NORTH FORK CROW RIVER WATERSHED DISTRICT

2019 ANNUAL REPORT

MARCH, 2020

Inside this issue:

Board Meetings are the second Monday of each month.

April– November 7 p.m.

December– March 1 p.m.

NFCRWD Boundary Change

It was discovered during a NFCRWD Grant Project and Redetermination of Benefits that the legal watershed boundary did not match the hydrologic boundary. The NFCRWD initiated a boundary change with the Board of Soil and Water Resources to update the legal boundary to the correct hydrologic area. The areas affected where located in Pope County on the western edge of the watershed and around Belgrade in Stearns County. A map showing affected areas can be found on page 6.

Are you Interested in installing a Best Management Practice?

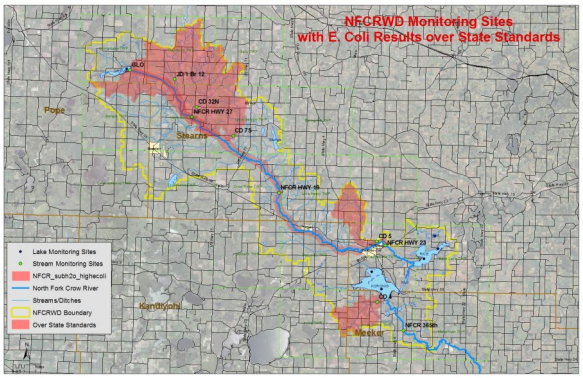
The District actively applies for grant funding through various sources in order to obtain outside funding to help put projects on the ground. A primary goal of the District is to promote use of practices that help reduce impacts of nutrients such as nitrogen and phosphorus from entering waterways through runoff or other means of export. Sedimentation of streams, ditches and wetlands is another major concern, and the District strives to promote practices that help reduce erosion. The District applies for grant funding in order to provide landowners with funds to assist adoption and installation of these water quality best management practices (BMPs).

As the majority of land use in the watershed is primarily agriculture, the District focuses on providing funding to assist producers in installing practices to decrease impacts of land use practices. The District has been able to fund numerous rock inlets and alternative inlets to reduce sedimentation of drainage systems, the majority of water resources in the District. The District has also been able to install denitrifying bioreactors, saturated buffers, and drainage control structures.
Contact the NFCRWD office for more information!

Local Waters Added to the 2020 Impaired waters list. (under review from EPA)

E. Coli impairments: NFCR Grove to Rice Lk, JD1br12, CD32, CD7, CD5 & CD4.
Fish Biomass: Lake Koronis

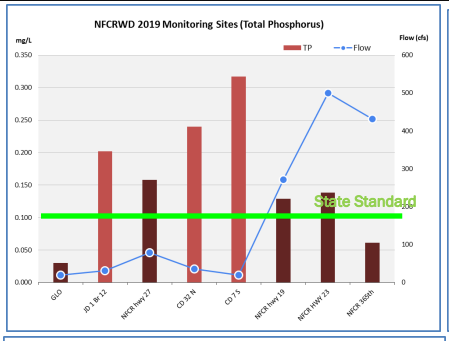
The NFCRWD has been sampling drainage ditches and the NFCR for E. coli the past 8 years (results on pg.2). Results confirm the assumptions of the Rice Lake TMDL that a major source of phosphorus loading is poorly managed manure application and storage. Manure is a valuable resource that if applied properly can benefit row crops and minimize impacts to water quality. Improper manure application results in minimal crop utilization and increases potential surface runoff to waterways which degrades water quality. (see setback rules pg. 4) Not spreading on frozen ground near waterways or open tile intakes can greatly reduce manure runoff.

