

PENSHORN —Agricultural Cost-Share Project



Protecting Your Water Resources

PROJECT SPECS

Date Constructed ...
Summer 2014

Iron Filings—7,226 lbs

Corrugated Tile—977 l.f.

Phosphorous Reduction:
10.6 lbs/year (90%)

Cost Share Funding -
\$17,511 (85% of project
costs)

Pre-Project Conditions

Julie Penshorn, owner of Sunborn Stables in Chisago City, contacted the District in the fall of 2012 regarding a drainage issue in one of her horse pastures. After investigation, it was determined that the issue was due to a failed draitile system, it was also noted that drainage from the facility drained to Third Lake and ultimately Bone Lake. Ms. Penshorn worked with the Chisago SWCD and the District to come up with a project that would correct her drainage issue and incorporate water quality improvement practices that would protect Third and Bone Lake.



Sunborn Stables is directly adjacent to and drains to Third Lake, see photo above, right.

Post-Project

The project design included in the following components:

- Installation of an iron-enhanced sand filter that would remove dissolved and particulate pollutants from runoff.
- Installation of new draitile that would convey runoff from an existing horse pasture to the filter.
- Regrading of the site to direct runoff from the existing horse holding areas into the filter
- Installation of draitile to convey water from the filter to a wetland before runoff reaches Third Lake.
- Stabilization work using rock boulders at the tile-line outlet to prevent any future issues related to erosion.



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