



**WATERSHED
ASSISTANCE
THROUGH
EDUCATION &
RESOURCES**

Heron Lake Watershed District

PO Box 345, Heron Lake, MN 56137

507-793-2462 ~ FAX 507-793-2253

Toll free: 888-878-4345

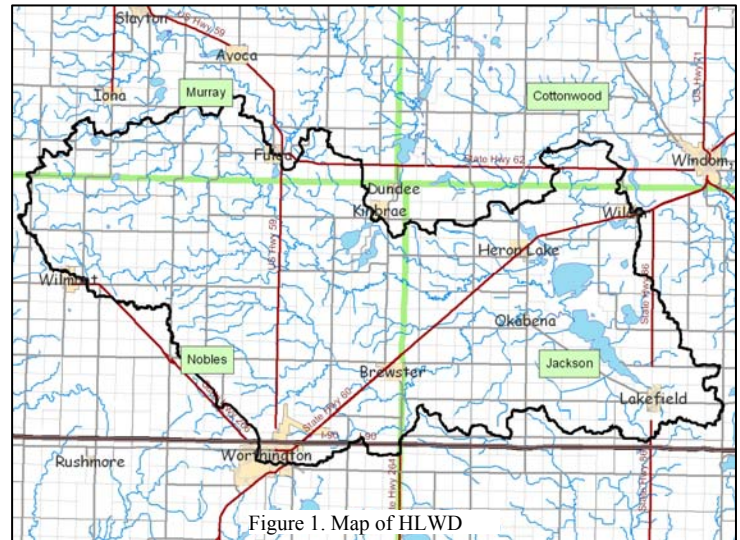
Email: hlwd@roundlk.net

Web: www.hlwdonline.org

HERON LAKE WATERSHED DISTRICT

HLWD information:

- Commissioners in Nobles, Jackson, Murray, and Cottonwood Counties submitted the nominating petition for creation of the HLWD
- The HLWD was established on February 25, 1970
- The HLWD encompasses approximately 472 square miles in portions of Nobles, Jackson, Murray, and Cottonwood Counties (See Figure 1)
- Over 86% of the land use is agricultural
- According to MPCA, most of the lakes and streams in southern Minnesota have sediment, nutrient, and bacteria issues, which are impairing aquatic life and human uses
- The HLWD is using its resources to address these impairments through education efforts and best management practices (BMP) implementation



Facts about a watershed district levy:

- The maximum general operating levy fund for a non-metro watershed district is the taxable market value (TMV) multiplied by .048 percent or \$250,000, whichever is less
- Any watershed district with over \$500,000,000.00 TMV is restricted to \$250,000
- The HLWD has a TMV of \$1,045,968,700.00
- In 2007, a residential home valued at \$100,000 paid about \$29.27, homestead farmland paid about \$.38 per acre, and non-homestead farmland paid about \$.76 per acre

HLWD fiscal responsibility:

- Since 1996, the HLWD has generated \$1,456,711.62 in grant dollars and \$1,729,732.00 in general operating dollars
- Grant dollars combined with inkind and loan generated funds have contributed over \$5.2 million to the program budget since 1996
- When grant, inkind, and low-interest loan dollars are combined, every levy dollar is returning \$3.02 to the watershed

With this fiscal responsibility, what has the HLWD accomplished?

- Met one-on-one with landowners and operators to provide information about available programs and make every effort to develop implementation programs based on residents' needs
- Obtained funding to offer incentives, cost-share, and low-interest loans for implementing BMPs in the watershed since 1996
- Distributed monthly newsletters to over 3,400 watershed residents, government officials, and agency personnel since 2006
- Implemented an interactive education program to inform the public about research findings, projects undertaken, current issues, and facilitate discussions so watershed residents have an opportunity to provide input - education programs included *Heron Lake: Past and Present*; *Hydrology of the Heron Lake watershed*; *Fall Waterfowl Disturbance on Heron Lake*; *HLWD Water Quality*; *Lawns, Lakes, and Laws*; *Lakeshore Stabilization and Restoration*; *The Nuts and Bolts of Shoreline Restoration*; and *Controlling Common Carp and other Aquatic Invasive Species*

