

MIDDLE FORK CROW RIVER WATERSHED DISTRICT

2013 ANNUAL REPORT



“The mission of the Middle Fork Crow River Watershed District is to protect and preserve water quality in the watershed.”



STAN LILLEBERG RECEIVING THE 2013 PROJECT OF THE YEAR AWARD FROM PRESIDENT BOB HODAPP

2013 WATERSHED PROJECT OF THE YEAR

The Middle Fork Crow River Watershed District (MFCRWD) Board of Managers has instituted a new program designed to confer special recognition upon those individuals and groups who have demonstrated a desire and willingness to protect and improve local water resources.

The Board of Managers unanimously selected Lilleberg Farms Woodchip Bioreactor as the 2013 MFCRWD Project of the Year. The Lilleberg Woodchip Bioreactor is an excellent example of agricultural producers willing to implement water quality improvement practices on their fields. Woodchip bioreactors work by routing tile drainage through a covered trench filled with woodchips. As natural soil bacteria feed on the woodchips, they can consume and remove up to 50% of nitrate-nitrogen from the water. Over the new few years, the District will monitor and report on the effectiveness of the project over time. With proper management and care, the Lilleberg bioreactor will provide water quality benefits for 15-20 years. The Middle Fork Crow River Watershed District hopes to significantly increase the number of agricultural water quality practices in the future.

Congratulations to the Lilleberg family for their admirable efforts, and for being awarded the 2013 MFCRWD Project of the Year!

COST-SHARE ELIGIBLE AGRICULTURE BEST MANAGEMENT PRACTICES:

- conservation buffers
- wetland restorations
- nutrient management plans
- riparian tree plantings
- alternative tile intakes
- ditch bank side inlets
- controlled drainage
- feedlot upgrades
- sediment basins
- animal exclusions (see picture below)
- stream bank stabilizations/restorations
- projects not listed may also qualify for incentives

CONTACT US TO LEARN MORE ABOUT OUR COST-SHARE PROGRAMS:

MFCRWD
189 County Rd. 8 NE
Spicer, MN 56288

320-796-0888

Web: www.mfcrow.org

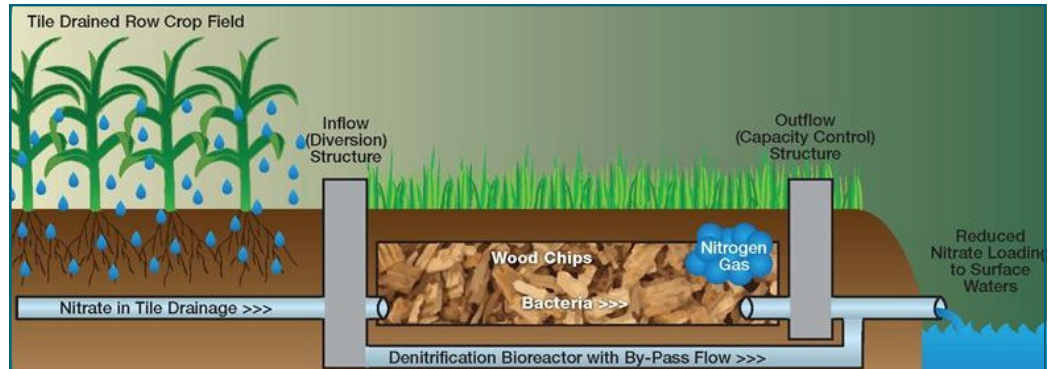
LILLEBERG WOODCHIP BIOREACTOR

In 2012 and 2013, the Middle Fork Crow River Watershed District worked with landowners in the Diamond Lake subwatershed to implement a woodchip bioreactor Best Management Practice. While woodchip bioreactors are a relatively new method to improve water quality, their effectiveness has quickly caught the attention of producers and conservationists across the Midwest.

practice

Woodchip bioreactors are covered trenches filled with woodchips. Water is diverted into the bioreactor and is retained with a control structure to ensure adequate saturation of the woodchips.

Diagram courtesy of Illinois Extension



benefits

The saturated conditions provide insufficient oxygen for bacteria feeding on the woodchips. As a result, the bacteria begin to respire nitrate, effectively removing it from the water.

The woodchip bioreactor installed in the Diamond Lake subwatershed covers a 2000 square foot area and is 4 feet deep. The bioreactor will remove nitrates from approximately 32 acres of drainage. The trench was lined and covered with plastic, and the bioreactor area will be taken out of production to avoid compaction. The bioreactor will be regularly monitored to measure its ability to remove nutrients from the water.



