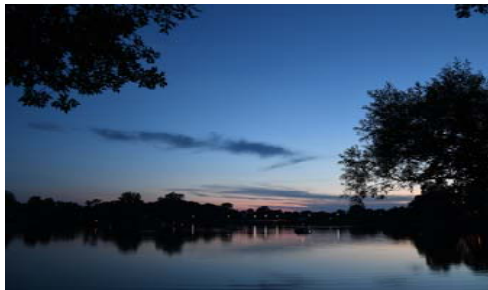




2018 ANNUAL REPORT



MISSION STATEMENT:

WE EXIST FOR THE PROTECTION AND PRESERVATION OF WATER QUALITY IN THE MIDDLE FORK CROW RIVER WATERSHED DISTRICT.

WHAT IS A WATERSHED DISTRICT?

A watershed district is a special-purpose unit of local government that works with the community and organizations through federal and state grant money to restore, protect and preserve wetlands, streams, rivers and lakes within the watershed boundaries.

Minnesota is the land of 11,842 lakes to be exact; water is very important to our way of life. Minnesotans rely on healthy lakes, rivers, and ground water for clean drinking water, fishing, swimming, hunting, kayaking, canoeing, and water sports; to name a few. Most boundaries are political (i.e. Township or County), watershed district boundaries are not, because water does not follow political boundaries. Currently there are 45 established watershed districts in Minnesota, all of which work to protect the surface and ground waters that make life in Minnesota wonderful.



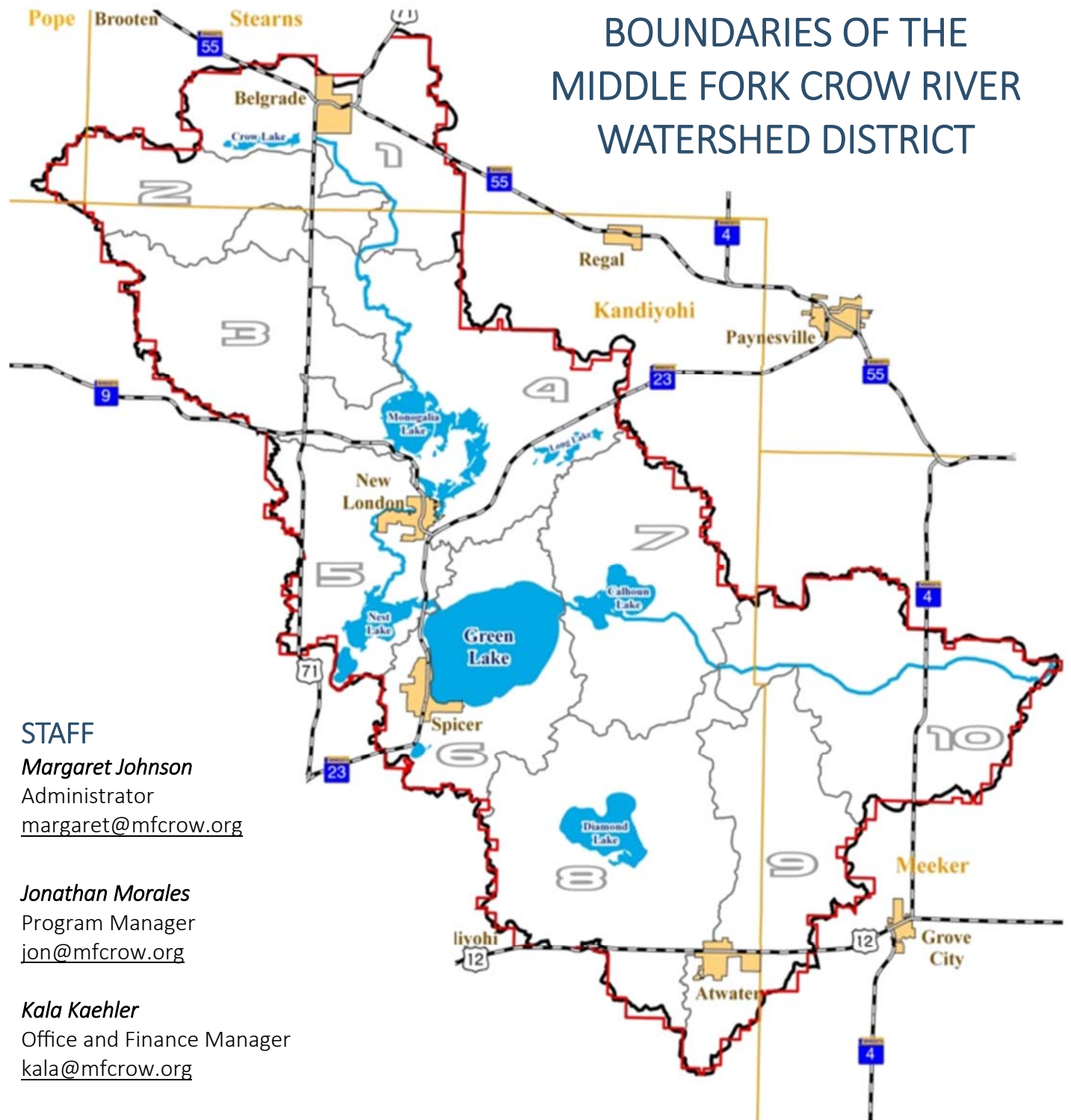
ABOUT MIDDLE FORK CROW RIVER WATERSHED DISTRICT...

