

RED LAKE WATERSHED DISTRICT

February 10, 2022

9:00 a.m.

Agenda

9:00 a.m.	Call to Order	Action
	Review and approve agenda	Action
	Requests to appear	Information
	January 27, 2022 Minutes	Action
	Financial Report dated February 9, 2022	Action
	Depreciation Schedule	Info./Action
	Enbridge Settlement-Red Lake County	Info./Action
	Red Lake Watershed 1W1P, RLWD Project No. 149 2022 Watershed Base Funding Grant Approval	Information
	Thief River Falls Westside Flood Damage Reduction Project RLWD Project No. 178-Maintenance Levee	Information
	Joint Ditch #2 Old RLWD Project 42	Information
	RLWD Project 41AA and 41BB Redetermination and Damages	Info/Action
	BWSR Memo Minnesota Statutes 103D605	Information
	Wetland Bank 1504 (Louisville Parnell)	Info/Action
	Snow Survey and NWS Outlook	Information
	Permit Extension No. 21045, TRF Regional Airport Authority	Action
	Permits 22001, 22002, 22003, 22005, 22007, Polk County Hwy. Dept.	Info./Action
	Permits: No. 22004, 22006, 22008	Action
	Administrators Update	Information
	Legal Counsel Update	Information
	Managers' updates	Information
	Adjourn	Action

UPCOMING MEETINGS

February 15, 2022	RRWMB, Ada, 10:00 a.m.
February 21, 2022	Presidents Day-Office Closed
February 23, 2022	Parnell Impoundment Advisory Meeting, RLWD Office, 10:00 a.m.
February 24, 2022	RLWD Board Meeting, 9:00 a.m.
March 2, 2022	2022 Interagency Impoundment Meeting, RLWD Office, 9:30 a.m.

DRAFT

RED LAKE WATERSHED DISTRICT
Board of Manager's Minutes
January 27, 2022

President Dale M. 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, Terry Sorenson, LeRoy Ose, Gene Tiedemann, Allan Page and Brian Dwight. Absent: Tom Anderson. Staff Present: Myron Jesme and Tammy Audette, and Legal Counsel Delray Sparby.

The Board reviewed the agenda. A motion was made by Ose, seconded by Dwight, and passed by unanimous vote that the Board approve the agenda as presented. Motion carried.

The Board reviewed the January 10, 2022, minutes. Motion by Tiedemann, seconded by Page, to approve the January 10, 2022, Board meeting minutes as presented. Motion carried.

The Board reviewed the Financial Report dated January 26, 2022. Motion by Sorenson, seconded by Page, to approve the Financial Report dated January 26, 2022, as presented. Motion carried. Administrator Jesme noted that the District received payment in the amount of \$400,000 from the Minnesota Department of Transportation for installation of the box culvert under HWY #32 as part of the construction for Thief River Falls Westside FDR Project, RLWD Project No. 178. Payment from Pennington County for their cost for centerline culverts should be received next week. After all funding has been received by our partners, a full report will be presented to the Board.

Zach Gutnecht, Beltrami SWCD, appeared before the Board to present a "Keep It Clean" campaign for the Upper Red Lake Area. The Beltrami SWCD is partnering with the Upper Red Lake Area Association and local resorts to raise awareness of winter angling impacts to Upper Red Lake when dealing with human waste that is left behind on the ice. Gutnecht discussed a series of meetings held with local resort owners and a kick off meeting with local governmental units. Where there is public access to the lake, they can have control points with local resort owners, where they can help manage awareness of the "Keep It Clean" campaign. Where there is no public access, this effort may also be a continuous reminder to folks to make sure they take their mess off the lake and dispose of it properly. This campaign is considered a Pilot Project, with plans to install dumpsters ready for use for February 2022, and then again December 2022 through February 2023. Total project cost is expected to be \$52,800, which includes four dumpsters per month, bio-bags, continued outreach and staff time. Landowner Robyn Dwight displayed a magnetic sign purchased as part of the multi-media campaign to be placed on one of dumpsters. Dwight stated that a letter will be drafted and distributed to the public making them aware of the impacts of winter angling on water quality and requesting assistance. Gutnecht stated that they applied for a Competitive Clean Water Fund Grant that they were not awarded as this type of practice doesn't fit in the present scoring system for grant funding. Gutnecht explained that once the Upper/Lower Red Lake 1W1P is completed, funding for this effort may be able to be had by including this practice in the workplan. After considerable discussion, Motion by Sorenson, seconded by Page, to approve the request of the Beltrami SWCD for the

Upper/Lower Red Lake “Keep It Clean” campaign in the amount of \$52,800 to be funded through the District’s Water Quality funding, RLWD Project No. 46. Motion carried.

Zach Gutnecht, Beltrami SWCD, discussed a Drought Management Workshop for local beef producers in the Blackduck area. Gutnecht discussed the impacts of the drought on smaller beef producers. The workshop will be held March 5, 2022 in Blackduck, with various professionals coming to speak. Gutnecht requested \$750 from the District, to assist with the cost of the workshop. President Nelson questioned how this workshop fits into any statutory funding that may be available by the District as he felt it was more NRCS or farm program oriented. Nelson also indicated that he did not feel this workshop was a bad idea, but he couldn’t see where funding the workshop would fit into the District’s mission statement or be authorized by statute. After further discussion, Nelson felt there should be no action on this item and would not entertain a motion.

Zach Gutnecht, Beltrami SWCD, stated that the Beltrami SWCD and Beltrami County are moving forward to get the partners together to submit for a grant application for the Upper/Lower Red Lake 1W1P. Gutnecht anticipates a meeting early March/April, with partners applying for a grant by June 1, with funding by September. The Board will be kept up to date on the process of the project.

Staff member Corey Hanson discussed the 2022-23 Thief River Watershed Surface Water Assessment Grant (SWAG), with the Minnesota Pollution Control Agency (MPCA). Hanson stated that the MPCA has a 10-year cycle for collecting and assessing data. Monitoring on the Thief River was last collected in 2011/2012. The cost of monitoring is \$35,541.06, with District staff completing the monitoring. No match is required, but the District would be responsible for any overages of staff time. Motion by Ose, seconded by Dwight, to accept the 2022-2023 Thief River Surface Water Assessment Grant, RLWD Project No. 168A, in the amount of \$35,541.06. Motion carried.

The District was informed of additional funding from the Federal Clean Water Act Section 319 Grant in the amount of \$124,232.26. The District previously had a 319 Grant grant for priority areas on the Red Lake River area. Staff member Corey Hanson stated that the Pennington SWCD has a Clean Water Fund Grant to stabilize an additional section of Pennington County Ditch 96, where the bank is severely eroding south of St. Hilaire, on the west side of Highway 32. Since this is a federal grant, state funding can be used as matching funds. Motion by Tiedemann, seconded by Dwight, to approve the Federal Clean Water Act Section 319 Grant in the amount of \$124,232.26, for bank stabilization of Pennington County Ditch 96, RLWD Project No. 46R. Motion carried.

Administrator Jesme stated that the Thief River Falls Oxbow Project, RLWD Project No. 46Q, is substantially completed, with the District submitting bills to the RRWMB for the first and final payment in amount of \$250,000.

Administrator Jesme discussed a request he received from a consultant, to purchase wetland banking credits from bank 1504 (Louisville Parnell). Jesme indicated that this bank consists of 18.23 acres of and that only 4.758 was certified by the Corps while the entire 18.23 acres was

certified by the State. Jesme indicated that at the time, the USACOE participated in establishing the wetland banking site but failed to process the paperwork in a timely manner, thus letting the certification process fall through the cracks and not getting any acres certified. Once the Corps got back on track to certify the acres, their rules changed thus only allowing 4.758 acres to be certified by them. Jesme felt that due to the ever-growing jurisdiction the USACOE seems to be gaining over the years in the 401 Certification Rule process, it seems rather unlikely many projects can be completed in the future without Corps' jurisdiction therefore making these wetland banking credits less useful. Jesme asked the Board that in the future should anyone request purchasing wetland banking credits from this bank for projects that don't fall under Corps' jurisdiction, would the Board consider giving staff the authorization to sell some of these credits to recoup the costs in establishing the credits. After discussion by the Board, it was suggested that Jesme complete an evaluation of the wetland banking credits to see what the cost per acre is that the District could expect, should the Board decide to move forward in the sale of the credits. Jesme will check into this matter further and report back to the Board.

Staff member Nick Olson stated that aeration system on Pine Lake, RLWD Project No. 35, officially began aerating on Monday, January 24, 2022. Olson stated that oxygen levels fell to 5 ppm, which is an indicator to begin aeration. The Gully Area Sportsman's Club completes all the monitoring and signage of the project. With the District being the permit holder, responsible for advertising and weekly inspection of the site.

MAWD dues for 2022 were presented to the Board. Motion by Sorenson, seconded by Tiedemann, and passed unanimously to approve paying \$7,500 for the 2022 MAWD dues. Motion carried.

Administrators Update:

- Jesme was unable to attend the RRWMB as he was on vacation.
- The first District payroll on QuickBooks Online Software was completed without a hitch. Staff is working with Brady Martz on minor adjustments on payment of taxes and reports.
- District and Houston Engineering staff met with Jason Boyle, MnDNR Dam Safety, to review old plans and share new structure ideas for the Knutson Dam to move forward in the design and permitting.
- The Clearwater River 1W1P Policy and Advisory Committee meeting was held on January 26th. The next meeting will be held February 23.
- A Thief River 1W1P Planning Work Group meeting was held on January 26th. Agenda items included the JD 23 Outlet, Education and Outreach Workshop, Implementation Schedule, review of financials for the Watershed Based Funding and year end E-link documentation.
- Jesme and Staff members Hanson and N. Olson and staff from HDR Engineering and the City of Thief River Falls met to discuss the Chief's Coulee project along with funding opportunities. Nate also met with two landowners within the project area.

Legal Counsel Sparby discussed the City of Thief River Falls Council Meeting, referring to Engineer Nate Dalager's, HDR Engineering, Inc., presentation on the Chiefs Coulee Project to

the council. Discussion was held on forming a subcommittee, focusing on preferred alternatives to the project.

Legal Counsel Sparby stated that Attorney, Mark Grainger, requested an extension to the scheduled hearing date, which was agreed to by Attorney Kolb, for the Improvement to Polk County Ditch 39, RLWD Project No. 179. Jesme expressed that the delays in the legal process could delay construction for another year should the courts rule in the petitioner's favor. It was the consensus to obtain a new hearing date as soon as possible.

Manager Dwight thanked the Board for supporting the "Keep it Clean" campaign presented by the Beltrami SWCD.

Manager Ose stated he was reappointed to the BWSR Board.

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

LeRoy Ose, Secretary

RED LAKE WATERSHED DISTRICT
Financial Report for February 10, 2022

Ck#	Check Issued to:	Description	Amount
online	EFTPS	Withholding FICA, Fed & Medicare (2-2-22 payroll)	4,265.01
online	MN Department of Revenue	Withholding taxes (2-2-22 payroll)	776.19
online	Further	Employee HSA (2-2-22 payroll)	215.00
online	Public Employees Retirement Assn.	PERA (2-2-22 payroll)	2,782.82
39144	Crookston Times	Voided check and re-issued. Never received	(697.60)
40025	Aramark	Office rug rental	52.19
40026	Beltrami SWCD	Sponsor "Keep it Clean" campaign Upper Red Lake	52,800.00
40027	Farmers Union Oil Company	Gas for vehicles	90.24
40028	Gatehouse Media MN Holdings	General fund hearing & Acct Officer ad	697.60
40029	Hugos #7	Meeting supplies & office supplies	162.06
40030	Les's Sanitation	Garbage pickup	35.74
40031	Marco	Copier maintenance	103.64
40032	MAWD	MAWD 2022 Dues	7,500.00
40033	MN Engergy	Heating expense	36.74
40034	Motor Vehicle License Bureau	License for ATV	66.00
40035	NCPERS Group Life Insurance	Life insurance premium	96.00
40036	Northwest Service Cooperative	2022 CCOGA membership dues	99.00
40037	Olson Construction	Snow removal for January 2022	480.00
40038	Pennington Co. SWCD	TR1W1P T & E expenses #149A	186.93
40039	Pitney Bowes	Postage	301.50
40040	Premium Waters, Inc.	H2O for Office	47.00
40041	Quill Corporation	Office supplies	202.70
40042	Sun Financial	Life insurance premium	147.84
online	Northwest Service Cooperative	Health insurance premium	3,009.21
online	Aflac	Staff paid insurance	381.78
online	Further	HSA & FSA account fees	11.00
online	Detla Dental	Dental insurance premium	685.00
	Payroll		-
	Staff Payroll (2-2-22 & 2-8-22)		14,739.45
	Total Checks		\$ 89,273.04

Banking

Northern State Bank

Balance as of January 27, 2022	\$ 411,386.93
Total Checks Written	(89,273.04)
Receipt #224083 Monthly Interest	83.06
Balance as of February 10, 2022	<u><u>\$ 322,196.95</u></u>
Current interest rate is .20%	

American Federal Bank-Fosston

Balance as of January 27, 2022	\$ 2,506,180.65
Receipt #224077 Sanderson - February Dental	\$ 56.95
Receipt #224078 Marshall Co. - 2021 Delinq taxes	6,221.53
Receipt #224079 Pennington Co. - 2021 Delinq taxes	20,607.14
Receipt #224080 Mahnommen Co. - 2021 Delinq taxes	127.66
Receipt #224081 Koochiching Co - 2021 Delinq taxes	1,603.04
Receipt #224082 Beltrami Co. - 2021 Delinq taxes	18,563.38
Receipt #224084 Monthly Interest	984.97
Receipt #224085 Pennington Co. - Final Payment Westside	368,775.55
Receipt #224086 Clearwater Co. - Prepay Ditch 100 Assessment	352.21
Receipt #224087 Clearwater Co. - Prepay Ditch 100 Assessment	10.16
Balance as of February 10, 2022	<u><u>\$ 2,923,483.24</u></u>
Current interest rate is .50%	
Total Cash	\$ 3,245,680.19

PO Box 367
Red Lake Falls, MN 56750
218/253-2598
FAX: 218/253-4894

Red Lake County Auditors Office

December 8, 2021

To: Clerks/Treasurers of affected Cities, Towns, Schools & Special Tax Districts;

As you may be aware, Enbridge Energy was in a dispute with the MN Department of Revenue (DOR) over the appraised value the state placed on the pipeline. Enbridge took the matter to court. The years affected are tax years 2013 thru 2019. There are 13 counties in the state that the Enbridge Pipeline passes thru and Red Lake County is one of those counties. The matter has been settled and it was determined that the state had the pipeline values too high. The court decided that those 13 counties must refund Enbridge the tax plus interest charges accrued back to 2013. So, there was legislation in the 2021 Omnibus Tax Bill passed that provided for a one-time grant for the 13 counties to reimburse Enbridge as was directed by the courts. However, the grant did not cover all the tax/interest charges due Enbridge; some of the counties were significantly short of grant dollars.


Red Lake County received \$1,904,685.00 in state grant dollars but owed Enbridge \$1,970,341.33 per court order, so there was a shortage of \$65,656.33 that the county paid on behalf of the tax districts that had pipeline values. These same tax districts benefit from the pipeline tax paid by Enbridge so now the amount that is not covered by the grant dollars is the responsibility of these same tax districts. The shortage payment that each tax district is reimbursing to the county is figured according to the interest charges in each tax district as compared to the overall interest costs of all districts. The largest amount of the shortage is the county's responsibility.

I am providing the following breakdown of the shortage amounts that each affected tax district must reimburse to Red Lake County. Note that the ISD #2906 School amount is large due to the fact that all the Enbridge property is located solely within the Red Lake County Central School District.

County	\$32,304.00
Emardville	\$ 1,762.51
Garnes	\$ 1,076.31
Lambert	\$ 364.64
River	\$ 48.93
City Oklee	\$ 1,900.34
City Plummer	\$ 3,901.15
NWRDC	\$ 151.30
Red Lake Watershed	\$ 3,052.88
NW HRA	\$ 340.05
ISD #2906	\$20,754.22
Total Shortage	\$65,656.33

I have highlighted the amount your respective tax district must reimburse to Red Lake County. Please submit your payment within the next 10 days and made payable "**Red Lake County**" and mail to the address listed above. Please contact me if you have any questions.

Thank you,


Bob Schmitz, County Auditor

DEC 13 2021

MS

103D.625 DRAINAGE SYSTEMS IN WATERSHED DISTRICT.

Subdivision 1. **Duty to assume drainage systems.** (a) The managers shall take over a joint county or county drainage system within the watershed district and the right to repair and maintain the drainage system if directed by a joint county drainage authority or a county board. The transfer may be initiated by:

- (1) the joint county drainage authority or county board;
- (2) a petition from a person interested in the drainage system; or
- (3) the managers.

(b) The transfer may not be made until the joint county drainage authority or county board has held a hearing on the transfer. Notice of the proposed transfer with the time and place of hearing must be given by two weeks' published notice in a legal newspaper of general circulation in the area where the transfer is to occur. All interested persons may appear and be heard.

(c) After the hearing, the joint county drainage authority or county board shall order the watershed district to take over the joint county or county drainage system, unless it appears that the takeover would not serve the purpose of this chapter and would not be for the public welfare or be in the public interest.

Subd. 2. **Status of assumed drainage systems.** A joint county or county drainage system that is taken over in whole or in part is part of the works of the watershed district to the extent taken over.

Subd. 3. **Procedure for repair or improvement.** After the transfer is ordered, all proceedings for repair and maintenance must conform to chapter 103E, except for repairs and maintenance done pursuant to section 103D.621, subdivision 4.

Subd. 4. **Construction or improvement.** Construction of new drainage systems or improvements of existing drainage systems in the watershed district must be initiated by filing a petition with the managers. The proceedings for the construction or improvement of drainage systems in the watershed district must conform to chapter 103E, except for repairs and maintenance done pursuant to section 103D.621, subdivision 4.

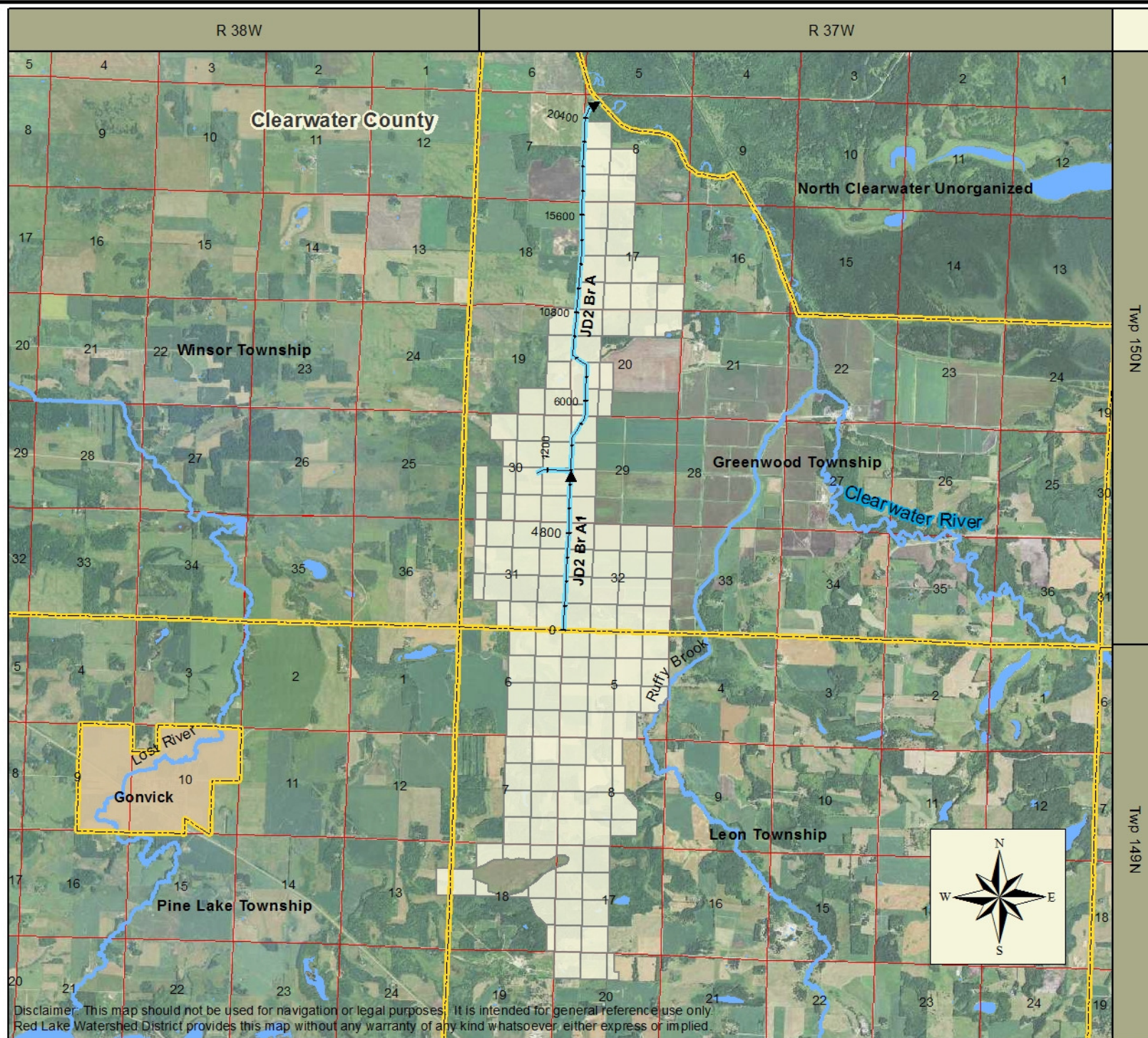
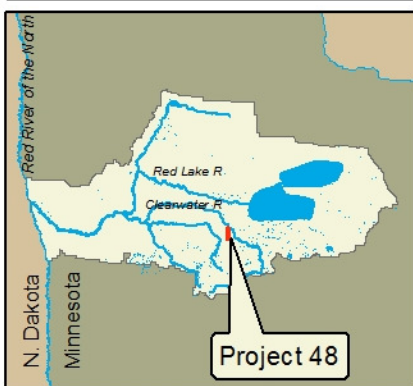
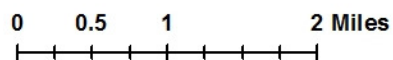
History: 1990 c 391 art 4 s 49; 1995 c 199 s 37,38



