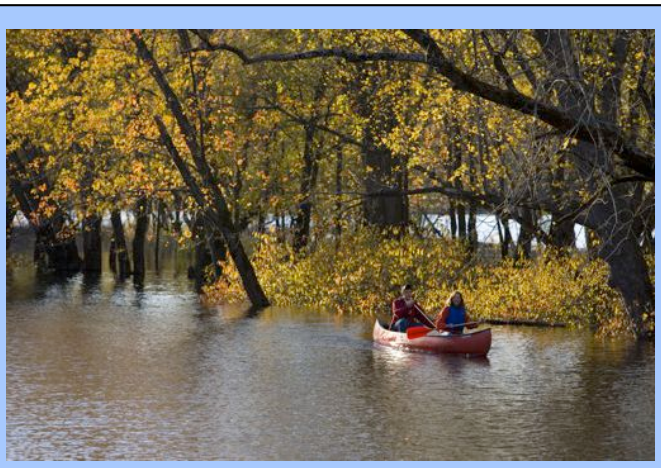

Mother and Son paddling near Northampton, Massachusetts
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Project Scope

The ecosystems of the Connecticut River and its tributaries depend on a naturally variable flow of water. High flows in spring and fall help fish move to spawning areas and help young fish move downstream. Low flows in the summer are critical to the rooting of certain aquatic plants. For most of the Connecticut and its tributaries, these seasonal flows have been altered by dams built for electricity generation and flood control. Other areas are impacted by water withdrawals for public water supplies and industrial purposes.

This study will help determine how management of these dams and water systems can be modified for environmental benefits while maintaining beneficial human uses such as water supply, flood control and hydropower generation. One of the study's key outcomes will be the creation of a basin-wide hydrologic model and decision support tool that will allow water managers and other key stakeholders to evaluate environmental and economic outcomes based on various management scenarios. These products will enhance the ability of the U.S. Army Corps of Engineers (Corps) to manage their dams to provide more natural stream flows while maintaining authorized water supply, flood control and hydropower uses. Data from this Study will also assist with decision making around future Federal Energy Regulatory Commission (FERC) licensing processes.

Project Status

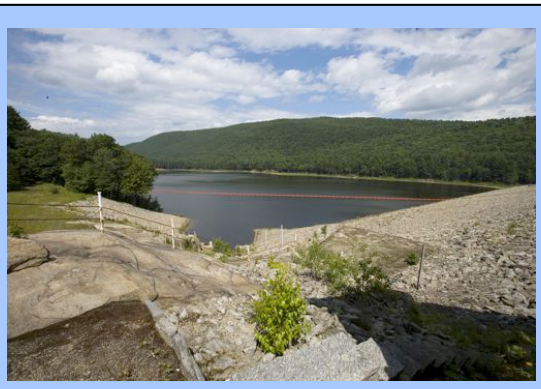
A Project Cooperation Agreement (PCA) was signed in August 2005, but legal issues raised during the fall of 2005 temporarily stopped the project. Corrective language was passed in the Water Resources Development Act of 2007, allowing the project to continue. Despite fiscal and legislative challenges, The Nature Conservancy (the Conservancy) was able to move forward with a scientific analysis of the scope of hydrologic alteration in the Connecticut River Basin using private funds. Additional discussions between the Conservancy and the Corps (New England District and Hydrological Engineering Center) regarding possible modeling approaches have lead to an expansion of the project scope, which was originally confined to the West and Ashuelot Rivers. The project will now evaluate how Corps impoundments across the entire basin fit into the overall hydrologic structure of the watershed. In FY 2009, plan formulation and stakeholder outreach will take place to lay the groundwork for building the hydrologic model for the basin in FY 2010. This will include the selection of important points in the basin for modeling (e.g. areas critical for flood protection, areas critical for environmental restoration, and all 75 large dams in the basin). Efforts this year will also document the current operations at each of the 75 dams in the basin.