The Middle Fork Crow River Watershed District was established in April 2005. The District exists for the protection and preservation of water quality in the Middle Fork Crow River Watershed. The District consists of a board of five Managers from three of the four counties in the watershed; watershed boundaries within Pope county are too small to constitute a member from that county. Board members must live in the district and are appointed by County Commissioners to serve three-year terms.

The Middle Fork Crow river Watershed drains a 271 square mile area. The river begins in Stearns County in the Belgrade area and flows southward through north central Kandiyohi county. As the river flows south it passes through the City of New London and enters Green Lake in Spicer. After the river outlets from Green lake, it flows eastward. Water from the City of Atwater and Diamond lake enter the Middle Fork Crow River just before it crosses the Meeker County line. The Middle Fork of the Crow river joins the North Fork Crow River just east of Manannah and eventually enters the Mississippi River near Dayton.



BOUNDARIES OF THE MIDDLE FORK CROW RIVER WATERSHED DISTRICT



BOARD

President

Bob Hodapp (Kandiyohi County)

Term Expiration: 4/26/18

Vice President

Bruce Wing (Stearns County)

Term Expiration: 4/26/19

Secretary

Ruth Schaefer (Kandiyohi County)

Term Expiration: 4/26/19

Treasurer

Gordy Behm (Kandiyohi County)

Term Expiration: 4/26/20

Co-Treasurer

Jay Hedtke (Meeker County)

