

What IS A Salt Marsh?

A salt marsh is a coastal wetland that extends up to the highest high tide line and is characterized by plants that are adapted to or prefer living in saline soils. Dominant plants within salt marshes include salt meadow cord grass (*Spartina patens*) and salt marsh cord grass (*Spartina alterniflora*). A salt marsh may contain tidal creeks, ditches and pools. Coastal wetlands are among the Commonwealth's most valuable natural resources.



Why are Salt Marshes Important?

Biological Functions

- ➔ Salt marshes are rich in marine life. They provide protected nursery areas for juvenile fishes, shellfish, crabs, and shrimp as well as a home for other animals such as birds, small mammals and turtles.
- ➔ Salt marshes also act as filters. Pollutants from upland activities flow through the marsh and are trapped by marsh vegetation and sediments, reducing the pollutant load entering estuaries.
- ➔ Coastal flood control, erosion prevention and soil stabilization are a few more of the many important functions of salt marshes.

Benefits to Humans

- ➔ Because numerous commercially and recreationally important fish and shellfish species spend the early part of their lives in salt marshes, indirectly these marshes provide people with food or income.
- ➔ Many people visit salt marshes simply to watch birds and enjoy nature's beauty.
- ➔ Everyone benefits from cleaner water!!!

What is a Tidally Restricted Salt Marsh?

Many salt marshes have been adversely impacted by human activities. Usually these activities are transportation related, such as the construction of roads, bridges, railroads, and footpaths. Bridges and culverts are commonly installed during construction to allow movement of tidal waters. However, these structures are often too small to allow full tidal flows necessary to maintain natural salt marsh vegetation upstream.



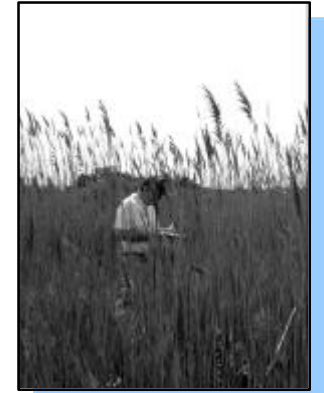
Structures that restrict the normal tidal flow of a salt marsh are referred to as "tidal restrictions". Restricting the normal tidal flow of a salt marsh can result in significant changes in its ecology. The strongly saline environment can change to one that is brackish or freshwater when seawater

is unable to reach the restricted areas. This change in marsh hydrology enables plants able to tolerate lower salinities, such as the common reed *Phragmites australis*, to invade the marsh and replace the natural salt marsh plants. This in turn leads to the displacement of wildlife species dependent on salt marsh vegetation.

Identifying Tidally Restricted Salt Marshes in Buzzards Bay...

Identification

In the winter of 1998, the Buzzards Bay Project, in partnership with the Department of Environmental Protection's Wetlands Restoration and Banking Program, began locating areas of impaired salt marsh vegetation along the coast of Buzzards Bay. Of particular concern were salt marshes impacted by human activity.



Maps of degraded habitat along with information on the potential causes of degradation (tidal restrictions, fill placement, etc.) were compiled into *The Atlas of Tidally Restricted Salt Marshes- Buzzards Bay*. This document has been made available for use by municipalities, state agencies, and other organizations to initiate salt marsh activities at these sites when appropriate.

Selection of a Marsh for Restoration

- ➔ Utilizing information in the atlas, the Buzzards Bay Project selected Winsegansett Marsh as our first demonstration project for salt marsh restoration.

RESTORING Winsegansett Marsh

The Winsegansett Salt Marsh system is a 30-acre coastal wetland on Sconticut Neck in the Town of Fairhaven. Located behind a barrier beach, the marsh is connected to the waters of Outer New Bedford Harbor and Buzzards Bay through a series of tidal creeks. The upper portion of Winsegansett has been separated from the rest of the marsh by the construction of Winsegansett Ave. An insufficiently sized 18-inch culvert currently exists under the road. Also restricting tidal flow are 3 privately owned culverts placed under footpaths that cross over the marsh. By restricting the tidal flow, the salt marsh vegetation is gradually being replaced with nuisance, nonnative species. Today, nearly half of the upper marsh has been converted to common reed.



As part of the Winsegansett Salt Marsh restoration process, these four culverts will be replaced with larger culverts that allow more of an adequate tidal flow. The increased tidal flow will permit the recolonization of naturally occurring plant communities and will effectively restore the salt marsh habitat in the upper six acres of the marsh. It is hoped that the restoration of Winsegansett Salt Marsh will serve as a model for future salt marsh restoration efforts throughout the Buzzards Bay watershed and beyond.

How can you help?

If you believe you know of a salt marsh that is tidally restricted or if you would like more information on how to restore tidally restricted salt marshes in your community please contact us. Also, if you would like to know more about the Winsegansett Salt Marsh Restoration Project or the *Atlas of Tidally Restricted Salt Marshes-Buzzards Bay*, you can call or visit our website at www.buzzardsbay.org.

WHAT IS THE BUZZARDS BAY PROJECT?

The Buzzards Bay Project (BBP), established in 1985, is one of 28 Estuary Programs throughout the United States. The BBP is jointly administered by the Massachusetts Office of Coastal Zone Management and the U.S. Environmental Protection Agency. The primary role of the Project is to provide technical assistance and funding opportunities to municipalities surrounding the Bay to facilitate implementation of the recommendations contained in the Buzzards Bay Comprehensive Conservation Management Plan (CCMP). The CCMP, which was completed by the Project in 1991, outlines research conclusions and management strategies for the protection and restoration of water quality and living resources in the Bay and its surrounding 432 square mile watershed.



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RESTORING Salt Marshes IN BUZZARDS BAY

TAKING ACTION AT
WINSEGANSETT MARSH