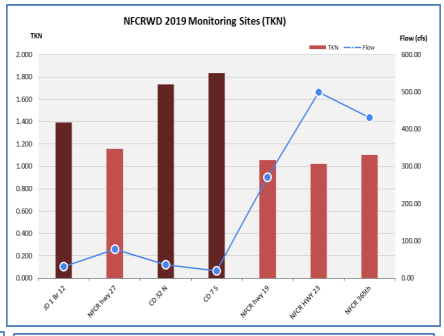


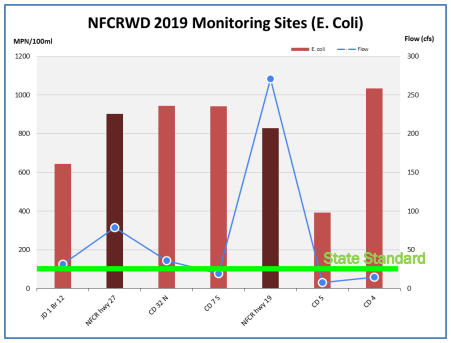
Stream Monitoring

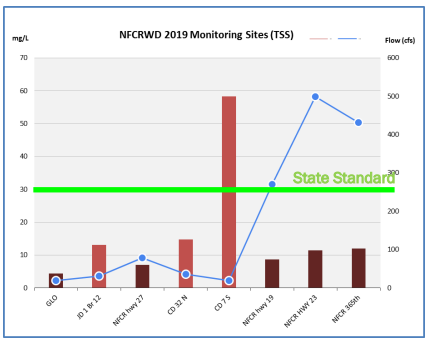
Stream sites are monitored for water level, flow, clarity and other water quality parameters including temperature, pH, dissolved oxygen (DO), conductivity, turbidity, total phosphorus (TP), E. coli, nitrogen content and the amount of suspended solid (TSS) material contained in the water. **Data shown in graphs are 2019 averages, all data for the NFCRWD monitoring sites can be found on NFCRWD website.**

Samples are collected twice a month from spring snow melt through October. Samples are also collected after significant runoff-causing rain events. The results show the summer averages for the various parameters versus flow in cubic feet per second (cfs). This data can help us better understand areas in the watershed which contribute to water quality impairments and focus districts resources to help us reach the Rice Lake TMDL goals.



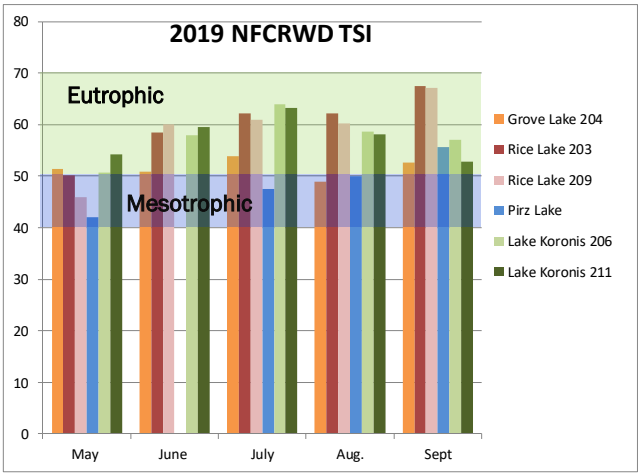






Lake Monitoring

Lake sites are monitored monthly May-September. Lake monitoring is accomplished through a cooperative effort between lake association volunteers and NFCRWD staff. A measure used to quantify these results is Carlson's Trophic Status (TSI), which is a benchmark for lake water quality. The graph to the right shows the TSI averages for the 2019 lake monitoring sites.



What are the Current TSI Trends? (2005-2019)

Grove: No significant TSI trend exist, but Total phosphorus is decreasing, which indicates improving water quality (95% confidence), Secchi depth is decreasing, which indicates declining water quality (95% confidence)

Koronis: Site 211, (South) Mean TSI is decreasing, which indicates improving water quality (99% confidence)

Site 206 (North) Mean TSI is decreasing, which indicates improving water quality (80% confidence).

Pirz: Mean TSI is decreasing, which indicates improving water quality (90% confidence).

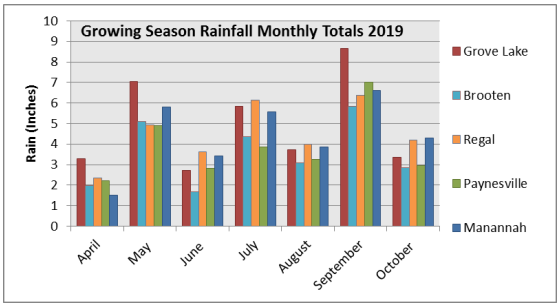
Rice: Site 209 (South) No significant TSI trend exists, but Total phosphorus is decreasing, which indicates improving water quality (95% confidence).

Site 203 (North) Mean TSI is decreasing, which indicates improving water quality (90% confidence).

Carlson's Trophic Status (TSI)

Eutrophic (TSI 51-70): Decreased transparency, lack of oxygen in the lower levels during the summer, weed problems evident, warm-water fisheries only.

Mesotrophic (TSI 41-50): Water moderately clear; some probability of no oxygen in the lowest levels during summer.



All water monitoring data is entered into the Minnesota Pollution Control Agency database. The data is used for water quality assessment. Link to NFCRWD sites are available on nfcrwd.org. Thank you to the lake associations and their members who assisted with water quality monitoring this year. Also, thank you to those who submitted rainfall data, served on district committees, and contributed to other district projects.