Enhancing Federal Lands or Investments

The Corps owns and operates a total of 14 flood control dams in the Connecticut River Basin. A better understanding of the hydrology of the Connecticut River will enhance the Corps's ability to manage these dams for environmental and other benefits. In addition to the dams themselves, the Corps owns almost 20,000 acres in the basin that are extensively used for recreation.

Several tributaries of the Connecticut River have received special federal designation. The Ashuelot River in New Hampshire has been designated as critical habitat for the federally endangered dwarf wedgemussel by the U.S. Fish and Wildlife Service (USFWS). Five tributaries in the watershed are

recognized by the Connecticut River Atlantic Salmon Commission as critical tributaries for Atlantic salmon habitat. More than 75 miles of the Westfield River have been designated by the National Park Service as a Wild and Scenic River. Last year, the House of Representatives approved a Wild and Scenic River designation for the Eightmile River, and in 1998, the Environmental Protection Agency recognized the entire Connecticut River as an American Heritage River. The Silvio O. Conte National Fish and Wildlife Refuge is contiguous with the boundaries of the Connecticut River watershed and consists of more than 32,000 acres of USFWS owned and managed land. Improving flow conditions in the Connecticut River will directly benefit the management of these lands as well as the ten federally listed species that live in and along the river. In addition, a large number of dams within the watershed will soon be relicensed and this study will provide much-needed data for future FERC licensing processes.



Surry Mountain Dam, Ashuelot River, New Hampshire
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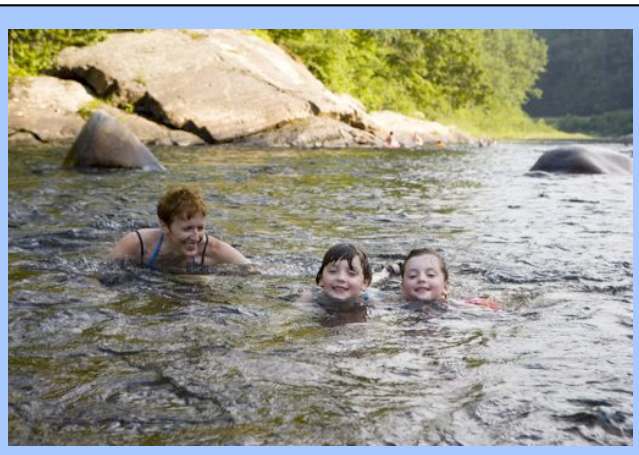
Biodiversity Significance

The Conservancy has identified the Connecticut River Basin as a high priority landscape in New England due to the high quality tributary systems, unique natural communities and multitude of federal trust species. These species include bald eagle, puritan tiger beetle, Jesup's milkvetch, piping plover, Robbins cinquefoil, northeastern bulrush, short-nose sturgeon, dwarf wedgemussel and Atlantic salmon.



Family enjoying swimming in the West River, Vermont
©Jerry and Marcy Monkman / ecophotography.com

Local and State Supporters

The project has strong support from the Corps and the Conservancy, evidenced by its inclusion in the Sustainable Rivers Project, an innovative partnership by both organizations to revise operations at Corps dams to restore river ecosystems. The Conservancy recently led the first phase of a basin-wide Conservation Area Plan for the Connecticut River that was developed by a team of more than 45 experts representing federal, state and local agencies, NGOs, and the academic community. All participants agreed that hydrologic alteration was one of the most critical threats to biodiversity in the Connecticut River Basin.

Additionally, a September 2004 meeting of scientists convened by the U.S. Geological Survey (USGS), USFWS and the University of Massachusetts identified the need for a basin-wide hydrological model as one of the five most pressing needs for the sustainability of the Connecticut River. Critical scientific support for this project is being provided by the USGS Silvio O. Conte Anadromous Fish Lab and the U.S. Forest Service Northeast Research Station.

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