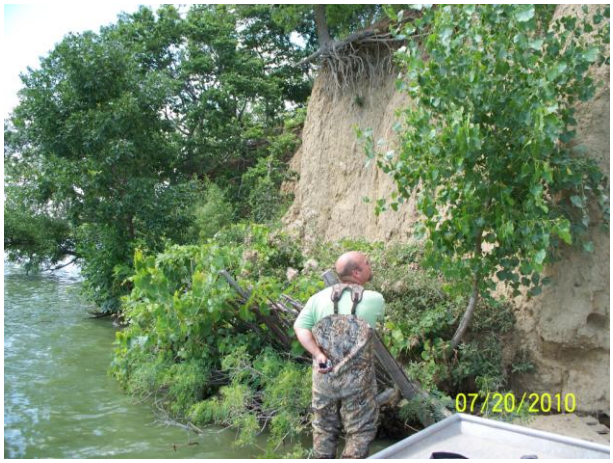
Loon Lake Habitat Erosion Mitigation

Loon Lake, located in southern Jackson County MN, is over 700 acres with a maximum depth of around 7 feet. The lake is managed primarily for walleye. The Loon Lake Watershed is dominated by row crop farming and has an extensive tiling system within the large watershed. The ditch that drains directly into Loon Lake has been in existence for many decades. It has a watershed:lake ratio of 27:1, which means the watershed has 27 acres of drainage for 1 acre of water on the lake. With the extensive row cropping and tile drainage within the watershed, the lake levels tend to fluctuate with precipitation as a result of the drainage. With the loss of many wetlands within the watershed and extensive drainage, getting water off the landscape speeds up the water reaching the lake. As a result of the fluctuating water elevations, shoreline erosion becomes a problem due to wave action. Coupled with mitigating the erosive action during high water time periods, controlling the amount of drainage coming within the watershed is also an important component in truly solving the problem. Loon Lake has mostly a north-south fetch and as a result southern winds can be erosive during those higher water events.

In the summer of 2011, MN DNR Fisheries secured funding to try and mitigate erosion on the Loon Lake Island AMA. Windom Fisheries Staff and the MN/IA Conservation Corps began installing a cedar tree revetment on the Loon Lake Island AMA. Cedar trees have extensive branches, decay slowly, and are readily abundant in the area. The objective of the project was not to stop erosion but to mitigate slumping that occurs on the island. The cedar trees were obtained from local wildlife management areas. The 40 or so trees were transported to the public water access point on Loon Lake. Using MN DNR Fisheries boats, the large trees were boated across the lake to the island. Once at the island, staff used Duck Bill Anchors and cable to secure the trees to the toe of the bank. We are hopeful that the trees and their many branches will capture soil as it slumps from the high 30 foot bank to create another natural stable toe for other vegetation to become established.

Pictures of the Loon Lake Island prior to installation of cedar tree revetment:



Pictures following are the installation of the cedar tree revetment: