# Scarborough Marsh Restoration Project Fact Sheet

# Mill Brook Saltmarsh

## Overview

Scarborough Marsh is the largest contiguous salt marsh in Maine and is a valued and high priority estuarine resource. The marsh has also been subjected to multiple forms of degradation, including tidal constrictions which impede tidal flow and ditching which drains pools and pannes as well as lowers groundwater levels. Friends of Scarborough Marsh and partners have developed designs and sought funding to respond to problems in the Mill Brook area, one of several high-priority candidates for restoration. The project will affect approximately 381 acres of the Mill Brook salt marsh in the Scarborough Marsh Wildlife Management Area.

At Mill Brook, man-made ditches have excessively drained substantial sections of the marsh, lowering the natural water table and destroying permanent pool habitat that once supported a swuite of species (aquatic plants, invertebrates, fish, shorebirds, wading birds, and waterfowl). This area is further troubled by an extensive Phragmites invasion, in part as a result of excessive fresh-water run-off from upland developments. (For more about Phragmites, see sidebar / page 2.)

## Purpose of Restoration

The project at Mill Brook will re-establish ecological functions of high marsh community by plugging drainage ditches. By installing ditch plugs in up to 35 strategic locations, water will no longer drain away. As the water table rises, permanent pool and panne habitat will also be restored. In addition, the conditions allowing for the return of natural vegetative communities will be restored. Maintenance to short ditches will drain excess freshwater run-off from upland developments. One short road berm will also be breached to improve tidal flow and twelve tiny patches of the invasive Phragmites will be treated with Rodeo, a short-lived but effective herbicide (see other side for more details).

## Restoration Timeline & Process

Restoration design work, monitoring protocol and cost estimates have been finalized and permits have been submitted. Fundraising is nearing completion. Pre-restoration monitoring was conducted during the Summer of 2003. Restoration activities continue through the fall and winter of 2004-2005.

## Mill Brook Project Partners

Maine Dept. of Inland Fisheries & Wildlife
US Fish & Wildlife Service Gulf of Maine Program
Natural Resources Conservation Service
Ducks Unlimited, Inc.
Maine Corporate Wetlands Restoration Partnership
Friends of Scarborough Marsh
National Fish & Wildlife Foundation
Scarborough Conservation Commission
Scarborough Land Conservation Trust
Local business and foundation supporters

*Need picture of Millbrook site here*

## For More Information, Contact:

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Produced by Friends of Scarborough Marsh
January, 2005

# Phragmites — Questions & Answers

## What is Phragmites?

Non-native Phragmites, also known as common reed, is a perennial and aggressive wetland grass. Growing in dense stands of reeds over 10 feet tall, it is easily recognized by its height and distinctive fronds of fluffy seed heads, which turn from purplish in July, to brown, then gray by October.

### Where does Phragmites grow?

Found in marshes and swamps, along streams, lakes, ponds, and ditches, Phragmites is most commonly associated with coastal brackish water, as well as disturbed, moist sites. Often found alongside roads, stands of the reed are easy to spot—even by motorists traveling quickly. More and more prevalent in Scarborough, Phragmites has become so common, many mistakenly believe it is "the marsh."

### How does Phragmites spread?

Often very difficult to eradicate, Phragmites can be an aggressive species that rapidly colonizes new areas. In addition to distribution of the seeds in the seedhead that can be seen at the top of the plant, shoots and rhizomes grow from the nodes, spreading the plant far beyond its original bounds. Rhizomes may reach 10 meters or more in length, and in sparse stands, shoots that fall over become horizontal runners.

### Why is Phragmites a problem?

Phragmites can be an indicator that a wetland ecoysystem is out of balance. Disturbances or stresses such as pollution, alteration of the natural hydrologic regime, and increased sedimentation favor invasion and continued spread of Phragmites. According to the best available scientific information, there may be a strain of Phragmites, native to the US, which is non-invasive and relatively rare. The non-native Phragmites, which tends to grow in monospecific (one species) stands, out-competes other plant species. In contrast to beneficial wetland species, Phragmites provides little or no food or shelter value to saltmarsh dependant wildlife, and contributes to the loss of biodiversity of the associated native fish and wildlife species typically found in a healthy saltmarsh. Phragmites itself becomes a greater and greater problem as the quality of our wetlands deteriorates.

## What Is Being Done to Control Phragmites in the Mill Brook Project Area ?

Phragmites in the Mill Brook area will be treated with an herbicide specific for controlling unwanted wetland plants.

**What will be used?**
Rodeo, an aquatic herbicide which is used to control unwanted plants growing in and around water, will be applied directly to the Phragmites plants in the Cascade Brook project area. Rodeo is made by Monsanto.

**How does Rodeo work?**
The herbicide will be applied directly to the foliage of the targeted aquatic plant. To work, Rodeo must come into direct contact with the exposed leaves. The chemical ingredients rapidly move through the plant tissues and into the roots, and effectively stop the plant from growing. Rodeo targets a protein found only in plants. Once inside the plant, the active ingredient (glyphosate) interrupts the plant's ability to produce this protein. In a week or so the treated plants will yellow, turn brown, and eventually die.

**Will Rodeo harm people, pets, or wildlife in the treated area?**
Used in the prescribed manner, Rodeo is nontoxic to humans, pets, and wildlife. There are no restrictions on the use of water in areas that have been treated with Rodeo herbicide.

**Does the herbicide harm plants not directly sprayed?**
Rodeo must come into direct contact with the exposed leaves and will affect only the aquatic plants that have been directly sprayed.

**Does Rodeo herbicide affect soil or water quality?**
Rodeo is "foliar active" — it only affects plants — so it has no activity in the surrounding soil or water. It is also biodegradable. Rodeo will be absorbed onto soil particles in water or sediment in the area. Microorganisms in both the water and sediment rapidly break the chemicals in Rodeo into naturally occurring compounds.

**Who has cleared Rodeo herbicide for use on aquatic sites?**
The Environmental Protection Agency (EPA) has given its approval for the use of Rodeo herbicide on all types of aquatic sites, including estuaries. Rodeo must be applied by a licensed professional. The Maine Dept. of Inland Fisheries and Wildlife, US Fish & Wildlife Service, Friends of Scarborough Marsh, and the Scarborough Conservation Commission have recommended its use for the control of Phragmites on selected sites within the Scarborough Marsh watershed.

**Where can I find out more?**
For more information about the Mill Brook Restoration Project and the use of Rodeo herbicide on the Phragmites found in that area, contact Phil Bozenhard, Regional Wildlife Manager, Maine Dept. of Inland Fisheries & Wildlife (207) 657-2345 or Lois Winter, Conservation Biologist, US Fish & Wildlife Service (207) 781-8364.

Produced by Friends of Scarborough Marsh
January, 2005