Education Efforts:

NFCRWD partners with other local agencies to provide educational events each year.

2019 Youth Educational Events
Paynesville Waterfest
Pope Waterfest
Steven's Conservation Day
Earth Day at Prairie Woods ELC
Continual education events with BBE schools

2019 Adult Education
AIS Inspection Program
Rice, Pirz, Koronis, & Grove Lake Association Presentations
Citizen Advisory Committee Meeting

Citizens Advisory Committee (CAC) - The NFCRWD CAC meetings are a great way for District citizens to talk to the managers and staff of the NFCRWD. Participants are provided updates on past and upcoming projects in the watershed. The committee allows citizens the ability to advise and make recommendations on District activities. Minutes and Agendas for CAC meetings can be found on the CAC page on NFCRWD website.

The **NFCRWD** website is updated frequently with information about District projects and related water quality materials. Please sign up for the NFCRWD emailing list (on home page of website). This will be a more economical and quicker way to provide information to landowners in the watershed. **www.nfcrwd.org**

Current Grants:

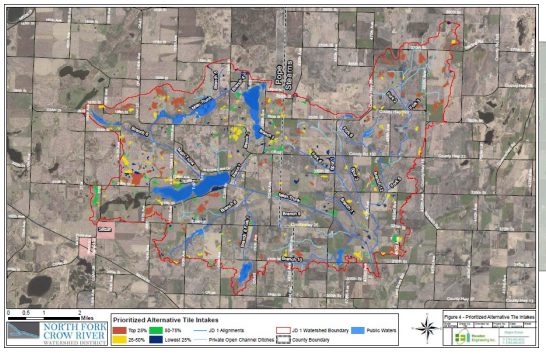
1W1P Watershed Based Funding : The North Fork Crow River Water Planning Partnership (NFCRWPP) is an organization of six counties, six soil and water conservation districts, and two watershed districts. The NFCRWPP came together and developed a comprehensive watershed management plan (i.e. One Watershed One Plan) outlining prioritized and targeted implementation strategies with measurable resource improvements. This project will accelerate existing implementation efforts, working towards a 10 year watershed-wide measurable goal of 25% sediment reduction and 12% total phosphorous reduction to the North Fork Crow River.
Final Plan can be found on NFCRWD website.

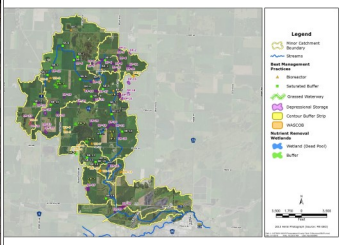
2018 Drainage Modernization Grant:
The NFCRWD is currently the drainage authority for thirteen 103E public drainage systems and wishes to improve the organization of its drainage system records to reach informed management decisions more quickly. The project will yield standardized drainage system records and GIS data to allow managers and staff to more quickly search and respond to specific landowner inquiries along with supporting larger planning and management decisions.

WRAPS 2: The NFCR is going through cycle two of the Watershed Restoration and Protection Strategy, this is a 10 year cycle to assess all of the watersheds throughout Minnesota. The NFCRWD worked with the Middle Fork Crow River WD, local SWCD, Counties and MPCA on this document and public outreach.

WPLMN: The Watershed Pollutant Load Monitoring Network is a long-term program designed to measure and compare pollutant load information from Minnesota's rivers and streams and track water quality trends. The NFCRWD is continually working with the MPCA and MNDNR on the Watershed Pollutant Load Monitoring Network. With this grant the NFCRWD intensively monitors the NFCR before it enters Rice Lake. This data help in better understanding the nutrient load entering Rice Lake from the NFCR.

Subwatershed Grants: To the right are some of the outcome maps of this subwatershed grants, which shows the prioritized areas for the most feasible and cost effective practices to help address TMDL requirements for Rice Lake and other issues of concern for the North Fork Crow River. NFCRWD, County, and SWCD staff and other partners can then work with willing landowners to implement these practices.





Pirz Lake AIS Project

The Pirz Lake Landowners submitted a petition to request an establishment of a project to control curly leaf pond weed, an invasive species in the lake (103D.745). After an engineering report, property appraisals and public hearing a project was established to control curly leaf pond weed and other potential AIS with an Eco Harvester. This is a 15 year project and is funded by benefitted landowners around Pirz Lake.

2019 Drainage Proceedings

The District underwent several proceedings relating to drainage systems in 2018. Buffer acquisition will continue into 2020 during redetermination of benefits proceedings. Inspections and general maintenance of the ditch systems will also continue in 2020.

