

RED LAKE WATERSHED DISTRICT

October 28, 2021

9:00 a.m.

Agenda

9:00 a.m.	Call to Order	Action
	Review and approve agenda	Action
	Requests to appear	Information
	October 14, 2021 Minutes	Action
	Financial Report dated October 27 , 2021	Action
	General Fund Budget as of September 30, 2021	Information
	Designate Authorized Signatures at Financial Institutions	Action
9:05 a.m.	Clearwater SWCD-Chester Powell	Info./Action
	Pine Lake Flood Damage & Fish Habitat Project, RLWD Project No. 26B-Construction Update	Information
9:20 a.m.	Thief River Falls Westside Flood Damage Reduction Project, RLWD Project No. 178 - RJ Zavoral & Sons/Midwest Boring	Information
	Black River Impoundment, RLWD Project No. 176-Update	Information
	Demarais/Hanson Outlet Project, Red Lake River 1W1P, RLWD Project No. 149-Construction Update	Action
	Schirrick Dam Outlet Repair, Project, RLWD Project No. 25 Plans and Specifications-Quotes	Info./Action
10:00 a.m.	Rob Sip, RRWMB	Information
	Permits: No. 21166-21172	Action
	MAWD Conference-Virtual	Information
	River Watch Agreements – Clearbrook/Gonvick	Action
	Administrators Update	Information

Legal Counsel Update

Information

Managers' updates

Information

Adjourn

Action

UPCOMING MEETINGS

October 28, 2021	RLWD Board Meeting, 9:00 a.m.
November 10, 2021	RLWD Board Meeting, 9:00 a.m. (note change of date)
November 11, 2021	Veteran's Day-Office Closed
November 24, 2021	RLWD Board Meeting, 9:00 a.m. (note change of date)
November 25-26, 2021	Thanksgiving-Office Closed
December 1-3, 2021	MAWD Conference-virtual

DRAFT

RED LAKE WATERSHED DISTRICT
Board of Manager's Minutes
October 14, 2021

President Dale Nelson called the meeting to order at 9:00 a.m. at the Red Lake Watershed District Office, Thief River Falls, MN.

Present: Managers: Dale Nelson, Gene Tiedemann, Terry Sorenson, Allan Page, LeRoy Ose, Brian Dwight and Tom Anderson. Staff Present: Myron Jesme, Arlene Novak and Legal Counsel, Delray Sparby.

The Board reviewed the agenda. Recommended to add the distribution of sales tax from RLWD Ditch 16, RLWD Project No. 177. A motion was made by Ose, seconded by Tiedemann, and passed by unanimous vote that the Board approve the agenda with the distribution of sales tax of RLWD Ditch 16, RLWD Project No. 177 added to agenda. Motion carried.

The Board reviewed the September 23, 2021, minutes. Motion by Tiedemann, seconded by Sorenson, to approve the September 23, 2021, Board meeting minutes as presented. Motion carried.

The Board reviewed the Special Board meeting minutes of October 6, 2021. Motion by Tiedemann, seconded by Page, to approve the minutes of October 6, 2021. Motion carried with Manager Dwight abstaining from voting due to his absence at this meeting.

President Nelson introduced new employee, Ann Jopru, to the Board.

The Board reviewed the Financial Report dated October 13, 2021. Motion by Sorenson, seconded by Page, to unanimously approve the Financial Report dated October 13, 2021. Motion carried.

Discussion was held on the regular November meeting dates which currently fall on Veterans Day and Thanksgiving. Motion by Ose, seconded by Anderson, to approve moving the November meeting dates to November 10th at 9:00 A.M. and November 24th at 9:00 A.M. Motion carried.

Matt Fischer, Board of Water and Soil Resources, presented a Legislative Summary and explained in detail the funding sources and which agency the funding sources were for. The Clean Water fund dollars projected for the next biennium for the Red Lake and Thief River One Watershed One Plan were approximately \$1,071M for Red Lake and \$500,000 for Thief River. Manager Dwight inquired of Mr. Fischer on the amount of 1W1P funds that could be used as Administrative and if that amount could be from contracted services. The answer was yes it could be used for contracted services and possibly up to 50%. Currently BWSR is planning a watershed district manager training on February 4, 2022 in Warren and February 11, 2022 in Buffalo Red. Grants training for watershed staff for competitive grants is upcoming.

The final payment hearing for Taggart Contracting, Inc. for the Threatt Ring Dike project was called to order at 9:30 a.m. Engineer, Blake Carlson, Widseth Smith Nolting, & Associates, Inc., submitted correspondence stating Taggart Contracting, Inc. has completed all construction in the amount of \$113,575.00. Administrator Jesme stated the RLWD has not received the IC134 from Taggart Contracting, Inc. Motion by Dwight, seconded by Tiedemann to close the hearing. Motion carried. Motion by Tiedemann, seconded Ose, to approve the final payment to Taggart Contracting, Inc. in the amount of \$2,000 for the Threatt Ring Dike, RLWD Project No. 129AS upon receipt of the IC134 form, consent from surety, and lien waivers from material suppliers and sub-contractors. Motion carried.

The Board reviewed Pay Estimate No. 15 in the amount of \$293,579.96 for the Black River Impoundment, RLWD Project No. 176. Motion by Tiedemann, seconded by Sorenson, to approve Pay Estimate No. 15 In the amount of \$293,579.96 to R.J. Zavoral & Sons, Inc., for the construction of the Black River Impoundment, RLWD Project No. 176. Motion carried. Engineer Tony Nordby, Houston Engineering, Inc. answered questions from the Board on the vinyl sheet piling used in the wetland area. Engineer Nordby also stated that a draft punch list has been started and he will complete a final later, prior to finalizing and scheduling the final payment in the Spring. Administrator Jesme received a phone call from Polk Centre Township regarding the shape of one of the township roads that off-road trucks used for transporting riprap to various locations along the diversion ditches of the project. The township was requesting 250 ton of gravel for the damaged stretch of township road. Motion by Ose, seconded by Page, to approve gravelling the road, for a cost not to exceed \$3,750. Motion carried.

Pennington County Engineer Mike Flaagan presented a map on roads used by off-road trucks during construction to the same diversion ditches mentioned by Polk Centre Township. Pennington County gravels their roads every 3-4 years, depending on traffic on the roads, and the roads noted were graveled 2 years ago. Pennington County is requesting financial assistance to gravel those damaged roads at 10 loads per mile or 250 ton per mile, approximately \$21,000. Flaagan also said the paved roads will need to be patched in the next 2-3 years, but the county will absorb those costs. (Engineer Tony Nordby questioned the Board if R.J. Zavoral and Sons, Inc. should be contacted for sharing in the cost of the graveling.) Motion by Dwight, seconded Tiedemann to approve up to 250 ton per mile to repair Pennington County roads in the Black River Project and to inquire with cost sharing by RJ Zavoral & Sons. Motion carried.

The Board reviewed Pay Estimate No. 1 for the Thief River Falls Streambank Stabilization Project, RLWD Project No. 14/ Thief River 1W1P, RLWD Project No.149A to Quality Spray Foam/Anderson Excavating in the amount of \$75,510.96. Motion by Ose, seconded by Page, to approve Pay Estimate No. 1 to Quality Spray Foam/Anderson Excavating in the amount of \$75,510.96 for the Thief River Streambank Stabilization Projects, RLWD Project 14/149A. Motion carried.

Thief River Falls Westside Flood Damage Reduction Project is in the final stages of completion and it was noted that the Board should set the final payment hearing. Motion by Ose, seconded by Dwight, and passed unanimously to set the final payment hearing for R.J. Zavoral & Sons, Inc. in regard to the Thief River Falls Westside Flood Damage Reduction Project for Wednesday, November 24, 2021 at 9:30 a.m. Administrator Jesme updated the Board on the

additional \$240,000 grant from MnDNR for the Thief River Westside FDR Project. Jesme also stated that the funds for the construction work for MnDOT Trunk Highway 1 in the amount of \$288,435.60 had been received and a submittal to MnDOT in the amount of \$400,000 for Trunk Highway 32 will be completed in the next week or so.

Administrator Jesme stated that he had been contacted by a landowner regarding the Marlin and Sharon Johnson property purchased by the District for the Thief River Westside FDR Project, RLWD Project No. 178. After considerable discussion by the Board, a motion was made by Sorenson, seconded by Dwight, to declare the remaining land not used within project area as excess property and advertise for sale with the option to reject any or all bids Motion carried. Jesme indicated he will get the land property legal description and bid information together and submit it to the Board for approval at a future meeting.

The Board reviewed Pay Estimate No.1 for the Thief River Oxbow Restoration and Stormwater Treatment Project, RLWD Project 46Q, to Spruce Valley Corporation, Inc., in the amount of \$269,731.32. Dillon Nelson, HDR, Inc., stated that Spruce Valley Corporation, Inc. is approximately 75% completed with the project. Motion by Ose, seconded by Anderson, and passed unanimously to approve Pay Estimate No. 1 to Spruce Valley Corporation, Inc. in the amount of \$269,731.32.

Pay Estimate No. 1, Larson Ring Dike, RLWD Project No. 129AV, for Bertils Gravel in the amount of \$27,091.75 was reviewed by the Board. The Larson Ring Dike is located east of Crookston. Motion by Tiedemann, seconded by Page, to approve Pay Estimate No. 1 to Bertils Gravel in the amount of \$27,091.75. Motion carried.

Engineer Nate Dalager, HDR, Inc. gave a Pine Lake construction update, RLWD Project No. 26B. Dalager indicated that the outlet structure has been poured, the outlet channel has been constructed, the fish passage rock weirs were placed and the inlet channel from the lake to the concrete structure have been completed. MnDNR had been onsite for a complete day to help with placement of the rock for the fish passage. Currently the optimum winter elevation has already been reached.

Quotes for the Demarais/Hanson Outlet Project, Red Lake River 1W1P, RLWD Project No. 149, were reviewed. The engineer's estimate for the project is \$160,625.00. The low quote was from Gladen Construction, Laporte, MN, in the amount of \$147,350. A preconstruction meeting is scheduled for October 20, 2021 at the Red Lake Watershed District office. Motion by Tiedemann, seconded by Page, and unanimously passed, to accept the low quote from Gladen Construction, Inc., and award the contract in the amount of \$147,350.

Cost share requests from Red Lake Soil and Water Conservation Districts for Grade Stabilization Projects were reviewed. The Beyer project is located in Section 10 of Louisville Township and \$1,100 is requested to assist with the local match requirement for this project. The total project cost is \$9,170 and 75% of project will be using the 2020 Watershed Based Funding. Second cost share request is \$1,000 for two grade stabilization projects located in Section 28 of Gervais Township for landowner Gagnon. The total project costs for the Gagnon project were \$9,110.50 with Red Lake SWCD using Board of Water and Soil Resources Clean Water Fund to fund 75%

of the project cost. The third cost share request is for two grade stabilization projects in Section 32 of Browns Creek in the amount of \$3,000. The total project cost is \$28,446.00. The Red Lake SWCD will be using 2020 Watershed Based Funding for 75% of total project cost. Motion by Page, seconded by Ose, to approve the three pay requests to Red Lake SWCD in the amount of \$5,100, with funds to come from the 2021 Streambank Erosion Fund, RLWD Project No. 164. Motion carried.

Discussion on the Judicial Ditch 72 Consolidation hearing was had. Administrator Jesme indicated that the Joint Board approved the separation of the remaining portion of "old" JD 72 into two systems. One system located west of the Lost River they named Joint Ditch 100, and the other system located east of the Lost River they named Joint Ditch 101. It was recommended to the Board that we should abandon Project 41 and start with two new project numbers, RLWD Project No. 41A for Judicial Ditch 100 and RLWD Project No. 41B for Judicial Ditch 101. It was also recommended to appoint Manager Sorenson and Anderson to the two Joint Boards.

Motion by Tiedemann, second by Dwight to separate the two systems and name them RLWD Project No. 41A and RLWD Project No. 41B and to appoint Managers Sorenson and Anderson to the two Joint Boards. Motion carried.

River Watch Advisors from the school districts were inquiring about purchasing additional River Watch apparel for newer students in the groups. Motion by Tiedemann, seconded by Anderson, to approve the purchase of additional River Watch apparel for current River Watch Students. Motion carried. Manager Page abstained from discussion and voting.

Motion by Tiedemann, seconded by Ose, to approve a one-year extension of Permit No. 19181, Wayne Vettleson. Motion carried.

Motion by Page, seconded by Anderson, to approve the following permits with conditions stated on the permit: No. 21144, Red Lake Band of Chippewa Indians, Hangaard Township, Clearwater County; No. 21153, Polk County Highway Department, Onstad Township, Polk County; No. 21154, Red Lake County Highway Department, Emardville Township, Red Lake County; No. 21155, Sullivan Township, Polk County; No. 21156, Gerald Wayne, Grand Plain Township, Marshall County; No. 21157, Peter Quam, Badger Township, Polk County; No. 21158, Leif Kolstoe, Garnes Township, Red Lake County; No. 21159, Doug Derosier, Gervais Township, Red Lake County; No. 21160, Cody Walseth, Norden Township, Pennington County; No. 21161, Harlow Johnson, Rocksbury Township, Pennington County; No. 21162, Carl Moland, Onstad Township, Polk County; No. 21163, Matt Schafer, Gervais Township, Red Lake County; No. 21164, Dale Kolseth, Wyandotte Township, Pennington County; and No. 21165, Wayne Vettleson, Equality Township, Red Lake County.

Administrators update:

- Jesme and Manager Ose will attend the October 19, 2021 RRWMB Meeting.
- Jesme and Manager Anderson attended the Clearwater County Board meeting on October 12th, 2021.
- Jesme plans to participate in a virtual Drainage Workgroup meeting this afternoon at 1:00 p.m.

- A Mud River Restoration Update meeting will be held on October 15, 2021.
- The Clearwater River Planning Workgroup meeting will be held October 20th, with a Policy Committee meeting held on November 3, 2021.
- The Red Lake River 1W1P Policy Committee met on October 13, 2021 to review budgets, update projects and funding requests and approve the amended Cost-Share Policy.
- Staff member Slowinski along with the Red Lake Falls River Watch students completed a macroinvertebrate sampling on October 5th. Slowinski also took the Clearbrook/Gonvick River Watch students kayaking on the Clearwater River south of Clearwater Lake.
- Staff member Hanson attended the Pennington County WRAC meeting held in the District office on October 11th.

Legal Counsel Sparby stated that he had reviewed the Gladen Construction contract documents for the Demarais/Hanson Outlet Project, RLWD Project No. 149, finding them to be adequate.

Discussion was held on a Court of Appeals Case in Renville County, MN where they did not complete an EAW as part of the improvement proceedings and the case was later appealed by Minnesota Environmental Advocacy Group. Renville County lost the case on appeal. As part of the appeal, it was determined that even though the water involved was not listed as a public waters in the DNR public waters inventory, the court sided that an EAW should have been completed. Administrator Jesme will follow-up with Renville County.

Discussion was held on the appeal for the Improvement to Polk County Ditch 39, RLWD Project No. 179. Due to the former judge recusing himself due to a potential conflict of interest with a petitioner, Judge Tamara Yon will replace the current sitting judge. Administrator Jesme asked if this will set back the timeline for a conclusion and Mr. Sparby stated that it would have to follow the new Judge's schedule.

Managers Ose updated the Board on the Red River Basin Commission and their plans to host the annual conference in Winnipeg in 2022.

Motion by Tiedemann, seconded by Page, to enter into Executive Session for discussion related to labor negotiations. Immediately after closing the meeting, there was a motion by Ose, seconded by Tiedemann, to re-open the meeting. Motion carried. Discussion was had on expanding training options for newly hired Accounting Officer. Motion by Tiedemann, seconded by Sorenson to allow Staff member Arlene Novak additional overtime hours for training the new staff person through October 29, 2021.

Motion by Ose, seconded by Tiedemann, to adjourn the meeting. Motion carried.

LeRoy Ose, Secretary

RED LAKE WATERSHED DISTRICT
Financial Report for October 27, 2021

Ck#	Check Issued to:	Description	Amount
online	EFTPS	Withholding for FICA, Medicare, and Federal taxes	4,443.91
online	MN Department of Revenue	Withholding taxes	806.74
online	Public Employees Retirement Assn.	PERA	2,907.40
online	EFTPS	Withholding for FICA, Medicare, and Federal taxes	38.26
39134	Quality Spray Foam/Anderson Exc.	Pay estimate #1-Thief River Streambank Stabilization Proj.	75,510.96
39135	Cenex	Gas for vehicles	128.91
39136	VOIDED		-
39137	Bertils Gravel & Exc. LLC	Pay estimate #1 for Larson Ring Dike	27,091.75
39138	Spruce Valley Corporation	Pay estimate #1 TRF Oxbow	269,731.32
39139	Taggart Contracting Inc.	Final Pay estimate for Threatt Ring Dike	2,000.00
39140	R.J. Zavoral & Sons Inc.	Pay estimate 15 Black River Impoundment	293,579.96
39141	Cenex Credit Card	Gas for vehicles	201.56
39142	Corporate Technologies	Managed IT Services & (17) MS Office 365	1,297.50
39143	Les Cota	Mowing Project 171	1,285.00
39144	Crookston Times Printing	General Fund Budget Hearing & Accounting Officer position	697.60
39145	Delta Dental	Dental Insurance Premium	593.25
39146	Farmers Union	Gas for vehicles	1,080.49
39147	Further	HSA and FSA account fees	11.00
39148	Houston Engineering Inc	Web hosting & Maintenance annual fee	1,200.00
39149	Larson Helicopter LLC	Application of Arsenal Parnell Impoundment	1,325.55
39150	Northwest Beverage	H2O for office	23.50
39151	Pennington County Treasurer	18" pipe Project 60-C & 15" Flapgate for JD23 149A	1,615.07
39152	Quality Spray Foam/Anderson Exc.	Lowboy, Dozer, Seeding & Hoe Project 60C	11,505.00
39153	Rinke Noonan	Legal Fees Project 179	1,466.00
39154	RMB Environmental Laboratories	Lab Analysis - WQ Samples	503.00
39155	Sun Life Financial	Life Insurance premium	128.56
39156	Widseth Smith Nolting & Assoc	Treatt Ring Dike Engineering Fees Project 129AS	962.50
39157	Matthew Audette	Mowing September and October	300.00
39158	Clearwater County Recorder	Recording Fee Project 26B	92.00
39159	Pennington County Recorder	Recording Fee Project 176	828.00
39160	Polk County Recorder	Recording Fee Project 60D	46.00
39161	Red Lake County Recorder	Recording Fee Project 161	92.00
online	Further	HSA Accounts	177.50
online	Cardmember Services	See below for explanation	1,332.49
online	Aflac	Staff paid insurance	381.78
direct	Tom Anderson	Mileage	129.92

Payroll

Check #12340-12349	14,634.72
Total Checks	\$ 718,149.20

***** Cardmember Services**

MN State Colleges-Maps reg.Koland	656.40
AT&T Cellphone payments & service	398.11
Amazon-Bathroom paper towels	87.98
MN Water Resources-Reg.Christina	95.00
MN Water Resources-Reg.Corey	<u>95.00</u>
Total	1,332.49

Banking

Northern State Bank

Balance as of October 13, 2021	\$ 442,573.08
Total Checks Written	(718,149.20)
Receipt #22415 Transfer in from American Federal Bank	400,000.00
Receipt #22416 Arlene Novak - reimbursed for Dental Ins for Nov and Dec	<u>113.90</u>
Balance as of October 27, 2021	<u><u>\$ 124,537.78</u></u>

Current interest rate is .20%

American Federal Bank-Fosston

Balance as of October 13, 2021	\$ 2,892,374.43
Receipt #22415 Transfer to Northern State Bank	<u>(400,000.00)</u>
Balance as of October 27, 2021	<u><u>\$ 2,492,374.43</u></u>

Current interest rate is .50%

2021 GENERAL FUND BUDGET

as of September 30, 2021

(unaudited)

	2021 BUDGET	2021 Exp	(over) under	3rd Qtr Exp.
		TO 9-30-21		
Manager's fees, salaries	40,000.00	17,260.00	22,740.00	30,000.00
Board of Manager's expense	24,200.00	6,435.45	17,764.55	18,150.00
Staff salaries	558,000.00	331,442.54	226,557.46	418,500.00
Payroll taxes	42,687.00	26,703.63	15,983.37	32,015.25
Employee benefits	85,000.00	49,305.64	35,694.36	63,750.00
Travel and meetings(inc. mileage & exp.	5,000.00	636.21	4,363.79	3,750.00
Audit	9,450.00	9,450.00	0.00	7,087.50
Legal	16,000.00	5,314.00	10,686.00	12,000.00
Office supplies	20,000.00	11,113.44	8,886.56	15,000.00
Office equipment	30,000.00	0.00	30,000.00	22,500.00
Appraiser/Viewer Expense	2,000.00	0.00	2,000.00	1,500.00
Professional services	20,000.00	16,706.50	3,293.50	15,000.00
Dues and subscriptions	10,000.00	9,725.00	275.00	7,500.00
Insurance and bonds	30,000.00	42,270.00	(12,270.00)	22,500.00 ***
Repairs and maintenance-Building	15,000.00	8,339.20	6,660.80	11,250.00
Utilities	12,000.00	6,737.73	5,262.27	9,000.00
Advertising and publications	4,000.00	7,308.89	(3,308.89)	3,000.00 *
Telephone	13,000.00	6,774.51	6,225.49	9,750.00
Vehicle expense and maintenance	15,000.00	11,648.85	3,351.15	11,250.00
Engineering supplies	3,000.00	2,749.78	250.22	2,250.00
Engineering equipment	40,000.00	7,098.44	32,901.56	30,000.00
Interest	<u>0.00</u>	0.00	0.00	<u>0.00</u>
TOTAL	994,337.00	577,019.81	417,317.19	745,752.75
Less: Overhead	837,000.00	511,884.24	(325,115.76)	627,750.00
Less: Miscellaneous revenue	7,000.00	8,186.42	1,186.42	<u>5,250.00</u> **
General Fund Budget	150,337.00	56,949.15	93,387.85	112,752.75

		TO 9-30-21
January 1, 2021 Beg. Balance	212,187.05	212,187.05
County levies revenue	0.00	<u>75,168.51</u>
Gross balance with revenue		287,355.56
Less net expenses		<u>(56,949.15)</u>
Subtotal- General Fund w/o interest		230,406.41

Plus interest earned-if allocated to GF 100%		14,317.62
General Fund Balance 9-30-21		<u><u>244,724.03</u></u>

* Ads for engineering and accounting officer staff positions

** Sale of excess property

*** Increase in Liability Insurance



Proposed Willow Stake planting along Lost River
Section 20 & 21 of Windsor Township
Clearwater County.

Dear RLWD Board,

Clearwater SWCD is seeking permission from Red Lake Watershed District to conduct a pilot project below the top of bank of the Lost River in Northern Clearwater County. Under Minnesota Statute 103E the RLWD has jurisdiction of the section of Lost River where the project is proposed.

The proposed project is to plant dormant willow stakes along the unstable and failing banks of the river to establish woody perennial cover to stabilize the banks during peak flows. Based on the WRAPs document the Lost River is listed as having bank instability and a priority resource concern. Due to the light peat soils of this area, there is a large amount of undercutting and bank sluffing in this section of river during peak run off times. It is believed that the establishment of perennial woody cover along the banks of the river will prevent further meandering and erosion as is evident in the northern, downstream reaches of the river where woody vegetation is present and erosion issues are much less prevalent.

For 2021 Clearwater SWCD would like to start with a pilot project of planting a short section of river in the south eastern part of the attached map. The goal for 2021 is to plant 500-1000 linear feet of streambank. These numbers are variant depending on weather, willow stake availability, and landowner willingness to allow access during hunting seasons. Clearwater SWCD has funds available for the project and is willing to sign contracts with landowners stating project will be funded in full. Additionally, Clearwater SWCD will be proposing to sign Operation Maintenance agreements with landowners stating Clearwater SWCD will be responsible for maintained establishment of planted shrubs.

If you have any questions on the project, please feel free to email me at:

Chester.powell@mn.nacdnet.net

Thank you,

Chester Powell
Waterplanner/Program Tech
Clearwater SWCD
218 694-6845 ext 4

Figure:1

The satellite image capture below shows the mile long region of the Lost River that is being proposed for planting.



SPEC. NO.	ITEM	UNIT	QUANTITY	UNIT PRICE	TOTAL PRICE
2021.501	MOBILIZATION	LUMP SUMP	1		
2101.501	CLEARING AND GRUBBING	LUMP SUMP	1		
2105.507	COMMON EXCAVATION (EV) (P)	CU. YD.	1125		
2105.601	DEWATERING	LUMP SUMP	1		
2511.507	RANDOM RIPRAP CLASS III	CU. YD.	675		
2573.503	SILT FENCE, TYPE MS	LIN. FT.	120		
2575.501	TURF ESTABLISHMENT	LUMP SUMP	1		
TOTAL BID AMOUNT					

1.2.06 CONTRACT TIME: If awarded the Contract, the Undersigned agrees to a final completion date of **June 30, 2022**. Construction shall be continuous to complete the project in a timely matter once construction activity is started. The Contractor will be issued A Notice to Proceed by the Owner, controlling the initiation of onsite construction operations. No work shall begin on the construction site prior to issuance of the Notice to Proceed.

1.2.07 OWNER'S RIGHTS RESERVED: The Undersigned understands that the Owner reserves the right to reject any or all Proposals or to waive any informality or technicality in any Proposal in the interest of the Owner.

1.2.08 PARTIAL AWARD OF CONTRACT: The Owner reserves the right to award a reduced quantity of work listed in the Proposal in the event that the lowest qualified bid exceeds the available funds to construct the entire project as described in Specifications and Construction Plans. In the event that a partial award will be made, the quantities from the Proposal will be reduced and multiplied by the unit prices provided by the lowest qualified bidder until the total construction cost doesn't exceed the available funds. The total construction cost will include a 10% contingency above construction costs calculated from the quantities and bid prices from the lowest qualified bidder.

CONSTRUCTION PLANS FOR RED LAKE WATERSHED DISTRICT SCHIRRICK DAM OUTLET REPAIR

SECTION 35, WYLIE TOWNSHIP, RED LAKE COUNTY, MINNESOTA OCTOBER, 2021

HOUSTON
engineering, inc.
125 3rd STREET E
THIEF RIVER FALLS, MN 56701
P: 218.681.2951
www.houstoneng.com

SHEET INDEX

1. COVER SHEET
 2. ESTIMATED QUANTITIES
 3. PLAN AND PROFILE
 4. CROSS SECTIONS
- THIS PLAN CONTAINS 4 SHEETS

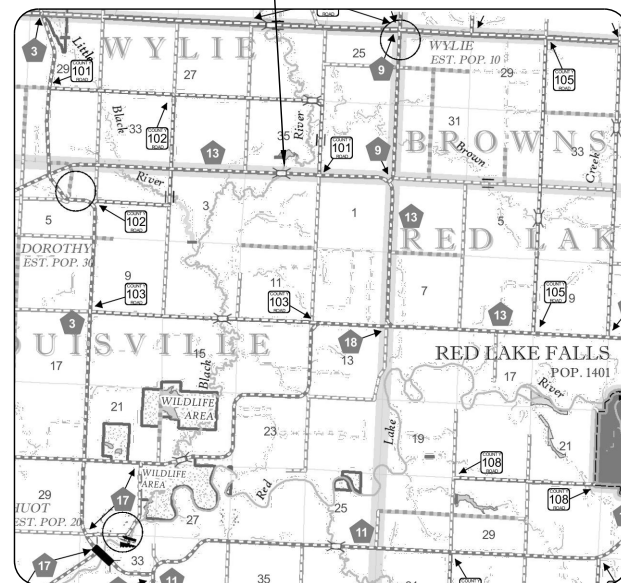
GOVERNING SPECIFICATIONS:

THE 2018 EDITION OF THE MINNESOTA DEPARTMENT OF TRANSPORTATION "STANDARD SPECIFICATIONS FOR CONSTRUCTION" WILL GOVERN.

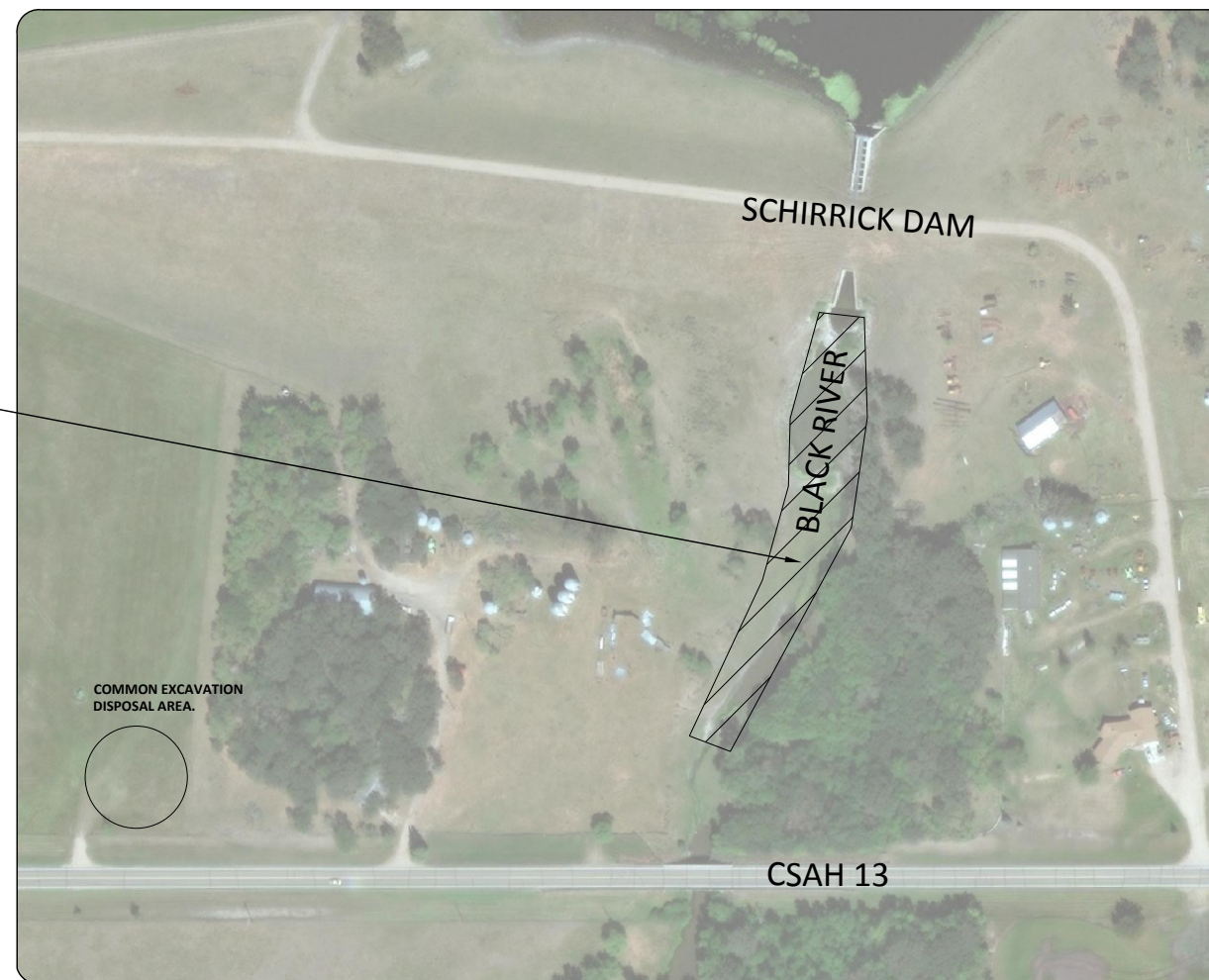
UTILITY NOTE:

THE UNDERGROUND UTILITIES SHOWN HAVE BEEN LOCATED FROM FIELD SURVEY INFORMATION, AS-BUILT MAPS AS PROVIDED BY MUNICIPALITIES OR UTILITY COMPANIES, AND/OR EXISTING DRAWINGS. THERE IS NO GUARANTEE THAT THE UNDERGROUND UTILITIES SHOWN INDICATE ALL SUCH UTILITIES IN THE AREA, EITHER IN SERVICE OR ABANDONED. NOR IS THERE A GUARANTEE THAT THE UNDERGROUND UTILITIES SHOWN ARE IN THE EXACT LOCATION INDICATED. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES. THE CONTRACTOR AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MAY RESULT FROM THEIR FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UTILITIES.

PROJECT LOCATION



VICINITY MAP



LOCATION MAP

HORIZONTAL AND VERTICAL CONTROLS:

1. ALL COORDINATES LISTED IN THIS PLAN ARE MN/DOT, RED LAKE COUNTY, U.S. FOOT
2. ALL ELEVATIONS ARE NAVD 88 DATUM

I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision, and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota.

Tony A. Nordby

Tony A. Nordby
License No. 51392

Date: 10/26/2021

ESTIMATED QUANTITIES				
NOTES	SPEC. NO.	ITEM	UNIT	QUANTITY
	2021.501	MOBILIZATION	LUMP SUM	1
(4)	2101.501	CLEARING AND GRUBBING	LUMP SUM	1
(1) (2) (5)	2105.507	COMMON EXCAVATION (EV) (P)	CU. YD.	1125
	2105.601	DEWATERING	LUMP SUM	1
(3)	2511.507	RANDOM RIPRAP CLASS III	CU. YD.	675
	2573.503	SILT FENCE, TYPE MS	LIN. FT.	120
(6)	2575.501	TURF ESTABLISHMENT	LUMP SUM	1

BASIS OF ESTIMATED QUANTITIES	
SEED, MIXTURE 25-121	61 LB PLS/ACRE
SEED, MIXTURE 21-112	25 LB PLS/ACRE
MULCH MATERIAL, TYPE 1	2 TON/ACRE
FERTILIZER, TYPE 1 (20-20-10)	250 LB/ACRE

CONSTRUCTION NOTES:

- (P) DENOTES PLAN QUANTITY
- (EV) DENOTES EXCAVATED VOLUME
- GEOTEXTILE FILTER TYPE IV SHALL BE PLACED UNDER ALL RANDOM RIPRAP CLASS III AND IS CONSIDERED INCIDENTAL TO BID ITEM "RANDOM RIPRAP CLASS III" WITH NO ADDITIONAL PAYMENT MADE THEREOF.
- MATERIAL GENERATED FROM BID ITEM "CLEARING AND GRUBBING" IS THE CONTRACTORS RESPONSIBILITY AND SHALL BE DISPOSED OF OUTSIDE THE PROJECT LIMITS.
- BID ITEM "COMMON EXCAVATION (EV) (P)" INCLUDES ALL EXCAVATION TO THE CROSS SECTIONS AND PROFILES SHOWN ON THE PLANS. THE EXCAVATION QUANTITY REQUIRED TO SUB CUT FOR PLACEMENT OF RANDOM RIPRAP CLASS III IS ALSO INCLUDED IN THE QUANTITY FOR BID ITEM "COMMON EXCAVATION (EV) (P)". EXCESS COMMON EXCAVATION MATERIAL SHALL BE PLACED OUTSIDE THE FLOODPLAIN AREA AS DIRECTED BY THE ENGINEER AND AS SHOWN IN THE PLANS.
- ANY DISTURBED AREA WILL NEED TO BE SEEDED AND PAID FOR UNDER TURF ESTABLISHMENT. SEE THE BASIS OF ESTIMATED QUANTITIES TABLE FOR TURF ESTABLISHMENT DETAILS.

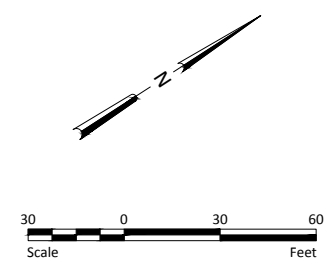
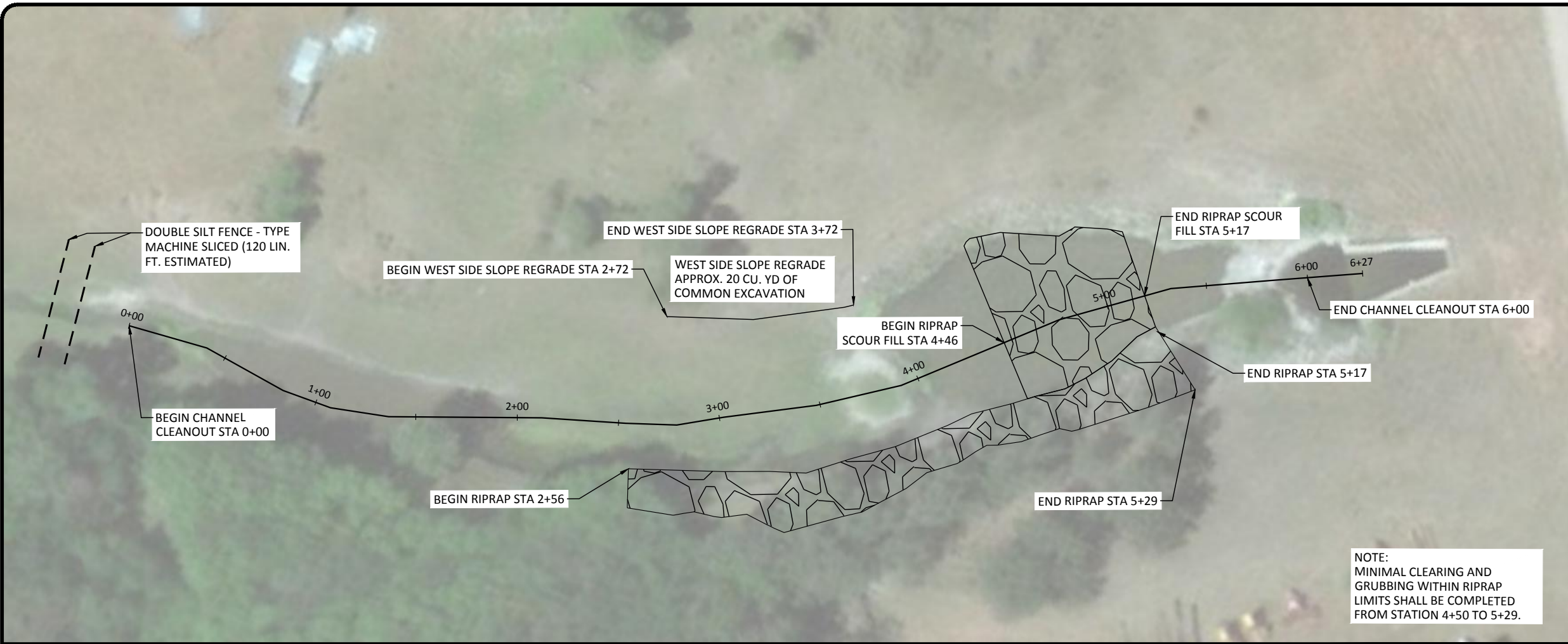
H:\JBM\3600\3655\3655-0101\CAD\EST.QUANTITIES.dwg, layout: 1-10/26/2021 3:08 PM, (ebetto)

I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision, and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota.

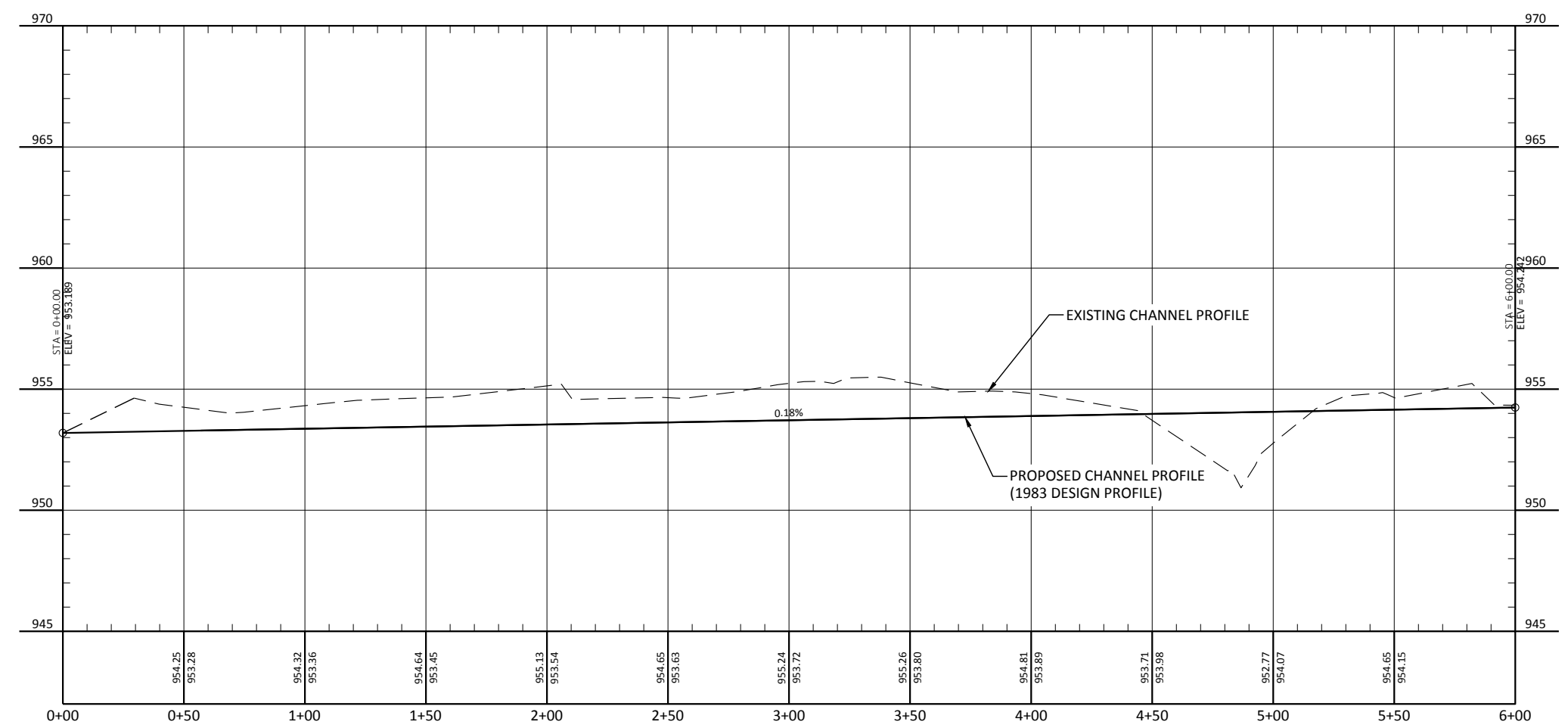
Tony A. Nordby
 Tony A. Nordby
 License No. 51392

Date: 10/26/2021


By	
Date	
Revision	
No.	
SCHIRICK DAM OUTLET REPAIR RED LAKE WATERSHED DISTRICT DOROTHY, MINNESOTA	
ESTIMATED QUANTITIES	
	
Drawn By	ELB
Checked By	TAN
Date	10-26-2021
Scale	As Shown
Project No.	3655-0101
SHEET	2 OF 4



NOTE:
MINIMAL CLEARING AND
GRUBBING WITHIN RIPRAP
LIMITS SHALL BE COMPLETED
FROM STATION 4+50 TO 5+29.



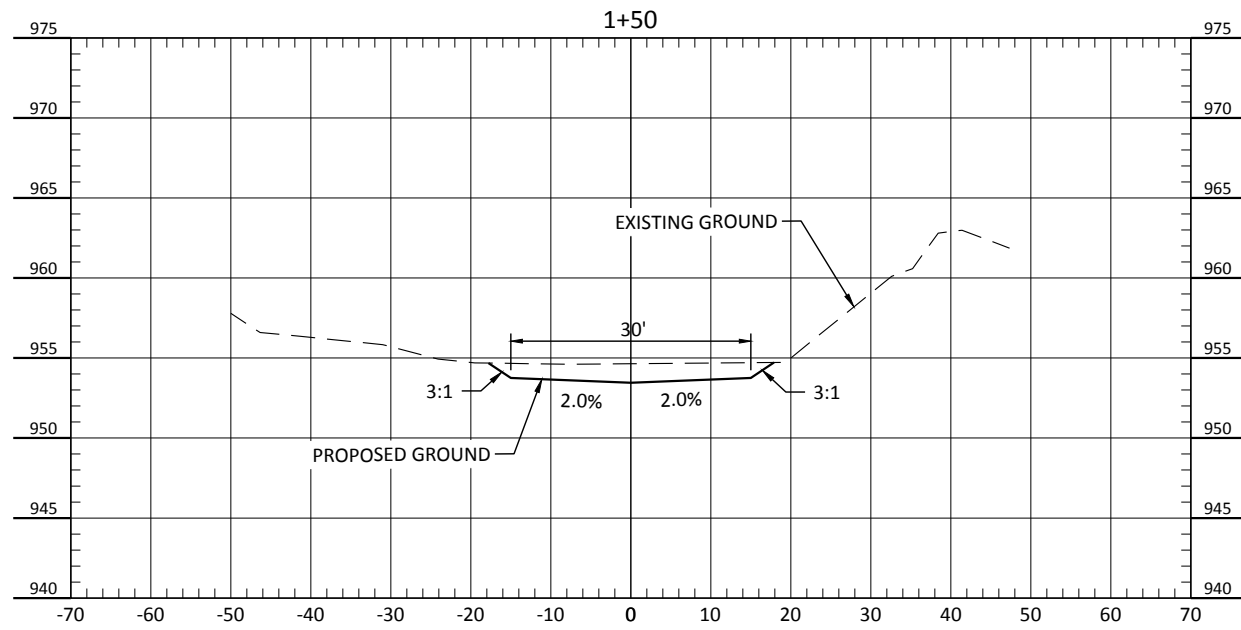
H:\JBM\3600\3655\3655-0101\CAD\PLAN AND PROFILE_tan.dwg-P&P-10/26/2021 3:00 PM-(lebeito)

SCHIRICK DAM OUTLET REPAIR RED LAKE WATERSHED DISTRICT DOROTHY, MINNESOTA	PLAN AND PROFILE
 Drawn By ELB Checked By TAN Date 10-26-2021 Scale As Shown Project No. 3566-0101 SHEET 3 OF 4	Date 10/26/2021 Revision No. By

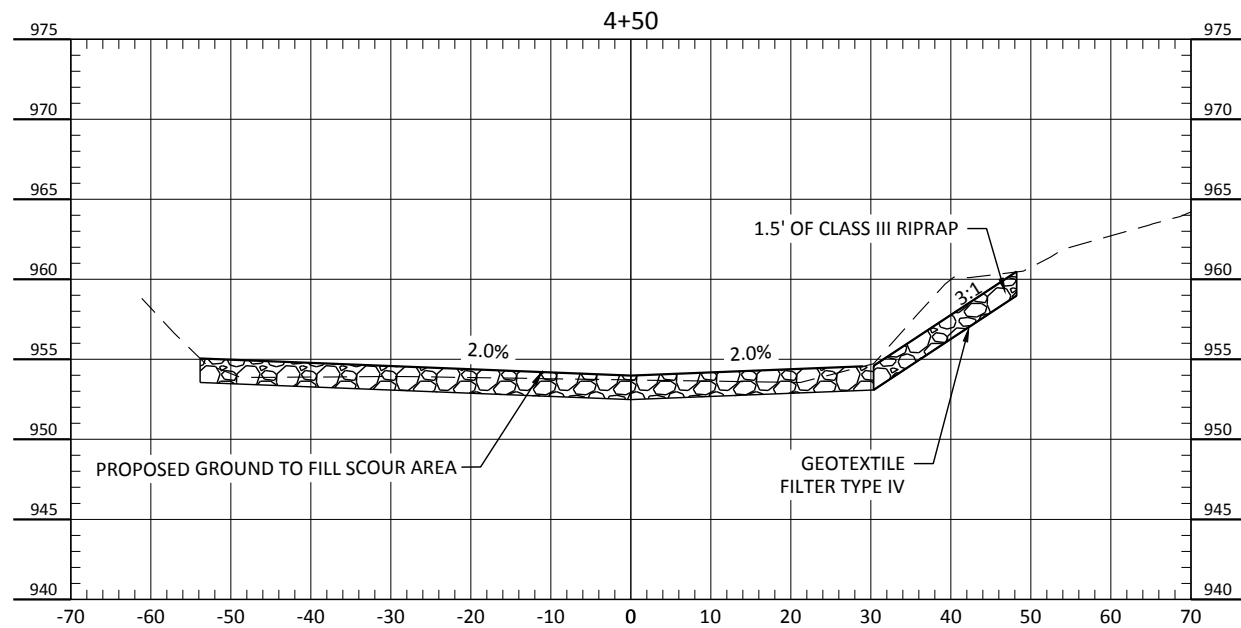
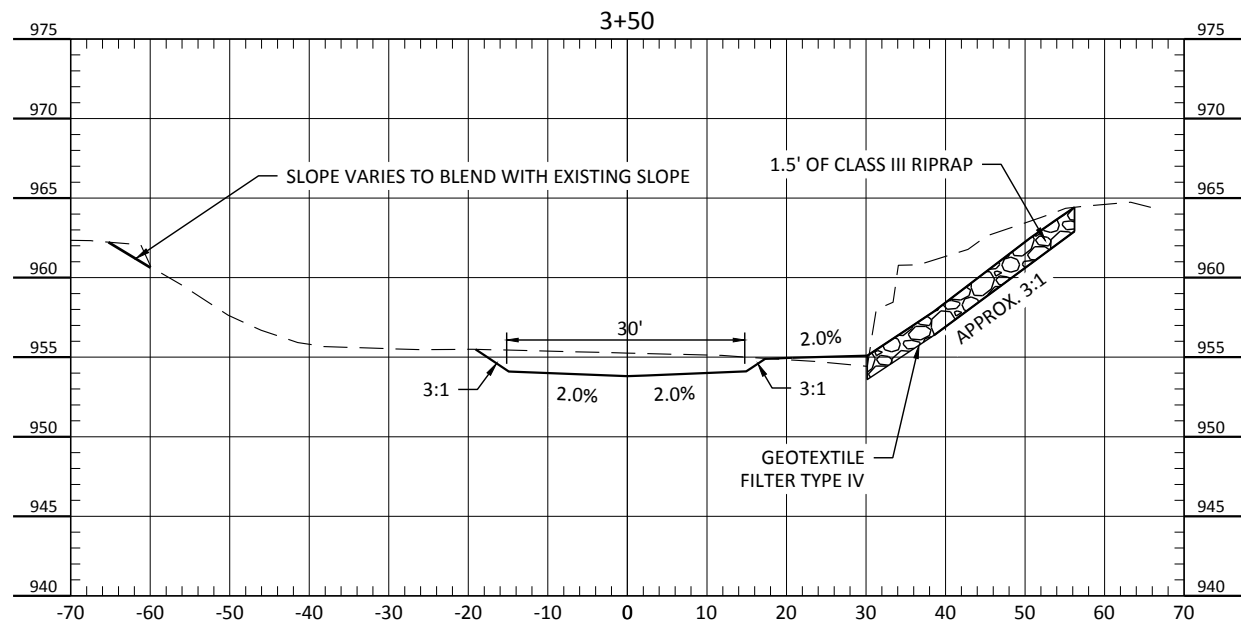
I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision, and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota.

Tony A. Nordby
Tony A. Nordby
License No. 51392

Date: 10/26/2021



NOTE:
CROSS SECTIONS OUTSIDE OF SCOUR AREA REPLICATES THE
CROSS SECTION FROM THE 1983 ORIGINAL PLAN.



H:\JBA\3660\3655\3655-0101\CAD\PLAN AND PROFILE_tan.dwg-XS-10/26/2021 2:22 PM-(eheto)

No.	Revision	Date	By

SCHIRICK DAM OUTLET REPAIR
RED LAKE WATERSHED DISTRICT
DOROTHY, MINNESOTA
CROSS SECTIONS



Drawn By
ELB
Checked By
TAN
Date
10-26-2021
Scale
As Shown
Project No.
3566-0101

I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision, and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota.

Tony A. Nordby
Tony A. Nordby
License No. 51392
Date: 10/26/2021

**SCHIRRICK DAM OUTLET REPAIR
RED LAKE WATERSHED DISTRICT
ENGINEER'S OPINION OF PROBABLE COST
10/26/2021**

SPEC. NO.	ITEM	UNIT	QUANTITY	UNIT PRICE	TOTAL COST
2021.501	MOBILIZATION	LUMP SUM	1	\$5,000.00	\$5,000.00
2101.501	CLEARING AND GRUBBING	LUMP SUM	1	\$2,500.00	\$2,500.00
2105.507	COMMON EXCAVATION (EV) (P)	CY	1,125	\$8.00	\$9,000.00
2105.601	DEWATERING	LUMP SUM	1	\$2,000.00	\$2,000.00
2511.507	RANDOM RIPRAP CLASS III	CY	675	\$100.00	\$67,500.00
2573.503	SILT FENCE, TYPE MS	LIN. FT.	120	\$6.00	\$720.00
2575.501	TURF ESTABLISHMENT	LUMP SUM	1	\$2,500.00	\$2,500.00
TOTAL CONSTRUCTION COSTS					\$89,220.00
CONTINGENCIES (5%)					\$4,461.00
ENGINEERING (PERMITTING, DESIGN, PLANS, SPECS, CONSTRUCTION ADMINISTRATION)					\$13,383.00
TOTAL PROJECT COST					\$107,064.00



Permit # 21-166

Status Report: **Approved**

Applicant Information

Name	Organization	Address	Email	Phone Number(s)
	Moylan Township	30598 270th Street NE Goodridge, MN 56725		tel: mobile: fax:

General Information

(1) The proposed project is a:

Culvert Installation / Removal / Modification

(2) Legal Description

(3) County: **Marshall** Township: **Moylan** Range: **40** Section: **1 1/4: NW1/4**

(4) Describe in detail the work to be performed. **Replace culverts**

(5) Why is this work necessary? Explain water related issue/problem being solved. **Current culverts are rusted out.**

Status

Status	Notes	Date
Approved		Oct. 27, 2021
Received		Oct. 18, 2021

Conditions

Site 1- Red Lake Watershed District (RLWD) approval to remove a 60" diameter centerline culvert and to replace it with a 36" & a 48" diameter culvert. Site 2- RLWD approval to remove and replace a 36" diameter field entrance culvert, in kind.

Consideration should be had regarding installation of rock riprap with filter fabric at the outlet end of the permitted culverts to prevent erosion. Applicant shall ensure that all disturbed areas are seeded. Applicant is responsible for utility locates by calling Gopher 1. (1-800-252-1166) N.J.O.

NOTE: This permit does not relieve the applicant of any requirements for other permits which may be necessary from Township, County, State, or Federal Government Agencies.



Permit # 21-167

Status Report: **Approved**

Applicant Information

Name	Organization	Address	Email	Phone Number(s)
Peter Nelson		26167 210th Street NE Goodridge, MN 56725		tel: mobile: 218-684-1287 fax:

General Information

(1) The proposed project is a:

Culvert Installation / Removal / Modification

(2) Legal Description

(3) County: **Marshall Township: Grand Plain Range: 40 Section: 10 1/4: NW1/4 NW1/4**

(4) Describe in detail the work to be performed. **Replace culvert with a longer pipe**

(5) Why is this work necessary? Explain water related issue/problem being solved. **Entrance is too narrow.**

Status

Status	Notes	Date
Approved		Oct. 27, 2021
Received		Oct. 18, 2021

Conditions

Red Lake Watershed District (RLWD) approval to remove an 18 " diameter field entrance culvert and replace it with a 16" diameter smooth steel culvert, as per approval of the Grand Plain Township; proposed work is within township road right-of-way. Consideration should be had regarding installation of rock riprap with filter fabric at the outlet end of the permitted culvert to prevent erosion. Applicant shall ensure that all disturbed areas are seeded. Applicant is responsible for utility locates by calling Gopher 1. (1-800-252-1166) N.J.O.

NOTE: This permit does not relieve the applicant of any requirements for other permits which may be necessary from Township, County, State, or Federal Government Agencies.



Permit # 21-168

Status Report: **Approved**

Applicant Information

Name	Organization	Address	Email	Phone Number(s)
Lucas Wolff		16794 Sorteberg Drive Thief River Falls, MN 56701		tel:218-681-4599 mobile: fax:

General Information

- (1) The proposed project is a:
Surface Drainage (New Ditch or Improvement)
- (2) Legal Description
- (3) County: **Pennington** Township: **Silverton** Range: **42** Section: **22 1/4: NW1/4**
- (4) Describe in detail the work to be performed. **Clean ditch for 1/2 mile**
- (5) Why is this work necessary? Explain water related issue/problem being solved. **Poor drainage**

Status

Status	Notes	Date
Approved		Oct. 27, 2021
Received		Oct. 15, 2021

Conditions

Red Lake Watershed District (RLWD) approval to clean various road ditches as per approval of the adjacent road authorities. See Maps. Plan and profiles have been provided with proposed cleaning grade lines. All excavation shall be consistent with the existing road and ditch slopes, there shall be no vertical excavation faces. Existing flows shall not be changed or diverted. For work on lands not owned by applicant, he/she must obtain, in writing, approval from the affected landowners signing off on the performed work. Consideration should be had regarding installation of rock riprap with filter fabric at the outlet end of any culverts that are lowered to prevent erosion. Applicant shall ensure that all disturbed areas are seeded. Applicant is responsible for utility locates by calling Gopher 1. (1-800-252-1166) N.J.O.

NOTE: This permit does not relieve the applicant of any requirements for other permits which may be necessary from Township, County, State, or Federal Government Agencies.



Permit # 21-169

Status Report: **Approved**

Applicant Information

Name	Organization	Address	Email	Phone Number(s)
Bobby Miller		38577 140th Street NE Goodridge, MN 56725		tel: mobile: 218-689-1536 fax:

General Information

(1) The proposed project is a:

Culvert Installation / Removal / Modification

(2) Legal Description

(3) County: **Pennington** Township: **Star** Range: **39** Section: **13 1/4**: **SE1/4 SW1/4**

(4) Describe in detail the work to be performed. **Install culvert**

(5) Why is this work necessary? Explain water related issue/problem being solved. **Need access.**

Status

Status	Notes	Date
Approved		Oct. 27, 2021
Received		Oct. 14, 2021

Conditions

Red Lake Watershed District (RLWD) approval to install a 24" diameter field entrance culvert, as per approval of the Star Township; proposed work is within township road right-of-way. Consideration should be had regarding installation of rock riprap with filter fabric at the outlet end of the permitted culvert to prevent erosion. Applicant shall ensure that all disturbed areas are seeded. Applicant is responsible for utility locates by calling Gopher 1. (1-800-252-1166) N.J.O.

NOTE: This permit does not relieve the applicant of any requirements for other permits which may be necessary from Township, County, State, or Federal Government Agencies.



Permit # 21-170

Status Report: **Approved**

Applicant Information

Name	Organization	Address	Email	Phone Number(s)
Terry L. Anderson		10754 350th Avenue NE Goodridge, MN 56725		tel:218-378-4214 mobile: fax:

General Information

(1) The proposed project is a:

Culvert Installation / Removal / Modification

(2) Legal Description

(3) County: **Pennington** Township: **Reiner** Range: **39** Section: **12 1/4**; **NE1/4**

(4) Describe in detail the work to be performed. **Install culvert**

(5) Why is this work necessary? Explain water related issue/problem being solved. **Access to timber.**

Status

Status	Notes	Date
Approved		Oct. 27, 2021
Received		Oct. 18, 2021

Conditions

Red Lake Watershed District (RLWD) approval to install a 24" diameter field entrance culvert, as per approval of Reiner Township; proposed work is within township road right-of-way. Consideration should be had regarding installation of rock riprap with filter fabric at the outlet end of the permitted culvert to prevent erosion. Applicant shall ensure that all disturbed areas are seeded. Applicant is responsible for utility locates by calling Gopher 1. (1-800-252-1166) N.J.O.

NOTE: This permit does not relieve the applicant of any requirements for other permits which may be necessary from Township, County, State, or Federal Government Agencies.



Permit # 21-171

Status Report: **Approved**

Applicant Information

Name	Organization	Address	Email	Phone Number(s)
Geraldine Lindemoen		32416 160th Avenue NW Newfolden, MN 56738		tel: mobile: 218-689-4341 fax:

General Information

- (1) The proposed project is a:
Surface Drainage (New Ditch or Improvement)
- (2) Legal Description
- (3) County: **Pennington** Township: **Wyandotte** Range: **42** Section: **23 1/4: NE1/4**
- (4) Describe in detail the work to be performed. **Clean east road ditch.**
- (5) Why is this work necessary? Explain water related issue/problem being solved. **Drainage**

Status

Status	Notes	Date
Approved		Oct. 27, 2021
Received		Oct. 19, 2021

Conditions

Red Lake Watershed District (RLWD) approval to clean an east road ditch bottom, as per approval of Pennington County Highway Department; proposed work is within CSAH #84 right-of-way. All excavation shall be consistent with the existing road and ditch slopes, there shall be no vertical excavation faces. Existing flows shall not be changed or diverted. Applicant shall ensure that all disturbed areas are seeded. Applicant is responsible for utility locates by calling Gopher 1. (1-800-252-1166) N.J.O.

NOTE: This permit does not relieve the applicant of any requirements for other permits which may be necessary from Township, County, State, or Federal Government Agencies.



Permit # 21-172

Status Report: **Approved**

Applicant Information

Name	Organization	Address	Email	Phone Number(s)
Marion Sorenson		20193 120th Street SE Plummer, MN 56748		tel: mobile: 218-686-5647 fax:

General Information

- (1) The proposed project is a:
Surface Drainage (New Ditch or Improvement)
- (2) Legal Description
- (3) County: **Pennington** Township: **Mayfield** Range: 41 Section: 8 1/4: **SW1/4**
- (4) Describe in detail the work to be performed. **Clean road ditch.**
- (5) Why is this work necessary? Explain water related issue/problem being solved. **Poor drainage.**

Status

Status	Notes	Date
Approved		Oct. 27, 2021
Received		Oct. 20, 2021

Conditions

Red Lake Watershed District (RLWD) approval to clean the north and east road ditch bottom, as per approval of Pennington County Highway Department & Mayfield Township; proposed work is within legal road right-of-way. All excavation shall be consistent with the existing road and ditch slopes, there shall be no vertical excavation faces. Existing flows shall not be changed or diverted. Applicant shall ensure that all disturbed areas are seeded. Applicant is responsible for utility locates by calling Gopher 1. (1-800-252-1166) N.J.O.

NOTE: This permit does not relieve the applicant of any requirements for other permits which may be necessary from Township, County, State, or Federal Government Agencies.

Program Schedule Overview

WEDNESDAY, DECEMBER 1

PRE-CONFERENCE SESSIONS

- 9:00 AM-3:30 PM Watershed Management Workshop
9:00 AM-3:00 PM Minnesota Drainage Seminar
4:00 PM-5:00 PM Regional Caucuses + Pryor Learning Information Session

THURSDAY, DECEMBER 2

- 9:00 AM-11:45 AM Morning Concurrent Sessions, check schedule for presentations and zoom links
12:00 PM-12:45 PM Awards and Matinee Movies
DNR Watershed District of the Year (?)
BWSR Watershed District Employee of the Year
Watershed District Program of the Year
Watershed District Project of the Year
1:00 PM-3:45 PM Afternoon Concurrent Sessions, check schedule for presentations and zoom links
4:00 PM Networking Sip and Share hosted by our Platinum Sponsors

FRIDAY, DECEMBER 3

- 9:00 AM-11:45 AM Concurrent Sessions, check schedule for presentations and zoom links
1:00 PM-4:00 PM MAWD Business Meeting

THANK YOU TO OUR PLATINUM SPONSORS!



Thursday, December 2nd Sessions

HOSTED BY:

BARR

TIME	TRACK	SPEAKERS + PRESENTERS
9:00 AM	Pond Treatment with Spent Lime to Control Phosphorus Release from Sediments	Greg Wilson; Barr Engineering Co.
9:00 AM	Water Treatment By-Product Used to Enhance Phosphorus Reductions	Joshua Maxwell; RPBCWD
9:00 AM	What does Climate Change mean for future flooding in the Red River basin?	Tyler Olsen; Barr Engineering Co.

HOSTED BY:

EOR w a t e r
e c o l o g y
c o m m u n i t y

TIME	TRACK	SPEAKERS + PRESENTERS
10:00 AM	Translating Diversity, Equity, & Inclusion into Systems Change in Policy & Planning	Rosie Russell; EOR Belinda Gardner; Capitol Region WD Rebecca Walker; University of MN
10:00 AM	Diversity, Equity, and Inclusion Leadership Forum	Belinda Gardner, Mark Doneaux; Capitol Region WD
10:00 AM	Developing Automated Technologies for Common Carp Management	Vinnie Hirt; Carp Solutions Matt Kocian; Rice Creek WD

HOSTED BY:

HOUSTON
engineering, inc.

TIME	TRACK	SPEAKERS + PRESENTERS
11:00 AM	Black River Impoundment Project	Myron Jesme; Red Lake WD Tony Nordby; Houston Engineering
11:00 AM	"If I Were King for a Day": the How's and Why's of Rule Revision	Patrick Hughes; Rice Creek WD Chris Otterness; Houston Engineering
11:00 AM	The Hallock Dam Retrofit	Ted Rud; Houston Engineering Ericka Beito; Houston Engineering

12:00 PM

GRAB LUNCH AND WATCH THE AWARDS + MATINEE MOVIES

Thursday, December 2nd Sessions

HOSTED BY:  **Stantec**

TIME	TRACK	SPEAKERS + PRESENTERS
1:00 PM	A Tale of Two Filters: Amending Filtration Media with Biochar to Remove Bacteria from Urban Stormwater	Justine Dauphinais, Jon Janke, Chase Vanderbilt; Coon Creek WD
1:00 PM	The Mississippi River Green Team: Impacts of an Environmental Workforce Program	Michaela Neu; MWMO Gretchen Engstrom; MSP Park and Rec
1:00 PM	Red River Basin LiDAR Data Acquisition	Robert Sip; Red River WMB Charles Fritz; International Water Institute

HOSTED BY:  **moore**
engineering, inc.

TIME	TRACK	SPEAKERS + PRESENTERS
2:00 PM	Redpath Impoundment and Mustinka River Rehabilitation Project	Chad Engels, Greg Fransen; Moore Engineering
2:00 PM	Lake Traverse Water Quality Improvement Project	James Guler, Amy Denz; Moore Engineering
2:00 PM	Tools for Implementing Your Comprehensive	Tara Ostendorf, Moore Engineering

HOSTED BY: 

TIME	TRACK	SPEAKERS + PRESENTERS
3:00 PM	Watershed Planning: Targeting Flexibility	Paul Marston, Courtney Phillips; ISG
3:00 PM	Recreation as a Catalyst for Conservation and Community	Staci Williams; ISG

HOSTED BY: 

TIME	TRACK	SPEAKERS + PRESENTERS
3:00 PM	TBD TBD TBD	TBD

4:00 PM

Join our Platinum Sponsors for a Sip and Share Networking Event!

Friday, December 3rd Sessions

TIME	TRACK	SPEAKERS + PRESENTERS
9:00 AM	Improving Water Quality with the Scenario Application Manager	Cindie McCutcheon, Seth Kenner, Chris Lupo, Jason Love; RESPEC
9:00 AM	Lambert Lake Upgrade: Building a Meander to Improve Water Quality and Reconnect the Floodplain while Conducting Needed Maintenance	Dawn Tanner, Phil Belfiori; VLAWMO Emily Jennings; SHE Inc.
10:00 AM	Multi-Partner Implementation of Urban Stormwater Project - Columbia Golf Course BMPs	Alicia Beattie; MWMO Erin Hunker; SRF Consulting Group
10:00 AM	Low Salt Diet Needed: The Sources and Impacts of Chloride Pollution and Tools to Help You Address it	Brooke Asleson; MPCA Laura Jester; BCWDC
11:00 AM	A fundamentally new approach to Lake Management	Eli Kersh, Christian Ference; Moleaer Inc.
11:00 AM	Wetland Restoration Challenges in an Agricultural Landscape	Daniel Tix, Janna Kieffer; Barr Engineering Co. Courtney Phillips; Shell Rock River WD

1:00 - 4:00 PM

MAWD Business Meeting

THANK YOU TO OUR EXHIBITORS!



TrueNorth Steel

General Agreement

**Agreement Between
Red Lake Watershed District and
Clearbrook-Gonvick Independent School District #2311
River Watch Program**

THIS AGREEMENT is made between the Red Lake Watershed District (hereinafter RLWD) and Clearbrook-Gonvick Independent School District Number 2311 (hereinafter Recipient).

WHEREAS, BOTH PARTIES have a mutual interest in the continuation of the River Watch water quality monitoring program in the Red Lake Watershed.

WHEREAS, the RLWD Board of Managers has voted to grant the Recipient funds and support for a five-year period for the River Watch water quality monitoring program described herein.

WHEREAS, this agreement is entered into pursuant to the authority granted in Minnesota Statute 471.59, where the RLWD and Recipient are political subdivisions.

NOW THEREFORE, it is agreed by the RLWD and the Recipient:

1. GENERAL CONDITIONS

1.1 Applicable substitute teacher rates and mileage rates are attached to this agreement and labeled as Attachment A.

1.2 Ownership of any property or supplies supplied by the RLWD to the recipient shall be retained by the RLWD upon termination of this agreement. Also, any unused or surplus funds shall be retained by the RLWD upon termination of this agreement.

1.3 This agreement is to be approved by the RLWD and Recipient through resolutions by the RLWD Board of Managers and the Recipients' School Board.

1.4 CONTACT PERSONS

The authorized contact person and address for the RLWD is:

Christina Slowinski
Red Lake Watershed District
1000 Pennington Avenue South
Thief River Falls, MN 56701
Phone: (218)681-5800
Fax: (218)681-5839
e-mail: christina.slowinski@redlakewatershed.org

General Agreement

The authorized contact person and address for the Recipient is:

Sarah Goudge

16770 Clearwater Lk Rd

Clearbrook, MN 56634

Phone: (218)776-3112

Fax: (218)776-3117

e-mail: sgoudge@clearbrook-gonvick.k12.mn.us

2. USE OF FUNDS

- 2.1 Recipient shall use the funds granted by the agreement to achieve the work program laid out in Section 3 below.
- 2.2 Recipient shall provide a Disbursement Voucher on a semiannual basis for disbursement of the water quality monitoring funds. A copy of this disbursement voucher, along with a key form, is attached to this agreement and labeled as Attachment B.

3. PROGRAM

3.1 Recipient agrees to:

- A. Use, store and protect equipment in accordance with procedures outlined in the "Standard Operating Procedures for Water Quality Monitoring in the Red River Watershed" (hereinafter RLWD SOP) provided by the RLWD.
- B. Collect water quality samples and other pertinent information according to the RLWD SOP Manual. At a minimum, each group will collect data on:
 - Dissolved Oxygen
 - Water Temperature
 - Conductivity
 - pH
 - Turbidity
 - Visual Water Clarity
 - Stream Stage and Depth
 - Field Observations
- C. Monitor no less than four separate sites, preferably on a monthly basis.
- D. Enter and store all data in electronic form on a spreadsheet template approved by RLWD.

General Agreement

- E. Where applicable, maintain RLWD equipment in its normal condition; notify the RLWD Contact Person in case of equipment repair or replacement.
 - F. Submit a semiannual disbursement voucher to the RLWD as outlined in Section 2.
 - G. Recipient's students are under Recipient's control and are the Recipient's responsibility at all times.
 - H. Assume all responsibility for supervision, protection, transportation, and other safety of students.
 - I. Agree to indemnify and hold the RLWD harmless for any claims or damages, including costs and attorney's fees.
- 3.2 The RLWD agrees to make available as required:
- A. Direct RLWD staff support or other approved person as necessary for each monitoring trip.
 - B. Necessary equipment and consumable materials as needed for water quality monitoring.
 - C. Field training and notification of other training opportunities for teachers and students.
 - D. Data entry training, electronic file templates, field data sheets and site metadata necessary to maintain the highest possible data quality.
 - E. Verification of the accuracy of all data submitted to the Minnesota Pollution Control Agency or intermediate data repositories such as the International Water Institute water quality database.
 - F. Consideration of support for other student research initiatives on a per-case basis, depending on project relevance to the RLWD mission.
4. EFFECTIVE DATE
- 4.1 This agreement commences upon execution by both parties, not sooner than May 1, 2020 and no later than May 1, 2025.
5. TERMINATION
- 5.1 This agreement will terminate on May 1, 2025 unless earlier terminated by the parties as follows in Sections 5.2 and 5.3.
- 5.2 This agreement may be terminated by the RLWD for cause at any time upon seven (7) days written notice to the recipient. Cause shall mean a material breach of this agreement and will result in the termination of funding and Recipients' return of RLWD equipment purchased under this agreement.
- 5.3 This agreement may be terminated by the RLWD or the Recipient at any time with or without cause upon thirty (30) days written notice to the other party. In the event of such a

General Agreement

cancellation, the recipient shall be entitled to payment determined on a pro rata basis for work or services satisfactorily performed. Payment shall be at the discretion of the Red Lake Watershed District Board of Managers.

6. PAYMENT

6.1 A disbursement voucher will be filled out by the recipient and should be received by the RLWD at least twice per year, approximately April 1 and October 1.

7. Signatures

Dale M. Nelson, President
Red Lake Watershed District
Board of Managers

Date _____



Chairman of the School Board
Clearbrook-Gonvick Independent School District
#2311

Date _____



Clerk of the School Board
Clearbrook-Gonvick Independent School District
#2311

Date _____

Attachment A

Table A.1. Annual Volunteer Water Quality Monitoring Program Budget¹

Program Element	Cont
1) Substitute Teacher rate of \$87.73/day (\$78 base + \$5.73 FICA _ \$3.00 PERA) (8 schools for one year)	\$6316.56
3) Transportation: 9 sample dates @ 20 miles + training/forums est. 140 miles (8 schools for one year)	\$1920.00
4) Miscellaneous Budget (equipment repair and replacement)	\$1,000
6) RLWD Staff Time	\$28,000
TOTAL	\$37,236.56

¹ This budget estimate is based on eight schools making nine monitoring trips in one year.

Red Lake Watershed District River Watch Voucher Form Key

Term Used:	Description:
Name	Enter the name of teacher and school applying for.
City	Enter city of school/billing address
Address	Enter address of school or where reimbursement will be sent.
State	Automatically entered in Minnesota.
Zip	Enter zip code of school/billing address.
Date	Enter date of accrued expense.
Description	Enter the description of the expense, use the attached "Qualified Expenses Sheet" for reference. The expenses listed there are ones deemed acceptable by the Red Lake Watershed District. Any other expenses need to be approved by a Red Lake Watershed District representative.
Code	Leave this blank and an RLWD representative should fill in the billing code.
Miles	Enter the number of miles traveled for the river Watch Program (maximum of 350 miles/year is reimbursable.)
Mileage Comp.	Enter the mileage reimbursement total (number of miles x \$0.75).
Substitute Teacher	Enter the amount for substitute teacher reimbursement (\$83.73 rate per day), has a maximum of 9 days per year allowed.
Other Expenses	Enter other expenses such as supplies, equipment repair, etc. See attached "Qualified Expenses Sheet."
Claimant Signature/	Sign your name and enter the date of signature.
Date	
RLWD Office Section	(for use by RLWD staff)
Check No.	Enter reimbursement check number.
Date Paid	Enter the date check is sent.
Approved By	Signature of responsible project agent.

Attachment B

Red Lake Watershed District - Administrators Report

October 14, 2021

Red River Watershed Management Board – LeRoy (live) and I (virtual) attended the RRWMB at 10:00 am October 19, 2021, in Ada. Rob will most likely have given an update on this meeting earlier today.

Drainage Workgroup Meeting – I attended the virtual Drainage Workgroup meeting this afternoon at 1:00 pm. As expected, there was some interesting discussion concerning road authority's responsibilities under Minn. Stat. 103E525, subd. 2, towards the drainage improvements and how they are being addressed statewide. Consistency seems to be lacking throughout the State on how damages or lack thereof are being handled. There was also discussion on 103E process in that some folks feel the public is not given enough chance or information during the process. I was rather discouraged at what appears to be a lack of knowledge from the commentors on how many checks and balances there are in a proceeding such as this.

Thief River 1W1P – The PWG met at 10:00 am October 18th. Most to the meeting was to give project updates on JD 23 project as well as Thief River Bank Stabilization Project. It was the consensus of the group

Mud River Project Work Team – A Mud River Restoration Update meeting was held at 10:00 am, October 15th. There was a checklist of items and ideas that were discussed by the USFWS, MnDNR, RLWD, land and HDR as well as tasks moving forward. I will be more specific on this project as we move forward with the PWT process.

Clearwater River Watershed 1W1P PWG – The Clearwater River Planning Workgroup held their meeting at 9:00 am October 20th in preparation of the Policy Committee which will be held 9:30 am November 3, 2021 at the Bagley Courthouse.

Water Quality Reports – Corey has provided many months of Water Quality Reports so please review and comment as you find the time.

By Corey Hanson, Red Lake Watershed District Water Quality Coordinator. 10/22/2021



Water Quality Monitoring

2019 dissolved oxygen data from deployed HOBO U26-001 temperature/dissolved oxygen (DO) loggers were processed and corrected. When data is downloaded from dissolved oxygen loggers, it is inspected and converted to .csv files using HOBOWare software. In the lab, side-by-side measurements (in water) are recorded from each logger and a “control” instrument which is usually the District’s portable Manta 2 sonde before and after the steps of cleaning and calibrating the loggers. The relative change in logger readings before and after cleaning is called “fouling drift.” The relative change in logger readings from before calibration to after calibration is called “calibration drift.” Because the HOBO DO loggers are equipped with optical sensors, they are fairly resistant to either form of drift. Data compilation and correction is completed using Aquarius software. Dissolved oxygen data is only corrected for calibration and fouling drift if the sum of the absolute values of the drift calculations meets or exceeds a threshold of 0.3 mg/L. The data can also be inspected for individual outlier values that can be trimmed from the record. Periods of excess drift (>2 mg/L, in rare cases of excess fouling) are also trimmed from the corrected dissolved oxygen records. Because the loggers record dissolved oxygen levels 24 hours a day, they capture values that are relatively close to each day’s daily minimum concentration (compared to daytime measurements collected during site visits), which is important for accurate water quality assessments. If more than 10% of the daily minimum dissolved oxygen levels drop below 5 mg/L throughout a 10-year summer water quality record for a portion of a stream, that stream may be listed as impaired by low dissolved oxygen concentrations. The amount of daily fluctuation in dissolved oxygen is also used in water quality assessments as an indicator of eutrophication (excess nutrients). The results are shown in the following charts.

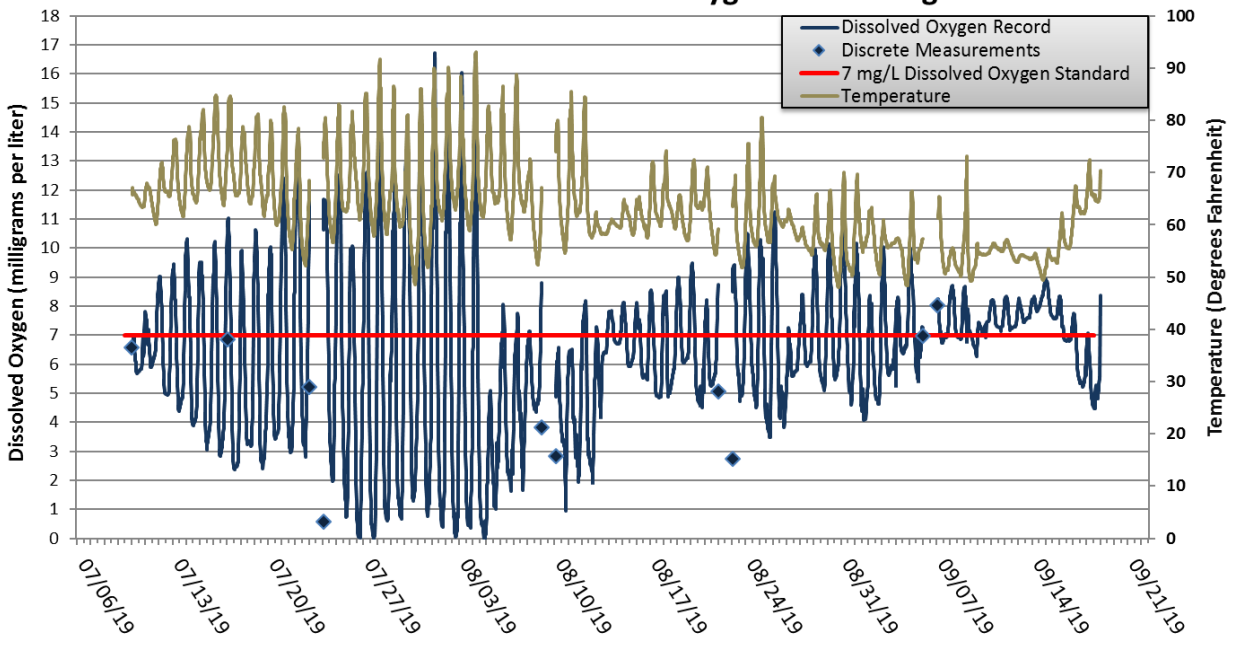
RED LAKE WATERSHED DISTRICT MONTHLY WATER QUALITY REPORT

January 2021



68 of 72 Daily Minimums
were <7 mg/L (94.4%)

Lost River at the South Crossing of 141st Ave 2019 Continuous Dissolved Oxygen Monitoring



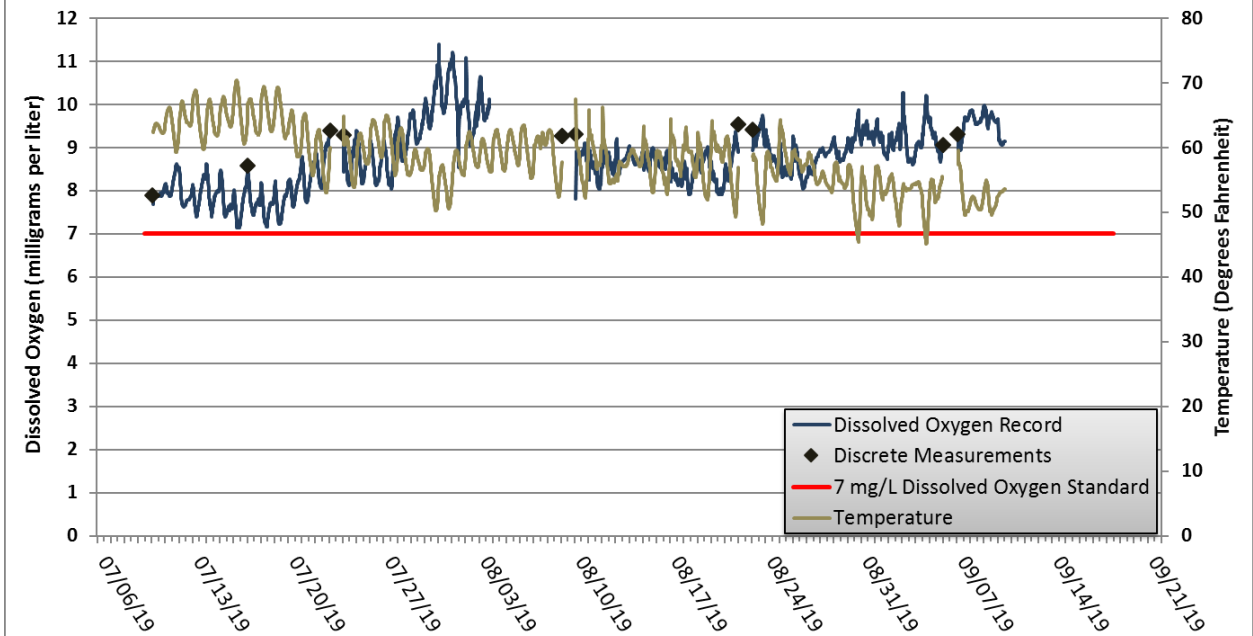
RED LAKE WATERSHED DISTRICT MONTHLY WATER QUALITY REPORT

January 2021



0 of 67 Daily Minimums
were <7 mg/L (0.0%)

Lost River Tributary at 410th Street Upstream of Lost Lake 2019 Continuous Dissolved Oxygen Monitoring



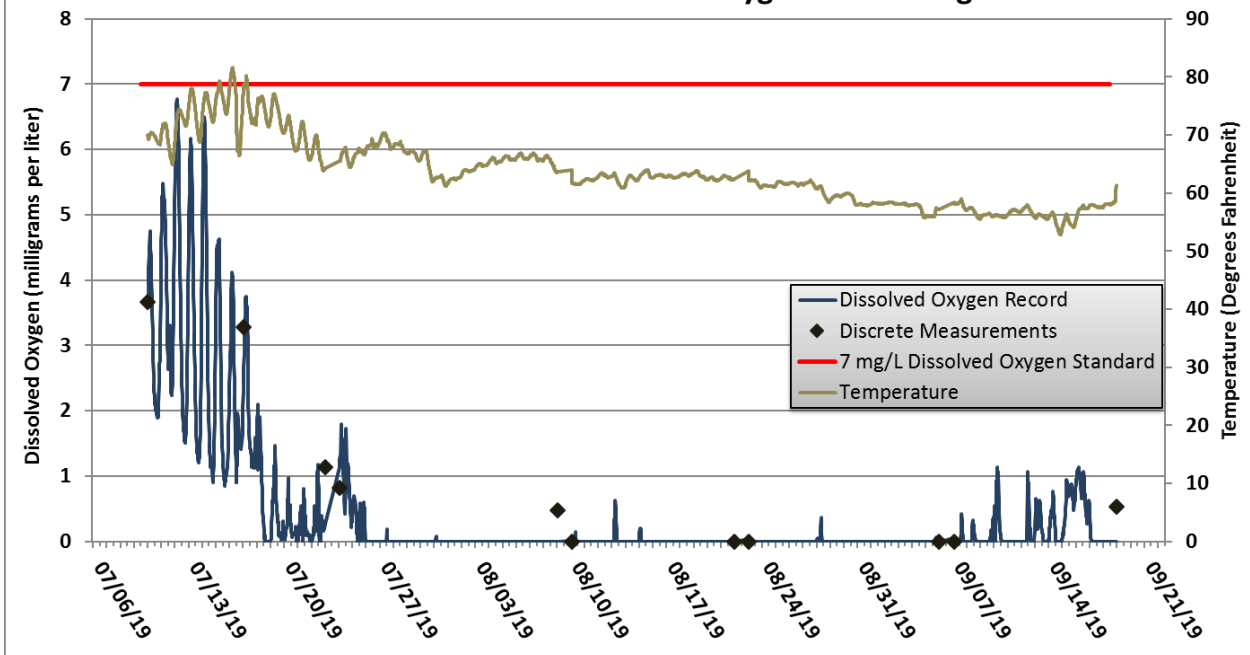
RED LAKE WATERSHED DISTRICT MONTHLY WATER QUALITY REPORT

January 2021



72 of 72 Daily Minimums
were <7 mg/L (100%)

Lost River at 141st Ave Downstream of Lost Lake (LR20) 2019 Continuous Dissolved Oxygen Monitoring



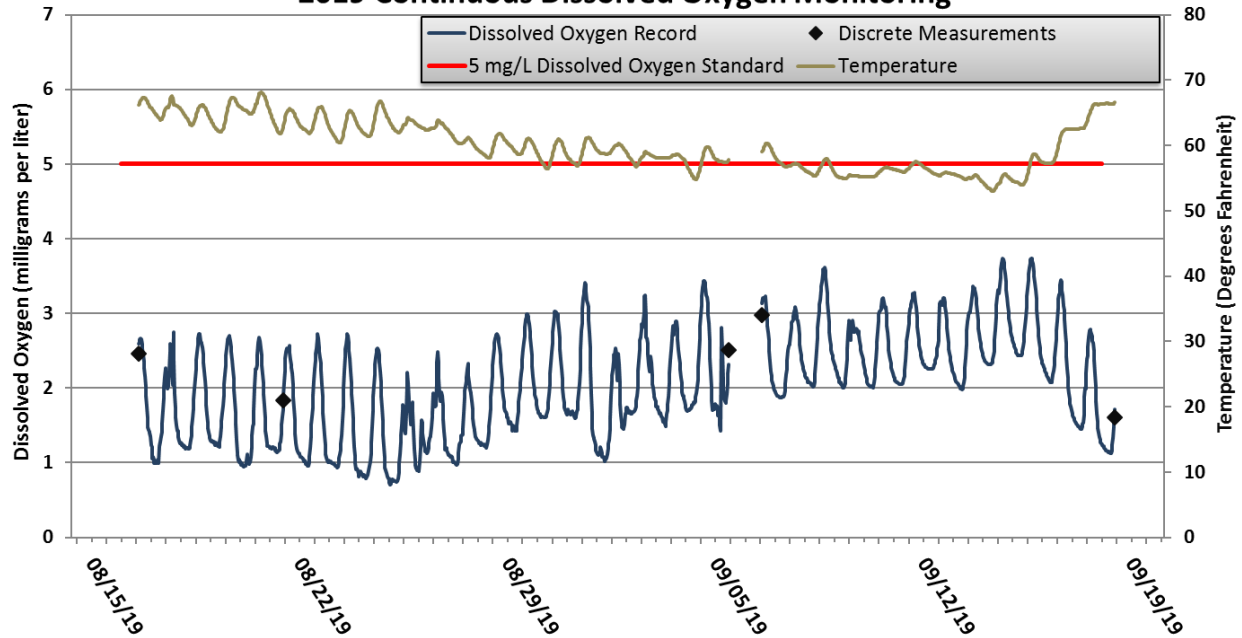
RED LAKE WATERSHED DISTRICT MONTHLY WATER QUALITY REPORT

January 2021



34 of 34 Daily Minimums
were <5 mg/L (100%)

Lost River at 109th Ave Upstream of Pine Lake 2019 Continuous Dissolved Oxygen Monitoring



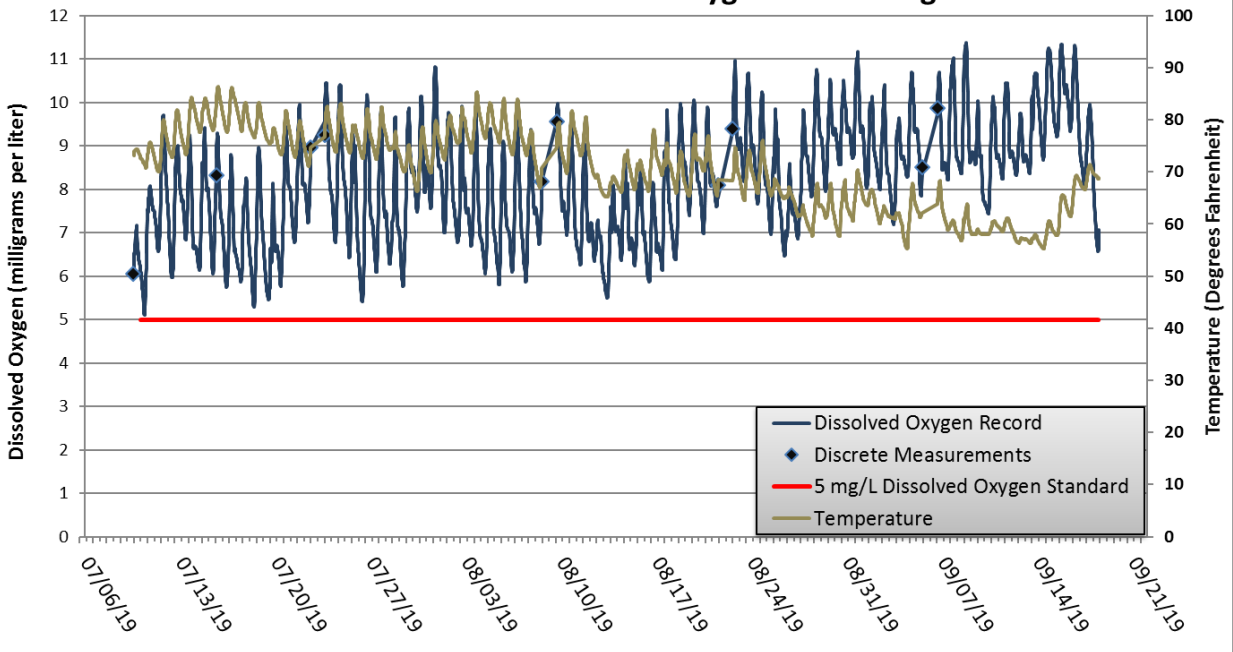
RED LAKE WATERSHED DISTRICT MONTHLY WATER QUALITY REPORT

January 2021

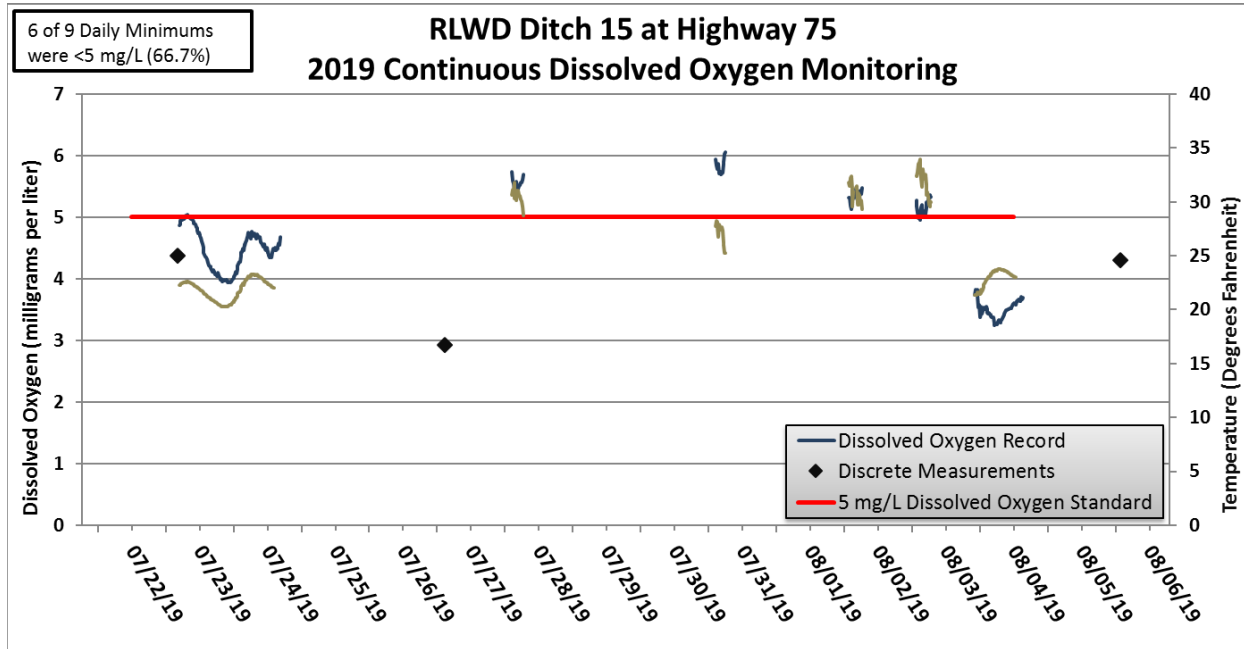


0 of 72 Daily Minimums
were <5 mg/L (0.0%)

Lost River at 486th Street, Near the Pine Lake Outlet 2019 Continuous Dissolved Oxygen Monitoring



Red Lake Watershed District Ditch 15 (and Brandt Impoundment outlet channel) was monitored at the Highway 75 crossing. Though there was some flow when the logger was deployed, it became sporadic and the sensors were dry when the logger was retrieved. Due to the relatively stagnant conditions, dissolved oxygen levels below the 5 mg/L water quality standard were recorded during the majority of days in which there was flow. The channel is wide at this site, so water was very shallow, making the site unsuitable for logger deployments during low flows. Logger deployment at a different crossing was attempted for the next deployment within RLWD Ditch 15.



