



Connecticut River Watershed Riparian Forested Ecosystem Project

BACKGROUND

The Connecticut River Conservation District Coalition (CRCDC) is comprised of the 19 conservation districts in the states of Connecticut, Massachusetts, Vermont, and New Hampshire in the Connecticut River Watershed. Because many landowners were concerned about degraded buffers and erosion along the Connecticut River, the federal cost-share Wildlife Habitat Incentives Program (WHIP) was being used to provide them with technical assistance and information on riparian forest ecosystems. Building on a foundation started through WHIP, the districts designed the Riparian Forest Ecosystem Project to continue giving technical assistance and informational outreach to landowners about riparian forest ecosystems.

LOCATION

The project is located throughout the 11,000 square mile Connecticut River Watershed, which stretches 410 miles from the Canadian border southward through Vermont, New Hampshire, Massachusetts, and Connecticut on its way to Long Island Sound.



Connecticut River Watershed.

ISSUES BEING ADDRESSED

Many areas in the Connecticut River Watershed are affected by bank erosion. This results in sediment loading, which can lead to decreased oxygen and smothering of macro invertebrates and fish within spawning grounds.

Riparian forest buffers have been degraded or removed from much of the watershed's mainstem and tributaries because of human interference and natural causes. Buffer reduction restricts wildlife travel corridors, removes food and cover, allows polluted runoff to enter stream systems, and reduces shade, thus increasing water temperatures.

Generally, landowners

needed to care about the

existence of forest buffers, but there was a lack of information on what could be done to improve conditions in the river.

GOALS

The project was developed to inform landowners, conservation district staffs and directors, consultants, and watershed leaders how to identify and prevent riverbank erosion as well as how to identify degraded riparian forest buffers and reestablish them.

Landowners need training on how to inventory riparian forest buffer problems and establish erosion control on riparian corridors to improve water quality and wildlife and fisheries habitat.

The CRCDC will work with landowners and other partners to accomplish the following:

- Connecticut River soil erosion inventories for Connecticut and Massachusetts as well as the development of an erosion inventory protocol and an erosion educational primer.
- Workshops to teach landowners to identify riparian forest ecosystems in need of replacement or enhancement.
- Workshops for riparian forest ecosystem management.

METHODOLOGY

- Develop an Erosion Inventory Manual. The CRCDC has been actively involved with the Connecticut River Watershed Council (CRWC) and the Connecticut River Joint Commission (CRJC) in coordinating efforts in all four states to develop a river erosion study protocol. The CRCDC districts in New Hampshire and Vermont had done erosion studies on the mainstem of the Connecticut River and were offering technical advice to Connecticut and Massachusetts to assist them with their inventories. The intent is to complete the inventories in the lower two states and develop a consistent protocol for erosion studies that can be used by any watershed.
- Develop a Riparian Inventory Manual. There is a need to identify areas where riparian forest buffers have been degraded or totally removed. The CRCDC will develop a riparian inventory manual and hold workshops in each of the four states for landowners, natural resource and forestry consultants, river basin committees, and local river advisory committees to demonstrate how to inventory riparian forest buffers in need of establishment.

Since 1999, the Northeastern Area and the Northeastern Area Association of State Foresters have sponsored a cooperative challenge grants program to promote watershed health and restoration through the conservation, restoration, and sound stewardship of trees and forests.

The districts will work with these trainees to inventory rivers and streams. The inventories will be located at four sites where actual riparian buffer repair demonstrations can be installed.

OUTCOMES AND ACCOMPLISHMENTS

- Developed the Connecticut River Erosion Inventory Methodology Manual for Riverine Systems.
- Organized two workshops to train student interns in Connecticut and Massachusetts to perform soil erosion inventories in the Connecticut River mainstem.
- Completed erosion studies and transferred the information to conservation districts in Connecticut and Massachusetts. Over 170 erosion sites were identified.
- Developed the Connecticut River Riparian Forest Ecosystem Inventory Methodology Manual for Riverine Systems and gave five workshops in four states to train over 100 volunteers to perform these riparian buffer inventories. All four state foresters have been sent a copy of the manual. This project received media coverage from local papers and has been published in organizational newsletters. The inventories have been shared with Hudson and Merrimack River groups who want to complete similar inventories. The workshops and demonstration sites will create a better-informed public about the need and methods for restoring riparian forest ecosystems.
- Completed the Deerfield River inventory. Results have been sent to the Massachusetts state forester.
- Completed the Rock River inventory. The West River Alliance, whose volunteers completed the inventory, has acquired 501c3 status and received a grant to hire a watershed coordinator to continue the riparian inventory in other streams in the West River Watershed. The results of the inventory have been sent to the Vermont state forester.
- Completed an inventory of the Cold River. The inventory was presented to the New Hampshire state forester and forestry extension specialist.
- Partnered with the CRJC to develop a protocol to prioritize the restoration of erosion sites.
- Assisted CRWC in the development of an erosion primer that is currently being finalized and printed. It contains information on erosion, how to access problems, and how landowners can seek assistance.
- Created well-informed landowners, district staffs and supervisors, volunteers, and natural resource professionals who will understand the value of riparian forest buffers and will promote their establishment beyond the period of this project.

PARTNERS

- 19 Conservation Districts
- Natural Resources Conservation Service (NRCS)
- Landowners and local river advisory committees
- Connecticut River Watershed Council (CRWC)
- American Heritage Rivers Initiative (AHRI)

- Connecticut River Joint Commission (CRJC)
- Watershed associations and river basin teams
- Schools through the Connecticut River Educational Initiative (CREI)
- Vermont Leadership Center
- Student Conservation Corps
- American Chestnut Foundation
- USDA Forest Service
- USDI Fish and Wildlife Service
- State forestry and fish and wildlife agencies
- State water quality agencies
- Cooperative Extension Service in all four states

FUTURE PLANS

- Schedule meetings with the state foresters of Connecticut and Massachusetts to discuss the erosion studies.
- Generate an erosion report that will educate people about erosion and how to address it.
- Document the use of the ecosystem by wildlife species to evaluate the effectiveness of the practices in improving wildlife habitat.
- Develop an evaluation or monitoring technique to describe the success of the riparian forest buffer installation.
- Prioritize erosion sites and riparian areas in need of restoration or enhancement.
- Track the trained volunteers to determine if they use the manuals.
- Provide copies of the primer to the USDA Forest Service and the four state foresters.
- Secure funding to establish riparian forest buffer demonstration sites in the four states. These demonstration areas will use volunteer groups and student conservation corps to plant trees and shrubs.

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