Clearwater River
Subwatershed






Scale: 1:81,000

- ➡ Project 48
- 📐 Townships
- 🟡 Benefitted Area
- 🔴 Sections
- 🟤 Town/City

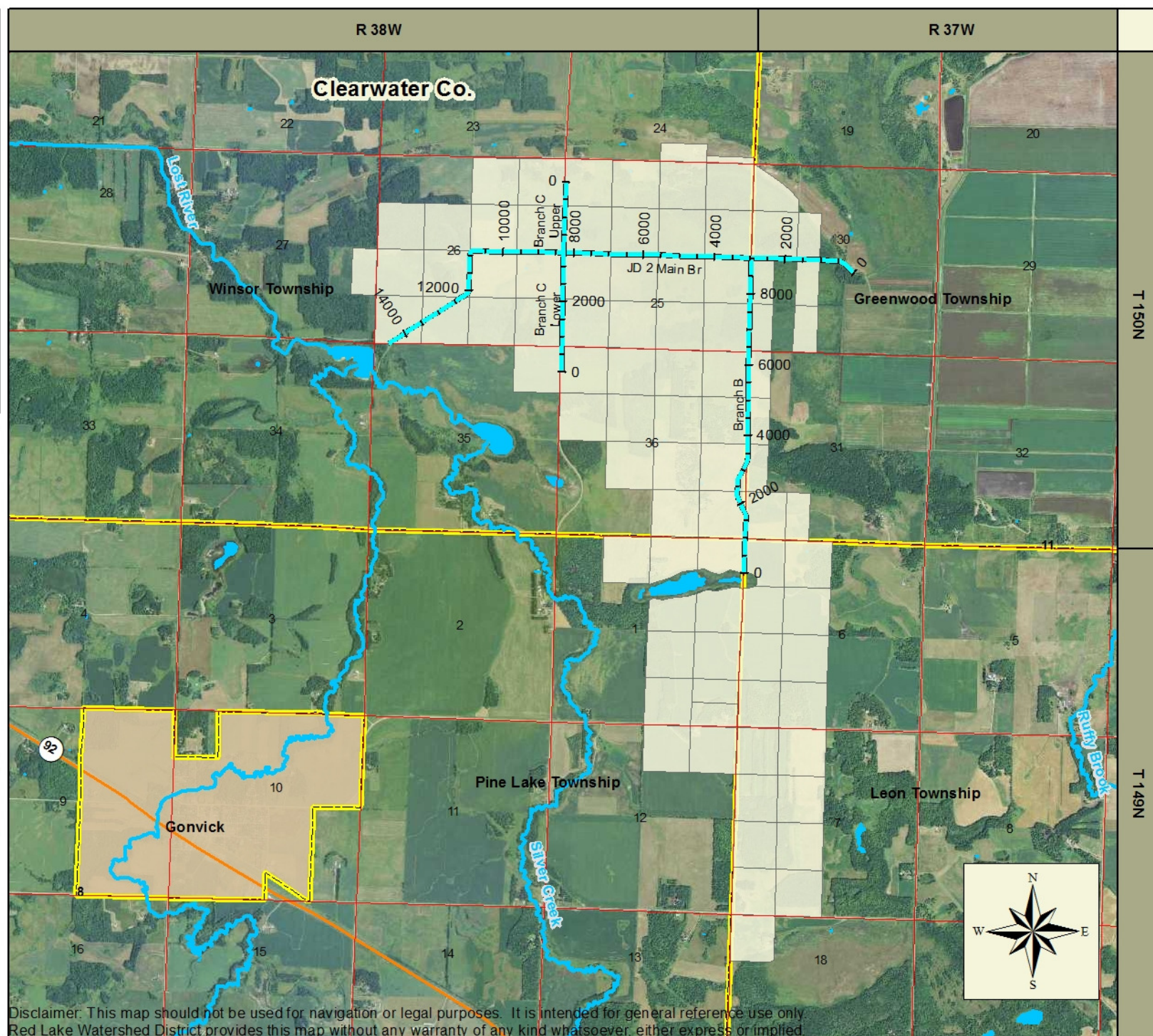
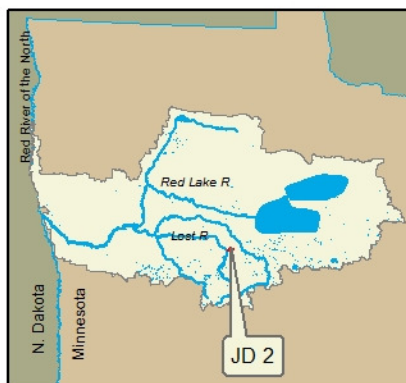




**Red Lake
Watershed District**
Project 49
Judicial Ditch 2
Clearwater County
Clearwater River
Subwatershed
Scale: 1:43,000

-  Judicial Ditch 2
-  Section Boundary
-  Proj. 49 Benefitted Area
-  Township Boundary
-  Towns/Cities

0 0.125 0.25 0.5 0.75 1 Mi





Red Lake Watershed District Main Judicial Ditch 2

Lost River

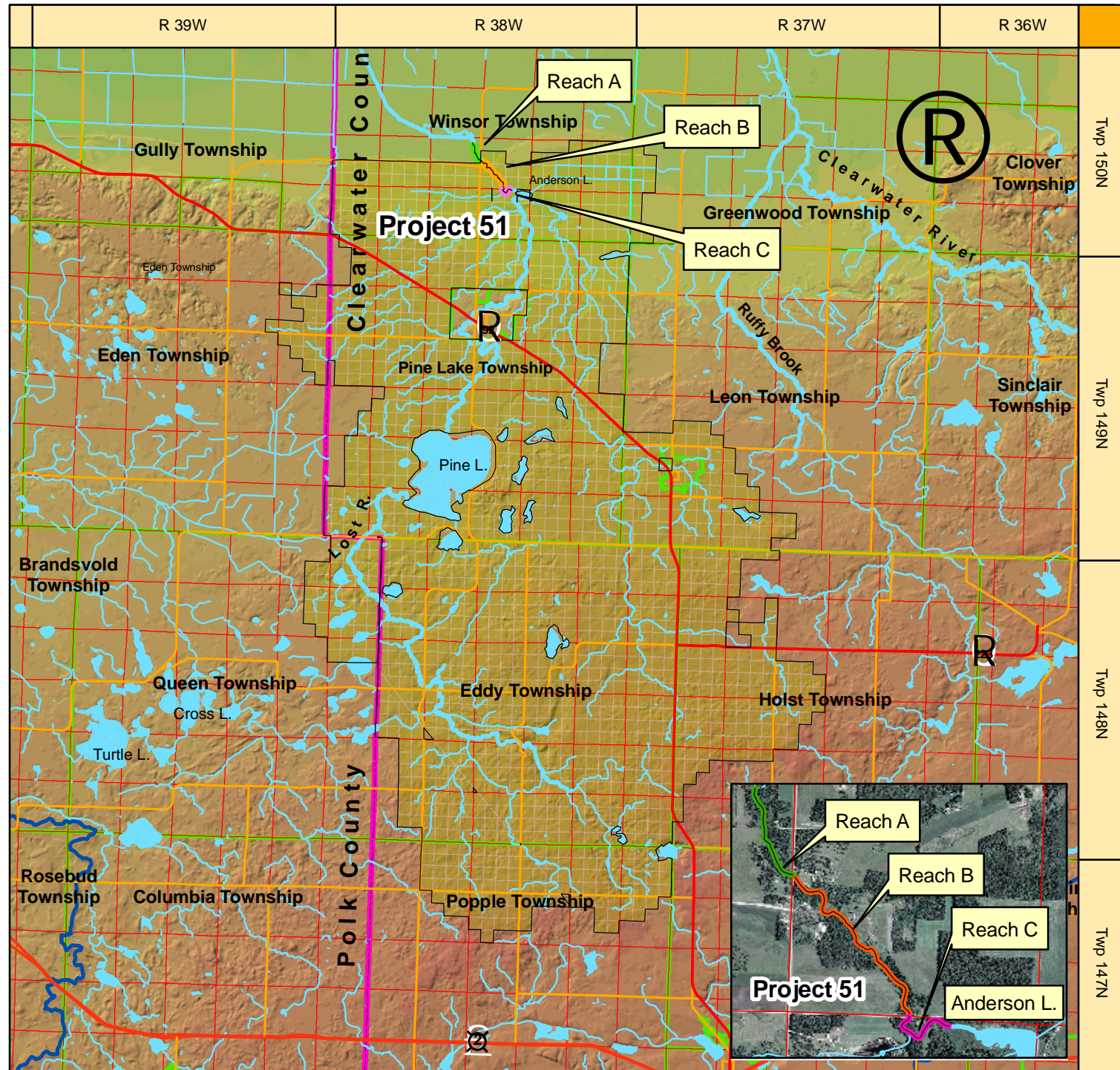
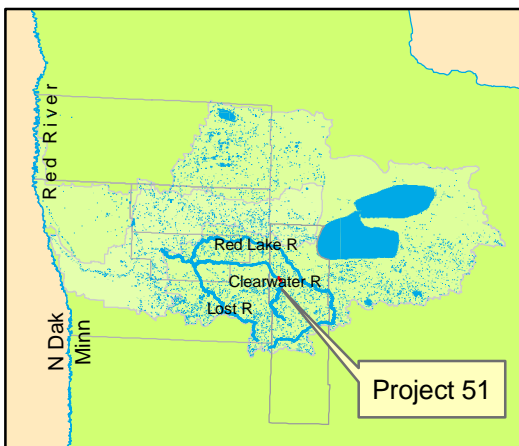
Clearwater/Polk/Red Lake
Counties

Clearwater River
Subwatershed

Scale: 1:175,000

- Proj. 51, Reach A
- Proj. 51, Reach B
- Proj. 51, Reach C
- Watershed Divide
- County
- Township
- Proj 51 Benefitted Areas

0 0.5 1 2 3 4 Miles

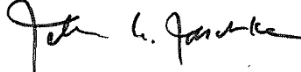


MEMO

Date: February 1, 2022

To: Watershed District staff

Cc: BWSR Board Conservationist

From: John Jaschke, Interim Assistant Director of Regional Operations 

RE: Watershed District Project Establishments using 103D.605

According to 103D.605 Projects constructed with government aid or as part of a plan, BWSR must establish the project via BWSR Order. The BWSR Board (Board Order #21-31) has delegated the BWSR Order decision to the Executive Director to provide for efficient processing of WD project establishment requests. The following procedure is required by statute for BWSR to establish the project:

1. Watershed district (WD) provides a copy of the project plan to BWSR Chief Engineer and the Division of Ecological and Water Resources of the Department of Natural Resources (DNR). Both agencies must review the project plan and submit reports to the WD.
2. After the WD receives the reports from BWSR and DNR, the WD schedules and provides notice for a public hearing on the project per 103D.605 subd. 3.
3. WD holds the public hearing and listens to all parties interested in the proposed project.
4. After the project hearing, the WD determines if the project will be conducive to public health, promote the general welfare, and is in compliance with the adopted WD plan and the provisions of Minn. Stat. 103D.
5. The WD submits their official request for a decision from BWSR with their findings (resolution/board order/approved meeting minutes) and any additional supporting material (Engineers Report, hearing documentation, etc.).
6. BWSR, via Board Order, will make a decision on the project. BWSR will inform the WD of the decision with a letter and Board Order distributed via email.

BWSR anticipates working with MAWD in the future to review this statutory requirement.

Please contact your BWSR Board Conservationist with any additional questions.

**Louisville Parnell Wetland Banking Site
Section 13 and Section 18/ Polk and Red Lake Counties**

Account # 1504
Acres Stored for WCA 18.23
WCA acres remaining 17.182
Acres Stored for USACOE 4.758
USACOE acres remaining 3.784

Trans Date by Regulatory Authority	WCA Acres Withdrawn	*USACOE		County Withdrawl	Project Withdrawn	Amount
		Acres Withdrawn	Type			Received \$
6/29/2012	0.394	0.394	3 Pennington		Proj. 171A	\$2,145.77
6/29/2012	0.394	0.394	U Penninton		Proj. 171A	\$2,145.77
11/1/2013	0.186	0.186	3 Polk		Fosston Trail Project	\$2,259.71
4/17/2020	2.98	0	6 Pennington		Proj. 178	\$41,720.00
8/3/2020	0.074	0	3 Polk		City of Crookston	\$1,036.00

* The United State Army Corps of Engineers only certified 4.758 acres of the 18.23 acres available for WCA.



2019 Average Cost per Credit

Minnesota Wetland Bank
2019 Withdrawal Transactions

Standard Banking ¹			
BSA ²	Average Cost per Credit ³	Number of Transactions That Reported Cost Information	Total Number of Transactions Processed
1	\$70,399.33	12	13
2	\$35,664.75	16	17
3	\$17,791.11	9	11
4	\$31,218.00	6	8
5	\$20,773.87	12	22
6	\$42,783.71	7	8
7	\$81,558.09	45	65
8	\$36,813.78	9	17
9	\$49,962.50	21	46
10		0	0
Total		137	207

Agricultural Banking ¹			
BSA ²	Average Cost per Credit ³	Number of Transactions That Reported Cost Information	Total Number of Transactions Processed
1		0	0
2		0	0
3	\$5,281.25	8	8
4	\$13,000.00	1	9
5		0	1
6		0	0
7	\$19,890.00	2	5
8	\$19,300.00	2	2
9	\$18,666.67	3	23
10		0	0
Total		16	48

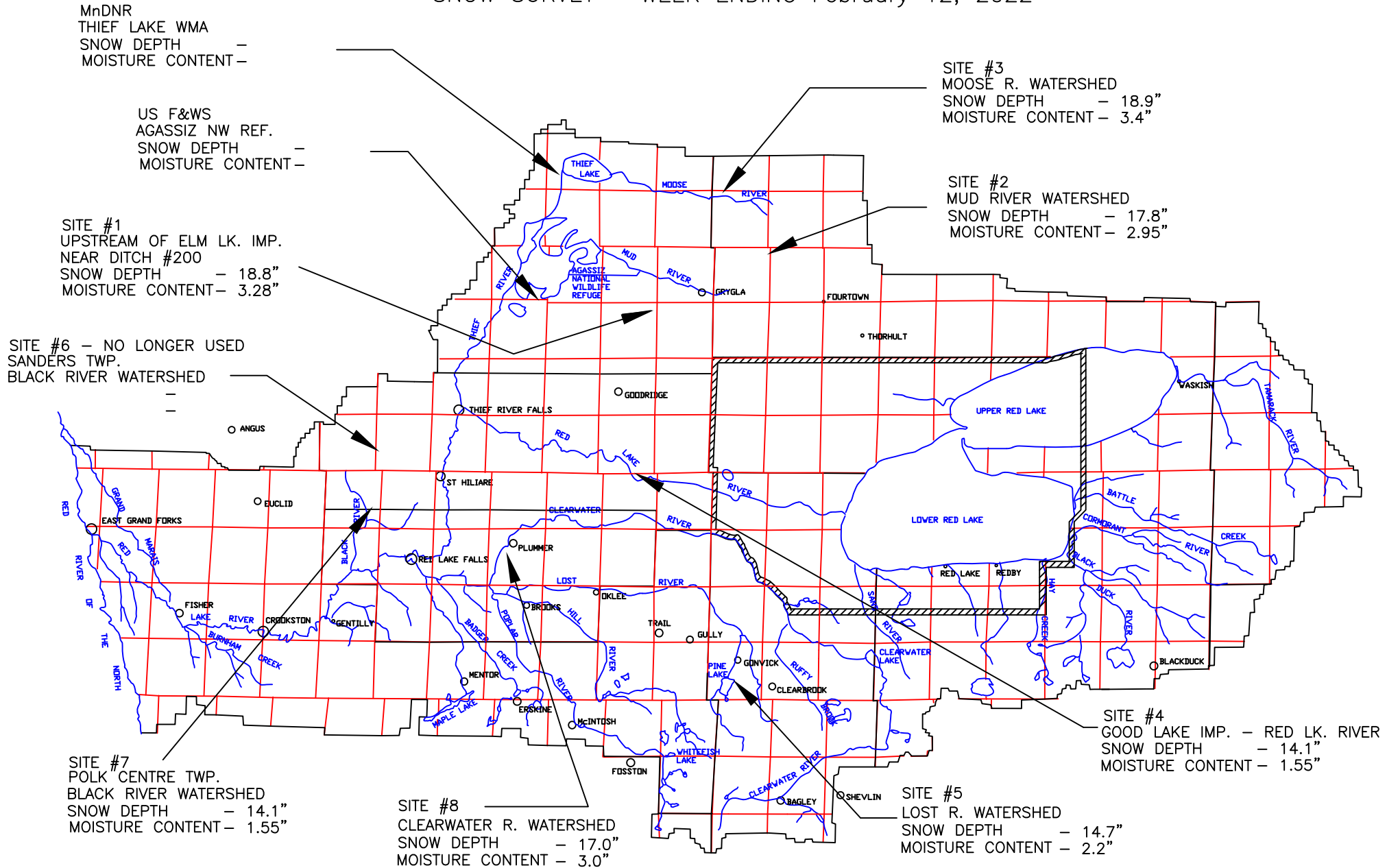
1. Standard Banking refers to all banking transactions that are not part of the Road Program (LGRWRP) or Agricultural Banking. Agricultural Banking does not include Standard Banking or Road Program (LGRWRP).

2. BSA is the Bank Service Area

3. The average cost per credit is calculated using information voluntarily provided to BWSR on withdrawal transaction forms. It includes transactions completed between January 1, 2019 and December 31, 2019. BWSR did not verify any of the cost information provided on the withdrawal forms.

RED LAKE WATERSHED DISTRICT

SNOW SURVEY – WEEK ENDING February 12, 2022

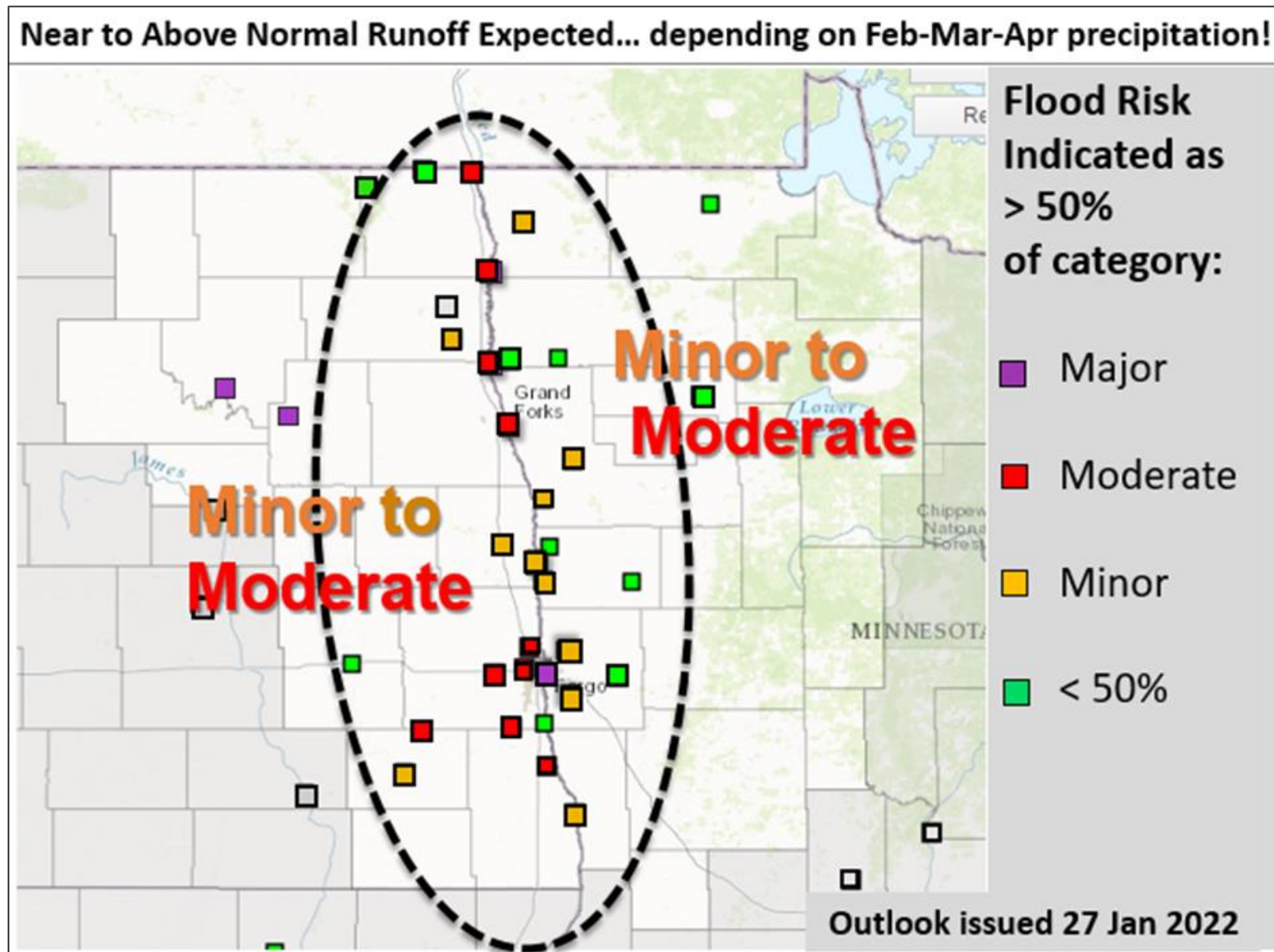


Bottom Line up Front:

- Risk for *significant flooding* is near to slightly higher than historic*.
- *Minor to moderate flooding* is the main threat...for now.
 - Dry/drought conditions from 2021 are much improved due to fall precipitation.
 - Soil moisture and base streamflow near normal.
 - Snowpack/snow water content near to slightly above normal.
- February/March/April climate predictions suggest equal chances for below/normal/above temperatures and precipitation (i.e., no strong signal in any direction).

