



# Farmington River Streambank Stabilization Fish Habitat Restoration – Phase I

## *Success Stories*



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Connecticut Department of Environmental Protection, 79 Elm Street, Hartford, CT 06106-5127  
– Gina McCarthy., Commissioner



**Farmington River Project Site – Barkhamsted  
West River Road**

## Executive Summary/Abstract

The town of Barkhamsted and the Farmington River Coordinating Committee (FRCC) received a section 319 grant of \$52,000 for a two phased project. Phase 1 restored an actively eroding 200-foot section area of streambank.

FRCC was created by the U.S. Congress in 1994 to oversee activities on the 14 mile Wild & Scenic section of a river whose members include the towns of Barkhamsted, Canton, Colebrook, Hartland, and New Hartford, the CT DEP, Farmington River Watershed Association (FRWA), Metropolitan District Commission, and the National Park Service. The restoration was to include the protection of roads, improvements to aquatic habitat through reducing excessive sedimentation and increasing habitat structure, re-establishing the river bank with native vegetation, and with encouragement of low impact recreational access to the river.

## Introduction

The rehabilitation site chosen for this project has a long history of erosion and destabilization due to sandy soils, road proximity, informal recreational access and the powerful forces of the river (augmented, upon occasion, by upstream dam releases). In the early 1990's the town of Barkhamsted stabilized small sections of the bank to protect West River Road, however erosion has continued in the areas that were not stabilized. This project addressed approximately 200 feet of shoreline (including the primary recreational access point to the River) in need of stabilization.

## The Resource

The 14-mile Wild and Scenic section of the Farmington River is widely regarded as the most fished section of river in Connecticut (as a whole, the Farmington is the most fished river in the state). This is largely due to a catch-and-release trout fishery stocked/managed by CT DEP, its proximity to the Hartford metro area, and the high water quality and aesthetics of the River. Not only is this area important as a natural resource, but also it is a very valuable asset for the five towns adjacent to the River. A recently released North Carolina State University study entitled "Use and Economic

Importance of the West Branch of the Farmington River" highlights some of the direct economic benefits experienced by communities in the 14-mile "Wild and Scenic" designated stretch of the River:

- recreational river use generates an estimated annual economic impact of \$3.63 million for the five towns nearest the river stretch studied;
- proximity to the Farmington River accounts for approximately 8% of the value of nearby residential land;
- the West Branch is estimated to receive 77,400 recreation visits annually: 60% of these visits were for fishing, 30% were for tubing, and 8% were for boating; and
- the total economic benefit to recreational users was estimated to be \$9.45 million. This represents the total social value of the river segment to users over and beyond what they spend to visit.

A copy of this economic study is available through the FRCC at [www.farmingtonriver.org](http://www.farmingtonriver.org) or FRWA at [www.frwa.org](http://www.frwa.org) websites.

## Environmental Problems

The heavy recreational use of the Wild and Scenic River combined with the existence of erodible banks as well as dam releases that occasionally surpass "normal" flows experienced historically on the river, equals a recipe for bank destabilization in certain stretches of the River. This destabilization is worsened when recreational users cut their own paths down banks, damage vegetation, and further loosen streambank soils. The 200-foot stretch focused on by this project was a classic example of a recreational access point that was both ineffective at accommodating public use (due to its degraded state), and it was a significant contributor of sediment to the River. Of course, eroding banks are not always a cause for alarm because "erosion happens", but excessive sedimentation can impact fish habitat and reduce the quality of the River and the recreational experience in the locality of the problem.

## The Solution

The bank stabilization project was initiated to accomplish multiple objectives, namely:

- reduce the input of sediment into the river which had the potential of degrading fish habitat in a heavily fished area;
- harden and repair a popular recreational access staircase to reduce sediment created by recreational users; and
- create an opportunity for education of recreational users of the river. Signs at the site talk about the bank stabilization work and further interpretive signs encouraging users to “walk lightly” will be installed in the future.

FRCC contracted with Milone & MacBroom, Inc. to design the bank stabilization project in two phases. Stabilization work included the following activities:

- removal of some existing trees and shrubs;
- placement of large boulders below the mean low water line of the river and up the bank slope, covering the boulders with gravel and topsoil;
- replacement of decrepit steps above the eroding recreational access point with natural boulder steps that provide access and reduce erosion simultaneously;
- anchoring of root wads and a habitat tree amongst boulders to enhance aquatic habitat;
- placement of bio-fiber materials over the top for soil stabilization;
- installation of a rustic wooden fence along the parking area to maintain the character of the site and focus public access to the hardened recreational access point; and
- seeding of disturbed area with New England Erosion Control/Restoration mix for dry sites and planting with stabilization vegetation.

Once the site was stabilized, the main focus of activity was to promote revegetation of the site through replanting activities, namely:

- placing of stakes to allow for additional vegetation plantings in Spring/Summer 2003;
- conducting two planting sessions with native plants in April and July 2003; and

- watering the plants to maximize survival of young plants and saplings.



Before Bank Stabilization Project

### Project Partners and Funding

Not only did this project accomplish its on-the-ground objectives of stabilizing approximately 200 feet of actively eroding streambank, but also it was successful at working in partnership with the town of Barkhamsted and leveraging significant contributed goods and services. In addition, the end result of this stabilization project is both people-friendly and fish friendly and further serves as testament that you don't have to sacrifice access to and use of the River to protect its health.

Through contributions of machinery and time, the town of Barkhamsted documented matching contributions of nearly \$40,000. Additional contributions of approximately 20 total volunteers to two planting efforts drew upon the resources of FRCC members, FRWA members, Farmington River Angler's Association members, and local residents. Further, the town of Barkhamsted staff (notably 1<sup>st</sup> Selectman Michael Fox and Rich Nowak) provided invaluable assistance and advice in addition to substantial financial contributions to the effort. The total expenditures for this project was \$28,510.46.

### Results/ Final Conclusions

This project has dramatically improved this recreational access point. The river bank was stabilized and the town of Barkhamsted has

dedicated substantial time in managing this project. Although the amount of sediment retained on the riverbank rather than eroding into the River has not been quantified, the pictures tell the story of how this site has been positively transformed.



After Stabilization Project

### Future Plans

The FRCC will be installing additional interpretive signage at the stabilization site to

educate the public further about the values of bank stabilization and impacts on aquatic life stemming from excessive sedimentation. Finally, the FRCC will start a second phase of this project with \$23,489 of 319 funds to assess streambank stabilization problems and priorities for the entire 14-mile Wild and Scenic stretch of the Farmington River. This will help FRCC, CT DEP, and 5 towns adjacent to the Wild and Scenic River to understand the relevant importance of erosion sites, prioritize remediation activities, and reduce excess sedimentation where it most dramatically impacts aquatic habitat and recreational uses.

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For more information regarding the Farmington River Streambank Stabilization Fish Habitat Restoration Project, contact:

Eric Hammerling, Executive Director, Farmington River Watershed Association  
Acting as Fiscal Agent for the Farmington River Coordinating Committee (FRCC)

Stan Zaremba, CT DEP NPS Manager (860) 424-3730 [stanley.zaremba@po.state.ct.us](mailto:stanley.zaremba@po.state.ct.us)

Steven Winnett, US EPA NPS Coordinator (617) 918-1687 [winnett.steven@epamail.epa.gov](mailto:winnett.steven@epamail.epa.gov)

Section 319 of the Federal Clean Water act authorizes EPA to award grants to states and tribes to support their NPS management programs. The CT DEP passes through a portion of these funds to other state, regional and local government agency and non-government organization to implement programs and projects.