

Keeping Maine's Forests Pilot Project Summary: Penobscot Watershed Stewardship and Restoration

Project Description:

Working with state, federal, and nonprofit fisheries habitat managers, the project offers technical assistance to identify, prioritize, and remove barriers to fish passage in high priority watersheds, starting with the Pleasant River drainage within the Penobscot River watershed. A range of assistance is provided, depending on the landowner's interests and needs:

- ◆ **Training programs to familiarize landowners with existing, publicly available tools** for assessing barriers to aquatic connectivity and determining best management practices for restoration;
- ◆ **Technical assistance in prioritizing habitat restoration for salmon, alewives and brook trout**, using existing state and federal habitat assessment methods;
- ◆ **Technical assistance in identifying and prioritizing existing barriers to fish passage** using existing data, and conducting additional field surveys with cooperating landowners;
- ◆ **Technical assistance in identifying cost effective ways to improve fish passage;** and
- ◆ **Financial assistance for qualifying landowners**, utilizing existing US Fish & Wildlife Service, NOAA, and NRCS programs, for barrier removal and stream bank restoration.

Goals:

- ◆ Improve recreational and commercial fisheries.
- ◆ Demonstrate methods of prioritizing restoration work to correct a widespread problem (barriers to aquatic connectivity and degraded stream habitat from culverts and bridges) in a way that lends itself to ready implementation by a broad group of forest landowners.
- ◆ Focus this effort in the Penobscot River watershed to build on other ongoing restoration work.

Background:

Through the Penobscot River Restoration Project, three major dams on the Penobscot River will be removed or bypassed, opening up over 1,000 miles of river and streams to sea-run fish, including salmon and alewives (herring), without negatively impacting hydropower generation. Successfully restored, the salmon fishery could once again become a significant recreational industry for economically underperforming areas of the state. Alewives are a vitally important food fish for all recreational and commercial fisheries, including lobster, striped bass, bluefish, tuna, cod, haddock, halibut, American eel, and all Maine cold and warm freshwater fish. In addition, 35 towns in Maine have commercial alewife harvesting rights on 39 streams that they lease to fishermen. Improving the alewife spawning grounds will benefit all fisheries, with direct benefits to commercial and recreational fishermen and these municipalities.

Another economically important fishery is in the Moosehead-Katahdin region, the headwaters of both the Penobscot and Kennebec Rivers. Maine contains 90% of the intact brook trout habitat in the eastern United States, and a significant concentration of the nation's native brook trout habitat is located within this region. Brook trout are a critical species for the recreational fishing industry in northern Maine; improving brook trout habitat will have direct economic benefits to guides and tourism businesses in the region who will be able to claim access to the best trout fishing in the east.

Once three dams in the Penobscot River are removed or bypassed, the ability of fish populations to access habitat in the tributary streams and ponds will be critical to ensuring effective restoration of the sea run fish populations, and will enhance brook trout populations at the same time. However, logging roads, culverts, and bridges along the tributaries can block fish passage, depending on their state of repair. Investing coordinated

resources and expertise in this region to improve stream crossings and stabilize stream banks is a wise use of private and public funds with significant potential economic benefits.

The Issue:

Undersized or hanging culverts are often barriers to fish passage, cutting off access to important habitat for native cold-water species. These culverts also degrade stream habitat by creating marshy backwaters that destroy the trees along the stream, reduce shade, increase water temperature, and reduce stream flow. These conditions tend to favor warm water and invasive species that out-compete the cold-water fish.

Initial Pilot:

NRCS met with a landowner that was interested in removing three culverts on their property. Two of the three culverts were severe barriers to fish passage. NRCS engineers designed the remediation work to remove the culverts and restore the stream banks in accordance with the landowner’s wishes. Prior to construction, stream monitoring data was collected, and brook trout were removed from the construction site. USFW secured the necessary permits and funded the project in its entirety. There were no costs to the landowner, but the landowner was responsible for hiring the contractor. The removal of the three culverts has reconnected three miles of stream habitat identified by the Maine Department of Inland Fisheries and Wildlife as wild brook habitat. An assessment of the project’s effectiveness will be made by comparing MDIFW’s data on the project area streams before and after barrier restoration work.

Cooperating Entities:

The Penobscot Watershed Stewardship and Restoration Pilot Project has coordinated the resources and efforts of the following groups:

- ◆ Appalachian Mountain Club (AMC)
- ◆ The Nature Conservancy (TNC)
- ◆ Natural Resources Conservation Service (NRCS)
- ◆ US Fish & Wildlife Service (USFWS)
- ◆ Maine Department of Inland Fisheries & Wildlife (MDIF&W)
- ◆ Huber Resources
- ◆ Trout Unlimited
- ◆ Forest Society of Maine

Next Steps:

Keeping Maine’s Forests is coordinating with other interested adjacent landowners to broaden the effort in 2012. Projects are likely to include removal, restoration, and/or replacement of culverts and bridges.

