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Highland Lake Fish Passage Restoration (Fact Sheet)

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FACT SHEET

HIGHLAND LAKE FISH PASSAGE RESTORATION

Westbrook, Maine

September, 2006

Stock Enhancement Division

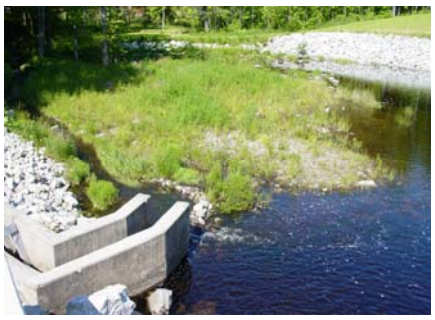
Gulf of Maine Coastal Program

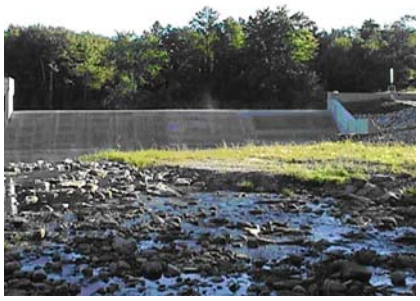
Engineering Services

City of Westbrook

Highland Lake Association

Nearby landowners





PURPOSE:

Renovating the fishway and restoring the degraded stream channel at Highland Lake Dam will improve upstream and downstream passage for diadromous (sea-run) fish – especially alewives. Historically, alewives had enjoyed free access to Highland Lake's spawning and nursery habitat, so this project will help restore the alewife population, enhance biological vitality, improve recreational opportunities and expand economic prospects in the Presumpscot River Watershed, Casco Bay and the Gulf of Maine. This restoration project represents one more important piece in the ongoing efforts of state and federal natural resource agencies, towns, non-government organizations and individual citizens to bring the Presumpscot River and its watershed back to life as a cornerstone of community, state and national pride!

BACKGROUND INFORMATION:

In 1936, a dam owned by the City of Westbrook was built at the outlet of Highland Lake, cutting off native sea-run alewives from their historic spawning and nursery habitat. More than 50 years later, in 1988, Maine Dept. of Marine Resources constructed a concrete denil fishway at the dam to once again allow adult alewives to successfully pass upstream to spawn in Highland Lake and to allow adult and juvenile alewives to move downstream to the Gulf of Maine. During a massive southern Maine flood in October 1996, the old Highland Lake Dam breached, the fishway was destroyed, and the downstream channel was degraded and over-widened. A new dam and fishway were constructed in 2000, but they have not worked effectively at passing alewives.

-- see reverse --

A planning team, initially including biologists and engineers from Maine Dept. of Marine Resources, U.S. Fish and Wildlife Service and USDA Natural Resources Conservation Service initiated design work, solicited additional partners and consultants to provide technical and financial support, obtained required permits, and conducted outreach. This project will:

- Adjust the fishway structure to reduce the velocity of the water in the fishway and improve passage of adult alewives into Highland Lake,
- Restore the degraded stream channel to direct adult alewives to the fishway entrance,
- Restore the degraded stream channel to concentrate water flows and improve upstream and downstream migratory routes for adult and juvenile alewives, and
- Install a fish trap and counter to monitor and help manage the Presumpscot alewife population.

RESOURCE VALUES:

This restoration project will provide alewives with access to 640-acre Highland Lake for spawning and nursery habitat. With fish passage restored, Highland Lake will produce an estimated 150,000 adult alewives annually. Alewives from Highland Lake will travel to Mill Brook, the Presumpscot River, Casco Bay and the Gulf of Maine, creating a healthier and more diverse watershed by providing vital nutrients and forage along the entire route. Alewives swim as far as 120 miles offshore in the Gulf of Maine to grow to adulthood. They swim back to freshwater lakes to spawn in the spring. In summer and fall, adults and juveniles return to the ocean. Between and within these habitats, nearly everything eats alewives: striped bass, bluefish, weakfish, tuna, cod, haddock, halibut, American eel, brown trout, brook trout, landlocked salmon, smallmouth bass, largemouth bass, pickerel, perch, seabirds, bald eagle, osprey, great blue heron, gulls, terns, cormorants, seals, whales, otter, mink fox, raccoon, skunk, weasel, fisher and turtles. Alewives have been central to the web of life in Maine for millennia. If we give alewives a chance by helping restore them to their spawning grounds, alewives will once again play an important role in bringing our rivers, lakes, estuaries and oceans back to life. In return, we will be treated to exuberance and bounty in Maine's watersheds, in a way that none of us have fully experienced in our lifetimes.

To learn more about Maine alewives, visit
http://www.maine.gov/dmr/rm/speciesinformation.htm
http://www.fws.gov/northeast/gulfofmaine/publications/alewives.htm

OTHER ENVIRONMENTAL SUCCESSES IN THE PRESUMPSCOT WATERSHED:

As water quality and air quality have improved in the Presumpscot River watershed in recent years, grassroots, state and federal efforts have expanded to permanently protect and restore lakes, streams and river corridors. In the last few years, several initiatives to permanently protect and restore riparian habitat for fish and wildlife and to enhance recreational trail uses have come to fruition. Some of the notable accomplishments include:

- removal of Smelt Hill Dam at the head-of-tide on the Presumpscot River,
- permanent protection of riparian habitat at the Presumpscot River Preserve and other locations,
- construction of recreational trail corridors,
- construction of boat access facilities,
- completion of preliminary riparian restoration inventories,
- ongoing documentation of water quality,
- reduction of non-point source pollution,
- formation of the Presumpscot River Watershed Coalition, and
- successful initiatives to access private, state and federal funding to permanently protect and restore riparian habitat and enhance water quality.

Much remains to be done, but all of these successes speak to active and effective conservation partnerships involving concerned citizens, locally-based organizations, town officials, and state and federal natural resource agencies.