



NOAA Community-based Restoration Program



Sebasticook River Anadromous Fish Restoration Newport & Plymouth, Maine

The Sebasticook River, the largest tributary to the Kennebec River, is approximately 50 miles long and runs through Kennebec, Somerset, Waldo, Penobscot and Piscataquis counties in Maine. Historically, the Sebasticook River provided nursery and spawning habitat to many anadromous fish including shad (*Alosa sapidissima*), alewives (*Alosa pseudoharengus*), blueback herring (*Alosa aestivalis*), rainbow smelt (*Osmerus mordax*), Atlantic and short-nosed sturgeon (*Acipenser oxyrinchus*, *Acipenser brevirostrum*), Atlantic salmon (*Salmo salar*) and American eel (*Anguilla rostrata*). Rainbow smelt, sturgeon and salmon are known to utilize the lower part of the river while shad and alewives can migrate into the upper reaches. However, over time the construction of several dams on the Sebasticook River has severely impeded fish passage and anadromous fish, namely shad and alewives, have been unable to reach historic spawning areas.



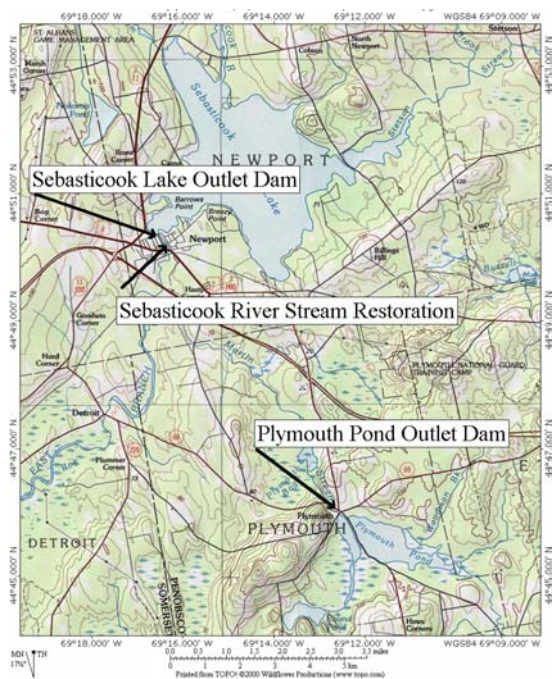
Sebasticook River just below Plymouth Pond

In 1998, the Federal Energy Regulatory Commission ordered the decommissioning and removal of Edwards Dam in Augusta, Maine. As part of the Lower Kennebec River Comprehensive Hydropower Settlement Accord, an agreement was reached providing for the removal of Edwards Dam, for fish passage requirement at upriver dams and for funds for fisheries restoration. In order for fish passage to be mandated at two downstream hydroelectric dams, Benton Falls and Burnham, fish passage must first be secured at 4 upstream non-hydropower dams. The state of Maine has been taking the lead to seek fish passage on 4 non-hydropower dams on the Sebasticook: Sebasticook Lake outlet dam, Guilford dam, Pleasant Pond outlet dam and Plymouth Pond outlet dam. The Town

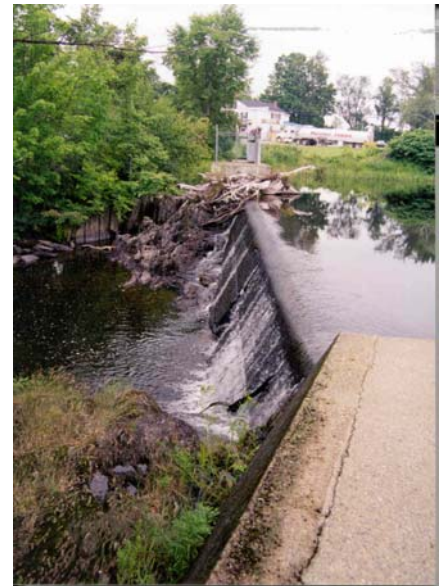
of Stetson rebuilt the spillway at Pleasant Pond dam in 1999 and the Maine Department of Marine Resources removed Guilford Dam in 2002 as a result of this mandate. The state has been actively working on the remaining two dams at Sebasticook Lake and Plymouth Pond to facilitate fish passage. With removal of Edwards dam, 17 miles of riverine habitat became available for use by anadromous fish. However, with the completion of further fish passage projects an additional 28 miles of riverine habitat will be open for use by anadromous fish.

