



Commonwealth of Massachusetts

RIVERWAYS PROGRAM

Building Partnerships, Protecting Rivers

Restoration Projects Update

April 2009

All of these projects involve diverse partnerships and the support of a multitude of individuals, municipalities and organizations. Although all of these projects are supported by Riverways none of them could be completed without strong partner participation.

Recently Completed Projects

New Way Dam Removal, Wareham and Plymouth

Project Description: Phase II of the Red Brook Restoration was complete with the removal of the New Way Dam and addition of large woody debris in September of 2008. For a full description of the project and project partners see below.



Yokum Brook dam removals, Becket

Project description: The Yokum Brook Restoration Project restored over five miles of coldwater fisheries habitat by eliminating barriers to Atlantic salmon migration and the movement of resident trout and other coldwater species. The Silk Mill dam was removed in 2003 and the Ballou dam was removed in December 2006. The restoration includes the natural formation of step pools, installation of large woody debris and riparian corridor plantings. The restoration was recently awarded a Coastal America Partnership Award.



Bronson Brook restoration, Worthington

Project description: The Bronson Brook restoration project involved retrofitting one culvert and replacing another to restore movement for aquatic species in the brook. Both culverts were perched above the stream, blocking aquatic species movement. Bronson Brook is a high quality coldwater tributary to the East Branch Westfield River, supporting habitat for Atlantic salmon and resident coldwater species such as Eastern brook trout and black nosed dace. The project also involved installing large woody habitat in the brook to increase habitat complexity. Engineering design and retrofit were completed in 2005-2006; the Dingle Road crossing replacement was completed in 2006; and the Cummington Road crossing retrofit and woody habitat installation were completed in 2007. Post project monitoring continues.

Other Completed projects



Galloway Brook Dam Removal, Barre

Project description: The Upper Cook's Canyon Dam was located within Mass Audubon's Cook's Canyon Wildlife Sanctuary in Barre. The former nine foot dam, owned by Mass Audubon, was located on Galloway Brook. It was once used to provide a pool for recreation and education. The reestablishment of unobstructed flow of Galloway Brook expands and enhances habitat for fresh water fish including brook trout, blacknose dace, and tessellated darter. The boards on the dams were removed several years ago and the completed project removed the remainder of the structure and reestablished more natural bank conditions.



Minute Man National Historic Park tributary daylighting and culvert replacement project, Lincoln

Project description: The National Park Service recreated a historic landscape and improved the function and viability of this headwater stream. The stream was daylighted and an inadequate culvert beneath Sunnyside Lane replaced. The design also incorporates stormwater best management practices to protect stream and wetland water quality and native plantings to help eradicate existing invasive plants.



Ongoing pilot projects

Neponset River restoration project, Milton/Boston

Project description: Since the early 1990s restoration of anadromous fish passage to the Neponset River and remediation of PCB contaminated sediments has been the subject of a multiple, long-term studies. The project area includes 2 dams and other fish passage obstructions. Target restoration species include American shad and river herring.



Current project phase: In 2007 the *Environmental Restoration Report and Environmental Assessment* was completed, concluding the preliminary feasibility study of the lower Neponset with special emphasis on the two lower dams. The report identifies a set of preferred alternatives. USGS will soon publish a report on PCB source contamination in the lower Neponset.

Update: Supplemental engineering on preferred alternatives is complete with MA DMF assistance. A Citizen Advisory Committee was convened in 2008 to review the alternative and the committee has recommended full and partial dam removal at two major dams.

Partners: NOAA, USGS, USFWS, USACE, MA DMF, MA DCR, MA DEP, Town of Milton,

City of Boston, Neponset River Watershed Association, municipal officials, other state and federal agencies.

Ox Pasture Brook Lower Dam Removal, Rowley

Project description: The project consists of the removal of a 6' concrete and stone dam situated at the head-of-tide. Sediment management and stream substrate enhancement to improve habitat for multiple aquatic species including rainbow smelt is being evaluated. Smelt presently spawn in limited numbers below the dam. The project seeks to improve habitat for American eel and native, resident aquatic species.

Update: Feasibility study, sediment management plan and final design is complete, permitting is underway and construction is expected in 2009.

Partners: Mass DFW, American Rivers, USFWS, CWRP -ERM, NOAA and Town of Rowley



Priority Projects

Shawsheen River Restoration, Andover

Project description: The purpose of this project is to restore aquatic habitat, stream processes, and native river ecosystem functions and values, including migratory fish passage, to the Shawsheen River in Andover. The Shawsheen River is a tributary of the Merrimack River which flows northeast along a 25 mile course, entering the Merrimack in North Andover. Specifically, removal of three dams in the Town of Andover is proposed – resulting in the complete removal of barriers along the mainstem river.