- Created a website in 2005 for easy access to program guidelines, application forms, reports, and historical information
- Offered seminars for watershed residents and agency personnel about Total Maximum Daily Loads (TMDL) and the impact this program could have on the watershed
- Partnered with Cottonwood County to conduct a TMDL Study of the entire West Fork Des Moines watershed and the Heron Lake watershed
- Provided six BMP workshops for watershed landowners
- Presented watershed and wetland EnviroScape demonstrations to youth groups and installed storm drain markers
- Obtained funding for 21 summer interns and five graduate students to assist with water quality monitoring, BMP site inspections, and sago pondweed research since 1996
- Established and maintained an on-going a field-scale conservation tillage demonstration site in Alba Township in 2005
- Developed and maintained an on-going controlled drainage demonstration site in 2007
- Created a natural resources department containing environmental education books, CDs, and other media available to the public at the Southwest Star Concept (SSC) High School Library
- Utilized the SSC Natural Resources Class to propagate the plants and install four rain garden demonstration sites in Okabena and Heron Lake
- Participating in a Region 5 EPA Social Indicators Pilot Project which will be used as a model for the nation

How have these accomplishments improved the watershed?

- Intensively monitored three stream sites annually to gather information on BMP effectiveness and water quality improvement (See Table 1)

Table 1: In-lake Phosphorus Goals (in ug/L) for HLWD's major lakes

Lakes	1992 Summer Average	1997-2002 Summer Average	Short Term Goals	Long Term Goals	1997	1998	1999	2000	2001	2002	2006
First Fulda	161	148	145	60-140	136	166	80	228	149	127	70
Second Fulda	173	148	111	25-105	142	161	56	225	184	121	67
West Graham	213	156	196	111-191	160	140	95	285	157	100	96
East Graham	206	188	193	108-188	142	159	114	340	172	200	133
North Heron	316	558	158	73-153	663	570	363	610	727	413	358
South Heron	288	690	174	89-169	583	676	293	1346	549	684	1495

* Red values are values exceeding short term goals for that site

2006 sampling revealed that First Fulda, Second Fulda, West Graham, and East Graham all are meeting the long term goals! West Graham is actually below the long term goal!

South Heron Lake may have had a contaminated sample causing the elevated average.

Based on OP, Chl A & TSS concentrations & intern field reports, SHL had fairly good water quality in 2006.

Note: Short Term Goals were based on BATHTUB modeling with Point Sources reduced to 1 mg/l and Nonpoint Sources reduced by 25%, excluding feedlot loading reductions. Long Term Goals were based on a feedlot loading reduction of 5-85 ug/L.

- Provided cost-share, incentive, and loan funds for the implementation of:
 - 4,723.14 acres of filter strips
 - 120.59 acres of grassed waterways
 - 314.48 acres of wetland restoration
 - 71.2 acres of field windbreaks
 - 16.62 acres of farmstead windbreaks
 - 384 rock inlets
 - 15,270.8 acres of minimum till
 - 2,490.8 acres of no-till
 - 1,731.3 acres of strip till
 - 255.2 acres of forage residue management
 - six rain gardens
 - six wildlife ponds
 - 63 septic system replacements
- Cost-share, incentive, and loan project locations (See Figure 2)
- Reduced phosphorus entering watershed streams and lakes (See Figure 3)
- Reduced sediment entering watershed streams and lakes (See Figure 4)

Figure 2.