A summary of water quality conditions in lakes sampled by the East Polk SWCD was written to accompany a proposal for a continuation of financial support for their monitoring program:

The East Polk Soil and Water Conservation District has been helping watershed districts with the collection of water quality data from streams and lakes within their district. Within the Red Lake Watershed District, they have been sampling 9 lakes and collecting water quality measurements at 5 river monitoring locations. At the April 26, 2018 meeting, the RLWD Board of Managers approved reimbursement for lake sample analysis for 3 years. The SWCD is interested in continuing to collect lake samples for an additional 3 years (2021-2023) if the Board wishes to continue to approve the reimbursement of their sampling expenses. This has been a great deal for the RLWD because the cost of sample analysis is relatively cheap compared to the staff time that is required to travel to lakes and collect samples. Data management and submittal to the MPCA is also handled as part of the RMB Lakes Monitoring Program, which adds to the time saving value in supporting the SWCD's monitoring effort. Their sampling effort has provided valuable data, including data from lakes that had not been sampled much in the past.

From the data collected by the East Polk SWCD, we have learned that the water quality in Cameron Lake has improved a little since the 2016 assessment. Severe impairments have been identified in Hill River Lake and Oak Lake. It would be good to continue to collect data to improve the data set that would be

needed to develop TMDLs for those lakes. Several lakes are near the impairment thresholds for total phosphorus and/or chlorophyll-a and additional data would improve confidence in future water quality assessments. The nearly/barely impaired statuses of Badger Lake, Turtle Lake, Cross Lake, and Whitefish Lake could potentially make those lakes' watersheds high priority areas for implementation of water quality improvement projects. The water quality in Poplar Lake and Spring Lake comfortably met water quality standards, so those lakes should have sufficient data to show that it is meeting water quality standards during the 2017-2026 assessment period. In the place of Poplar Lake and Spring Lake, Cable Lake and Store Lake could be sampled to attain a complete picture of water quality conditions in significant lakes within the Polk County portion of the Clearwater River watershed.

A final review of the District's 2020 water quality data, prior to storage in the MPCA's EQUIS database, was completed.

Thief River Watershed One Watershed One Plan (1W1P)

HDR Engineering began surveying the meanders of the old Mud River channel in early January 2021 for the feasibility study phase of the Mud River Restoration project. They surveyed a total of 27 miles of river channel (current and historic portions).

Red Lake River Watershed One Watershed One Plan (1W1P)

The Plan Coordinator (Peter Nelson) and the Planning Work Group worked on consolidating the 2018-19 and 2020-21 biennial work plans into a single 2021 Annual Work Plan.

The RLWD Board of Managers approved the hiring of a consultant to conduct a survey and feasibility assessment of the Demarais-Hanson erosion problem. This area is a very large gully that has formed downstream of CSAH 11, near the Red Lake River west of Red Lake Falls. District staff contacted landowners in the project areas to learn about the history of the problem and get access permission. District staff completed surveying for the Demarais-Hanson feasibility study. District staff helped staff from Houston Engineering complete a survey of the project area.



District staff updated the ArcOnline progress tracking map for the Red Lake River 1W1P with information about projects that were completed in 2020 (Ditch 16 side water inlets and outlet stabilization for the Thief River Falls Westside Flood Damage Reduction project). District staff contacted DNR geomorphology staff to get Bank Erosion Hazard Index (BEHI) data for the Red Lake River to help with prioritizing locations to implement streambank stabilization projects.

An article was written to publicize the Small Watersheds Focus 319 Grant that was awarded to the priority subwatersheds of the Red Lake River watershed:

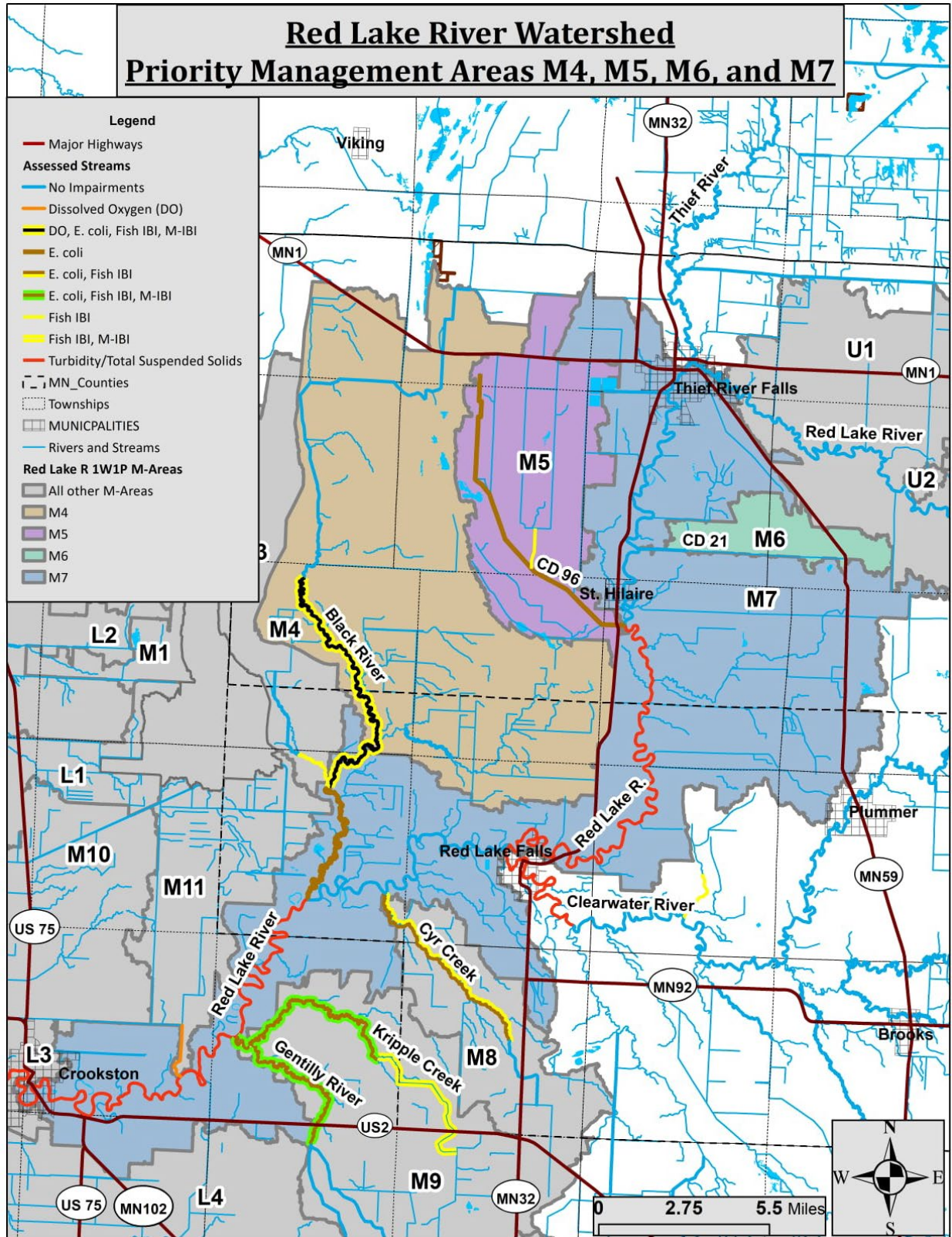
In November 2018, ten watersheds were selected to be prioritized for funding in federal fiscal year 2020. The selections were part of the transition in the federal Clean Water Act Section 319 program from one-time grants to more reliable funding focused on small watersheds. The goal of the program is to help local governments make measurable changes toward water quality improvements. Based on input from many local governments, the program is designed to provide a reliable and longer-term funding source to address all pollutants in small watersheds.

Red Lake River watershed was chosen to be one of the first 10 watersheds (Group A) to be eligible for this funding after the West Polk Soil and Water Conservation District (SWCD) successfully submitted a request for participation and Minnesota Pollution Control Agency (MPCA) staff met with local project partners. After the watershed was selected, the first step toward receiving the funding was to create a work plan. Grant applicants were required to have a nine-key-element (NKE) plan, approved by United States Environmental Protection Agency (EPA), to be eligible for funding. Group A watershed partners worked with the MPCA to develop a highly detailed plan for each watershed that, if implemented as written, will sufficiently reduce non-point source pollution so that the prioritized waterbodies will reach water quality standards in ten years. The Red Lake River (Thief River Falls – Crookston) and Black River Nine Key Element Plan was created using input from the Red Lake River One Watershed One Plan (1W1P) and the 1W1P Planning Work Group.

During the summer of 2020, the MPCA sought applications for the Fiscal Year 2020 round of funding for projects that will reduce nonpoint source pollution within the Group A watersheds. The Red Lake River 1W1P Planning Work Group developed a work plan and proposal for the funding that was allotted to the Red Lake River watershed. Peter Nelson, Pennington SWCD Water Plan Coordinator and Red Lake River 1W1P Coordinator, took the lead in writing the proposal. The proposal was officially submitted on July 16, 2020, by the Red Lake Watershed District (Red Lake River 1W1P Fiscal Agent). On August 6, 2020, MPCA staff announced that the Red Lake River proposal for a Fiscal Year 2020 Section 319 Small Watersheds Focus grant was approved for funding in the amount for \$284,275.

The projects and activities of the Red Lake River (Thief River Falls-Crookston) and Black River EPA NKE Plan will be targeted within priority management areas of CD 96, Black River, and the middle reach of the Red Lake River between Thief River Falls and Crookston. The projects will reduce the transport of eroded sediment (sediment loading) to the Red Lake River by an estimated 1,148 tons/year. Some of the projects will also reduce E. coli concentrations in the Red Lake River and its tributaries (especially the Black River and Pennington County Ditch 96). The \$284,275 in EPA grant funding, along with at least \$189,517 in matching state/local funds, will implement:

- Grade stabilization structures (including side water inlets)
- Water and Sediment Control Basins (WASCOBs)
- Streambank stabilization or meander cutoff stabilization along the Red Lake River
- Cover crops, nutrient management, and other non-structural source reduction projects
- Riparian buffers
- Riparian forest buffers
- Field borders
- Grazing management plans
- Cattle exclusion or access control plans



Clearwater River One Watershed One Plan (1W1P)

The work being done to develop PTMApp for the Clearwater River Watershed was transitioned from the former Natural Resource Technician (who left in mid-January for a new job with the NRCS) to the Water Quality Coordinator. Progress was made on completing the lakes routing phase of the PTMApp development. Lake outlines, “burn lines,” and “wall lines” were edited to make sure that the PTMAPP model correctly simulated flow through lakes. In PTMApp, a lake can have multiple inlets, but only one outlet. Some trial and error were needed to encourage the flow accumulation lines to exit odd-shaped lakes in a single location. Ground truthing and examining of LiDAR data was completed to make sure that the simulated, digital inlets and outlets matched reality as closely as possible.

A consultant for Technical Service Area 8 created a batch of 50 simple maps of the features in the Clearwater River Watershed. Project partners worked on finalizing a budget for the planning process.

Project Development

In anticipation of upcoming Red River Watershed Management Board Water Quality funding, District staff began compiling a list of known projects that could be funded and implemented soon.

- **Mud River Restoration Project:**
 - A limited amount of Thief River 1W1P Project Development money is available
 - If we reach a construction phase, RRWMB competitive water quality funding could be a resource to use to fund water quality components of the project.
 - There has been some optimistic discussion about the incorporation of flood damage reduction components, which would help with obtaining RRWMB funding.
- **Judicial Ditch 30 outlet stabilization**
 - Listed as a priority project for a feasibility study (2nd in priority) in the Thief River 1W1P, but the Mud River Restoration feasibility study may not leave sufficient Project Development funding to fully fund the JD 30 investigation.
 - Base funding could be used for Phase I, or the portion of the survey/design work not covered by the watershed-based funding.
 - Competitive RRWMB funding or the 2022 Thief River 1W1P application could be used for construction.
- **Moose River Stabilization Project**
 - Identified in the Thief River 1W1P as the 3rd priority project for a feasibility study, but there may not be sufficient funding remaining in the 2020 Thief River 1W1P Project Development budget.
 - RRWMB base water quality funding could be a good resource for funding the feasibility study
 - If the feasibility study results in plans for grade stabilization, streambank stabilization, or channel restoration, that construction work could be funded with RRWMB competitive water quality funding, 2022 Thief River 1W1P watershed-based funding, a competitive Clean Water Fund grant, or a combination of those funding sources.
 - Application of RRWMB base water quality funding to an investigation of Moose River channel/bank instability was discussed during a phone call with Beltrami County during

the summer of 2020. It sounded like Beltrami County was motivated to start working on this project.

- Clearwater River Watershed WASCObS
 - East Polk SWCD BWSR Clean Water Fund Application (currently unfunded)
 - Support from the RLWD Board in the form of pledged matching funds
- Grade Stabilization project at the outlet of Polk CD 1 (M10), Polk County JD 60 (M11), and CD 28 in Red Lake County
 - Among the list of “Other Projects” in the Red Lake River 1W1P annual work plans
- Phase III of Burnham Creek Watershed Project: Side inlet controls, vegetative buffer strips and grade stabilization structure installation
 - Among the list of “Other Projects” in the Red Lake River 1W1P annual work plans
 - MN DNR is working on an intensive geomorphological study of the Burnham Creek subwatershed that could be used to prioritize project areas within the subwatershed.

Other

- Ashley Hitt, Natural Resource Technician, accepted a new job with the NRCS. Ashley was an important member of our team, working with River Watch students, fulfilling the role of the office’s GIS specialist, helping with water quality sampling, and development of PTMapp for multiple watersheds. Christina Slowinski will transition from the Engineering Technician (Ditch Inspector) position to the Natural Resource Technician position in the spring of 2021.
- District staff worked on editing the Bartlett Lake Management Plan
- A water quality report was completed for the month of [December 2020](#).
- District staff reviewed an article about Red Lake River erosion control projects (PENnington that was being written by BWSR staff: <https://mnbwsr.medium.com/red-lake-river-bank-stabilizations-protect-water-quality-infrastructure-b6a4be1858e>).
- The Winter 2020-21 International Water Institute River Rendezvous newsletter featured an article thanking RLWD Natural Resource Technician, Ashley Hitt, for her contributions to the River Watch program: <https://mailchi.mp/56960162880b/iwi-river-rendezvous-winter-20?e=%5BUNIQID%5D>.
- District staff provided MPCA staff with GIS layers of ditches and ditch names so that they can correctly name channels in their databases. District staff also answered questions from another watershed district about working with HOBO Water Level Logger data.
- DNR staff shared GIS layers that show the results of the geomorphology assessments along the Red Lake River that were completed during the Watershed Restoration and Protection Strategy study.
- Agassiz National Wildlife Refuge staff shared the results of their 2020 water quality sampling. They found high *E. coli* concentrations upstream and downstream of the refuge. High TSS concentrations were found in the Mud River at Highway 89 and the Thief River at CSAH 7. They found high total phosphorus concentrations in the Thief River upstream of the refuge at 380th Street Northeast, Mud River at Highway 89, and Thief River at CSAH 7. The TSS concentrations at Agassiz Pool outlet monitoring sites were relatively low (the pool may not have been in a drawdown), but total organic carbon concentrations were relatively high in Judicial Ditch 11 downstream of Agassiz Pool.
- The District began the hiring process for Engineering Technician II and an Engineering Senior/Hydro II positions.

Water quality related notes and minutes from the January 14, 2021 Red Lake Watershed District Board of Managers meeting.

- The bid opening for Ditch 10 outlet repairs was conducted. The Board voted to accept the low bid from R.J. Zavoral & Sons, Inc., in the amount of \$218,498.35.
- Engineer Jacob Huwe, HDR Engineering, Inc., stated that collection of data has begun on the Preliminary Concept Report for the Mud River Restoration Project, RLWD Project No. 149A. Huwe noted that of the 27 miles to survey, five miles are left to be completed.
- Administrator Jesme discussed the funding agreement from the RRWMB for the Thief River Oxbow Project, RLWD Project No. 46Q. Construction on this project is anticipated to take place this summer.
- The RRWMB passed and approved last summer the RRWMB Water Quality Base Funding Program in the amount of \$100,000 for each watershed within the RRWMB. To receive the funding, each watershed puts in a request for water quality projects that would fit into their criteria.
- Executive Director Rob Sip, RRWMB, stated that the RRWMB allocated \$3 million for funding Water Quality projects, with \$1.3 million committed. The \$100,000 is meant to assist with smaller water quality projects, the competitive funds are for larger projects. Four projects were submitted as larger water quality projects. Sip stated that the RRWMB is looking for recommendations on what kind of funding needs there are for water quality projects through the RRWMB. Motion by Tiedemann, seconded by Ose, to support continuation of the RRWMB Water Quality Base Funding and Competitive Funding for Water Quality Projects within the RRWMB area. Upon roll call vote, motion carried unanimously.

Water quality related notes and minutes from the January 28, 2021 Red Lake Watershed District Board of Managers meeting.

- District Manager, Peter Nelson, Pennington SWCD, updated the Board on construction projects for all the LGU's within the Red Lake River 1W1P, RLWD Project No. 149. Nelson and Staff member, Arlene Novak, stated that BWSR recently completed a reconciliation of the first 50% allocation of the 2018 grant, which approves the release of the next 40% of the available funding.
- Staff member Corey Hanson reviewed a proposal for continuation of financial support for the analysis of lake samples collected by the East Polk SWCD. Hanson stated that the East Polk SWCD will collect water quality samples on nine lakes for a monitoring period of three years (2021-2023). The East Polk SWCD contribution is approximately \$8,663.04, which includes staff time, administration, and transportation. The District's contribution would cover the cost of lab testing and shipping at an approximate cost of \$7,290 over the three-year term. Motion by Sorenson, seconded by Dwight, to approve the lake monitoring proposal with the East Polk SWCD at an approximate cost of \$7,290.00 for a three-year term. Motion carried.

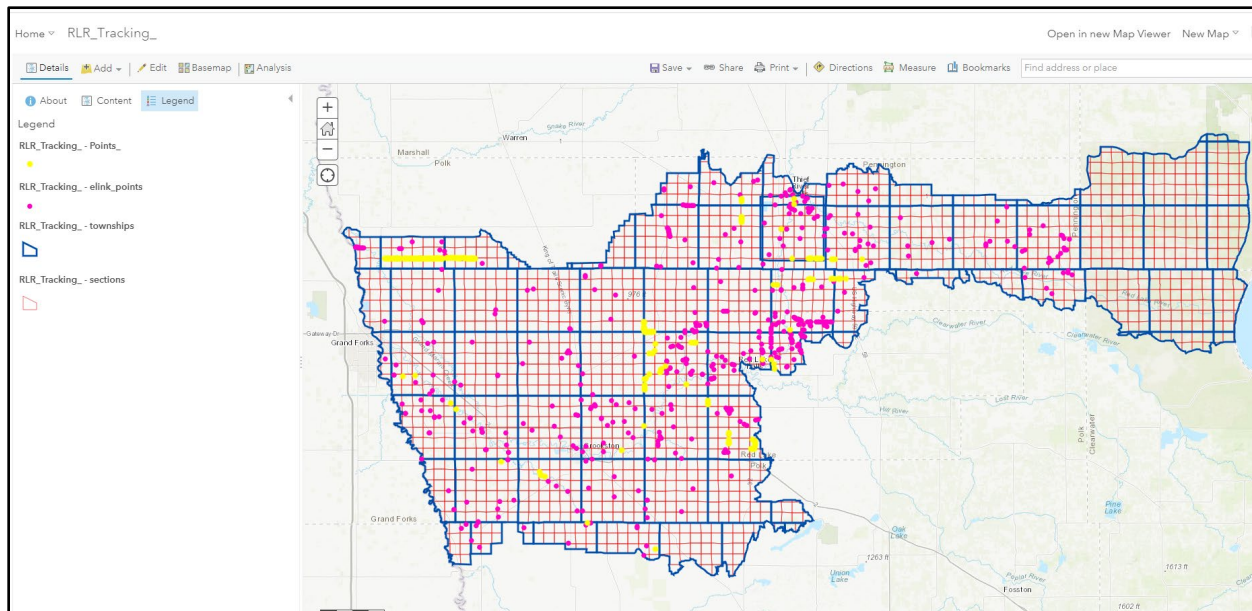
January 2021 Meetings and Events

- **January 4, 2021** – Red River watershed Management Board Administrator's Meeting
 - Discussion of water quality funding and the status of current water quality projects
 - RLWD staff provided an update on the progress of the Thief River Falls Oxbow Restoration Project, Ditch 16 side water inlets, and Black River side water inlets.
 - Projected funding needs were discussed (future projects).

RED LAKE WATERSHED DISTRICT MONTHLY WATER QUALITY REPORT

January 2021

- **January 5, 2021** – Red Lake River 1W1P Planning Work Group meeting
 - The PWG discussed the agenda for the upcoming Policy Committee meeting.
 - The PWG discussed the possibility of using 1W1P Technical and Engineering funding to design 319 grant projects.
 - BWSR staff and Ashley Hitt, from the RLWD, were collaborating to create PTMApp tools/filters to help agencies identify locations where best management practices should be targeted.
 - The Red Lake River 1W1P ArcOnline progress tracking tool (shown below) is ready to use.



- **January 11, 2021** – Meeting to discuss the creation of maps for the Clearwater River One Watershed One Plan
 - Parcel data will be gathered for use in a forestry protection analysis/plan (percentage of land protected by buffers, conservation easements, etc.).
 - Do wild rice paddies count as storage?
 - A logo will be designed for use in Clearwater River 1W1P documents.
- **January 11, 2021** – Water quality staff meeting to discuss continuation of progress on the development of PTMApp for the Clearwater River Watershed.
- **January 12, 2021** – Red Lake River 1W1P financial meeting (organize understanding and tracking of the multiple funding sources)
- **January 13, 2021** – Red Lake River 1W1P Policy Committee meeting
 - The PC elected committee officers: Chair (Mark LaCrosse), Vice Chair (Gene Tiedemann), and Secretary (Neil Peterson).
 - The PC approved a motion to allow the fiscal agent to pay partner agencies up front, like payments to contractors, as long as the expenditures are within the budget and plan.
 - A work plan change was approved to move \$44,000 in unused 2018 funding from Burnham Creek to the Thief River Westside outlet stabilization project.

RED LAKE WATERSHED DISTRICT MONTHLY WATER QUALITY REPORT

January 2021

- Project updates on the Thief River Westside outlet stabilization project, Ditch 16 side water inlets, Russia 13 stabilization project (Burnham Creek subwatershed), Wylie 34 grade stabilization, Joint County Ditch 60 grade stabilization, Pennington County Ditch 96 side water inlets, Pennington County Ditch 96 outlet stabilization, Regional Conservation Partnership Program (\$428,00 to use in fiscal years 2020-21, \$80,000 used in 2019, \$130,748 used in 2020), the Small Watersheds Focus 319 Grant.
- **January 26, 2021** – Clearwater River 1W1P Planning Work Group Meeting

Red Lake Watershed District Monthly Water Quality Reports are available online:
<http://www.redlakewatershed.org/monthwq.html>.

Learn more about the Red Lake Watershed District at www.redlakewatershed.org.

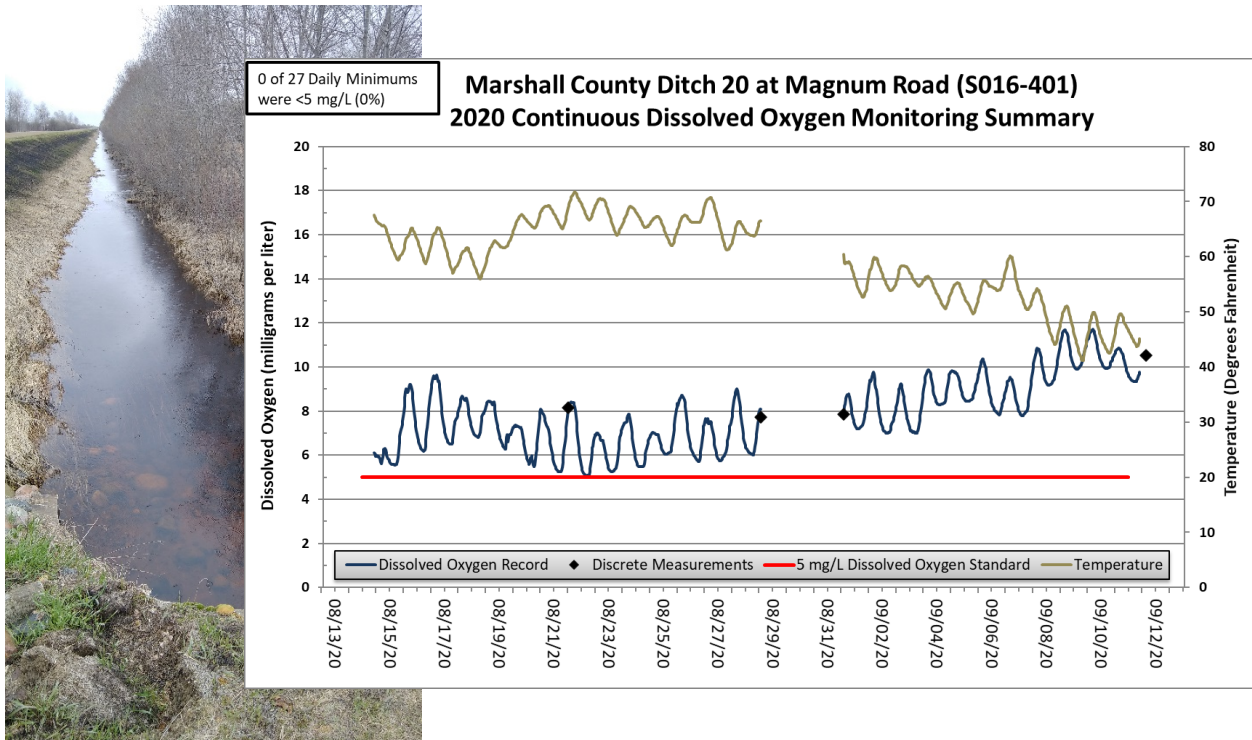
Learn more about the watershed in which you live (Red Lake River, Thief River, Clearwater River, Grand Marais Creek, or Upper/Lower Red Lakes) at www.rlwdwatersheds.org.

“Like” the Red Lake Watershed District on [Facebook](https://www.facebook.com/redlakewatershed) to stay up-to-date on RLWD reports and activities.

By Corey Hanson, Red Lake Watershed District Water Quality Coordinator. 10/25/2021

Water Quality Monitoring

2020 dissolved oxygen data from deployed HOBO U26-001 temperature/dissolved oxygen loggers was processed and corrected. When data is downloaded from dissolved oxygen loggers, it is inspected and converted to .csv files using HOBOWare software. In the lab, side-by-side measurements (in water) are recorded from each logger and a “control” instrument which is usually the District’s portable Manta 2 sonde before and after the steps of cleaning and calibrating the loggers. The relative change in logger readings before and after cleaning is called “fouling drift.” The relative change in logger readings from before calibration to after calibration is called “calibration drift.” Because the loggers are equipped with optical sensors, they are fairly resistant to either form of drift. Data compilation and correction is completed using Aquarius software. Dissolved oxygen data is only corrected for calibration and fouling drift if the sum of the absolute values of the drift calculations meets or exceeds a threshold of 0.3 mg/L. The data can also be inspected for individual outlier values that can be trimmed from the record. Periods of excess drift (>2 mg/L, in rare cases of excess fouling) are also trimmed from the corrected dissolved oxygen records. Because the loggers record dissolved oxygen levels 24 hours a day, they capture each day’s daily minimum concentration, which is important for accurate water quality assessments. If more than 10% of the daily minimum dissolved oxygen levels drop below 5 mg/L throughout a 10-year summer water quality record for a portion of a stream, that stream may be listed as impaired by low dissolved oxygen concentrations. The amount of daily fluctuation in dissolved oxygen is also used in water quality assessments as an indicator of eutrophication (excess nutrients). The 2020 dissolved oxygen records collected with deployed instruments are summarized in the following charts. Ideally, the blue lines (dissolved oxygen) should stay above the red lines (water quality standard) through at least 90% of the days shown in these charts.



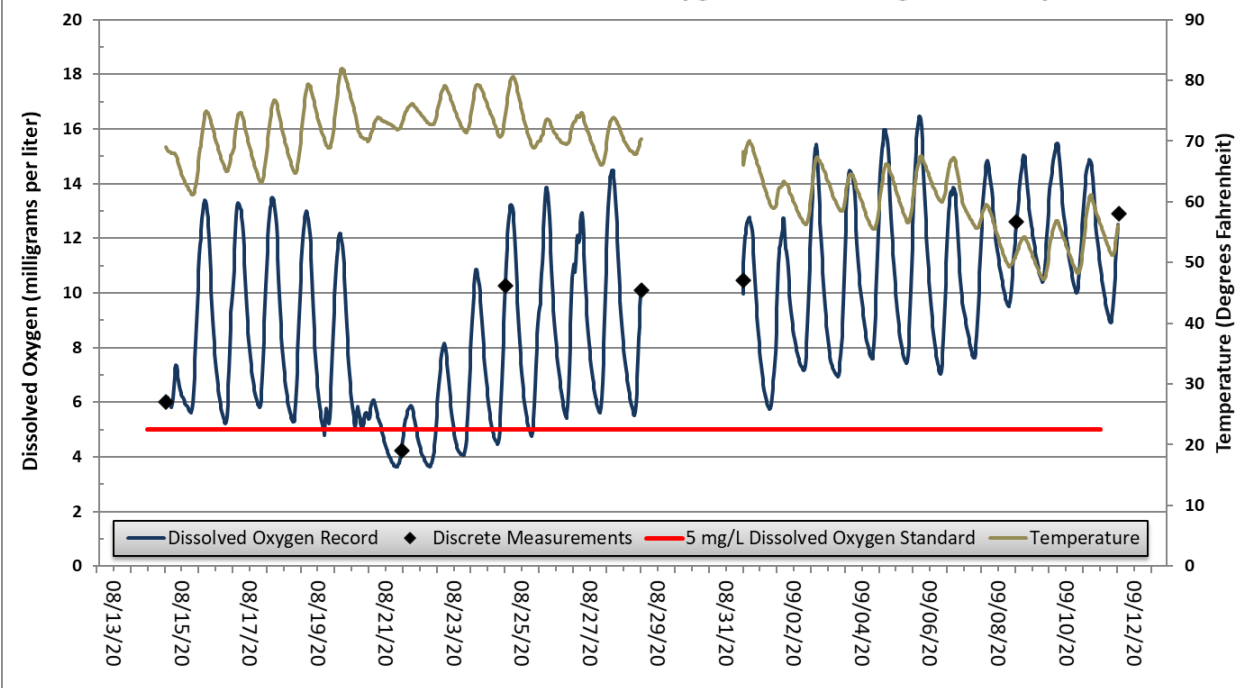
RED LAKE WATERSHED DISTRICT MONTHLY WATER QUALITY REPORT

February 2021



7 of 27 Daily Minimums were <5 mg/L (25.9%)

Mud River at Highway 89 (S002-078) 2020 Continuous Dissolved Oxygen Monitoring Summary



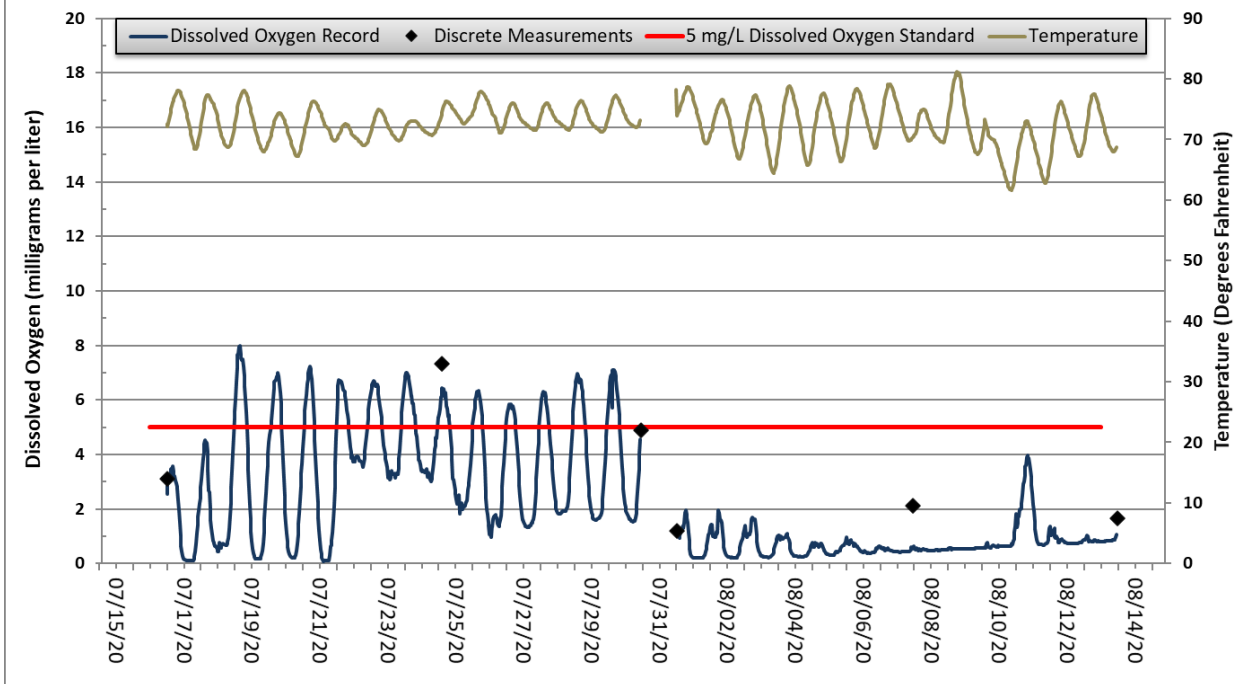
RED LAKE WATERSHED DISTRICT MONTHLY WATER QUALITY REPORT

February 2021



29 of 29 Daily Minimums
were <5 mg/L (100%)

Branch 200 of Judicial Ditch 11 (S004-493) 2020 Continuous Dissolved Oxygen Monitoring Summary



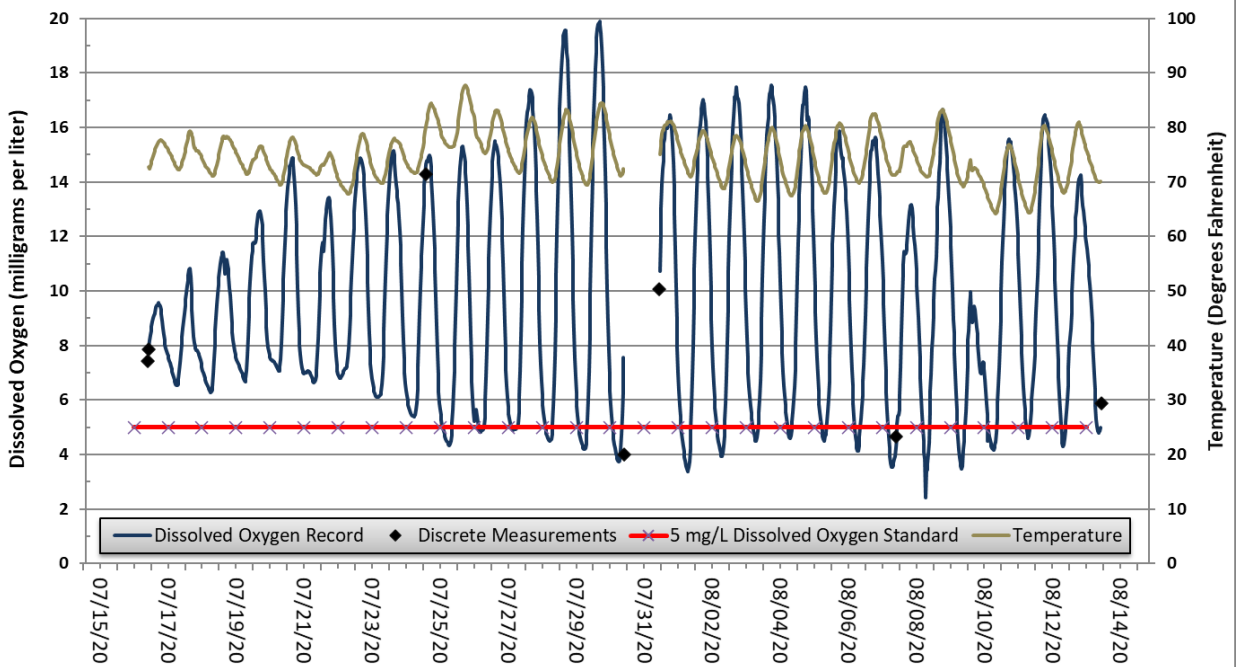
RED LAKE WATERSHED DISTRICT MONTHLY WATER QUALITY REPORT

February 2021



19 of 29 Daily Minimums
were <5 mg/L (65.5%)

Judicial Ditch 30 at 140th Ave NE (S004-966) 2020 Continuous Dissolved Oxygen Monitoring Summary



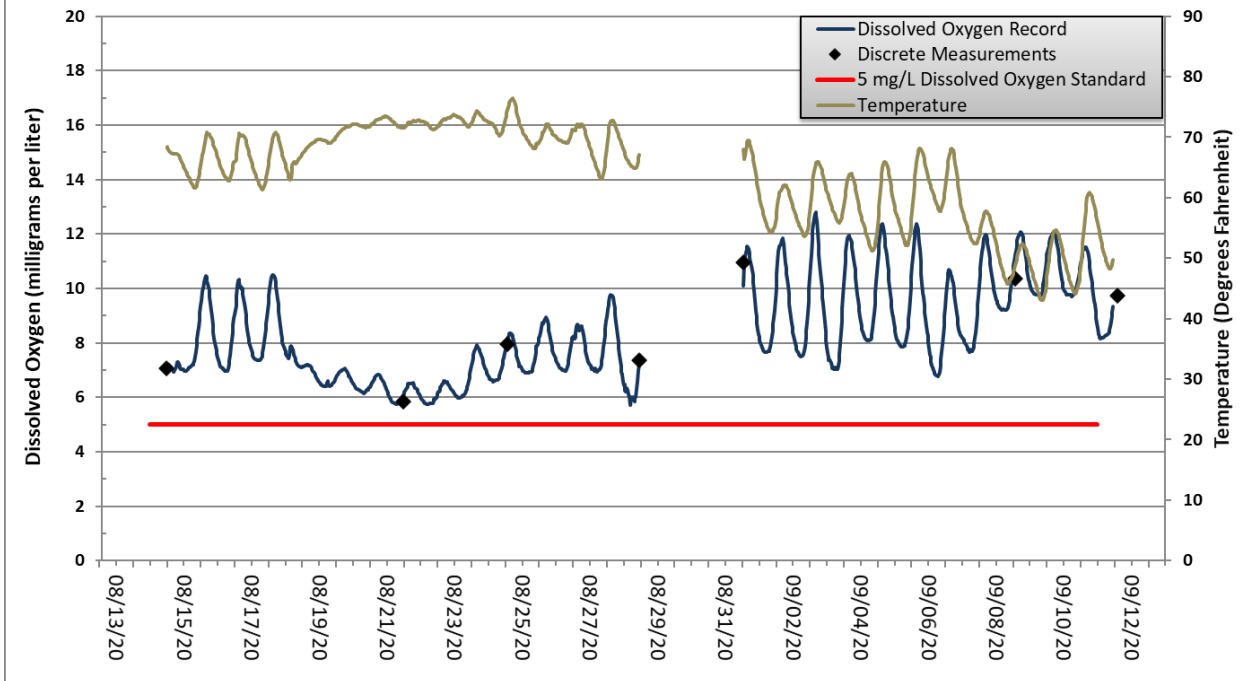
RED LAKE WATERSHED DISTRICT MONTHLY WATER QUALITY REPORT

February 2021



0 of 27 Daily Minimums
were <5 mg/L (0%)

Moose River at CSAH 54 (S004-211) 2020 Continuous Dissolved Oxygen Monitoring Summary



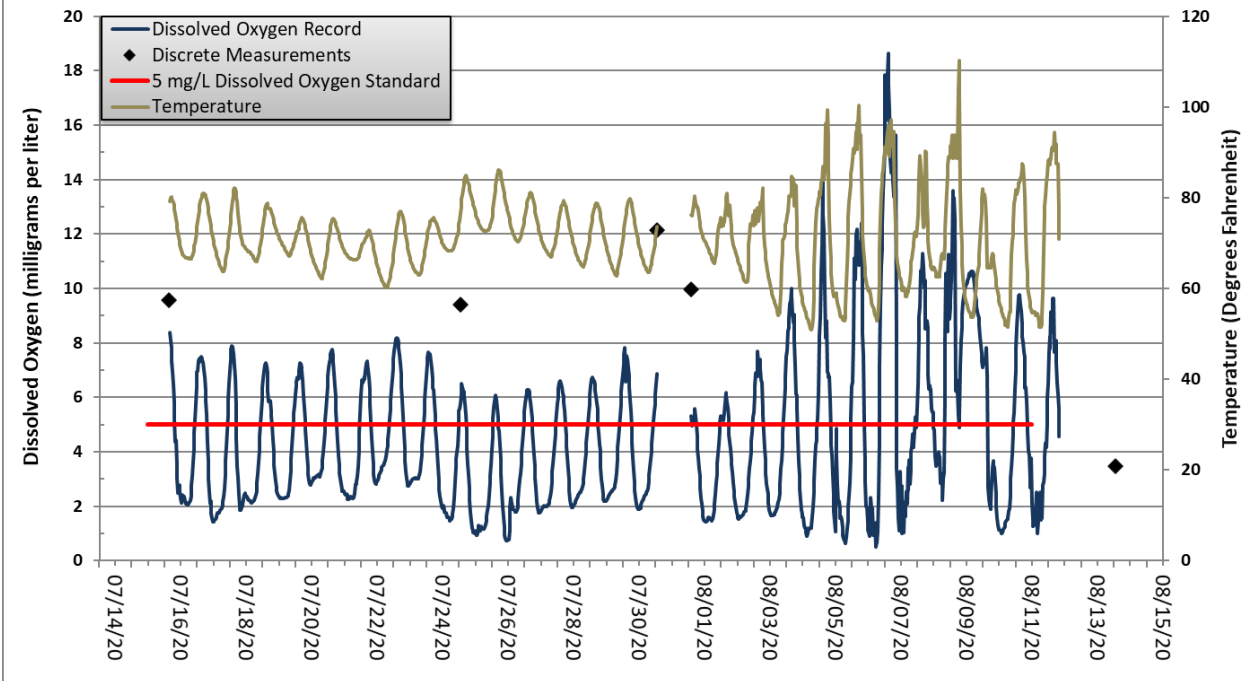
RED LAKE WATERSHED DISTRICT MONTHLY WATER QUALITY REPORT

February 2021



28 of 28 Daily Minimums
were <5 mg/L (100%)

Pennington County Ditch 21 at 135th Ave NE (S008-889) 2020 Continuous Dissolved Oxygen Monitoring Summary



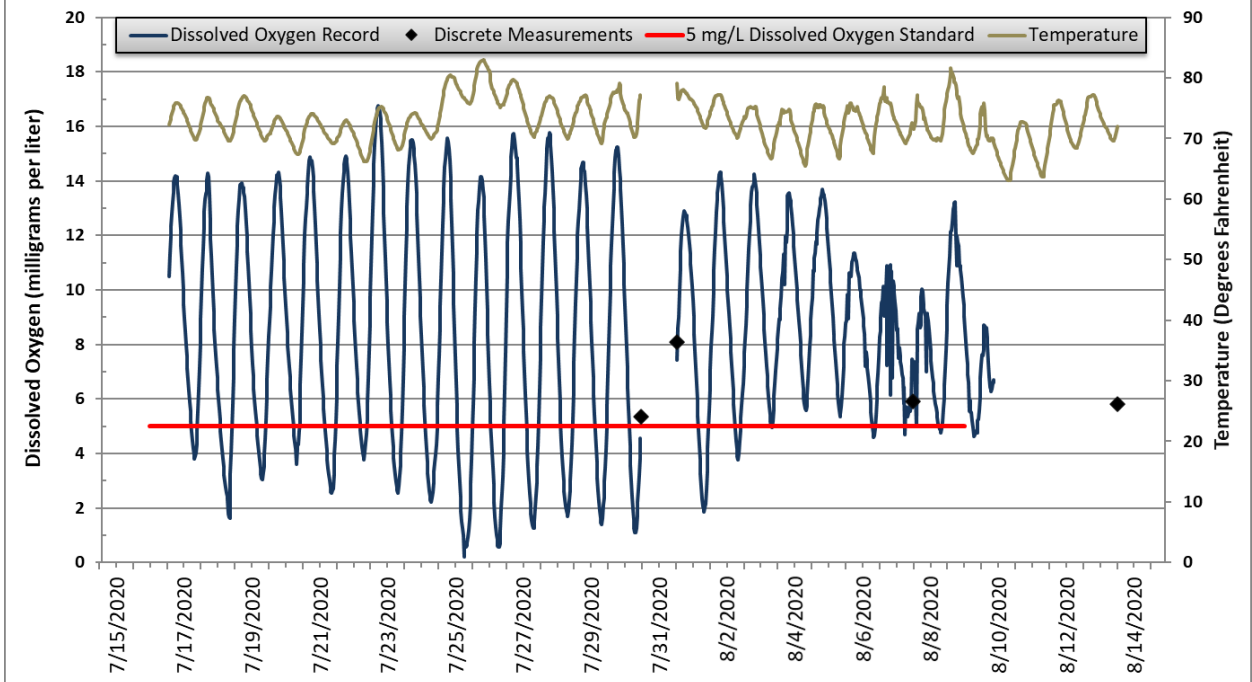
RED LAKE WATERSHED DISTRICT MONTHLY WATER QUALITY REPORT

February 2021



21 of 25 Daily Minimums were <5 mg/L (84%)

Branch 200 of Judicial Ditch 11 at 270th St. NE (S016-395) 2020 Continuous Dissolved Oxygen Monitoring Summary



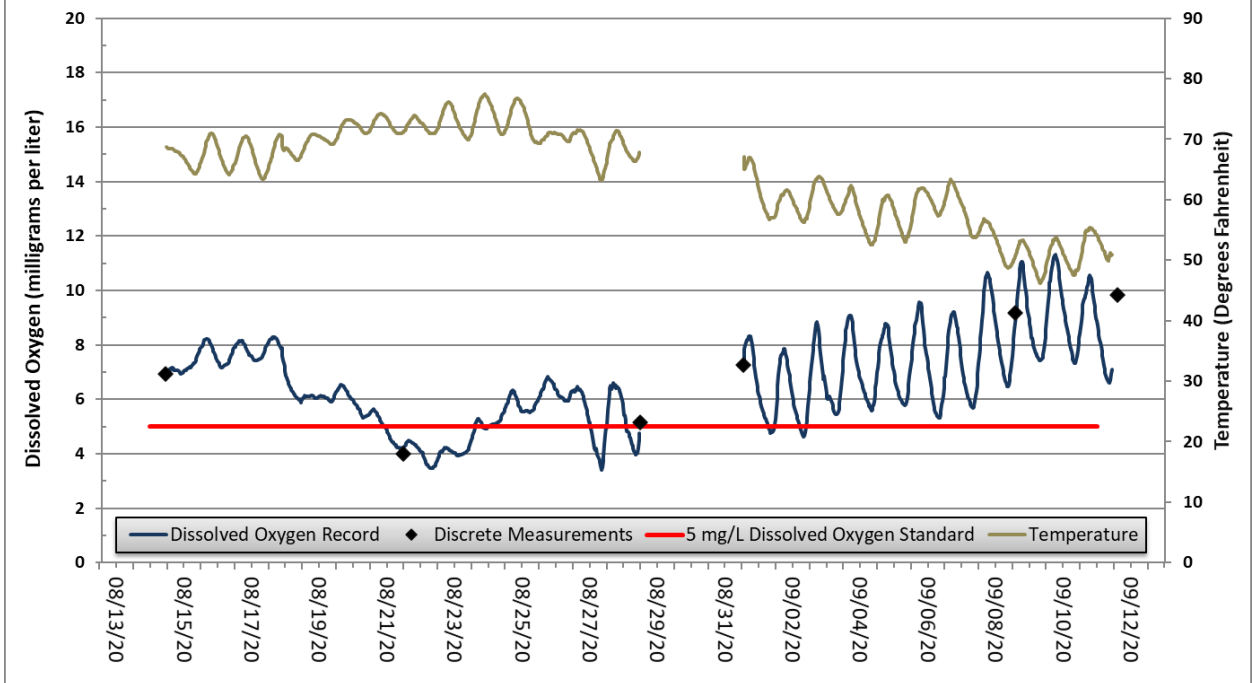
RED LAKE WATERSHED DISTRICT MONTHLY WATER QUALITY REPORT

February 2021



8 of 27 Daily Minimums
were <5 mg/L (29.6%)

Moose River at Moose River Road NW (S002-980) 2020 Continuous Dissolved Oxygen Monitoring Summary



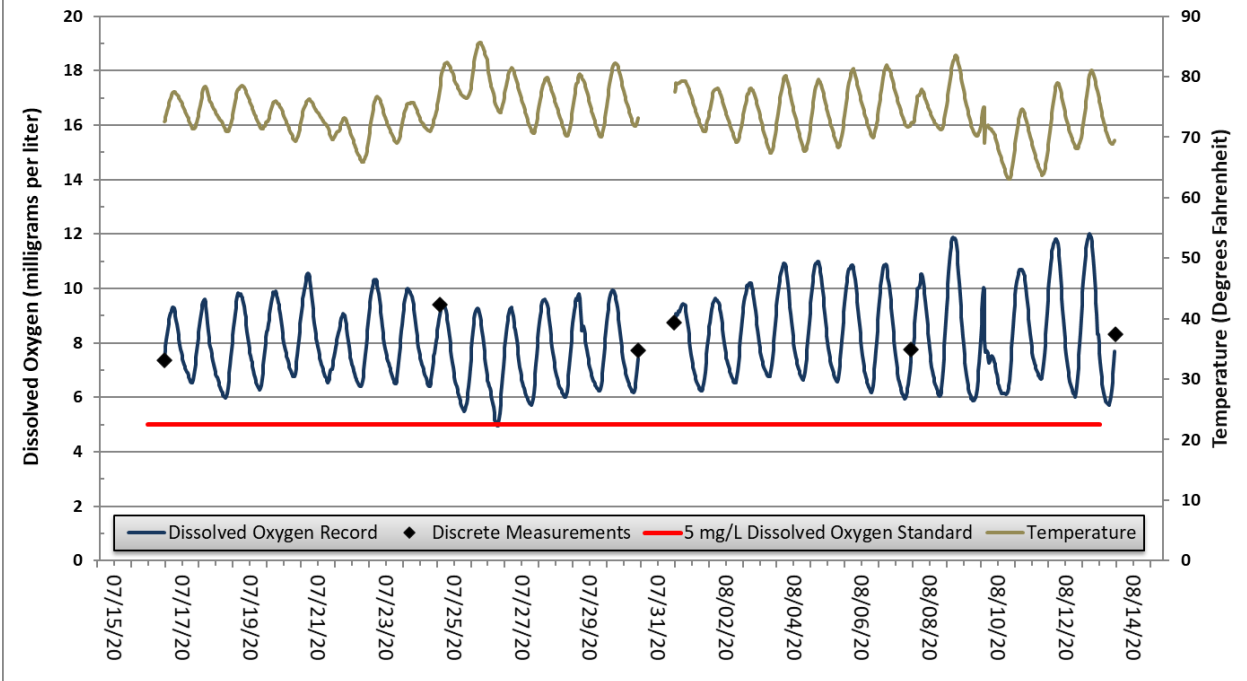
RED LAKE WATERSHED DISTRICT MONTHLY WATER QUALITY REPORT

February 2021



1 of 29 Daily Minimums
were <5 mg/L (3.4%)

Marshall County Ditch 20 at 180th Ave NE (S004-494) 2020 Continuous Dissolved Oxygen Monitoring Summary



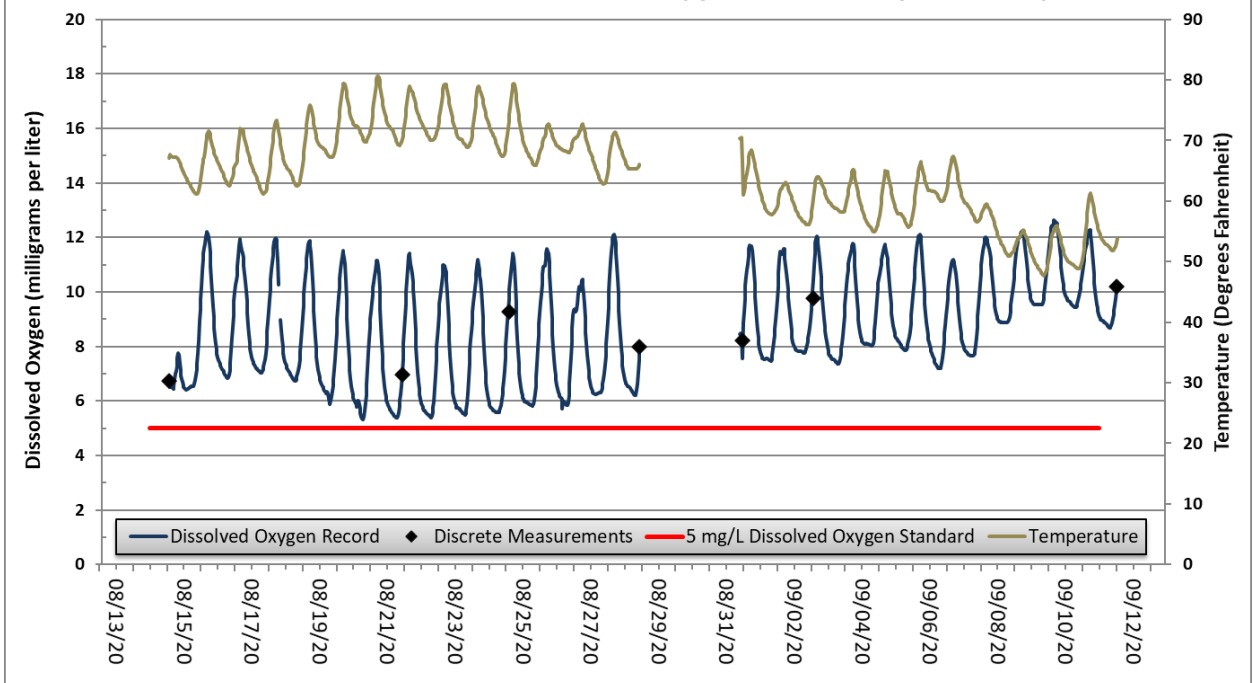
RED LAKE WATERSHED DISTRICT MONTHLY WATER QUALITY REPORT

February 2021



0 of 27 Daily Minimums
were <5 mg/L (0%)

Branch A of Judicial Ditch 21 at CSAH 48 (S006-540) 2020 Continuous Dissolved Oxygen Monitoring Summary



Thief River Falls Oxbow Restoration and Stormwater Treatment Project

District staff worked on a project work plan for the \$250,000 Clean Water Fund grant that was awarded to the project by the Minnesota Board of Water and Soil Resources.

Red Lake River Watershed One Watershed One Plan (1W1P)

Houston Engineering, hired to complete a feasibility study for stabilization of the “Demarais-Hanson” gully erosion problem (a large Gully north/downstream of CSAH 11, west of Red Lake Falls), evaluated alternative concepts for stabilization of the erosion.

Clearwater River One Watershed One Plan (1W1P)

Progress was made on completing the lakes routing phase of the PTMApp development. Lake outlines, “burn lines,” and “wall lines” were edited to make sure that the PTMAPP model correctly simulated flow through 293 lakes and other large pools in the watershed. In PTMApp, a lake can have multiple inlets, but only one outlet. Multiple rounds of “trial and error” editing were needed to encourage the flow accumulation lines to exit odd-shaped lakes in a single location. Ground truthing and examining of LiDAR data was completed to make sure that the simulated, digital inlets and outlets matched reality as closely as possible. After each round of groundtruthing, wall-line edits, and creation of a new flow accumulation layer, the number of lakes needing additional edits incrementally dropped until flow properly entered and exited all lakes.

Areas where flow is stopped (in the digital model) and creates a “pool” were examined to find areas where digital flow accumulation may be artificially halted by a roadway or other structure that may have a culvert. Potential culvert locations that could not be verified in aerial photos were marked on a map that was used to guide the groundtruthing effort. Along with an examination of those “non-contributing areas,” flow accumulation lines (digital flow paths) were examined to find unnatural-looking alterations to flow (90-degree turns, for example) where a culvert location may need to be groundtruthed and “burned” into the digital LiDAR elevation surface. A Google Earth layer was created to mark locations that needed to be visited to locate potential culverts, mark groundtruthed locations that did not have culverts, and record other observations from the groundtruthing effort.

The Planning Work Group was informed that a portion of the Clearwater River Watershed planning area boundary was slightly changed as a result of the completion of the Wild Rice River Watershed 1W1P process. Because of the change, work plan maps were revised to include the altered planning boundary.

Other

- District staff provided photos to MPCA public information staff to help with the creation of public notice materials for the Upper/Lower Red Lake Watershed Restoration and Protection Strategy and Total Maximum Daily Load reports.
- District staff wrote articles for the 2020 Red Lake Watershed District Annual Report.
- District staff looked at different options for remote water level monitoring equipment that could be deployed in Pine Lake.
- The Environmental Protection Agency approved the 24 TMDLs that were addressed in the Clearwater River Watershed Total Maximum Daily Load report.

Water quality related notes and minutes from the February 11, 2021 Red Lake Watershed District Board of Managers meeting.

- Staff member Nick Olson stated that aeration at Pine Lake has not begun. MnDNR staff completed oxygen testing last week and the Gonvick Sportsman's Club will complete additional testing next week. Criteria has been met for notice publication in the local paper. Olson stated that the District is the MNDNR permit holder for the aeration, and the Gonvick Sportsman Club pays the cost to install and run the aeration system.
- Administrator Jesme stated that he and Staff member Corey Hanson have been working with Chester Powell, Clearwater SWCD and other partners, on the Work Plan for Clearwater River 1W1P, RLWD Project No. 149B. Once a draft is completed, it will be presented to the Policy Committee for review and approval. Hanson is working on completing the editing on the PTMApp model before handing it off to Houston Engineering, Inc. Discussion was held on staff time spent on development of the PTMApp model. The Policy Committee meeting will be held on February 24, 2021 at 1:00 p.m. Notices for the meeting will come from Powell.
- Jesme and staff member Hanson have been working with the Clearwater SWCD on the Clearwater River 1W1P.

Water quality related notes and minutes from the February 25, 2021 Red Lake Watershed District Board of Managers meeting.

- Administrator Jesme stated that the District applied for and received a \$166,000 grant from the RRWMB and a \$250,000 BWSR Clean Water Funds Competitive Grant for construction of the Thief River Falls Oxbow Project, RLWD Project No. 46Q. The estimated project cost is \$500,000, with a remaining balance of needed funds in the amount \$84,000. Discussion was held on the administrative portion of the grants that the District will be required to complete for the Work Plans and various reporting requirements. Wayne Johnson, City of Thief River Falls, stated that in 2017 the city applied for a Storm Water Assessment Grant that identified 10 projects within the city limits. The city prioritized the projects, and applied for BWSR funding in 2018/2019, where three riverbank sloughing projects were funded and are currently being designed. The next priority project was the oxbow project. Johnson stated that the city hired HDR Engineering, Inc., to complete a preliminary design of the project, further stating that the city has spent approximately \$38,000 for design and survey. Jesme referenced invoices in the amount of \$42,769.25, that were included in the packet from HDR Engineering, Inc., that have not been paid yet for completion of the Environmental Assessment Worksheet. The City of Thief River Falls is requesting a partnership from the District for financial assistance in the amount of \$50,000. Staff member Corey Hanson discussed the benefits of the project, further stating that a Work Plan needs to be submitted by March 15, 2021. Manager Dwight inquired if any administrative costs are included in the grant applications. Hanson stated that he will look into the administrative portion of the grants. Motion by Dwight, seconded by Ose, to partner with the City of Thief River Falls in the amount of \$50,000 for construction of the Thief River Falls Oxbow Project, RLWD Project No. 46Q. Motion carried. Motion by Ose, seconded by Sorenson, to authorize payment of invoices to HDR Engineering, Inc., in the amount of \$42,769.25, for the Thief River Falls Oxbow Project, RLWD Project No. 46Q. Motion carried.
- Staff member Nick Olson stated that the aeration system on Pine Lake, RLWD Project No. 35, began on February 16, 2021. Olson is required to inspect the system weekly. Very little fish kill is anticipated.

- The Policy Committee for the Clearwater River One Watershed One Plan (1W1P) met for the first time on February 24, 2021 via virtual meeting. The Bylaws were approved by the Policy Committee. BWSR approved the Work Plan's proposed work. Houston Engineering, Inc., is the consultant and will assist on an as-needed basis.
- Jesme and Staff member Hanson attended the Clearwater River 1W1P Policy Committee meeting on February 24, 2021. The next meeting is scheduled for March 24 at 1:00 p.m.
- There was a Red Lake River 1W1P meeting on February 22nd, to discuss the upcoming RCPP/BWSR funding agreement, and if it would be an option for a 1W1P. No decision was made.
- A Planning Work Group meeting for the Thief River 1W1P will be held on March 4th at 10:00 a.m.

February 2021 Meetings and Events

- **February 8, 2021** – Pennington County Water Resources Advisory Committee
 - Pennington County Ditch Outlet Analysis Clean Water Fund Grant: As many outlets as possible will be flown to collect LiDAR data with drones before the grant expires.
 - Thief River PTMAApp: This project has been completed and has already been used to help plan a project that received a Clean Water Fund grant.
 - Pennington County Ditch 96: Groundwater moves from south to north, which is why the south banks are less stable and special drainage features were incorporated in the stabilization project.
 - Thief River Falls Streambank Stabilization Projects: The design for the Hartz Park project had to be revised due to the use of a plastic product in the design (DNR did not like that option).
 - Cover Crop and Grade Stabilization – Lower Thief River and JD 30/18/13: There has been a relative lack of interest in the Regional Conservation Partnership Program (RCPP).
 - Cooperative Weed Management Area Grant: Prevention will be promoted, not just control. A county-specific watch list will be created and shared. A memorandum of agreement is being drafted for project partners to sign.
 - The Pennington SWCD received a Clean Water Fund grant to complete Phase II of the CD 96 Stabilization Project.
 - The Upper/Lower Red Lakes TMDL and WRAPS reports will be on public notice in less than a month.
 - Denise Oakes noted that the Environmental Assessment Worksheet for the Thief River Falls Oxbow Restoration Project was well done.
 - The City of Thief River Falls is still working with the Federal government to try to find the funding necessary to move the intake for the city's drinking water supply to the Red Lake River.
 - The RLWD Water Quality Coordinator reported on RLWD projects like the Thief River Streambank Stabilization, Mud River Restoration Project, Thief River Falls Oxbow Restoration Project, Clearwater River 1W1P, Clearwater River PTMAApp development, Clearwater River TMDL/WRAPS completion, and the Black River Impoundment.
- **February 8, 2021** – Clearwater River 1W1P meeting to discuss PTMAApp development
- **February 12, 2021** – Thief River 1W1P Planning Work Group meeting
 - Most of the Project Development budget has been spent.

- The Marshall SWCD completed survey and design work for 6 side water inlets, but used other funding sources to get them constructed (buffer cost-share).
- Pennington SWCD and Marshall SWCD sent cover crop letters to landowners, but responses were minimal.
- Project tracking was discussed
- Judicial Ditch 23 outlet stabilization engineering work might be finished in mid-March.
- There was discussion about seeking assistance from the MN DNR for the Mud River Restoration project.
- A Policy Committee meeting was scheduled to approve bills and keep the Policy Committee “in-the-loop.”
- **February 22, 2021** – Red Lake River Regional Conservation Partnership Program (RCPP) meeting
- **February 24, 2021** – Clearwater River 1W1P Policy Committee meeting
 - By-laws and signature requirements were discussed
 - Each local government unit (LGU) can nominate up to 3 individuals for the Advisory Committee
 - A kick-off meeting will be held in May or June, in-person but outdoors if possible.

Red Lake Watershed District Monthly Water Quality Reports are available online:
<http://www.redlakewatershed.org/monthwq.html>.

Learn more about the Red Lake Watershed District at www.redlakewatershed.org.

Learn more about the watershed in which you live (Red Lake River, Thief River, Clearwater River, Grand Marais Creek, or Upper/Lower Red Lakes) at www.rlwdwatersheds.org.

“Like” the Red Lake Watershed District on [Facebook](https://www.facebook.com/redlakewatershed) to stay up-to-date on RLWD reports and activities.

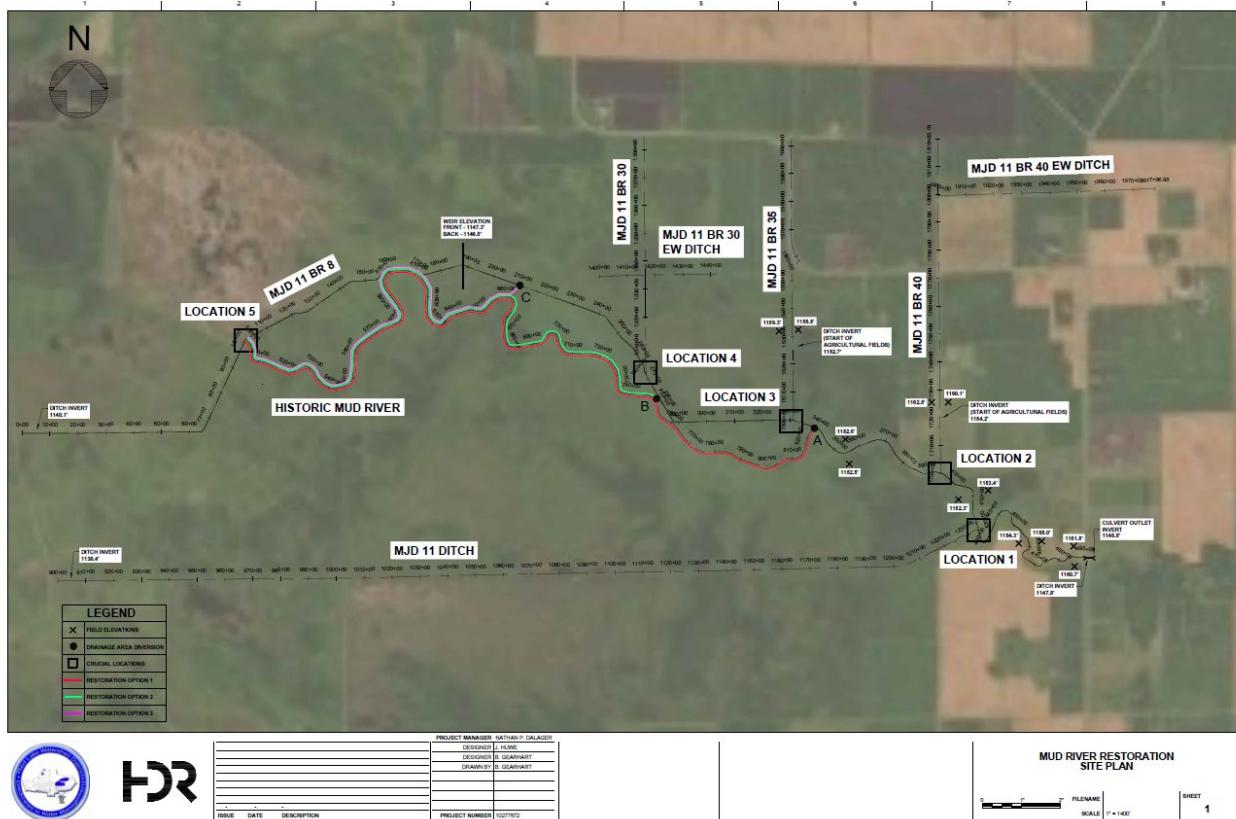
RED LAKE WATERSHED DISTRICT MONTHLY WATER QUALITY REPORT

March 2021

By Corey Hanson, Red Lake Watershed District Water Quality Coordinator. 10/25/2021

Thief River Watershed One Watershed One Plan (1W1P)

HDR Engineering shared the results of the survey work that they completed for the feasibility study phase of the Mud River Restoration Project. Project partners discussed potential funding sources for further planning, design, and construction work.



River Watch

Red Lake County Central was one of the first schools to participate in the International Water Institute's River of Dreams program this year. After learning about watersheds and water quality, the students decorated canoes and launched them into the Lost River. Each canoe's journey can be tracked online. When a canoe is found, it's location can be logged on a website. Elementary students from Red Lake Falls (Clearwater River), Clearbrook-Gonvick (Clearwater River near Clearwater Lake), Grygla (Mud River), and Thief River Falls (Red Lake River, in April) also participated in the program throughout the spring of 2021 (March through April). The River of Dreams program involves classroom instruction about watersheds and water quality, as well as an outdoor event where the students launch trackable wooden canoes, that they have decorated, into a local river.

RED LAKE WATERSHED DISTRICT MONTHLY WATER QUALITY REPORT

March 2021



Thief River Falls Oxbow Restoration Project

A work plan was developed and approved by the Minnesota Board of Water and Soil Resources (BWSR) for the Clean Water Fund grant that was awarded to the Thief River Falls Oxbow Restoration Project by the Minnesota Board of Water and Soil Resources.

Flow Monitoring

The District's HOBO water level loggers were deployed in March 2021.

Red Lake River Watershed One Watershed One Plan (1W1P)

Houston Engineering, Inc. completed a feasibility study for the Demarais-Hanson stabilization project (a large gully erosion problem at the outlet of a drainage system, east of Red Lake Falls along CSAH 11).

Clearwater River One Watershed One Plan (1W1P)

The Water Quality Coordinator worked on a section-by-section review of PTMApp outputs and culvert locations. A groundtruthing effort was initiated to check for culverts in locations where flow patterns appeared to be artificially altered in the digital model by roads, berms, approaches, etc. Those ridge-like features in the digital LiDAR elevation data can act as dams. If there is a culvert or bridge under the barrier, it needs to be drawn on a map as a “burn line.” The PTMApp model simulates the accumulation of flow and flow directions based on elevations of pixels in the LiDAR elevation data. That simulation reveals patterns of flow. Areas where surface flow is halted and water pools in the model are called non-contributing areas. The flow accumulation lines were examined to look for flow paths that seemed to have been artificially altered or diverted. Some of those diverted flows brought attention to culverts that were identifiable in aerial photos. Where flow seemed to be artificially diverted, but aerial photos did not clearly show a culvert or other drainage structure, a marker was placed on a Google Earth map so that the site could be visited, and the presence/absence of a drainage structure could be verified. The non-contributing areas were examined to see if the terrain and aerial photos suggested that there may be a drainage structure that hasn’t yet been marked as a burn line.

While traveling throughout the watershed for groundtruthing work, the Water Quality Coordinator photographed notable erosion problems that were encountered. Recent private ditch excavation, located 0.6 miles east of Highway 59 and 5.3 miles north of Erskine, had caused significant erosion and sedimentation.





A large area of dramatic erosion problems was discovered along a ditch along 250th Ave SE, near the border of Red Lake and Polk Counties. Conversion of a large section of land from forest/pasture to cultivated land, along with a lack of a buffer, has caused severe erosion problems along the bank of the ditch and severe wind erosion.



Due to a lack of snow cover and/or conservation practices, there was a remarkably high amount of wind erosion in many locations in the spring of 2021.



Project partners compiled a list of stakeholders (potential committee members and contacts to invite to attend public meetings and provide public comments). Each staff District staff created a list of people for the Clearwater 1W1P Advisory Committee and began contacting individuals to gauge their interest. A 60-day notice comment period for the Clearwater River Watershed 1W1P began in March 2021. A letter was distributed to stakeholders to announce the comment period and the beginning of the planning process. The due-date from comments was May 24, 2021.

Other

- Christina Slowinski began a transition from the Ditch Inspector (Engineering Technician II) position to the Natural Resource Specialist (water quality and GIS work) position to replace Ashley Hitt, who left in January 2021 for a new job with the NRCS. Some training was completed in early March, with the Water Quality Coordinator. The Annual Red River Basin Water Quality Monitoring Training Session was not held this year, so the water quality staff reviewed presentations from previous years' training sessions and practiced calibrating/maintaining equipment in the lab.
- District staff wrote articles for the 2020 Red Lake Watershed District Annual Report.
- New maps were created for the Bartlett Lake Management Plan. Some edits were made to the plan text in preparation for a resumption of the planning effort.
- The [public notice period](#) for the [Upper and Lower Red Lakes Watershed](#) Restoration and Protection Strategy and Total Maximum Daily Load documents began on March 22, 2021. The reports describe current water quality conditions in the watershed and describe strategies for

the restoration of impaired waters and protection of high-quality waters. The documents were on public notice until April 21, 2021.

Water quality related notes and minutes from the March 11, 2021 Red Lake Watershed District Board of Managers meeting.

- Jesme and Staff member Hanson participated in the Thief River 1W1P planning meeting on March 4th. The meeting provided progress updates on projects listed in the Work Plan as well as discuss BWSR's accounting requirement to assure billing is submitted properly for E-Link reporting.
- A Clearwater River 1W1P virtual meeting will be held on March 24 at 1:00 p.m.

Water quality related notes and minutes from the March 25, 2021 Red Lake Watershed District Board of Managers meeting.

- Administrator Jesme stated that as part of the BWSR Grant Agreement for the Thief River Falls Oxbow Project, RLWD Project No. 46Q, a Memorandum of Agreement with the City of Thief River Falls needs to be approved to make sure that there is a clear understanding of who is responsible for the maintenance of the project and also to include an Operating Plan. Jesme noted that the project has a life expectancy of 25 years. It was the consensus of the Board to table this item until the April 8, 2021 Board meeting, to allow for drafting of the Memorandum of Agreement.
- Engineer Tony Nordby reviewed the Demarais/Hanson Feasibility Report, which was identified as a potential project within the Red Lake River 1W1P, RLWD Project No. 149. Nordby stated that this project is located SW of Red Lake Falls, along CSAH 11, where a large gully has formed south of the highway, going north towards the Red Lake River. Houston Engineering was hired to look at various options and completed a feasibility study of the area. Nordby stated that he recommends shaping what is currently there, armor the bottom with riprap, include a coarse aggregate combination, to allow water to run on top of the rock instead of under and enter a plunge pool. Nordby stated that the reach of the project would only go to the woods area. The project would protect ag and pastureland. There could be some erosion in the woods and oxbow, which will be discussed with the Red Lake River 1W1P members. Manager Dwight asked about the possibility of upland treatment in the area. Nordby stated that this area has a 1.7 sq.mi. drainage area, with low flow cuts, water speeds up, cuts, etc. Water has split the oxbow with trees in the middle of the two oxbows. Nordby reviewed the cost estimate. This project will be presented to the Red Lake River 1W1P Policy Committee at their next meeting. Manager Page stated that he was informed of a permit violation upstream of this area, where a landowner used a scraper in the bottom of the ditch.
- Motion by Sorenson, seconded by Dwight, to approve the purchase of five HOB0 Dissolved Oxygen Data Loggers and replacement dissolved oxygen sensor caps from Onset, at a purchase price of \$6,675.00. Motion carried.
- Jesme and Hanson participated in the March 26, 2021, Thief River 1W1P Policy Committee meeting.
- Jesme and Hanson participated in the Clearwater River 1W1P PWG meeting on March 24, 2021.
- Jesme and Hanson will participate in the Red Lake River 1W1P PWG on April 1, 2021.

March 2021 Meetings and Events

- **March 4, 2021** – Thief River 1W1P Planning Work Group Meeting
 - Reimbursement invoices were discussed – there needs to be sufficient detail to indicate where the expenditure fits into the budget.
 - The Judicial Ditch 23 stabilization project is in the stage of final design. Plans and specifications will be completed, and the project will be advertised for bids.
 - An educational event for landowners will be planned for this summer (soil health workshop). Marshall and Beltrami County staff will work together to plan the event. Landowners from both counties will be included.
 - There is a need to create a tracking database for the Thief River Watershed, like the Red Lake River ArcOnline tracker that is being used for the Red Lake River Watershed.
- **March 9, 2021** – MPCA Triennial Standards Review public meeting
- **March 22, 2021** – Mud River Restoration Project meeting
 - The group reviewed several restoration options proposed by HDR Engineering.
 - In all the options, flow was split between the current Judicial Ditch 11 channel and a restoration of the old channel.
 - More/deeper excavation = more flow in the restored portion of the channel.
 - More information is needed
 - Soil borings
 - Maintenance plan
 - How can water quality benefits be estimated?
- **March 24, 2021** – Clearwater River 1W1P Planning Work Group meeting
 - The grant agreement and an agreement with Houston Engineering (consultant) were signed on March 18, 2021.
 - A 60-Day notice about the initiation of the planning process was sent on March 23, 2021.
 - The PWG discussed an online survey to gather input from the public.
 - Identification of priority resources and resource concerns
 - The PWG reviewed the Clearwater 1W1P timeline and meeting schedule
 - Houston Engineering will prepare 1-page progress summaries for Policy Committee and Advisory Committee meetings
 - Brielle Prokosch (Clearwater SWCD) will record meeting notes.
- **March 26, 2021** – Thief River 1W1P Policy Committee meeting
- **March 29, 2021** – Mud River Restoration Funding Meeting
 - We will need to identify the water quality components and habitat components. The costs of those components may have to be funded with applications to separate funding sources.
 - Discussion about the funding of further engineering costs
 - Would Ducks Unlimited be interested in the project?

**RED LAKE WATERSHED DISTRICT
MONTHLY WATER QUALITY REPORT**

March 2021

Red Lake Watershed District Monthly Water Quality Reports are available online:
<http://www.redlakewatershed.org/monthwq.html>.

Learn more about the Red Lake Watershed District at www.redlakewatershed.org.

Learn more about the watershed in which you live (Red Lake River, Thief River, Clearwater River, Grand Marais Creek, or Upper/Lower Red Lakes) at www.rlwdwatersheds.org.

“Like” the Red Lake Watershed District on [Facebook](https://www.facebook.com/redlakewatershed) to stay up-to-date on RLWD reports and activities.

By Corey Hanson, Red Lake Watershed District Water Quality Coordinator. 10/25/2021

Red Lake River Watershed One Watershed One Plan (1W1P)

District staff completed additional surveying at the Demarais-Hanson erosion control project location. The initial surveying effort and concept report focused on the eroded portion up to the tree line. Additional work will be completed to prevent erosion between the large gully and the oxbow wetland that receives the drainage.

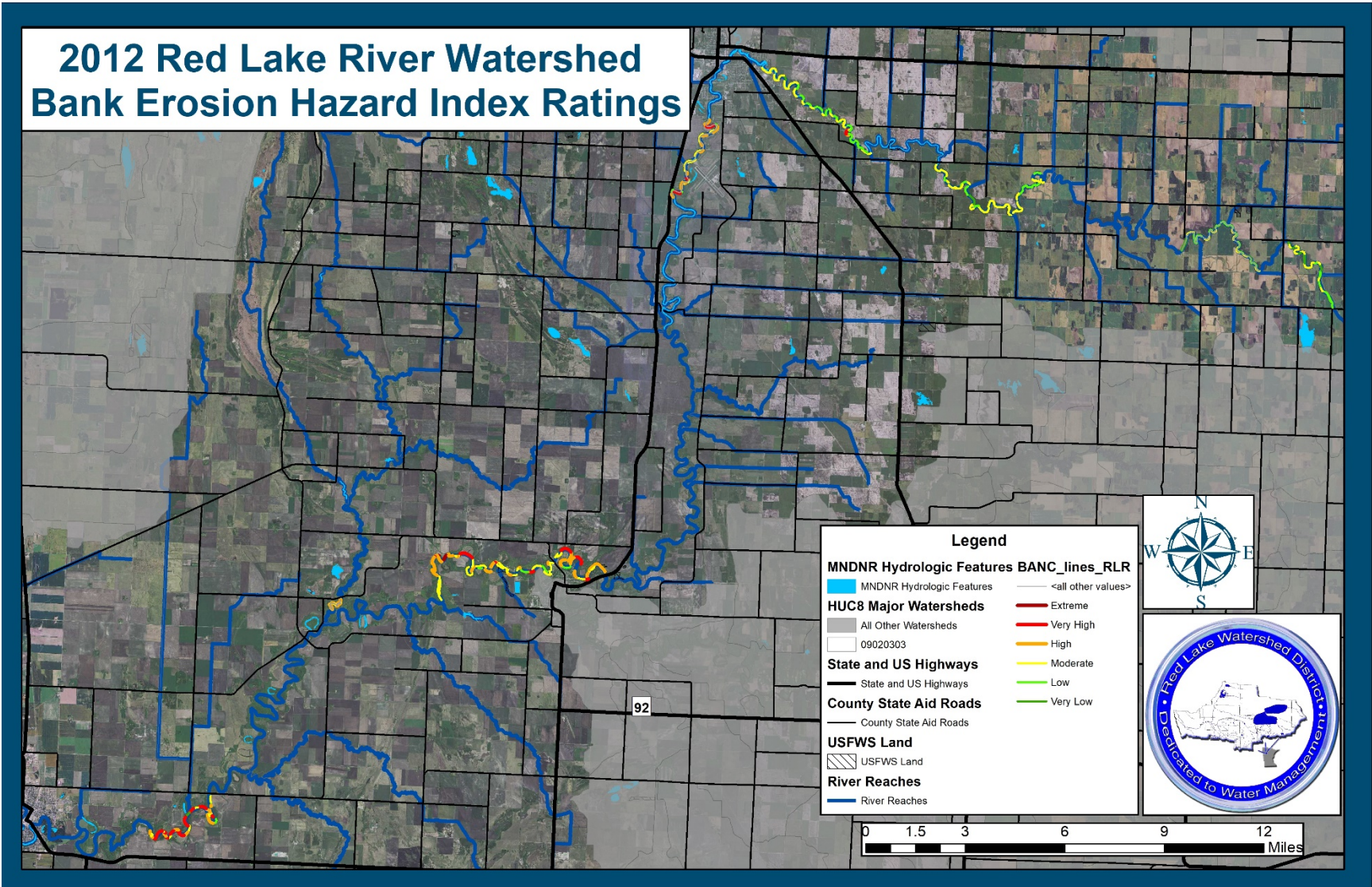
District staff wrote a summary about a potential erosion control project along the Voyageur's View campground in Red Lake Falls. The Red Lake SWCD submitted a project funding request for the streambank stabilization project along the Red Lake River, along the west side of the Voyageurs View campground. The West Polk SWCD presented a project funding request for a streambank stabilization project (shown below) along the Red Lake River east of Crookston (Crookston Township, Section 34).



Concerns have been expressed by landowners near the eroding outlet of the CD 99 drainage system, east of Crookston, perhaps prompted by upstream culvert installation proposals. This project has been specifically identified as a "Project for Consideration" in the 2020 Red Lake River 1W1P work plan. It would be a priority for a competitive grant application or the next round of watershed-based funding.

A GIS layer of Bank Erosion Hazard Index (BEHI) ratings from the geomorphology study of the Red Lake River was received from DNR staff. The map will assist with the prioritization of eroding riverbanks for stabilization projects. The layer was shared with the 1W1P Planning Work Group. For future projects, a feasibility study may be warranted for the high, eroding banks within the city of Red Lake Falls. Those bluffs have overlapping prioritization characteristics of their high BEHI ratings and potential to damage infrastructure and homes.

2012 Red Lake River Watershed Bank Erosion Hazard Index Ratings



Water Quality Monitoring

Lake water quality sampling (2-meter integrated sampler) and monitoring (Secchi disk) equipment was ordered so that it could be used to collect water quality data at Bartlett Lake (by a volunteer) during the summer.

Clearwater 1W1P partners were made aware of a recent development in which the U.S. Environmental Protection Agency and the Minnesota Pollution Control Agency are deciding how to address high sulfate concentrations along the channelized portion of the Clearwater River (from which water is pumped to grow wild rice). A longitudinal assessment of the limited sulfate data from the watershed shows that sulfate levels meet standards in the headwaters reaches but exceed the sulfate standard in Ruffy Brook and the channelized portion of the Clearwater River. Sulfates will be added to the list of parameters that are analyzed for samples collected along the headwaters of the Clearwater River through the channelized reach, including Ruffy Brook (an apparent source of elevated sulfate concentrations in the channelized portion of the Clearwater River).

Flow Monitoring

Water level loggers were deployed at stage/flow monitoring sites within the Thief River Watershed and Clearwater River Watershed. District staff researched options for remote, real-time water level monitoring equipment.

River Watch

The Natural Resources Technician led Win-E-Mac River Watch students in a round of water quality measurements in streams near their school. The Natural Resource Technician and International Water Institute held a River of Dreams educational event for Thief River Falls elementary students in April.

Thief River Watershed One Watershed One Plan (1W1P)

Houston Engineering, Inc. completed a set of plans for the Thief River streambank stabilization projects.

Clearwater River One Watershed One Plan (1W1P)

District staff conducted groundtruthing of Clearwater River Watershed PTMApp burn lines (representing culverts and bridges) and edited PTMApp input files using the findings. A section-by-section examination of flow accumulation lines and non-contributing areas (areas where water digitally “pools” instead of flowing downstream) to find locations that should be field-checked for the presence/absence of a culvert. This work was the primary focus of the Water Quality Coordinator during the month of April.

The process of checking on the presence/absence of culverts throughout the watershed led the Water Quality Coordinator to areas of the watershed that are seldom visited by District staff.

Significant erosion problems were noted. A small, intermittent waterway that flows into the Clearwater River, near Red Lake Falls, has a steep slope and notable channel/bank erosion problems. The following photo was taken from the 200th Street East crossing.



Recent, unvegetated ditch maintenance activity and insufficient buffer left some ditch channels susceptible to erosion and sedimentation.



Excessive wind erosion and substantial deposition of wind-blown sediment within ditches was a common occurrence throughout the western portion of the Clearwater River Watershed in the spring of 2021.



Stormwater drainage was mapped for the PTMApp development effort, where possible and practical, within Clearwater River Watershed cities and towns (Oklee stormwater outlet shown below).



For the pre-planning process, District staff uploaded Clearwater River watershed photos, maps, reports, spreadsheets, and other documents to a Google Drive folder so they could be shared with Houston Engineering staff that will be writing sections of the plan. District staff also completed some GIS analysis to generate statistics that were requested by the consultant.

District staff contacted potential Clearwater River 1W1P Advisory Committee members in order to find volunteers that could be nominated by the District (and other project partners). District staff also compiled a presentation to summarize the work of the Red Lake Watershed District for an upcoming Clearwater River 1W1P Policy Committee meeting. Planning Work Group staff reviewed letters that were received during the 60-day comment period that kicked-off the planning process.

Local staff were informed that the U.S. Environmental Protection Agency only partially approved the MPCA's 2020 impaired waters list and declare a portion of the Clearwater River (channelized portion – 09020305-647) as an impaired wild rice water. The reach was apparently listed because of high sulfate concentrations that were recorded during the MPCA's Intensive Watershed Monitoring effort in 2014-15. There was some sulfate data collected prior to the MPCA's 2016 water quality assessment, but sulfates were not assessed then. The newest version (2018) of the Guidance Manual for Assessing the Quality of Minnesota Surface Waters for Determination of Impairment: 305(b) Report and 303(d) List does not mention sulfates. It looks like the EPA takes issue with the lack of an assessment procedure. Though a 10 mg/L numerical threshold has been established by the state, the state does not specify a statistical test (annual average or frequency of exceedance) to which that impairment threshold would be applied. District staff assessed sulfate data from throughout the watershed to understand the extent

of the impairment. Sulfate concentrations in the Clearwater River were low, relative to water quality standards, in the headwaters portion where wild rice grows within the river channel. Water from the channelized portion is used for growing wild rice in off-channel paddies. The channelized portion did have high concentrations of sulfates. Ruffy Brook also had high sulfate concentrations. Sulfate sample analysis will be added to long-term monitoring sites along the Clearwater River and Ruffy Brook to better understand the extent of the problem (spatial and temporal).

Other

- Local newspapers published [articles](#) about the Upper/Lower Red Lakes Watershed Restoration and Protection Strategy and Total Maximum Daily Load public notice period.
- District staff reviewed information and submitted comments regarding the Minnesota Pollution Control Agency Triennial Standards Review public comment period.
 - Support for the establishment of a standard for shallow lakes in the Northern Lakes and Forests ecoregion.
 - Need to review individual total suspended solids standards on some tributary streams like the Black River.
- District staff reviewed the [Upper/Lower Red Lakes Total Maximum Daily Load](#) report and provided comments to the MPCA. The announcement of the public notice period was shared with the Bartlett Lake Management Plan group.
- District staff organized an online meeting of the Bartlett Lake Management Plan group.
- The eroding outlet of Polk County Ditch 99, east of Crookston, has gained more attention due to construction and culvert replacements upstream, along CSAH 11. Though it does not yet have funding, it is specifically identified as an action in the 2021 Red Lake River 1W1P Annual Plan. That will make it a priority for future rounds of water quality funding (1W1P or RRWMB).

Water quality related notes and minutes from the April 8, 2021 Red Lake Watershed District Board of Managers meeting.

- Staff member Nick Olson requested the purchase of an automated water level logger to be installed in Pine Lake, which would allow for District staff to monitor lake levels without having to drive to Pine Lake to get a manual reading, at an estimated cost of \$3,000. Motion by Dwight, seconded by Anderson, to approve the purchase of a water level logger for the Pine Lake FDR and Fish Habitat Project, RLWD Project No. 26B, at a cost not to exceed \$3,000.00. Motion carried.
- Motion by Ose, seconded by Anderson, to approve the Memorandum of Agreement between the City of Thief River Falls and the District for the Thief River Falls Oxbow Project, RLWD Project No. 46Q. Motion carried.
- Jesme, Hanson and Novak attended the March 26, 2021 Thief River 1W1P Policy Committee meeting. Jesme and Hanson participated in a conference call with various agencies regarding reduction of the sediment loads within the Agassiz NWR as it outlets into the Thief River.
- Jesme, Hanson and Novak attended the Red Lake River 1W1P Planning Work Group meeting on April 1st. A Policy Committee meeting will be held on April 14th.
- Jesme, Manager Dwight, and Hanson will participate in a Zoom meeting for the Bartlett Lake Planning Work Group.

Water quality related notes and minutes from the April 22, 2021 Red Lake Watershed District Board of Managers meeting.

- Discussion was held on the appointment of members to the Clearwater River 1W1P Advisory Committee, representing the District. Motion by Anderson, seconded by Dwight, to appoint landowners, Les Torgerson, Gary Mathis and Larry Peterson, to represent the District on the Clearwater River 1W1P Advisory Committee, RLWD Project No. 149B. Motion carried.
- The Board reviewed a proposal for financial support for analysis of lake samples on Bartlett Lake, near Northome, MN, at an approximate cost of \$320 per year. Samples will be gathered by a local volunteer. Motion by Dwight, seconded by Sorenson, to approve financial support, not to exceed \$500 per year for analysis of lake samples on Bartlett Lake, RLWD Project No. 46. Motion carried.
- Administrator Jesme stated that two individuals were interviewed for the Ditch Inspector/Technician II position and four individuals were interviewed for the Engineer Senior/Hydro II position. The Budget and Salary Committee recommended hiring Anthony Olson for the Ditch Inspector/Technician II position, at a Step 3 level at an hourly rate of \$20.83, plus benefits: and Nathan Koland for the Engineer Senior/Hydro II position, at a Step 4 level at an hourly rate of \$29.62, 5 years of service for vacation leave, plus benefits. Motion by Dwight, seconded by Page, to approve the hiring of Anthony Olson and Nathan Koland at the hourly rates as stated, with benefits. Motion carried. Jesme indicated that Olson will start on April 26th, with Koland beginning employment on May 10th.
- Staff member Hanson participated in the Pennington County WRAC meeting held on April 12th.
- Jesme and Staff members Slowinski and Olson participated in the RLWD Ditch 10, Project No. 161, pre-construction meeting held on April 13th.
- The Red Lake River 1W1P Policy Committee met on April 14th to review present and new projects.
- The Clearwater River 1W1P Planning Work Group meet on April 21st.
- Jesme, Manager Dwight and Staff member Hanson participated in the Bartlett Lake Planning Work Group meeting held on April 15th.

April 2021 Meetings and Events

- **April 1, 2021** – Red Lake River 1W1P Planning Work Group meeting
 - Project Updates:
 - The Pennington SWCD is making progress on side water inlet installation.
 - The West Polk SWCD is making progress on the Andover 9 and Roome 2 grade stabilization structures.
 - The West Polk SWCD is starting outreach in the Burnham Creek subwatershed for the installation of best management practices.
 - The Ditch 10 outlet stabilization project has been bid-out, a pre-construction meeting will be held soon, and construction is planned for this summer.
 - The Pennington County Ditch 96 outlet stabilization project has been completed.
 - The Black River Impoundment diversion ditches will be constructed this summer, as will the side water inlets and rock-check grade stabilization structures that will be funded by the 1W1P, 319 Grant and the RRWMB Water Quality Base Funding.

- The group reviewed the 2018 work plan and budget and discussed how to get that money spent before the end of the year.
- The group discussed the Demarais-Hanson stabilization project and decided that it would be best to complete additional surveying/design to make sure that the project has a stable outlet
- The group discussed the use of PTMApp to identify critical areas. This could be used to identify and prioritize projects that don't necessarily lie within one of the priority areas identified in the 1W1P.
- The West Polk SWCD is submitting a project request form for a streambank stabilization project along the Red Lake River, east of Crookston.
- **April 1, 2021** – Red Lake River 1W1P NRCS Water Quality Initiative discussion
 - A percentage of EQIP funding in MN is dedicated to the National Water Quality Initiative. Currently, the only project using this “pot” of funding has been Whiskey Creek, so they had the \$600,000 available to them. They were able to spend about \$350,000. Watersheds will compete against each other for the funding.
 - The 319 Small Watershed program makes the Red Lake River a priority for this program.
 - Work would be focused on specific HUC 12 subwatersheds.
 - Field-scale critical areas would be identified (PTMApp).
- **April 5, 2021** – Mud River Restoration Project meeting
- **April 7, 2021** – Red Lake River 1W1P financial meeting
 - Since the completion of the Red Lake River One Watershed One Plan (1W1P), there have been abundant opportunities for local government units (LGUs) to receive funding to complete projects within the watershed. Funding has been awarded by multiple sources, including 2018 1W1P watershed-based clean water funding (WBF), 2020 WBF, competitive Clean Water Fund grants, a 319 Grant, Regional Conservation Partnership Program, Red River Watershed Management Board, in-kind cost share from local partners, and other conservation programs. In some cases, a specific implementation project is funded by multiple sources. In some cases, other funding sources have paid for the implementation of projects that were part of a 1W1P budget, making 1W1P WBF dollars available for other projects. With multiple funding sources and budget and multiple adjustments to budgets, tracking 1W1P budgets and expenditures has become complex and local staff met to brainstorm means to more clearly understanding and tracking the funding of Red Lake River 1W1P projects.
 - In addition to tracking budgeted numbers, the multiple classifications of expenditures perhaps add a layer of complexity to tracking and understanding project funding. In the annual work plan, funding is divided among priority projects. Each project is described and provided a budgeted amount of funding within the Annual Work Plan document. When a work plan is submitted to BWSR's eLINK reporting system, the work is consolidated into general categories like Ag Practices, Streambank and Shoreline Protection, Administration, Project Development, and Technical & Engineering. In financial reports to the Red Lake River 1W1P policy committee, portions of the budget are allocated to each LGU partner, in addition to being categorized by eLINK category.
 - We need a simplified way to keep track of budget changes, expenditures, budget transfers, invoices, project timelines, budget balances, etc.
 - The level of importance/need for individual agency budgets was discussed. Initially, it may have been done to make sure that each partner got a “piece of the pie” and could

estimate their workloads for this project. Because there has not been a shortage of funding, it might be okay to eliminate this layer of categorization. We could focus the project-specific budgets and fairly distribute project-lead responsibilities/opportunities during annual work plan development.

- Project/work plan specific discussions:
 - Prioritize work in the 2018 1W1P WBF budget because that money needs to be spent by the end of the year.
 - The project development, surveying, and engineering work for the Demarais-Hanson project (a large gully at the outlet of a drainage system, downstream of CSAH 11, west of Red Lake Falls) was funded with the 2018 Project Development and Technical and Engineering budget, so the \$100,000 of Streambank and Shoreline Protection funding in the 2020 Red Lake River 1W1P work plan is still available for construction. There might be unused funding from other projects that could be shifted to the Demarais-Hanson project to fund construction.
- **April 12, 2021** – Pennington County Water Resources Advisory Committee
 - Surveying and design work will be completed this year for the Pennington SWCD’s streambank stabilization projects along the Red Lake River in Thief River Falls. Construction will likely start in the spring of 2022.
 - The Pennington County Cooperative Weed Management Area Grant will target buckthorn, Canada thistle, and common tansy. A gravel pit reclamation certification program will be developed.
 - The Pennington SWCD has received complaints about the protestors at the “Red Lake Treaty Camp” near the Line 3 pipeline crossing of Highway 32 and the Red Lake River. SWCD staff noted that the camp has been violating county ordinances.
 - Bryanna Grefthen has been promoted to Water Resource Specialist and the SWCD will be hiring a new natural resource specialist.
 - Governor Walz is prioritizing climate and carbon sequestration, so funding may be made available to incentivize tree programs, storage, and soil health.
 - United States Fish and Wildlife Service staff are concerned about cattail colonization of exposed mud flats within Agassiz National Wildlife Refuge.
- **April 14, 2021** – Red Lake River 1W1P Policy Committee meeting
 - Tony Nordby, Houston Engineering, attended the meeting to discuss the Demarais-Hanson project.
 - The PC approved a 300’ extension of the stabilization work.
- **April 15, 2021** – Bartlett Lake Management Planning meeting
- **April 21, 2021** - Clearwater River Watershed 1W1P Planning Work Group meeting
 - The PWG reviewed the draft Land and Water Resources Narrative document (a summary of background information about the Clearwater River Watershed. The PWG also discussed planning regions (HUC 10 subwatersheds), resource categories, issues, and planning of a public kick-off event.
- **April 28, 2021** – Clearwater River 1W1P Policy Committee meeting
 - The consultant asked the Planning Committee questions to get input on priority resources and issues (What resources do you value? What are some specific resource concerns?).

**RED LAKE WATERSHED DISTRICT
MONTHLY WATER QUALITY REPORT**

April 2021

- The draft Land and Water Resources Narrative for the Clearwater River Watershed will be reviewed throughout the month of May 2021 and approved at the next Policy Committee meeting.
- The Policy Committee unanimously approved the list of Advisory Committee member that had been compiled by the Planning Work Group
- Alternate Policy Committee members can remain engaged in the process by participating on the Advisory Committee.
- The committee discussed location and formats for future meetings.

Red Lake Watershed District Monthly Water Quality Reports are available online:

<http://www.redlakewatershed.org/monthwq.html>.

Learn more about the Red Lake Watershed District at www.redlakewatershed.org.

Learn more about the watershed in which you live (Red Lake River, Thief River, Clearwater River, Grand Marais Creek, or Upper/Lower Red Lakes) at www.rlwdwatersheds.org.

“Like” the Red Lake Watershed District on [Facebook](https://www.facebook.com/redlakewatershed) to stay up-to-date on RLWD reports and activities.

By Corey Hanson, Red Lake Watershed District Water Quality Coordinator. 10/25/2021

Water Quality Monitoring



The first round of water quality sampling for 2021, at the District's long-term monitoring sites, was completed in May. The water in the Clearwater River, near Bagley, was extraordinarily clean. Water in the lower Red Lake River (Grand Forks, Fisher, and Crookston) met water quality standards.

High concentrations of total phosphorus were found in:

- Bartlett Lake
- Blackduck River at Deer Trail Road NE
- Grand Marais Creek at 130th St. NW
- Heartsville Coulee at 13th St. SE in East Grand Forks
- North Cormorant River at CSAH 36
- O' Briens Creek at Harvest Road NE
- Ruffy Brook at CSAH 11
- Terrebonne Creek at CSAH 92

High *E. coli* concentrations (>126 MPN/100ml) were found in:

- Blackduck River at Deer Trail Road NE
- Judicial Ditch 73 at 343rd St. SE, near Rydell National Wildlife Refuge
- North Cormorant River at CSAH 36
- O' Briens Creek at Harvest Road NE

The *E. coli* concentration in Silver Creek at 159th Ave, a site that has had chronically high *E. coli* concentrations, was notably lower than the water quality standard. *E. coli* concentrations also frequently exceed the 126 MPN/100ml threshold for *E. coli* impairment at the monitoring stations in the Upper/Lower Red Lakes subwatershed. Coburn Creek and the South Cormorant River *E. coli* concentrations were notably low in the May samples.

Netting to discourage cliff swallows under the CSAH 36 bridge over the North Cormorant River



A side water inlet installation along Branch 3 of State Ditch 83 that might need more work to avoid a wash-out and lacks erosion control measures at the outlet. The field is also lacking a buffer. The bare, loosely piled soil on the embankment would be washed downstream to the Thief River during a runoff event.



Wind erosion and dust storms occurred much-too-frequently in the spring and early summer of 2021. This one was photographed 1 mile west of Agassiz National Wildlife Refuge.



Very low flow in the Thief River on May 27, 2021



Equipment was purchased and a shipping arrangement was set up for volunteer sampling of Bartlett Lake. District staff helped the volunteer collect the first sample and provide some training on monitoring methods.

Water Level and Flow Monitoring

An In-Situ VuLink remote water level logging system was purchased to give District staff the ability to check water levels in Pine Lake from a computer at the office.

River Watch

The Gold Award for the 2021 River Watch Forum was awarded to the Red Lake Falls team from Lafayette High School. They had nearly perfect scores on all three challenges of the Forum!

This year, the Forum was held virtually from March 8th to March 26th due to COVID-19. The groups that participated were asked to complete 3 challenges:

Challenge #1: The River Watch staff collected a 'snapshot' of water quality along 300 miles of the Red River by collecting field data and collecting water samples for further lab analysis. The dataset was given to each River Watch team, and they had to match the data to one of the 14 locations on a map.

Challenge #2: Requiring an in-depth understanding of a biological component of rivers and streams, each team had to identify several macroinvertebrates from five separate locations and calculate a pollution tolerance index for each location.

Challenge #3: This activity was all about sharing a fun River Watch memory for a social media contest and preparing for 2021 summer and fall activities.

River Watch is a watershed education program created for Jr. high and high school students. Students collect water quality samples from local rivers and streams, learn about their local watersheds and typically participate in a watershed-based project over the winter months. Due to COVID-19 restrictions, schools were not able to work on a watershed-based project over the winter months. Schools from Minnesota and North Dakota located in the Red River Basin participate in River Watch throughout the year.

District staff helped Win-E-Mac students complete a round of water quality measurements at their monitoring sites in May.

Red Lake County Central was one of the first schools to participate in the International Water Institute's River of Dreams program this year. After learning about watersheds and water quality, the students decorated canoes and launched them into the Lost River. Each canoe's journey can be tracked online. When a canoe is found, it's location can be logged on a website. Elementary students from Red Lake Falls (Clearwater River), Clearbrook-Gonvick (Clearwater River near Clearwater Lake), Grygla (Mud River), and Thief River Falls (Red Lake River, in April) also participated in the program throughout the spring of 2021 (March through April). The River of Dreams program involves classroom instruction about watersheds and water quality, as well as an outdoor event where the students launch trackable wooden canoes, that they have decorated, into a local river.

Thief River Watershed One Watershed One Plan (1W1P)

A meeting was held to discuss the Mud River Restoration project and the next steps that were needed to continue planning the project. The need for soil borings was discussed and plans were made to gather equipment and a team of staff from partner agencies to collect some data in early June.

Plans for the streambank stabilization projects along the Thief River were reviewed by DNR staff.

Thief River Falls Oxbow Restoration Project

Project partners discussed three additions to the project that could improve the effectiveness of the project: 1) additional excavation within the oxbow restoration site; 2) installation of drain tile under the snow storage area settling pond; 3) an additional underground structure that will bypass high flows and prevent overloading of the eastern hydrodynamic separator.



Clearwater River One Watershed One Plan (1W1P)

Houston Engineering, Inc. (HEI) created a draft Land and Water Resources Narrative, which was reviewed by District staff and the rest of the Planning Work Group. The Planning Work Group also reviewed survey results. The consultant also created a public survey that could be distributed at the same time as the public kick-off meetings.

District staff conducted groundtruthing of Clearwater River Watershed PTMAApp burnlines (representing culverts and bridges) and edited PTMAApp input files using the findings. A section-by-section examination of flow accumulation lines and non-contributing areas (areas where water digitally “pools” instead of flowing downstream) to find locations that should be field-checked for the presence/absence of a culvert. PTMAApp files were shared with Houston Engineering, Inc. staff for a preliminary quality assurance review.



“Waterfall” at the dammed outlet of Spike Lake, discovered while ground truthing. There was a nice little stream, downstream from the dam.



Other

- A complaint was received about algae in the Thief River. District staff checked on the problem and found that it was an accumulation of filamentous green algae (annoying, but harmless) and not blue-green algae.
- District staff received a complaint about poor water quality in the Clearwater River during wild rice paddy drainage.
- A complaint was received about possible blue-green algae in a ditch south of McIntosh. Because it was in the Sand Hill Watershed District, all information about the complaint was passed along to Polk County Environmental Services.
- The Clearwater Lake Area Association shared their [Spring 2021 Dockside Newsletter](#).

Water quality related notes and minutes from the May 13, 2021 Red Lake Watershed District Board of Managers meeting.

- Nicole Bernd, West Polk SWCD, participating via Zoom, requested funding for the following two grade stabilization projects (both in Red Lake River 1W1P Management Area L7) from the District's 2021 Erosion Control Funds, RLWD Project No. 164: Hangsleben Project, Huntsville Township, Polk County, estimated project cost of \$8,500, with a request for cost share in the amount of \$6,375.00; and the Boushee Project, Huntsville Township, Polk County, estimated project cost of \$9,800, with a request for cost share in the amount of \$7,350, for a total of \$13,725. Motion by Tiedemann, seconded by Sorenson, to approve cost share in the amount of \$13,725 for the Hangsleben and Boushee Erosion Control Projects from the District's 2021 Erosion Control Funds, RLWD Project No. 164. Motion carried.
- Engineer Dillion Nelson, HDR Engineering, Inc., and Wayne Johnson, City of Thief River Falls, appeared before the Board for discussion on potential additional items for construction of the City of Thief River Falls Oxbow Restoration and Stormwater Treatment Project, RLWD Project No. 46Q. Nelson proposed the installation of 6" drain tile where the City of Thief River Falls currently uses the area as snow storage, deeper pool for longer life span, installation of a third structure to bypass high flows and make hydrodynamic separator more effective to filter out trash, sediment and pollutants. Total additional potential cost is \$170,000. Nelson indicated that they have added a condition in the Specifications that the owner will have the right to remove full bid items if the bids come in over budget. Discussion was held on requesting additional funding from the project partners. Motion by Ose, seconded by Dwight, to approve the Plans and Specifications for construction of the Thief River Falls Oxbow Project, RLWD Project No. 46Q. Motion carried.
- The Board reviewed a letter from the MnDNR regarding a domestic well interference complaint in Red Lake County that has been fully settled with the local landowners with irrigation systems.
- Staff member Corey Hanson presented a quote in the amount of \$4,869.70 from Eureka for the purchase of a water quality sonde. Hanson discussed the cost to repair the current sonde versus purchasing new equipment. Motion by Tiedemann, seconded by Ose, to approve the purchase of a water quality sonde in the amount of \$4,869.70 from Eureka. Motion carried.
- Staff member Slowinski has been working with schools on River Watch this spring.
- The Policy Committee for the Clearwater River 1W1P met on April 28, 2021. Included in the packet was the agenda for the meeting.
- Manager Ose discussed the RRWMB meeting and research the USGS is conducting on the lack of water and water quality in the Thief River 1W1P.

Water quality related notes and minutes from the May 27, 2021 Red Lake Watershed District Board of Managers meeting.

- Sealed bids for the construction of the Thief River Falls Oxbow Restoration and Stormwater Treatment Pond, RLWD Project No. 46Q, will be publicly opened at 10:00 a.m. on June 16, 2021, in the City of Thief River Falls Council Chambers.
- Engineer Tony Nordby, Houston Engineering, updated that Board on the Demarais/Hanson Bank Stabilization Project, RLWD Project No. 149. Nordby stated that since this is a Red Lake River 1W1P Project, BWSR had requested that the Engineer determine the approximate cost of extending the project downstream from the “tree row to the oxbow”, approximately an additional 150 feet. Nordby stated that the preliminary design shows that the area flattens out about 150 feet downstream, which would then enter a plunge pool. The original estimated cost of the project was \$210,000 and the additional work was estimated to cost an additional \$30,000 for a total approximate cost of \$240,000. Motion by Tiedemann, seconded by Dwight, to move forward with the Demarais/Hanson Bank Stabilization Project, RLWD Project No. 149, with the additional 150 feet to the oxbow. Motion carried.
- Staff member Christina Slowinski reviewed the Pennington Cooperative Weed Management Area Memorandum of Agreement for the management and control of invasive plants and noxious weeds on public and private lands in Pennington County. Motion by Dwight, seconded by Anderson, to authorize Administrator Jesme and grant the authority to sign the Pennington Cooperative Weed Management Area Memorandum of Agreement and to have Slowinski continue to attend these meeting on behalf of the District. Motion carried.
- A Clearwater River 1W1P Planning Work Group met on May 19, 2021, to review information for the Advisory Committee meeting held on May 26th. The first kickoff meeting will be held on June 10th.
- Staff member Christina Slowinski has been meeting with several River Watch Schools.

May 2021 Meetings and Events

- **May 7, 2021** – Red River Watershed Management Board – Water Quality Monitoring Advisory Committee meeting
 - The committee reviewed a funding proposal for the Lake Traverse Water Quality Improvement Project – Phase 2. The multi-phased project is stabilizing a severely eroding waterway that flows into Lake Traverse. The planning of this project was impressively detailed. The extreme erosion problems made this project a high priority. While stabilizing the steep channel slope, a lot of design features have been incorporated to facilitate fish passage.
- **May 17, 2021** – Mud River Restoration Project meeting
 - Geomorphology, river ecology, and fisheries staff are interested in helping with this project. The DNR has limited funding for projects, though, other than the Outdoor Heritage Fund. Due to the size of the project, Lessard-Sams might be the funding source to target.
 - USFWS staff have reached out to DNR staff to get advice on the project. There is a lot for us to “wrap our head around” in terms of the kind of project that will be needed and what kind of benefits it can provide.
 - What is the current bed load of sediment in the Mud River?

- Soil borings are recommended to find elevations of the old stream bed. DNR, USFWS, and RLWD staff will team-up to collect soil boring data.
- **May 19, 2021** – Clearwater River 1W1P Planning Work Group meeting.
 - The Advisory Committee will review the draft Land and Water Resources Narrative at their next meeting.
 - The Trap bar in Gonvick and the Brooks Community Center were chosen as the locations of public kick-off meetings.
 - Priority resource points (for PTMApp development and utilization) will be located at HUC 10/12 outlets, monitoring stations at which total maximum daily loads (TMDLs) were established, and lake outlets.
- **May 19, 2021** – Meeting to discuss the creation of an educational video to showcase the Clearwater River Watershed
 - Dain Erickson ([Red Canoe Cre8tive](#)) can help with the production of the video. He has a contract for services within Technical Service Area 8.
 - The video concept is a virtual tour of the Clearwater River Watershed that highlights unique aspects and identifies problem areas.
 - Collect drone footage (MPCA or consultant)
 - DNR staff have looked at the river and started writing a preliminary script.
 - Highlight past projects and talk about how they connect to resource priorities and future projects.
 - Interview landowners
- **May 26, 2021** – Clearwater River 1W1P Advisory Committee Meeting
 - Planning Work Group staff gave presentations on the types of projects their agencies have completed in the Clearwater River watershed.
 - Additional issues identified by Advisory Committee members included sturgeon spawning (DNR), erosion (DNR), floodplain connectivity (DNR), the Lost/Clearwater confluence (DNR), mussel diversity (DNR), wild rice BMPs (DNR & MPCA), *E. coli* bacteria (DNR), groundwater (DNR), well-interference (DNR), sulfate impairments (MPCA), feedlots (MPCA), septic systems (MPCA)

Red Lake Watershed District Monthly Water Quality Reports are available online:
<http://www.redlakewatershed.org/monthwq.html>.

Learn more about the Red Lake Watershed District at www.redlakewatershed.org.

Learn more about the watershed in which you live (Red Lake River, Thief River, Clearwater River, Grand Marais Creek, or Upper/Lower Red Lakes) at www.rlwdwatersheds.org.

“Like” the Red Lake Watershed District on [Facebook](#) to stay up-to-date on RLWD reports and activities.

By Corey Hanson, Red Lake Watershed District Water Quality Coordinator. 10/25/2021

Water Level and Flow Monitoring

An In-Situ VuLink remote water level logging system was deployed in Pine Lake to give District staff the ability to check water levels in the lake from a computer at the office. The logger was installed on June 1, 2021.

Water Quality Monitoring

Stormwater samples were collected from the Thief River Falls Oxbow Restoration Project area during a June 11, 2021 rain event. Total suspended solids (TSS) concentrations were high at the Pennington Ave stormwater outlets into the oxbow wetland. The TSS concentration was lower, downstream, at Columbia Ave, but still higher than the water quality standard for TSS. Total phosphorus (TP) exceeded the 0.1 mg/L water quality standard on the upstream and downstream end of the oxbow restoration project area, and the TP concentration was higher at the downstream, Columbia Avenue sampling location. Chloride concentrations were low in the stormwater inflow from the east and the north, at Pennington Avenue. Chloride concentrations were six times higher at the downstream, Columbia Avenue sampling site.



Due to the lack of runoff this summer, there were relatively few exceedances of water quality standards recorded in streams during the June round of samples for the District's long-term water quality monitoring effort. The TP and chlorophyll-a concentrations in Long Lake were low.

High total phosphorus (greater than 0.5, 0.1, or 0.15 mg/L, depending on location) concentrations were found in:

- Moose River at CSAH 54
- Mud River at State Highway 89

Proliferation of filamentous algae in the Thief River (in stagnant water at CSAH 44)



Nature Day Camp – Macroinvertebrate Day

District staff helped with the “Macroinvertebrate Day” of the Thief River Falls Nature Day Camp, organized by local teachers, in which 5th and 6th graders from area schools learned where to find aquatic insects, why they are important, and how to identify them.



Thief River Watershed One Watershed One Plan (1W1P)

A meeting was held to discuss the Mud River Restoration project and the next steps that were needed to continue planning the project. The need for soil borings was discussed and plans were made to gather equipment and a team of staff from partner agencies to collect some data in the early summer.

A team of 6 staff from the United States Fish & Wildlife Service, Minnesota Department of Natural Resources, Natural Resource Conservation Service, and the Red Lake Watershed District collected transects of soil boring information along the old channel of the Mud River to aid in planning a restoration project. Survey data and photos from the soil boring effort were provided to the engineer.

Shells and coarse material were found in soil borings near the downstream (west) end of the old channel path. At the upstream end, however, Soil borings maxed-out at about a 5-foot depth and only produced decaying vegetation. Due to the insulating nature of the organic material, dense layers of frost remained a short distance from the surface. A flood damage reduction project team will be assembled to begin an official process of planning a restoration project.



On-the-ground view of the old meanders of the Mud River that are visible in aerial photos.



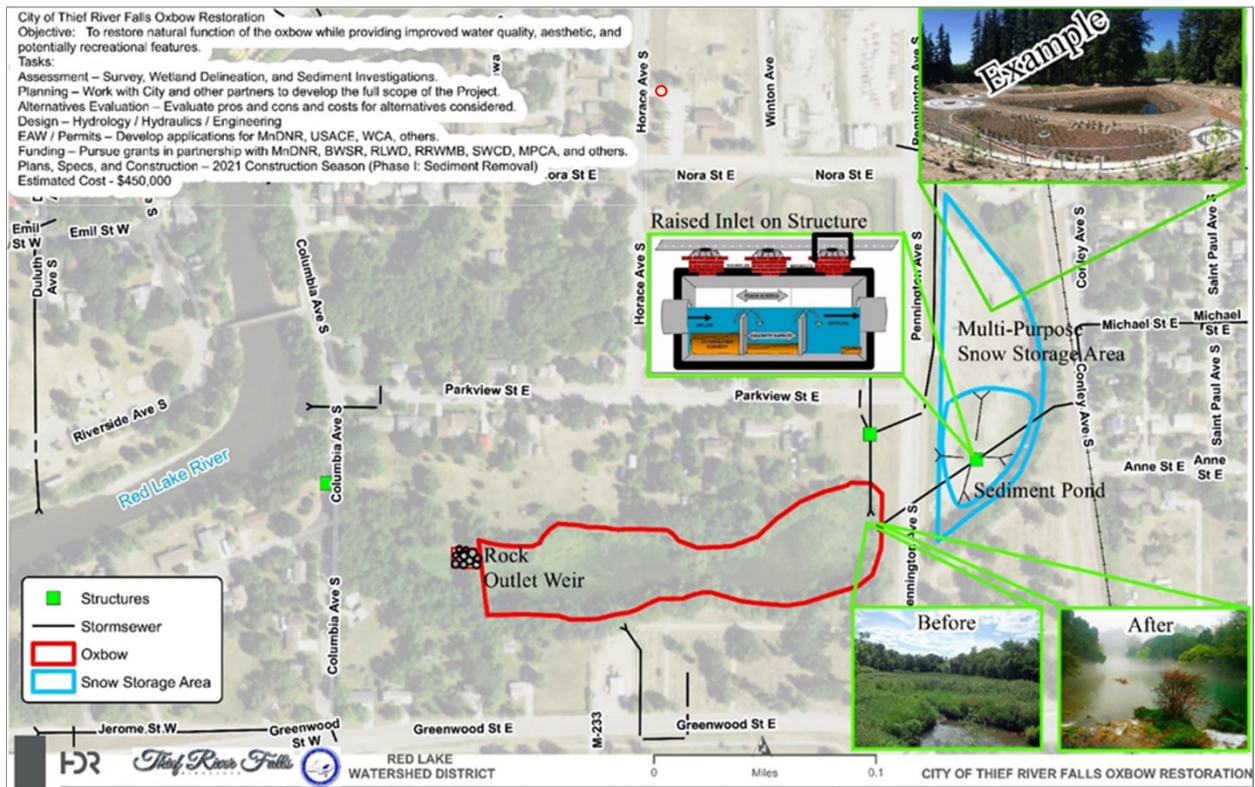
A new meander cut-off channel was identified by the Pennington SWCD as a future project.



Lawn mowing to the edge of the river has had a negative effect on streambank stability



Thief River Falls Oxbow Restoration Project



HDR Engineering, the city of Thief River Falls, and District staff continued to collaborate and plan for funding and 2021 construction of the Thief River Falls Oxbow Restoration Project. HDR Engineering staff spoke with neighboring residents to keep them in-the-loop about the project.

The total estimated cost of the Thief River Falls Oxbow Restoration project is currently \$728,772. Funding for the project came in from:

- City of Thief River Falls
 - Approximately \$35,000 for early planning/engineering expenses (before grants)
 - \$50,000 for construction costs
- Red Lake Watershed District
 - \$50,000 (10% of the original total budget of \$500,000.
 - The District Board of Managers approved additional cost-share (remaining construction and engineering costs less grant funding and the \$50,000 contribution from the city to construction costs) to help fund the additional excavation, tile drainage, and additional underground structure that were recommended by the engineer.
- The Red River Watershed Management Board (RRWMB) approved an additional \$84,000 to bring the total RRWMB contribution from competitive water quality funding to \$250,000.
- A \$250,000 Clean Water Fund grant was awarded to the project by the Minnesota Board of Water and Soil Resources.

Clearwater River One Watershed One Plan (1W1P)

District staff conducted groundtruthing of Clearwater River Watershed PTMApp burnlines (representing culverts and bridges) and edited PTMApp input files using the findings. A section-by-section examination of flow accumulation lines and non-contributing areas (areas where water digitally “pools” instead of flowing downstream) to find locations that should be field-checked for the presence/absence of a culvert. Houston Engineering staff completed a quality check on the hydroconditioning work that had been completed through May. In their opinion, the hydroconditioning work completed for the Clearwater River watershed might be the best in the state. They shared the results of an analysis that highlights portions of subwatersheds that were changed by the hydroconditioning process (comparison of USGS HUC-12 boundaries and new subwatershed boundaries delineated by PTMApp with hydro-corrected LiDAR data). They also provided a layer of points where they thought that additional ground-truthing would be beneficial. District staff used those layers to complete another desktop examination of the watershed and add points to the groundtruthing “to-do list.”



Photo of perched culverts on the trout stream reach of the Clearwater River, submitted by a landowner

RED LAKE WATERSHED DISTRICT MONTHLY WATER QUALITY REPORT

June 2021



The local staff of the Planning Work Group (PWG) met to coordinate public kick-off events for the Clearwater River 1W1P process. The PWG reviewed letters that were submitted in response to the 60-day comment period that marked the beginning of the planning process. Public open-house kick-off meetings were held in Brooks and Gonvick. Houston Engineering, Inc (HEI) created a flyer to help with the promotion of the public open house events. After the meetings, the consultant drafted a set of issue statements using existing information and input from letters and in-person meetings.





Clearwater River WATERSHED

JUNE
10th

Public Open House

4:30-6:00 pm at the
Brooks Community Center
(Short presentation at 5:00)

6:30-8:00 pm at
The Trap in Gonvick, MN
(Short presentation at 7:00)

Who: Anyone! We especially would like those who live in or have a vested interest in the Clearwater River Watershed.

What: A free event to provide input on what resources are most important to you and learn about our water resources in the area.

Why: To build community and create a shared legacy around the water in our region.

One Watershed One Plan Public Survey

We are beginning a planning process for the Clearwater River Watershed. This planning process is used to determine the best focus for our local time and funding to manage our natural resources including lakes, streams, wetlands, forests, prairie, and soil health. We want to hear from you about what you care about in the region. What important issues need attention now and, in the future, to continue the progress made in the area?