Term Expiration: 4/26/18

STAFF

Margaret Johnson

Administrator

margaret@mfcrow.org

Jonathan Morales

Program Manager

jon@mfcrow.org

Kala Kaehler

Office and Finance Manager

kala@mfcrow.org

SURFACE WATER

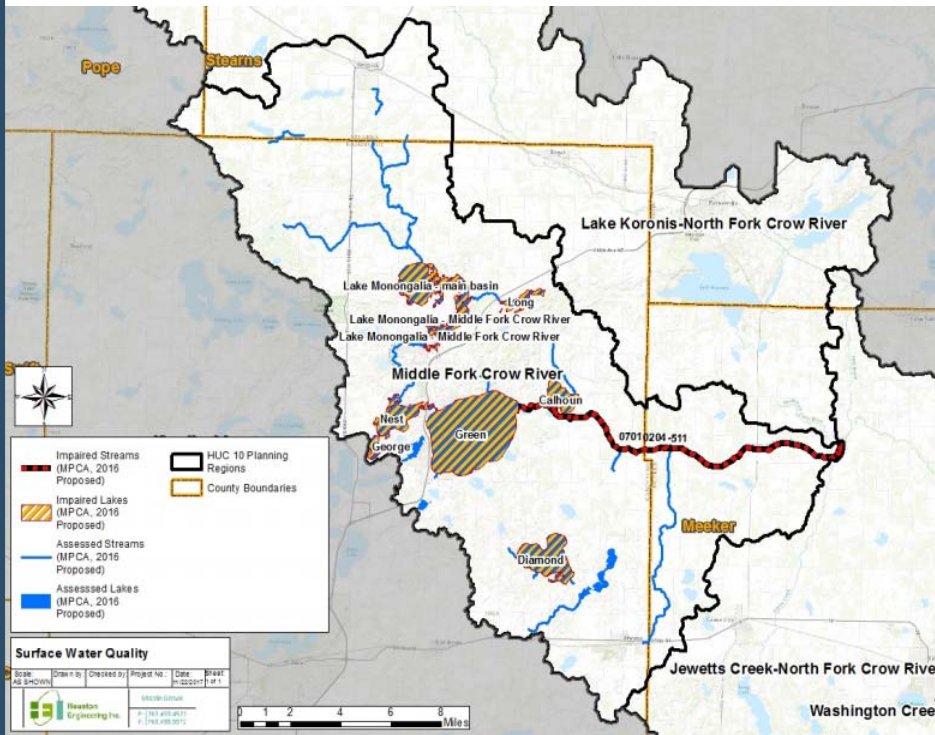
What is surface water?

(noun): water that collects on the surface of the group. The top layer of a body of water.

Why is it important?

Excess surface water runoff leads to flood damages, accelerated bank erosion and stream channel movement, increased movement of sediment and the loss of aquatic habitat. Excess surface runoff can also lead to the overtopping and washout of road and damage to land and buildings. The term “altered hydrology” is a term commonly used within Minnesota to describe the changes associated with excess surface runoff.

Current Conditions: within the Middle Fork Crow River watershed there is one stream reach and seven lakes (Diamond, George, Nest, Green Calhoun, Lake Monongalia, and Long) which do not meet the state water quality standards, and are listed as impaired. The map below shows the current impaired water streams and rivers.



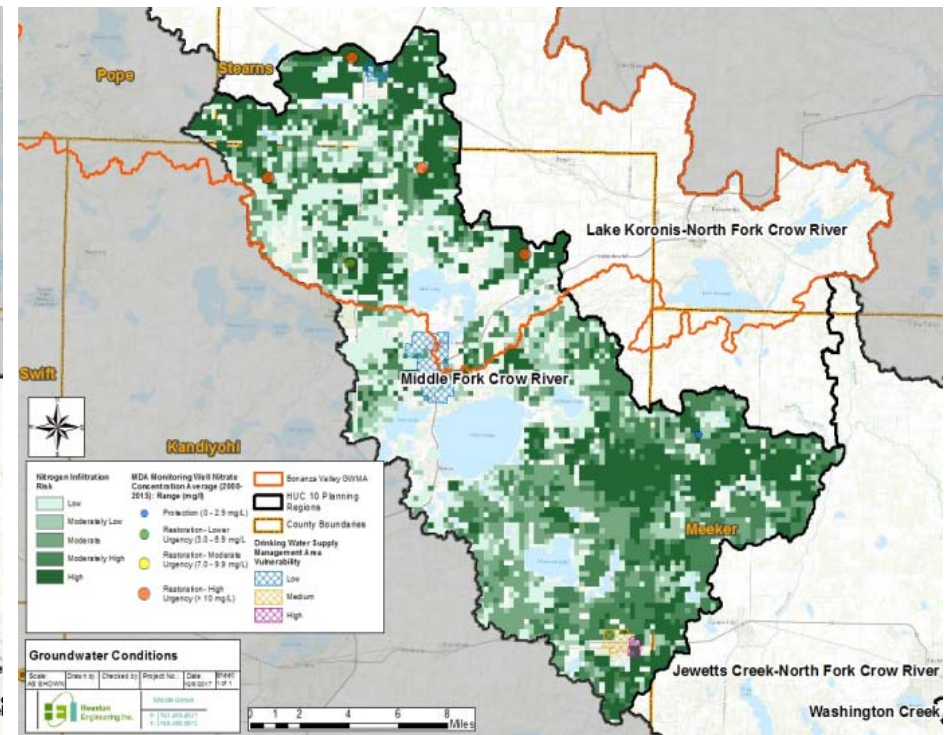
GROUNDWATER

What is groundwater?