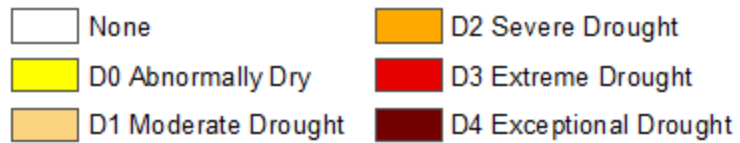
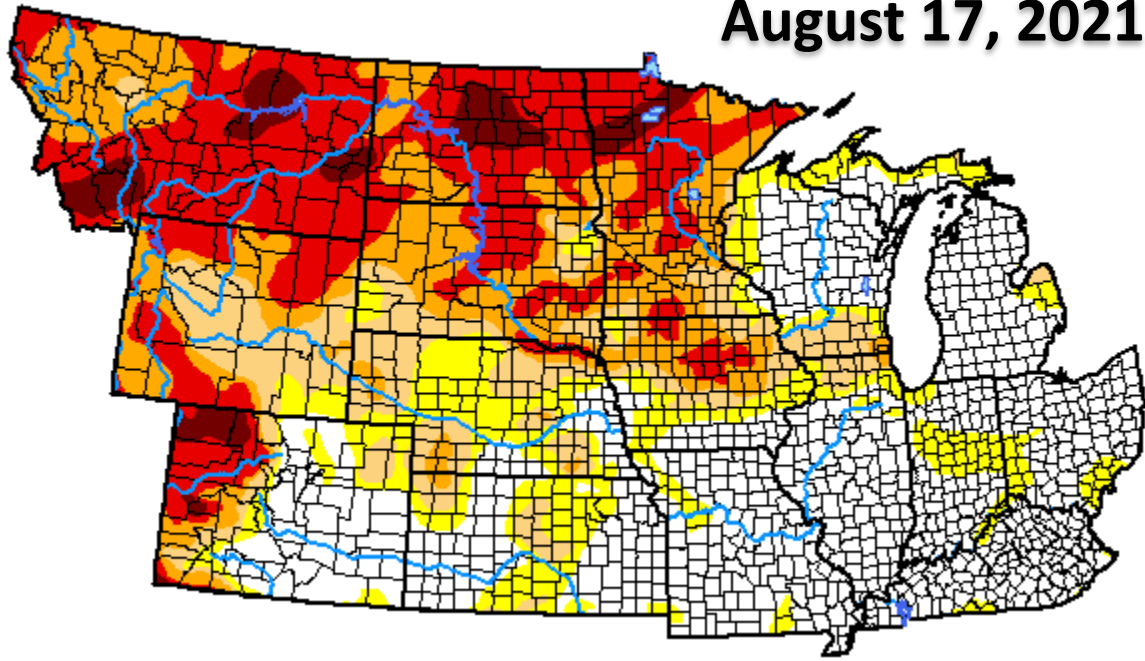
*Refers to Conditional Risk (this year) versus Historical Risk

Flood Risk by Category at River Forecast Points



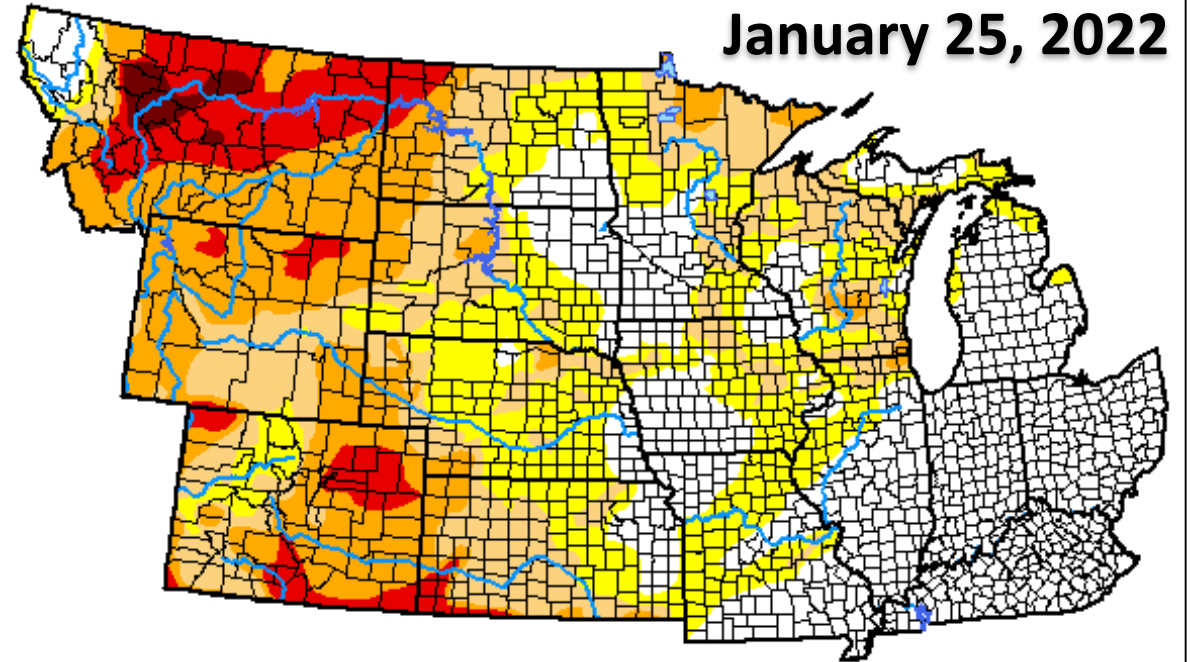
U.S. Drought Monitor

August 17, 2021



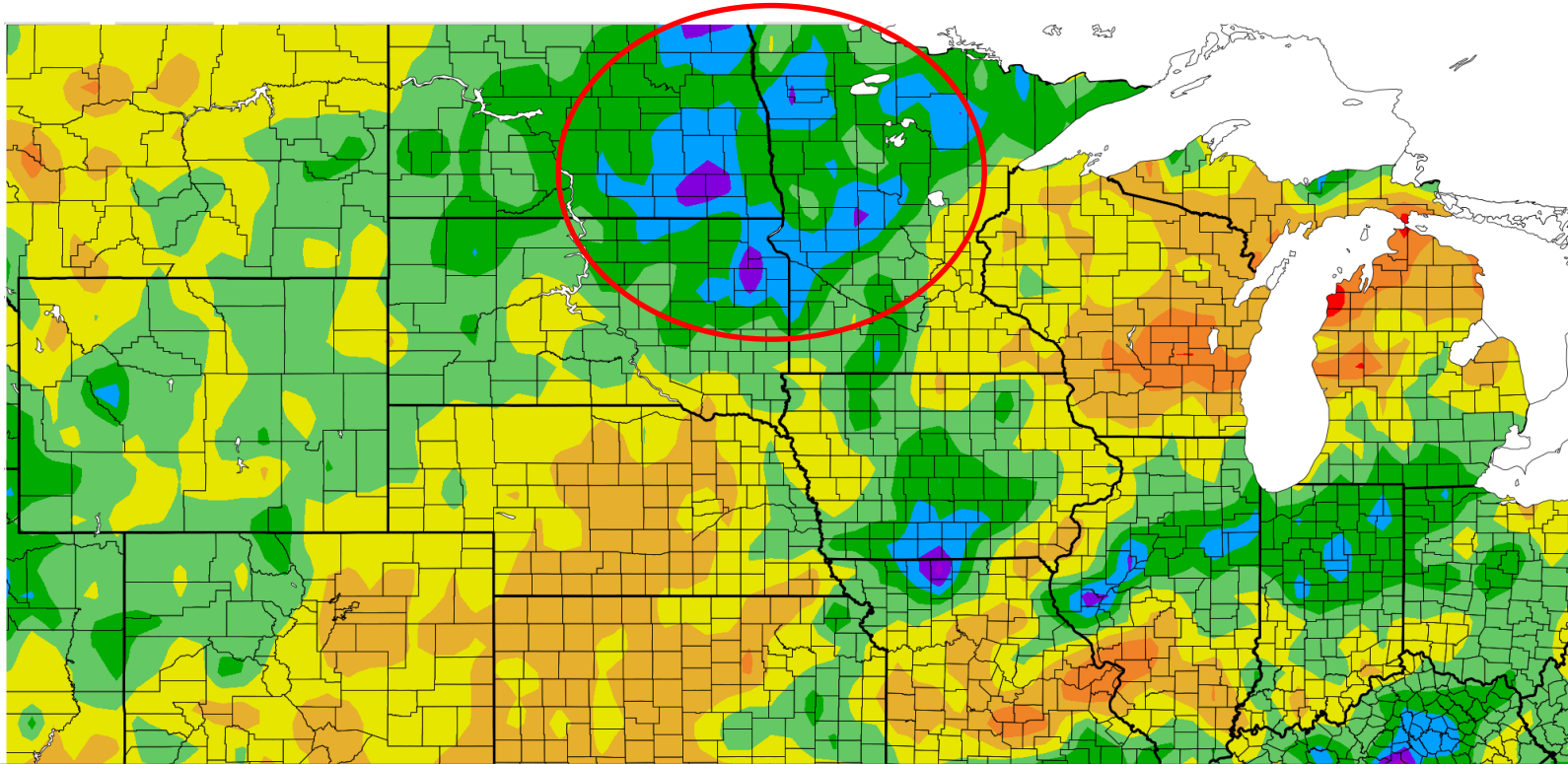
droughtmonitor.unl.edu

January 25, 2022



Fall-Winter Precipitation

Departure from Normal Precipitation (in)
10/1/2021 – 1/25/2022



3-6 inches more Fall-Winter precipitation (so far) compared to last year



Generated 1/26/2022 at HPRCC using provisional data.

NOAA Regional Climate Centers

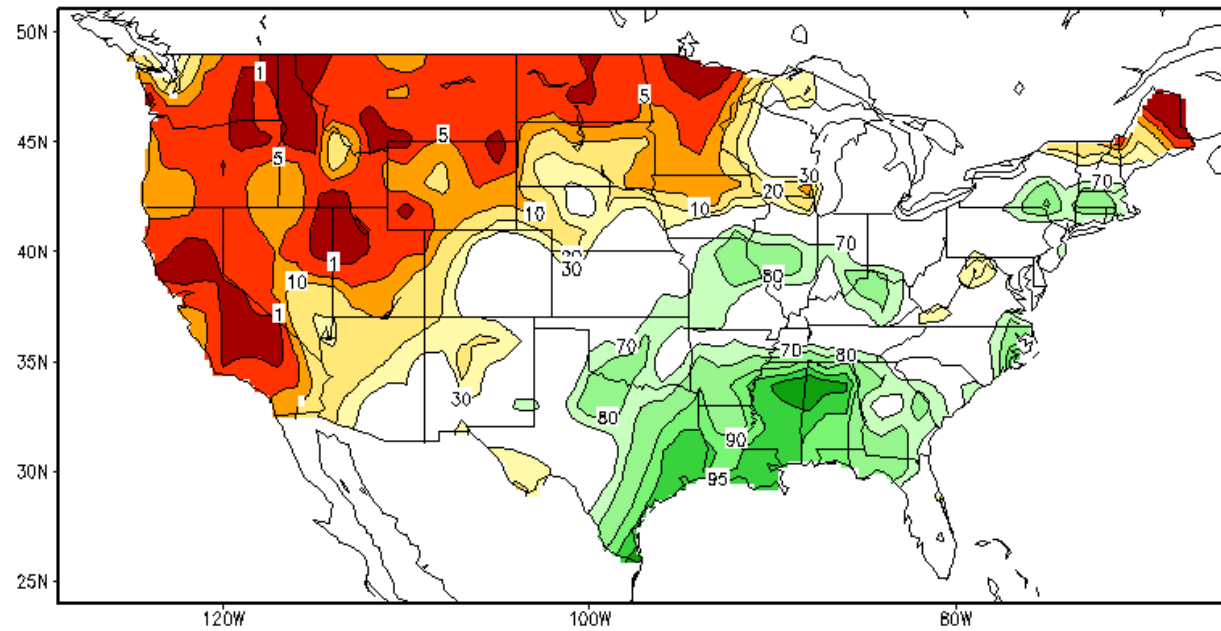
Summer vs Winter Soil Moisture

6 Months Ago (July 2021)

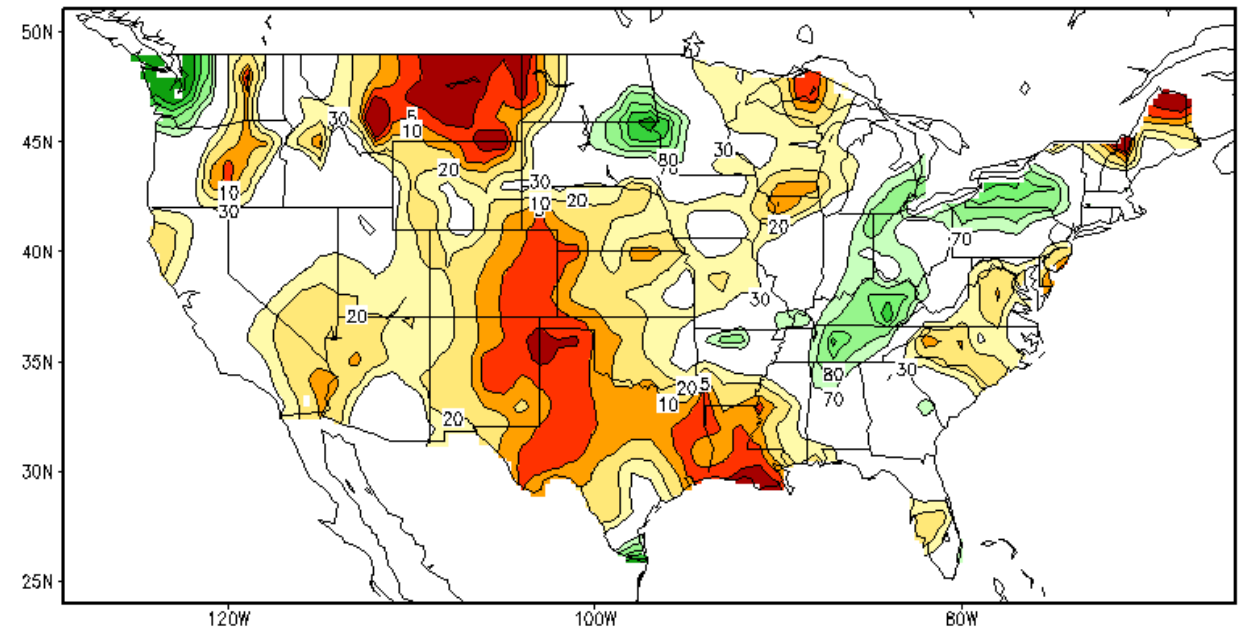
vs

Few Days Ago (January 2022)

Calculated Soil Moisture Ranking Percentile
JUL, 2021

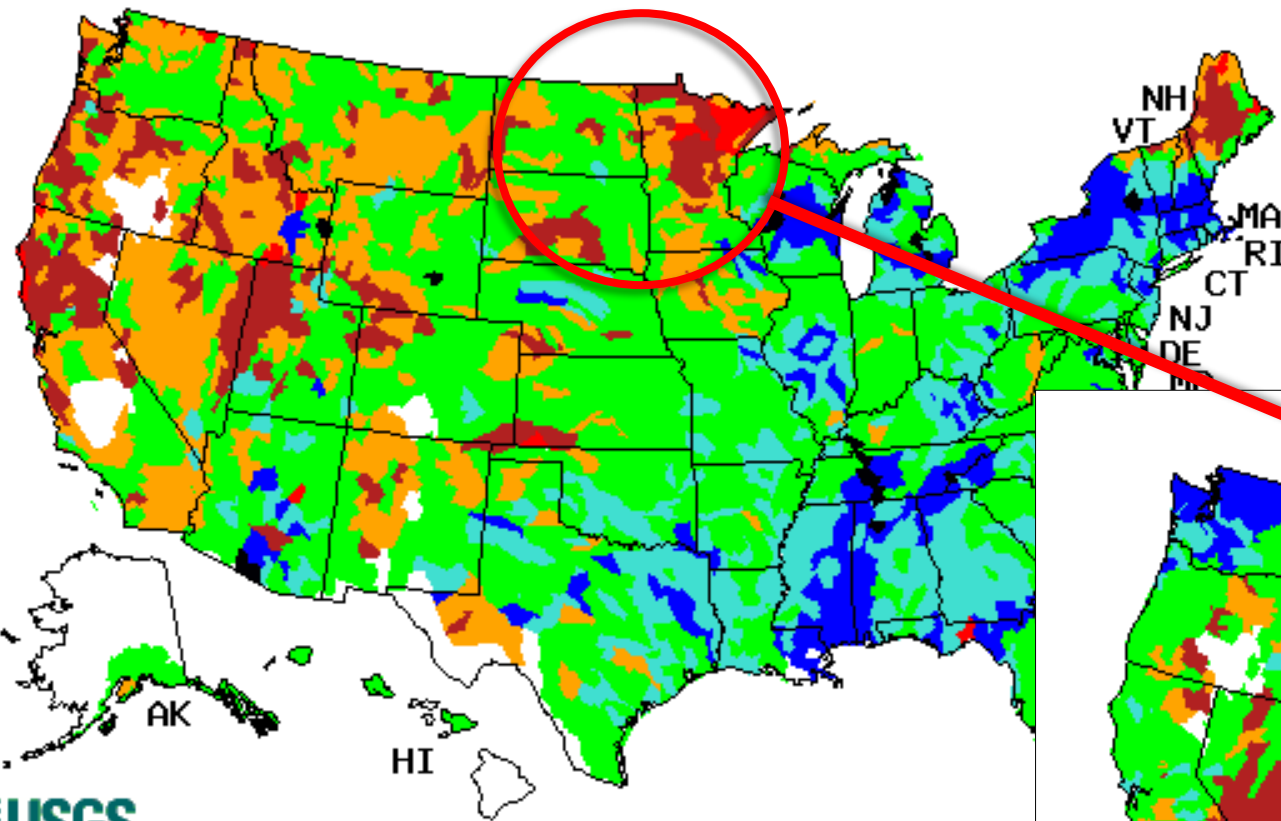


Calculated Soil Moisture Ranking Percentile
JAN 25, 2022



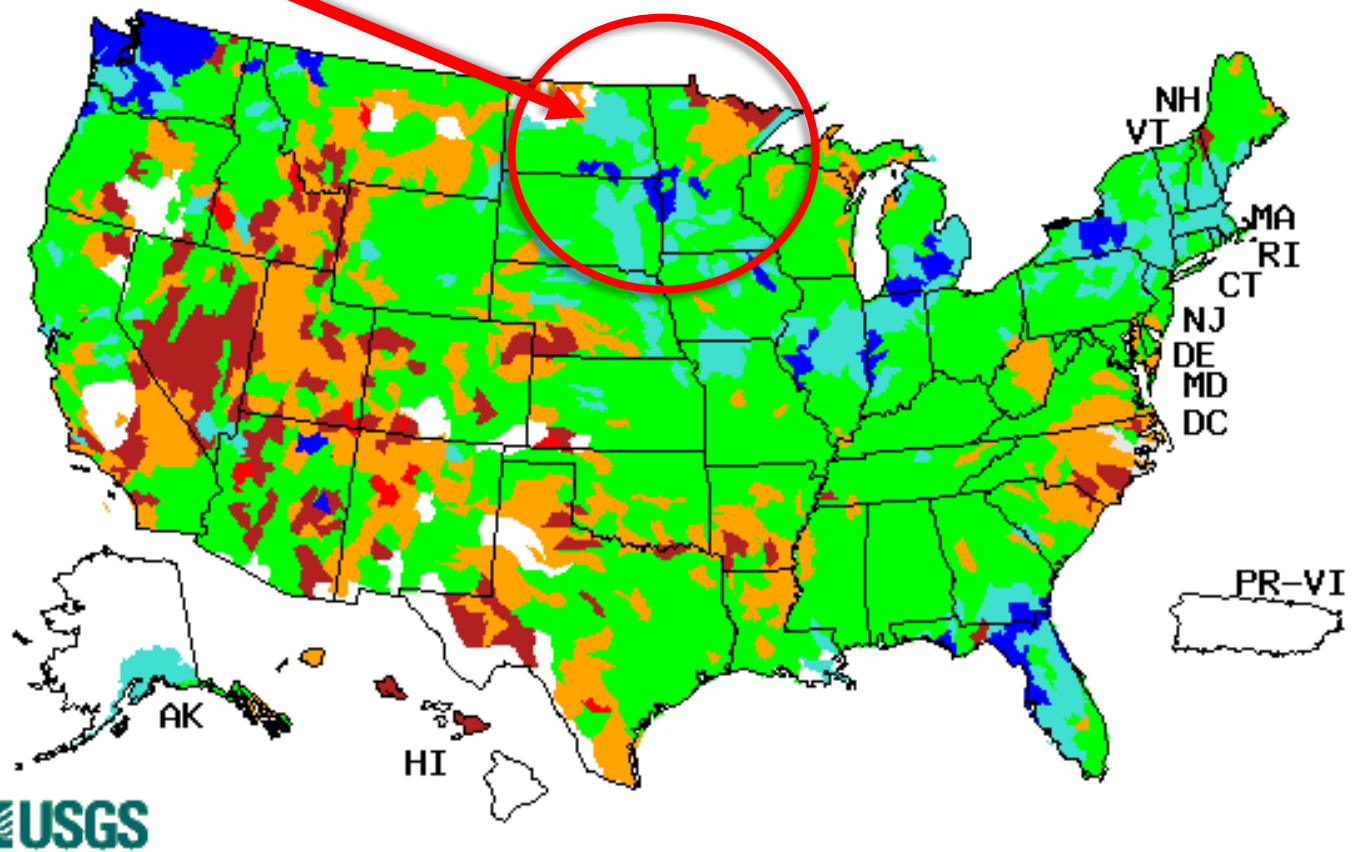
Current NWS/CPC analysis has the basin within +/- 1 inch of normal in top ~3 ft of soil

August 2021



**Much needed fall rains led to
near normal streamflow
heading into freeze-up**

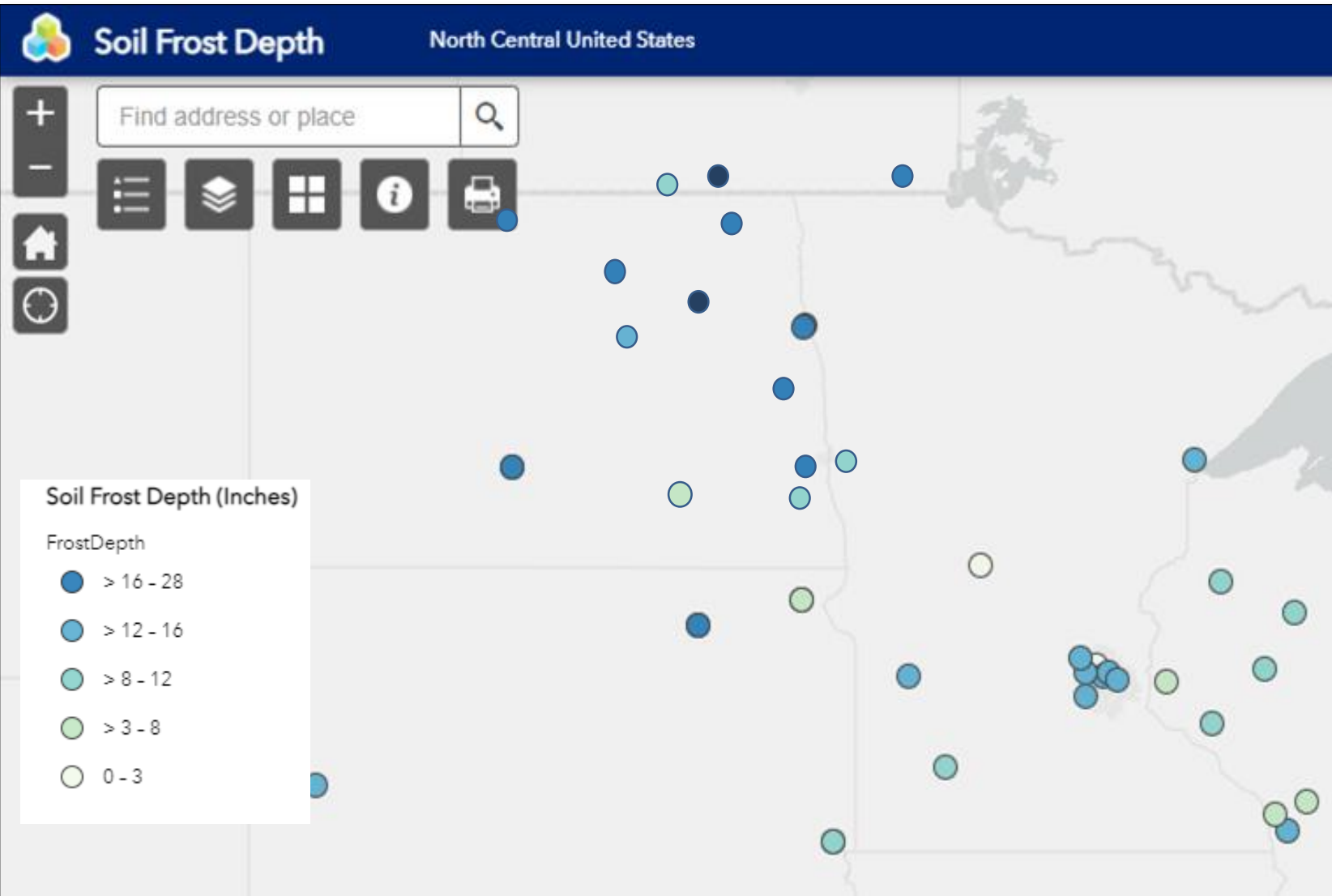
November 2021



Explanation - Percentile classes

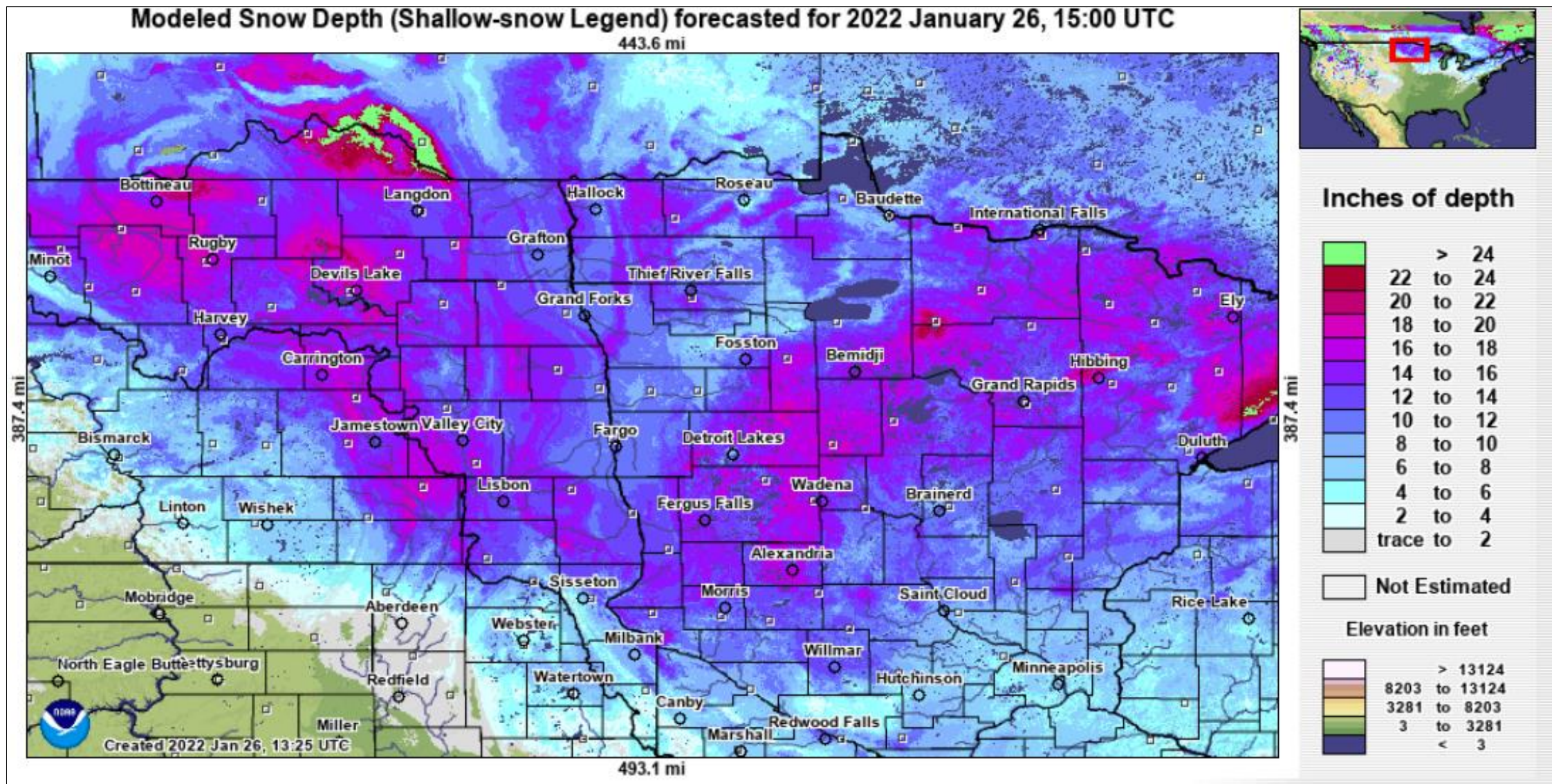
Low	<10	10-24	25-75	76-90	>90	High
	Much below normal	Below normal	Normal	Above normal	Much above normal	

