

Salt marshes get and give new life

By Eric Aldrich

PORTSMOUTH - After centuries of abuse, many of New Hampshire's salt marshes are working again. Historically, salt marshes suffered from all sorts of alterations by well-meaning people who felt they could improve nature's design. But these ecosystems provide vital habitats for fish and birds, valuable filtering functions for water quality, and important components of the Seacoast landscape.

Fixing the plumbing

In the past 10 years, efforts to restore New Hampshire's salt marshes have focused on repairing the "plumbing" to restore tidal flow. In 1994, before New Hampshire's salt marsh restoration efforts really began, the Natural Resource Conservation Service searched around the Seacoast and found 31 places where the ocean's tides were blocked from salt marshes by roads, bridges and culverts.

Those 31 tidal restrictions were limiting water flow to an estimated 700 acres of salt marsh. "Over the past decade, we've eliminated 17 of the 31 tidal restrictions," said Ted Diers of the N.H. Department of Environmental Service's Coastal Program.

Controlling mosquitoes

An example of salt marsh alteration involves mosquito control. During the Great Depression in the 1930s, one Public Works project involved having the Civilian Conservation Corps dig ditches throughout the salt marshes. The idea was to allow better drainage of the salt marshes. Draining the standing water, they thought, eliminates the stagnant pools where mosquitoes breed. "It was very successful in draining the marshes," Diers said, "And it probably worked for a time in controlling mosquitoes." But then the ditches gradually began to fill in here and there, creating scattered pools of mosquito-breeding habitat. These pools were completely cut off from the creeks - and the thumb-size fish that eat their larvae. To address the mosquito problem (and restore the salt marsh), today's restoration crews fill some of the ditches and connect others. The aim is to allow for high tidal flows to the area for a longer period of time and re-establish habitat for mosquito-eating mummichogs.

Restoration partners

Several state and federal agencies have worked to restore wetlands, but it is the contributions of local communities and volunteers that provide the crucial element. A good example of a multi-partner effort is the restoration of Pickering Brook in Greenland. The 40-acre salt marsh suffered from the "ditch and drain" management strategy of the 1930s. Several partners came together to create semi-permanent pools in the marsh to provide habitat for salt marsh birds and fish. Ducks Unlimited, the University of New Hampshire, the New Hampshire Coastal Program and volunteers documented the degraded "health" of Pickering Brook marsh by examining fish and bird use, mosquito larvae abundance, and groundwater and salinity levels. Eric Aldrich is director of communications for The Nature Conservancy in New Hampshire. This is one of a series of monthly columns about coastal watershed issues by the New Hampshire Estuaries Project. For more information, visit www.nh.gov/nhep.

Published in Portsmouth Herald on 12/13/2004