WOODCHIP BIOREACTOR INSTALLATION

A special thanks to Kandiyohi County Water Task Force, Diamond Lake Area Recreation Association, and the Lilleberg family for making this project possible.

Grant dollars made possible by:



IRVING TOWNSHIP STORMWATER GRIT CHAMBER AND INFILTRATION BASIN

In 2012, the Middle Fork Crow River Watershed District procured legacy grant funding through the Minnesota Board of Water and Soil Resources to improve the impacts of stormwater on water quality in Green Lake. In the past two years, District staff worked with Irving Township to implement a stormwater improvement project.



INFILTRATION BASIN ON IRVING TOWNSHIP PROPERTY

A special thanks to Green Lake Property Owners Association, Kandiyohi County Water Task Force, and Irving Township for making this project possible.

practice

The property, located on the North side of Green Lake, contained a stormwater pipe which drained approximately five acres of stormwater from North Shore Drive directly into the lake. The stormwater which was previously untreated will be directed into grit chamber under the street and a vegetated basin on the Township's property to allow filtration and infiltration into the soil.

benefits

The Irving Township project will reduce the total volume of stormwater entering Green Lake, while filtering and absorbing pollutants such as sediment, nutrients, and organic material. The basin is planted with a combination of shrubs, grasses, and wildflowers and will become an eye-pleasing project to improve water quality in Green Lake.



BMP projects

Cost Share and Low Interest loans

The District will continue working on the expansion of the BMP programs; including shoreline restorations, raingardens, infiltration basins, and stream stabilization, and we hope to expand our BMP efforts with local farmers.





MIDDLE FORK CROW RIVER

VOLUNTEERS

The District Board of Managers and Staff express sincere thanks and appreciation to the following, whom without the monitoring program would not be possible:

Bruce Wing

Bob Hodapp

Gordy Behm

Ed and Mary Rhude

Graden West

Jill and Riley Nelson

Kyle Knudsen

Randy and Mary Jo Patton

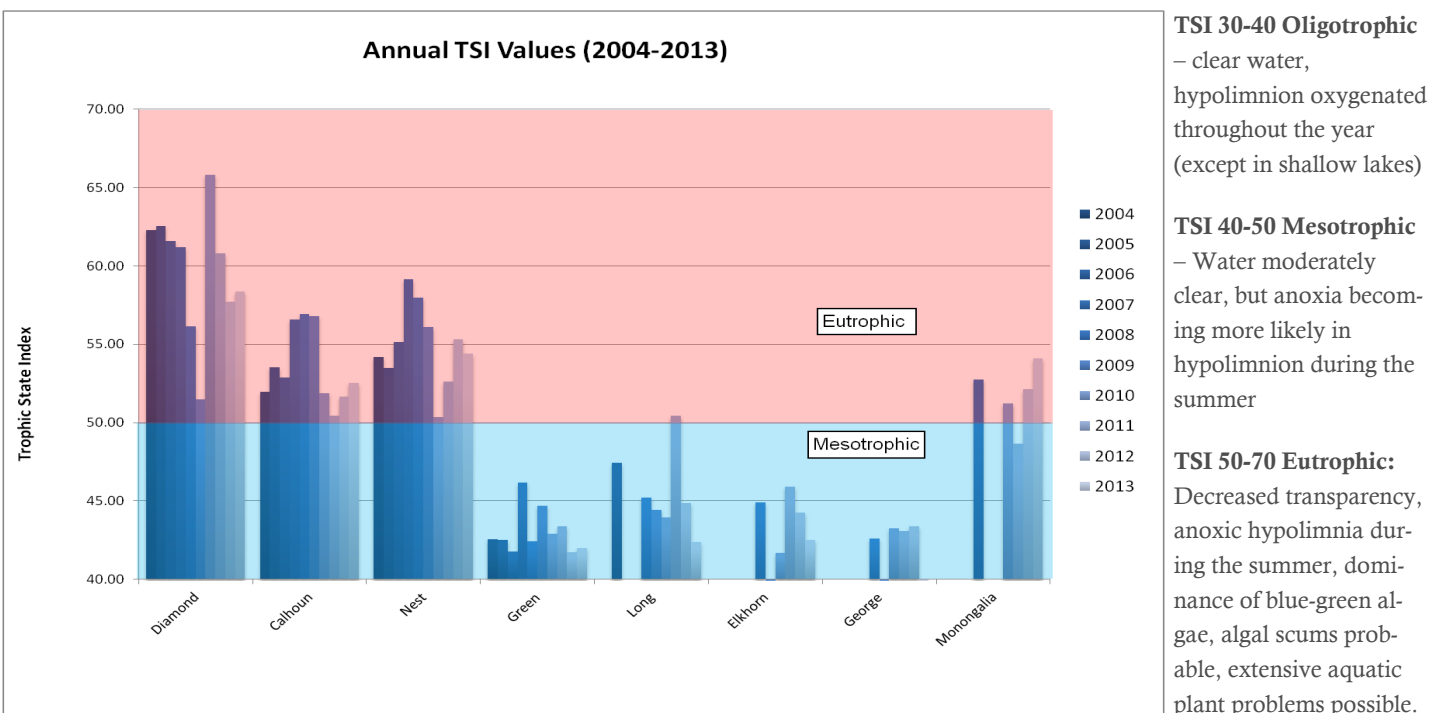
Robert and Susan Dice

Ruth Schaefer and Lee Thompson

WATER QUALITY MONITORING

Another successful monitoring season concluded in 2013. District volunteers and staff collected over 160 samples in 2013. Each sample was packed with ice and sent to an Minnesota Pollution Control Agency certified lab for analysis. In addition to chemical analysis, volunteers measure water clarity with a secchi disk or tube, and determine physical appearance and recreational suitability of the water. Monitoring water quality within the District is essential for assessing trends in water quality and targeting restoration and protection projects.

Five Stream sites and Eight Lake sites were regularly monitored in 2013. Lab analysis was performed for the following water quality parameters: Total Phosphorus, Total Suspended Solids, Chlorophyll-a, and Total Kjeldahl Nitrogen. The Trophic State Index (TSI) utilizes secchi depth and water chemistry (Total Phosphorus, Total Nitrogen, and Chlorophyll-a) to rank a lake's biological productivity. Lakes are classified as either oligotrophic, mesotrophic, or eutrophic. Below is a graph of the TSI for each of the eight major recreational lakes within the District. Visit the District website and click 'Resources' to view the full 2013 Monitoring Report and past monitoring reports.



DIAMOND LAKE TMDL RECOMMENDATION IMPLEMENTATION HUBBARD, SCHULTZ, AND WHEELER CHAIN OF LAKES

The approved Total Maximum Daily Load (TMDL)* study for Diamond Lake recommended a project to improve the water quality in the Hubbard, Schultz, and Wheeler Lake chain. An estimated 74% and 83% of the total phosphorus entering Diamond Lake from surface runoff in 2008 and 2009, respectively, came from the chain of lakes. *TMDL is a calculation of the maximum amount of a pollutant that a waterbody can receive and still meet water quality standards.



In 2011, Ducks Unlimited partnered with the Middle Fork Crow River Watershed District and the Diamond Lake Area Recreational Association to investigate the feasibility of actively managing water levels on the Hubbard, Schultz, and Wheeler chain of lakes to enhance their condition. Much of this feasibility work was completed with funding from Minnesota's Outdoor Heritage Fund as recommended by the Lesard-Sams Outdoor Heritage Council.

The Ducks Unlimited 2012 Feasibility Report details the viability of a Management Plan for the combined purposes of improving wildlife habitat and water quality. The project is envisioned as a cooperative action of the MFCRWD, Minnesota Department of Natural Resources, and Ducks Unlimited for the construction, operation and maintenance of water control structures to allow for temporary drawdown of the lake chain. Through temporary water level draw-downs, basin sediments are exposed, consolidated, and aerated to allow rooted aquatic



plants to germinate from natural seed banks that absorb nutrients and help anchor bottom sediments. Through active water level management, shallow lakes can be managed to persist in a clear water healthy condition, whereas deteriorated, turbid water conditions provides

little benefit. Just as fire maintains the health of prairies, we know through science that shallow lakes and wetlands require periods of low water or droughts to stay healthy, productive, and beneficial for waterfowl, wildlife species, and humans as well. High stable water levels, excessive nutrient inflows, invasive fish, and the lack of natural fish winterkill have led to the loss of aquatic vegetation and invertebrate populations, both of which are key elements to a healthy shallow lake system. Essential to improving the overall health of these lakes is our ability to actively manage water levels.