Frost Depths: Near Normal



- Despite the relatively warm start to winter, frost has penetrated fairly deep due to recent cold conditions
- Normal to slightly deeper than normal
 - Generally 12-30 inches
 - Note quite as deep in the far southern valley
 - Currently 27" at NWS Grand Forks

Snow Depth: Near to above Normal



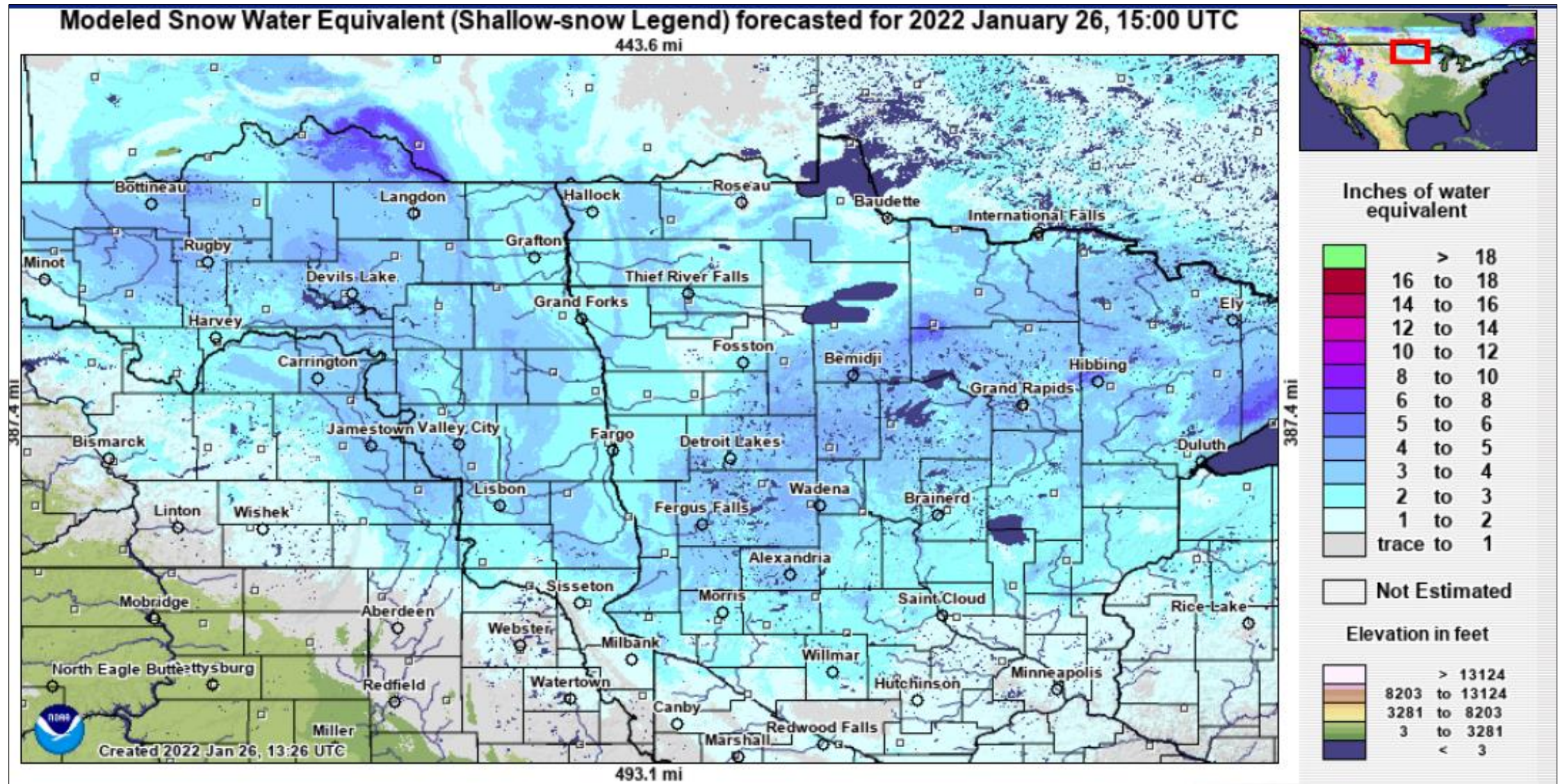
Roughly 6-20" across the basin

NWS Grand Forks: 8"

Fargo Observer: 11"

Data courtesy of NOHRSC

Snow Water Content: Near to above Normal



Roughly 1.5-3.5" across the basin

NWS Grand Forks: 2.5"

Data courtesy of NOHRSC

Permit # **21-045**Status Report: **Approved****Applicant Information**

Name	Organization	Address	Email	Phone Number(s)
	Thief River Falls Regional Airport Authority	13722 Airport Drive Thief River Falls, MN 56701		tel: mobile: fax:

General Information

(1) The proposed project is a:

Surface Drainage (New Ditch or Improvement)

(2) Legal Description

(3) County: **Pennington** Township: **Rocksbury** Range: **43** Section: **16 1/4: SE1/4**(4) Describe in detail the work to be performed. **Construction of a cargo apron and hangar. Construction of two filtration basins to treat stormwater runoff.**(5) Why is this work necessary? Explain water related issue/problem being solved. **Improvements are needed to expand airport capabilities and function.****Status**

Status	Notes	Date
Approved	1 Year Extension	Feb. 4, 2022

Conditions**RLWD approves the extension request, the permit will now have a completion date of May 21, 2023. 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 # **22-001**Status Report: **Approved****Applicant Information**

Name	Organization	Address	Email	Phone Number(s)
	Polk County Highway Department	820 Old Highway 75 South Crookston, MN 56716		tel:218-281-3953 mobile: fax:

General Information

(1) The proposed project is a:

Culvert Installation / Removal / Modification

(2) Legal Description

(3) County: **Polk** Township: **Grove Park** Range: **43** Section: **22 1/4**:(4) Describe in detail the work to be performed. **Remove in-place 64" span CMP-A culvert and install a 10' X 4' box culvert.**(5) Why is this work necessary? Explain water related issue/problem being solved. **Existing culvert is structurally deficient.****Status**

Status	Notes	Date
Approved		Feb. 3, 2022
Received		Jan. 18, 2022

Conditions

Red Lake Watershed District (RLWD) approval to remove the existing 64" span CMP-Arch and install a 10' X 4' box culvert, as per plan-set provided. Permit location is within P.C.D. #14. 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 # **22-002**Status Report: **Approved****Applicant Information**

Name	Organization	Address	Email	Phone Number(s)
	Polk County Highway Department	820 Old Highway 75 South Crookston, MN 56716		tel: 218-281-3952 mobile: fax:

General Information

(1) The proposed project is a:

Culvert Installation / Removal / Modification

(2) Legal Description

(3) County: **Polk** Township: **Grove Park** Range: **43** Section: **22 1/4**:(4) Describe in detail the work to be performed. **Remove in-place 64" span CMP-A culvert and install a 10' X 4' box culvert.**(5) Why is this work necessary? Explain water related issue/problem being solved. **Existing culvert is structurally deficient.****Status**

Status	Notes	Date
Approved		Feb. 3, 2022
Received		Jan. 12, 2022

Conditions

Red Lake Watershed District (RLWD) approval to remove the existing 64" span CMP-Arch and install a 10' X 4' box culvert, as per plan-set provided. Permit location is within P.C.D. #14. 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 # **22-003**Status Report: **Approved****Applicant Information**

Name	Organization	Address	Email	Phone Number(s)
	Polk County Highway Department	820 Old Highway 75 South Crookston , MN 56716		tel: 218-251-3953 mobile: fax:

General Information

(1) The proposed project is a:

Culvert Installation / Removal / Modification

(2) Legal Description

(3) County: **Polk Township: Grove Park Range: 43 Section: 22 1/4:**(4) Describe in detail the work to be performed. **Remove 4' X 4' Box Culvert and install a 10' X 4' box culvert.**(5) Why is this work necessary? Explain water related issue/problem being solved. **existing structure is structurally deficient.****Status**

Status	Notes	Date
Approved		Feb. 3, 2022
Received		Jan. 18, 2022

Conditions

Red Lake Watershed District (RLWD) approval to remove the existing 4' X 4' box culvert and install a 10' X 4' box culvert, as per plan-set provided. Permit location is within P.C.D. #14. 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 # 22-005

Status Report: **Approved****Applicant Information**

Name	Organization	Address	Email	Phone Number(s)
	Polk County Highway Department	820 Old Hwy 75 South Crookston , MN 56716		tel:218-281-3953 mobile: fax:

General Information

(1) The proposed project is a:

Culvert Installation / Removal / Modification

(2) Legal Description

(3) County: **Polk** Township: **Grove Park** Range: **43** Section: **3 1/4**:(4) Describe in detail the work to be performed. **Install 1-line of 10'X5' box culvert**(5) Why is this work necessary? Explain water related issue/problem being solved. **Existing structure is deficient****Status**

Status	Notes	Date
Approved		Feb. 3, 2022
Received		Feb. 2, 2022

Conditions

Red Lake Watershed District (RLWD) approval to remove the existing 2 – 48" CMP's and install a 10' X 5' box culvert, as per plan-set provided. Permit location is within P.C.D. #14. 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 # **22-007**Status Report: **Approved****Applicant Information**

Name	Organization	Address	Email	Phone Number(s)
	Polk County Highway Department	820 Old Hwy 75 South Crookston, MN 56716		tel: 218-280-3952 mobile: fax:

General Information

(1) The proposed project is a:

Culvert Installation / Removal / Modification

(2) Legal Description

(3) County: **Polk** Township: **Euclid** Range: **47** Section: **16 1/4**:(4) Describe in detail the work to be performed. **Install 1-line of 12'X5' box culvert**(5) Why is this work necessary? Explain water related issue/problem being solved. **Existing structure is deficient****Status**

Status	Notes	Date
Approved		Feb. 4, 2022
Received		Feb. 2, 2022

Conditions

Red Lake Watershed District (RLWD) approval to remove the existing 2 – 72" RCP culverts and install a 12' X 5' box culvert, as per plan-set provided. Permit location is within P.C.D #66. 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 #	County Ditch #	In-Place	Planned	Additional End Area	Drainage Area
22-001	CD14	64" Span CMP-A 15.9 sq.ft.	10'X4' Box 38 sq.ft.	+22.1 sq. ft.	68 sq. mi.
22-002	CD14	64" Span CMP-A 15.9 sq.ft.	10'X4' Box 38 sq.ft.	+22.1 sq. ft.	68 sq. mi.
22-003	CD14	4'X4' RCP Box 14 sq. ft.	10'X4' Box 38 sq.ft.	+24 sq. ft.	69 sq. mi.
22-005	CD14	2 - 48" CMP 25.14 sq. ft.	10'X5' Box 48 sq.ft.	+22.86 sq. ft.	78 sq. mi.
22-007	CD66	2- 72" RCP 56.54 sq ft	12'X5' Box 58 sq.ft.	+1.46' sq. ft.	17 sq. mi.

Nick Olson

From: Rich Sanders <rsanders@co.polk.mn.us>
Sent: Monday, January 31, 2022 2:37 PM
To: Nick Olson
Cc: Myron Jesme
Subject: CSAH 106, 113 and Mentor City Street Harrison Ave

Polk County has submitted permits to replace the culverts in Polk County Ditch 14 (Maple Creek).

The proposed structure for each crossing is a PCC 10'x4' Box Culvert with end sections.

This is based on a drainage area of 51 sq. mi. and 13 percent Lake and Pond coverage.

Just upstream Polk County replaced a Grove Park Township Bridge with the same structure, (10'x4' Box) in 2021.

Just downstream from this location thru CSAH 45, Polk County installed 2 lines of 73" span RCP-A in 2003.

So the structures fit the reach and culvert requirements for CSAH's/Roadways.

Polk County does not consider this culvert replacement to be an improvement to CD 14.

If you have any further questions feel free to contact me.

Richard C. Sanders, PE
Polk County Engineer

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Permit # **22-004**Status Report: **Approved****Applicant Information**

Name	Organization	Address	Email	Phone Number(s)
	BNSF Railway Company	4515 Kansas Avenue Kansas City, KS 66106		tel:817-897-4184 mobile: fax:

General Information

(1) The proposed project is a:

Bridge Installation / Removal / Modification

(2) Legal Description

(3) County: **Clearwater** Township: **Popple** Range: **38** Section: **28 1/4**:(4) Describe in detail the work to be performed. **Replace existing 9-span concrete bridge (144') and replace it with a new 6-span bridge (160').**(5) Why is this work necessary? Explain water related issue/problem being solved. **To maintain a structure for the safe and efficient transportation of interstate freight.****Status**

Status	Notes	Date
Approved		Feb. 9, 2022
Received		Jan. 25, 2022

Conditions

Red Lake Watershed District (RLWD) approval to remove the existing 9-span, 144' span bridge and install a 6-span, 160' bridge as per plan-set provided. Permit location is on the Clearwater River. Plan-set was created by TKDA. Applicant shall contact the MN Dept. of Natural Resources (MNDNR) area hydrologist concerning their requirements, if any. Contact person at the Thief River Falls MNDNR office is hydrologist Stephanie Klamm at 218-219-8585. 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 # **22-006**Status Report: **Approved****Applicant Information**

Name	Organization	Address	Email	Phone Number(s)
	Polk County Highway Department	820 Old Highway 75 South Crookston , MN 56716		tel: 218-281-3952 mobile: fax:

General Information

(1) The proposed project is a:

Culvert Installation / Removal / Modification

(2) Legal Description

(3) County: **Polk** Township: **Eden** Range: **39** Section: **31 1/4**:(4) Describe in detail the work to be performed. **Install 2-lines of 10'X5' box**(5) Why is this work necessary? Explain water related issue/problem being solved. **Existing structure is deficient****Status**

Status	Notes	Date
Approved		Feb. 3, 2022
Received		Feb. 2, 2022

Conditions

Red Lake Watershed District (RLWD) approval to remove the existing 48" RCP, 60" RCP, & 60" CMP and install 2 Lines of 10' X 5' box culvert, as per plan-set provided. Permit location is within the Hill River. Applicant shall contact the MN Dept. of Natural Resources (MNDNR) area hydrologist concerning their requirements, if any. Contact person at the Thief River Falls MNDNR office is hydrologist Stephanie Klamm at 218-219-8585. 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 # **22-008**Status Report: **Approved****Applicant Information**

Name	Organization	Address	Email	Phone Number(s)
	Polk County Hwy Department	820 Old Hwy 75 South Crookston, MN 56716		tel: 218-280-3952 mobile: fax:

General Information

(1) The proposed project is a:

Culvert Installation / Removal / Modification

(2) Legal Description

(3) County: **Polk** Township: **Brandsvold** Range: **40** Section: **20 1/4**:(4) Describe in detail the work to be performed. **Install 2-lines of 12'X5' box culverts**(5) Why is this work necessary? Explain water related issue/problem being solved. **Existing structure is deficient****Status**

Status	Notes	Date
Approved		Feb. 9, 2022
Received		Feb. 2, 2022

Conditions

Red Lake Watershed District (RLWD) approval to remove the existing 2 – 60” span RCP-Arch culverts & 1 – 48” RCP culvert and install 2 - 12' X 5' box culverts, as per plan-set provided. Permit location is within the Poplar River. Applicant shall contact the MN Dept. of Natural Resources (MNDNR) area hydrologist concerning their requirements, if any. Contact person at the Thief River Falls MNDNR office is hydrologist Stephanie Klamm at 218-219-8585. 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.

Red Lake Watershed District - Administrators Report

February 10, 2022

Red River Watershed Management Board – Just a reminder that LeRoy will be gone for the next Red Board meeting so I assume Gene or Dale will be attending the meeting which will be held at 10:00 am February 15th at the RRWMB Board room in Ada. I will not be attending live but will participate via Teams. Some of the agenda items review of funding commitments, Brady Martz and Associates Audit, City of Perley Flood Levee Improvement Funding Agreement, Red Path Step 2 Amendment and an update on the Newfolden Flood Prevention Project.

QuickBooks Online Software – Ann, Tammy and I met with Alexandra from Brady Martz to move forward in completing the next steps to compiling month end reports. There were also some minor adjustments to Time entries that had to be incorporated to separate the three funds we use as well as the different codes for water quality grants from BWSR. The changes were very minor, so things seem to be moving forward as we enter the second month of the new accounting software.

River of Dreams – Christina has been very busy working with the International Water Instituted in completing the curriculum for upcoming class-room visits with our River Watch Schools that are participating in the River of Dreams Program. To date it appears RLCC, Clearbrook/Gonvick and Red Lake Falls are the three schools that will participate in the upcoming forum.

Pennington County SWCD Annual Meeting – Corey, Christina and I attended the annual Pennington County SWCD annual meeting held at 9:00 am February 1st in the RLWD Board Room. Matt Fisher gave a presentation on the history on the BSWR Clean Water Funds and where we are today. I gave a little history on how the RLWD started assisting SWCD's in our District with project funding using Project 164 and Project 46 and where we are today based on the completions of the Red Lake and Thief River 1W1P. Corey gave a presentation on projects that have been completed using 1w1p funding as well as tools we use in determining what projects to work complete.

BWSR Watershed Managers Training – Terry, Tom, Allan and Brian attended the Watershed Managers Training session held at 9:00 am on February 4th in Warren. There were about 15 Watershed Managers in attendance from various Districts which included Warroad River, Two Rivers, Sand Hill, Red Lake and Middle Snake Tamarac Rivers. We will be holding another meeting at 9:00 am on Friday February 11th at the BRRWD in Barnesville, MN.

Polk County Multi Hazard Mitigation Plan – Nick and Nate attended a virtual meeting for the Polk County Multi Hazard Mitigation Plan. This meeting covered various aspects of the plan and what a multi governmental response would look like. We attend these meeting to be aware of what takes place if there were to be large scale flooding in the Red Lake Watershed District.

Water Quality Reports – Corey has included in your packet his water quality reports from November and December. This should wrap up his 2021 reports.

Polk County MHMP Planning Team Meeting #1

February 2, 2022 - Meeting Summary & Documentation

Summary: On Wednesday, February 2, 2022 Polk County Emergency Management convened key county, city, and township representatives, as well as neighboring jurisdictions and other stakeholders to participate in the 1st Planning Team Meeting for the update of the Polk County Multi-Hazard Mitigation Plan (MHMP). The purpose of the meeting was to formally present information about the Polk County MHMP update and to discuss key items that would inform plan development. The meeting was held via Zoom webinar video conference and was facilitated by Stacey Stark and Bonnie Hundrieser of the U-Spatial@UMD project team.

Stakeholder Invitations: Polk County Emergency Management invited all stakeholders included on the county's MHMP Update Jurisdictional Contact List (JCL), which includes the key County Contacts, City Contacts, Township Contacts, Other Stakeholder Contacts, and Neighboring Jurisdiction Contacts identified to be invited to participate in the plan update process. Contacts were encouraged to engage additional staff or to send someone in their stead if they could not attend. A copy of the county's Jurisdictional Contact List is provided in *Appendix F Steering Committee Meetings*.

Meeting Participants: A total of **29** people attended the meeting. Representation included elected officials and departmental staff from Polk County and the following cities: Beltrami, Climax, Crookston, East Grand Forks, Erskine, Fosston, Gully, McIntosh, Mentor, and Nielsville. The cities of Fertile, Fisher, Lengby, Trail and Winger were unable to attend. Other stakeholders, including neighboring jurisdictions, participated in the meeting. A participant list is included with this meeting summary.

Presentation Overview: The Power Point presentation covered the following items. A PDF of the presentation slides is included with this meeting summary.

- Overview of Hazard Mitigation & the MHMP Update
- Who the Plan Covers & Role of the Planning Team
- Review of Hazards + Overview of Risk Assessment and Vulnerability Analysis
- Update of Risk Priorities
- Review of Mitigation Strategies & Example Actions
- Overview of FEMA HMA grant program
- Discussion of local mitigation ideas
- Discussion of next steps & answer your questions.