With assistance from the NOAA Community-based Restoration Program, the State of Maine along with support from other project partners is taking the lead to restore fish passage to Sebasticook Lake and Plymouth Pond through installation of fish ladders as well as some stream restoration work along the Sebasticook River.

At the Sebasticook Lake Dam a pool and chute fishway was constructed in 2003 to allow fish passage into the lake. The fishway is located on the eastern side of the lake and provides excellent public viewing with a small park located directly adjacent. The Town of Newport is leading this effort and the total costs for this project were estimated to be \$352,000.



At the Plymouth Pond dam, two fishways were constructed in 2002 to facilitate fish passage. One was placed at the dam outlet and the other was installed at a small falls just below the dam. As the outlet of the dam is divided into two channels by a ledge, a cut in the ledge was made to allow fish on both sides of the ledge to access the fishway. The installation of these fishways will allow anadromous fish access to 480 surface miles of upriver habitat in the East Branch Sebasticook. In addition, through a new state volunteer project, this project provides opportunities to engage the local community in fishway monitoring, and fishery assessment programs. The Maine Department of Marine Resources is leading this project and total costs were estimated to be \$100,000.



Plymouth Pond Dam

Between Sebasticook Lake and the former site of the Guilford dam, runs an approximately 1,800-foot stretch of the Sebasticook River. Before the removal of the Guilford dam, the river had been channelized in 1980 to facilitate the annual drawdown of Sebasticook Lake, which flushed algae and phosphorus from the eutrophic lake. With the removal of the dam, the channelized stretch has led to high water velocities that make passage difficult for alewives. In addition, the channelization eliminated much of the riverine habitat favored by aquatic animals and has allowed the spread of invasive vegetation such as the common reed, (*Phragmites australis*), purple loosestrife (*Lythrum salicaria*), and reed canary grass (*Phalaris arundinacea*). The Town of Newport is leading an effort to restore this reach by reestablishing native vegetation and restoring historic river meanderings. Total costs for this project were estimated to be \$402,000.

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The benefits from creating fish passage at Sebasticook Lake and Plymouth Pond dams are numerous. Greater fish passage will increase spawning habitat for shad and alewives, which in will feed other fish and wildlife. Restoring the Sebasticook River will also benefit the community by combating growth of invasive species and providing habitat for aquatic fish, invertebrates and birds as well as allowing for educational and public outreach activities. With the completion of these fish passages, the two downstream mainstem dam owners will be required to create fish passage at their hydroelectric dams. This project is unique as it has a watershed approach involving many communities along the Sebasticook River who are all supportive of restoring anadromous fish passage.

In addition to the NOAA Community-based Restoration Program, the Maine Department of Marine Resources, and the Towns of Newport and Plymouth, a number of other organizations and agencies are committed to restoring anadromous fish passage on the Sebasticook River including American Rivers, Conservation Law Foundation, Environmental Protection Agency, FishAmerica Foundation, Friends of the Kennebec River, Maine Department of Inland Fisheries and Wildlife, Maine State Planning Office, Mid-Maine Communications, National Association of Counties, National Fish and Wildlife Foundation, Natural Resources Conservation Service, Natural Resources Council of Maine, Penobscot County Soil and Water Conservation District, Sebasticook River Watershed Association, Trout Unlimited, US Fish and Wildlife, and the Wildlife Habitat Council.

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.



View of the new fishway and viewing platform at the Sebasticook Lake Dam outlet

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