(noun): water held underground in soil or in pores and crevices in rock.

Why is it important? Drinking water supplies are primarily groundwater, which is water within the subsurface pores of soil and rock within the aquifer. The susceptibility of the drinking water supply to contamination is driven largely by how quickly and easily water can be transported from the surface to the aquifer, and conditions within the primary aquifer recharge areas.

Current Conditions: The Middle Fork Crow River overlays a significant portion of the Bonanza Valley Groundwater Management Area (GWMA), a regionally important resource. Within the Bonanza Valley GWMA, there is growing concern about the sustainability of groundwater supplies and elevated nitrate levels. To address these concerns, recharge structural practices should be encouraged in areas of “low” nitrogen infiltration risk to promote recharge of cleaner water. Storage and filtration practices should be encouraged in “high” nitrogen infiltration risk area, to promote trapping and filtering of nitrogen rich surface water to minimize the likelihood of further groundwater contamination, especially in Drinking Water Supply Management Areas (DWSMAS).



The MFCRWD continues monitoring, education, and best management practice project implementation with grants expended in 2018. All ongoing grants are listed below.

Watershed Pollutant Load Monitoring Network:

The purpose of this monitoring project is to maintain water quality data collection and develop a better understanding of land use impacts on rivers. This project will collect water samples at seven locations in the Crow River watershed.

Completion date: December 31, 2018.

Total grant: \$22,980

Diamond Lake TMDL Implementation Projects grant:

The degradation of Diamond Lake’s water quality resulted in the placement of the lake on the MPCA’s List of Impaired Waters in 2006. The MFCRWD and its partners are making significant progress towards reducing phosphorus loading to Diamond Lake by completing implementation activities outlined in the Diamond Lake TMDL Report.

Completion date: December 31, 2018.

Total grant: \$176,000 Total match: \$59,434 Total: \$235,434

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.

Date: June 8, 2015—June 30, 2018

Total low interest loans available: \$110,000

Nest and Diamond Lake Subwatershed Assessment and Internal Load Control:

The project entails the completion of a subwatershed assessment upstream of Nest Lake including the application of multiple models to develop a cost/benefit analysis of individual projects/best management practices (BMPs) at the field level; additionally, the project entails an evaluation of Nest Lake and Diamond Lake sediment chemistry to develop a better understanding of nec-

essary aluminum sulfate (alum) dosing and potential cost for alum treatment.

Completion date: December 31, 2021

Total grant: \$65,000 Total Match: \$16,250 Total: \$81,250

Stormwater Implementation Importance for Progressive “City on the Pond”

This grant seeks to build the top 5 prioritized projects within the City of New London. Installation of these project will result in a cost-effective pollutant reduction from city runoff to various nearby water resources. One of the most urbanized areas in the Middle Fork Crow River watershed is the City of New London. With high runoff values and modified land uses, urban areas contribute increased amounts of pollutants (sediment and nutrients) to the Middle Fork Crow River and ultimately downstream to Nest Lake and Green Lake.

Total grant: \$160,250 Total match: \$40,063 Total: \$200,313

Developed Partners Expanded Resources Accomplishment:

The District has the unique ability to provide financial assistance in the format of sub-grants to those in need of implementing their waiting Best Management Practices (BMPs).

Completion date: December 31, 2018.

Total grant: \$125,000 Total match: \$37,500 Total: \$162,500

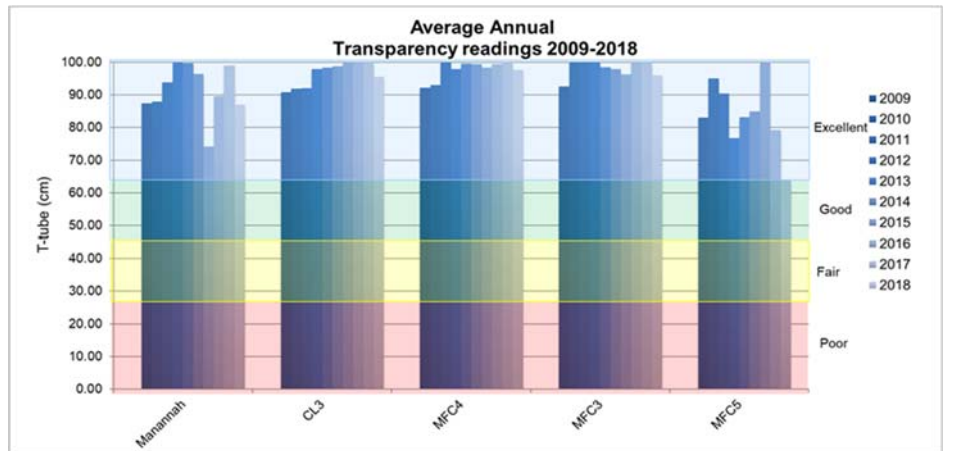
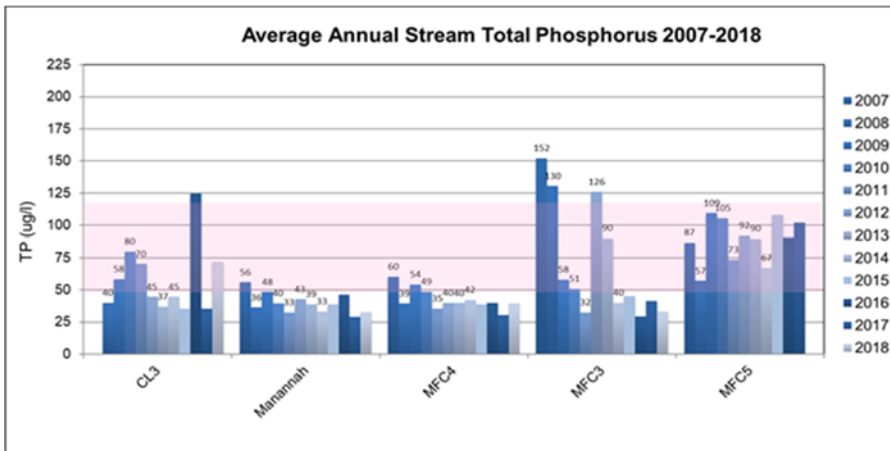
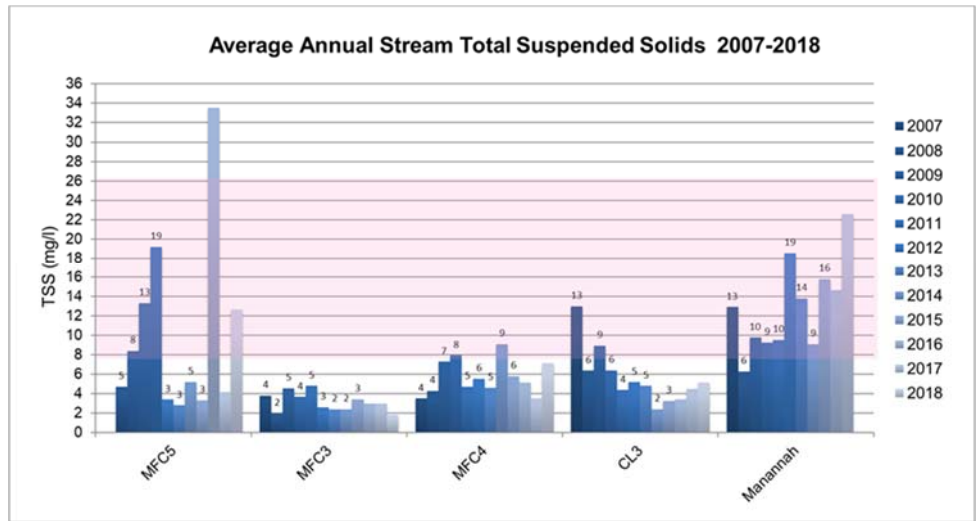
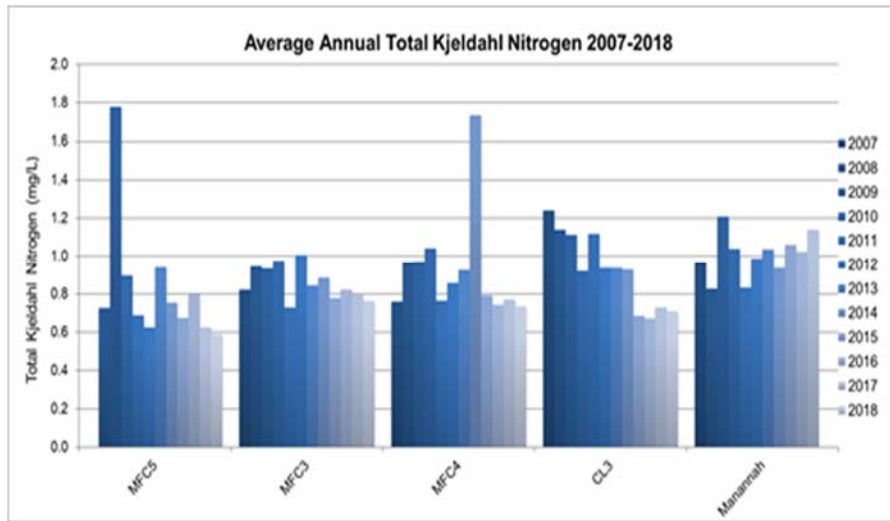
Watershed Restoration and Protection Strategy:

This project activity will develop collaboration between the major watershed partners to develop the watershed public participation plan that identifies specific potential activities, results, timelines, and measurable goals for the North Fork Crow River Watershed Public Participation Plan. The watershed public participation plan will set a framework for the public to play a more active role in building public capital for natural resource restoration and protection; in deliberating the choices and tradeoffs involved in restoration and protection actions; and in executing and adopting a public participation plan.

Completion Date: June 30, 2019.

Total grant WRAPS: \$50,000

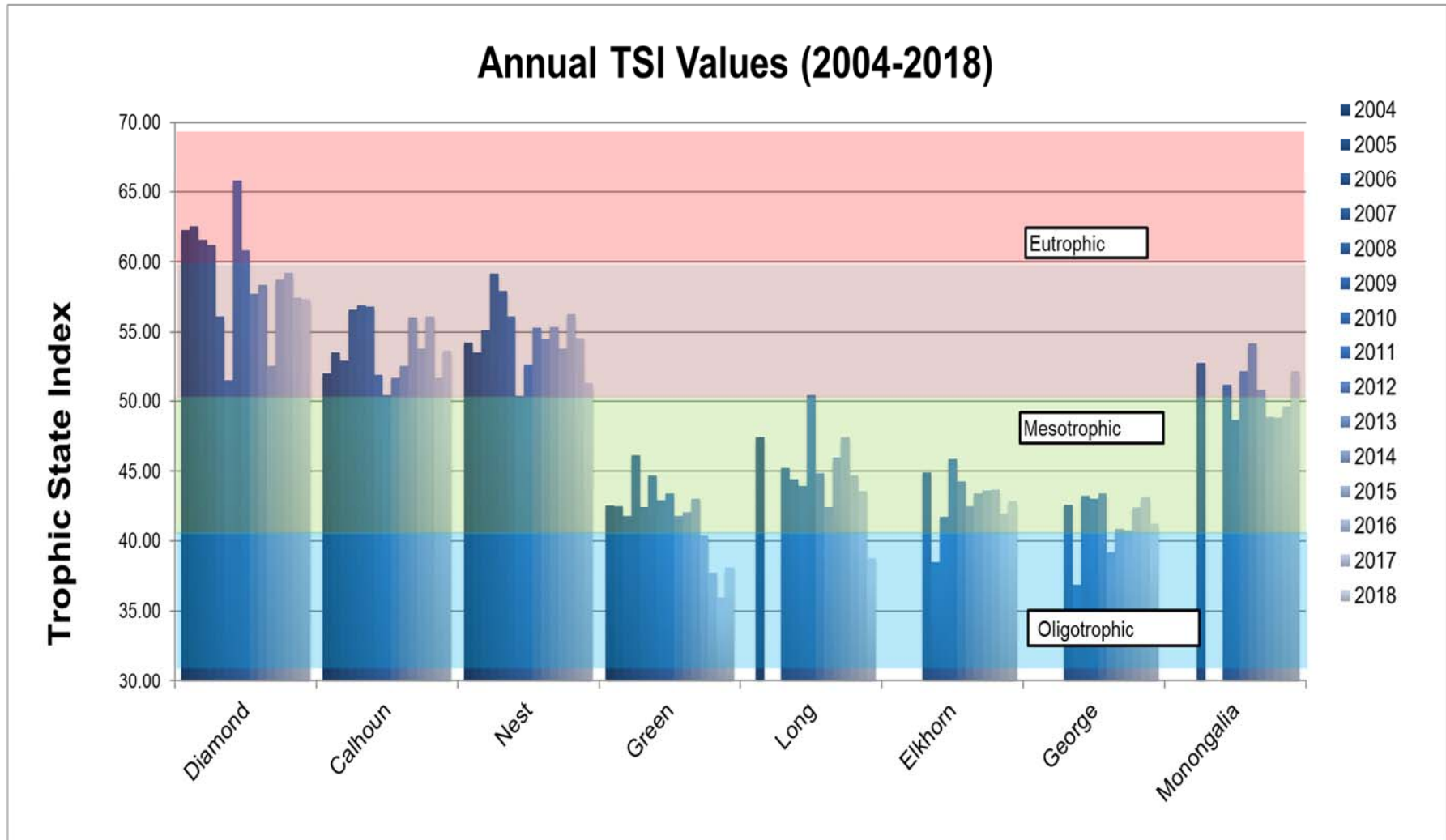
STREAM CONDITIONS



- ◆ Total Kjeldahl Nitrogen determines both organic and inorganic forms of nitrogen. In large concentrations it can indirectly increase oxygen demand thus depleting available oxygen and creating harmful conditions for aquatic life.
- ◆ Phosphorus is an essential for plant growth and many times the limiting nutrient in ecosystems. So the more phosphorus the more plants such as algae. It comes from a variety of sources, many of which are related to human activity. This includes human and animal waste, soil erosion, detergents, septic systems and runoff from farmland or lawns.

- ◆ Chlorophyll-a is the pigment that makes plants and algae green. This pigment is what allows plants and algae to photosynthesize. Chlorophyll-a is tested in lakes to determine how much algae is in the lake.