Participant Poll: At the start of the meeting participants were presented with an interactive poll asking "Have you participated in Hazard Mitigation Planning previously?" Following are the poll results:

- Yes, I have previously participated in in a hazard mitigation planning process. **(8/24) 33%**
- No, but I am familiar with hazard mitigation planning. **(6/24) 25%**
- No, and this is all new to me. **(10/24) 42%**

Prioritization of Natural Hazards: The planning team was presented with an overview of each of the natural hazards that were covered in the county's last plan and the risk prioritization at that time. Considerations for the current risk prioritization since the last plan was presented for each hazard, such as events recorded since the last plan, NCEI Storm Data, or known existing local vulnerabilities (i.e., number of mobile home parks). It was noted to participants that:

- Hazards deemed to be of high or moderate risk must result in mitigation actions to address them for the jurisdictions that are affected.
- Hazard prioritization may vary for jurisdictions or may not differ countywide.
- Hazards deemed to be low risk and without significant mitigation actions may be dropped from the plan. This excludes the hazard of Dam/Levee failure, which must be addressed per new FEMA guidelines, even if risk is deemed low.

Following is a chart reflecting the 2015 risk priorities for Polk County and any changes to the current risk prioritization for the plan update. This discussion served as an introduction to updating the risk prioritization and will be followed up with further information gathered from the county and local jurisdictions during the planning process. Any changes to the risk prioritizations will be noted.

HAZARD	EXISTING PLAN	2022 PLAN
Flooding	High	High
Tornadoes	High	High
Drought	High	High
Winter Storms	Moderate	Moderate
Wildfire	Moderate	High
Windstorms	Moderate	High
Hail	Low	Low
Dam/Levee Failure	Low	Low
Extreme Heat	Low	Low
Lightning	Low	Low
Extreme Cold	N/A	Low
Landslides	N/A	Low

Comments, Questions or Mitigation Ideas – Following are the questions, comments or mitigation ideas that were shared by participants and how they will be addressed for the plan update.

Meeting Participant	Comment, Question or Mitigation Idea Submitted	Facilitator Feedback / How to be Addressed in Plan Update
Jon Steiner, Polk County Environmental Services Administrator	<i>Regarding Dam/Levee Failure:</i> The dam/levee failure seems like a man-made issue, not natural disaster. The floodwaters from such a failure could be handled under the flood category.	Stacey Stark: Provided an explanation to everyone of how FEMA requires we evaluate if there are High Hazard Potential Dams (HHPD's) or other dams or levees that are at risk of failure. This is a failure of the structure, which results in flooding, but is separate from flooding.
Richard Sanders, Polk County Highway Engineer	<i>Regarding Landslides:</i> Landslide should be moved up to Moderate.	Jody Beauchane – felt that overall landslides at the county level could be prioritized as low. There is a county road along the Red River of the North that may have some risk concerns.

Meeting Participant	Comment, Question or Mitigation Idea Submitted	Facilitator Feedback / How to be Addressed in Plan Update
Jon Steiner, Polk County Environmental Services Administrator	<i>Regarding Flooding:</i> Should flooding be broken into 2 categories: flooding from rivers/streams/lakes vs. flooding from large rainfall events (flashfloods).	Stacey Stark: We include both in our flood risk analysis. "Flood" hazard includes riverine (and lakes) and flash floods. It also includes overtopping of It also includes overtopping of "ring levees" or, temporary flood mitigation structures.
Richard Sanders, Polk County Highway Engineer	<i>Regarding Extreme Wet / Frost Boils and damage to roads:</i> Extreme Wet / Frost Boils are an issue on our township roads. If you have a wet spring but not enough to cause flooding can cause gravel roads to become impassible due to wet or fast frost coming out of ground.	Stacey Stark: Frost boils are not something we have had come up in previous plans so we will follow up and see how to address this under Extreme Cold.
Mori Maher, Middle-Snake-Tamarac Rivers Watershed District (MSTRWD) Administrator	<i>Regarding Dam/Levee Failure:</i> Are ring dikes considered under the Dam/ Levee category?	Stacey Stark: No, we don't address these in the risk analysis for dam/levee failure. We are looking at large impoundment structures that, if they fail, would cause major community damages or put lives at risk. Jon Steiner, Polk County Environmental Services Administrator - The federal / state government does not recognize ring dikes as providing protection from flood events. Unless designed by the Army Corps of Engineers, they ignore.
April Swenby, Sand Hill River Watershed District Administrator	<i>Regarding Dam/Levee Failure:</i> I feel like the Levee Failure is likely low risk of failure in our area - however, IF one were to fail the damage would be detrimental. Not sure if that ranks it higher. Several of our cities now have levee's that didn't in the original plan.	Stacey Stark: For the purposes of the MHMP we need to talk about impoundments protecting the public /community. If there is a potential inundation area at high risk by a public or private impoundment then we need to work with the county or city jurisdiction to address it. If it's in the MN DNR dam database or national levee inventory we would find it there.

Meeting Participant	Comment, Question or Mitigation Idea Submitted	Facilitator Feedback / How to be Addressed in Plan Update
Jon Steiner, Polk County Environmental Services Administrator	<i>Regarding Dam/Levee Failure:</i> Unless you consider this under "Flooding", if "Levee" category includes the municipal dikes around the Cities of Crookston, EGF or other, then the risk should be more than "Low". Its relatively common that these cities are sandbagging to supplement the levee protection elevation in the event of an ice-jam or additional precipitation would suddenly raise the river levels. There have been 2 floods >100 year flood events (1% chance) in last 20 years.	Stacey Stark/ Bonnie Hundrieser: Your concern is a flooding concern, not a dam/levee failure concern. It is agreed that flooding is of highest concern. As we work with each of the city jurisdictions they will be asked if their flood risk differs geographically from the rest of the county. If a city prioritizes their flood risk as moderate to high, they will have a local mitigation action chart where they identify their measures for reducing or eliminating risk, such as improving levees or continuing to be ready with emergency flood response plans and equipment such as sandbags and pumps.
April Swenby, Sand Hill River Watershed District Administrator	<i>Regarding Dam/Levee Failure:</i> Climax has one - whole city	Stacey Stark: Noted. Their levee is already a mitigation measure in place – if they city expresses that there is a current risk of failure, we can work with them to identify their mitigation actions they will undertake to address it.
Mori Maher, Middle-Snake-Tamarac Rivers Watershed District (MSTRWD) Administrator	<i>Regarding Risk Assessments:</i> In measuring the economic effect of each hazard area, does FEMA account for \$ value for the specific state? I mean a widow broken due to hail in MN would be less affordable compared to Washington DC elsewhere.	Stacey Stark: We don't have an economic loss analysis for hazards except flooding. We do use a national risk index from FEMA – as a companion to this plan you can use it for Polk County...it is something that both the State and FEMA try to take into consideration.
Lisa Schaumburg, City of Mentor City Clerk/Treasurer	<i>Regarding Prioritization of Extreme Cold and Landslides:</i> Extreme cold and landslides should both go higher. The cold probably wasn't dealt with last time because we always just sort of "deal with it" we're "cold blind".	Jody Beauchane: Felt that overall extreme cold and landslides can both remain low for the hazard prioritizations countywide. Stacey Stark: We can note to have extreme cold and landslides be prioritized as low, but we can still address them in the plan (just as dam failure is low, but still addressed with a hazard profile).

Meeting Participant	Comment, Question or Mitigation Idea Submitted	Facilitator Feedback / How to be Addressed in Plan Update
Jon Steiner, Polk County Environmental Services Administrator	<i>Regarding Tornadoes and Windstorms:</i> If you are looking at mobile home parks to inventory for storm shelters, I'd recommend doing so with other similar land uses (rv parks, campgrounds, etc.).	Bonnie Hundrieser: As we work individually with city jurisdictions, we will collect information on where they have areas where people are vulnerable to high wind events like municipal campgrounds, RV parks, etc. Our database will only have licensed mobile home and /RV parks in it.
Jay Anderson, City of Mentor Vol. Fire and Rescue, Fire Chief	Our department is listed as a storm shelter with the county and have been working on getting a generator for backup power. Would this project be eligible for funding?	Bonnie Hundrieser: Obtaining generators with FEMA grant funding is not very likely. It would be best to inquire to the State Hazard Mitigation Officer regarding the project idea if it is for a permanent generator.
Eugene Dufault, Polk County Township Officer's Association - Chair	Great presentation. I would like to expand on the "frost boil" issue and will write that up.	Stacey Stark: Your follow up information will be appreciated, thank you.

Following the discussion, participants were encouraged to fill out and return the "Mitigation Ideas" worksheet that they were provided with to Polk County Emergency Management to submit any specific local concerns and related mitigation ideas. The meeting concluded with an overview of next steps and estimated timeline for completion.

Attached are the following documentation items for the Polk County MHMP Meeting #1:

- 2-2-22 Mtg. #1 Email Invitation
- 2-2-22 Mtg. #1 List of Participants
- 2-2-22 Mtg. #1 Power Point Slides
- 2-2-22 Mtg. #1 Handouts

Meeting Summary Prepared By: Bonnie Hundrieser, U-Spatial@UMD Project Team

From: [Jill Moreno](#)
To: [genedufault@gmail.com](#); [laura.pettit@usda.gov](#); [Heather.Winkleblack@state.mn.us](#); [klein.eastpolk@gmail.com](#); [jenny.burrack@mn.usda.gov](#); [nicole.bernd@wpolk.mnswcd.org](#); [luther.newton@usda.gov](#); [info@redlakeelectric.com](#); [ddalchow@isd592.org](#); [jeremyolson@isd593.org](#); [mkolness@egf.k12.mn.us](#); [bclarke@isd599.org](#); [schase@fosston.k12.mn.us](#); [rbruer@win-e-mac.k12.mn.us](#); [mhclause@crk.umn.edu](#); [elbeitel@co.pennington.mn.us](#); [mbernstein@sheriff.co.red-lake.mn.us](#); [candice.coulter@co.clearwater.mn.us](#); [edward.snetsinger@co.mahnomen.mn.us](#); [garry.johanson@co.norman.mn.us](#); [james.tadman](#); [Jon Steiner](#); [Jacob Snyder](#); [Rich Sanders](#); [Sarah Reese](#); [Chuck Whiting](#); [Jody Beauchane](#); [Amy Finch](#); [Angie Shimp](#); [Barbara Sellers](#); [Cassie Heide](#); [David Murphy](#); [Dominica Zarkoff](#); [Jackie Voeller](#); [Kara Bowen](#); [Lisa Liden](#); [Lisa Schaumburg](#); [Lori Wollman](#); [Melissa Finseth](#); [Roseanne Erickson](#); [Stephanie Abentroth](#); [Stephanie Melby](#); [Chad Gunderson - Climax](#); [Daniel Netland](#); [Eric Murphy - Fosston](#); [Jay Anderson - Mentor](#); [Jeff Boushee](#); [Jesse Hickman - Erskine](#); [Joshua Mailhot - Fisher](#); [Justin Shultz - McIntosh](#); [Scott Revier - Winger](#); [Tim Froeber](#); [Wolfe Clark - Fertile](#); [april.swenby@sandhillwatershed.org](#); [Myron.Jesme@redlakewatershed.org](#); [morteza.maher@mstrwd.org](#); [kevin@wildricewatershed.org](#); [thrdlicka@otpc.com](#); [kolson@pkmcoop.com](#); [jmarcotte@pkmcoop.com](#); [bbjerke@clearwater-polk.com](#); [Jodi.stauss@northlandcollege.edu](#); [shaaven@wildriceelectric.com](#)
Cc: [Bonnie K Hundrieser](#)
Subject: Polk County Multi-Hazard Mitigation Plan Update - Meeting Invitation
Date: Thursday, December 2, 2021 12:59:07 PM

POLK COUNTY

MULTI-HAZARD MITIGATION PLAN UPDATE – MEETING INVITATION

Greetings,

Your presence is requested at a Planning Team Meeting for the update of the **Polk County Multi-Hazard Mitigation Plan**. You are requested to participate in this vital meeting because you have a position of administrative or departmental responsibility within either the county, a municipal government, or are a key stakeholder related to the planning process. Emergency Managers from neighboring jurisdictions are also encouraged to attend so we may strengthen our shared mitigation efforts.

We will be holding the meeting virtually using Zoom video/phone conferencing:

Date: Wednesday, February 2, 2022

Time: 1:00 – 3:00 p.m.

Zoom Link: https://umn-private.zoom.us/webinar/register/WN_6Y4xZ8ZQb2OdDgdy9dUsQ

You must click on the link above to register. (Ctrl+Click to follow link) When you register, you will automatically be placed on an RSVP list. Please be sure to include the name, title and representation (jurisdiction/agency) for all persons planning to attend the meeting.

About the Plan

The update of the Polk County Multi-Hazard Mitigation Plan (MHMP) is a requirement by the State of Minnesota Department of Homeland Security & Emergency Management (HSEM) as well as the Federal Emergency Management Agency (FEMA) every 5 years. Our last plan is due for an update and our planning is currently underway. The plan addresses the natural hazards that face Polk County and will result in the identification of mitigation actions that will help to reduce or eliminate the impact of future hazard events, such as flooding and severe winter or summer storms.

Your participation in this plan update is important for several reasons:

1. You will help to identify critical mitigation projects to implement at the county / municipal level, and how they can be integrated with existing plans, policies, or project efforts.
2. Participating jurisdictions will be eligible to apply for FEMA hazard mitigation grant funding.
3. Mitigation planning is necessary to keep our communities resilient against future disasters and reduce the costs of recovery.
4. FEMA requires documentation of how local government and key stakeholders participated in the planning process.

During this meeting we will review and prioritize the natural hazards that pose risk to Polk County and individual communities and discuss a range of mitigation measures for local implementation. The meeting will be facilitated by personnel from U-Spatial at the University of MN Duluth who are working closely with us on this project.

We look forward to you joining us for this important meeting.

Thank you,

Jody Beauchane

Emergency Manager

Polk County Sheriff's Office

(218) 470-8263

E.M: www.co.polk.mn.us/EM

Disclaimer: Information in this message or an attachment may be government data and thereby subject to the Minnesota Government Data Practices Act, Minnesota Statutes, Chapter 13, may be subject to attorney-client or work product privilege, may be confidential, privileged, proprietary, or otherwise protected, and the unauthorized review, copying, retransmission, or other use or disclosure of the information is strictly prohibited. If you are not the intended recipient of this message, please immediately notify the sender of the transmission error and then promptly delete this message from your computer system.

Polk County

2/2/22 MHMP Planning Team Meeting #1

List of Participants (29)

	First Name	Last Name	Organization	Job Title
1	Jody	Beauchane	Polk County Sheriff's Office	Emergency Management Director
2	Jill	Moreno	Polk County Sheriff's Office	Emergency Management Program Assistant
3	James	Tadman	Polk County Sheriff's Office	Sheriff
4	Sarah	Reese	Polk County Public Health	Director
5	Richard	Sanders	Polk County Highway	County Engineer
6	Jon	Steiner	Polk Co Env Svs/Solid Waste	Environmental Services Administrator
7	Terri	Oliver	Polk County Public Health	PHEP Coordinator
8	Daniel	Netland	City of Beltrami Fire Dept.	Fire Chief
9	Jacquelyn	Voeller	City of Climax	Clerk/Treasurer
10	Brandon	Carlson	City Of Crookston	Public Works Director
11	Tim	Froeber	City of Crookston Fire Dept.	Fire Chief
12	Jeff	Boushee	East Grand Forks Fire Dept.	Fire Chief/Emergency Manager
13	Angie	Shimpa	City of Erskine	Clerk/Treasurer
14	Cassie	Heide	City of Fosston	City Administrator
15	Barbara	Sellers	City of Gully	City Clerk
16	Melissa	Finseth	City of McIntosh	Clerk/Treasurer
17	Lisa	Schaumburg	City of Mentor	City Clerk / Treasurer
18	Jay	Anderson	City of Mentor Vol. Fire and Rescue	Chief
19	David	Vraa	City of Nielsville	Mayor
20	Eugene	Dufault	Polk County Township Officer's Association	Chair
21	Nick	Olson	Red Lake Watershed District	Engineering Specialist
22	Heather	Winkleblack	MN HSEM	Region 3 Regional Program Coordinator
23	Luther	Newton	USDA-NRCS	District Conservationist - Team Lead
24	David	Danforth	University of Minnesota Crookston	Director of Facilities and Operations
25	Karen	Olson	PKM Electric	CFO
26	Tara	Jensen	Wild Rice Watershed District	Administrator
27	April	Swenby	Sand Hill River Watershed District	Administrator
28	Nate	Koland	Red Lake Watershed	Field Tech
29	Mori	Maher	Middle-Snake-Tamarac Rivers Watershed District (MSTRWD)	Administrator

POLK COUNTY Multi-Hazard Mitigation Plan Update 2022 Planning Team Meeting #1

February 2, 2022



U-SPATIAL

UNIVERSITY OF MINNESOTA DULUTH
Driven to Discover

Welcome & Introductions

U-Spatial@UMD Project Leads



Stacey Stark
Project Manager
U-Spatial@UMD



Bonnie Hundrieser
HMP Planning Specialist
Hundrieser Consulting LLC

Polk County Project Lead

■ Jody Beauchane, Polk County
Emergency Management Director



Please type your name and jurisdiction in the CHAT – so others know who is here

PRESENTER: STACEY STARK

Zoom Logistics

If you haven't yet, please type your name and jurisdiction or department in the Chat window

PLEASE REMAIN MUTED AND VIDEO OFF SO EVERYONE CAN HAVE THE BEST EXPERIENCE.

USE CHAT:

- Send a message to everyone
- Send a message to individuals or the presenters
- Send a message to host to ask for help or ask a question that isn't for the whole group. The host is Stacey Stark



ASK TO SPEAK:



PRESENTER: STACEY STARK

Meeting Purpose & Agenda



2016 Tornado, near City of Beltrami

The purpose of this meeting is to formally convene the **Polk County MHMP Planning Team** for a presentation of the plan update and discussion of key items.

Agenda:

- Overview of Hazard Mitigation & the MHMP Update
- Who the Plan Covers & Role of the Planning Team
- Review of Hazards + Overview of Risk Assessment and Vulnerability Analysis
- Review of Hazard Risk Prioritization
- Review of Mitigation Strategies & Actions
- Overview of FEMA HMA grant program
- Discuss local mitigation ideas
- Discuss next steps & answer your questions.

PRESENTER: STACEY STARK

About your Project Team

U-SPATIAL

UNIVERSITY OF MINNESOTA DULUTH
Driven to Discover

U-Spatial at the University of Minnesota Duluth was contracted by MN HSEM to facilitate the development of this plan and to conduct spatial analysis, mapping and research for the plan.

Working with U-Spatial@UMD is **Bonnie Hundrieser**, who specializes in hazard mitigation planning.

We Bring:

- *Proven experience* in county/tribal plan updates and State MHMP
- *Advanced capabilities* in GIS, HAZUS, and research
- *Ability to expedite* plan development and approval through consistent & proven approach

PRESENTER: STACEY STARK

What is Hazard Mitigation?

Hazard Mitigation is any action taken to reduce or eliminate long term risk to people and property from natural disasters.



Hazard Mitigation Planning:

- identifies risks and vulnerabilities
- develops a plan of action built on capabilities and partnerships.
- breaks the cycle of disaster and reconstruction.
- builds stronger & more resilient communities.

PRESENTER: BONNIE HUNDRIESER

MHMP Overview & Timeline

The Multi-Hazard Mitigation Plan (MHMP) is a requirement of the Federal Disaster Mitigation Act of 2000 (DMA 2000).

- ✓ The development of a local government plan is required in order to maintain eligibility for FEMA hazard mitigation grant programs.
- ✓ Plans must be updated every 5 years.
- ✓ Must address all jurisdictions and engage key stakeholders.
- ✓ Planning process must give an opportunity to the public to provide feedback.



2019 Flood, washed out County Road

Polk County MHMP Update 2022

- Last plan adopted in 2015.
- The updated plan will cover a 5-year window for implementation.
- Documentation of county and local-level government participation is required for plan approval.

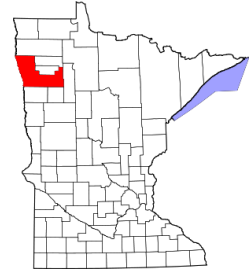
PRESENTER : BONNIE HUNDRIESER

Who the Plan Covers



The Polk County MHMP is a multi-jurisdictional plan that covers the county as well as all city & townships within the county.

- ✓ County and city governments are required to adopt the plan.
- ✓ Townships are covered under the umbrella of the county, but may elect to adopt.
- ✓ City-level participation in the plan update must be documented for local adoptions to be approved.



PRESENTER: BONNIE HUNDRIESER

MHMP Planning Team



Polk County Planning Team

- Polk County Emergency Management
- Key County Officials & Staff
- City & Township Officials & Staff
- Neighboring Jurisdictions
- Other Related Agency or Organizational Stakeholders

- Participate in 2 planning team meetings.
- Assist with public outreach (2 news releases) using websites, social media & bulletin boards.
- Provide information to inform plan update.
- Help develop & review local mitigation action charts.
- Review the draft plan.
- Facilitate local-level adoptions.

PRESENTER : BONNIE HUNDRIESER

What Hazards are Addressed in the Plan?



➤ Natural hazards that pose risk to the county and its jurisdictions.

- Manmade hazards are not required to be addressed (per the DMA 2000).
- Hazards that are deemed to be of low risk may be omitted from the plan.
- Hazard risk may differ in cities and the county overall.

Flooding	Hail	Drought
Dam/Levee Failure	Lightning	Extreme Heat
Wildfire	Winter Storms	Extreme Cold
Windstorms	Landslides	Earthquakes
Tornadoes	Sinkholes & Karst	Coastal Erosion

Natural hazard categories for Minnesota MHMPs.

PRESENTER : BONNIE HUNDRIESER

Comments and Questions?

Hazard Risk Assessment and Vulnerability Analysis

The U-Spatial@UMD Team will work closely with the county and each city to provide information as needed.

- Inventory of critical infrastructure.
- Identify specific, local-level impacts and vulnerabilities.
- Identify any factors (i.e., new development) that may increase the community's vulnerability.
- Review social vulnerability factors.
- Identify if and how risk priorities have changed since the last plan. (Increased / Decreased)



2019 Flood, home near Crookston



2019 High winds break power poles

PRESENTER : STACEY STARR

Polk County Review of Existing Hazard Risk Prioritization

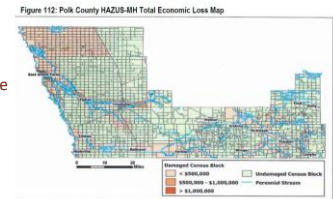
HAZARD	EXISTING PLAN	2022 PLAN
Flooding	High	Please consider any changes for these priorities in 2022 based on:
Tornadoes	High	
Drought	High	
Winter Storms	Moderate	<ul style="list-style-type: none"> Increase or decrease in risk over the last 5 years (probability + severity)
Wildfire	Moderate	
Windstorms	Moderate	
Hail	Low	<ul style="list-style-type: none"> Local vulnerabilities (people, systems, infrastructure)
Dam/Levee Failure	Low	
Extreme Heat	Low	
Lightning	Low	<ul style="list-style-type: none"> New development
Extreme Cold	N/A	
Landslides	N/A	

Updated hazard priorities for 2022 should seek to be clearly identified as High, Moderate or Low.

Flooding (High)



- A potential economic loss model is run for 1% annual chance flood
- Use of FEMA Flood Insurance Rate Map (FIRM)
- Use of property values from county assessor
- Critical Infrastructure locations from GIS and EM input



Distribution of Estimated Economic Loss: 1% annual chance flood.

PRESENTER : STACEY STARK

Tornadoes (High)



- Based NCEI Storm Events Database through 2021, the relative frequency of tornadoes is .38 per year (72 total)
- Tornadoes occurred in 2019 (EF2) and 2018 (EF1, EF2)
- Identify mobile home locations



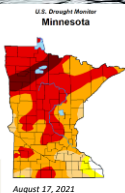
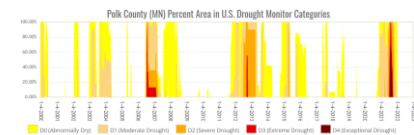
2018 City of Winger tornado damage

PRESENTER : STACEY STARK

Drought (High)



- From 2000 – 2018, Polk County was in at least Moderate (D1) Drought 25 - 27% of the time.



August 17, 2021

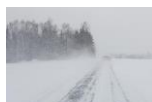
July, 2021 drought - low lake levels

PRESENTER : STACEY STARK

Winter Storms (Moderate)



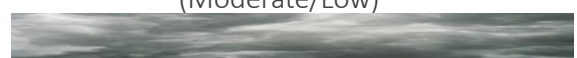
- 105 winter weather related events (blizzards, heavy snows, ice storms, winter storms, and winter weather) have occurred since January 2012 (10-11 year)
- Based on all records in the NCEI Storm Events Database, the relative frequency of winter-related storm events is 9.6 per year.



Polk County blizzard warnings issued by NWS

PRESENTER : STACEY STARK

Windstorms, Lightning, Hail (Moderate/Low)



- Each addressed individually
- The relative frequency of all wind-related events since January of 2012 is 10.5 per year.
- There were 58 hailstorms with hail greater or equal to 1-inch since 2012. The relative frequency of all hail events is 8.8 per year.
- Hazards deemed low risk and without significant mitigation actions, can be dropped from the plan.



Minnesota storm front, InForum photo



Central MN hailstorm Brainerd Dispatch photo

PRESENTER : STACEY STARK

Wildfire/Wildland Fire (Moderate)



- Minnesota DNR tracked wildfires in Polk County between 2000 and 2018 indicate 5 fires/yr and 690 acres/yr burned
- 10th highest in state for crop indemnity claims due to wildfire



2021 Glacial Ridge Wildfire

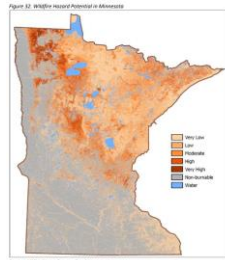


Figure 10. Wildfire Hazard Potential of Minnesota

PRESENTER : STACEY STARK

Extreme Heat (Low)



- From 2012 - 2021, daily high temperatures > 90 °F were recorded 67 times at Crookston NW Exp weather station. Polk County experiences an average of 6-7 extreme heat days each year.
- Three Excessive Heat Warnings (Heat Index > 105 °F) in NCEI database, One in the last 10 years.

Extreme Cold (N/A)



- From 2012 - 2021, daily low temperatures < -18 °F were recorded 126 times at Crookston NW Exp weather station. Polk experiences an average of 12-13 extreme cold days each year.
- -38°F recorded by the Crookston NW Exp weather station on January 30-31, 2019
- The relative frequency of cold-related events (NWS Warning issued due to wind chill of -35 °F or colder) in Polk County is 6.5 per year.

PRESENTER : STACEY STARK

Dam Failure (Low)



- No high hazard potential dams in Polk County
- 18 dams in Polk County. All with the hazard risk of "low".
- Must state any mitigation actions if the county wishes to be eligible for the High Hazard Potential Dam Rehabilitation Grant Program

Polk County Review of Hazard Risk Prioritization

HAZARD	EXISTING PLAN	2022 PLAN
Flooding	High	
Tornadoes	High	
Drought	High	
Winter Storms	Moderate	
Wildfire	Moderate	
Windstorms	Moderate	
Hail	Low	
Dam/Levee Failure	Low	
Extreme Heat	Low	
Lightning	Low	
Extreme Cold	N/A	
Landslides	N/A	

High to moderate priority hazards will be addressed in the 2022 plan update and will require mitigation actions.

PRESENTER : STACEY STARK

Mitigation Strategies & Example Actions



See Handout: Mitigation Strategies & Action Types

PRESENTER : BONNIE HUNDRIESER

#1 - Local Planning & Regulations



These actions include government authorities, policies, or codes that influence the way land and buildings are developed and built.

EXAMPLES:

- Establishing & enforcing floodplain & shoreland ordinances
- Participating in the NFIP
- Developing stormwater management plans
- Long-term planning for infrastructure improvements
- Working with MHP operators to be in compliance with State statutes for storm shelters & evacuation plans.



PRESENTER : BONNIE HUNDRIESER

#2 – Structure and Infrastructure Projects



These actions involve modifying existing structures to protect them from a hazard or remove them from a hazard area. This type of action also involves projects to construct manmade structures to reduce the impact of hazards.

EXAMPLES:

- Property acquisitions (repetitive flooding/erosion risk)
- Structural elevations (flooding)
- Constructing floodwalls & retaining walls
- Improving culverts, roads & bridges
- Green infrastructure projects
- Tornado Safe Rooms
- Utility undergrounding



PRESENTER : BONNIE HUNDRIESER

Tornado Safe Rooms

- Are eligible for FEMA HMA grant funding
- Include new construction or retrofit of existing facilities
- Should be considered for vulnerable areas such as MHPs, schools, parks, and campgrounds



1998 Tornado damage to MHP in Le Center, MN.



Warba, MN mobile home park tornado safe room, FEMA grant funded



1st School-based tornado safe room, Wadena, MN (2012) following June 17, 2010 tornado damage

PRESENTER : BONNIE HUNDRIESER

Utility Undergrounding

- Converting vulnerable overhead powerlines to underground is eligible for FEMA HMA grant funding.
- Include municipal and rural electric cooperatives in the planning process to document participation and establish eligibility for potential future project applications.



PRESENTER : BONNIE HUNDRIESER

#3 – Natural Systems Protection



These are actions that minimize damage and losses and also preserve or restore the functions of natural systems.

EXAMPLES:

- Slope management for soil stabilization
- Shoreland restoration
- "Living Fences" for wind/erosion reduction or snow buffer
- Forest management for wildfire mitigation (fuels reduction)
- Flood diversion and storage



PRESENTER : BONNIE HUNDRIESER

#4 – Education & Awareness Programs

These are actions to inform and educate citizens, elected officials, and property owners about hazards and potential ways to mitigate them.

EXAMPLES:

- Promoting sign-up for emergency notifications
- Educate on use of outdoor warning sirens and response
- Participation in the NWS Severe Weather Awareness Weeks
- SKYWARN Storm Spotter Training
- Turn Around Don't Drown
- Promoting personal & family emergency preparedness (i.e. Ready.gov)



PRESENTER : BONNIE HUNDRIESER

#5 – Mitigation Preparedness & Response Support

These are actions that help to protect life and property prior to, during, and immediately after a disaster or hazard event.

These activities are typically not considered mitigation, but support reduction of the effects of damaging events.



EXAMPLES:

- Emergency Notification Systems
- Emergency Operations Plans
- Outdoor warning sirens
- Shelter Planning
- Flood fight plans & equipment
- Training local elected officials in EM responsibilities
- Obtaining backup generators for critical facilities

PRESENTER : BONNIE HUNDRIESER

FEMA HMA Grant Program

See Handout: HSEM HMA Grants Program Overview

- ✓ All applicants must have or be covered under an approved MHMP.
- ✓ Eligible applicants: State & local governments, Tribal Communities, and certain private non-profit organizations or institutions.
- ✓ Cost Share: Federal 75%/ Applicant 25%
- ✓ Eligible projects must be identified in the local MHMP.

Examples of Eligible Activities

- Property Acquisition/Relocation
- Tornado Safe Room Construction
- Minor Localized Flood Risk Reduction
- Green Infrastructure
- Infrastructure Retrofits
- Soil Stabilization
- Wildfire Mitigation
- 5% Initiative Projects

PRESENTER : BONNIE HUNDRIESER

Historical Projects in Polk County Resulting from HMA Funding

PRESENTER : BONNIE HUNDRIESER

Mitigation Ideas

See Handout: Mitigation Ideas Worksheet

Do you have questions or ideas to share about local hazards, vulnerabilities and proposed mitigation actions?

PRESENTER : BONNIE HUNDRIESER

Next Steps

January – April, 2022

Completion of EM Tasks and Local Mitigation Survey (LMS) Forms

Lead: Bonnie Hundrieser

- **EM Tasks:** Plans in Place Form, Capabilities Assessment, and Past Mitigation Action Review
- **LMS Forms (County/City)**
 - Local hazard identification & risk prioritization.
 - Local vulnerabilities (critical infrastructure, populations or assets)
 - Local-level capabilities (programs, policies, staff, funding)
 - Identify local mitigation projects.

PRESENTER : BONNIE HUNDRIESER

Next Steps

(Concurrent)
January – June, 2022

Critical Infrastructure Inventory, Risk Assessment and Vulnerability Analysis

Lead: U-Spatial

- Updated risk assessment & vulnerability analysis
- Update of CI inventory
- Development of hazard profiles (history, probability, impacts of climate change)
- GIS mapping
- HAZUS analysis

PRESENTER : BONNIE HUNDRIESER



April – June, 2022

Development of Local Mitigation Action Charts

Lead: Bonnie Hundrieser

- County and City-Specific MACs
- 5-year window
- Mitigation actions must address high and moderate risk hazards.
- Mitigation actions must incorporate local capabilities & planning mechanisms.
- Include projects eligible for FEMA HMA grant funding.

PRESENTER : BONNIE HUNDRIESER



July – August, 2022

Hold Planning Team Meeting #2

Lead: U-Spatial & Bonnie Hundrieser

- **Planning Team Mtg. #2**
 - Outreach to stakeholders
 - Presentation of risk assessment & vulnerability analysis, hazards prioritizations
 - Overview of Mitigation Action Charts and FEMA grant funding.
 - Finalize draft MACs

PRESENTER : BONNIE HUNDRIESER



Sept. – Oct., 2022

EM review of Draft Plan + Public Review & Comment Period

Lead: U-Spatial & Bonnie Hundrieser

- EM initial review of draft plan
- **News Release #2**
 - Disseminate & document news release by county and jurisdictions.
 - Document and incorporate feedback as appropriate.

PRESENTER : BONNIE HUNDRIESER



Nov. – Dec., 2022 to Spring, 2023

Draft Plan Submission to HSEM & FEMA for Approval

Lead: U-Spatial

- Draft plan will be submitted first to HSEM and then to FEMA for approval for meeting all Federal requirements.
- Typically requires 1-2 months.
- APA letter
- EM coordination of adopting resolutions and submission to HSEM (Spring, 2023)
- Final Letter of Approval

PRESENTER : BONNIE HUNDRIESER

Questions?

What questions do you have for U-Spatial@UMD about the MHMP update process?

PRESENTER : STACEY STARK

Contact Information

Stacey Stark, MS, GISP

U-Spatial@UMD

slstark@d.umn.edu

218-726-7438

Bonnie Hundrieser, Consultant

Hundrieser Consulting LLC

hundrieserconsulting@outlook.com

218-343-3468

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CONSULTING LLC

PRESENTER : STACEY STARK

Mitigation Strategies & Action Types

Following are the five types of mitigation strategies that will be used in the update of the Multi-Hazard Mitigation Plan with examples of related mitigation actions. Minnesota HSEM recommends the use of these mitigation strategies to be in alignment with the State plan and those recommended by FEMA. The first four strategies listed are taken from the FEMA publications *Local Mitigation Planning Handbook* (2013) and *Mitigation Ideas: A Resource for Reducing Risk to Natural Hazards* (2013). The fifth strategy type was determined by Minnesota HSEM for use within the state.

These strategies will provide the framework for identification of new jurisdictional-level mitigation actions for implementation over the next 5-year planning cycle.

Mitigation Strategy	Description	Example Mitigation Actions
Local Planning and Regulations	These actions include government authorities, policies, or codes that influence the way land and buildings are developed and built.	<ul style="list-style-type: none"> • Comprehensive plans • Land use ordinances • Planning and zoning • Building codes and enforcement • Floodplain ordinances • NFIP Community Rating System • Capital improvement programs • Open space preservation • Shoreline codes • Stormwater management regulations and master plans • Mobile home park compliance for storm shelters
Structure and Infrastructure Projects	<p>These actions involve modifying existing structures and infrastructure to protect them from a hazard or remove them from a hazard area. This could apply to public or private structures as well as critical facilities and infrastructure.</p> <p>This type of action also involves projects to construct manmade structures to reduce the impact of hazards.</p>	<ul style="list-style-type: none"> • Property Acquisitions and elevations of structures in flood prone areas • Utility undergrounding • Structural retrofits (i.e., metal roofs) • Floodwalls and retaining walls • Detention and retention structures • Culvert Installation/Modification • Roads & Bridge risk reduction • Safe Room (New construction or facility retrofit) • Green Infrastructure Methods <p><i>Many of these types of actions are projects eligible for funding through FEMA HMA grant programs.</i></p>

Mitigation Strategy	Description	Example Mitigation Actions
Natural Systems Protection	<p>These are actions that minimize damage and losses and also preserve or restore the functions of natural systems.</p>	<ul style="list-style-type: none"> • Soil stabilization for sediment and erosion control • Floodplain and Stream corridor restoration • Slope management • Forest management (defensible space, fuels reduction, sprinkler systems) • Conservation easements • Wetland restoration and preservation • Aquifer Storage & Recovery • Flood Diversion and Storage <p><i>Many of these types of actions are projects eligible for funding through FEMA HMA grant programs.</i></p>
Education and Awareness Programs	<p>These are actions to inform and educate citizens, elected officials, and property owners about hazards and potential ways to mitigate them. These actions may also include participation in national programs, such as StormReady or Firewise Communities. Although this type of mitigation reduces risk less directly than structural projects or regulation, it is an important foundation. A greater understanding and awareness of hazards and risk among local officials, stakeholders, and the public is more likely to lead to direct actions that support life safety and lessen property damage.</p>	<ul style="list-style-type: none"> • Radio or television spots • Websites with maps and information • Social media outreach • Promotion of sign-up for emergency warnings • Real estate disclosure • Promotion of NFIP insurance to property owners • Presentations to school groups or neighborhood organizations • Mailings to residents in hazard-prone areas. • NWS StormReady Program • Firewise Communities <p><i>Some of these types of actions may be projects eligible for funding through the FEMA HMA "5 Percent Initiative Program".</i></p>
Mitigation Preparedness and Response Support	<p>This is a State of Minnesota mitigation strategy with the intent of covering emergency preparedness actions that protect life and property prior to, during, and immediately after a disaster or hazard event. These activities are typically not considered mitigation, but support reduction of the effects of damaging events.</p>	<ul style="list-style-type: none"> • Emergency Operations Plan • Flood fight plans and preparedness measures • Dam emergency action plans • Emergency Warning Systems (i.e., CodeRed, warning sirens) • Generator backup power • NWS Storm Spotter Training • Training and education for local elected officials and key partners.



State of Minnesota
Department of Public Safety
Division of Homeland Security and Emergency Management
445 Minnesota Street, Suite 223
St. Paul, MN 55101-6223

HAZARD MITIGATION ASSISTANCE

Hazard Mitigation Assistance (HMA) grant programs provide funding with the aim to reduce or eliminate risk to property and loss of life from future natural disasters. HMA programs are typically a 75%/25% cost share program. The federal share is 75% of total eligible project reimbursement costs. The local applicant is responsible for 25% of the project costs. The amount of HMGP funds availability is based on a percent of Public Assistance provided by Federal Emergency Management Agency (FEMA).

- Hazard Mitigation Grant Program (HMGP) funds assists in implementing long-term hazard mitigation measures following a Presidential major disaster declaration.
- Pre-Disaster Mitigation (PDM) provides funds for hazard mitigation planning and projects on an annual basis.
- Flood Mitigation Assistance (FMA) provides funds on an annual basis to reduce or eliminate risk of flood damage to buildings that are insured under the National Flood Insurance Program (NFIP).

Who is eligible for grant funding?

All applicants must have or be covered under an approved Hazard Mitigation Plan. Eligible applicants include: State and local governments; certain private non-profit organizations or institutions; and Tribal Communities

What types of projects can be funded?

All projects must be eligible, technically feasible, and cost-effective. All projects are subject to environmental and cultural resource review. Examples of projects include:

- **Advance Assistance** may be used to develop mitigation strategies and obtain data, including for environmental and historic preservation compliance considerations, and develop complete project applications in a timely manner.
- **Aquifer Storage and Recovery** (ASR) projects serve primarily as a drought management tool, but can also be used to reduce flood risk and restore aquifers that have been subject to overdraft. The concept is to capture water when there is an abundant supply, store the water in subsurface aquifers, and recover water from the storage aquifer when needed. Storing water underground can help protect it from pollutants, evaporation, and weather events.
- **Floodplain and stream restoration** (FSR) projects are used primarily to reduce flood risk and erosion by providing stable reaches, and may also mitigate drought impacts. FSR projects restore and enhance the floodplain, stream channel and riparian ecosystem's natural function. They provide base flow recharge, water supply augmentation, floodwater storage, terrestrial and aquatic wildlife habitat, and recreation opportunities by restoring the site's soil, hydrology and vegetation conditions that mimic pre-development channel flow and floodplain connectivity.
- **Flood Diversion and Storage** (FDS) projects often are used to reduce flood risk, but also can be used to mitigate drought and improve ecosystem services. These projects involve diverting floodwaters from a stream, river, or other body of water into a conduit such as a canal, pipe, or wetland and storing them in an above-ground storage facility. Water is then slowly released, reducing flood risk.

- **Green Infrastructure Methods** are a sustainable approach to natural landscape preservation and storm water management. Include in *eligible hazard mitigation activities* as well as provide additional ecosystem benefits. Ecosystem-based approach to replicate a site's pre-development, natural hydrologic function. Benefits include: Increase water supply, improved water quality, can be scaled to size and designed to fit site conditions.
- **Property Acquisition and Structure Demolition or Relocation** – The voluntary acquisition of an existing at-risk structure and the underlying land, and conversion of the land to open space through the demolition or relocation of the structure. The property must be deed-restricted in perpetuity to open space uses to restore and/or conserve the natural floodplain functions.
- **Retrofit Flood-Prone Residential Structures** are changes made to an existing structure to reduce or eliminate the possibility of damage to that structure from flooding, erosion, or other hazards. Examples of this mitigation are primarily elevation of structures above flood levels and floodwalls.
- **Safe Room Construction** - Safe room construction projects are designed to provide immediate life-safety protection for people in public and private structures from tornado and severe wind events. Includes retrofits of existing facilities or new safe room construction projects, and applies to both single and dual-use facilities
- **Minor Localized Flood Reduction Projects** - Projects to lessen the frequency or severity of flooding and decrease predicted flood damages, such as the installation or up-sizing of culverts, and stormwater management activities, such as creating retention and detention basins. These projects must not duplicate the flood prevention activities of other Federal agencies and may not constitute a section of a larger flood control system.
- **Infrastructure Retrofit** - Measures to reduce risk to existing utility systems, roads, and bridges.
- **Soil Stabilization** - Projects to reduce risk to structures or infrastructure from erosion and landslides, including installing geotextiles, stabilizing sod, installing vegetative buffer strips, preserving mature vegetation, decreasing slope angles, and stabilizing with rip rap and other means of slope anchoring. These projects must not duplicate the activities of other Federal agencies. *New tools for Bioengineered Shoreline Stabilization, Bioengineered Streambank Stabilization.*
- **Wildfire Mitigation** - Projects to mitigate at-risk structures and associated loss of life from the threat of future wildfire through: Defensible Space for Wildfire, Application of Ignition-resistant Construction and Hazardous Fuels Reduction. *New tool for Bioengineered Wildfire Mitigation.*
- **HMGP only - 5 Percent Initiative Projects** – These projects, which are only available pursuant to an HMGP disaster, provide an opportunity to fund mitigation actions that are consistent with the goals and objectives of approved mitigation plans and meet all HMGP program requirements, but for which it may be difficult to conduct a standard Benefit-Cost Analysis (BCA) to prove cost-effectiveness.

How do I apply?

Start by submitting a Notice of Interest, available on HSEMs website at:

<https://dps.mn.gov/divisions/hsem>

Where can I obtain further information?

For additional information about the HMA grant program, you can refer to the FEMA website:

<http://www.fema.gov/hazard-mitigation-assistance>

MITIGATION IDEAS WORKSHEET

Please use the following worksheet to list your ideas for mitigation actions that you feel will help reduce the impact of future natural hazard events to the county or to your jurisdiction. Following the MHMP planning team meeting, please return this form via email to your county Emergency Manager to submit your feedback.

NAME OF JURISDICTION:

CONTACT INFORMATION

Name:

Phone:

Email:

Hazard	Description of Concern or Proposed Mitigation Action

RED LAKE WATERSHED DISTRICT MONTHLY WATER QUALITY REPORT

November 2021

By Corey Hanson, Red Lake Watershed District Water Quality Coordinator, 1/28/2022

River Watch and Public Education

District staff met with International Water Institute staff to discuss the River Watch Forum. Emails were sent to students to provide them with information about River Watch Forum projects. Emails were sent to try to schedule classroom visits with the District's River Watch teams to spend time working on the River Watch Forum projects.

The theme of the 2022 River Watch Forum will be: "2022: Together Again; Your Watershed, Your Community, Your Forum." The upcoming River Watch Forum is scheduled for March 30th, 2022 at the Alerus Center in Grand Forks. River Watch teams are tasked with planning, marketing, and executing their very own River Watch event in their community.

The District purchased jackets for its partner River Watch Teams and those jackets were distributed to students. District staff began working on cleaning up the District's website and making some improvements.

Water Quality and Flow Monitoring

Field water quality measurements from 2021 were entered into a spreadsheet and submitted to the MPCA. The results of laboratory analysis are sent directly from RMB Environmental Laboratories to the MPCA.

The District's HOBO water level loggers were all retrieved by early November, before streams began to freeze. The loggers were cleaned and data was downloaded from each logger.

While retrieving the water level loggers, District staff discovered very green water in the Poplar River, downstream of Fosston, that was being caused by wastewater discharge from the city's wastewater treatment facility. The November discharge was confirmed by the MPCA. The concentrations of pollutants allowed by the MPCA in the Fosston wastewater discharge significantly exceed the water quality standards that the MPCA expects the Poplar River to meet. Total suspended solids in the river, for example, are supposed to be lower than 30 mg/L to fully support aquatic life. The Fosston WWTF, however, is allowed to discharge water with a 45 mg/L calendar month average concentration. Water quality samples were collected from the Poplar River at CSAH 6 (upstream of Fosston) and CSAH 30 (downstream of Fosston). The permitted total phosphorus concentration (1 mg/L) is ten times higher than the river eutrophication impairment threshold that is applied to the Poplar River (0.1 mg/L). The stream met applicable water quality standards upstream, but exceeded the TSS (at 32.7 mg/L), total phosphorus (at 0.352 mg/L), and biochemical oxygen demand (at 9.5 mg/L) water quality standards downstream of Fosston, at CSAH 30. In larger rivers, WWTF discharge can be mitigated by dilution, but there is much less dilution in the Poplar River – especially during a dry year like 2021.

Poplar River at CSAH 30, during
Fosston WWTF discharge



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

The Planning Work Group (PWG) met on November 17th and reviewed and updated the list of Citizen Advisory Committee members. Project updates were shared at the PWG meeting.