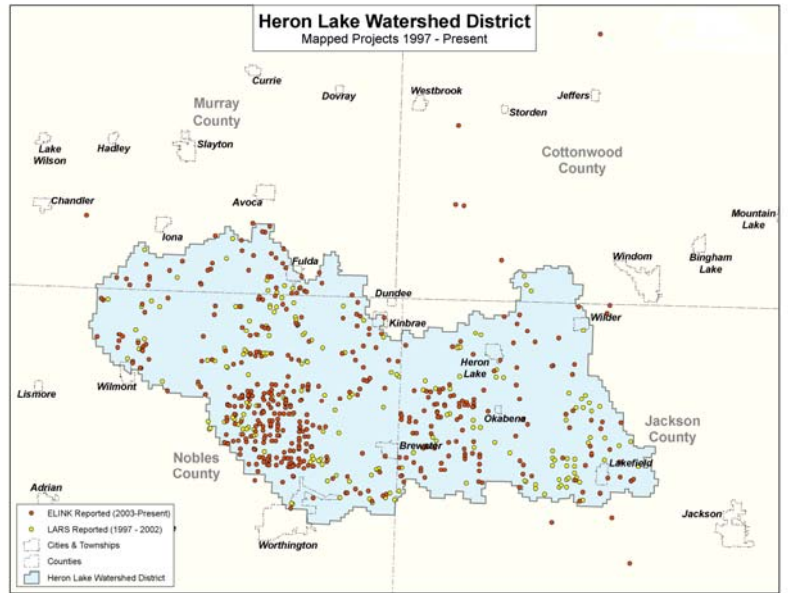


Figure 3.

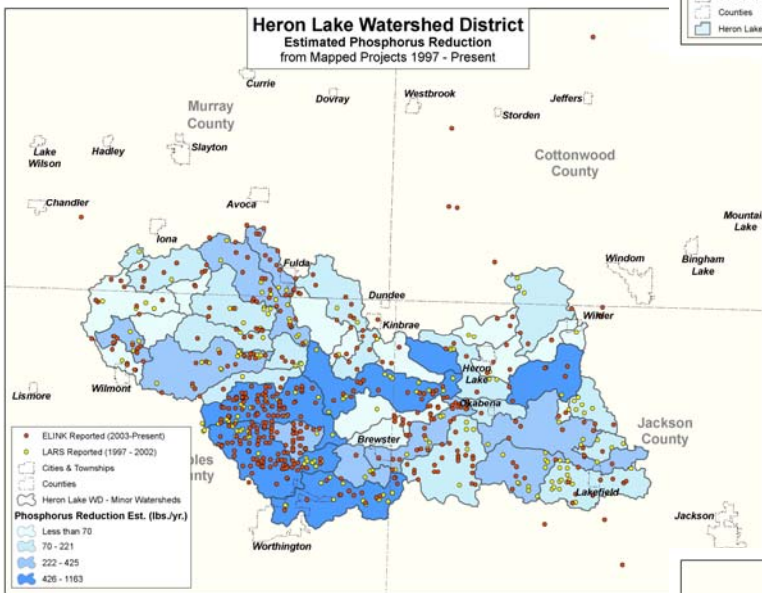
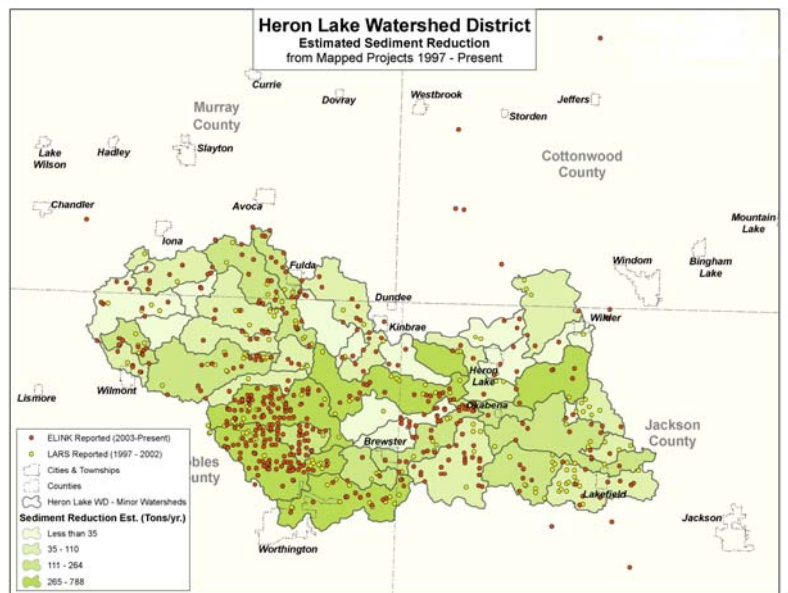


Figure 4.



For more information contact:

Jan Voit, District Administrator

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