
ENVIRONMENTAL Fact Sheet



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The New Hampshire Initiative to Restore Rivers through Selective Dam Removal

There are more than 4,800 active and inactive dams in New Hampshire. Many of these dams were built during the Industrial Revolution in the 19th and early 20th centuries, and they played central roles in New Hampshire's economic and societal growth during that period. But as technological and societal needs have changed, so too has the need for some dams.

Many New Hampshire dams and their impoundments enable and enhance valued recreational uses, such as boating, fishing, and swimming. A smaller number of New Hampshire's dams provide important services such as fire protection (provided by 8 percent of active dams statewide), hydropower production (5 percent), water supply (3 percent), and flood control (2 percent). **But some dams, particularly those that are old, unsafe and uneconomical, may be good candidates to consider for removal.**

Why Remove Dams?

Selective dam removal can eliminate a public safety hazard, relieve a dam owner's financial and legal burdens and restore a river to a healthier, free-flowing condition. Consequently, some dam owners are taking a second look at their dams.

The Benefits of Selective Dam Removal

- Eliminates a public safety hazard.
- Provides cost savings to taxpayers and dam owners (both short and long-term).
- Improves water quality.
- Eliminates barriers to fish and other aquatic species.
- Restores river habitats.
- Creates new, river-based recreational opportunities.
- Improves opportunities for riverfront revitalization.

Economic and Public Safety Issues. The cost of keeping a dam safe, particularly when the dam is no longer serving an economic function, can represent a significant burden to a dam owner. Dam ownership requires an on-going financial responsibility. Sometimes, the costs of operation and maintenance, liability protection, annual registration fees and other obligations of dam ownership may outweigh the benefits derived from the dam. Studies show that repairing a dam can often cost three times more than removing that dam. In addition, there are many potential funding sources, both public and private, that can help offset the cost of dam removal and associated river restoration projects, while funding sources to offset the costs of dam repair or reconstruction are currently far less available.

Environmental Issues. Dams can have many ecological impacts on rivers. They can block fish and other aquatic species from moving throughout a river system to access spawning sites and other critical habitats. Dams can hold back and cause the build-up of sediment, woody debris and other materials that would have naturally been distributed throughout the river, playing important roles in providing nutrients and habitat for plants and animals downstream. Dams can increase water temperatures and decrease dissolved oxygen availability in impoundments, forcing many native river species out because they can't live under those conditions. Dams can also flood wetlands, floodplain forests and other ecosystems that naturally occur along the river's edge and serve valuable purposes.

The act of removing a dam may seem like a radical event to a river and the species that live in it, but rivers have proven themselves to be very resilient and able to "heal" quickly, based upon many dam removals that have taken place nationwide. Previously submerged lands revegetate rapidly, typically within a few weeks during the growing season. Fish populations and species diversity commonly increase in the restored stretch of river within the first year after a dam is removed. Significant water quality improvements are often seen in a similarly short amount of time, depending upon river conditions.

Social Issues. Many dams and their impoundments provide valuable and treasured recreational opportunities. But the act of removing some dams can create new, river-based recreational opportunities - from restored sport fisheries to whitewater paddling to wildlife watching. "Rediscovering" the asset of a free-flowing, healthy river may lead to community riverfront revitalization, new businesses and enhanced tourism.

What is the New Hampshire River Restoration Task Force?

In January 2000, the New Hampshire River Restoration Task Force was formed with the common goal of exploring opportunities to selectively remove dams for a variety of reasons, most notably for the purposes of restoring rivers and eliminating public safety hazards. The Task Force is an initiative with diverse representation, including multiple state and federal agencies, conservation organizations, local interests and others. Through its work, the Task Force is enabling an efficient and effective process of removing dams in New Hampshire. Due to the collaborative efforts of the Task Force, two dams have been removed from the Ashuelot River for the purpose of river restoration - the McGoldrick Dam in Hinsdale (2001) and the Winchester Dam (2002). These dam removals are critical pieces of a basin-wide plan to restore anadromous fish to the Ashuelot River, an historically significant Connecticut River tributary for American shad, blueback herring and Atlantic salmon. Several dam removals statewide are currently in the planning and permitting stages.

What is the Process of Removing a Dam in New Hampshire?

DES has created the Dam Removal and River Restoration Program to assist dam owners and communities through the dam removal process. Information on the program and the dam removal process can be found at: <http://des.nh.gov/organization/divisions/-water/dam/damremoval/index.htm> . The Program Coordinator (see contact information below) can also provide information on the permitting process, including a copy of the "Attachment to the Standard Dredge and Fill Application for Dam Removal Projects," which must be submitted to the Wetlands Bureau with the "Standard

We Can Provide:

- Information about various components of the dam removal option.
- Technical assistance in obtaining the necessary permits
- Assistance in developing a funding package to offset the costs of removal.

Dredge and Fill Application." DES can assist the applicant during the process of planning a dam removal and completing the permit application materials. The River Restoration Coordinator can also assist the applicant in identifying potential funding sources to offset the costs of dam removal.

- General assistance through the process.

Very few dams in New Hampshire and in the United States are currently under consideration for removal. However, dam removal is an option that should be considered on its merits. When the costs associated with a dam outweigh its benefits, dam removal may be a wise decision, one that can result in significant environmental, economic and social benefits.

For more information about dam removal, please contact the N.H. Department of Environmental Services Dam Bureau, River Restoration Coordinator, at (603) 271-3406. See the Program website at: <http://des.nh.gov/organization/divisions/water/dam/damremoval/index.htm>.