- Browns Creek Township, Section 32: Two projects will be constructed. Materials have been ordered and received. Due to the weather, construction will be postponed until the spring of 2022.
- Louisville Township, Section 10: Materials have been ordered and received for this project, as well. Due to the weather, construction will be postponed until the spring of 2022.
- Lake Pleasant Township, Section 8: Materials have also been ordered and received for this project. Due to the weather, construction will be postponed until the spring of 2022.
- Voyageur's View Streambank Stabilization: Houston Engineering has been hired to design the project. They will be surveying the project area soon and will design the project over the winter. Construction should start in the summer or fall of 2022.
- Red Lake Falls Township, Section 14 and 21: Project requests has been submitted to the PWG and Houston Engineering is working on an engineering proposal. The Red Lake County SWCD Board will review the engineering proposal and decide whether to proceed with these two projects.

RED LAKE WATERSHED DISTRICT MONTHLY WATER QUALITY REPORT

November 2021

- Polk Centre Township, Sections 9 & 16 (Mosbeck): Construction of these grade stabilization projects will begin in 2022.
- Andover Township, Section 9: This grade stabilization project will not be completed in 2021, so construction will be planned for 2022.
- Hammond Township, Section 1: This project is not moving forward.
- Roome Township, Section 2: This grade stabilization project has been completed.
- Louisville Township, Section 26/27 (Demarais-Hanson) erosion control project: District staff completed staking. Construction of the project began but was halted after some initial brush clearing due to the weather. Construction will resume in the spring and summer of 2022.



The Pennington SWCD is planning a new side water inlet project in Section 4 of Polk Centre Township.

Project partners began gathering and entering information about the projects that have been completed through 2021. The group made sure that the 2018 grant funds were spent by early December so that the grant could be closed-out with final financial reports and progress reports. District staff met with the Red Lake River 1W1P project coordinator to review financial information for the 2018 and 2020 grants and prepare for closing-out the 2018 watershed-based implementation funding grant.

The PWG prepared a draft 2022 Annual Work Plan for the next round of Watershed-Based Implementation Funding. The group applied lessons learned from previous grants to simplify budget and to add flexibility for funding beneficial projects throughout the watershed. To provide guidance for the 1W1P, District staff will use existing geomorphology data and some additional data collection to prioritize streambank stabilization sites throughout the watershed. A feasibility study for the stabilization of tall eroding riverbanks in/near the City of Red Lake Falls was added to the work plan. Those banks should rate high as a priority for stabilization based on their high bank erosion hazard index

rating and their proximity to infrastructure/homes, but successful stabilization of the tall banks could be a challenge. Instead of creating an itemized budget for individual projects, the funding for construction projects will be split into two “buckets” for “ag practices” and for “streambank and shoreline stabilization.” Project requests will be submitted to the PWG and projects that meet criteria for funding will be funded on a first come, first serve basis. Funding has been reserved, until the rest of the implementation funding has been spent, for projects that are outside of priority areas but meet certain criteria. Additional priority areas have been added along the corridor of the Red Lake River downstream of the Thief River Falls dam and along Grand Marais Creek.

Thief River Falls Oxbow Restoration Project



Construction of the project was completed, for the year, other than installation of a screw gate on the east structure. The construction has been completed except for seeding, some site grading where trucks were being loaded, and potentially some rock weir work depending on how it looks in the spring/summer and if it settles. The structures are fully functioning and have been for a few weeks along with the drain tile and all excavation of the oxbow area has been completed.





Dirt, sand and leaves will be captured in the [continuous deflective separation \(CDS\) hydrodynamic separator structure](#) that has been installed, so that it never gets to the west side of Pennington Ave in the oxbow. The City will need to skim out the floatables a few times a year, and the Contech representative said the sump should be vac'd out every few years. A cast iron screw gate will cover a 12-inch hole at ground level on the structure on the east side of Pennington Avenue. It will be used only if the water needs to be released quickly, likely in a frozen ground scenario. If the water is allowed to enter through the sluice gate it will still go through the separation chamber to help limit debris entering the pool. In addition to the structure that creates the settling pond on the east side of Pennington Avenue, the settling pond also features more than 2,000 feet of draitile covered with a geotextile sock and embedded in aggregate filter. Any debris from the stored snow will be cleaned up in the spring by the City once the snow melts and the water infiltrates into the drain tile. The City has a tractor and box scraper that they can use to pull away any sediment over time that may build up near the structure. A CDS structure has also been installed on the west side of Pennington Avenue to filter pollutants from stormwater runoff that enters the oxbow from the north.



Thief River One Watershed One Plan (1W1P)



District staff surveyed additional, potential streambank stabilization sites along the Thief River, between CSAH 7 and CSAH 12.



Judicial Ditch 23 outlet stabilization construction was nearly completed, though some touch-up work (slopes were let in rough shape) and buffer planting must still be completed (in the spring or summer of 2022). In addition to the rock structures at the outlet of the ditch, the last 0.6 miles of the ditch were re-sloped and two side water inlets were installed.

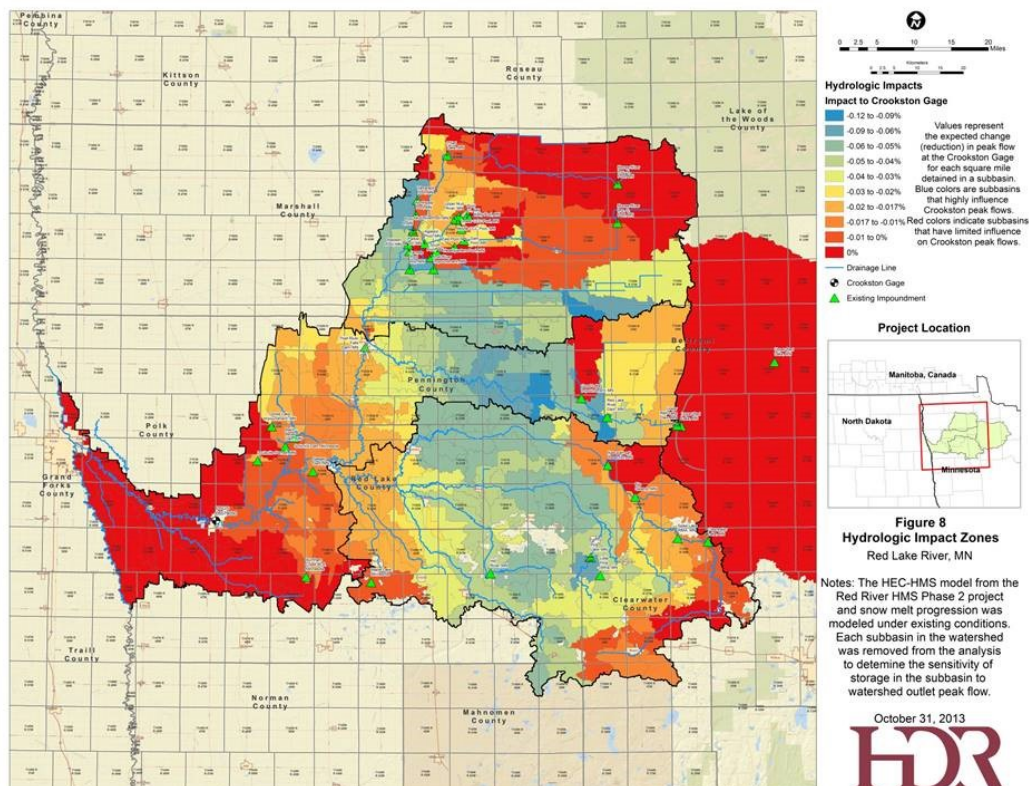
RED LAKE WATERSHED DISTRICT MONTHLY WATER QUALITY REPORT

November 2021



Clearwater River One Watershed One Plan (1W1P)

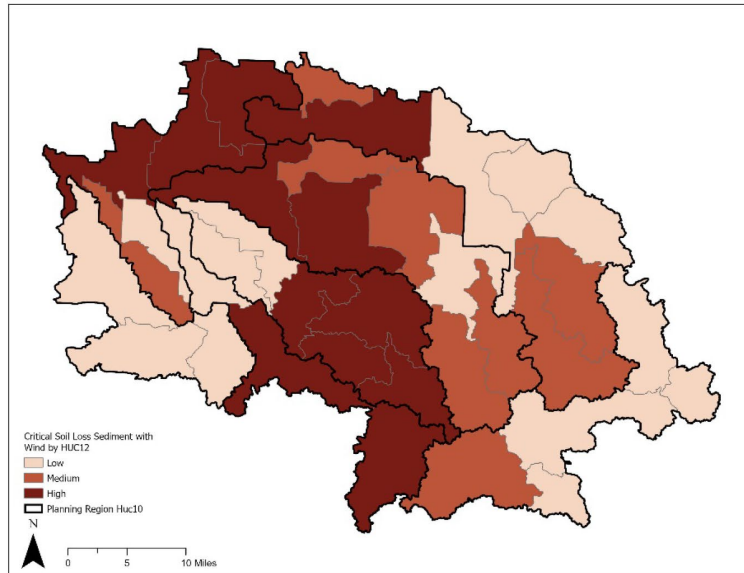
The Planning Work Group (PWG) reviewed a draft Section 3 of the 1W1P (Priority Issues) and draft measurable goals. District staff shared a HEC-HMS map of prioritized locations for flood damage reduction projects so that it could be used to prioritize areas in the Clearwater River Watershed for FDR projects. District staff also shared the wind erodibility layer and shapefile data that were used to create a map in the Clearwater River Watershed Restoration and Protection Strategy.



RED LAKE WATERSHED DISTRICT MONTHLY WATER QUALITY REPORT

November 2021

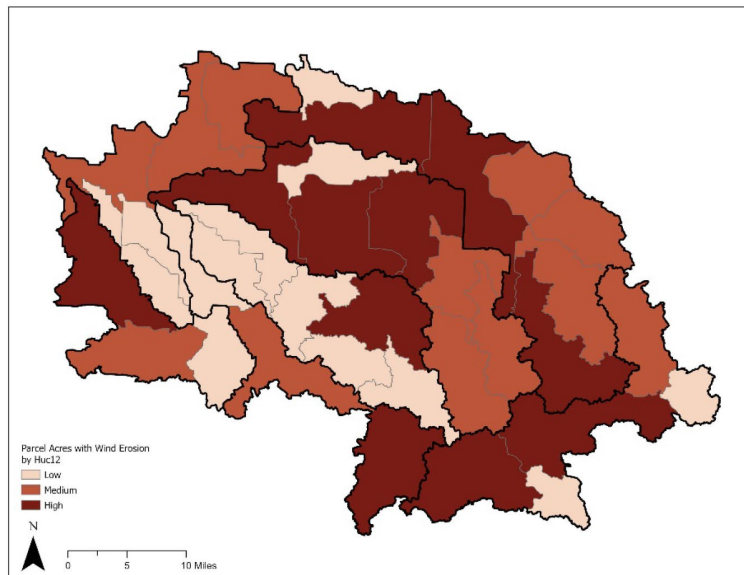
The PWG reviewed options for prioritizing subwatersheds for overland wind and water erosion (which areas should be prioritized for the implementation of agricultural best management practices).



HUC12 Level

Wind+Water Erosion

Prioritized by Sediment Load per HUC12



HUC12 Level

Wind+Water Erosion

Prioritized by number of acres per HUC12

2022 Draft List of Impaired Waters

The MPCA has released a Draft 2022 List of Impaired Waters. New changes for waters within the Red Lake Watershed District for the 2022 list mostly include the results of a biological assessment of channelized streams and ditches in the Thief River Watershed that had been deferred during the 2013 assessment:

1. Delisting of a chlorpyrifos (pesticide) impairment on the Grand Marais Cut-Channel (most of the flow from that watershed has been diverted into the restored channel). The Minnesota Department of Agriculture has been contacted to suggest that they may want to move their

monitoring site to the restored channel to continue to collect samples that represent runoff from that entire drainage area.

2. New sulfate impairment of the Clearwater River (channelized portion, 09020305-647). Sulfates were not assessed in 2016 (the most recent formal assessment of the Clearwater River Watershed), but the EPA forced the MPCA to apply their 10 mg/L standard, which is frequently exceeded in that portion of the Clearwater River.
3. New Fish Index of Biological Integrity (IBI) impairment of Marshall County Ditch 20 (09020304-548). The Thief River Watershed was retroactively assessed for aquatic life in 2019-2020 using data that was collected prior to the 2013 assessment. District staff helped MPCA staff with the stressor identification process and planning the next round of sampling (2022) in 2020-21.
4. New Low dissolved oxygen impairment in Branch 200 JD 11 (09020304-534, upstream of Elm Lake WMA).
5. New Fish IBI impairment of the Moose River (09020304-565, upstream of Morel Rd. NW)
6. New Benthic Macroinvertebrates Index of Biological Integrity (M-IBI) impairment of the Mud River (09020304-567)
7. New Benthic Macroinvertebrates Index of Biological Integrity (M-IBI) impairment of the Mud River (09020304-568)
8. New Fish IBI impairment of the Mud River (09020304-568)
9. New Fish IBI impairment of the Thief River (09020304-504, Thief Lake to Agassiz Pool)
10. New M-IBI impairment of Br. 200 of JD 11 (09020304-511, downstream of Farnes Pool)
11. New F-IBI impairment of Br. 200 of JD 11 (09020304-511, downstream of Farnes Pool)

Other

- Construction of the Pine Lake outlet project is mostly completed.



RED LAKE WATERSHED DISTRICT MONTHLY WATER QUALITY REPORT

November 2021

- District staff prepared a presentation with updated water quality trend analysis and assessment statistics for the next Mud River Restoration Project Team meeting
- A final report was submitted to the Red River Watershed Management Board for the 2020 Base Water Quality Funding. The \$100,000 of water quality funding from the RRWMB helped fund the installation of side water inlets and rock-drop structures in the Black River Impoundment drainage area (\$78,000) and side water inlet structures along Ditch 16 (\$22,000).
- The District's [website](#) now features a section on the home page that puts a spotlight on a current or recently completed District project. In November, the website featured the Thief River Falls Oxbow Restoration Project.
- The Red River Watershed Management Board featured the Black River Impoundment Project in its [December newsletter](#).
- The Clearwater SWCD is planning an effort to plant willow stakes along the banks of the Lost River in Section 20 of Winsor Township.
- Moose River Impoundment was drawn down to winter levels during the first 3 weeks in November.

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

- Gladen Construction, Inc., installed SWPP items and began clearing near the outlet end on the Demarais/Hanson Outlet Project (Red Lake River 1W1P). Tony Nordby, Houston Engineering, Inc, stated that the contractor is waiting to see what the weather does this weekend, prior to proceeding with the construction.
- Quotes were received for the Schirrick Dam Outlet Repair. This project will repair erosion downstream of the dam.
- The Board voted (motions carried) to approve and pay Change Order No. 1 in the amount of \$2,000 (extra excavation at Site B) and Pay Estimate No. 2 in the amount of \$20,494.35 to Quality Spray Foam/Anderson Excavating for the Thief River Streambank Stabilization Projects.
- Administrator Jesme stated while inspecting the slump on along County Road 16, they were made aware that a landowner along the TRF Westside Diversion Channel had made various cuts through the buffer strip, over the spoil bank as well as turning around on the ditch slope with farm equipment damaging the slopes and vegetation. Jesme drafted a letter that was submitted to the landowner, stating that the repairs to all damaged areas shall be made by May 30, 2022. The landowner is currently collaborating with a local contractor that is also repairing the slump on County Road 16, to repair the damage.
- Construction on the structure for the Pine Lake Flood Damage and Fish Habitat Project, RLWD Project No. 26B has been substantially completed. There is some concern in that the steel gates and catwalk for the structure have been on back order and have not yet arrived. At the direction of the Engineer, plywood has been placed in the bay areas and cuts will be made by District staff to assure operation and water levels in accordance to the plan can be accomplished. It is the hopes of the contractor that the steel gates and catwalk will be made available by February so they can be installed prior to Spring runoff.
- Staff member Nick Olson discussed two SCS/NRCS dams that need repair. The Knutson Dam located southeast of Red Lake Falls, has completely failed. The riser is rusted out and does not hold water. In discussion with the NRCS and Red Lake SWCD, the Red Lake SWCD has Clean Water funding available for up to 75% funding for construction costs, depended on final

construction costs, as well as \$5,000 for preliminary engineering. The Board voted and approved entering into an agreement with the Red Lake SWCD for repairs to the Knutson Dam with the District agreeing to pay all preliminary Engineering cost in excess to the \$5,000 cost share, as well as excess construction costs utilizing the Red Lake SWCD Clean Water Grant. Olson stated that the Thibert Dam, located northwest of Red Lake Falls, has severe erosion downstream of the structure. The Red Lake SWCD does not have funding for this project, as it is out of their priority area. Olson spoke to the landowner, encouraging them to sign up for NRCS EQIP funds, to help offset any costs. The NRCS has some pre-engineering funds that could be used. EQIP applications are due by November 19, 2021, but we will not find out until March 2022 if the project is funded. Discussion was held on obtaining a design and costs for replacement. Motion by Ose, seconded by Dwight, that if EQIP funds are received for repair of the Thibert Dam, RLWD Project No. 50, the District will pay for any local share required above and beyond the appropriated EQIP funding. Motion carried.

Water quality related notes and minutes from the November 24, 2021 Red Lake Watershed District Board of Managers meeting.

- Gladen Construction, Inc., completed some clearing and grubbing of trees on the Demarais/Hanson Outlet Project, Red Lake River 1W1P, RLWD Project No. 149. Engineer Tony Nordby, Houston Engineering, Inc, stated that after receiving rain and snow at the project site, the contractor decided to suspend work until the Spring.
- Engineer Dillion Nelson, HDR Engineering, Inc. reviewed project construction on the Thief River Falls Oxbow Project, RLWD Project No. 46Q. Nelson informed the Board that work is substantially completed with minor site grading, seeding and the addition of a screw gate on the east structure to be completed. Two flap gates at the outlet, near the river were replaced. Water will be approximately 3-4 feet deep in the pond. Nelson presented a video on the operation of how the hydrodynamic separators work to remove debris and infiltration from the drain tile to help with water quality. The City of Thief River Falls will be responsible for debris removal from the hydrodynamic separator.
- The Board reviewed a request from the Red Lake SWCD for the Weiss/Knott Grade Stabilization Project located in Sections 8 and 9, Lake Pleasant Township, Red Lake County. The project consists of an earthen embankment, a drop structure, pipe (under the embankment), and rip-rap armoring around the outlet of the pipe. The total project construction cost is \$32,340.21, with the Red Lake SWCD requesting a cost share of \$4,885 from the District's 2021 Erosion Control Funds, RLWD Project No. 164. The Board voted and approved the Weiss/Knott cost share request in the amount of \$4,885.

November 2021 Meetings and Events

- **November 3, 2021** – Clearwater River 1W1P Advisory Committee and Policy Committee meeting
 - [August Policy Committee Meeting Minutes](#)
 - [November 2021 Project Update Newsletter](#)
 - Groundwater presentation by Bob Guthrie of the MN DNR
 - Well permitting process (MPARS Application)
 - Addressing high risk domestic wells and water dependent features
 - Discussed well interference

- Large volume users of groundwater, like irrigators, have been drawing down aquifers enough to interfere with domestic wells.
- Rather than limiting the amount of water that offending operations consume, offenders are allowed to “fix” the problem by paying for the lowering of the domestic well pump or replacement of the domestic well. This raised concern about why the solution is to force victims to adapt to a depleted resource rather than putting limits on the operations that are depleting the resource. Advisory committee members noted that deeper wells have more dissolved minerals and potential taste issues compared to shallow, flowing wells.
- The DNR has set base levels for how low aquifers can go. So, the agency has established a limit to how much the resource can be depleted.
- During the 2021 drought, conservation officers issued cease and desist orders to irrigators that continued to operate.
- There was a question about how tile drainage affects discharge. This is not yet known (inconclusive information). Aquifers in the area are being recharged, as evidenced by the way wells rebound after pumping.
 - Implementation administration: Consensus that a memorandum of agreement is the “way to go.”
- **November 17, 2021** – Clearwater River 1W1P Planning Work Group meeting
 - Lake prioritization
 - Discussion about how to prioritize lakes and streams for protection
 - Soil health goal map
 - PTMAApp decisions (costs and preferred practices)
 - Funding (drafting budget expectations that can be used during PTMAApp analysis to determine whether goals are achievable)
 - Goal review
- **November 17, 2021** – Red Lake River 1W1P Planning Work Group meeting
 - 2018 Project Updates
 - 2018 Grant Reporting
 - 2022 Annual Plan – Working Draft
 - Policy Committee Agenda Items
 - Planning for Advisory Committee 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, 1/28/2022

River Watch and Public Education

The theme of the 2022 River Watch Forum will be: “2022: Together Again; Your Watershed, Your Community, Your Forum.” The upcoming River Watch Forum is scheduled for March 30th, 2022 at the Alerus Center in Grand Forks. River Watch teams are tasked with planning, marketing, and executing their very own River Watch event in their community.

District staff met with Red Lake County Central students to help them work on their River Watch Project and answer their questions. There were lessons for the students about nonpoint source pollution and played a virtual escape room game.

Water Quality and Flow Monitoring

District staff completed a final review of 2021 Red Lake Watershed District water quality monitoring data so that it can be stored in the MPCA EQuIS database. 2021 water quality monitoring data was received from the East Polk SWCD, reviewed, and submitted to the MPCA. A final review of that data was also completed so that it could be officially stored in EQuIS.

Data from 2022 deployments of dissolved oxygen loggers were compiled and corrected for fouling/calibration drift. Low dissolved oxygen levels occurred more frequently than expected in the Clearwater River. The Thief River experienced some relatively stagnant conditions, so low dissolved oxygen readings at that location were not a surprise. A site establishment form for the MPCA’s WISKI database was completed for sites where dissolved oxygen loggers have been deployed since 2015 and data will be relevant to future assessments.

- Thief River at 380th Street Northeast (S004-055, north boundary of Agassiz National Wildlife Refuge)
 - Dissolved oxygen dropped below the 5 mg/L standard during 31.7% of the days in which the logger was deployed.
- Clearwater River in Red Lake Falls (S002-118)
 - Dissolved oxygen dropped below the 5 mg/L standard during 10.3% of the days in which the logger was deployed.
- Clearwater River at CSAH 12, near Terrebonne (S002-914)
 - Dissolved oxygen dropped below the 5 mg/L standard during 20.7% of the days in which the logger was deployed.
- Clearwater River near Plummer (S002-124)
 - Dissolved oxygen dropped below the 5 mg/L standard during 8.8% of the days in which the logger was deployed.
- Clearwater River at County Road 127 (280th Avenue SE, S002-916)
 - Dissolved oxygen dropped below the 5 mg/L standard during 66.7% of the days in which the logger was deployed.

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

The Planning Work Group created a draft work plan for Fiscal Year 2022 funding. District staff worked on mapping, in the Red Lake River 1W1P ArcOnline progress tracker and eLINK, the 39 side water inlets and 39 rock-drop grade stabilization structures that were installed in the Black River Impoundment drainage area. Additional Ditch 16 side water inlets (those not in original plans) were also mapped. Data like costs, funding sources, and load reductions were also entered for each structure. PTMApp was used to estimate and record sediment load reduction benefits for each structure.

Red Lake River 1W1P partners were informed that the MPCA had additional 319 Grant funding available for a shovel-ready project(s) that could be completed in early 2022 (before the end of August). District staff compiled a list of shovel-ready projects from the Red Lake River 1W1P. There are multiple grade stabilization projects in Red Lake County for which construction nearly began or for which some work has already begun in 2021. The Pennington SWCD has two Clean Water Fund projects that could be constructed in 2022 and will reduce sediment loading to the Red Lake River. Because it will be “shovel-ready” in the summer of 2022, the Pennington County Ditch 96 Stabilization Project, Phase II will be the primary project to be funded with the additional 319 grant funding.

