

# HERON LAKE WATERSHED DISTRICT

PO Box 345 • Heron Lake, MN 56137 • Email: hlwd@roundlk.net • www.hlwdonline.org  
Phone: 507-793-2462 • Toll Free: 888-878-4345 • Fax: 507-793-2253

September 2010

## ALTERNATIVE TILE INTAKES — WHAT ARE THEY?

Alternative tile intakes are a relatively simple and inexpensive surface drainage option that cleans water by removing a large percentage of sediments and phosphorus contained in field runoff. Alternative tile intakes provide water quality benefits, are easy to work around, show a positive crop response, and eliminate suction voids that can contribute to sediment entering the tile line.

Research conducted in Carver County, Minnesota on alternative tile intakes shows that these structures provide adequate drainage capacity and a 50% reduction of sediment and phosphorus levels in subsurface tile lines. The estimated expected minimum life for alternative tile intakes are 10 years, and the maximum life can be 25 years or more, if proper upland practices and maintenance is used.



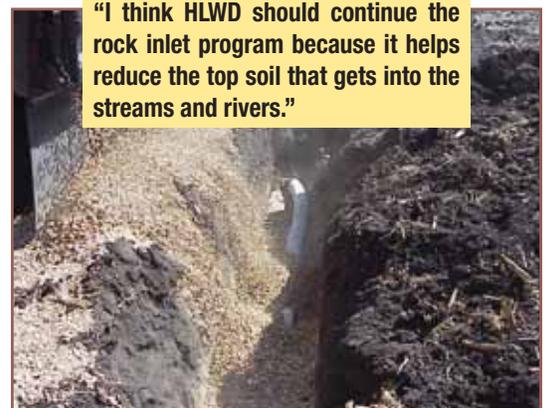
### Landowner Testimonial

"I would recommend rock inlets because they improve water quality and are easy to work around."



### Landowner Testimonial

"I think HLWD should continue the rock inlet program because it helps reduce the top soil that gets into the streams and rivers."



## HOW ARE ALTERNATIVE INTAKES INSTALLED?

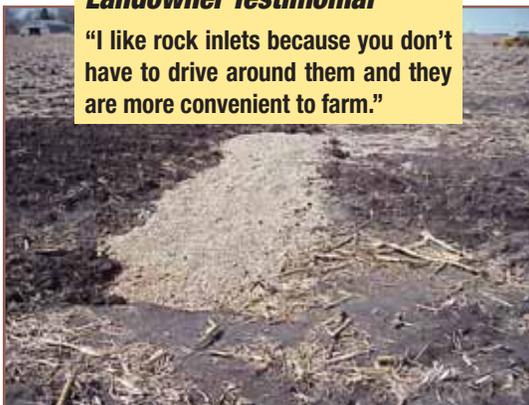
After the HLWD receives and approves a cost-share application and a contractor's bid from the landowner, construction can begin. The first intake installed by each contractor must be checked on-site by the Heron Lake Watershed District (HLWD) Technician to document that the intake being constructed meets the design specifications. The open tile intakes are removed and a trench approximately three feet wide by 15 feet long is excavated to the existing tile depth and filled with rock that is 1/4 of an inch to 7/8 of an inch in size. The new intake can be placed across or perpendicular to the rows depending on landowner/operator preference. The trench should have a slight incline away from the existing tile line.

A 15' trench will accommodate a drainage area of 20 acres. This practice allows water to filter through the rock before reaching the tile. Water will also enter subsurface through the walls of the structure. Unlike a conventional open tile intake, equipment can be driven across these intakes. Alternative intakes can withstand planting and light tillage, such as a single disking, but heavier tillage or plowing is not recommended because it forces sediment into the structure.

Periodic maintenance may be needed depending on soil types, runoff rates and volumes, and tillage practices. Maintenance will usually consist of removing the top layer of mounded rock from the structure and replacing it with a fresh layer of rock.

### Landowner Testimonial

"I like rock inlets because you don't have to drive around them and they are more convenient to farm."



## COST-SHARE IS AVAILABLE!

The HLWD was recently awarded funding to continue alternative tile intake installation through an Environmental Protection Agency 319 grant from the Minnesota Pollution Control Agency. The grant funds are available from September 6, 2010 to June 30, 2013. **This grant provides a 75% cost-share for the installation of alternative surface tile intakes to replace existing surface tile intakes within the HLWD and also throughout all of Nobles, Jackson, Murray, and Cottonwood counties.** If you are interested in replacing your intakes, please contact your Soil and Water Conservation District office or the HLWD office at 507-793-2462.

Heron Lake Watershed District  
PO Box 345  
Heron Lake, MN 56137

Nonprofit  
U.S. Postage  
Paid  
Heron Lake Watershed



**WATERSHED  
ASSISTANCE  
THROUGH  
EDUCATION &  
RESOURCES**

## WHAT'S HAPPENING?

**October 19, 2010**

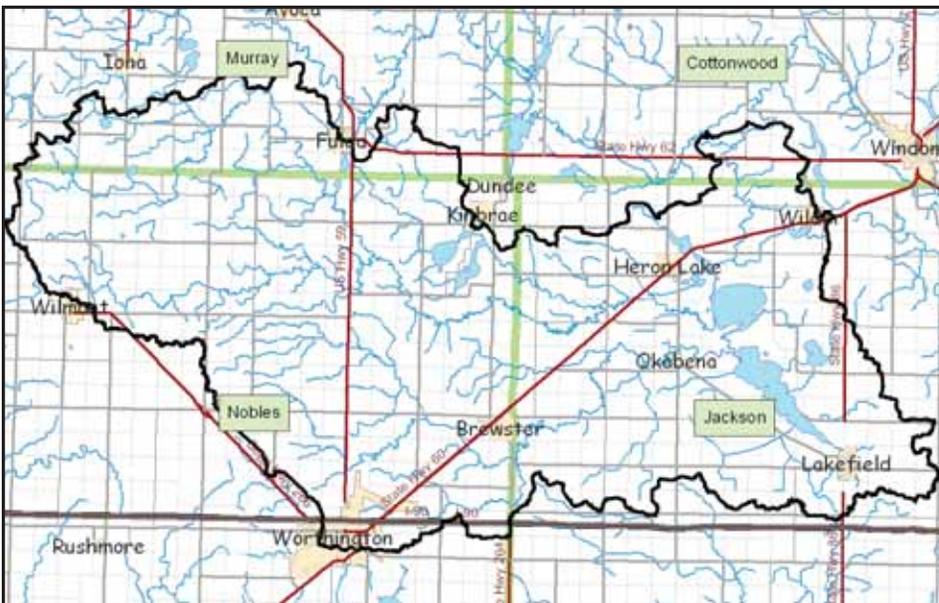
**HLWD board meeting**

**7:00 p.m. at the HLWD office**

Note that the HLWD board meeting dates and times are tentative. Please contact the HLWD office for the exact date and time.

**H**  **HERON LAKE WATERSHED DISTRICT**

Funding for the newsletter is provided by the Minnesota Pollution Control Agency through an EPA Section 319 Grant. Please contact us with your questions or concerns! Telephone 507-793-2462; Email: [hlwd@roundlk.net](mailto:hlwd@roundlk.net)



## MAP OF THE HERON LAKE WATERSHED DISTRICT