Please submit responses by June 11th.

This survey is anonymous. If you would like to be on an email list to receive updates about this project, please email Chester Powell at Clearwater SWCD:
chester.powell@mn.nacdnet.net.

Scan the QR code
to take the public survey
Survey is anonymous.



Other

- The International Water Institute shared their [Spring 2021 River Rendezvous Newsletter](#). Water quality related notes and minutes from the June 10, 2021 Red Lake Watershed District Board of Managers meeting.
- Staff member Nick Olson discussed significant erosion occurring on the west bank, downstream of the Schirrick Dam, RLWD Project No. 25. Olson stated that when the District operates the dam for a flood event, erosion is occurring downstream of the structure due to the high volume of water being released. Discussion was held on reforming the channel and removal of the sand bar. Manager Dwight suggested the use of stream barbs to direct the water away from the bank. Motion by Ose, seconded by Dwight, to proceed with the hiring of an Engineer to determine the needed repairs for downstream of the Schirrick Dam, RLWD Project No. 25. Motion carried. Olson and Manager Page discussed a request from landowner Dave Schirrick to move the access road to the impoundment, further east on an existing berm, to keep traffic away from the Schirrick home. It was the consensus of the Board, that due to the limited number of times the District needs to access the property, and the fact that the Board currently has an easement with the landowner, the District declined the request to move the access road.
- Engineer Tony Nordby, Houston Engineering, Inc., stated that R.J. Zavoral and Sons, Inc., installed the air vents last week on the Ditch 10 Outlet Repairs, RLWD Project No. 161. Nordby stated that the plan called for grouting the rock chute to lock things together. After inspecting the site, Nordby determined that there is good gradation, therefore grout would not be needed, noting that since they did not grout the project, they did extend the approach to the riprap. The District will need to monitor the area where the stumps were buried as the landowner had concerns of settling.
- Bid opening on the Thief River Falls Oxbow Project will take place on June 16th in the City Council Chambers.
- There will be a Clearwater River 1W1P Kick-off meeting on June 10th, in Brooks and Gonvick. Staff members Corey Hanson and Christina Slowinski will attend. The Policy Committee meeting will be held on June 23rd at 1:00 p.m.
- The Red Lake Falls River Watch Team won first place during the 26th Annual River Watch forum.
- Manager Ose stated that he was at the outlet of the Agassiz National Wildlife Refuge, reporting that no water is coming out of the refuge, with a small amount of water coming from Farnes Pool and Ditch 18.

Water quality related notes and minutes from the June 10, 2021 Red Lake Watershed District Board of Managers meeting.

- The Board reviewed the executed RRWMB Water Quality Program Grant Agreement 2020-12 for the Thief River Falls Oxbow Restoration and Stormwater Treatment Project, RLWD Project No. 46Q in the amount of \$166,000. Engineer Nate Dalager, HDR Engineering, Inc., discussed betterments to the project to keep the water deeper to help eliminate cattail growth, addition of a diversion structure and drain tile at a total estimated cost of \$730,000. Discussion was held on potential funding partners for the additional project costs. The District had previously committed \$50,000. Wayne Johnson, City of Thief River Falls, stated that the city is willing to contribute an additional \$50,000, adding that he has concerns about the cost of paying for maintenance over the next 25 years. Discussion was held on requesting additional funding from the RRWMB Water Quality Program. Motion by Ose, seconded by Sorenson, to request

additional funding from the RRWMB Water Quality Program Grant, with the District covering the remaining balance, less the additional \$50,000 contribution from the City of Thief River Falls. Motion carried.

- Administrator Jesme discussed the need to create a Project Work Team for the Mud River Restoration Project, RLWD Project No. 149A, in order to apply for a Flood Damage Reduction Work Group Acceleration Grant. Engineer Nate Dalager, HDR Engineering, Inc., discussed the Judicial Ditch 11 channel within the Agassiz National Wildlife Refuge and the alignment of the Mud River channel that was straightened. Presently, both channels are about five feet lower than the silted in historical channel. Dalager discussed the amount of sediment that moves through the system, noting this area has a large drainage area. A survey and study of the hydrology has been completed. Excavation/restoration of the original channel would be hard to complete, which is where a Project Work Team would come into play to help review the area, decide what the project goals would be and come up with alternatives to reach the goals or objectives agreed to in the Project Team process. Jesme noted that this does not commit the District to the project but would paint a clearer picture as to what funding sources could be used once the scope of the project is better defined. Motion by Tiedemann, seconded by Page, to develop a Project Work Team for the Mud River Restoration Project, RLWD Project No. 149A. Motion carried.
- The Board reviewed River Watch Agreements between the District and the Red Lake Falls School District and the Win-E-Mac School District. Motion by Tiedemann, seconded by Page, to approve the River Watch Agreement between the District and the Red Lake Falls School District and the Win-E-Mac School District. Motion carried.
- A Clearwater River 1W1P Advisory and Policy Committee meeting was held on June 23rd in Bagley.
- The Red Lake River 1W1P Planning Workgroup will meet on June 28th in preparation for the upcoming Policy Committee meeting which will be held on July 14th.
- Staff members Hanson and Slowinski participated in the Riverview Nature Camp held in Thief River Falls. Included in the packet was photos of the camp.
- Manager Ose stated that there is no water coming out of Agassiz National Wildlife Refuge and very little out of Ditch 200 and 20, noting that this would be a good year to have maintenance done on State Ditch 83, RLWD Project No. 14.

June 2021 Meetings and Events

- **June 1, 2021** – Clearwater River 1W1P Planning Work Group meeting to coordinate public kick-off events
 - The PWG discussed meeting locations, supplies, advertising, door prizes, and other details.
- **June 3, 2021** – Thief River 1W1P Planning Work Group meeting
- **June 4, 2021** – Virtual meeting to discuss the results of Houston Engineering’s quality control check of the Clearwater River Watershed PTMApp hydroconditioning data (culvert “burn lines,” lakes routing, and non-contributing areas)
- **June 10, 2021** – Clearwater River 1W1P Public Kick-Off meetings
- **June 15, 2021** – Red Lake River 1W1P presentation at an Area 1 Soil and Water Conservation District at Shooting Star Casino in Mahnomen

- **June 16, 2021** – Clearwater River 1W1P Planning Work Group meeting
 - The PWG reviewed a summary of letters received during the 60-day comment period that marked the initiation of the planning process.
 - Issues and recommendation in the letter from the Minnesota Department of Natural Resources included:
 - Erosion problems along the Hill River, Lost River, and the Clearwater River downstream of the Lost River confluence
 - Recommended a review of the Clearwater River Watershed Fluvial Geomorphology Report.
 - Improve base flows to improve dissolved oxygen levels (low dissolved oxygen impairments are mostly caused by low flows)
 - Grazing management to address *E.coli* impairments
 - Maintain mussel diversity (DNR has maps that could help identify the areas that can be prioritized for protection)
 - Wild rice paddy drainage
 - Groundwater and well interference
 - Declining water quality
 - Habitat protection (Wildlife Protection Areas, Rydell National Wildlife Refuge, and Minnesota Prairie Conservation Plan)
 - The BWSR letter reviewed plan requirements and general priorities.
 - The Clearwater Lake Area Association submitted a letter that mentioned:
 - Lake Lomond zebra mussels
 - AIS enforcement and compliance
 - Communication (improve educational efforts)
 - Wild rice paddy drainage
 - Forest/CRP
 - Erosion and sedimentation
 - Septic systems
 - Wake boat restrictions to reduce disturbance to lake sediment
 - Aquifer protection (groundwater supply and quality)
 - The Minnesota Department of Health wrote a letter to emphasize:
 - Prioritization of Drinking Waters Supply Management Areas
 - Concerns for DWSMAs include highways, railroads, pipelines, arsenic, and contaminated sites
 - Sealing of abandoned wells
 - Protection of private wells
 - Protection of Noncommunity Public water Supplies
 - GRAPS Report (Groundwater Restoration and Protection Strategies)
 - Concerns/issues/recommendations from citizen/landowner letters included:
 - Lost River flooding
 - Pollutant runoff
 - Protection of good water quality in Pine Lake
 - Aquifers
 - Ag runoff
 - Harmful chemical runoff

- AIS (multiple letters)
- *E. coli* (cattle in streams)
- Lack of buffers
- Streambank erosion
- Septic tanks
- Cattails
- Education (shoreline restoration) for residents and businesses
- Accessible and understandable summaries of reports
- The Minnesota Department of Agriculture's (MDA) letter noted plans and programs that may be relevant to the Clearwater River Watershed:
 - Nitrogen Fertilizer Management Plan
 - Groundwater Protection Rule
 - Vulnerable Groundwater Areas
 - Mitigation level determination
 - Minnesota Agricultural Water Quality Certification Program (MAWQCP)
 - Cropland Grazing Exchange
 - Agricultural Growth, Research, and Innovation (AGRI) program
 - MDA pesticide monitoring
- The MPCA letter mentioned:
 - Information about impaired waters can be found in the WRAPS and TMDL documents.
 - Chloride reduction (no chloride problems have been identified in this watershed)
 - Stormwater
 - Feedlots
 - Septic systems
 - Ag practices
 - Streambank erosion
 - Ditch maintenance
 - Restore stream meanders
 - Restore base flow in streams
 - Revegetation of ditches
 - Wild rice farming
 - Nutrient loading reductions
- Draft issue statements, Land and Water Resources Narrative comments, and the agenda for the upcoming meeting of Advisory and Policy Committees were reviewed.
- **June 21, 2021** – Nature Day Camp at LaFave Park in Thief River Falls
- **June 23, 2021** – Clearwater River 1W1P Advisory Committee and Policy Committee meeting in Bagley
- **June 25, 2021** – Thief River 1W1P Policy Committee meeting
 - Judicial Ditch 23 plans and specifications have been provided to the county. The county will handle bids and bid opening. The RLWD will handle inspections.
 - There was discussion about the planning of an educational workshop.
 - There hasn't been much interest in cover crops, so far.

- The Pennington SWCD has found that another meander cut-off has started forming near their previous meander cut-off stabilization project.
- The Pennington SWCD is working on a project that was funded by a competitive Clean Water Fund grant and will install ag practices in the Lower Thief River and Judicial Ditch 30 subwatersheds.
- **June 28, 2021** – Red Lake River 1W1P Planning Work Group meeting
 - The next round of 1W1P watershed-based funding (2022) goes to the Minnesota Board of Water and Soil Resources (BWSR) Board for approval in September. It will be important to close-out the first grant (2018) before applying for the next round.
 - Project updates were shared for 2018 work plan projects: Pennington County side water inlet construction, the Thief River Westside outlet stabilization (final hearing), Ditch 16 side water inlets, Black River Impoundment side water inlet and rock-check construction. The West Polk SWCD provide updates on grade stabilization projects in the Burnham Creek subwatershed. The Red Lake SWCD has hired Houston Engineering, Inc. to design 4 grade stabilization projects in Red Lake County. Construction on those projects is planned for Fall 2021 (Seeger x 2, Beyer, and Weiss projects). The RLWD Board of Managers has approved moving forward with the Demarais-Hanson project construction.
 - Project updates were shared for 2020 work plan tasks. There may be sufficient funding for both proposed Red Lake River streambank stabilization projects. Construction is being completed on the Ditch 10 outlet stabilization project. The RLWD has applied for a FEMA grant to help pay for stabilization of erosion at the Ditch 10 outlet. The Pennington SWCD has identified two large grade stabilization projects along the Black River. There was a discussion about landowner cost-share requirements for ag practices. There was discussion about how it can be helpful to find other sources of funding to help pay a portion of the 25% cost-share requirement, but the landowner should contribute at least 10% of the project cost.

Red Lake Watershed District Monthly Water Quality Reports are available online:

<http://www.redlakewatershed.org/monthwq.html>.

Learn more about the Red Lake Watershed District at www.redlakewatershed.org.

Learn more about the watershed in which you live (Red Lake River, Thief River, Clearwater River, Grand Marais Creek, or Upper/Lower Red Lakes) at www.rlwdwatersheds.org.

“Like” the Red Lake Watershed District on [Facebook](https://www.facebook.com/redlakewatershed) to stay up-to-date on RLWD reports and activities.

By Corey Hanson, Red Lake Watershed District Water Quality Coordinator. 10/26/2021



Water Quality Monitoring

District staff completed the second round of 2021 samples at Red Lake Watershed District long-term monitoring sites. Some streams were not sampled due to a lack of flow. The TP and chlorophyll-a concentrations in Long Lake met water quality standards. The July *E. coli* concentration in the Blackduck River was notably low. The *E. coli* concentration in the Hill River at CR 119, near Brooks, notably met the water quality standard. *E. coli* concentrations have been chronically high at that location. The *E. coli* concentration in the Lost River at CR 119, north of Brooks, was also low. The nitrate & nitrites concentrations in the Lost River and Hill River, near Brooks, are often relatively high. In July, the nitrate & nitrite concentrations were notably low. If the nitrates & nitrites were coming from tile drainage, this would make sense. There would be very little, if any, drainage from tile due to the lack of rainfall.

Exceptionally clear water with very low total suspended solids concentrations (at or below the laboratory's minimum reporting limit) was found in:

- Clearwater River at CSAH 25, near Bagley
- Clearwater River at Minnesota Street N, north of Plummer
- Judicial Ditch 73 near Rydell national Wildlife Refuge
- Branch A of Judicial Ditch 21 (total phosphorus was also very low)
- Branch 200 of Judicial Ditch 11 (total phosphorus was also very low)
- Red Lake River at CSAH 7 (Smiley Bridge)
- Red Lake River at CSAH 219 (Highlanding Bridge)

High *E. coli* concentrations (>126 MPN/100 mL) were found in:

- Branch A of Judicial Ditch 21
- Silver Creek at 159th Ave, near Clearbrook (*E. coli* was lower than the 126 MPN/100 mL standard in Clear Brook).
- Clearwater River at CSAH 2
- Heartsville Coulee at 13th Street SE in East Grand Forks
- Hill River at 335th Ave SE
- Lost River at CSAH 8
- Lost River at CSAH 5 in Oklee
- Gentilly Creek at CSAH 11 (very high)
- Judicial Ditch 73 near Rydell national Wildlife Refuge (very high)
- Kripple Creek at 180th Ave SW
- Coburn Creek, near Blackduck Lake
- North Cormorant River at CSAH 36
- Thief River at 140th Ave NE, north of Thief River Falls

High total phosphorus (greater than 0.5, 0.1, or 0.15 mg/L, depending on location) concentrations were found in:

- Burnham Creek at 320th Ave SW
- Clearwater River at CSAH 12 (“Terrebonne Bridge”)
- Clearwater River at CR 127
- Clearwater River at Minnesota Street N, north of Plummer
- Coburn Creek, near Blackduck Lake
- North Cormorant River at CSAH 36
- South Cormorant River at CSAH 37
- Grand Marais Creek at 130th Street NW
- Hill River at 335th Ave SE
- Hill River at CSAH 35
- Hill River at CR 119, near Brooks
- Heartsville Coulee at 13th Street SE in East Grand Forks
- Nasset Creek
- Lost River at 109th Ave, upstream of Pine Lake
- Ruffy Brook at CSAH 11
- Lost River at CSAH 28
- Lost River at CSAH 5 in Oklee
- Lost River at CR 119, near Brooks
- Kripple Creek at 180th Ave SW
- Poplar River at 310th Street SE
- Poplar River at CR 118
- Mud River at State Highway 89
- Thief River at 140th Ave NE, north of Thief River Falls

RED LAKE WATERSHED DISTRICT MONTHLY WATER QUALITY REPORT

July 2021

High sulfate concentrations (>10 mg/L) were found in the Clearwater River at County Road 127. A high concentration of total suspended solids (>15 mg/L) was found in Coburn Creek, near Blackduck Lake.

Low dissolved oxygen levels (<5 mg/L) were recorded in:

- O' Briens Creek
- Polk County Ditch 14 near the maple Lake outlet
- Clearwater River at CSAH 25, near Bagley
- Lost River at CSAH 5 in Oklee
- Clear Brook at CSAH 92
- Hill River at CSAH 35
- Hill River at 335th Ave SE
- Lost River at 109th Ave, upstream of Pine Lake
- Poplar River at CSAH 30, near Fosston
- Poplar River at 310th Street SE
- Heartsville Coulee at 13th Street SE in East Grand Forks
- Moose River at Highway 89
- Thief River at 140th Ave NE, north of Thief River Falls
- South Cormorant River at CSAH 37
- Walker Brook at CSAH 19
- Judicial Ditch 73 at CSAH 10 (Maple Lake inlet)

Mud River at Highway 89



**RED LAKE WATERSHED DISTRICT
MONTHLY WATER QUALITY REPORT**

July 2021



Moose River at CSAH 54



Thief River at CSAH 7



District staff began summer 2021 sampling for algal toxins (from blue-green algae blooms) and zebra mussel veligers (early detection samples from the Red Lake River at the eastern boundary of Pennington County) in July. No algal toxins or zebra mussels were detected in any of the samples that were collected. There was a noticeable concentration of blue-green algae in the Thief River, at the bridge near the golf course, on July 20, 2021. There was a green tint to the river and blue-green algae was conspicuously present in the sample (confirmed by a jar test). District staff wrote to the city to recommend the implementation of a no-wake zone, like the one implemented in 2018, to reduce the amount of nutrient suspension from wakes. Thankfully, there were no measurable toxins in the sample and the bloom soon disappeared (by July 26, 2021) instead of getting worse. A sample was also collected from Maple Lake, on July 20, 2021, for algal toxin analysis. No measurable algal toxins were found in the sample, but the jar test showed that some blue-green algae was present in the sample. There were also reports of blue-green algae in the Red Lake River around July 20th, but there was no visual evidence of a bloom in Thief River Falls or upstream of the city on July 26, 2021.

A [website](#) was created in order to have a central location for sharing updates on the District's blue-green algae monitoring efforts and results.

Thief River at the “Golf Course Bridge” on July 20, 2021



Polk County Park on Maple Lake – Possible Blue-Green Algae in the Marina



District staff found a River of Dreams canoe that was launched by a 4th Grader in Grygla (green marker on the webpage map). The canoe had traveled all the way down the Mud River, through Agassiz National Wildlife Refuge, and down the Thief River to the Hillyer Bridge near Thief River Falls (blue marker on the webpage map). We logged the find into the canoe tracking webpage and tossed it back into the river so the journey could continue.

21RD0384

Code 21RD0384

Dream My canoe will make it all the way to Canada. I hope it sees my cousins and meets a cow. My canoe's name is Spirit. I want Spirit to see my cousins that are in Canada.

Launched With [Grygla 4th Grade \(2021\)](#)

Last seen on 2021-07-27

Sightings 1

Previous Sightings

I found this Canoe!



Photo



Red Lake River Watershed One Watershed One Plan (1W1P)

District staff completed a progress report for the Red Lake River Small Watersheds Focus 319 grant. Construction of side water inlets along Black River Impoundment diversion ditches began during the last week of July 2021.

Thief River Falls Oxbow Restoration Project

During final engineering and design for the TRF Oxbow Restoration Project, there were some changes to the bid items which we increased the cost of the project:

- Increasing yards of excavation in the restored channel by 7,000 cubic yards which would allow more storage and water depths to assist in settling silt and other pollutants at the same time reducing chance of cattail growth future.
- Incorporating tile system in the oxbow east of the restored channel (settling pond in the snow storage area) to allow water to seep into the tile thus filtering out pollutants prior to getting into the restored channel.
- Adding a third structure to bypass high flows and make the hydrodynamic separator more effective to filter out trash, sediment, and pollutants.

All the changes along with bids coming in higher than anticipated, increased the cost of the project by \$230,000. Total project was estimated to be \$500,000 but now stands at approximately \$730,000. Additional funding was requested from the Red River Watershed Management Board (RRWMB). The RRWMB approved an additional \$84,000 to help cover the additional work that was added in the final plans (additional excavation, tile drainage in the settling pond, and an additional structure to keep one of the hydrodynamic separators from becoming overloaded).

Clearwater River One Watershed One Plan (1W1P)

The Planning Work Group reviewed priority resource points that will be used for the development of the PTMApp tool.

District staff completed the groundtruthing effort for the Clearwater River Watershed PTMApp hydroconditioning process. A section-by-section examination of flow accumulation lines and non-contributing areas (areas where water digitally “pools” instead of flowing downstream) to find locations that should be field-checked for the presence/absence of a culvert. The last points on the groundtruthing to-do list, around the relatively complicated drainage patterns of wild rice paddies, were checked in July. Completed hydroconditioning data was uploaded to Houston Engineering, so that they could complete the process of developing the PTMApp model.





Accumulation of wind-blown peat soil within ditch in Hangaard Township, near wild rice paddies and 2 miles west of the Kiwosay pools.



Other

- District staff answered questions from the MPCA about potential 2022 Intensive Watershed Monitoring stations
- District staff provided information about Ruffy Brook monitoring and previous studies to a landowner that was interested in knowing more about the status of efforts to restore the stream.

Water quality related notes and minutes from the July 8, 2021 Red Lake Watershed District Board of Managers meeting.

- Engineer Jerry Pribula, Pribula Engineering, Inc., presented his Report of Substantial Completion for the construction of RLWD Ditch 16, RLWD Project No. 177. This project included side water inlet installations that were funded by the Red Lake River 1W1P Clean Water Funds.
- Engineer Tony Nordby, Houston Engineering, Inc., stated that construction for the Ditch 10 Outlet Repairs, RLWD Project No. 161 have been completed.
- Engineer Nate Dalager, HDR Engineering, Inc., stated that bids for the Pine Lake Flood Damage Reduction and Fish Habitat Project will be opened on July 22, 2021. Staff from HDR and Staff member Nick Olson met with landowners to mark the trees to be removed in the easement area for construction. Dalager discussed the design of the structure.
- Staff member Hanson participated in a Clearwater River 1W1P PTMapp meeting on July 7th to discuss Priority Resource Point locations. A Planning Work Group meeting will be held on July 21, 2021, which will be attended by Staff members Hanson and Slowinski.
- The Red Lake River 1W1P Planning Work Group will meet on July 14th, following by the Policy Committee meeting.
- Manager Ose stated that State Ditch 83, RLWD Project No. 14 is low, with very little water coming out of the Agassiz Refuge. Administrator Jesme stated that staff is working on various sites for maintenance of the system.

Water quality related notes and minutes from the July 22, 2021 Red Lake Watershed District Board of Managers meeting.

- Engineer Tony Nordby, Houston Engineering, Inc., stated that the contractor on the Black River Impoundment, RLWD Project No. 176, is working on the diversion ditch along CSAH 3 and stripping along the north diversion ditch along County Road 68. Nordby noted that the pipe installation crew will be arriving on site on July 21, 2021. Discussion was held on the installation of rock structures in areas of sandy silty soil along the south diversion ditch parallel to CR 55.
- At 9:30 a.m. Vice President Gene Tiedemann stated that the bid opening for the construction of the Pine Lake Flood Damage Reduction and Fish Habitat Project, RLWD Project 26B, would be conducted. Motion by Anderson, seconded by Ose, and passed by unanimous vote to accept the apparent low bid from Wright Construction, in the amount of \$241,344.95 for construction of Pine Lake Flood Damage Reduction and Fish Habitat Project, RLWD Project No. 26B, contingent upon the approval by Legal Counsel Sparby, District Staff, and Project Engineer Nate Dalager, HDR Engineering, Inc. in their review of the bid documents and materials.
- Administrator Jesme stated that the RRWMB approved the additional \$84,000 funding increase for the City of Thief River Falls Oxbow Restoration and Stormwater Treatment Project, RLWD Project No. 46Q. The total RRWMB commitment is now \$250,000. The City of Thief River Falls

committed to \$50,000 towards construction of the project. Dalager is waiting on the MN DNR permit application and review of the construction contracts from the city attorney.

July 2021 Meetings and Events

- **July 7, 2021** – Clearwater River Watershed PTMApp meeting
 - Maximum of 150 priority resource points
 - Lakes with pollutant reduction goals
 - Larger, important lakes
 - The Planning Work Group will review the Priority Resource Points
 - In last stages of PTMApp groundtruthing, double-check the drainage around the lakes with Priority Resource Points
 - Match Priority Resource Point locations with monitoring sites
 - New NRCS Practices have been added to PTMApp. The model will provide results for individual NRCS practices rather than groups of practices. The Planning Work Group and committees should decide which practices to focus on.
 - Create a map of where to target *E. coli* work using longitudinal monitoring results.
- **July 10, 2021** – Maple Lake Improvement District meeting in Mentor
 - District staff provided an update on water quality conditions and monitoring efforts, along with printed fact sheets about the lake's water quality conditions and monitoring efforts. Blue-green algae and agricultural runoff were topics of concern in the questions received from attendees.
 - 2011-2020 summer average total phosphorus concentration = 37.26 µg/L (meets the <60 µg/L standard)
 - 2011-2020 summer average chlorophyll-a concentration = 13.52 µg/L (meets the <20 µg/L standard)
 - 2011-2020 summer average Secchi depth = 1.40 meter (meets the >1.0 meter standard)
 - There were a lot of questions and comments, including concern about runoff from farm fields that surround the lake, concern about excess weeds, concern about blue-green algae and concern about aquatic invasive species (AIS) in wakeboard boat ballast tanks.
 - At the suggestion of a meeting attendee, the RLWD will create a webpage dedicated to updates on blue-green algae monitoring efforts and results.
 - There was an update on efforts to prevent the spread of AIS in the county. The county has been allocated \$60,000/year to fund AIS prevention measures. Cleaning equipment and a specialized Internet Landing Installed Device Sensor camera have been purchased. Used docks cannot be used without being cleaned and dried.
 - There were questions about lake levels. A member of the MLID Board reported that the water level is down 5 inches from the top of the dam at the outlet. There was discussion about how to raise water levels and there seemed to be interest in monitoring water levels in the lake.
- **July 12, 2021** – Pennington County Water Resources Advisory Committee meeting
 - The Pennington Soil and Water Conservation District has hired a new District Technician: Larissa Fitzgerald.
 - New Clean Water Fund ideas
 - Judicial Ditch 30 outlet and bank stabilization

- Thief River streambank stabilization
 - Thief River meander cutoff stabilization
 - One Watershed One Plan progress updates (Red Lake River, Thief River, and Clearwater River)
 - Aquatic Invasive Species signage has been installed at accesses
 - Zebra mussel samplers have been deployed in the Red Lake River near the Smiley Bridge and Kratka Bridge.
 - Informational and promotional items will be available at a fair booth.
 - A grade stabilization structure will be installed along the Red Lake River near Hudson Electric, in Thief River Falls.
 - Groundwater levels in observation wells within Pennington County dropped ½ to 1 foot from May to June.
 - The Pennington SWCD has started working on a culvert inventory.
 - The surficial geology portion of the Pennington County Geologic Atlas will likely be completed by the end of July. Quaternary stratigraphy will begin this fall.
 - Pennington SWCD staff have continued to collect monthly samples and water quality measurements in streams throughout the county. Water levels are low in rivers. They found a high level of turbidity in the Clearwater River (possibly related to wild rice paddy discharge).
 - A budget was passed for the State of Minnesota, avoiding a shutdown that would have affected projects funded by state grants.
 - The MPCA may be allowing local government units (LGUs) to make some decisions regarding WRAPS updates
 - BWSR is receiving \$141 Million from the Clean Water Fund. Ninety-one percent of that will go to LGUs (approximately: \$43.5 Million for Watershed-Based Funding, \$19.6 Million for Accelerated Implementation Grants, and \$22 Million for Projects and Practices grants.
 - The city is looking into a water quality credit trading program as a means to more cost-effectively mitigate phosphorus discharges from the city's wastewater treatment facility. They are working with the MPCA, Houston Engineering, and the Red River Basin Commission to develop ground rules.
 - The city is still trying to find funding to construct a new drinking water intake. The new pipe will be laid along the bottom of the Red Lake River and will extend upstream of the Thief River confluence.
 - Improvements (reductions) in soil salinity have been observed in the Black River subwatershed after the installation of tile drainage.
 - Agassiz Pool is 2.5 feet below the summer objective water level and has dropped 0.5 feet since May. There are signs that the low water levels have allowed for more cattail germination, which might be a step backward in the United States Fish and Wildlife Service's efforts to control cattails within the pools of the Agassiz National Wildlife Refuge.
- **July 13, 2021** – Red Lake River 1W1P Planning Work Group meeting
 - Project updates for projects in the 2018-19 work plan:
 - The side water inlets and rock-check structures along Black River Impoundment diversion ditches have been staked and some preparatory excavation has been

- started. The structures will be all be installed at one-time for the sake of efficiency.
- The Pennington SWCD is planning fall construction of side water inlets.
 - West Polk is planning to construct 3 grade stabilization projects this fall.
 - The group discussed shifting a remaining balance for the Project Development task to cover an over-budget balance for the Technical & Engineering budget.
 - Project updates for projects in the 2020-21 work plan:
 - The Project Development budget has been nearly used-up (much was used for the Demarais-Hanson project).
 - The Pennington SWCD has \$58,837.50 left over from the CD 96 outlet stabilization that can be shifted to another streambank/shoreline stabilization project like the Demarais-Hanson project.
 - More outreach, guided by PTMApp, is needed to promote ag practices in priority areas.
 - **July 14, 2021** – Red Lake River 1W1P Policy Committee and Planning Work Group meetings
 - The punch list for the Thief River Falls Westside outlet stabilization project has been completed.
 - A final payment hearing is scheduled for the Ditch 16 project (side water inlet construction was funded by the 1W1P and Red River Watershed Management Board).
 - The Russia 13 stabilization project, in the Burnham Creek subwatershed, has been completed.
 - The Wylie 34 project has been completed. This project was in the 2018 1W1P budget, but it was instead funded by another Clean Water Fund grant and a contribution from the RLWD. A portion of the 2018 1W1P budget can be reallocated from that project to another project.
 - 43 side water inlets have been installed in Pennington County along CD 96, CD 21, and CD 16.
 - 32 side water inlet locations have been identified along Judicial Ditch 25, 7 have been installed, and 16 are ready to install.
 - 2021 Red River Watershed Management Board Base Water Quality Funding is available for each member watershed (\$100,000 each). The RLWD will work on finding projects that can be funded. For the Red Lake River 1W1P, an example of an unfunded, priority project would be the eroding outlet of Polk CD 99, on the east side of Crookston.
 - PTMApp has been used to identify locations where ag practices are needed in priority areas. It was used to create a mailing list. Locations were prioritized by catchment.
 - **July 15, 2021** – Clearwater River 1W1P Planning Work Group meeting to prioritize issues by subwatershed
 - **July 15, 2021** – Red Lake River Corridor Enhancement Project meeting
 - **July 21, 2021** – Polk County Aquatic Invasive Species meeting

**RED LAKE WATERSHED DISTRICT
MONTHLY WATER QUALITY REPORT**

July 2021

Red Lake Watershed District Monthly Water Quality Reports are available online:
<http://www.redlakewatershed.org/monthwq.html>.

Learn more about the Red Lake Watershed District at www.redlakewatershed.org.

Learn more about the watershed in which you live (Red Lake River, Thief River, Clearwater River, Grand Marais Creek, or Upper/Lower Red Lakes) at www.rlwdwatersheds.org.

“Like” the Red Lake Watershed District on [Facebook](https://www.facebook.com/redlakewatershed) to stay up-to-date on RLWD reports and activities.