Moving forward Ducks Unlimited and the Minnesota Department of Natural Resources will continue working with the Middle Fork Crow River Watershed District, the Diamond Lake Area Recreational Association, and other partners to develop a comprehensive management plan for the entire lake system.



MIDDLE FORK WELCOMES MIKE

Mike Behan joined the Middle Fork Crow River Watershed District in February 2013 as a Hydrologic Technician. Mike is the son of Deb Behan and Mike Kueppers, and is a 2007 graduate of New London-Spicer High School. Mike received a degree in Environmental Science from St. Cloud State University in 2012. Mike serves the District in a variety of ways, including working with landowners to implement projects, monitoring water quality, and reviewing permit applications. He also works with local school districts to educate students about watersheds through hands-on learning experiences. Mike began his work with the District as a summer intern in 2012 inspecting watercraft for Aquatic Invasive Species (AIS) at lake accesses within the District. Mike looks forward to serving the District and helping protect and improve water quality in the watershed.

ZEBRA MUSSELS

Zebra mussels are small bivalve mollusks with alternating black and white stripes. Native to the Black and Caspian Seas of Eastern Europe and Western Asia, Zebra Mussels were likely introduced to Lake Superior in the late 1980's via the ballast tanks of shipping vessels. Like many invasive species, a zebra mussel's ability to reproduce rapidly contributes to their success. As zebra mussel populations increase, less food is available for fish and other wildlife. Zebra mussels can affect water quality by altering nutrient cycling and decreasing dissolved oxygen (Arnott and Vanni 1996, James and others 1997, Heath and others 1995, Johengen and others 1995).

In 2013, The Minnesota DNR list of infested waters contained 138 zebra mussel infested lakes and rivers. Twenty-eight new infestations in Minnesota increased the number of infested waters. When zebra mussels are introduced to a lake, all lakes within that particular watershed are at-risk.



JORDAN REINER, A 2013 MFCRWD INTERN, INSPECTING WATERCRAFT AT COUNTY PARK 4

AQUATIC INVASIVE SPECIES

The District has worked diligently with stakeholders and agency partners to establish an annual aquatic invasive species (AIS) education and inspection program. The District has also worked with lake associations to manage aquatic invasive plants via mechanical harvesting and herbicidal treatment. In 2013, the District hired three watercraft inspectors to help educate lake-users how to reduce the spread of invasive species. Watercraft Inspectors are trained by the Department of Natural Resources, and upon completion of their training have the authority to deny access to a waterbody if aquatic invasive species are found. Watercraft Inspectors do not have the ability to issue citations and are only allowed to inspect watercraft and water-related equipment for AIS. In 2013, MFCRWD AIS inspectors performed 1,450 watercraft inspections on District lakes. Each interaction provided an opportunity for lake-users to learn about the impacts and spread of aquatic invasive species. To date, 2,332 watercraft inspections have been performed by MFCRWD staff since the formation of the inspection program in 2011.

In addition to the District's AIS inspection program, educational materials are created and distributed to inform the public about the dangers of AIS and how to prevent spreading them to non-infested lakes. If you plan to transport your watercraft or related-equipment between infested and non-infested lakes, make sure to decontaminate your watercraft with high-pressure hot water (>160F) and be sure it is adequately drained. Zebra mussel larvae (veligers) float in the water column and are microscopic, while Eurasian watermilfoil can be spread by a single stem fragment. The District will continue to work and seek new opportunities to reduce the risk of a watershed infestation of zebra mussels and other aquatic invasive species. Learn more about aquatic and terrestrial invasive species on the Minnesota Department of Natural Resources' website or the Watershed District website.

www.dnr.state.mn.us/invasives & www.mfcrow.org

FINANCIAL REPORT

GRANTS

The MFCRWD continues monitoring, education, and implementation projects with grants expended in 2013. A summary of our expended grants and contract agreements from 2013 follows:

