will provide forage for larger fish and birds including Great Blue Herons, egrets and migratory shorebirds. Restoring habitat for fish will also aid to combat mosquito populations and

reducing *Phragmites* stands will lessen fire hazard concerns. The creation of the park adjacent to the restoration site will provide excellent public outreach and educational opportunities especially for the environmental science curriculum in Quincy Public Schools.

The restoration at Mallard Road is part of a larger effort by the City of Quincy to restore marshes at Hough's Neck. Past restoration projects have included fill removal and installation of a self-regulating tide gate at Post Island Marsh as well as Hough's Neck Third Marsh. Results of the restoration effort at Post Island in 1992 have been overwhelmingly successful with the disappearance of *Phragmites* and the return of salt marsh vegetation.

In addition to the NOAA Community-based Restoration Program and the City of Quincy, a number of organizations and agencies have been active in restoring tidal flow to the Post Island Salt marsh including the Post Island Road Neighborhood Association, the Willows Neighborhood Group, the Massachusetts Wetlands Restoration Program, Conservation Law Foundation, Massachusetts Coastal Zone Management, Army Corps of Engineers and the Office of Congressman William Delahunt. Many departments within the City of Quincy have been supportive of this project including the Department of Public Works, Conservation Commission, the Beaches Commission, Parks Department, the City Council and the Office of the Mayor. PJ Foley, a local citizen, has been instrumental in raising and organizing community support for restoration efforts in Quincy. The Hough's Neck Seacoast and Salt Marsh Group, a local community group, has also been actively involved in supporting this project through providing volunteer labor, education and outreach.

The NOAA Community-based Restoration Program seeks to involve communities in the restoration of marine and estuarine habitat. Partnerships with Federal agencies, states and local governments, non-governmental and non-profit organizations, businesses, industry and schools have assisted over 700 projects nationally including 49 within the Gulf of Maine to restore coastal habitat. The NOAA Community-based Restoration Program and its partners provide funding and expertise to projects that promote coastal stewardship and a conservation ethic. Through partnerships, the Community-based Restoration Program has been able to leverage \$3-\$5 on average for every NOAA dollar invested.



Public Park adjacent to Mallard Road Salt Marsh

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