CD 32—Repair of Stearns

The District ordered the repair of CD 32 in 2015. Open ditch repair was completed during 2016-2017, including the reestablishment of the buffer. The only unresolved issue regarding tile replacement will be completed in the Spring of 2020.

JD1-Repair of Main and Braches

Tree removal occurred on the Main from Pope County Road 22 to the control structure on Mud Lake. Planning is underway to complete the system wide repair initiated in 2015.

CD 7—Repair

The repair initiated in 2017 is nearly complete. A few punch items remain and it is anticipated that an acceptance hearing will be held in 2020.

CD 29, CD 36, CD37-Redetermination of Benefits

The Redetermination of Benefits on CD 29, CD 36 and CD 37 continues by H2Overviews. Initial viewer reports have indicated that benefitted properties outside of the legal watershed district have been identified. The Board initiated District boundary change has been approved by BWSR. Final hearings are planned for early 2020.

CD 5—Culvert

The MN Department of Transportation Board rebuilt Highway 4 during the summer of 2019. The CD5 culvert under Highway 4 was reset to the original elevations established.

CD 38—Televising

The upper portion of CD38 was televised. Video has indicated that the system is in need of repairs. An informational meeting with all benefitted landowners will occur in early 2020 to provide direction to the Board regarding any repairs.

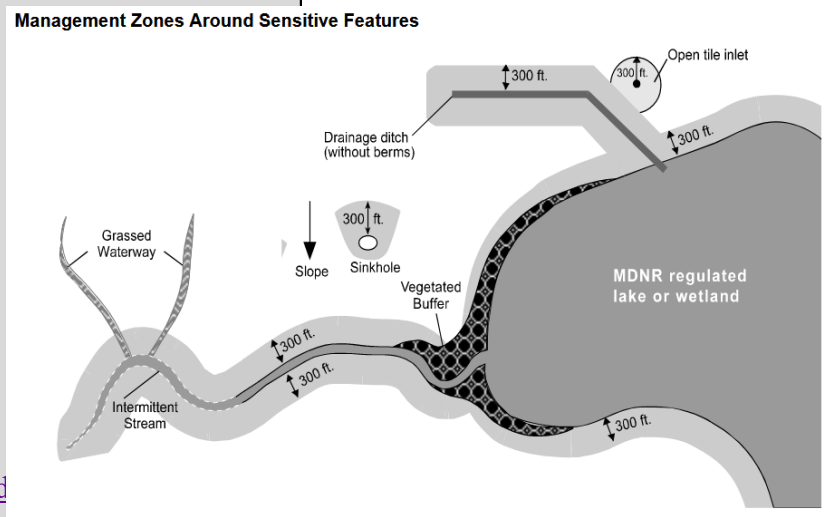
Manure Applications-Minimum setbacks near waters

	Surface Application	Incorporation within 24 hrs.
Lake, Stream	**300'***	25'**
Wetlands (10+ac.)	**300'***	25'**
Ditches (w/o berms)	**300'***	25'**
Open tile intakes	**300'**	0'
Well, quarry	**50'**	50'
Sinkhole (w/o berms)		
Downslope	**50'**	50'
Upslope	**300'**	50'

*100' vegetated buffer can be used instead of 300' setback
For non-winter applications (50' buffer for wetlands/ditches)
**no long-term phosphorus buildup within 300'
(counties can be more restrictive than State Rule 7020)

Feedlot Helpline : 1-877-333-3508

https://www.pca.state.mn.us/quick-links/feed



Financial Report (Pre-Audit)

2019 Summary of Income & Expenses

Income

Grants (Deferred Revenue=$)	38,770.47
AIS Project Contributions	33,644.00
Watershed Dist. Levies	253,602.50
State Aid	37,656.91
Drainage Reimbursements	214,827.51
Pre-certified 2018 & 2019 assmt prepaids	150,811.85
CD 7 Loan Proceeds	330,000.00
Interest Income	29,949.49
Intern Fund Contribution	5,532.00
SRF Receivables	27,585.04
Pirz Lake AIS Project Loan Proceeds	60,123.00
Project Billings/Reimbursement/Other	10,002.91
Total Revenues	**1,192,505.68**

Expenses

Employee Expenses	$146,877.19
Employee Benefits	$26,927.76
Managers Expenses	$11,338.30
Payroll Tax/Expenses	$27,867.94
Office Operations Expenses	$21,676.72
Professional Education	$9,045.55
Public Education	$1,220.21
Legal	$13,368.00
WSD Ins. & Bonding	$9,901.71
Engineering (WD Boundary Change)	$4,942.75
Data Collection, WSD Projects /Grants	$112,943.93
AIS Project	$66,644.00
Ditch Maintenance	$459,028.33
SRF State Repay	$148,748.96
Total Expenditures	**$1,060,531.35**

Complete audit reports are available at the NFCRWD Office.

NFCRWD Audit Reports

Plans and Goals for 2020

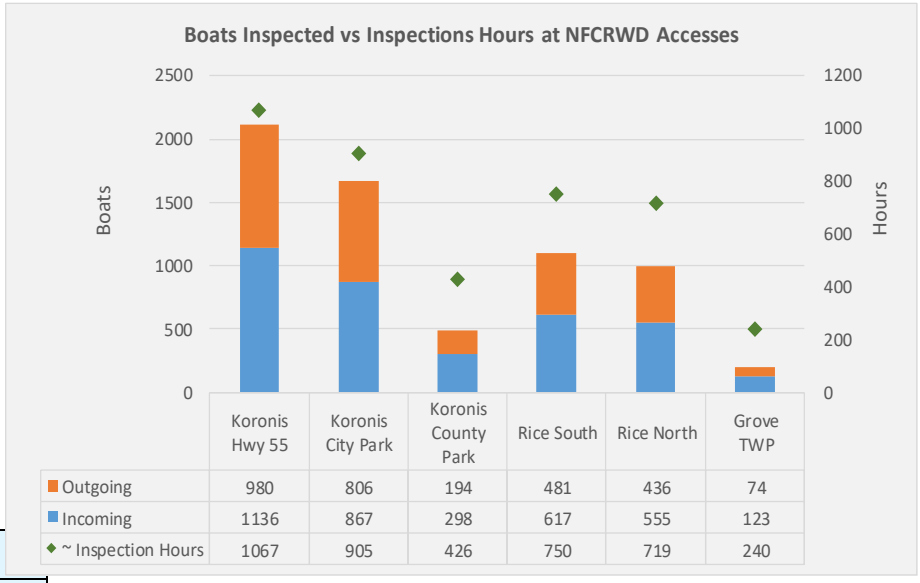
1. Seek and secure grant funds for NFCRWD water quality projects and the Rice Lake TMDL Implementation
2. Landowner education events: Manure Workshop, Agriculture Field Day
3. Collaborate with local SWCD's to accrue grants and implement BMPs throughout watershed
4. Continue to partner on water quality projects with other agencies, lake associations, and landowners
5. Determine potential areas to retain water and restore wetlands
6. Complete Redetermination of Benefits
7. Adopt Drainage Policies
8. Continue compliance with buffer law and drainage system buffer strip staking.
9. Implement WRAPS 2 Civic Engagement
10. Hire 2020 summer intern

2020 Programs

- Work on current grant projects
- AIS Boat Inspections on local lakes
- Contribute to Bonanza Valley Ground Water Advisory Committee
- 1W1P project implementation
- Water quality monitoring of surface water, minor watershed diagnostic studies
- Participate in annual youth education events.
- Provide adult education to district landowners
- Permitting of tile and private ditches that outlet into Public Ditches
- Perform ditch inspections identifying repair needs and buffer compliance
- Drainage system maintenance, as needed

NFCRWD AIS Boat Inspection Summary

The NFCRWD hired Lamb Labor Services to staff Level 1 watercraft inspectors, May - Oct, during 2019. The inspectors were trained by the MNDNR to inspect boats entering and exiting public boat accesses on the District's recreational lakes. Contributors to the project include the MN DNR, Meeker County, Paynesville TWP, Koronis Lake Association, Rice Lake Association, City of Paynesville, Grove Lake Association, Union Grove TWP, Stearns County, Pope County and the NFCRWD. Full 2019 AIS report see District website.



	Koronis Hwy 55	Koronis City Park	Koronis County Park	Rice South	Rice North	Grove TWP
Outgoing	980	806	194	481	436	74
Incoming	1136	867	298	617	555	123
~ Inspection Hours	1067	905	426	750	719	240

Drain Plug on Arrival	
In	0.5% (20)
In (Boater stated it was out when they arrived at access)	2.5% (89)
Out	97% (3487)

Starry stonewort is an invasive green alga, that was identified in Lake Koronis in 2015 and Rice Lake in 2016. It can grow tall and dense, forming mats on the surface interfering with recreation and potentially displacing native plant species. Minnesota Aquatic Invasive Species Research Center researchers are currently performing ecological niche modeling to assess the risk of spread in Minnesota as well as laboratory experiments to assess survivability out of water and evaluate the efficacy of herbicides and algaecides while minimizing non-target impacts.