- **Aquatic Invasive Species Watercraft Inspection Program DNR grant:** This grant allowed the District to hire three interns to inspect watercraft for AIS on area lakes. \$7,750 was spent May 2013—September 2013.
- **Drainage Water Quality Improvement Project:** This grant provides \$43,505 to implement agricultural BMPs including two large woodchip bioreactors and five rock inlets. It runs through December 2014.
- **Green Lake Stormwater Quality Improvement Project:** This grant provides \$252,125 to implement stormwater infrastructure around Green Lake to address increased runoff velocities and volumes associated with a higher percent of impervious surfaces. It runs through December 2014.
- **Middle Fork Crow Watershed Restoration Enhancement Project:** This grant provided \$350,000 to improve and preserve water quality through implementing best management practices and education programs which engaged citizens in active resource management. This grant concluded June 2013.
- **Middle Fork Crow Watershed Restoration Loan Program:** This allows the District to provide financial assistance to District residents interested in septic upgrades as well as BMPs through low interest loans. \$150,000 is available through October 2014.
- **Middle Fork Crow Watershed Resource Investigation:** This grant provides \$75,450 for education, civic engagement, monitoring, and analysis to improve the effectiveness of limited implementation funding for Best Management Practices. It runs through June 2016.
- **Shoreland and Streambank Restoration/Stabilization Program:** This grant provides \$120,000 to implement shoreline/streambank stabilization projects, a rain-barrel program, and water quality education efforts. It runs through December 2014.
- **Shoreline Enhancement and Stabilization DNR Block Grant:** This grant provides \$50,000 in grant funds to create a workshop focusing on the benefits of natural shorelines and to implement shoreline restorations. It runs through June 2014.

NEW DISTRICT OFFICE LOCATION

The District has moved into a new building located at 189 County Road 8 NE in Spicer. The former office space rented by the District did not provide adequate room for its staff, meetings, and equipment, and thus prompted the need for a new location. A substantive search of existing properties did not reveal a space that fulfilled the specific needs of the District (such as wheelchair accessibility). Consequently, the Board of Managers motioned to purchase property where the building stands today. The new building will allow for agencies and related groups to borrow the meeting space, and shall allow for potential future growth of the District staff and equipment. The new building was designed by Engan Associates of Willmar, MN and was constructed by Alliance Building Corporation of Sauk Rapids, MN. Construction of the building began in March of 2013 and was completed the following August. The District plans to implement best management practices on the property to provide good examples of how landowners can protect and improve water quality. If you missed the District's annual Open House gathering in August, feel free to stop in for a tour of the building and to learn about the District's role in preserving water resources.



2013 FINANCIAL INFORMATION SUMMARY OF REVENUES AND EXPENSES

Revenues

Grants	\$290,516
Clean Water Fund	\$43,500
General fund	\$252,231
Special assessments	\$43,098
State aid	\$429
Interest income	\$3,951
Miscellaneous	\$24,010
Total Revenues	\$657,735

Expenditures

Meetings	\$14,301
Contract labor	\$93,988
Administrative	\$10,075
BMP implementation expenses	\$182,314
Professional expenses	\$28,519
Employee Benefits	\$11,098
Dues	\$3,766
Insurance	\$4,252
Payroll expenses	\$147,382
Payroll tax expenses	\$11,821
Utilities	\$3,280
Monitoring	\$9,295
Public Education	\$16,231
Rent	\$3,900
Office expense	994
Miscellaneous	734
Capital outlay	\$1,531
Depreciation	\$9,463
Interest	\$14,763
Total Expenses	\$567,707

Fund Balance January 1	\$369,288
Fund Balance December 31	\$459,316

The complete audit report is available at the Middle Fork Crow River Watershed District Office.

LOAN INTEREST SEPTIC LOANS

Interested in upgrading your old septic system? The Middle Fork Crow River Watershed District provides low-interest loans for septic upgrades and other water-quality related projects. Rates are 3.25% and are paid over seven years through property taxes. Call, click, or visit the District office for details on how to apply. Available until October 2014

2014 DISTRICT EVENTS

Shoreland Tour, June 18th at 6 p.m., District Office—rain or shine

Agricultural BMP Tour, July 10th, at 6 p.m., District Office—rain or shine—meal provided

Please RSVP on the District website, or by contacting mike@mfcrow.org

Annual Open House, June 3rd , District Office

2014 LOCAL EVENTS

Earth Day Celebration, PWELC, April 26th, 8-1 p.m.

BOARD OF MANAGERS

President: Robert Hodapp,
Kandiyohi County

V. President: Bruce Wing,
Stearns County

Secretary: Ruth Schaefer,
Kandiyohi County

Treasurer: Gordy Behm,
Kandiyohi County

V. Treasurer: Joe Flanders,
Meeker County

Regular Board Meeting:
First Tuesday of the Month at 7 p.m.

PLACE
STAMP
HERE



P.O. Box 8
Spicer, MN 56288