- ◆ Secchi depth is a measurement of water clarity. Water transparency directly affects the amount of light penetration into a lake. Algae and suspended particles from erosion make the water cloudy and decrease the Secchi transparency in a lake; therefore, the lower the Secchi depth, the higher the algal concentration and lake productivity.

LAKE CONDITIONS



TSI 30-40 Oligotrophic – clear water, hypolimnion (Lower layer of water in a stratified lake) is oxygenated throughout the year (except in shallow lakes).

TSI 40-50 Mesotrophic – Water moderately clear, but anoxia becoming more likely in hypolimnion during the summer.

TSI 50-70 Eutrophic: Decreased transparency, anoxic hypolimnion during the summer, dominance of blue-green algae, algal scums probable, extensive aquatic plant problems possible.

MONITORING IN THE MIDDLE FORK

Monitoring helps us fulfill our mission of protecting and preserving water quality in the Middle Fork Crow River Watershed. The information we gather from monitoring helps us assess water quality trends and provides insight as to where to implement projects. We have a number of historic sites that allow the District to track long-term changes.

HUBBARD, WHEELER, & SHCUTLZ LAKE PROJECT, KANDIYOHI COUNTY

By: Josh Kavanagh, MN DNR

Over the past several years the Diamond Lake Area Recreational Association has been working with the Middle Fork Crow River Watershed District, Ducks Unlimited, and the Minnesota Department of Natural Resources to develop a lakes area enhancement project which includes managing water levels on the Hubbard, Schultz, and Wheeler Lake Chain. Improving water quality and wildlife habitat conditions on this chain of shallow prairie lakes will benefit the entire area, including direct benefits to Diamond Lake which is currently listed by MPCA as an impaired water.

