

Manatawny Creek Dam Removal Project

Come see one of the best-studied dam removal projects in the world!



What's the dam problem, and what can be done about it?

Dams are such a common feature of many streams and rivers that we sometimes forget how much they can degrade the health of flowing water ecosystems. Yet dams can choke a river's "life blood" by disrupting flow, changing the supply of sediment, reducing water quality, and blocking the migrations of fish and other biota. Over one hundred thousand dams were constructed in the United States during the last two centuries, but many have been abandoned and are now in poor repair. Especially for rivers blocked by such old and obsolete structures, there is a growing interest in using dam removal as a novel method of restoring rivers.

How did the project get started, and who was involved?

In the late 1990s, a grass-roots movement in Pottstown, Pennsylvania began to explore the possibility of removing a non-functional "orphan" dam from Manatawny Creek that had been built in the 1700s to power a grist mill. A partnership of community groups, environmental organizations, government, and academia formed soon thereafter to conduct the removal of the 2 m-high dam, assess ecological responses to the removal, and restore the riparian zone along the former impoundment. This partnership included the Greater Pottstown Watershed Alliance, Berks County Conservancy, the Delaware Riverkeeper Network, the Pennsylvania Fish and Boat Commission, the Academy of Natural Sciences, and the University of Delaware.

Where can I see the restoration project?

Start by visiting the project website (<http://www.acnatsci.org/research/pcer/manatawny.html>) for some background

information. Research scientists from the Academy of Natural Sciences can lead tours of the study site, which is located immediately upstream and downstream from the King Street Bridge in Pottstown, Pennsylvania (about 30 minutes drive from Philadelphia).

Why is this a model project, and what has been learned so far?

Extensive monitoring of vital signs of ecosystem health before and after the August, 2000 removal of the Manatawny Creek dam has yielded one of the world's most comprehensive assessments of the effectiveness of dam removal as a river restoration practice. The most dramatic improvement in stream health occurred in the former impoundment, which was converted to a free-flowing stream reach. Within a year after the dam removal, researchers observed that the fish in this portion of Manatawny Creek shifted from species typical of ponds and reservoirs (e.g., goldfish, carp, and golden shiners) to species more typical of a free-flowing stream (e.g., shield darters and longnose dace). A similar shift was observed in the composition of the invertebrates upon which some fish feed.

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