

Dam Removal on the Little River, NC



A growing form of river restoration in the United States is dam removal. Over 5,000 dams dot the North Carolina's landscape and some of these have been abandoned or no longer serve their originally-intended purpose. Removing dams for a variety of reasons has been gaining considerable momentum recently in the United States, although little is known about the environmental impacts of removal.

An example is the upcoming removal of the Lowell Mill Dam on the Little River in Johnston County, NC which will begin removal on April 28, 2005 . Restoration Systems, LLC is funding the dam removal as a novel approach for river restoration in North Carolina.

The Lowell Mill Dam is of particular interest because it is the most downstream dam on the Little River and its removal will provide unimpeded flows to the Neuse River Estuary. Shad, a migratory fish species, will gain an unobstructed migration corridor from the Neuse River Estuary to the 130 newly opened river miles of the Little River and its tributaries following removal of the Lowell Mill Dam. However, like all dam removals, there are trade offs. While shad gain a migration corridor, so do any sediments and nutrients stored in the impoundment. A growing concern is how much sediment and other materials will be removed from reservoirs following dam removal, and how far downstream these materials are transported.

Adam Riggsbee, a graduate student at the University of North Carolina, is studying the environmental impacts of removing the Lowell Mill Dam and other dams in North Carolina . Because of continued water quality concerns in the Neuse River Estuary, Riggsbee and his colleagues are focusing considerable

attention on the movement of nitrogen and phosphorus following dam removal, and on the ability of wetlands near the impoundment to retain nitrogen and phosphorus during and after removal. This research will aid in understanding the role of dams and their removal on water quality in rivers and their impacts on sensitive downstream coastal ecosystems.

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