District staff drafted a work plan for the additional 319 Grant funding that was being offered by the MPCA. A final amount was not available until the first week of 2022, but the approximate amount (>\$100K) was known. The funding was discussed by the Planning Work Group and the discussion led to a consensus that the funding would be best utilized to help fund the Phase II of the Pennington County Ditch 96 Stabilization.

District staff, the plan coordinator, and BWSR staff worked together to calculate final invoices and budget balances to close-out the 2018 Red Lake River 1W1P Watershed Based Implementation Funding grant. The District Accounting Officer created financial reports for the Red Lake River 1W1P grants.

Houston Engineering, Inc. completed a survey of the Voyageur’s View streambank stabilization project and began designing the project.

Clearwater River One Watershed One Plan (1W1P)

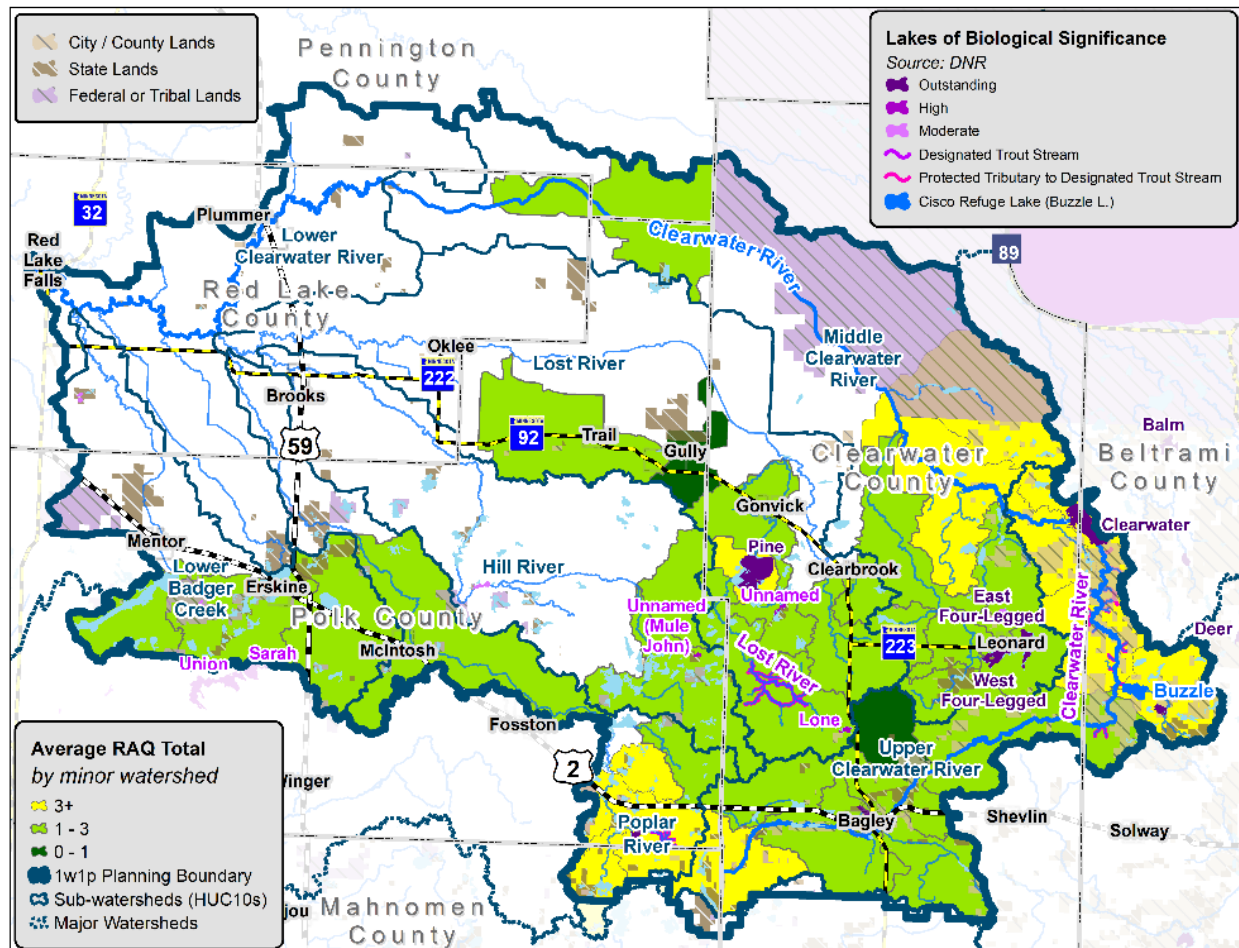
District staff began compiling a GIS shapefile with locations of water quality and flow monitoring stations throughout the Clearwater River Watershed. The layer will include known monitoring sites used by multiple organizations (RLWD, SWCDs, and River Watch). It will be used to create a map for the monitoring section of the 1W1P document.

District staff began compiling a list of potential capital projects that may be completed in the Clearwater River Watershed.

The Planning Work Group discussed ways to draft a budget for projects and practices, reviewed a map of priority areas for projects that reduce *E. coli* bacteria pollution, and reviewed a map of priority areas for permanent protection. The protection map was based on the results of a Riparian, Adjacency, and Quality (RAQ) analysis of parcel data. The scoring system assumes that the best parcels to protect would be those in a riparian area, adjacent to public land, and include important features (outstanding biodiversity, outstanding resource value, wild rice lakes, cisco lakes, trout streams/lakes, etc.).

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Other

- A water quality report for the month of [August 2021](#) was completed.
- A water quality report for the month of [September 2021](#) was completed.
- A water quality report for the month of [October 2021](#) was completed.
- District staff drafted a work plan for the 2022-2023 Thief River Watershed Surface Water Assessment Grant
- The District's [website](#) now features a section on the home page that puts a spotlight on a current or recently completed District project. In December, the website featured the Thief River Falls Oxbow Restoration Project and a ring dike project.

Water quality related notes and minutes from the December 9, 2021 Red Lake Watershed District Board of Managers meeting.

- The Board reviewed Pay Estimate No. 2 in the amount of \$289,394.99 to Spruce Valley Corporation, Inc., for the Thief River Falls Oxbow Project and Stormwater Treatment Project. Engineer, Dillion Nelson, stated that the project is 98% complete. The contractor will complete

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site grading and seeding in the Spring. The Board voted and approved Pay Estimate No. 2 in the amount of \$289,394.99.

- Quality Spray Foam/Anderson Excavating began hauling riprap to the site for the Schirrick Dam Outlet Repair, RLWD Project No. 25. The Contractor will also remove any trees that are falling in, within the work area.
- Aly Bergstrom, Beltrami SWCD, appeared (virtually) before the Board to discuss a Forest Stewardship cost share proposal for Beltrami County landowners. Bergstrom explained that a forest stewardship plan is largely a “foot in the door” for a landowner to become enrolled in one of two conservation incentive programs. These programs provide forest protection through the life of the contract. Bergstrom stated that there are scientific reports that point out the correlation between a catchment that is 75% protected and improved water quality. Forest stewardship plans and subsequent conservation incentive programs increase protected lands on the landscape. Bergstrom is requesting cost share in the amount of \$5,400, which would account for approximately 1,000 acres of forested property, with landowners paying a 60% cost share. The Board voted and approved a cost-share in the amount of \$5,400 with the Beltrami SWCD for a Forest Stewardship Program.
- The Board reviewed correspondence from the RRWMB regarding cost share payments due for USGS stream gauge sites. The Board voted and approved payment in the amount of \$11,675.00, to the RRWMB, for cost share on USGS stream gauge sites.
- Six RLWD staff participated in the MAWD Annual Conference. Jesme and Engineer, Nordby, gave a presentation on the Black River Impoundment.

Water quality related notes and minutes from the December 23, 2021 Red Lake Watershed District Board of Managers meeting.

- The Board reviewed an itemized worksheet for the installation of side water inlet (SWI) culverts located in Marshall County. The Marshall SWCD is requesting their 2021 Erosion Control Funds, RLWD Project No. 164, appropriation for the installation of SWI's. The Board voted and approved payment in the amount of \$12,500.
- Jesme met with MN DNR and HDR Engineering, Inc. staff to review the Knutson Dam plans as well as recommended replacement to the structure.
- Manager Dwight discussed the Beltrami SWCD concerns with human waste being left behind on Upper Red Lake during ice fishing season. The SWCD is working on a Pilot Project to hopefully prevent the issue.

December 2021 Meetings and Events

- **December 2, 2021** – Minnesota Association of Watershed Districts Annual Conference
 - *What Does Climate Change Mean for Future Flooding in the Red River Basin?*
 - A long-term flood study is currently ongoing.
 - River flood levels (summarize variance and uncertainty)
 - Protective measures (plans, ordinance, structural protection, downstream effects)
 - Precipitation trends and predictions:
 - Decreased snowpack
 - Increased precipitation for all seasons
 - Increased intensity of precipitation

- Timing of peak flows in river will be earlier, but volume will be unchanged
- US Army Corps of Engineers analysis shows that the Red River Basin has some of the strongest increasing trends in flood magnitude in the country.
- Temperatures will increase in all seasons, but winter temperatures will increase the most.
- Recommended integration of resiliency at the beginning of projects.
- *Translating Diversity, Equity, and Inclusion into Systems Change in Policy and Planning*
 - Plenty of variety, balance of opportunity, accessibility, and belonging
 - Example land acknowledgement statements that can be used in 1W1P, WRAPS, TMDLs, or other plans:
 - Capitol Region Watershed District: “Capitol Region Watershed District acknowledges the Dakota peoples o whose land we met. We thank the Dakota peoples and their relatives for their care of the land, and we recognize their continuing connection to the land, waters, and community. We pay our respects to the Dakota and their culture; both past and present. We pledge to treat this land honorably and respectfully.
 - Thinking Historically (plan initiation), thinking synthetically (plan development), and thinking together (plan implementation)
 - Historical aspects to consider for water management include land ownership, cultural values, history of decision-making bodies, land acknowledgements (indigenous lands), stewardship changes, racial covenants (existed in Hennepin County), and redlining (sections of cities graded by realtors as good or hazardous). Policy and redlining has shaped where infrastructure investments were made in cities. Current green infrastructure investments are being made in areas that were historically redlined (land is cheaper and more susceptible to flooding due to less investment in stormwater drainage infrastructure), replacing affordable and low-cost homes.
 - Be open to changes and new perspectives when writing plans
 - Policy shaped where certain people can live, who can buy land, and who can receive loans. Policy affected the economic burdens and affordability for family farms.
 - Advisory committees should truly represent the district/watershed.
- The Hallock Dam Retrofit
 - A dam on the South Branch of the Two River, near the Two River Golf Course, was replaced with a series of rock riffles.
 - The riffle structures had “wiggly” arches of rock to create pools for fish. The pools also included large 3-6 foot wide rocks, spaced 12-16 inches apart (so the fish can find refuge and have space to swim between the rocks).
 - Toe-wood sod mats were used to stabilize downstream riverbanks. Root wads are very important to the success of this streambank stabilization strategy. The sod mats included willows and other plants with good root systems.
 - The drop between rock weirs was between 0.4 and 0.7 feet.
 - Aggregate was mixed with rock as it was installed.

- The golf course's cart path was designed to be part of an overflow spillway.
- Black River Impoundment Project
- Awards
 - Project of the Year: Sand Hill River Ecosystem
 - Program of the Year: Comfort Lake Forest Lake Citizen-Assisted Tributary Monitoring
 - DNR Annual Watershed District Award: Valley Brach Watershed District
 - Watershed District Administrator of the Year: Jamie Beyer, Bois de Sioux Watershed District
 - Outstanding Watershed Organization Employee of the Year: Cody Fox, Cedar River Watershed District
- Red River Basin LiDAR Data Acquisition
 - LiDAR should be collected on a hydrological basin scale, NOT a political boundary.
 - Turf-ism is a challenge – non-cooperation or conflict between organizations with seemingly common goals or interests.
 - Partners/agencies fit three categories: assets, inconsequential, and liability (some agencies were inexplicably opposed to the project).
 - Rational for 2021 data collection
 - Age of current LiDAR database
 - USGS specifications for data consistency
 - Improved technologies
 - Data storage and computing power has improved dramatically
 - Cost of the 2021 pass = \$2.3 million
 - Features of the 2021data
 - 1-foot contours
 - 0.5-meter DEM (digital elevation model)
 - Hydro-conditioned DEM
 - Building footprints and ring dikes
 - Updated IWI LiDAR viewer
 - Anticipated completion in the summer of 2022
- Tools for Implementing Your One Watershed One Plan
 - Moore Engineering introduction and advertisement highlighted their ability to create 3-D visualizations of projects.
 - Interactive maps
 - Google Drive or Sharepoint for sharing files
 - Shared calendar on website
 - Keep a shared list of topics for upcoming meetings (monthly activities, annual activities, and long-range activities).
 - Shared fiscal management/grant tracking spreadsheet
 - Write a plan you can actually use. Make the plan a tool and find ways to make it interactive.
- Roseau Lake Rehabilitation
 - The project reduces peak flows and improves habitat.
- Thief River Falls Oxbow Restoration Project

- The presentation included a [video](#) that demonstrates how a hydrodynamic separator works.
 - The city will clean floatables out of the hydrodynamic separators a few times each year.
 - A specialist flew to Thief River Falls from Texas to make sure that the internal portion of the hydrodynamic separator was installed correctly.
- Pine Lake Outlet Project
 - There was a need to increase capacity of the outlet to help prevent flooding (which has been occurring in one out of three years) around the lake.
 - The new outlet water control structure and rock riffle fish passage structure have been constructed.
- **December 3, 2021** – Minnesota Association of Watershed Districts Annual Conference
 - Improving Water Quality with the Scenario Application Manager (SAM)
 - Lambert Lake Upgrade: Building a Meander to Improve Water Quality and Reconnect the Floodplain while Conducting Needed Maintenance
 - Used real-time water level and flow loggers to prepare for the project. The data is publicly available through the “[Monitor my Watershed](#)” data sharing portal.
 - Restored meanders in a drained wetland
 - Multi-Partner Implementation of Urban Stormwater Project – Columbia Golf Course BMPs
 - Flood damage reduction, native plantings, stormwater pre-treatment structures
 - Upfront documentation of goals and negotiations (who is responsible for each line item) to minimize “gray areas.” Change orders are easily associated with each line item.
 - Wetland Restoration Challenges in an Agricultural Landscape
 - Re-routing and tile was used to appease uphill neighbor’s concerns and needs.
 - A Fundamentally New Approach to Lake Management
 - Nanobubble treatment, by [Moleaer](#)
 - Bubbles are 2500 time smaller than a grain of salt and invisible to the naked eye. Larger bubbles rise to the surface and release the air to the atmosphere. Nanobubbles have more of a neutral buoyancy, which improves oxygen delivery to the water.
 - Treatment at the sediment layer reduces release of nutrients by preventing anoxic conditions.
 - The negative charge of the bubble can actually scour algae and scale from surfaces.
 - Creates oxidative environments that enable nutrient sequestration.
 - Requires:
 - Water source
 - Water pump
 - Nanobubble generator
 - Source of compressed air
- **December 8, 2021** – Red Lake River 1W1P Planning Work Group meeting
 - There was discussion about how imperative it is to limit projects to priority areas. Recently, projects that reduced sediment loading to an impaired reach of the Red Lake River were unable to use 1W1P funding (funded by other sources) because they were

not located within one of the priority areas that were specifically listed in the work plans for the watershed-based implementation funding (WBIF) grants.

- BWSR staff recommended a March check-in for the 2020 WBIF grant to see how much we think we can spend and shift money around in the budget to fund other projects as needed. There is a large budget remaining in the “ag practices” budget that could be shifted to the “streambank and shoreline stabilization” budget to be spent by (relatively more expensive) grade stabilization and streambank stabilization projects.
- BWSR staff reiterated that most of the funding needs to be spent in priority areas, but not necessarily 100% of the funding. If there is a resource-related reason to spend money outside of the priority areas, we could create a second “tier” of eligibility to justify funding. The group discussed qualifications that would make additional projects eligible for “tier 2” funding, like projects located within a riparian corridor and projects highlighted by PTMApp in the Red Lake River 1W1P targeted implementation plan.
- BWSR still wants to see separate budgets for “technical & engineering” (design) and “project development” (outreach). BWSR strongly encourages additional outreach.
- Riparian corridors along the Red Lake River and Grand Marais Creek will be added to the list of priority areas.
- The 2022 work plan budget should be split by project type, rather than individual projects, to add flexibility and simplification.
- BWSR showed the group an example of a spreadsheet that can be used to track the amount of project funding that has been approved and spent.
- PWG members will email narratives, load reduction estimates, and other activity details to the 1W1P Coordinator so that the eLINK reporting can be completed.
- **December 15, 2021** – Red Lake River 1W1P Advisory Committee and Policy Committee meeting
 - The Policy Committee (PC) approved the 2022 Red Lake River Annual Plan
 - Discussion about simplifying financial sorting, tracking, and reporting. BWSR can help provide a template for invoices. BWSR will also provide conferences and training for fiscal agents.
 - A PC member expressed concern about the east end of the “41” ditch (extended 1.5 miles to the east).
- **December 15, 2021** – Clearwater River 1W1P Planning Work Group (PWG) meeting.
 - Discussed prioritization of subwatersheds for projects that reduce sediment and total phosphorus loading to streams and lakes.
 - Reviewed “Issues” section of the 1W1P
 - After summarizing input received from the PWG, Houston Engineering, Inc. (HEI) has completed a baseline funding spreadsheet.
 - PTMApp modeling strategies and practices were discussed. The model can provide an indication of whether we can achieve goals with available baseline and the addition of the watershed-based implementation funding. The model will identify the top third of catchment areas for the implementation of pollutant-reduction projects. Cover crops are a practice that hasn’t really taken off in the area, according to SWCD staff.
- **December 16, 2021** – Thief River Intensive Watershed Monitoring meeting
 - The MPCA has a 10-year cycle for monitoring, assessment, and plan (WRAPS and TMDL) writing for each watershed. The last 10-year cycle for the Thief River began in 2011. The Cycle II monitoring for the watershed was originally scheduled for 2021, but the COVID-19 pandemic interrupted the MPCA’s plans for sampling in 2020 and delayed the start of

subsequent cycles by one year. So, the Thief River intensive watershed monitoring will now occur 2022 and 2023.

- The MPCA will contract with a local organization to do the sampling, if possible. If there is no local capacity or willingness to collect the samples, the MPCA will conduct the sampling. The direct contracting is a welcome improvement over the grant application process that the District had to navigate for previous SWAG monitoring efforts.
- Sampling at Watershed Pollutant Load Monitoring Network sites will be limited to bacteria samples because the WPLMN has already collected a large dataset for other parameters.
- There were no other volunteers among LGUs to lead the monitoring effort, so District staff will draft a work plan for a Surface Water Assessment Grant and water quality sampling in the Thief River Watershed in 2022-23.
- Subcontractors are allowed.
- The MPCA will reimburse the local contractor for staff time and mileage for water quality monitoring, data management, project management, laboratory analysis, and necessary equipment.
- A cost estimate and work plan will be drafted in January and the contract should be executed by March.
- **December 17, 2021** – Mud River Restoration Project Team meeting
 - Agassiz National Wildlife Refuge (NWR) water management
 - The refuge has long-term plans to re-create Judicial Ditch 11 so that it flows freely through the refuge and Agassiz Pool is split into two off-channel impoundments.
 - The refuge would still want to maintain some flow to the north. Would flow from County Ditches be sufficient?
 - Agassiz NWR sediment history
 - Rough estimate of 10,000 acft of storage loss due to sedimentation in Agassiz Pool (using figures from the [Schottler study](#)).
 - Review and wordsmithing of a draft Mud River Project - Purpose and Need statement.
 - 2022 flow and sediment monitoring
 - Monitor and calculate flow and sediment budgets at the JD 11 flow split on the east side of the refuge.
 - RLWD and USWFWS will cooperate to create and implement a plan to collect the necessary data.
 - Water quality in the Mud River
 - A landowner commented that water standing on flooded fields seems to get muddier due to wind before it runs off the land into the river.
 - Discussion of project alternatives
 - Channel restoration
 - Judicial Ditch 11 diking
 - Diversion structures
 - Enhancing existing ditches
 - Agricultural best management practices upstream
- **December 17, 2021** – Virtual meeting to discuss additional 319 Grant funding that may be available, from the MPCA, for shovel-ready water quality projects.
 - More than \$100,000 will be available

- The funding, from another project that did not spend it, expires on August 31, 2022 and must be spent by then.
- The work plan will be similar to the current Small-Watershed Focus 319 Grant, but simpler.
- This funding can be used as a “puzzle piece” to fill a large matching funds (this is federal funding) need for a state-funded project.
- The Red Lake River 1W1P partners have a handful of options for shovel-ready projects that will be constructed in 2022. There are several grade stabilization projects in Red Lake County that were ready for construction at the end of 2021, but had construction delayed until spring/summer 2022 due to weather. The Pennington SWCD has two large projects that are funded by BWSR Clean Water Fund Grants, but are in need of significant matching funds. Those are Thief River Falls Streambank Stabilization projects and Phase II of the Pennington County Ditch 96 Stabilization project. Construction for both of those projects is planned for 2022. One of the streambank stabilization sites will require additional design. The CD 96 project is less likely to have permitting issues because it is along a county ditch. The budget shortfall of the CD 96 project is slightly larger than the amount of the available 319 grant funding. The consensus of the group settled on a “Plan A” of using the additional 319 grant funding for the CD 96 stabilization construction. If there are unforeseen delays to the CD 96 construction, the 319 grant funding can instead be used for the Red Lake County grade stabilization projects.
- A work plan will be developed in the first week of January 2022.
- **December 20, 2021** – Clearwater River Planning Work Group meeting
 - Protection priorities based on quantified risk of change in the landscape – cheaper to protect than to restore. Land and easement acquisition for protection can be funded by sources other than the watershed-based implementation funding (WBIF) from BWSR. Target larger parcels that are currently unprotected.
 - Forestry stewardship plans are currently funded with SWCD capacity funding, federal grants, and WBIF.
 - Progress will be measured in acres rather than load reductions, though water quality models like HSPF do show pollutant load reduction benefits from some land use conversions.
 - The RAQ (riparian, adjacency, quality) analysis will be used to prioritize areas within the watershed.
 - Protection efforts along high-quality waters will provide assurance that things won’t get worse.
 - 75% protection goal, based on study that found a correlation between disturbed land and lake phosphorus. The study found that 25% disturbance was the “breaking point.”
- **December 21, 2021** – Red Lake River 1W1P 2018 Watershed-Based Implementation Funding grant reconciliation meeting with District staff, the plan coordinator, and BWSR staff.
- **December 21, 2021** – Thief River Surface Water Assessment Grant (SWAG) kick-off meeting with the MPCA Project Manager
 - Use a modified version of the BWSR rate calculator for hourly rates (exclude line items that are directly funded by the SWAG contract).
 - Do not sample if there is no flow.
 - If sampling events are missed due to a lack of flow, they can be “made-up” on the 2nd year of the contract on a case-by-case basis.

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- The laboratory analysis budget is based on current rates on a master contract between the MPCA and RMB Environmental Laboratories. The laboratory analysis budget can be increased, later, if the lab increases its prices.
- Use RMB courier service for sample delivery
- Include equipment needs in the budget
- Follow the MPCA intensive watershed monitoring standard operating procedures
- Progress report templates are on the [SWAG website](#).
- **December 28, 2021** – Red Lake River 1W1P Planning Work Group meeting to discuss the additional 319 Grant funding that was being offered by the MPCA for shovel-ready projects that could be completed before August 31, 2022.

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.