

Project: Pinchot Lake Bank Stabilization Project
Client: Izaak Walton League of America
Location: York County, Pennsylvania



Pinchot Lake, a 340-acre reservoir, is the focal point of Gifford Pinchot State Park. The reservoir serves as a drinking water supply and provides park visitors with a wide variety of recreational opportunities including fishing, boating and swimming.

Based on the 1994 Pinchot Lake Phase I Study, the lake is classified as “eutrophic”. This simply means that the lake contains excessive amounts of nutrients (namely, phosphorus and nitrogen) and sediments. Excessive amounts of nutrients and sediments in lakes can result in a number of lake problems such as, nuisance levels of aquatic plants and algae (algal blooms), shallowness, low dissolved oxygen levels and possible impairment of the lake’s fishery.

One of the major sources of nutrients and sediments to the lake is stream bank and lake shoreline erosion. The worst case of lake shoreline erosion was occurring within Loop B of the campground area. At Loop B, a 500-foot section of the lake shoreline was severely eroding due to wave action, surface water runoff and heavy pedestrian foot traffic. Heavy pedestrian foot traffic was primarily due to park visitors gaining access to the lake from their campsites.

In February 2002, Aqua-Link stabilized and restored a 500-foot section of severely eroded lake shoreline. Funding for this project was provided by the Pennsylvania Department of Environmental Protection (PA DEP) through its Growing Greener Grant Program. Severely eroded lake banks were stabilized and restored using soil bio-engineered and natural bank design principles.

For this project, native rock (iron stone), live stakes and live fascines were utilized. Live stakes (cuttings) and live fascines (“sausage like” bundles of branches) were created using branches from willow trees. During construction, several mature trees had to be cut down to maneuver construction equipment. These trees were later re-anchored horizontally into the bank and now serve as habitat for the lake’s fishery.