November 11, 2014

PROJECT SUMMARY
Culver Trail Project

In August 2014, the Circle Lake Association applied to the Carl & Verna Schmidt Foundation, of Rochester, Minnesota, for a grant to do an erosion-control project on the south side of our lake. During heavy rainfall, water would wash over Culver Trail and carry large amounts of sediment and contaminants into the lake. Here are a few photographs showing the problem:

Farm field run off

Water rushing off a field about 150 yards from the south shore of Circle Lake. The water is washing over Culver Trail and carrying sediment and nutrients into the lake.

Lakeshore Resident Ankle Deep in Mud

You can see the lake over this lake resident's shoulder. When the water stopped flowing this lakeshore resident needed to use a skid steer to scrape a couple of inches of mud off of her driveway.

Water and Mud Rushing Down the Driveway

This picture is taken with their back to the farm field looking toward the lake.

Lake association board member Keith Kluzak worked with a contractor on plans and determined that the remediation work could be accomplished at a cost of $10,000. He submitted a grant application, and the Carl & Verna Schmidt Foundation awarded us a $10,000 grant to do the project. In September, contractor Sonnee Environmental Services installed three log cribs and three erosion-control berms:

Log Crib Backstopped with Rock

This is a log crib backstopped with rock. The crib will slow the flow of water and provide a location for sediment to filter out before reaching the lake. Three of these structures were installed with funds from the Carl and Verna Schmidt Foundation.

Erosion Control Berm in the Field

There were three erosion control berms built with the funds from the Carl and Verna Schmidt Foundation. This a picture of the second of the three berms in order from top to bottom going towards the lake.

Highest Berm on the Hill

This is the highest berm of the three and a stand pipe to the tile line to allow the water to gradually drain as opposed to rushing down hill. The outlet of the tile line would be just a few feet upstream from the first log crib.

The Last of the Three Berms

This is the lowest of the three berms. It is the closest to Culver Trail and the same general location to the first slide in this presentation. It is difficult to see the berm as it is covered with straw until the seeded grass sprouts. The straw blends in with the surrounding stubble wheat. The darker area is a basin excavated out to capture and slowly release water.

The berms are intended to reduce the violent rush of water runoff that flows toward the lake in a heavy rainfall, and to allow the water to drain more gradually. The log cribs should further slow the flow of water and provide a place for sediment to filter out before hitting the lake. This project was made possible by the Carl & Verna Schmidt Foundation's generous financial support, a landowner interested in helping protect the lake, a talented contractor, and good, old-fashioned volunteer effort.