Update: Feasibility study is complete, preliminary design is underway.

Partners: Town of Andover; American Rivers; USFWS, MADFW, MA DMF, NOAA; Mass CWRP; Shawsheen River Watershed Association and Center for Ecosystem Restoration, Inc.



Green River Restoration, Greenfield

Project description: The Green River Habitat Restoration Project will remove the two furthest-downstream dams on the Green River in Greenfield and provide fish passage at the two upstream dams. When complete, the project will open up 94 miles of mainstem and tributary habitat for diadromous fish, including salmon.

Update: Feasibility study is underway

Partners: Connecticut River Watershed Council, American Rivers, Town of Greenfield, USACE,

USFWS, TNC, and the Deerfield Watershed Association.



Jones River Restoration, Kingston

Project description: This project would restore Jones River and its aquatic habitat. The current phase of the project will assess the feasibility of removing the dam downstream of Wapping Road and restoring the surrounding stream. The dam is privately owned. The current work will open an additional 3.7 miles for anadromous fish access to spawning. The project is also important for restoring habitat and connectivity for resident species.

Update: Feasibility study is complete; Final Design beginning in Summer 2009

Partners: Jones River Watershed Association, Caton Connector Corporation, Town of Kingston, NOAA, MA DMF



Blackstone River, Worcester Consolidated Street Railway (Mass Electric) Dam Removal, Millbury

Project description: The goal of this project is to restore a reach of the Blackstone River negatively impacted by the failing Worcester Consolidated Street Railway Dam. The project will enhance aquatic habitat, improve natural stream conditions, facilitate movement of resident aquatic species, improve water quality, and allow safe recreational paddling through this stretch of the historic Blackstone River.

Update: Feasibility designs (including sediment testing) is complete, further defined sediment management plan and final designs is needed to examine contaminant sediment remediation.

Partners: NPS, Blackstone Headwaters Coalition, Mass Audubon, CWRP-ERM, American Rivers

Coles Brook Restoration, Washington

Project description: The Coles Brook restoration project will restore habitat connectivity and more natural wetland function in Coles Brook in the Westfield River watershed. In partnership with The Nature Conservancy, Riverways is working to design and permit the removal of a dam that was originally constructed for a residential development that was never completed. The impoundment smothers a riparian wetland and coldwater habitat in an otherwise pristine forested habitat.

Update: Public outreach and education is continuing. **Partner:** TNC



Eel River Headwaters Restoration, Plymouth

Project description: This large-scale and precedent setting project involves comprehensive river and wetland restoration in the headwaters of the Eel River watershed. Approximately 40 acres of abandoned cranberry bogs (now Town conservation land) will be converted to a wetland and coldwater stream ecosystem through channel and floodplain reconstruction, extensive wetland plantings (including 17,000+ Atlantic white cedars), and removal of existing barriers to fish passage including a stone dam, several undersized culverts, and former flow control structures in the bogs. The project will create high-quality, coldwater stream habitat, establish of rare wetland communities, significantly improve water quality through enhanced nutrient uptake, removal of contaminated legacy sediments, and implementation stormwater management

measures, and provide recreational and education opportunities in the community.

Update: The project is currently in the final design phase and permitting is in progress. Construction is expected to begin in 2009.

Partners: The Town of Plymouth, MA CZM-WRP, USFWS, NRCS, American Rivers, TNC, New England Wildflower Society, Underwood & Associates, CWRP-Horsley Witten, and the Eel River Watershed Association.

Hoosic River and Hoxie Brook, Adams

Project description: This project will investigate opportunities to daylight a portion of Hoxie Brook and review potential opportunities for habitat restoration through modifying a flood control channel to improve aquatic habitat, channel complexity, aesthetics, and public access and enjoyment of these rivers.

Update: Feasibility study and conceptual designs for the stream daylighting are complete.

Restoration alternatives are being created for the flood control channel in consultation with the USACE.

Partners: Hoosic River Watershed Assoc., Town of Adams, Berkshire Regional Planning Comm.



North Branch Hoosic River dam removal, Clarksburg

The Hoosuck Trout Unlimited chapter is the lead proponent to restore the North Branch of the Hoosic River. This habitat restoration project will examine the feasibility of removing the Briggsville Dam to improve habitat for trout and other coldwater species. The dam is owned by Cascade School Supplies of North Adams. Restoration of the headwaters of the North Branch of the Hoosic provides an important opportunity for the continuity of habitat for species of concern.

Update: Feasibility study and alternatives analysis are complete, final design is complete and permitting is underway, construction is expected in 2009.

Partners: USFWS, Massachusetts Division of Fish and Wildlife, Cascade School Supplies (owner), Trout Unlimited, Hoosic River Watershed Association, Town of Clarksburg, CWRP- P&G (Gillette) & National Grid, NRCS and American Rivers

Little River Habitat Improvements, Gloucester

Project description: The Little River is a tributary of the Annisquam River in West Gloucester. The entire lower section of the river (freshwater/saltwater interface) is degraded by encroaching infrastructure. Restoration opportunities include the removal and replacement of an antiquated concrete channel and obsolete treatment plant sludge lagoon with a natural streambed. Multiple aquatic species will benefit from the restoration; other benefits include improvement of the flood capacity and riparian connectivity.

Update: Feasibility study and alternatives are complete, final design is complete and construction is underway.

Partners: City of Gloucester, Mass Audubon, NOAA



Mill River dam removals, Taunton

Project description: The Mill River-Taunton Habitat Restoration project will address habitat restoration and potential dam removal of three dams on the Mill River in Taunton. The Riverways Program and the Southeastern Regional Planning and Economic Development District (SRPEDD) are leading a partnership among local, state, and federal organizations to restore river connectivity and habitat, provide fish passage, and improve public safety at the dams (Taunton State Hospital and Whittenton Pond Dams). The impacts of the project on a fourth dam, Morey's Bridge Dam will also require fish passage evaluation during this project phase.

Update: Feasibility study is complete, final design for project components ongoing.

Partners: Southeastern Regional Planning and Economic Development District (SRPEDD), American Rivers, NOAA, NRCS, MA DMF, Taunton River Watershed Alliance, TNC, MA DPH, Reed and Barton co., Jefferson Development

Partners, City of Taunton.

Red Brook Restoration dike removals, Wareham/Bourne/Plymouth

Project description: The Red Brook restoration will remove several small dikes and earthen berms to improve habitat for "salter" brook trout and other aquatic species in this spring-fed coastal stream. The project will involve removing the remainder of the structures, stabilizing and vegetating banks, installing woody debris and restoring native stream and riparian habitat through the brook.

Update: In 2006 a sediment management and restoration action plan was completed. The first dike (Robbins Dam) was removed in fall 2006 and New Way dam was removed in the fall of 2008 (see page 1). Construction on the final phase will take place in summer of 2009 (includes removal of two more dams).

Partners: TTOR, Trout Unlimited, MA DFW, American Rivers, NOAA, The Coalition for Buzzards Bay, A.D. Makepeace, Waquoit Bay Estuarine Research Reserve, CWRP-General Electric



North Nashua River, Fitchburg

Project description: This project is a pilot in-stream restoration effort to improve habitat, river function and stability in this flood prone river reach near downtown Fitchburg. Currently the river flows through a highly altered and wide river channel; the current conditions impair habitat and aquatic species passage. This project will work within the constraints of this urban landscape to create a more natural river channel and improve public access.

Update: Design is complete; permitting is underway and fundraising ongoing for implementation.

Partners: The City of Fitchburg, Nashua River Watershed Association, North County Land Trust, Fitchburg Economic Development Office, CWRP and USACE

Town Brook restoration; dam removals and stream daylighting, Plymouth

Project description: This is a phased restoration project. The current phase of the project will assess feasibility of removing two dams: the Off Billington Street Dam, a town owned structure, and the Plymco or Standish Mill Pond Dam, a privately owned structure. Daylighting a portion of the brook near the upper dam is also proposed.

Update: Final design and permitting are underway

Partners: Town of Plymouth, NOAA, MA DMF, CWRP, American Rivers



West Branch Housatonic River, Mill St. dam removal, Pittsfield

Project description: This project seeks to restore the West Branch of the Housatonic River through the removal of the Tel Electric (Mill St.) Dam. Removal of the dam will greatly improve habitat, remediate contaminated sediments and will open up over a many miles of stream continuity (upstream and downstream), extending to the main branch of the Housatonic River.

Update: A feasibility study was completed in spring 2006; next phase: will be sediment management study and pre-restoration monitoring. Project was awarded \$750,000 from the GE, Housatonic River Natural Resource Damages (NRD) funding, first phase is sediment management testing/planning and pre-restoration

monitoring which will be completed in the spring of 2009. **Partners:** City of Pittsfield