Temporary water level management (i.e. drawdown) is a tool used on shallow lakes to improve water quality and wildlife habitat conditions by restoring the natural balance of the aquatic ecology of a lake. Shallow lakes and wetlands require periods of low water or droughts to stay healthy and productive. This is especially true today given the various landscape and watershed challenges we face. Drawdown can be used to help control undesirable fish such as carp as well as help promote the growth of rooted aquatic plants which buffer nutrients from the water column and provide valuable habitat for aquatic animals and invertebrates. Aquatic plants are vital to a healthy lake or wetland system. Temporary drawdown is used to promote plant growth and a healthy lake condition. Absence of rooted aquatic plants leads to a deteriorated turbid water condition that provides little benefit to wildlife or people.

Following a public hearing held consistent with M.S. 103G.408 a management plan was adopted for the Hubbard, Wheeler, and Schultz Lake project. Schultz Lake (167 acres), Wheeler Lake (238 acres), and Hubbard Lake (57 acres) are all located in Kandiyohi County, Harrison Township, directly upstream of Diamond Lake which is a popular recreational lake in the area. As of March 2018, phase #1 of the project has been completed which includes improvements at Site #1 and Site #4. DNR Section of Wildlife began drawing down Schultz Lake on July 20, 2017 in preparation for phase #2 which includes construction of the remaining infrastructure (Site #2 and Site #3). Phase #2 of the project is currently underway with construction nearly complete. Contractors plan on moving to Site #3 in early March 2018. The plan is to maintain Hubbard Lake and South Wheeler Lake at normal water levels next spring (2018), which will restore a large portion of the Diamond Lake watershed. North Wheeler Lake and Schultz Lake will remain in drawdown through the growing season. The entire system will then be drawn down next winter with gradual refill planned in the spring of 2019.

This is a large cooperative project that included private landowners and lake residents. A broad collaboration was developed in pursuit of water quality and wildlife lake habitat improvements. The lakes will continue to be monitored following drawdown and a project team will meet periodically to discuss future management actions and assess project accomplishments. The Hubbard, Wheeler, and Schultz Area Lakes Project has been a great demonstration of partnerships and we anticipate many good things moving forward!



2018 Revenue

General Income	\$307339.43
Basic Water Management	\$85571.00
Survey and Data Acquisition	\$104.00
Clean Water Fund	\$102296.51
Grants	\$164764.62
Diamond Lake Special Assessment	\$20112.66
Nest Lake Special Assessment	\$54419.92
BMP Loan Program	\$5567.67
Revenue Total	\$740,175.81

Net Financial Position December 31, 2018: \$648,139.16



2018 Expenditures

General Operating expenses	\$32,099.36
Manager Expense	\$6,147.77
Employee Mileage	\$2,953.39
Health Insurance	\$10,322.40
Audit/Accounting Services	\$13,298.45
Legal	\$14,667.90
Staff/Manager Education	\$5,807.89
Public Education	\$1,744.99
Vehicle Operating & Maintenance	\$2,782.74
Insurance	\$11,812.00
Dues	\$5,832.00
Monitoring Expenses	\$55,086.49
BMP/ Project Development	\$52,365.86
Payroll; Payroll Expenses	\$268,481.72
Bond Repayment	\$42,975.00
Special Assessment Expenses: Diamond Lake and Nest Lake APM	\$42,577.61
Debt Service: Loan repayment	\$15,694.89
Expenditure Total	\$584,650.46

EDUCATION AND OUTREACH

THE YEAR IN NUMBERS

- 200 pounds of garbage picked out of the Middle Fork Crow River in New London on Clean Up The Crow Day
- 800 of pounds of garbage picked out of the Crow River on the Annual Clean Up the Crow Day
- 20 participants for Clean Up the Crow Day
- 45 different species of macroinvertebrates identified by NL-S students
- 26 drains adopted for the Adopt-a-Drain Program
- 95 pounds of sediment removed through the Adopt-a-Drain Program
- 210 known drains to Green Lake
- 154 city storm drains in New London
- 650 people at Earth Day celebration at Prairie Woods Environmental Learning Center
- 90 students at local Conservation Day
- 45 participants on a Tour of Hubbard, Wheeler, and Schultz, Chain of Lakes project

